

ROBBINS MANUFACTURING COMPANY COLUMBIA COUNTY, FLORIDA

COLUMBIA
COUNTY



PROJECT LOCATION



PLANS PREPARED FOR:

ROBBINS MANUFACTURING COMPANY
P.O. BOX 17939, TAMPA, FL, 33682

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09/2023
FINAL PLANS

REVISIONS		DATE	SHEET NO.
DESCRIPTION			
REVISIONS TO THE FOLLOWING SHEETS: C-8 THRU C-12 THRU C-15, AND C-17; REVISIONS TO THE FOLLOWING SHEETS: C-4, C-6, C-14, AND C-15.		09/23	C-1



NORTH FLORIDA PROFESSIONAL SERVICES, INC.
P.O. BOX 3823
LAKE CITY, FL 32056
PH: 386-752-4875
LIC. NO. 1B8335

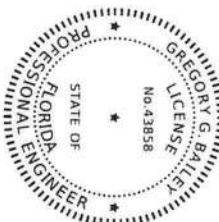
JOB NUMBER:
220531008
FOR:
GREGORY G. BAILEY
P.E. NO.:
43858

COVER SHEET

Print Scale

1/8" = 1'-0"

1/8" = 1'-0"



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY GREGORY G. BAILEY ON THE DATE ADJACENT TO THE SEAL.
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE REPRODUCED BY ANY ELECTRONIC COPIES.

NORTH FLORIDA PROFESSIONAL SERVICES, INC.
P.O. BOX 3823
LAKE CITY, FL 32056
CERTIFICATE OF AUTHORIZATION, 20011
GREGORY G. BAILEY, P.E. 43858

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61C11-23.004, F.A.C.

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REVISIONS		DATE
DESCRIPTION		
 NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32056 PH: 386-752-4675 LIC NO. LB8358		
2351 BLAIRSTONE PINES DR. TALLAHASSEE, FL 32301 WWW.NFPS.NET CAF 23011		
JOB NUMBER: 230531N08 FOR: GREGORY G. BAILEY P.E. NO.: 43858	SIGNATURE SHEET ROBBINS MANUFACTURING COMPANY COLUMBIA COUNTY, FLORIDA	
	SHEET NO.	C-2

Sheet 2 of 2

P:\11-00-01\11-28-05-05

1:2007-12-20 11:00 AM - C:\2007-12-20 11:00 AM

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE PRIOR TO THE BEGINNING OF CONSTRUCTION. THE OWNER INTERFERED ON THE PLANS SHOULD ANY CONDITIONS EXIST THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND COLUMBIA COUNTY, FLORIDA OF SUCH DIFFERENCES IMMEDIATELY AND PRIOR TO PROCEEDING WITH THE WORK.
2. THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS AS SET FORTH BY THE ISSUED SURNAMEE RIVER WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMIT.
3. THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION SITE IN A SECURE MANNER ALL OPEN TRENCHES AND EXCAVATED AREAS SHALL BE PROTECTED FROM ACCESS BY THE GENERAL PUBLIC.
4. ANY PUBLIC LAND CORNER WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHOULD NOTIFY THE ENGINEER.
5. THE SITE IS LOCATED IN SECTION 35, TOWNSHIP 3 SOUTH, RANGE 17 EAST, COLUMBIA COUNTY, FLORIDA.
6. THE CONTRACTOR SHALL IMPLEMENT ALL COMPONENTS OF THE EROSION AND SEDIMENTATION CONTROL PLAN PRIOR TO ANY EARTH DISTURBING ACTIVITIES. ALL COMPONENTS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL ALL VEGETATION IS ESTABLISHED. THE ENTIRE PROJECT AREA IS STABILIZED AND THE OWNER HAS ACCEPTED OPERATION AND MAINTENANCE.
7. THE STORMWATER BASIN IS DESIGNED IN ACCORDANCE WITH SMOUD APPLICANT HANDBOOK VOLUME II AND 62-390 F.A.C.
8. ALL SLOPES OF THE STORMWATER BASIN SHALL BE GRASSSED. ALL SLOPES STEEPER THAN 3:1 SHALL BE STAIRED 500.
9. ALL DISTURBED AREAS NOT SOONER SHALL BE SEEDS WITH A MIXTURE OF LONG-TERM VEGETATION AND QUICK GROWING SHORT-TERM VEGETATION FOR THE FOLLOWING CONDITIONS. FOR THE MONTHS FROM SEPTEMBER THROUGH MARCH, THE MIX SHALL CONSIST OF 70 POUNDS PER ACRE OF LONG-TERM SEED AND 20 POUNDS PER ACRE OF WINTER WRE. FOR THE MONTHS OF APRIL THROUGH AUGUST, THE MIX SHALL CONSIST OF 70 PER ACRE OF LONG-TERM SEED AND 20 POUNDS PER ACRE OF WINTER.
10. EXISTING DRAINAGE STRUCTURES WITHIN THE CONSTRUCTION LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED IN PLANS.
11. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. CONTRACTOR SHALL PROTECT ALL UTILITIES WITHIN THE PROJECT AREAS.
12. ALL SITE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE COLUMBIA COUNTY LAND DEVELOPMENT REGULATIONS.
13. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER CONTRACTORS WITHIN PROJECT AREA.
14. CONTRACTOR SHALL PROVIDE ACTUAL INVERT ELEVATIONS ON ALL DRAINAGE STRUCTURES INCLUDING COVERTS, PRIOR TO PLACING ANY BASE MATERIAL. DEVIATIONS FROM THE PLANS SHALL BE APPROVED BY THE ENGINEER BEFORE CONTINUING WORK.
15. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION) AND THE F.D.O.T. STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION), AWWA SPECIFICATIONS, AND THE COLUMBIA COUNTY LAND DEVELOPMENT REGULATIONS UNLESS OTHERWISE NOTED.
16. IF UNSUITABLE MATERIAL IS ENCOUNTERED DURING GRADING, CONTRACTOR SHALL REMOVE UNSUITABLE MATERIAL TO A DEPTH OF 2' BELOW FINISHED GRADE WITHIN THE CONSTRUCTION LIMITS.
17. THE CONTRACTOR SHALL NOTIFY THE COUNTY AT LEAST 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION.

18. THE CONTRACTOR SHALL SUBMIT A NOTICE OF CONSTRUCTION COMMENCEMENT TO THE WATER MANAGEMENT DISTRICT AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION LIMITS.

19. CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY MEETING THE REQUIREMENTS OF CHAPTER 6107 F.A.C. FOR THE STORMWATER MANAGEMENT SYSTEMS INCLUDE HORIZONTAL AND VERTICAL DIMENSIONAL DATA SO THAT IMPROVEMENTS ARE DETERMINED. THE CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY DATA TO THE ENGINEER. THE CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY DATA TO DETERMINE WHETHER THE IMPROVEMENTS WERE CONSTRUCTED IN ACCORDANCE WITH THE PLANS. A COPY OF THE AS-BUILT SURVEY (IN PAPER AND DIGITAL AUTOCAD FORMAT) MUST BE SUBMITTED TO COLUMBIA COUNTY, FLORIDA (DEPARTMENT OF GROWTH MANAGEMENT) AND THE ENGINEER.

20. THE CONTRACTOR SHALL SUBMIT A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT ALONG WITH SUPPORTING DOCUMENTATION TO THE BEGINNING OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMIT FEES.

21. IF DURING CONSTRUCTION OR OPERATION OF THE STORM WATER MANAGEMENT SYSTEM, A STRUCTURAL FAILURE IS OBSERVED THAT HAS THE POTENTIAL TO CAUSE THE DIRECT DISCHARGE OF SURFACE WATER INTO THE FLORIDIAN ADJUTER SYSTEM, CORRECTIVE ACTIONS DESIGNED OR APPROVED BY A REGISTERED PROFESSIONAL ENGINEER SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. REPAIR DETAIL AND ADDITIONAL PREPARATION FOR THE FAILURE SHALL BE PROVIDED AS SOON AS PRACTICAL TO THE DEPARTMENT FOR REVIEW AND APPROVAL THAT PROVIDES REASONABLE ASSURANCE THAT THE BREACH WILL BE PERMANENTLY CORRECTED.

22. ALL CONCRETE SLABS ADJUTING EXTERIOR WALLS SHALL BE SOIL TREATED FOR TERMITES.

23. ALL UTILITY AND/OR DRAINAGE STRUCTURES SHALL BE PRECAST UNLESS APPROVED BY THE ENGINEER. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO PROCUREMENT.

