OKALOOSA FACILITIES MAINTENANCE

OWNER:

BCC OKALOOSA COUNTY
302 N WILSON ST. STE 302
CRESTVIEW, FL 32536

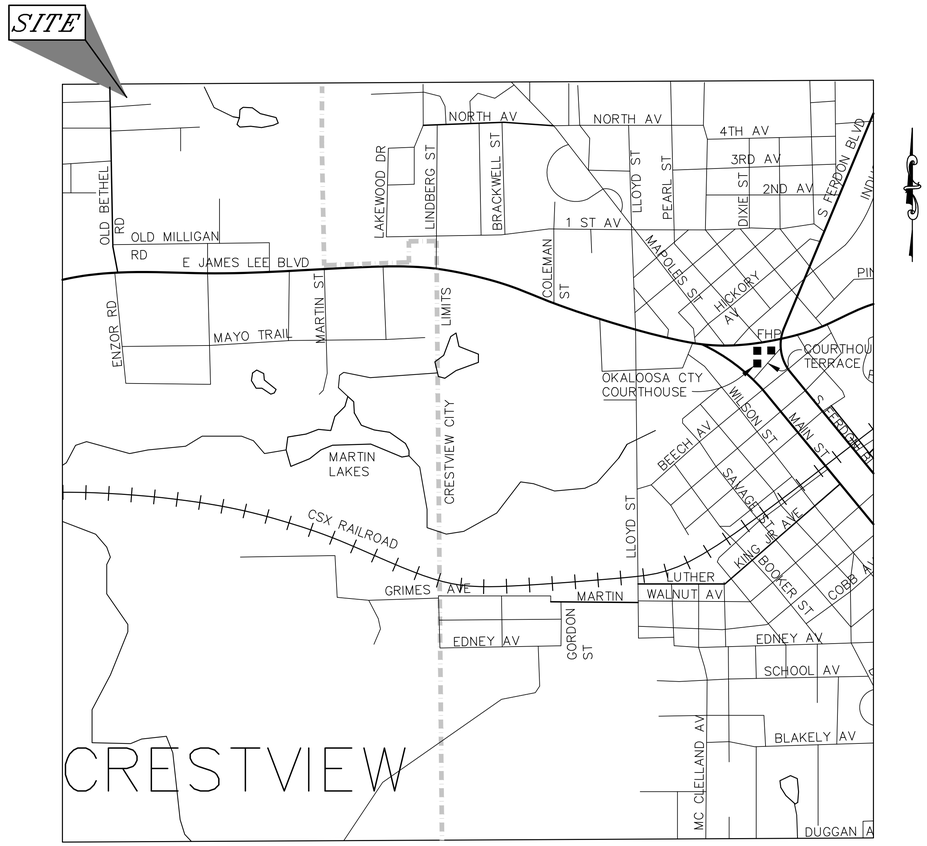
CIVIL ENGINEER:

LJA, INC.
112 TRUXTON AVENUE
FORT WALTON BEACH, FL 32547
(850) 446-4360

GENERAL NOTES

1. THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THIS SITE.
2. CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE PROJECT DOCUMENTS & PER THE CITY OF CRESTVIEW STANDARDS & SPECIFICATIONS.
3. THE CONTRACTOR SHALL FIELD VERIFY ALL HORIZONTAL AND VERTICAL LINES AND GRADES OF EXISTING UTILITIES PRIOR TO THE CONSTRUCTION OF IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF A DISCREPANCY BETWEEN CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS.
4. APPLICABLE PERMITS MUST BE OBTAINED FROM THE CITY, STATE AND COUNTY PRIOR TO EXCAVATION WITHIN ANY RIGHT-OF-WAY, AND PRIOR TO ANY CONSTRUCTION.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY UNDERGROUND UTILITIES OR OTHER OBSTRUCTIONS AND TO BE LIABLE FOR DAMAGE AND CONSEQUENT REPAIR TO SUCH IN THE COURSE OF HIS OPERATIONS.
6. THE CONTRACTOR AND/OR BUILDER WILL KEEP THE AREA NEAT AND ORDERLY AT ALL TIMES WHILE CONSTRUCTION IS TAKING PLACE. ALL CITY STREETS ADJACENT TO THE DEVELOPMENT SHALL BE KEPT CLEAR OF MUD, ROCK, DIRT, DEBRIS, PAPER AND WASTE MATERIAL AT ALL TIMES. THE PROPER AMOUNT OF INSPECTION SHALL BE CALLED FOR AT THEIR PROPER TIMES, OR ANY AND ALL WORK MAY BE REJECTED.
7. IF ANY WORK OR ACCESS TO ANY ADJOINING PROPERTY IS DONE, IT IS THE FULL RESPONSIBILITY OF THE APPLICANT/OWNER TO OBTAIN PROPER RELEASES FROM ADJOINING PROPERTY OWNERS AND ASSUME ALL LIABILITY FOR ACTION TAKEN DURING ALL CONSTRUCTION.
8. ALL DISTURBED AREAS ARE TO BE RE-SEEDED IN ACCORDANCE WITH THE APPROVED PLANS.
9. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING STREET, CURB AND GUTTER, SIDEWALK AND DRIVEWAYS.
10. THE CONTRACTOR SHALL HAVE ON SITE A SET OF PLANS. THE CONTRACTOR SHALL HAVE ON THE PROJECT AT ALL TIMES, AS HIS OR HER AGENT, A COMPETENT SUPERINTENDENT CAPABLE OF READING AND THOROUGHLY UNDERSTANDING THE PLANS AND SPECIFICATIONS, THOROUGHLY EXPERIENCED IN THE TYPE OF WORK BEING PERFORMED, AND WHO SHALL RECEIVE INSTRUCTIONS FROM THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
11. ALL TRENCHES, WHICH LIE UNDER PROPOSED PAVEMENT OR LIE WITHIN TWO FEET OF THE BACK OF CURB SHALL BE BACKFILLED TO PAVEMENT SUBGRADE WITH COMPACTED GRANULAR MATERIAL.
12. MANHOLE COVERS, VALVE BOXES AND OTHER UTILITY APPURTENANCES SHALL NOT ENCROACH ON SIDEWALKS, CURBS OR PAVEMENT. WHERE CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR INSTRUCTION PRIOR TO PROCEEDING.
13. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY NEW SINKHOLES, MINE FEATURES OR OTHER GEOLOGIC ANOMALIES DISCOVERED DURING CONSTRUCTION.
14. THE CONTRACTOR IS RESPONSIBLE FOR ALL METHODS, SEQUENCING, AND SAFETY CONCERNS ASSOCIATED WITH THIS PROJECT DURING CONSTRUCTION, UNLESS SPECIFICALLY ADDRESSED OTHERWISE IN THIS PLAN OR ELSEWHERE IN THE CONTRACT.
15. THE QUANTITIES AND SITE CONDITIONS DEPICTED IN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE SUBJECT TO ERROR AND OMISSION. CONTRACTORS SHALL SATISFY THEMSELVES AS TO ACTUAL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
16. A REASONABLE EFFORT HAS BEEN MADE TO SHOW THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES AND UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND/OR FACILITIES CAUSED DURING THEIR CONSTRUCTION OPERATIONS.
17. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION OF CONSTRUCTION AFFECTING UTILITIES AND THE COORDINATION OF ANY NECESSARY UTILITY RELOCATION WORK.
18. COORDINATION BETWEEN ALL PARTIES IS AN ESSENTIAL PART OF THE CONTRACT.
19. LJA, INC. TO INSPECT ALL ROAD GRADES LESS THAN 0.5% PRIOR TO THE POURING OF ASPHALT.

PARCEL IDS: 12-3N-24-0000-0007-0000
OKALOOSA COUNTY
STATE OF FLORIDA



STAGES OF CONSTRUCTION:

1. CONTRACTOR TO PERFORM DETAILED SITE INSPECTION TO LOCATE ALL EXISTING UTILITIES AND VERIFY ANY POSSIBLE CONFLICTS WITH PROPOSED IMPROVEMENTS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTACT OWNER WITH ANY CONFLICTS.
2. INSTALLATION OF CONSTRUCTION ENTRANCE.
3. INSTALLATION OF EROSION CONTROL FENCE.
4. DEMOLITION OF EXISTING SITE IMPROVEMENTS.
5. REMOVAL OF EXISTING PAVEMENT ON THE SITE.
6. INSTALLATION OF ALL STORM WATER DRAINAGE IMPROVEMENTS.
7. ROUGH GRADING.
8. CONSTRUCTION OF NEW SITE IMPROVEMENTS.
9. FINAL GRADING.
10. PLACEMENT OF FINAL LANDSCAPING ITEMS AND SOD.
11. REMOVAL OF EROSION CONTROL FENCE.

INDEX OF SHEETS

SHEET	DESCRIPTION
C1.0	COVER SHEET
C2.0	OVERALL SITE PLAN
C3.0	DEMOLITION AND SITE PLAN
C4.0	GRADING AND DRAINAGE PLAN
C5.0	UTILITY AND LANDSCAPE PLAN
C6.0	SPECIFICATIONS (1 OF 2)
C7.0	SPECIFICATIONS (2 OF 2)

MAINTENANCE ENTITY

ALL INFRASTRUCTURE, INCLUDING ALL COMMON AREAS, STREETS, SIDEWALKS, STORMWATER FACILITIES, LANDSCAPING, ETC., SHALL BE MAINTAINED BY THE OWNER.

FLOOD ZONE:

THE SUBJECT PROPERTY AS SHOWN HERON IS LOCATED IN FLOOD ZONE X, AS DETERMINED FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP OF OKALOOSA COUNTY, COMMUNITY-PANEL NUMBER 12091C0165J, DATED 09 MARCH 2021.

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MARK SINER, P.E. ON THE DATE ADJACENT TO THE SEAL USING A SHA AUTHENTICATION CODE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