EROSION CONTROL NOTES

1. THIS EROSION AND SEDIMENTATION CONTROL PLAN COMPLIES WITH THE REQUIREMENTS OF THE "FLORIDA DEVELOPMENT MANUAL" AND THE "FLORIDA EROSION AND SEDIMENT CONTROL INSPECTOR'S MANUAL".
2. THE CONTRACTOR SHALL ADHERE TO COLUMBIA COUNTY, SMOUD, AND OTHER GOVERNING AGENCIES FOR EROSION AND SEDIMENTATION CONTROL. AS THE CONTRACTOR NEEDS TO CHANGE THIS PLAN TO MORE EFFECTIVELY CONTROL EROSION AND SEDIMENTATION, THE CONTRACTOR SHALL USE BMPs FROM THE "FLORIDA EROSION AND SEDIMENT CONTROL INSPECTOR'S MANUAL".
3. THE CONTRACTOR SHALL ADJUST AND REVISE THIS PLAN TO MEET ACTUAL FIELD CONDITIONS. ANY REVISIONS SHALL BE APPROVED BY THE REVIEWING AGENCIES.
4. SEDIMENT AND EROSION CONTROL FACILITIES STORM DRAINAGE FACILITIES AND DETENTION BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION.
5. EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL OF 0.5 INCHES OR GREATER, AND REPAIRED OR REPLACED AS NECESSARY.
6. SEDIMENT AND EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL ALL CONSTRUCTION IS COMPLETE AND UNTIL A PERMANENT GROUND COVER HAS BEEN ESTABLISHED.
7. ALL OPEN DRAINAGE SWALES SHALL BE GRASSSED AND RIPRAP SHALL BE PLACED AS REQUIRED TO CONTROL EROSION.
8. SILT FENCES SHALL BE LOCATED ON SITE TO PREVENT SEDIMENT AND EROSION FROM LEAVING PROJECT LIMITS.
9. CONTRACTOR SHALL PLACE A DOUBLE ROW OF SILT FENCE IN AREAS WHERE RUNOFF FROM DISTURBED AREAS MAY ENTER WETLANDS.
10. DURING CONSTRUCTION AND AFTER CONSTRUCTION IS COMPLETE, ALL STRUCTURES SHALL BE CLEARED OF ALL DEBRIS AND EXCESS SEDIMENT.
11. ALL GRADED AREAS SHALL BE STABILIZED IMMEDIATELY WITH A TEMPORARY FAST-GROWING COVER AND/OR MULCH.
12. A PAD OF RUBBLE RIP RAP SHALL BE PLACED AT THE BOTTOM OF ALL COLLECTION FLUMES AND COLLECTION PIPE OUTLETS. GRANITE OR Limestone RIPRAP IS REQUIRED. NO BROKEN CONCRETE WILL BE ACCEPTED.
13. ALL SIDE SLOPES STEEPER THAN 3:1 SHALL BE ADEQUATELY PROTECTED FROM EROSION THROUGH THE USE OF SYNTHETIC BAILS OR SODDING.
14. ALL STABILIZATION PRACTICES SHALL BE INITIATED AS SOON AS PRACTICABLE IN AREAS OF THE JOB WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY STOPPED, BUT IN NO CASE SHALL THE DISTURBED AREAS BE LEFT UNPROTECTED FOR MORE THAN SEVEN DAYS.
15. ALL WASTE GENERATED ON THE PROJECT SHALL BE DISPOSED OF BY THE CONTRACTOR IN AREAS PROVIDED BY CONTRACTOR.
16. LOADED HAUL TRUCKS SHALL BE COVERED WITH TARPS.
17. EXCESS DIRT SHALL BE REMOVED DAILY.
18. THIS PROJECT SHALL COMPLY WITH ALL WATER QUALITY STANDARDS PERMIT REQUIRED FROM SMOUD HAS BEEN OBTAINED.
19. QUALIFIED PERSONNEL SHALL INSPECT THE AREA USED FOR STORAGE OF STOCKPILES, THE SILT FENCE AND STABILIZATION PRACTICES WEEKLY OR AFTER EACH RAINFALL OF 0.5 INCHES OR GREATER. THE DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED OR LEAST ONE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM OF 0.5 INCHES OR GREATER.
20. SITES THAT HAVE BEEN FINALLY STABILIZED WITH SOD OR GRASSING SHALL BE INSPECTED AT LEAST ONCE EVERY WEEK.

REVISIONS

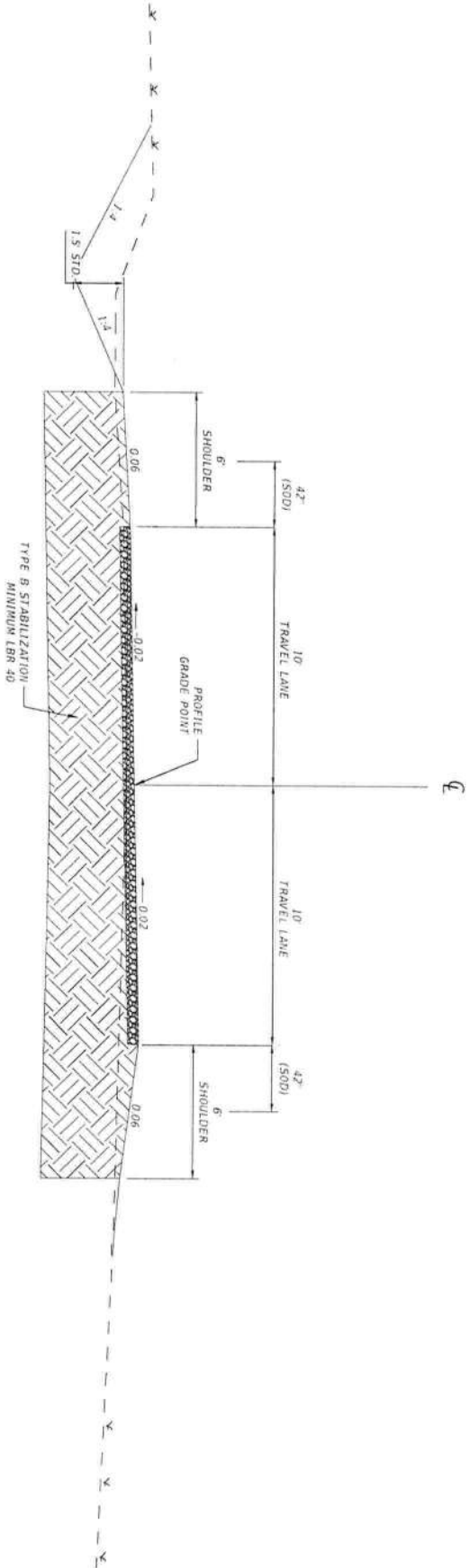
DATE	DESCRIPTION	SHEET NO.
	 NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32056 TALLAHASSEE, FL 32301 WWW.NFPS.NET LIC NO. LB8356 CA# 29011 JOB NUMBER: EROSION CONTROL FOR: GREGORY G. BAILEY P.E. NO.: 43858	C-3

GENERAL & EROSION CONTROL NOTES

ROBBINS MANUFACTURING COMPANY
COLUMBIA COUNTY, FLORIDA

11/11/2021 11:29:31 AM

11/20/21 15:51:49 PM C:\P\Projects\1451\1451.dwg



TYPICAL SECTION

N.T.S.

6" ASPHALT MILLINGS
12" STABILIZED SUBGRADE (MIN. LBR 40)

NOTES:

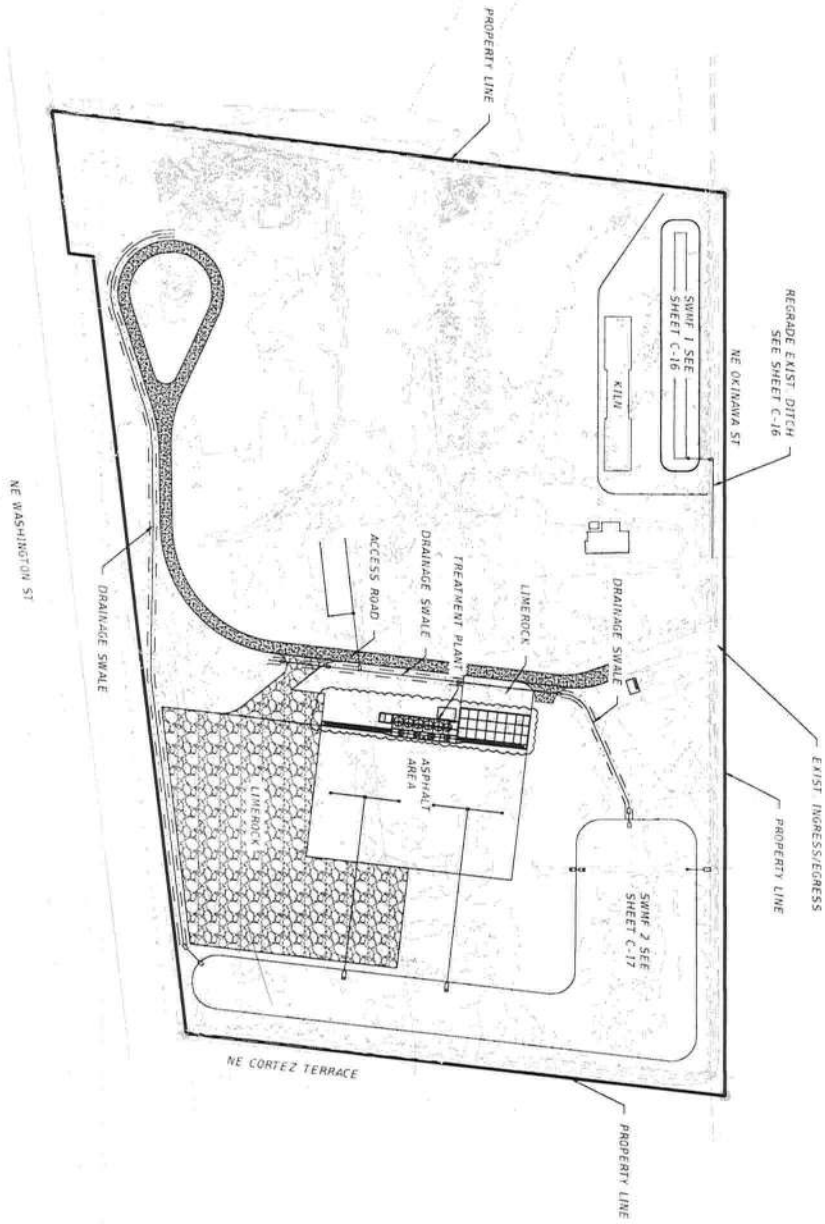
1. FINISH THE STABILIZED SUBGRADE SURFACE ELEVATION AND CROSS SLOPE IN ACCORDANCE WITH THIS PAVEMENT DESIGN.

REVISIONS		DATE	DESCRIPTION
NO.	DESCRIPTION		
1	NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32056 PH: 386-792-4675 LIC NO. LBS355		
2	2551 BLAIRSTONE PINES DR. TALLAHASSEE, FL 32301 WWW.NFPS.NET CAM 29011		
3	JOB NUMBER: EOR 225331008 FOR: GREGORY G. BAILEY P.E. NO.: 43858		
4	TYPICAL SECTION ROBBINS MANUFACTURING COMPANY COLUMBIA COUNTY, FLORIDA		
5	SHEET NO. C-4		

DATE: _____ DESCRIPTION: _____		REVISIONS _____ _____ _____	
 NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32056 PH: 386-452-4875 LIC. NO. 188336		2551 BLAIRSTONE PINES DR. TALLAHASSEE, FL 32301 WWW.NFPS.NET CAD 25011	
JOB NUMBER: EOR: L226537ROB P.E. NO.: 43858		DEMOLITION PLAN ROBBINS MANUFACTURING COMPANY COLUMBIA COUNTY, FLORIDA	
SHEET NO. C-5			



REVISIONS		DATE
1.	ADDED PLANT FOUNDATION DETAILS	8/11/23
 NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32066 PH: 386-52-4875 LIC NO. 1B8336 2551 BLAINSTONE PINES DR, TALLAHASSEE, FL 32301 WWW.NFPS.NET CAP 29011		
JOB NUMBER: EOR: L220531ROB GREGORY G. BAILEY P.E. NO.: 43838 OVERALL SITE PLAN ROBBINS MANUFACTURING COMPANY COLUMBIA COUNTY, FLORIDA		
SHEET NO.		C-6