FOR BID

LJA
4300 LEGENDARY DRIVE
SUITE C280
DESTIN, FL 32541
850-446-4365

MARK COOPER SINER
LICENSE
No. 48831
STATE OF FLORIDA
PROFESSIONAL ENGINEER

ENGINEER OF RECORD
MARK SINER, PE
#48831

NO.	DATE	DESCRIPTION	BY	CHK	APV

OKALOOSA FACILITIES MAINTENANCE WAREHOUSE
CRESTVIEW, FL 32536
PARCEL ID: 12-3N-24-0000-0007-0000

JDF ARCHITECTURE, LLC
CONTACT: JASON FLOYD
201 HOLLYWOOD BLVD.
FORT WALTON BEACH, FL 32548

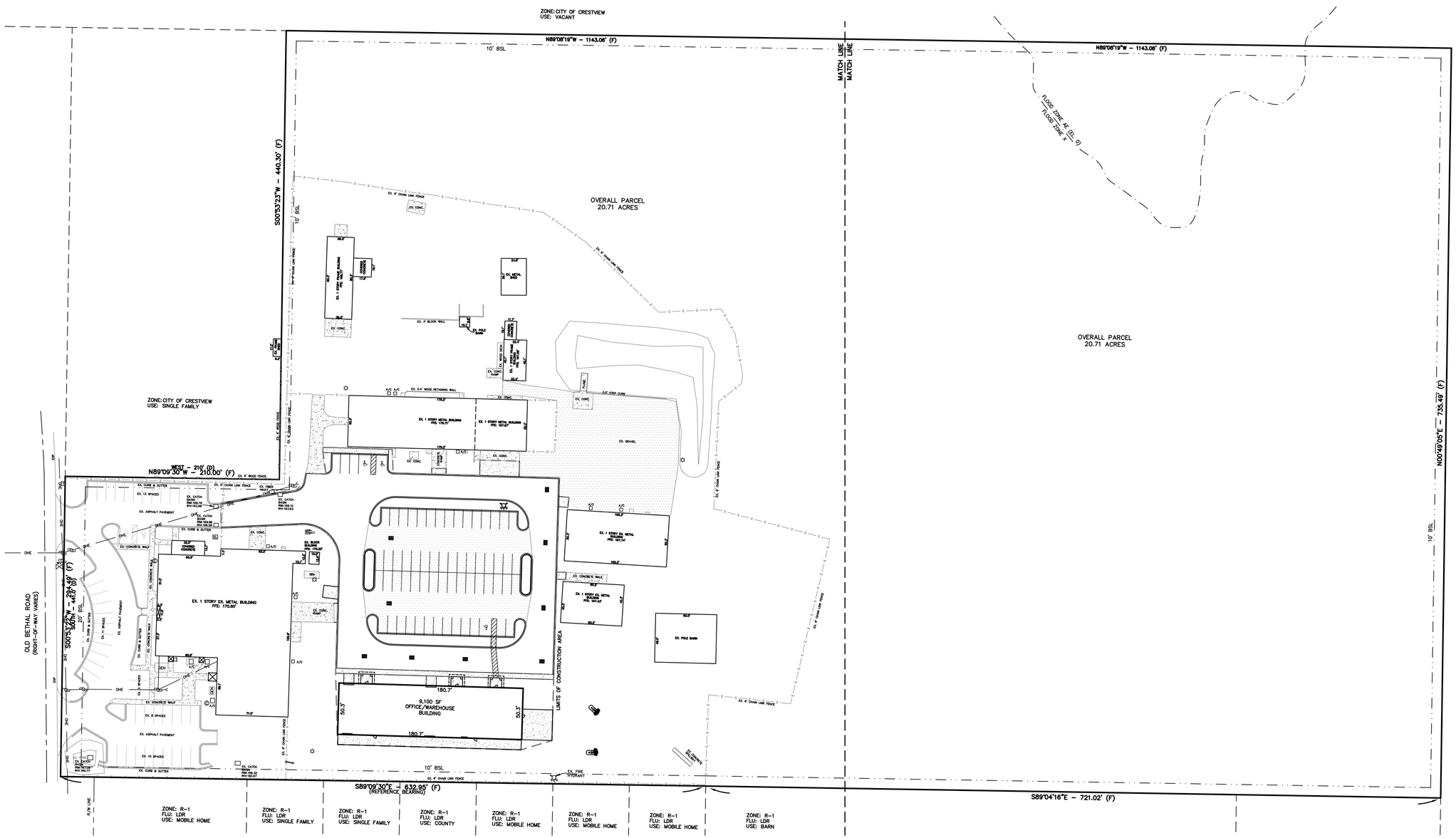
ISSUE DATE
15 SEPTEMBER 2026

PROJECT NUMBER
FL2025151

SHEET TITLE
COVER SHEET

SHEET NUMBER
C1.0

S:\LAND\SE\DEST-FL\04 - PROJECTS FWB\2025\2025151-FL885S - OKALOOSA FACILITIES MAINTENANCE WAREHOUSE\04-CAD\BASE FILES



SITE DATA TABLE:

ZONED: R–1

LAND USE: LDR

FLOOD ZONE: X*

PARCEL ID #: 12–3N–24–0000–0007–0000

BUILDING SETBACKS:
REQUIRED: FRONT = 10'
SIDE = 20'
REAR = 10'

BUILDING INFORMATION:
MAXIMUM BUILDING HEIGHT: 45'
NET BUILDING AREA: 9,100 SF (PROPOSED) + 34,064 SF (EXISTING) = 43,164 SF

TOTAL SITE AREA: 902,252 SF = 20.7 ACRES

LIMITS OF CONSTRUCTION AREA: 64,350 SF = 1.47 ACRES

MAXIMUM FAR: 90,225 SF = 0.10

PROPOSED FAR: 43,164 SF = 0.048

MAXIMUM IMPERVIOUS AREA: 496,239 SF = 55%

PROPOSED IMPERVIOUS AREA: 127,780 SF = 14.2%

PARKING SPACES REQUIRED: 1 SPACE / 1,000 SF (6,800 SF WAREHOUSE) = 7 SPACES
4 SPACE / 1,000 SF (2,300 SF OFFICE) = 10 SPACES
17 SPACES

PARKING SPACES PROVIDED: 64 SPACES (INC. 3 H/C SPACES)

* FLOOD ZONE INFORMATION PER FLOOD INSURANCE RATE MAP OF OKALOOSA COUNTY, FLORIDA, COMMUNITY PANEL NO. 12091C–0165–J, DATED 09 MARCH 2021.

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CRESTVIEW, FL 32536
PARCEL ID: 12-3N-24-0000-0007-0000

JDF ARCHITECTURE, LLC
CONTACT: JASON FLOYD
201 HOLLYWOOD BLVD.
FORT WALTON BEACH, FL 32548

ISSUE DATE
15 SEPTEMBER 2026

PROJECT NUMBER
FL2025151

SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER
C2.0

S:\LAND\SEL\DEST-FL\04 - PROJECTS FWB\2025\2025151-FL8855 - OKALOOSA FACILITIES MAINTENANCE WAREHOUSE\04-CAD\BASE FILES

L E G E N D

EXISTING FEATURES TO BE REMOVED

NOTE:
ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

DEMOLITION NOTES:

1. REMOVE PAVEMENT, BUILDINGS, BASE COURSE AND CURBING.
2. REMOVE EXISTING UTILITY SERVICES. COORDINATE WITH UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO COMMENCING WORK.
3. CONTRACTOR SHALL DISPOSE OF ALL DEBRIS OFF-SITE AND BE IN COMPLIANCE WITH FEDERAL, STATE AND COUNTY LAWS AND REGULATIONS.
4. CONTRACTOR SHALL RETAIN ALL SOIL EROSION SEDIMENTATION ON-SITE BY USING STAKED SILT FENCE.
5. THE EXISTING WATER SERVICES WITHIN THE PROPERTY MUST BE LOCATED, DISCONNECTED AND CAPPED AT THE MAIN LINE AND REMOVED FROM THE SITE.
6. EXCAVATION MATERIAL TO BE USED AS FILL MATERIAL ON-SITE OR DISPOSED OFF-SITE.

EROSION NOTES:

1. EROSION PROTECTION: SOIL EROSION SEDIMENTATION MUST BE CONTROLLED AND RETAINED ON SITE DURING CONSTRUCTION. THEREFORE, EROSION PROTECTION, SUCH AS STAKED BALED HAY AND SILT FENCE BARRIERS, MUST BE INSTALLED PRIOR TO START OF CONSTRUCTION.
2. SILT FENCE BARRIER SHALL BE INSTALLED IN ALL AREAS SUBJECT TO SOIL EROSION SEDIMENTATION.
3. GRADES AT CURBS ARE AT FLOWLINE.
4. STABILIZED CONSTRUCTION ENTRANCESHALL BE INSTALLED AS THE 1ST STEP OF CLEARING AND GRADING
5. ADDITIONAL TECHNIQUES TO REDUCE SOIL TRACKING OFF OF SITE & ONTO ROADWAY SUCH AS WHEEL WASHING MAY BE REQUIRED.
6. ANY SEDIMENT THAT IS TRACKED ONTO ROADWAY SHALL BE REMOVED IMMEDIATELY BY SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED FROM ROADWAY & STABILIZED ON THE SITE.

L E G E N D

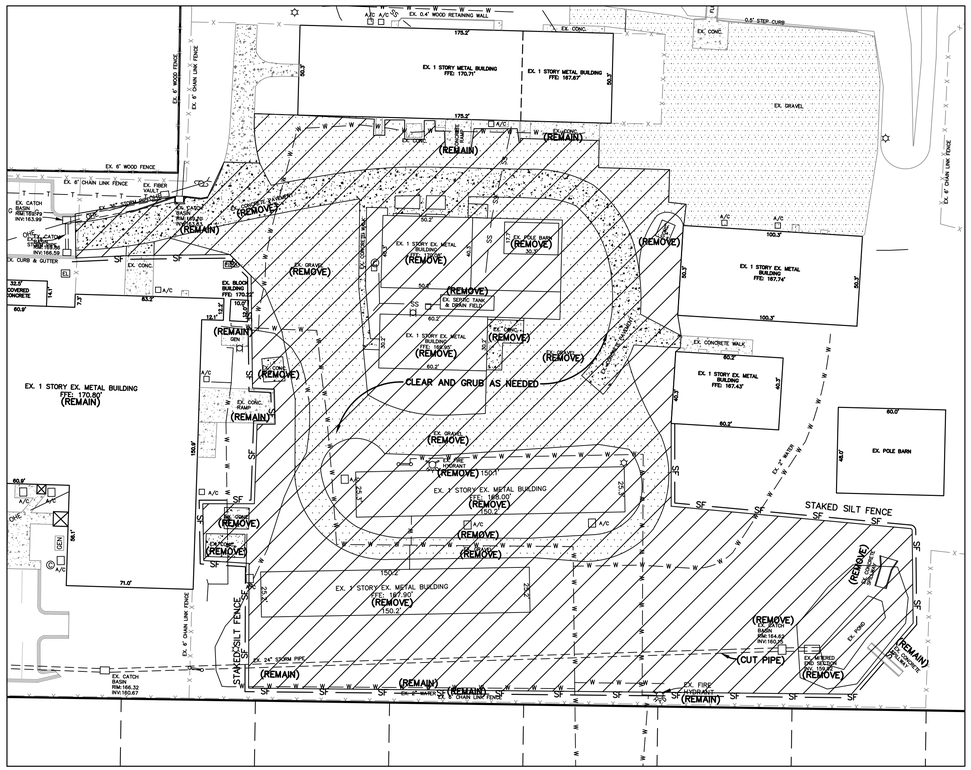
ASPHALT	TRAFFIC SIGNAL BOX
CONCRETE	TELEPHONE BOX
SETBACK LINE	FENCE
POWER POLE	TRAFFIC ARROW
GUY ANCHOR	CENTERLINE
LIGHT POLE	SINGLE POLE SIGN
OVERHEAD UTILITY LINE	DOUBLE POLE SIGN
ELECTRICAL BOX	MONITORING WELL
TELEVISION BOX	

NORTH

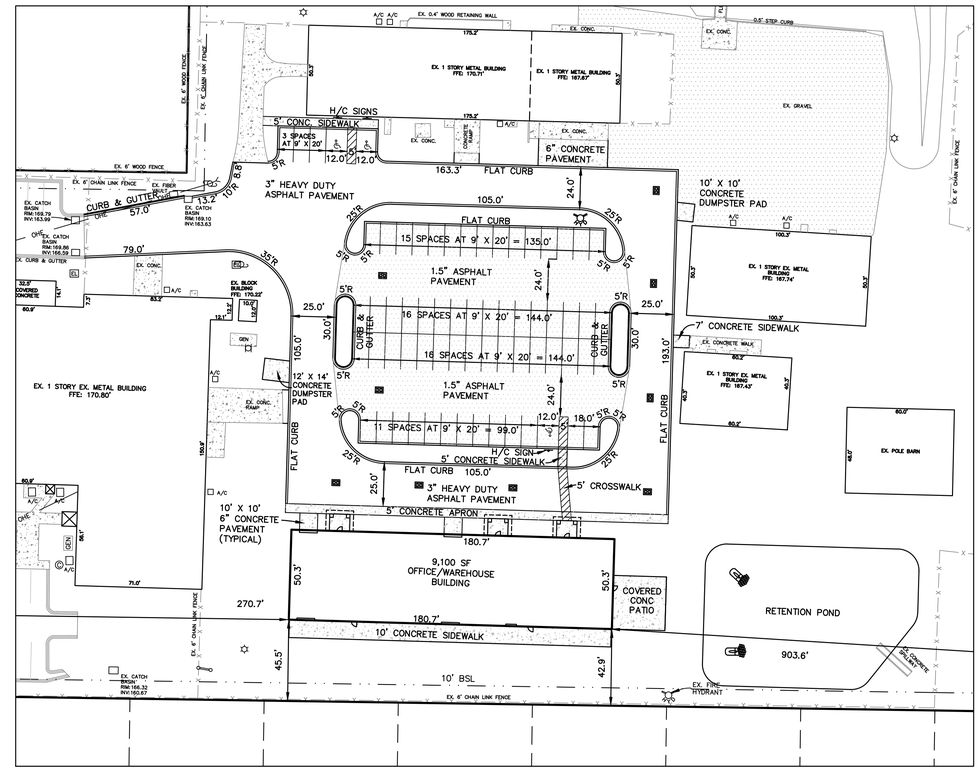
GRAPHIC SCALE

20 0 10 20 40

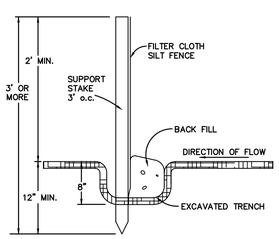
(IN FEET)
SCALE: 1" = 20 ft.



DEMOLITION PLAN



SITE PLAN

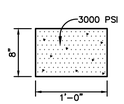


SILT FENCE DETAIL
N.T.S.

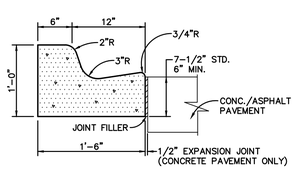
NOTE:
SILT FENCE TO BE CONSTRUCTED AND MAINTAINED AROUND ALL INLETS; ALSO ACROSS DRAINAGE COURSE AT EDGE OF SITE.

EROSION NOTES:

1. ALL SILT FENCING SHALL BE INSTALLED AND SPACED ACCORDING TO FDOT INDEX #102.
2. EROSION PROTECTION, SUCH AS STAKED BALED HAY AND SILT FENCE BARRIERS, MUST BE INSTALLED PRIOR TO START OF CONSTRUCTION.
3. SILT FENCE BARRIER SHALL BE INSTALLED AS SHOWN ON PLANS, AND IN ALL AREAS SUBJECT TO SOIL EROSION SEDIMENTATION, SPECIFICALLY ADJACENT TO ALL BODIES OF WATER AND WETLAND AREAS WHERE THERE IS A POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION.
4. SEDIMENT AND EROSION CONTROL DEVICES SHALL REMAIN IN PLACE THROUGHOUT CONSTRUCTION AND SHALL BE REMOVED AT COMPLETION OF THE PROJECT.

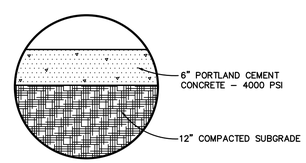


CONCRETE FLAT CURB DETAIL
N.T.S.

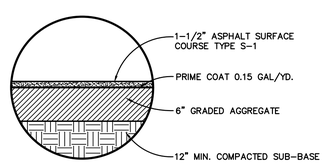


CONCRETE CURB AND GUTTER DETAIL
N.T.S.

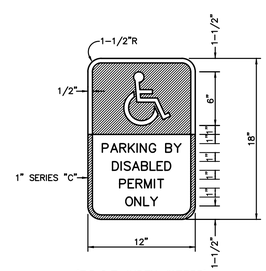
WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT AND THE THICKNESS OF THE LIP SHALL BE 6" MIN., UNLESS OTHERWISE SHOWN ON PLANS. EXPANSION JOINT, PREFORMED JOINT FILLER AND JOINT SEAL ARE REQUIRED BETWEEN CURB AND CONCRETE PAVEMENT OR CONCRETE STRUCTURES.



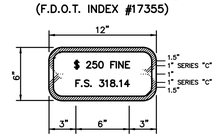
6" CONCRETE PAVEMENT DETAIL
N.T.S.



1-1/2" ASPHALT PAVEMENT DETAIL
N.T.S.



(F.D.O.T. INDEX #17355)



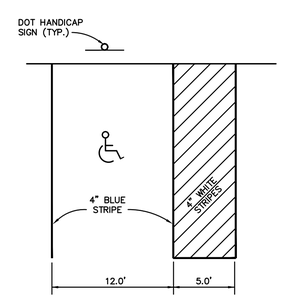
(FTP – 55)

COLOR

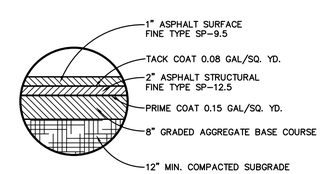
BACKGROUND	WHITE
LEGEND & BORDER	BLACK

THIS PANEL SHALL BE INSTALLED UNDER THE FTP-25 OR FTP-26 HANDICAP PARKING SIGN.

HANDICAP SIGN DETAIL
(F.D.O.T. INDEX No. 700-102)
N.T.S.



HANDICAP AREA STRIPING DETAIL
N.T.S.



3" ASPHALT PAVEMENT DETAIL
N.T.S.

LJA
4300 LEGENDARY DRIVE
SUITE C280
DESTIN, FL 32541
850-446-4365

MARK COOPER SINER LICENSE No. 48831 STATE OF FLORIDA PROFESSIONAL ENGINEER

ENGINEER OF RECORD
MARK SINER, PE
#48831

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ISSUE DATE
15 SEPTEMBER 2026

PROJECT NUMBER
FL2025151

SHEET TITLE
DEMOLITION & SITE PLAN

SHEET NUMBER
C3.0

S:\LAND\SEL\DEST-FLV04 - PROJECTS FWB\2025\2025151-FL8855 - OKALOOSA FACILITIES MAINTENANCE WAREHOUSE\04-CAD\BASE FILES

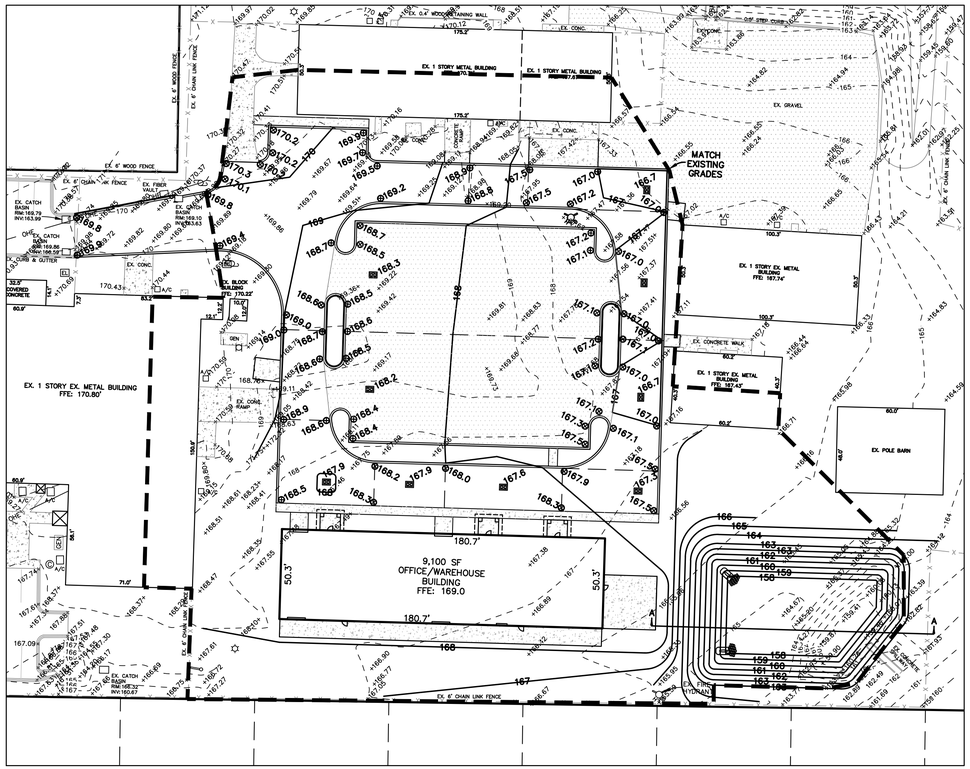
FOR BID

LEGEND

- DIRECTION OF STORMWATER RUNOFF
- FFE — FINISHED FLOOR ELEVATION
- DHW — DESIGN HIGH WATER
- PERC TEST LOCATION
- BENCHMARK
- 5.5 — PROPOSED SPOT GRADE
- +5.00 — EXISTING SPOT GRADE
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- SF — STAKED SILT FENCE
- A — BASIN AREA

NOTES:

1. MATERIAL EXCAVATED FOR STORMWATER MANAGEMENT SYSTEM TO BE USED FOR FILL MATERIAL THROUGHOUT SITE.
2. CONTRACTOR WILL BE RESPONSIBLE FOR MONITROING CONSTRUCTION AND SUBMITTING TO THE DISTRICT NOTICE OF COMMENCEMENT. ENGINEER-OF-RECORD WILL BE RESPONSIBLE FOR AS-BUILT CERTIFICATIONS WHEN PROJECT IS COMPLETED.
3. THE PROPOSED DEVELOPMENT SHALL BE CONSTRUCTED WITH THE LOWEST FLOOR ELEVATION (EXCLUDING BASEMENTS AND NON-HABITABLE GARAGE) NOT LESS THAN ONE (1) FOOT ABOVE THE AVERAGE ACTUAL CROWN OR CENTER LINE OF THE LOWEST ELEVATION OF THE ROAD ABUTTING THE SUBJECT PROPERTY.
4. STORMWATER RETENTION AREAS SHALL BE SODDED.



GRADING PLAN

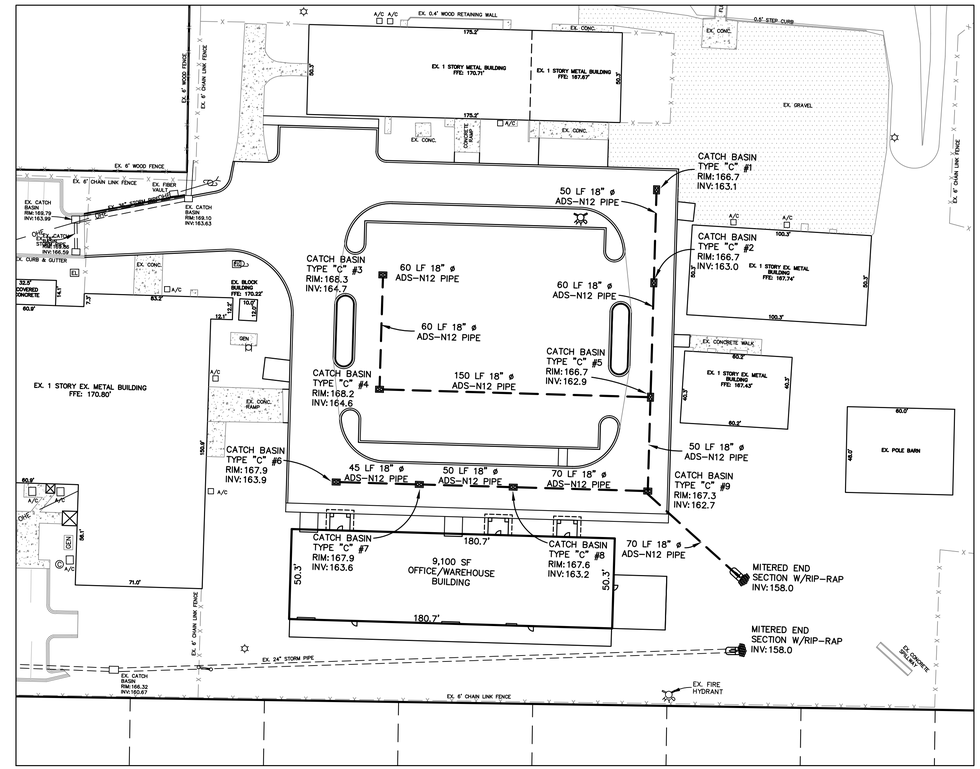
LEGEND

- PROPOSED STORM SEWER PIPE
- CPP — CORRUGATED POLYETHYLENE PIPE
- PCPP — PERFORATED CORRUGATED POLYETHYLENE PIPE
- EXISTING STORM SEWER PIPE
- STORM DRAIN MANHOLE
- CATCH BASIN
- TYPE "9" CURB INLET
- TYPE "3" CURB INLET
- TYPE "4" CURB INLET
- MITERED END SECTION

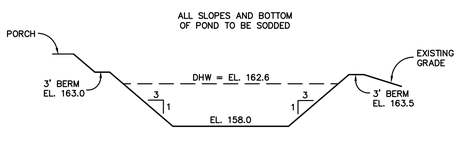
GRAPHIC SCALE

20 0 10 20 40

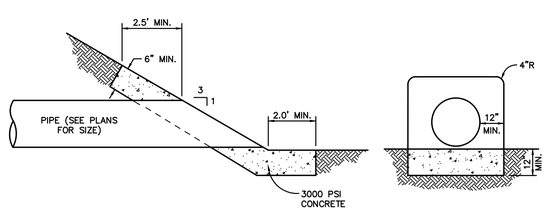
(IN FEET)
SCALE: 1" = 20 ft.



DRAINAGE PLAN



SECTION A-A
N.T.S.



MITERED END SECTION AND CONCRETE COLLAR DETAIL
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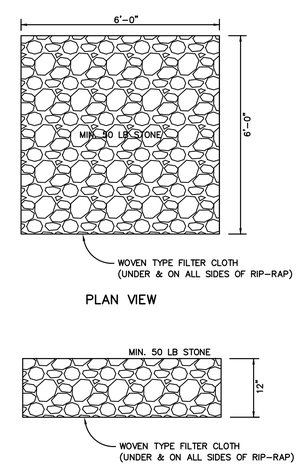
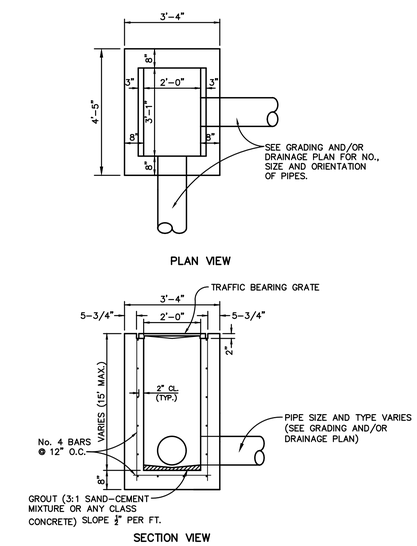


RIP-RAP DETAIL
N.T.S.