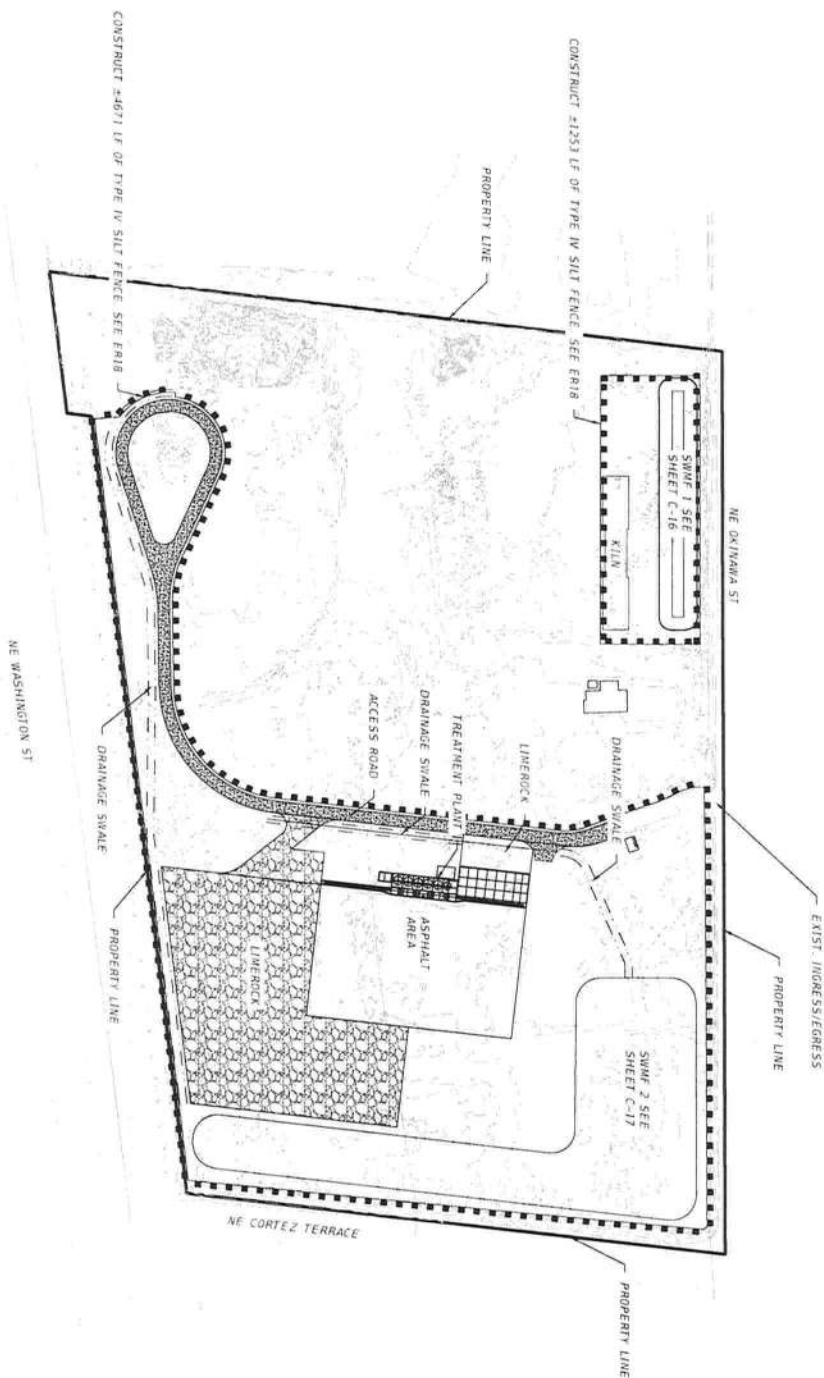


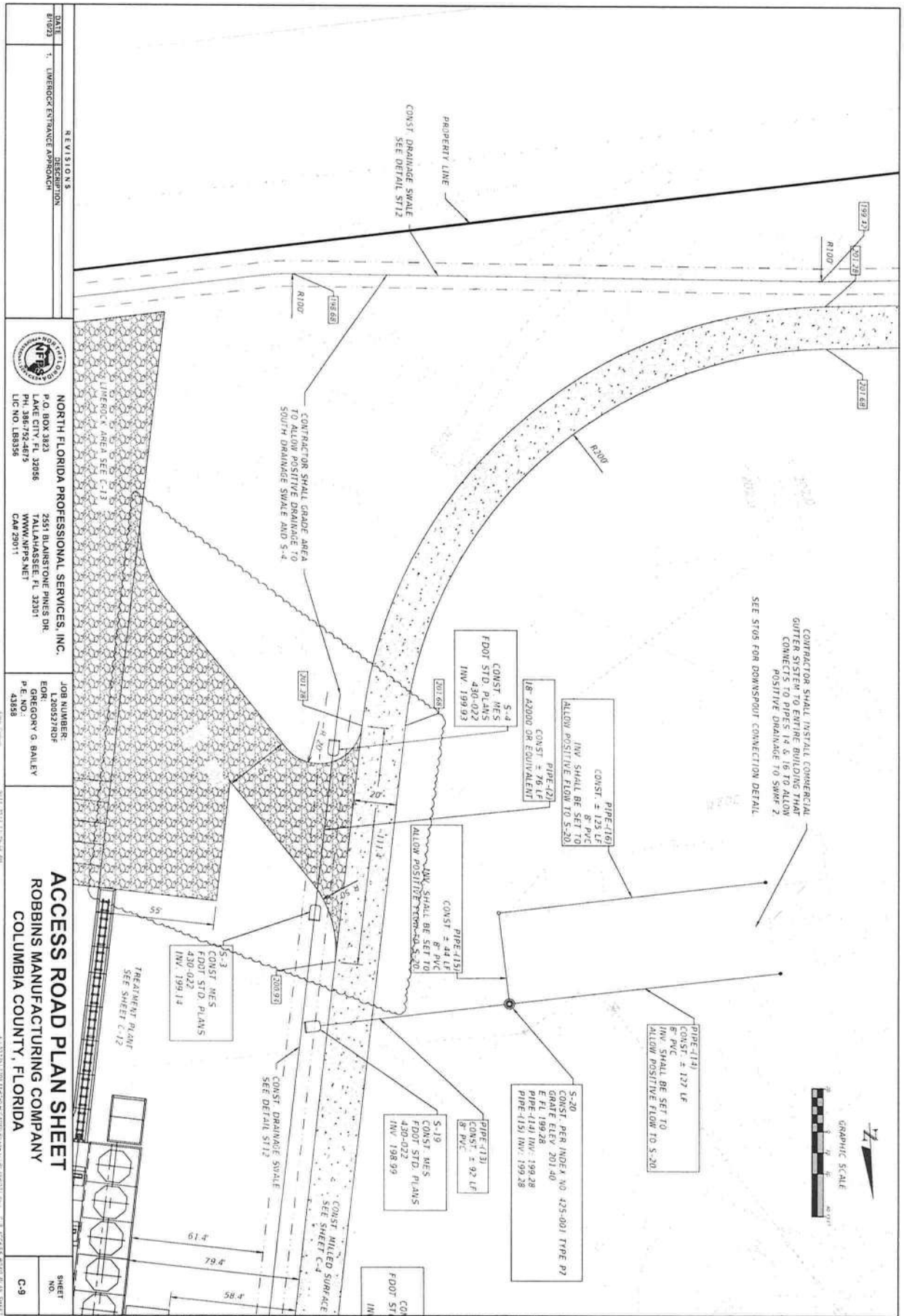
REVISIONS		DATE
DESCRIPTION		
NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32056 PH: 386-752-4675 LIC NO. LB8358 2551 BLAINSTONE PINES DR. TALLAHASSEE, FL 32301 WWW.NFPS.NET CAD 25011		
JOB NUMBER: L220531608 FOR: GREGORY G. BAILEY P.E. NO.: 43858		
EROSION CONTROL PLAN ROBBINS MANUFACTURING COMPANY COLUMBIA COUNTY, FLORIDA		
SHEET NO. C-7		

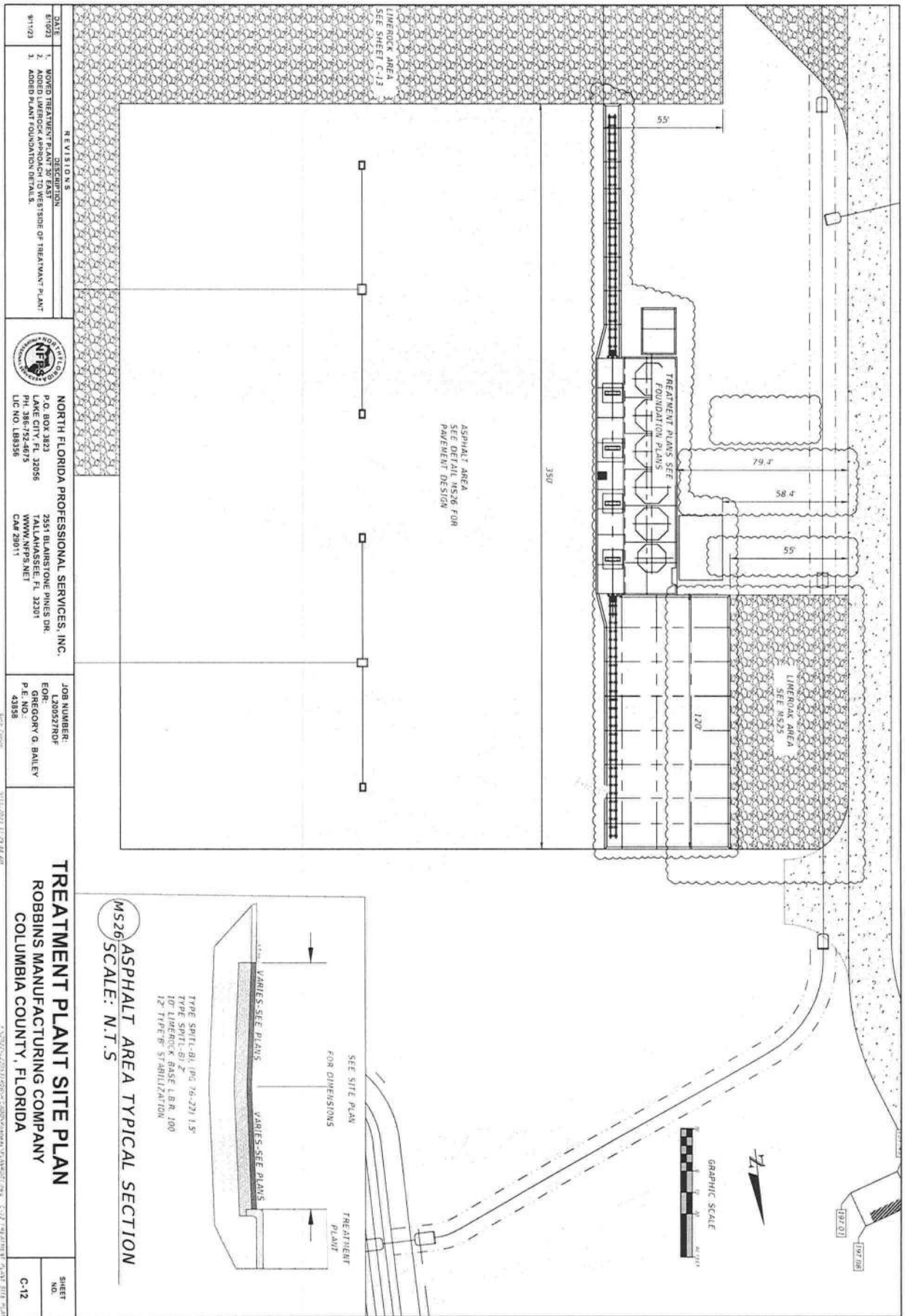
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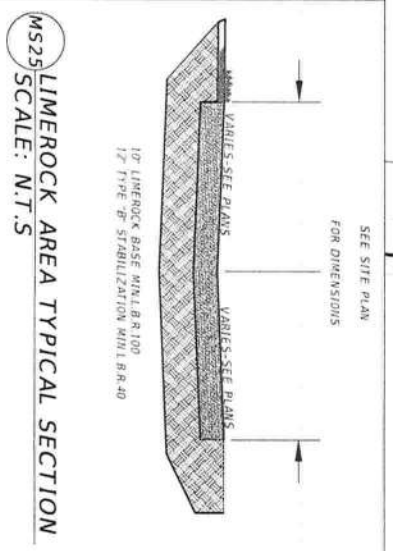
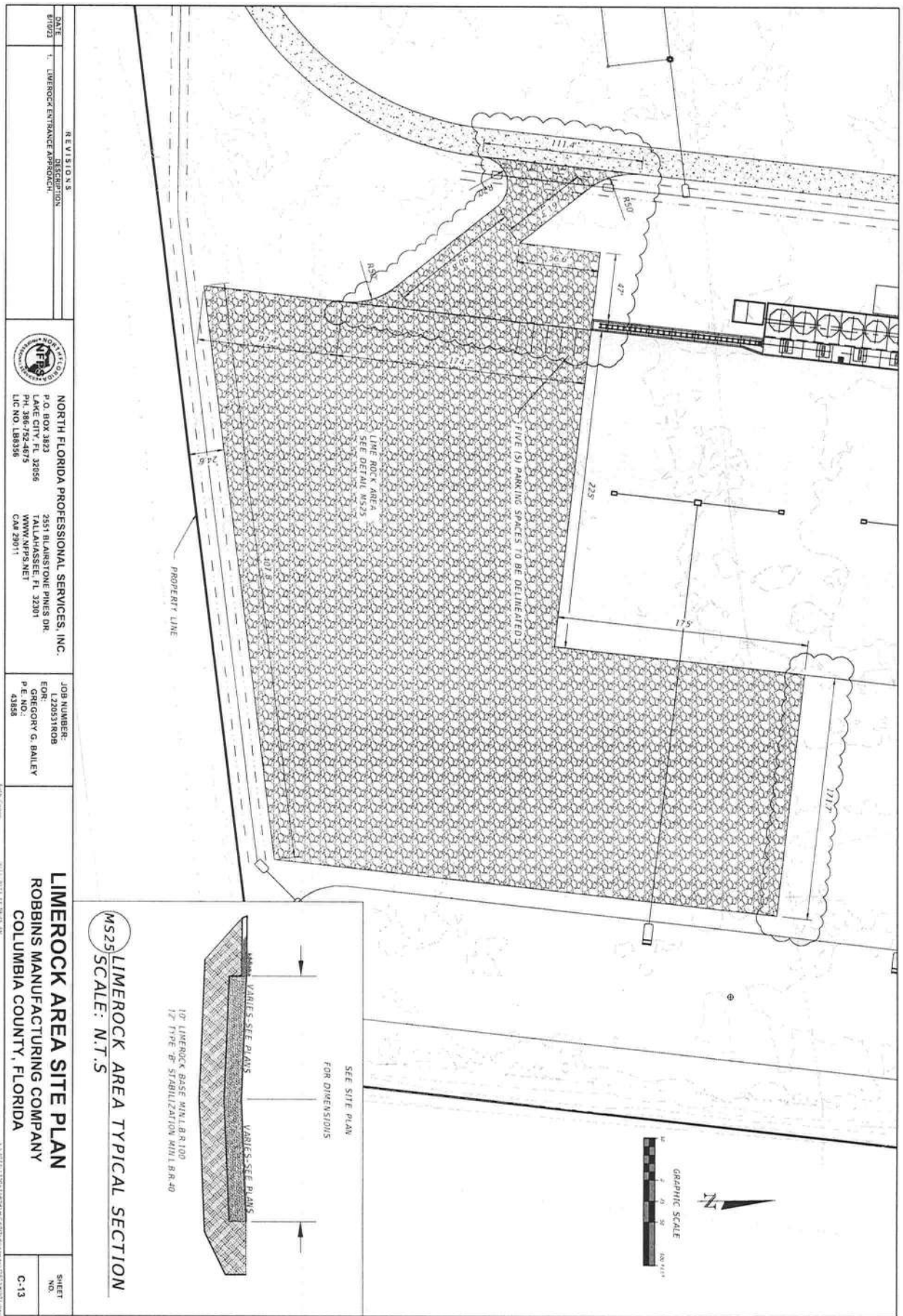
DATE	REVISIONS	DESCRIPTION	DATE
8/10/23	1.	WORKED TREATMENT PLANT TO EAST SIDE OF TREATMENT PLANT	
8/11/23	2.	ADDED PLANT FOUNDATION DETAILS	
	3.	ADDED PLANT FOUNDATION DETAILS	