TYPE "C" CATCH BASIN DETAIL
(F.D.O.T. INDEX No. 425-052)
N.T.S.

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#48831

NO.	DATE	DESCRIPTION	BY	CHK	APV

OKALOOSA FACILITIES MAINTENANCE WAREHOUSE
CRESTVIEW, FL 32536
PARCEL ID: 12-3N-24-0000-0007-0000

JDF ARCHITECTURE, LLC
CONTACT: JASON FLOYD
201 HOLLYWOOD BLVD.
FORT WALTON BEACH, FL 32548

ISSUE DATE
15 SEPTEMBER 2026

PROJECT NUMBER
FL2025151

SHEET TITLE
GRADING & DRAINAGE PLAN

SHEET NUMBER
C4.0

S:\LAND\SE\DEST-FL\04 - PROJECTS FWB\2025\2025151-FL8855 - OKALOOSA FACILITIES MAINTENANCE WAREHOUSE\04-CAD\BASE FILES

FOR BID

LEGEND

- PROPOSED SANITARY SEWER MAIN
- PROPOSED WATER MAIN
- WSC — WATER SERVICE CONNECTION
- FSC — FIRE SERVICE CONNECTION
- SSC — SEWER SERVICE CONNECTION
- EXISTING GAS MAIN
- EXISTING SANITARY SEWER MAIN
- EXISTING WATER MAIN
- GAS VALVE
- GAS METER
- BACKFLOW PREVENTER
- WATER METER
- FIRE HYDRANT
- WATER VALVE
- IRRIGATION VALVE
- WATER SHUT-OFF
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT

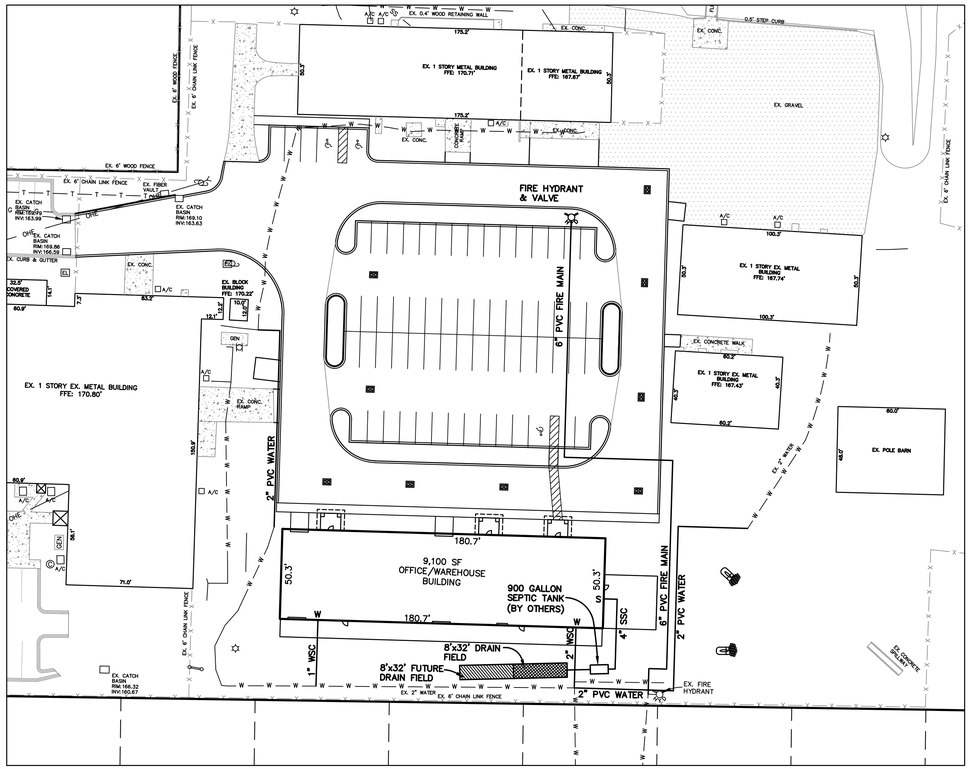
LEGEND

- MAGNOLIA TREE
- MAPLE TREE
- MARSH / WETLANDS
- OAK TREE
- PALM TREE
- PINE TREE
- CEDAR TREE
- DOGWOOD TREE
- PECAN TREE
- SHRUB / BUSH

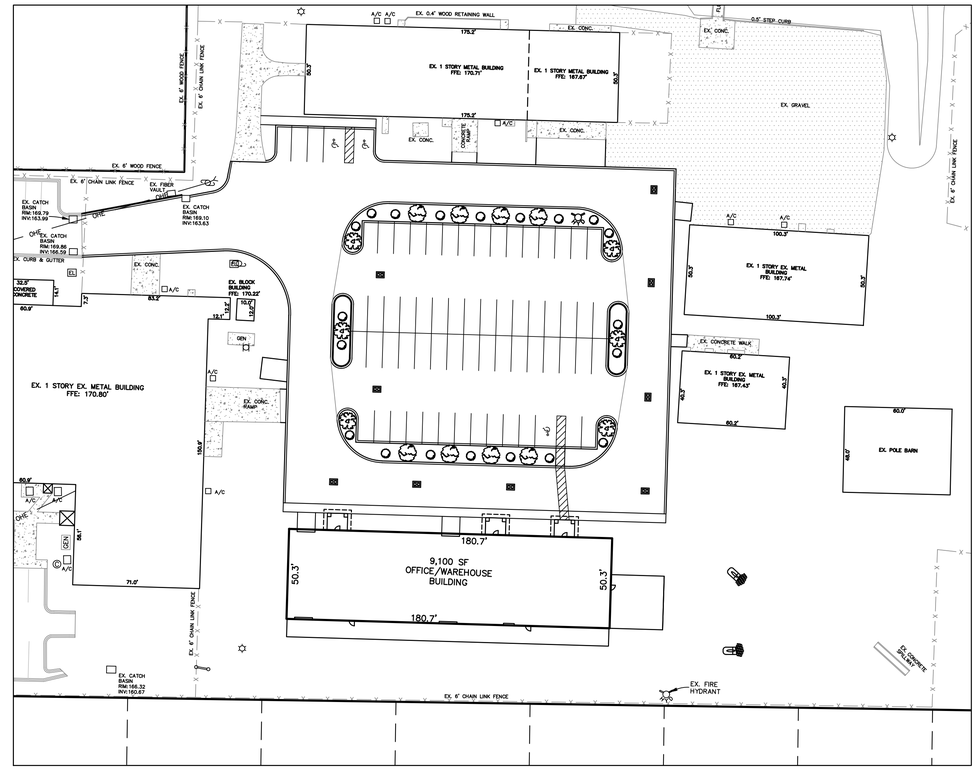
GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
SCALE: 1" = 20 ft.



UTILITY PLAN



LANDSCAPE PLAN

SEWAGE DISPOSAL SYSTEM CALCULATIONS:

ESTIMATED FLOW: WAREHOUSE OFFICE BUILDING (15 EMPLOYEES) 15 GALS. / EMPLOYEE = 225 GALS.
TANK CAPACITY = 900 GALLONS
DRAINFIELD LOADING RATE = 0.9 GALLONS / SQ. FT.
REQUIRED DRAINFIELD AREA = 225 GALS. / DAY / 0.9 GALS. / SQ. FT. = 250 SQ. FT.
PROVIDED DRAINFIELD AREA = 256 SQ. FT.
ADDITIONAL GREEN SPACE PROVIDED = 256 SQ. FT.

NOTE: SEPTIC DRAIN FIELDS ARE NOT PERMITTED WITHIN 75 FEET OF WETLANDS AND STORMWATER RETENTION PONDS.

LANDSCAPE REQUIREMENTS

LANDSCAPE AREA	PLANTING REQUIREMENTS	SITE INFORMATION	PLANTS REQUIRED	PROPOSED VEGETATION
PARKING LOT	1 CANOPY TREE / 15 SPACES 1 UNDERSTORY / 10 SPACES 1 SHRUB / 4 SPACES	66 SPACES	5 CANOPY TREES 7 UNDERSTORY 17 SHRUBS	6 CANOPY TREES 8 UNDERSTORY 18 SHRUBS
PROPOSED LIVE OAK TREE (CANOPY) PROPOSED CREPE MYRTLE OAK TREE (UNDERSTORY) PROPOSED AZALEA BUSH (SHURB)			TOTAL REQUIRED:	6 CANOPY TREES 8 UNDERSTORY 18 SHRUBS
			TOTAL PROPOSED:	6 CANOPY TREES 8 UNDERSTORY 18 SHRUBS

LANDSCAPE NOTES:

1. SHRUBS SHALL BE A MINIMUM OF TWELVE (12) INCHES IN HEIGHT WHEN MEASURED IMMEDIATELY AFTER PLANTING.
2. TREES SHALL HAVE A MINIMUM HEIGHT OF SIX (6) FEET AT THE TIME OF PLANTING. TREES HAVING AN AVERAGE MATURE SPREAD OF CROWN LESS THAN 20 FEET MAY BE ARRANGED IN GROUPINGS SO AS TO CREATE THE EQUIVALENT OF 20-FOOT CROWN SPREAD.
3. ONLY FLORIDA #1 GRADE OR BETTER PLANT MATERIALS AS DESCRIBED BY THE FLORIDA DEPARTMENT OF AGRICULTURE CAN BE PLANTED ON PROJECT SITE.
4. THE REMAINDER OF THE FRONT BUFFER IS TO BE SODDED.
5. A RAIN SENSOR DEVICE OR SWITCH SHALL BE INSTALLED WITH IRRIGATION SYSTEM.
6. IRRIGATION TO BE PROVIDED BY SHALLOW WELL.
7. ALL LANDSCAPING SHALL BE HIGH SALT TOLERANT.

LJA
4300 LEGENDARY DRIVE
SUITE C280
DESTIN, FL 32541
850-446-4365

MARK COOPER SINER LICENSE No. 48831 STATE OF FLORIDA PROFESSIONAL ENGINEER

ENGINEER OF RECORD
MARK SINER, PE
#48831

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FOR BID

SPECIFICATION: CLEARING AND GRUBBING

All site Clearing and Grubbing shall be in accordance with section 110 of the "Florida Department of Transportation Specifications for Road and Bridge Construction" unless modified herein. This work shall be performed in the following areas:

A. All street rights-of-way.
B. All areas where excavation or embankment are to take place.
C. Detention areas.

In addition, certain other areas where underground utilities are to be installed are to be cleared and grubbed to the extent necessary to properly install the utilities. Such work shall be incidental to the contract unit price for the utility to be installed.

SCOPE: Site clearing work includes, but is not limited to:

A. Removal of trees and other vegetation.
B. Topsoil stripping.
C. Clearing and grubbing.
D. Removing above grade improvements.
E. Removing below grade improvements.

JOB CONDITIONS:

Traffic:
Conduct site clearing operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from the Owners and or Local approving authority.

Clearing and Protection in Construction Areas:
Preserve trees 6 inches or larger measured breast height (6"dbh) where possible within construction area.

Protection of Existing Improvements:
Provide protection necessary to prevent damage to existing improvements indicated to remain in place.

Protect improvements on adjoining properties and on project site.

Restore damaged improvements to original condition as acceptable to the Owner.

LIMITATIONS:
Clearing will be limited to the extent necessary to allow for construction of the proposed improvements as a result of:

Need for access to the project site for construction equipment.
Essential grade changes.
Surface water drainage and utility installation.
Location of driveways, buildings, and required parking.

CLEARING AND GRUBBING:
Remove trees, shrubs, grass, other vegetation, improvements, or obstructions interfering with the installation of new construction. Removal includes digging out stumps and roots. Do not remove items elsewhere on site or premises unless specifically indicated. Disposal of trees, limbs, stumps, and debris shall be the responsibility of the Contractor.

Strip topsoil to whatever depths encountered to prevent intermingling with underlying subsoil or other objectionable material. Cut heavy growths of grass from areas before stripping.

Stockpile topsoil in storage piles in areas shown or where directed by the Owner. Construct storage piles to freely drain surface water. Cover storage piles if required to prevent windblown dust.

Dispose of unsuitable or excess topsoil same as specified for waste material.

FILLING:
Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.

Place fill material in horizontal layers not exceeding 6" loose depth, and thoroughly compact to density equal to adjacent ground, unless otherwise shown on the plans.

REMOVAL OF IMPROVEMENTS:
Remove existing above and below grade improvements and abandoned underground piping or conduit necessary to permit construction and other work.

DISPOSAL OF WASTE MATERIALS:
No burning of any material, debris, or trash will be allowed.

Remove waste materials from project site on a daily basis and dispose of off-site in an approved area.

SPECIFICATION: EXCAVATION, EMBANKMENT AND SUBGRADE:

EXCAVATION, EMBANKMENT AND SUBGRADE: Shall be performed in accordance with Section 120 of the Florida D.O.T. Specifications. All subgrade fill material, and the top 12 inches in cut area, shall be compacted to 100 percent of maximum density as determined by AASHTO T-99. The Subgrade Compaction (Stabilization) shall conform to Section 160 of the Florida D.O.T. Specifications. In most cases this will consist of compacting existing cleaned soil. However, it is the contractor's responsibility to assure that the finished roadbed section meets bearing value requirements, regardless of the quantity of stabilizing materials to be added. One field density test shall be taken for each 5000 square feet or fraction thereof.

Where required subgrade density cannot be obtained, unsuitable material shall be removed so that the road base will be constructed on a minimum of 3 feet of suitable, properly compacted material. This work shall be included in the contract lump sum price for earth excavation.

SOIL CEMENT BASE: As a minimum the soil cement base course will conform generally to Section 270 of the Florida D.O.T. Specifications for Road and Bridge Construction. The detailed specifications of the soil cement base course are to be determined by an independent testing laboratory after testing of the material the contractor proposes to use. Moisture and cement content will be specified by the laboratory. However, as a guide for bid purposes, estimate 12% cement by weight and include a price reduction schedule if tests show less cement is required. The soil cement mix will be at optimum moisture content, i.e., neither mushy nor dry, but containing sufficient moisture to make a firm case when squeezed in the hand. Water should not appear on the hand when so squeezed. This requires 5 to 6 gallons per square yard but actual quantity of water to be added will depend on latent moisture in the base material. From a practical standpoint the highest moisture content should be maintained that permits packing and finishing without surface checking, shoving or rutting during compaction and finishing operations.

The freshly compacted and finished soil-cement mix must be adequately cured. An application of bituminous material such as RC-2, MC-3, RT-5 or asphaltic emulsion at the rate of 0.15 to 0.20 gal per square yard is preferred as the curing medium. Waterproof paper or moist hay is acceptable if properly maintained.

SAND-CLAY BASE COURSE: Shall comply with the requirements of Sections 240 and 912 of the Florida D.O.T. Specifications. Tests necessary to determine compliance with Section 912 shall be performed prior to placing the material on the roadbed. These tests include:

	Composition and gradation	Percent of material passing the 10-mesh sieve
1.	Clay (material smaller than 0.005mm)	8 to 21
	Silt (material from 0.005 to 0.005mm)	0 TO 10
	Combined clay and silt	8 to 25
2.	Limerock Bearing Ratio Value(LBR)	Of at least 75
3.	Liquid Limit	Not greater than 25
4.	Plasticity Index	Not greater than 6

The results of these tests shall be submitted to the engineer for approval. After approval of the material, the sand-clay base course shall be placed in accordance with Section 240. The base course shall be compacted to not less than 98 percent of the maximum density as determined by AASHTO T-180. One density test shall be taken for each 5000 square feet or fraction thereof.
NOTE: Sand Clay base material shall not be used in areas where the seasonal high groundwater table is within two (2) feet of the bottom of the base material.

LIMEROCK BASE COURSE: Shall be constructed in accordance with Section 200 of the Florida D.O.T. Specifications for Road and Bridge Construction. The material shall meet the requirements of Section 911 of the Specifications. Tests necessary to determine compliance with Section 911 shall be performed prior to placing the material on the subgrade. These tests include:

Test	Requirement
1. Liquid Limit	Less than 35
2. Plastic Index	Non-Plastic
3. Gradation	97% passing 3.5 inch sieve
4. Limerock Bearing Ratio	Not less than 100

The results of these tests shall be submitted to the engineer for approval. After approval of the material, the limerock base course shall be placed in accordance with Section 200. The base course shall be compacted to not less than 98 percent of the maximum density as determined by AASHTO T-180. A minimum of three density tests shall be made on each days compaction operations. More frequent tests shall be made as deemed necessary by the Engineer. The base shall be installed to a compacted thickness as shown on the plans, plus or minus one half inch. Deviations from this specification shall be corrected as indicated in the State Specifications.

CONTINUED ON NEXT COLUMN

GRADED AGGREGATE BASE COURSE: Shall comply with the requirements of Section 204 of the Florida D.O.T. Specifications. Tests necessary to determine compliance with Section 204 shall be performed prior to placing the material. These tests include:

1. Soundness Loss, Sodium, Sulfate: AASHTO T 104.
2. Percent Wear: AASHTO T 96 (Grading A).
3. Sieve Analysis.
4. Limerock Bearing Ratio Value.

The results of these tests shall be submitted to the engineer for approval. After the approval of the material, the graded aggregate base course shall be placed in accordance with Section 204. The base course shall be compacted to a density of not less than 100 percent of the maximum density as determined by AASHTO T 180. At least three density tests shall be made on each day's final compaction operation of each course, and the density determinations shall be made at more frequent intervals if deemed necessary by the Engineer.

ASPHALT BASE COURSE: Shall comply with the requirements of Sections 280, 330, 331 and 916 of the Florida D.O.T. Specifications. The design mix for Asphaltic Base Course Type 3 shall conform to the requirements in Tables 331-1 and 331-2. The Minimum Marshall stability shall be 1000 lbs./sq. in. as indicated in Table 331-2. Percent bitumen by weight of total mix: 5.0 (minimum). Two copies each of the actual design mix shall be submitted to the Engineer. Written approval of the Asphalt base course design mix must be obtained from the engineer prior to commencing base course construction. Once the design mix has been approved by the engineer, sieve analysis tolerances indicated in Table 331-5 are allowable during construction. If sieve analysis values fall outside these tolerances, design mix must be resubmitted for acceptance. After the approval of the mix design, the Asphalt base course shall be placed in accordance with Section 280 and compacted in accordance with Section 330-10.

NOTE: STORMWATER DRAINAGE SHALL BE CONTROLLED DURING ALL PHASES OF CONSTRUCTION.

SPECIFICATION: ASPHALT CONCRETE PAVING

SCOPE: This section includes materials and work required for installation of flexible asphaltic concrete pavement for parking and drive areas shown on the plans excluding any work in the FDOT right-of-way.

APPLICABLE PUBLICATIONS: The publications listed below form a part of this specification to the extent referenced. The publications shall be the most current issue and are referred to in the text by the basic designation only. The following are minimum requirements and shall govern except that all local, state, and/or federal codes and ordinances shall govern when their requirements are in excess hereof. All asphalt construction shall be in accordance with applicable sections of the "Florida Department of Transportation Specifications for Road and Bridge Construction" unless modified herein.

A. Florida Department of Transportation Specifications:

Section 901	Course Aggregate
Section 902	Fine Aggregate
Section 916	Bituminous Materials
Section 917	Mineral Filler
Section 334	Superpave Asphalt Concrete
Section 337	Asphalt Concrete Friction Course

B. American Society for Testing and Materials (ASTM) Publications:

D 1557	Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb (4.54 kg) Rammer and 18-in. (457 mm) Drop.
D 1559	Marshall Stability Mix Design

SUBMITTALS:

A. Asphalt Design Mix:
1. Before any asphalt surface is constructed, submit two copies of each of the actual design mix to the Engineer and Owner.

2. Written approval of the asphaltic concrete design mix must be obtained from the Engineer and Owner prior to commencing asphalt pavement construction.

B. Material Certificates: Furnish copies of materials certificates signed by material producer and Contractor, certifying that each material item complies with, or exceeds specified requirements.

C. Asphalt extraction tests.

D. Aggregate gradation tests.

JOB CONDITIONS:

A. Weather limitations: Apply prime and tack coats when ambient temperature is above 40 degrees, and when temperature has not been below 35 degrees for 12 hours prior to application. Do not apply when base is wet or contains excess moisture.

MATERIALS:

A. Mineral Filler: Rock dust, hydraulic cement, or other inert material complying with section 917 of the Florida DOT Specifications.

B. Asphalt Cement: The bituminous material shall be AC-20, viscosity grade and comply with section 916 of the Florida DOT Specifications.

C. Course Aggregate: Comply with section 901 of the Florida DOT Specifications.

D. Fine Aggregate: Comply with section 902 of the Florida DOT Specifications.

E. Prime Coat and Tack Coat: The bituminous material for the Prime Coat shall be MC-70. The bituminous material for the Tack Coat shall be AC-20, or Emulsified asphalt, grade RS-2 and comply with the requirements in Section 300 and 916 of the Florida DOT Specifications.

F. Asphaltic Concrete Design Mixes:

1. Asphalt shall conform to the requirements for Type S Asphalt as indicated in Section 334 of the Florida DOT Specifications.

2. Mix shall be within sieve analysis and bitumen range given in Section 334 of the Florida DOT Specifications.

3. Percent bitumen by weight of total weight mix: 5.0 – 8.5.

4. Once design mix has been accepted by Engineer and Owner, sieve analysis tolerances indicated in Table 334-3 are allowable during construction. If sieve analysis analysis values fall outside these tolerances, design mix must be resubmitted for acceptance.

5. Provide asphalt-aggregate mixture as recommended by local or state paving authorities to suit project conditions. Use locally available materials and graduations which meet Florida DOT Specifications and exhibit satisfactory record on previous installations.

BASE COURSE PREPARATION:

A. Prior to construction of the base course, the top 12 inches of subgrade shall be compacted to a minimum soil density of 98% of the Modified Proctor Test Density (ASTM 1557). The subgrade shall be sterilized by a borate or chlorate sterilant containing not less than 25% sodium chlorate and shall be mixed thoroughly with water at the rate of 1-1/2 lbs. of sterilant per gallon of water. The sterilant shall be applied evenly at the rate of 0.2 gallons per square yard to subgrades that are less than 12" below original grades. If perpared base course will not be immediately covered with asphalt on the same day and wind-blown seeds will contaminate the base course surface, the sterilants shall be applied to the base course contaminate the base course.

B. Remove loose material from compacted base material surface immediately before applying prime coat.

C. Proof roll prepared base material surface to ensure unstable areas have been corrected and are ready to receive paving.

CONTINUED ON NEXT COLUMN

D. Prime Coat:

1. Apply bituminous prime coat to base material surfaces where asphaltic concrete paving will be constructed.

2. Apply bituminous prime coat in accordance with Section 300 of Florida DOT Specifications.

3. Apply at minimum rate of not less than 0.15 gal./sq. yd. over compacted base material. Apply material to penetrate and seal, but not flood, surface.

4. Cure and dry as long as necessary to attain penetration and evaporation of volatile.

E. Tack Coat:

1. Tack coat shall be applied in accordance with Section 300 of Florida DOT Specifications. Apply to contact surfaces of previously constructed asphalt or portland cement and concrete and surfaces abutting or projecting into asphalt concrete pavement.

2. Apply tack coat to full depth asphalt base course and sand asphalt base course. Apply emulsified asphalt tack coat between each lift or layer of full depth asphalt and sand asphalt bases and on surface of such bases where asphaltic concrete paving will be constructed.

3. Distribute at rate of 0.02 gal/s.y. on new asphalt, and 0.08 gal/s.y. on milled asphalt.

4. Allow to dry until at proper condition to receive paving.

PLACING ASPHALT MIX:

A. Place asphalt concrete mixture on prepared surface, spread, and strike off. Spread mixture at the following minimum temperatures:

1. When ambient temperature is between 40 degrees F and 50 degrees F: 285 degrees F.

2. When ambient temperature is between 50 degrees F and 60 degrees F: 280 degrees F.

3. When ambient temperature is higher than 60 degrees F: 275 degrees F.

B. Place inaccessible and small areas by hand. Place each course to required grade, cross-section, and compacted thickness.

C. Paver Placing:

1. Place in strips not less than 10'-0" wide, unless otherwise acceptable to the Contracting Officer.

2. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips.