NORTH FLORIDA PROFESSIONAL SERVICES, INC.
 P.O. BOX 3823
 LAKE CITY, FL 32056
 PH: 386-752-4875
 LIC. NO. 188536
 CAD: 28011

JOB NUMBER:
 L200527RDF
FOR:
 GREGORY G. BAILEY
P.E. NO.:
 43858

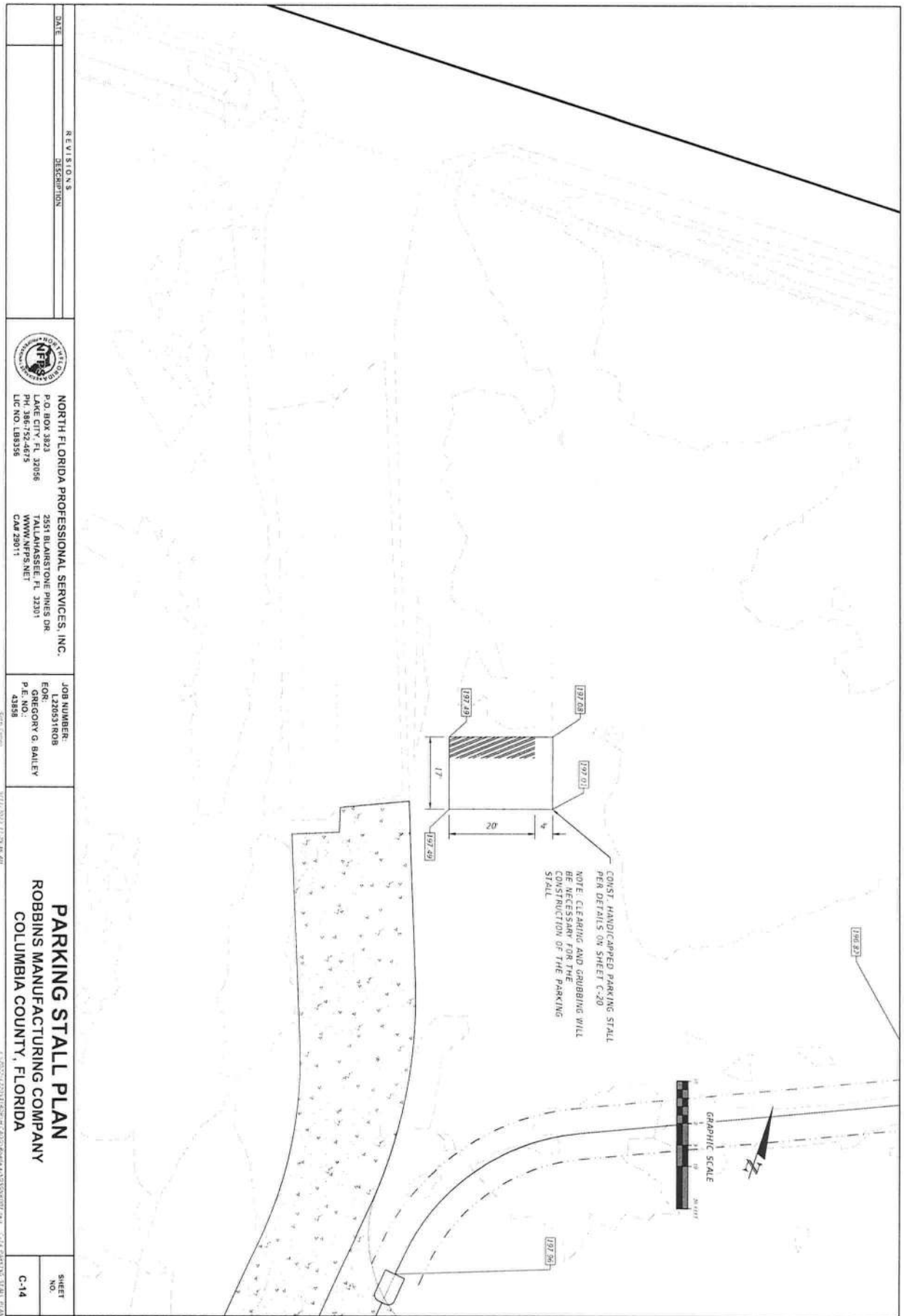
TREATMENT PLANT SITE PLAN
ROBBINS MANUFACTURING COMPANY
COLUMBIA COUNTY, FLORIDA