D. Joints:

1. Construct joints between old and new pavements as detailed in the plans.

2. Joints between successive days' work shall be constructed to ensure continuous bond between adjoining work.

3. Construct joints to have same texture, density, and smoothness as other sections of asphalt concrete course.

4. Clean contact surfaces and apply tack coat.

COMPACTION:

A. Each lift of asphalt shall be compacted to a minimum of 98% of the Marshall test ASTM D1559).

B. Begin rolling when mixture will bear roller weight without excessive displacement.

C. Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.

D. Breakdown Rolling:

1. Accomplish breakdown or initial rolling immediately following rolling of joints and outside edge.

2. Check surface after breakdown rolling, and repair displaced areas by loosening and filling, if required, with hot material.

E. Second Rolling:

1. Follow breakdown rolling as soon as possible, while mixture is hot.

2. Continue second rolling until mixture has been thoroughly compacted.

F. Finish Rolling:

1. Perform finish rolling while mixture is still warm enough for removal of roller marks.

2. Continue rolling until roller marks are eliminated and course has attained maximum density.

G. Patching:

1. Remove and replace paving areas mixed with foreign materials and defective areas.

2. Cut out such areas and fill with fresh, hot asphalt concrete.

3. Compact by rolling to maximum surface density and smoothness.

H. Protection:

1. After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.

I. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

FIELD QUALITY CONTROL:

A. An Independent Testing Laboratory, selected and paid by the contractor shall be retained to perform construction testing of in-place asphalt courses for Asphalt Extraction, Aggregate gradation, Marshall Stability, thickness and surface smoothness.

B. Thickness: In-place compacted thickness shall not be less than thickness specified on the drawings.

C. Surface Smoothness: Testing shall be performed on the finished surface of each asphalt concrete course for smoothness, using 10'-0" straightedge applied parallel with, and at right angles to centerline of paved area. The variation of the surface from the edge of the straight edge between any two contact points shall not exceed 1/4". Check surface areas at intervals necessary to eliminate ponding areas. Repair or remove and replace unacceptable paving as directed by the Contracting Officer.

D. Asphalt content, Aggregate gradation, and Marshall Stability shall be as specified in Section 334 of the Florida DOT Specifications.

SPECIFICATION: PORTLAND CEMENT CONCRETE PAVING

SCOPE: This section includes sidewalks, curbs, and miscellaneous concrete pavement.

APPLICABLE PUBLICATIONS: The publications listed below form a part of this specification to the extent referenced. The publications shall be the most current issue and are referred to in the text by the basic designation only. The following are minimum requirements and shall govern except that all local, state, and/or federal codes and ordinances shall govern when their requirements are in excess hereof. All concrete construction shall be in accordance with applicable sections of the "Florida Department of Transportation Specifications for Road and Bridge Construction" unless modified herein.

CONTINUED ON NEXT COLUMN

A. Florida Department of Transportation Specifications:

Section 346	Portland Cement Concrete
Section 350	Cement Concrete Pavement
Section 520	Concrete Gutter, Curb Elements and Traffic Separator
Section 931	Metal Accessory Materials for Concrete Pavement and Concrete Structures

B. American Society for Testing and Materials (ASTM) Publications:

A 615	Deformed and Plain Billet Steel Bars for Concrete Reinforcement
D 1557	Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb. (4.54 kg) Rammer and 18-in. (457 mm) Drop.
D 1751	Preformed Expansion Joint Filler for Concrete Paving and Structural Construction. (Nonextruding and Resilient Bituminous Types)

SUBMITTALS:

A. Material Certifications: Furnish copies of materials certificates signed by material producer and Contractor, certifying that each material item complies with, or exceeds, specified requirements.

MATERIALS:

A. Forms:

1. Steel, wood, or other suitable material of size and strength to retain horizontal and vertical alignment until removal. Use straight forms, free of distortion and defects.

2. Use flexible spring steel forms or laminated boards to form radius bends as required.

B. Form Release Agent:

1. Coat forms with nonstaining type coating that will not discolor or deface surface of concrete.

C. Welded Wire Mesh:

1. Welded plain cold-drawn steel wire fabric. Furnish in flat sheets, not rolls, unless otherwise acceptable to Contracting Officer. Welded wire mesh shall be free from rust, dirt, foreign matter and shall not be stored directly on the ground. Wire fabric shall comply with Sections 931 of the Florida DOT Specifications.

D. Reinforcing Bars:

1. Deformed steel bars, ASTM A 615, Grade 40. Reinforcing bars shall be free from rust, dirt, foreign matter and shall not be stored directly on the ground. Deformed steel bars shall comply with Section 931 of the Florida DOT Specifications.

E. Concrete Materials:

1. Comply with requirements of Sections 346 and 350 of the Florida DOT Specifications for concrete materials, admixture, bonding materials, curing materials, and others as required.

F. Joint Fillers:

1. Resilient premolded bituminous impregnated fiberboard units complying with ASTM D1751. Joint fillers shall comply with Section 932 of the Florida DOT Specifications.

MIXING:

A. Design mix to produce normal weight concrete consisting of Portland cement, aggregate, water-reducing or high-range water reducing admixture (super-plasticizer), air-entraining admixture and water to produce following properties:

1. Compressive Strength: Minimum 3,000 psi for curb and walkways and 4,000 psi for pavement, at 28 days. In addition, concrete for pavement shall have a minimum modulus of rupture of 600 psi.

2. Slump Range: 3"-5".

3. Air Content: 3% to 6%.

PREPARATION:

A. Surface Preparation:

1. Remove loose material from compacted base material surface immediately before placing concrete.

B. Compact the top 12 inches of subgrade to a minimum soil density of 98% for the Modified Proctor Test (ASTM D1557) to result in a minimum modulus of subgrade reaction (k) of 150 psi/in. Proof-roll prepared base material surface to check for unstable areas. The paving work shall begin after the unsuitable areas have been corrected and are ready to receive paving. Compaction testing for the base material shall be completed prior to the placement of the paving.

CONCRETE INSTALLATION:

A. Form Construction:

1. Set forms to required grades and lines, rigidly braced and secured. Install sufficient quantity of forms to allow continuous progress of work and so that forms can remain in place at least 24 hours after concrete placement.

2. Check completed formwork for grade and alignment to following tolerances:

A. Top of forms not more than 1/8" in 10'-0".

B. Vertical face on longitudinal axis, not more than 1/4" in 10'-0".

3. Clean forms after each use, and coat with form release agent as often as required to ensure separation from concrete without damage.

B. Reinforcement:

1. Locate, place, and support reinforcement to ensure compliance with plans.

C. Concrete Placement:

1. Comply with requirements of Sections 346, 350, and 520 of Florida DOT Specifications for mixing and placing concrete.

2. Do not place concrete until base material and forms have been checked for line and grade. Moisten base material if required to provide uniform dampened condition at time concrete is placed. Concrete shall not be placed around manholes or other structures until they are at the required finish elevation and alignment.

3. Place concrete using methods, which prevent segregation of mix. Consolidate concrete along face of forms and adjacent to transverse joints with internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Consolidate with care to prevent dislocation of reinforcing, dowels, and joint devices.

4. Deposit and spread concrete in continuous operation between transverse joints, as far as possible. If interrupted for more than 1/2 hour place construction joint.

D. Curbs and Gutters:

1. Automatic machine may be used for curb and gutter placement at Contractor's option. Machine placement must produce curbs and gutters to required cross section, lines, grades, finish, and jointing as specified for formed concrete. If results are not acceptable, remove and replace with formed concrete as specified.

CONTINUED ON NEXT SHEET

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4300 LEGENDARY DRIVE
SUITE C280
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850-446-4365

MARK COOPER SINER
LICENSE
No. 48831
STATE OF FLORIDA
PROFESSIONAL ENGINEER

ENGINEER OF RECORD
MARK SINER, PE
#48831

NO.	DATE	DESCRIPTION	BY	CHK	APV

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CRESTVIEW, FL 32536
PARCEL ID: 12-3N-24-0000-0007-0000

JDF ARCHITECTURE, LLC
CONTACT: JASON FLOYD
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SHEET TITLE
SPECIFICATIONS
(1 OF 2)

SHEET NUMBER
C6.0

S:\LAND\SE\DEST-FL\04 - PROJECTS FWB\2025\2025151-FL88S5 - OKALOOSA FACILITIES MAINTENANCE WAREHOUSE\04-CAD\BASE FILES

FOR BID

JOINT CONSTRUCTION:

A. Construct expansion, weakened-plane (Contraction), and construction joints true-to-line with face perpendicular to surface of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.

1. Weakened-Plane (Contraction) Joints:

A. Provide weakened-plane (contraction) joints, sectioning concrete into areas at 15'-0" o.c. maximum each way.

B. Sidewalks shall have contraction joints at 5'-0" o.c.

C. Construct weakened-plane joints for depth equal to at least 1/4 concrete thickness.

2. Tooled Joints:

A. Form weakened-plane joints in fresh concrete by grooving top portion with recommended cutting tool and finishing edges with jointer.

B. Construction Joints:

1. Plan concrete placement such that construction joints fall at expansion joints as detailed in the plans.

C. Expansion Joints:

1. Provide premolded joint filler for expansion joints abutting concrete curbs, catch basins, manholes, inlets, structures, walks, and other fixed objects.

2. Locate expansion joints at 40'-0" o.c. maximum for each pavement lane or for curb.

3. Locate expansion joints at 50'-0" o.c. maximum for walkways.

D. Joint Fillers:

1. Extend joint fillers full-width and depth of joint, and not less than 1/2" or more than 1" below finished surface where joint sealer is indicated.

2. Furnish joint filler in one-piece lengths for full width being placed, wherever possible. where more than one length is required, lace or clip joint filler sections together.

E. Joint Sealants:

1. Exterior pavement joint sealants shall be composed of a non-priming, pourable, self-leveling type polyurethane sealant, such as grey shep-calk, or approved equal suitable for use in pavements and sidewalks.

CONCRETE FINISHING:

A. After striking-off and consolidating concrete, smooth surface by screeding and floating. Adjust floating to compact surface and produce uniform texture.

B. After floating, test surface for trueness with 10'-0" straightedge (maximum deviation of 1/4 inch). Distribute concrete as required to remove surface irregularities, and refloat repaired areas to provide continuous smooth finish.

C. Work edges of slabs, gutters, back top edge of curb, and formed joints with an edging tool, and round to 1/2" radius. Eliminate tool marks on concrete surface.

D. After completion of floating and troweling when excess moisture or surface sheen has disappeared, complete surface finishing as follows:

1. Curbs, Gutters, and Walks:

A. Broom finish by drawing fine-hair broom across concrete surface perpendicular to line of traffic. Repeat operation if required to provide fine line texture.

2. Inclined Slab Surfaces:

A. Provide coarse, nonslip finish by scoring surface with stiff-bristled broom perpendicular to line of traffic.

3. Paving:

A. Burlap finish by dragging seamless strip of damp burlap across concrete perpendicular to line of traffic. Repeat operation to provide gritty texture.

E. Do not remove forms for 24 hours after concrete has been placed. After form removal, clean ends of joints and point up any minor honeycombed areas. Remove and replace areas or section with major defects, as directed.

F. Protect and cure finished concrete paving in accordance with "Florida Department of Transportation Specifications for Road and Bridge Construction" section 350-13.

CLEANING AND ADJUSTING:

A. Repair or replace broken or defective concrete as directed.

B. Protect concrete from damage until acceptance of work. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials.

C. Sweep concrete pavement and wash free of stains, discolorations, dirt, and other foreign material just prior to final inspection.

SPECIFICATION: FENCING

The Contractor shall install fencing as shown on the plans and in accordance with the manufacturer's brochure. The following are minimum requirements and shall govern except that all local, state and/or federal codes and ordinances shall govern when their requirements are in excess hereof.

MATERIAL CERTIFICATES:
Furnish copies of materials certificates signed by material producer and Contractor, certifying that each material item complies with, or exceeds, specified requirements.

MATERIALS:
All materials and equipment incorporated in the work shall be new, clean, and free of visual defects unless otherwise specified, and that all work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All work not conforming to these requirements may be considered defective.

Height shall be as required as shown on the construction plans.

Fabric shall be #9 gauge, chain link open hearth steel wire, hot-dipped galvanized after weaving with minimum coating of 2.0 ounce of zinc per square foot or aluminum coating with .40 ounces per square foot, woven in 2" diamond mesh.

Line post, top, intermediate and bottom rails, shall be 1 5/8" O.D. steel pipe, weight 2.27 lbs per foot, hot-dipped galvanized. Set 36" deep in concrete.