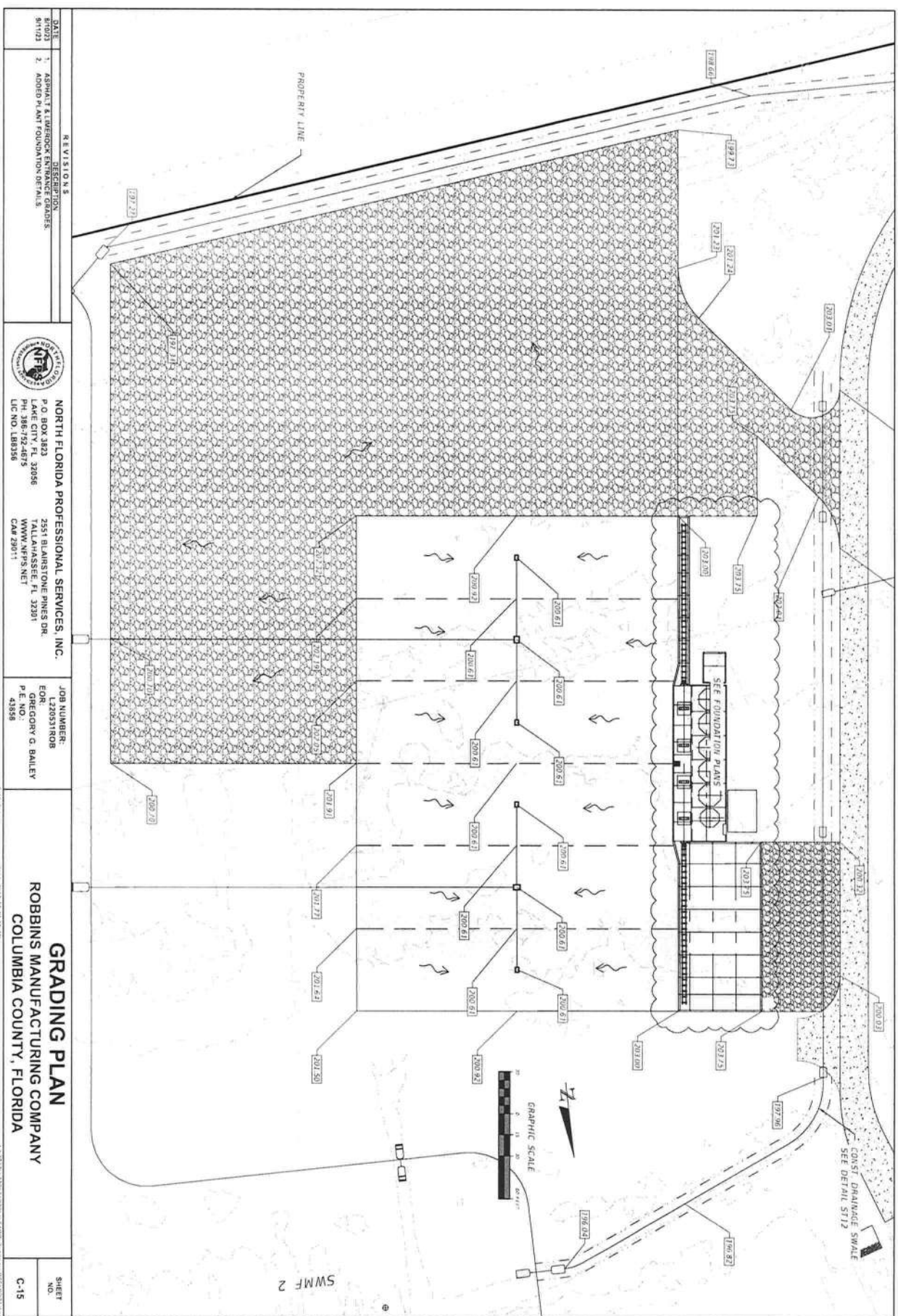
SHEET NO. C-12



REVISIONS		JOB NUMBER:		LIMEROCK AREA SITE PLAN	
DATE	DESCRIPTION	FOR:	43855	ROBBINS MANUFACTURING COMPANY	SHEET NO.
8/10/23	LIMEROCK ENTRANCE APPROACH	FOR: GREGORY G. BAILEY		COLUMBIA COUNTY, FLORIDA	C-13
		NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32056 PH: 386/752-4875 LIC NO. 188535 2551 BLAINSTONE PINES DR. TALLAHASSEE, FL 32301 WWW.NFPS.NET CAD 23011			

Scale: 1"=20'-0" (1"=20'-0" x 1/2"=40'-0")





**CRITICAL EVENT: 100 YR - 8 HR
MAX STAGE: 196.26**

SECTION A-A SWMF 1 DETAIL
SCALE: N.T.S.



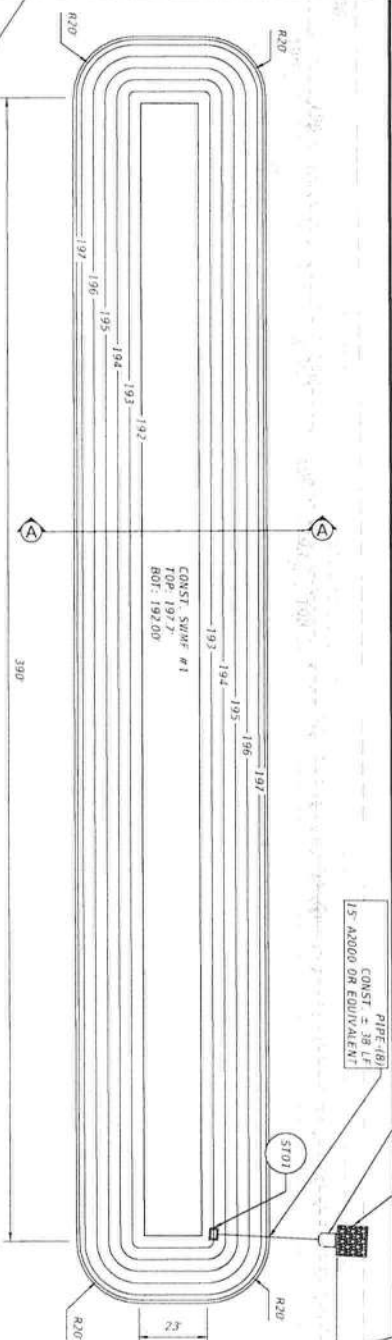
PROPERTY LINE
NE OKINAWA ST

5-16
CONST. IN
FDOT STD. PLANS
REV. 194.89

CONST. = 38 LF
15' A2000 OR EQUIVALENT

REGRADE DITCH TO PROVIDE
POSITIVE SLOPE TOWARDS
INVERT ELEV. 194.40

LEGEND
--- EXISTING
--- GROUND CONTOUR
--- LINES
--- PROPOSED
--- CONTOUR LINES



REVISIONS		DATE
DESCRIPTION		
NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32056 FL 386-726-4675 LIC NO. LB5358 2851 BLAINSTONE PINES DR. TALLAHASSEE, FL 32301 WWW.NFPS.NET CAD 28011		
JOB NUMBER: L22051160B EOR: GREGORY G. BAILEY P.E. NO.: 43858		
SWMF 1 ROBBINS MANUFACTURING COMPANY COLUMBIA COUNTY, FLORIDA		
SHEET NO.	C-16	

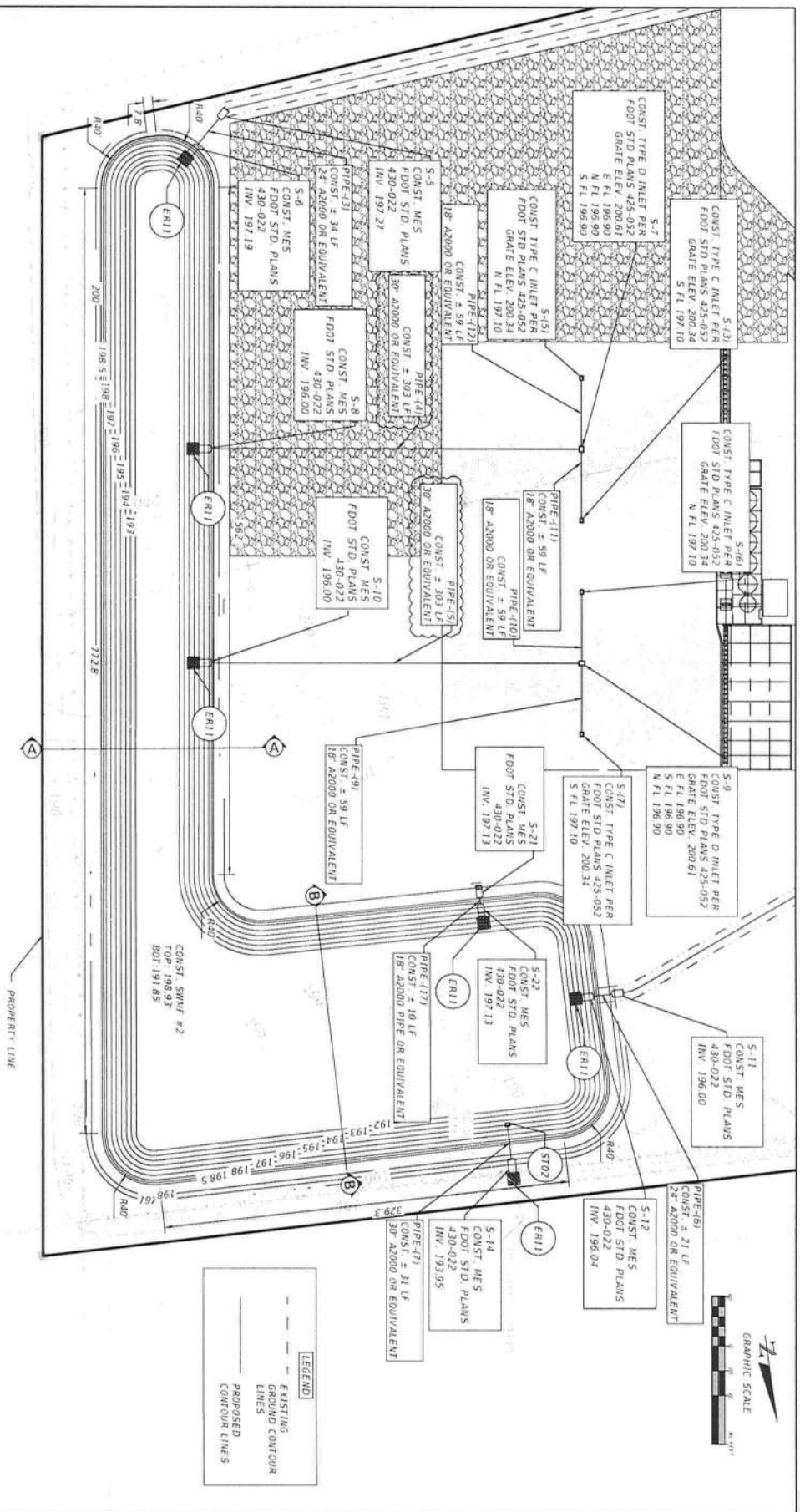
REVISIONS		SHEET NO.
DATE	DESCRIPTION	
8/7/23	1. PER 4.5.3 SHORTENED BY 30'	C-17
 NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32056 FL 3867524875 LIC NO. LB9358 2551 BLAINSTONE PINES DR. TALLAHASSEE, FL 32301 WWW.NFPS.NET CRM 29071		JOB NUMBER: L220531808 FOR: GREGORY G. BAILEY P.E. NO.: 43558
SWMF 2 ROBBINS MANUFACTURING COMPANY COLUMBIA COUNTY, FLORIDA		

SCALE: 1"=20'

DATE: 8/7/23

PROJECT: 220531808

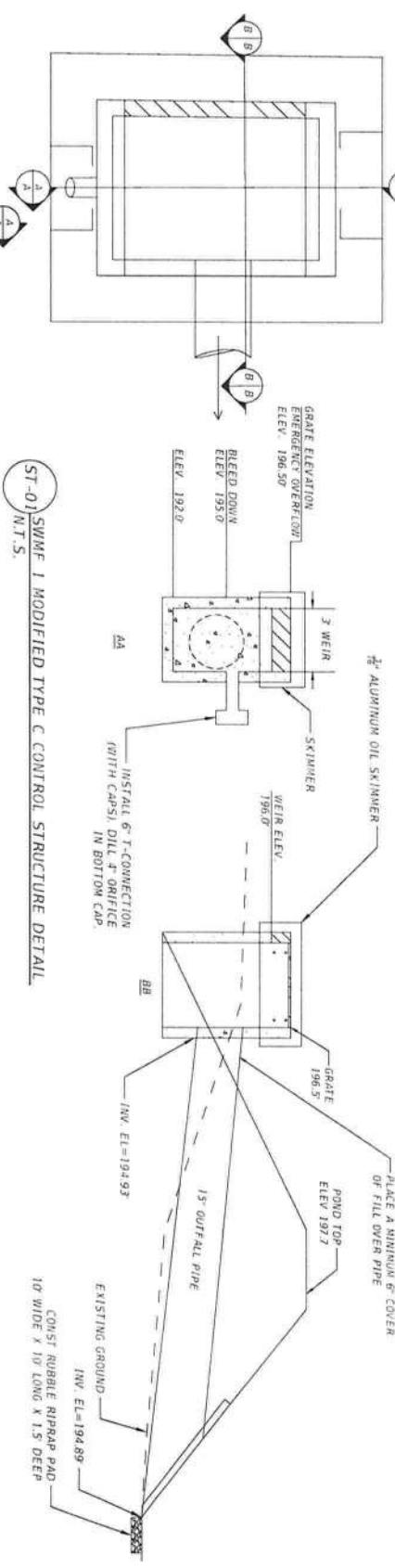
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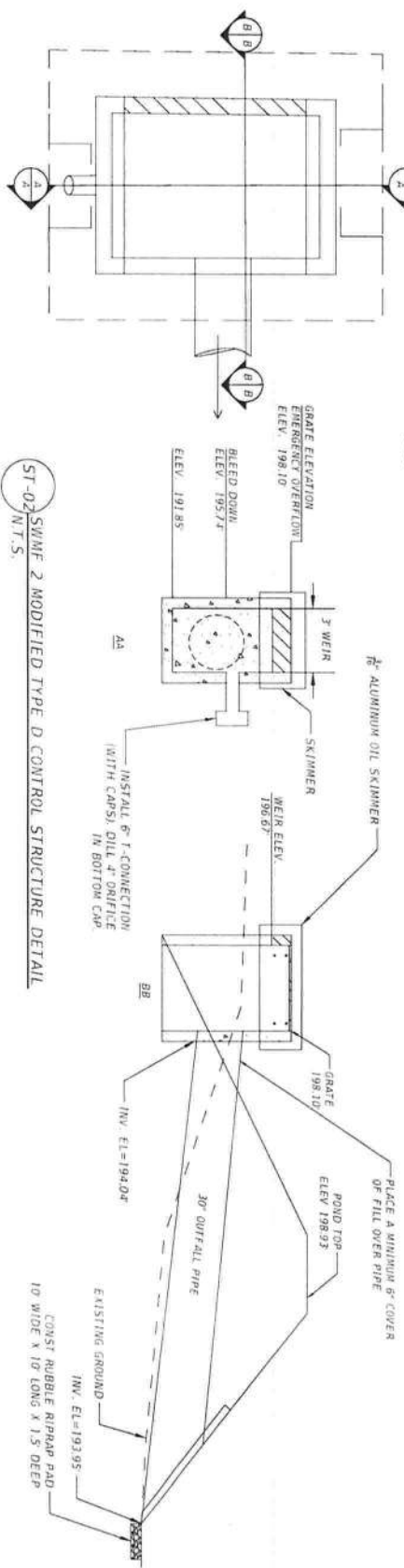


**CRITICAL EVENT: 100 YR - 8 HR
MAX STAGE: 197.93**

SECTION A-A AND B-B SWMF 2 DETAIL
SCALE: N.T.S.



ST-01 SWMF 1 MODIFIED TYPE C CONTROL STRUCTURE DETAIL
N.T.S.



ST-02 SWMF 2 MODIFIED TYPE D CONTROL STRUCTURE DETAIL
N.T.S.

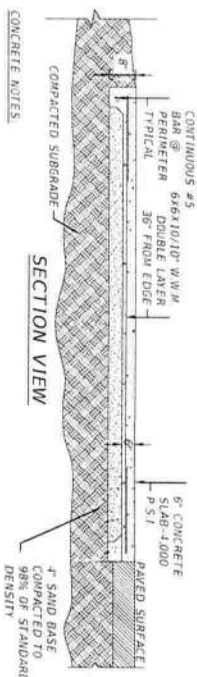
REVISIONS		DATE
DESCRIPTION		
NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32096 PH: 286-752-4875 WWW.NFPS.NET LIC. NO. LB0536 JOB NUMBER: L22051808 FOR: GREGORY G. BAILEY P.E. NO.: 43858 ROBBINS MANUFACTURING COMPANY COLUMBIA COUNTY, FLORIDA		
SWMF DETAILS		
SHEET NO. C-18		



ST12 GRASSED SWALE DETAIL
SCALE: N.T.S



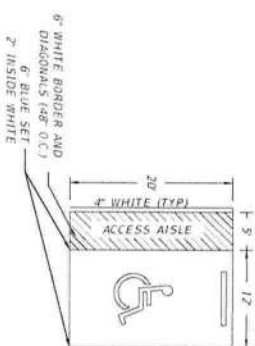
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



- 1 THE DESIGN OF FOUNDATIONS AND SLAB-ON-GRADE IS BASED ON AN ASSURED MINIMUM BEARING CAPACITY OF 2,000 PSF.
- 2 THE AREA UNDER FOOTINGS, FOUNDATIONS, AND CONCRETE SLABS-ON-GRADE SHALL HAVE ALL VEGETATION, STUMPS, ROOTS, AND OTHER ON MATERIALS REMOVED PRIOR TO THEIR CONSTRUCTION. FILL MATERIAL AND BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, CONSTRUCTION DEBRIS, LARGE ROCKS, AND ANY OTHER MATERIALS THAT COULD BE DETRIMENTAL TO THE FOUNDATION.
- 3 THE CONTRACTOR SHALL INVESTIGATE ACTUAL LOCATIONS OF UNDERGROUND LINES AND UTILITIES BEFORE EXCAVATING. ALL EXCAVATIONS NEAR THESE LINES SHALL BE CARRIED OUT WITH EXTREME CAUTION.
- 4 A MINIMUM CONCRETE COVER OF 3" SHALL BE PROVIDED FOR ALL REINFORCING STEEL.
- 5 REINFORCING STEEL/REINFORCING STEEL BARS: ASTM A-615 GRADE 40 WELDED OR 40 WELDED WIRE FABRIC. ASTM A-185.

MS06 CONCRETE PAD DETAIL
SCALE: NTS

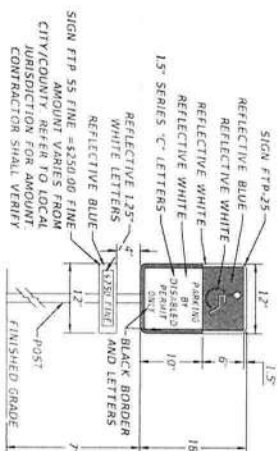
MS06
SCALE: N.T.S



1. SIGN SHALL BE PLACED IN FRONT OF ALL DESIGNATED HANDICAPPED SPACES. SIGN HEIGHT SHALL BE 7' FROM PavEMENT TO BOTTOM OF SIGN.
2. 5' HANDICAPPED AISLE MAY BE PLACED ON THE RIGHT OR LEFT SIDE OF PARKING STALL.
3. HANDICAPPED PARKING SYMBOL SHALL BE 3 OR 5 FT HIGH.
4. BLUE PavEMENT MARKINGS SHALL BE TIED TO MATCH TYPED 15180 OF FEDERAL STANDARDS 5932A.