Terminal, corner, gate and pull posts shall be 3" O.D. pipe, 5.79 lbs. Set 36" deep in concrete.

Concrete for setting posts shall be Portland Cement complying with ASTM C-150, aggregates complying with ASTM C-33, and clean water. Mix materials to obtain concrete with a minimum 28-day compressive strength of 2,500 psi.

Stretcher bar bands, tie wires, hog rings, couplings, nuts, stretcher bars, bolts, and miscellaneous fastening devices shall be manufacturer's standard for heavy construction fence.

Swing gates shall consist of the following components.

2" O.D. steel pipe 2.72 lbs. per foot, hot-dipped galvanized. Each frame to be equipped with 3/8" diameter adjustable truss rods.

Hinges shall be hot-dipped galvanized pressed steel or malleable iron to suit gate size, non-lift-off type. Hinges shall be offset to permit 180 degrees opening. Provide one (1) pair of hinges per lead.

Latch shall be forked type to permit operation from either side with provisions to lock both leaves with padlock.

ACCEPTABLE MANUFACTURERS: Cyclone Fence, Page Fence, and Hackney Corporation.

OKALOOSA COUNTY SPECIFICATIONS

CONTINUED ON NEXT COLUMN

SPECIFICATION: TRAFFIC STRIPING AND PAINTING

The Contractor shall paint traffic striping as shown on the plans. The following are minimum requirements and shall govern except that all local, state and/or federal codes and ordinances shall govern when their requirements are in excess hereof. All traffic striping and painting shall be in accordance with sections 710 and 971 of the "Florida Department of Transportation Specifications for Road and Bridge Construction" and "Florida Department of Transportation Roadway and Traffic Design Standards.

MATERIAL CERTIFICATES:
Furnish copies of materials certificates signed by material producer and Contractor, certifying that each material item complies with, or exceeds, specified requirements.

TRAFFIC STRIPING AND PAINTING:
Traffic control markings shall be marked on pavement as indicated on drawings.

Paint shall be in sealed containers that plainly show the designated name, formula or specification number, batch number, color, date of manufacture, manufacturer's name, formulation number, and directions, all of which shall be plainly legible at the time of use. The paint shall be homogeneous, easily stirred to smooth consistency, and shall show no hard settlement or other objectionable characteristics during a storage period of six months.

All machines, tools, and equipment used in performance of the work shall be approved and maintained in satisfactory operating condition. Hand-operated push-type machines of a type commonly used for application of paint to pavement surfaces shall be acceptable for marking small street and parking areas. Applicator machines shall be equipped with necessary paint tanks and spraying nozzles, and shall be capable of applying paint uniformly at the coverage specified. Sandblasting equipment shall be provided as required for cleaning surfaces to be painted. Hand-operated spray guns shall be provided for use in areas where push-type machines cannot be used.

New pavement surfaces shall be allowed to cure for a period of not less than thirty days before application of marking materials. All surfaces to be marked shall be thoroughly cleaned before application of the paint. Dust, dirt, and other granular surface deposits shall be removed by sweeping, blowing with methods as required. Rubber deposits, surface laitance, existing paint markings and other coatings adhering to the pavement shall be completely removed with scrapers, wire brushes, sandblasting, approved chemicals, or mechanical abrasion as direction.

Paint shall be applied evenly to the pavement surface to be coated at a rate of 105 plus or minus 5 square feet per gallon. Paint shall be applied as shown on the drawings.

Paint shall be applied to clean, dry surfaces, and unless otherwise approved, only when air and pavement temperatures are above 40 degrees F and less than 95 degrees F. Paint temperature shall be maintained within these same limits. Paint shall be applied pneumatically with approved equipment at rate of coverage specified herein. The Contractor shall provide guidelines and templates as necessary to control paint application. Special precautions shall be taken in marking numbers, letters, and symbols. All edges of marking shall be sharply outlined. The maximum drying time requirements of the paint specifications will be strictly enforced, to prevent undue softening bitumen, and pickup, displacement, or discoloration by tires of traffic. If there is a deficiency in drying of the markings, painting operations shall be discontinued until cause of the slow drying is determined and corrected.

Suitable warning signs shall be placed near the beginning of the worksite and well ahead of the worksite for alerting approaching traffic from both directions. Small markers shall be placed along newly painted lines to control traffic and prevent damage to newly painted surfaces. Painting equipment shall be marked with large warning signs indication that slow moving painting equipment is in operation.

Markings which must be visible at night shall be reflectorized unless ambient illumination assures adequate visibility.

SPECIFICATION: WATER DISTRIBUTION SYSTEM

The Contractor shall provide and install all materials for a potable water distribution system as shown on the drawings and in this specification. In addition, he shall obtain all permits and conduct all tests required by local, state and federal authorities and as specified on these drawings.

MATERIALS:
All materials and equipment incorporated in the Work shall be new, clean, and free of visual defects unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not conforming to these requirements may be considered defective.

Piping:

Less than 4" inches in diameter:	
Polyvinyl Chloride (PVC) 160 psi, SDR 26	ASTM D-2241
Polyethylene pipe 160 psi, SDR 9	ASTM D-3350 & ASTM D-2239
Polyethylene tubing 200 psi, SDR 9	ASTM D-3350 & ASTM D-2737
Greater than 4" inches in diameter:	
Polyvinyl Chloride (PVC) 150 psi	AWWA C-900 (DR 18)
Ductile Iron (Class 50)	ANSI A21.51

Joints:
Joints for PVC pipes:
Joints shall comply with ASTM D-3139
No solvent cements or toxic lubricant will be allowed.
Expansion capability will be provided.

Joints for Ductile Iron pipes:
Joints shall comply with AWWA C-153 or AWWA C-110

Gate Valves:
Valves shall comply with AWWA C-509
200 psi iron body, bronze mounted, Non-rising stems with square operating nuts and a suitable valve box.

INSTALLATION:
Shall comply with all local, state and federal regulations. The Contractor shall provide proper facilities for handling and laying pipe and accessories. No pipe will be laid in unsuitable weather or in water. The Contractor will verify all field dimensions with the design Engineer (including Field Stake-Out) prior to commencing work. The contractor shall notify the Engineer at least 24 hours prior to installing any portion of the water main distribution system. He shall also stake all service connections and provide as-built dimensions to the Engineer. Connections to the existing system shall be coordinated with the utility company. Minimal service interruption shall occur and traffic safeguards shall be taken.

The Contractor shall conduct hydrostatic pressure and leakage tests as follows:
Apply 150 psi or 150% of the working pressure whichever is greater to the test line. Duration of the pressure test shall be at least two (2) hours. After 1/2 hour, check pressure, if pressure has dropped, inspect for leaks and correct as required. Repeat tests until there are no leaks or pressure loss. Pressure must hold for two hours.

NOTE: The contractor shall notify the utility company and the Engineer at least 48 hours prior to conducting pressure and leakage tests. A 3/4" hose bibb connection will be required for guage connection.

The Contractor shall sterilize the lines by chlorinating at 40 to 50 ppm, injecting at a corporation stop and operating all valves and accessories. Flush system. Subsequent tests on replacement water shall show a chemical and bacterial count equal to the supply main. Samples shall be taken by and tested at the expense of the Contractor, and results shall be acceptable to local, state and federal agencies of interest.

NOTES:
All water piping and fittings used shall be National Sanitation Foundation (N.S.F). approved for potable water.

A minimum separation of 10 ft. horizontal, outside to outside and 18 inches vertical is required between all water lines and the sanitary sewer system.

When trench excavation depth exceeds five feet, the Contractor shall provide trench protection (shields, sloping, shoring, etc.) and shall comply with OSHA Standard 29 CFR, Section 1926.650 Subpart P.

In accordance with rules of the Florida Department of Environmental Protection (DEP), Chapter 62-555, the Engineer of record will be responsible for observation of construction of the Potable Water System. The Engineer SHALL be notified at commencement and completion of construction. To assure compliance with plans and specifications, said Engineer will report to DEP upon completion of construction and cleaning and disinfecting described above before the system can be placed in service.

All PVC potable water lines and services will be marked with No. 14 copper insulated tracer wire to enable location with a Ferrous Metal Detector. The tracer wire will be placed 12 inches above and throughout the length of all such pipe.

CONTINUED ON NEXT COLUMN

FIRE HYDRANTS:
All fire hydrants shall be 6 inch, three way hydrants with two 2-1/2 inch hose nozzles and one 4-1/2 inch pumper nozzle, designed for 150 lbs working pressure or 300 lbs hydrostatic pressure and shall conform to the latest specifications of the AWWA. All working parts shall be bronze. All hose threads shall be National Standard Threads. Hydrants shall have a mechanical joint end inlet. Hydrants shall be Traffic Breakaway Model. The hydrant main valve shall be a compression type that closes with the water pressure. Hydrants shall have not less than a 5-1/4 inch valve opening. All hydrants shall be equipped with automatic self-oiling reservoirs that lubricate the stem threads and all bearing surfaces each time the hydrant is operated. Hydrants shall be painted one coat of red iron oxide, zinc oxide primer conforming to Steel Structures Painting Council SSPC-paint 25 and two finish coats of silicone alkyd paint conforming to Steel Structures Painting Council SSPC-paint 21. Fire hydrants shall be painted in accordance with NFPA 291, Recommended Practice For Fire Flow Testing and Marking of Hydrants.

SPECIFICATION: SANITARY SEWER SYSTEM

The Contractor shall provide and install all gravity sewer material shown on the drawings and in this specification. In addition, he shall obtain all permits and conduct all tests required by local, state and federal authorities and as specified on these drawings.

MATERIALS:
All materials and equipment incorporated in the Work shall be new, clean, and free of visual defects unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not conforming to these requirements may be considered defective.

Piping:	PVC Gravity Sewer	ASTM D-3034, SDR-35
	Ductile Iron Pipe (D.I.P.)	ANSI A21.51
	PVC Force Mains (160 psi)	ASTM D-1784 and D 2241
Joints:	PVC, Rubber Ring	ASTM D-1869
	D.I.P. Joints, Rubber Gasket	ANSI A21.11

NOTE: ALL JOINTS TO BE BELL AND SPIGOT TYPE.

Concrete: Poured or Pre-cast 4000 psi at 28 days;

INSTALLATION:
Shall comply with all local, state and federal regulations. The Contractor shall provide proper facilities for handling and laying pipe and accessories. Trenches shall be properly prepared; pipe shall be supported over its full length and bell holes hand dug as required. No pipe will be laid in unsuitable weather or in water. The Contractor will verify all field dimensions and report all discrepancies (including field stake-out) prior to commencing work. The contractor shall notify the Engineer at least 24 hours prior to installing any portion of the sanitary sewer system. He shall also stake all service connections and provide as-built dimensions to the Engineer. Manholes, cleanouts and the like shall be located, built and sized as shown on these drawings. Connections with existing sewer systems shall be coordinated by the Contractor with the utility company.

A minimum separation of 10 ft. horizontal measured outside to outside and 18 inches vertical is required between sanitary sewer lines and all water lines.

When trench excavation depth exceeds five feet, the Contractor shall provide trench protection (shields, sloping, shoring, etc.) and shall comply with OSHA Standard 29 CFR, Section 1926.650 Subpart P.

In accordance with rules of the Florida Department of Environmental Protection (DEP), Chapter 62-604, the Engineer of record will be responsible for observation of construction of the Sanitary Sewer System. The Engineer SHALL be notified at commencement and completion of construction. To assure compliance with plans and specifications, said Engineer will report to DEP upon completion of construction before the system can be placed in service.

The Contractor shall coordinate all tests with the utility company and the Engineer. All lines, fittings and manholes shall be clean and dry before conducting tests. Tests and subsequent corrections shall be at the expense of the Contractor.

GRAVITY SEWERS:
Leakage tests by exfiltration and/or infiltration will be made on all pipe. Generally, the exfiltration method is used when the groundwater is low enough that filling the sewer system can provide a minimum of 2 feet of positive head within the sewer system. The infiltration method is used when the ground water provides a minimum of 2 feet of positive head outside the sewer line. Infiltration amounts may be measured by the accumulated water in the lower end manhole or lift station in the system or by installsation of a V-notch sharp crested wier in a wood frame rightly secured at the low end of each sewer lateral or at locations on the sewer main. Duration of test shall be not less than two (2) hours. Visible leaks encountered shall be corrected regardless of leakage test results. Leakage as measured by either the infiltration or exfiltration test shall not exceed 0.157 gallons per inch diameter per 100 feet of pipe per hour. When leakage exceeds the maximum amount specified, satisfactory correction shall be made and retesting accomplished.

Deflection testing shall be done on all flexible pipe at the direction of the Engineer. Testing shall be done using a mandrel having a diameter equal to 95 percent of the inside diameter of the pipe. When a deflection device is used in lieu of the mandrel, such device shall be approved by the Engineer prior to use. No pipe deflection shall exceed 5 percent.

FORCE MAINS:
The Contractor shall conduct hydrostatic pressure and leakage tests as follows:
Apply 100 psi or 150% of the working pressure, whichever is greater, to the test line. Duration of the pressure test shall be at least two (2) hours. After 1/2 hour, check pressure, if pressure has dropped, inspect for leaks and correct as required. Repeat tests until there are no leaks or pressure loss. Pressure must hold for two hours.

NOTE: The contractor shall notify the utility company and the Engineer at least 24 hours prior to conducting pressure and leakage tests.

Force mains shall have thrust blocks designed for 100 PSI test pressure. Force Mains shall be colored other than white to distinguish from water lines. Force Mains in the right-of-way shall have 30 inches (minimum) cover over the crown.

All sanitary sewer force mains will be marked with No. 14 copper insulated tracer wire to enable location with a Ferrous Metal Detector. The tracer wire will be placed 12 inches above and throughout the length of all such pipe.

MANHOLES:
Shape: All manholes will be eccentric or as specified on the drawings.

Setting Manhole Castings: The frame of the casting shall be set in a full mortar bed composed of one part Portland Cement to two parts of fine aggregate.

Concrete: The minimum compressive strength required at twenty-eight days is 4,000 pounds per square inch. The minimum amount of water shall be used to produce a workable mix and shall not exceed six (6) U.S. Gallons per sack of cement. Concrete shall conform to ASTM Specification ASTM C-94.

Pre-cast Reinforced Concrete Manhole Sections: Pre-cast reinforced concrete manhole sections shall conform to ASTM Specification C-478. All joints for pre-cast sections shall be approved by the Engineer.

Castings: Cast iron frames and covers shall conform to the drawings in all essentials of design. All castings shall be made of clean, even grain, tough gray cast iron. The quality of iron in the castings shall conform to the current ASTM Specification A-48 for Class 20 Gray Iron Castings. The weight of castings shall be as shown in the plans. Castings shall be smooth, true to pattern, and free from projections, sand holes, or defects. A raised word "SEWER" shall be cast on the upper non-skid surface of all manhole covers. The portion of the frame and cover which forms the cover seat shall be machined so that no rocking of the cover is possible. The castings shall be coated with coal tar pitch varnish. On roadways the frame and cover shall be set flush with and in the plane of the surface. In other locations they shall be set to grades determined by the Engineer. A shop drawing of the manhole frame and cover must be approved by the Engineer for all covers and frames furnished on the project.

Water-Proofing: Both concrete and pre-cast sections below grade shall be painted on the outside with either two coats of bitumastic paint or a heavy layer of emulsified asphalt to water-proof completely. Manholes shall be inspected for water tightness prior to being placed in service. All incoming and outcoming sewer lines shall be plugged and the manhole filled with water to a level to create a minimum positive head of two feet or above the highest section joint. If the water level drop exceeds 1/8" per vertical foot of manhole depth in 5 minutes, the manhole shall have failed the test.

GENERAL:
Grout all riser joints and entry pipes.
Provide neat cement seals for pre-cast units.
Minimum radius allowed is 20 inches.
Invert grouting shall be uniform and smooth-sloped to center line of pipe.

NOTE: Roof drains, foundation drains and all other clean water connections to the sanitary sewer system are prohibited.

CONTINUED ON NEXT COLUMN

SPECIFICATION: STORM SEWER SYSTEM

The Contractor shall provide and install all storm sewer material shown on the drawings and in this specification. In addition, he shall obtain all permits and conduct all tests required by local, state and federal authorities and as specified on these drawings.

MATERIALS:
All materials and equipment incorporated in the Work shall be new, clean, and free of visual defects unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not conforming to these requirements may be considered defective.

Corrugated Polyethylene Pipe:
Shall comply with section 948 of the latest edition "Florida Department of Transportation Specifications for Road and Bridge Construction" unless modified herein. Pipes 12 inches to 24 inches in diameter shall comply with ASTM F-405 and ASTM F-667. Joints shall be by means of dimpled band. If used outside of dry wells, joints shall be wrapped in filtercloth 2 feet in width and with 2 feet of overlap on the diameter. This pipe, in the perforated form, shall be used inside dry wells. It may be used outside dry wells only when used with a filter sock. Perforations shall be 1/4 inch diameter and spaced 10 inches on center in the valley of the corrugations.

Polyvinyl-Chloride Pipe:
Shall comply with section 948 of the latest edition "Florida Department of Transportation Specifications for Road and Bridge Construction" unless modified herein. Polyvinyl-Chloride Pipe shall meet the requirements of ASTM D 3034, SDR-35, or ASTM F 949, profile wall without perforations. Polyvinyl-Chloride Pipe for use as underdrain shall conform to the requirements of ASTM F 758 or ASTM F 949. Also, PVC underdrain manufactured from PVC pipe meeting ASTM D 3033 or ASTM D 3034, perforated in accordance with the perforation requirements given in AASHTO M 36, or AASHTO M 196 will be permitted.

Reinforced Concrete Pipe:
Shall comply with requirements of ASTM C 76, Class III, unless otherwise indicated on the Drawings, and shall be installed with rubber gasketed joints complying with ASTM C 443. Install rubber gaskets in strict accordance with pipe manufacturer's recommendations.

Manholes:
Precast reinforced concrete manhole sections shall conform to ASTM Specification C-478. Construct manholes of precast concrete sections as required by Drawings to size, shape, and depth indicated, but never less than 4-0" inside diameter. All joints for precast sections shall be approved by the engineer.

Inlets/Catch Basins:
Precast reinforced concrete Inlets/Catch Basins sections shall conform to ASTM Specification C-478. Construct Inlets/Catch Basins of precast concrete construction as required by Drawings to size, shape, and depth indicated.

Main and Lateral Pipes:
Neatly cut off main and lateral pipes flush with inside of manhole or inlet where they enter structure walls. Dress all irregularities and rough edges with non-shrinking grout (inside and outside).

Where pipes enter or exit manholes, a "Kor-N-Seal" molded neoprene boot with stainless steel internal and external bands as manufactured by the National Pollution Control Systems, Inc., Nashua, New Hampshire, or a polyurethane joint with a short transition joint as manufactured by Moorform Corporation, Centralia, Illinois, or an approved equal (or superior) connection shall be provided.

Cast Iron Frames, covers, and Grates:
After completion of manhole inlet, set cast iron frame in full mortar bed after adjusting to required elevation. Cast iron frames and covers shall conform to the drawings in all essentials of design. All castings shall be made of clean, even grain, tough gray cast iron. The quality of iron in the castings shall conform to the current ASTM Specification A-48 for Class 20 Gray Iron Castings. The weight of castings shall be as shown in the plans. Castings shall be smooth, true to pattern, and free from projections, sand holes, or defects. A raised word "STORM SEWER" shall be cast on the upper non-skid surface of all manhole covers. The portion of the frame and cover which forms the cover seat shall be machined so that no rocking of the cover is possible. The castings shall be coated with coal tar pitch varnish. On roadways the frame and cover shall be set flush with and in the plane of the surface. In other locations they shall be set to grades determined by the engineer. The frame and cover shall be heavy duty traffic bearing.

Plastic Filter Fabric:
Plastic Filter Fabric shall be the non-woven type and shall comply with sections 514 and 985 of the latest edition "Florida Department of Transportation Specifications for Road and Bridge Construction" unless modified herein.

Concrete:
Concrete shall comply with sections 345 of the latest edition "Florida Department of Transportation Specifications for Road and Bridge Construction" unless modified herein.. Minimum compressive strength at 28 days shall be 4,000 psi.

DETENTION AREAS AND GRASSED SWALES:
Swales must be landscaped with seeding, sodding, or sprigging, which does not inhibit the infiltration rate of the soil. Engineer requires 48 hours notice prior to landscaping of infiltration areas to make appropriate inspections.

The system will require periodic maintenance for continued proper operation. This will include, as a minimum: A) removal of silt debris from surface infiltration areas and catch basins, and B) maintenance of vegetative cover in surface infiltration areas.

STORMWATER DRYWELLS:
Drywells shall be constructed to the dimensions as detailed in the plans. The washed granular material shall have of a void ratio of not less than 0.4 and the gradation shall conform to section 901 of the latest edition "Florida Department of Transportation Specifications for Road and Bridge Construction". The dry well shall be completely wrapped in woven (as opposed to spun) filter cloth with a minimum 2 feet of overlap at field joints. The dry well shall contain a perforated pipes as detailed in the plans.

INSTALLATION:
The Contractor shall comply with all local, state and federal regulations. The Contractor shall provide proper facilities for handling and laying pipe and accessories. Trenches shall be properly prepared; pipe shall be supported over its full length and bell holes hand dug as required. No pipe will be laid in unsuitable weather or in water. The Contractor will verify all field dimensions and report all discrepancies (including field stake-out) prior to commencing work. The contractor shall notify the Engineer at least 24 hours prior to installing any portion of the storm sewer system. He shall also stake all service connections and provide as-built dimensions to the Engineer. Manholes, cleanouts and the like shall be located, built and sized as shown on these drawings. Connections with existing storm sewer systems shall be coordinated by the Contractor with the Utility Authority. Adequate traffic control shall be provided.

A minimum separation of 10 ft. horizontal measured outside to outside and 18 inches vertical is required between storm sewer lines and all water lines.

When trench excavation depth exceeds five feet, the Contractor shall provide trench protection (shields, sloping, shoring, etc.) and shall comply with OSHA Standard 29 CFR, Section 1926.650 Subpart P.

In accordance with rules of the Florida Department of Environmental Protection (DEP), Chapter 62-25, the Engineer of record will be responsible for observation of construction of the Storm Sewer System. The Engineer SHALL be notified at commencement and completion of construction. To assure compliance with plans and specifications, said Engineer will report to DEP upon completion of construction before the system can be placed in service.

TESTS:
The Contractor shall coordinate all Tests and Inspections with the Utility Authority and the Engineer. All lines, fittings and manholes shall be clean and dry before the Inspector is summoned. Tests and subsequent corrections shall be at the expense of the Contractor.

Non-Perforated Storm Sewers:
Leakage tests by exfiltration and/or infiltration will be made on all pipe as deemed by the Engineer. The Engineer shall have the option determining which test shall be employed. Generally, if the groundwater table is below the bottom of the pipe, an exfiltration test shall be used. Duration of test shall be not less than two (2) hours. Visible leaks encountered shall be corrected regardless of leakage test results. Leakage as measured by either the infiltration or exfiltration test shall not exceed 0.2 gallons per inch diameter per 100 feet of pipe per hour. When leakage exceeds the maximum amount specified, satisfactory correction shall be made and retesting accomplished.

Deflection testing shall be done on all flexible pipe at the direction of the Engineer. Testing shall be done using a mandrel having a diameter equal to 95 percent of the inside diameter of the pipe. When a deflection device is used in lieu of the mandrel, such device shall be approved by the Engineer prior to use. No pipe deflection shall exceed 5 percent.

EROSION PROTECTION:
New and existing drainage structures shall be protected from soil erosion sedimentation by placing baled hay around structures.

Staked baled hay and silt fence barriers shall be installed downhill from any earthwork activity, and in all areas subject to soil erosion, prior to start of construction.

Soil erosion sedimentation shall be controlled during all phases of construction.

ALL SOIL EROSION SEDIMENTATION SHALL BE RETAINED ON SITE.

LJA
4300 LEGENDARY DRIVE
SUITE C280
DESTIN, FL 32541
850-446-4365

MARK COOPER SINER
LICENSE
No. 48831
STATE OF FLORIDA
PROFESSIONAL ENGINEER

ENGINEER OF RECORD
MARK SINER, PE
#48831

NO.	DATE	DESCRIPTION	BY	CHK	APV

OKALOOSA FACILITIES MAINTENANCE WAREHOUSE
CRESTVIEW, FL 32536
PARCEL ID: 12-3N-24-0000-0007-0000

JDF ARCHITECTURE, LLC
CONTACT: JASON FLOYD
201 HOLLYWOOD BLVD.
FORT WALTON BEACH, FL 32548

ISSUE DATE
15 SEPTEMBER 2026

PROJECT NUMBER
FL2025151

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(2 OF 2)

SHEET NUMBER
C7.0

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