MS23 HANDICAP PARKING STALL DETAIL

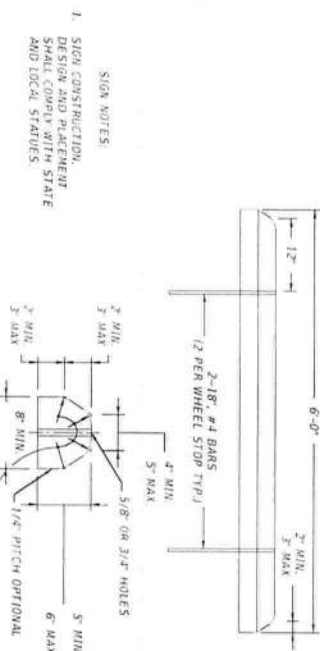
MS23
SCALE: N.T.S



- REFLECTIVE BLUE
SIGN FTP 55 FINE = \$250.00 FINE
AMOUNT VARIES FROM
CITY/COUNTY. REFER TO LOCAL
JURISDICTION FOR AMOUNT.
CONTRACTOR SHALL VERIFY

MS21 HANDICAP PARKING SIGN DETAIL
SCALE: N.T.S

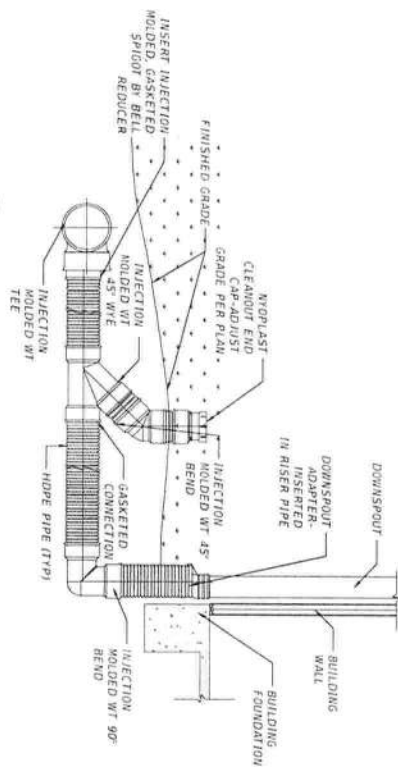
MS21
SCALE: N.T.S.



1. SIGN CONSTRUCTION, DESIGN AND PLACEMENT SHALL COMPLY WITH STATE AND LOCAL STATUTES.

NYOPLAST DOWNSPOUT DETAIL
SCALE: N.T.S

5105
SCALE: N.T.S.



REVISIONS		DATE
DESCRIPTION		
 NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32058 PH: 386-52-4675 LIC NO. 12205356 2551 BLAIRSTONE PINES DR. TALLAHASSEE, FL 32301 WWW.NFPS.NET CMA# 25971		JOB NUMBER: L122053790-B EOR: GREGORY G. BAILEY P.E. NO.: 41556
MISC. DETAILS ROBBINS MANUFACTURING COMPANY COLUMBIA COUNTY, FLORIDA		SHEET NO. C-20

WOOD TREATING PLANT FOUNDATION COLUMBIA COUNTY, FL

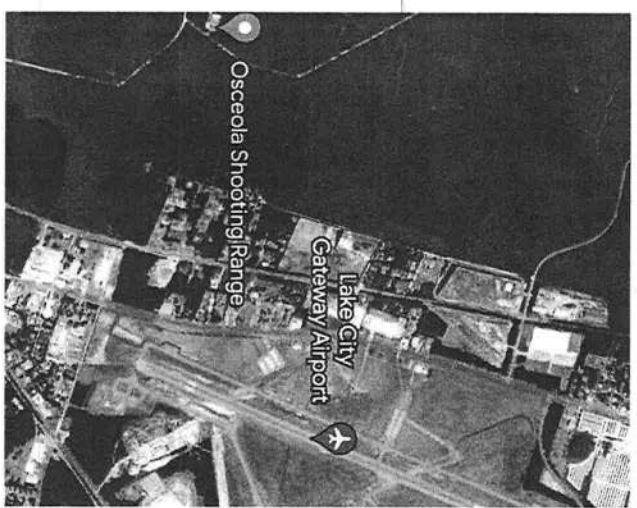
COLUMBIA
COUNTY



SHEET INDEX

SHEET NAME	SHEET #	CURRENT REV.	REVISION DESCRIPTION
COVER SHEET	S1	5	UPDATED INDEX
SIGNATURE SHEET	S2	5	UPDATED INDEX
OVERALL PLAN VIEW	S3		
TANK FARM PLAN AND ELEVATION	S4		
CYLINDER PIERS	S5	1	LENGTHENED BOLTS
SECTION VIEWS	S6	2	ADDED SECTION TO SHEET
DRIP PAD PLAN	S7	4	ADDED ENLARGED VIEW CALLOUT & MOVED SAWCUT
DRIP PAD DETAILS	S8	3	CHANGED RAIL CLIP AND ADDED DIMS
BRIDGE RAIL CONCRETE DETAILS	S9	1	CALLED OUT THICKNESS OF BOX
TRUCK UNLOADING PAD	S10	5	NOTED GRADE ELEVATION
PERFORMED SUMP BOX	S11		
STEM WALL DETAILS	S12	3	ADDED ELEVATIONS
STEM WALL ELEVATIONS	S13	4	ADDED CALLOUT
STEM WALL ELEVATIONS	S14	4	ADDED CALLOUT
DRIP PAD WINCH CONCRETE	S15	4	ADDED SHEET TO SET
TRUCK PAD WINCH CONCRETE	S16	4	ADDED SHEET TO SET
WATERSTOP SPLICE DETAILS	S28		
CONCRETE DETAILS	S29		
CONCRETE NOTES	S30		

PROJECT LOCATION



PLANS PREPARED FOR:

ROBBINS MANUFACTURING COMPANY
P.O. BOX 17939 TAMPA, FL 33682

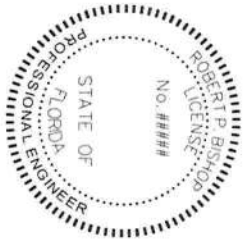
arayada
1579 KOPPERS RD
CONLEY, GA 30288

DATE	REVISIONS
09/29/23	2. UPDATED INDEX
10/10/23	4. UPDATED INDEX
10/21/23	5. UPDATED INDEX

NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32056 PH: 386-752-4875 LIC NO. LB8356	JOB NUMBER: L220631 ROB FOR: ROBERT P. BISHOP P.E. NO.: 38546
--	---

COVER SHEET

SHEET NO.
S1



THIS DOCUMENT HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY ROBERT P. BISHOP OF THE STATE ENGINEER TO THE SEAL.
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE REPRODUCED ON ANY ELECTRONIC COPIES.

NORTH FLORIDA PROFESSIONAL SERVICES, INC.
P.O. BOX 3823
LAKE CITY, FL 32056
PH: 386-752-4575
WWW.NFPS.NET
CA# 29011

THE ABOVE SIGNED PROFESSIONAL ENGINEER SEAL, BE REPRODUCED FROM THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-21.004, F.A.C.

SHEET INDEX

SHEET NAME	SHEET #	CURRENT REV.	REVISION DESCRIPTION
COVER SHEET	S1	5	UPDATED INDEX
SIGNATURE SHEET	S2	5	UPDATED INDEX
OVERALL PLAN VIEW	S3		
TANK FARM PLAN AND ELEVATION	S4		
CYLINDER PIERS	S5	1	LENGTHENED BOLTS
SECTION VIEWS	S6	2	ADDED SECTION TO SHEET
DRIP PAD PLAN	S7	4	ADDED ENLARGED VIEW CALLOUT & MOVED SAWCUT
TRACK PAD DETAILS	S8	3	CHANGED RAIL CLIP AND ADDED DIMS
BRIDGE RAIL CONCRETE DETAILS	S9	1	CALLED OUT THICKNESS OF BOX
TRUCK UNLOADING PAD	S10	5	NOTED GRADE ELEVATION
PREFORMED SUMP BOX	S11		
STEM WALL DETAILS	S12	3	ADDED ELEVATIONS
STEM WALL ELEVATIONS	S13	4	ADDED CALLOUT
STEM WALL ELEVATIONS	S14	4	ADDED CALLOUT
DRIP PAD WINCH CONCRETE	S15	4	ADDED SHEET TO SET
TRACK PAD WINCH CONCRETE	S16	4	ADDED SHEET TO SET
WATERSTOP SPLICE DETAILS	S28		
CONCRETE DETAILS	S29		
CONCRETE NOTES	S30		

REVISIONS

DATE	DESCRIPTION
09/28/23	2. UPDATED INDEX
10/10/23	4. UPDATED INDEX
10/23/23	5. UPDATED INDEX



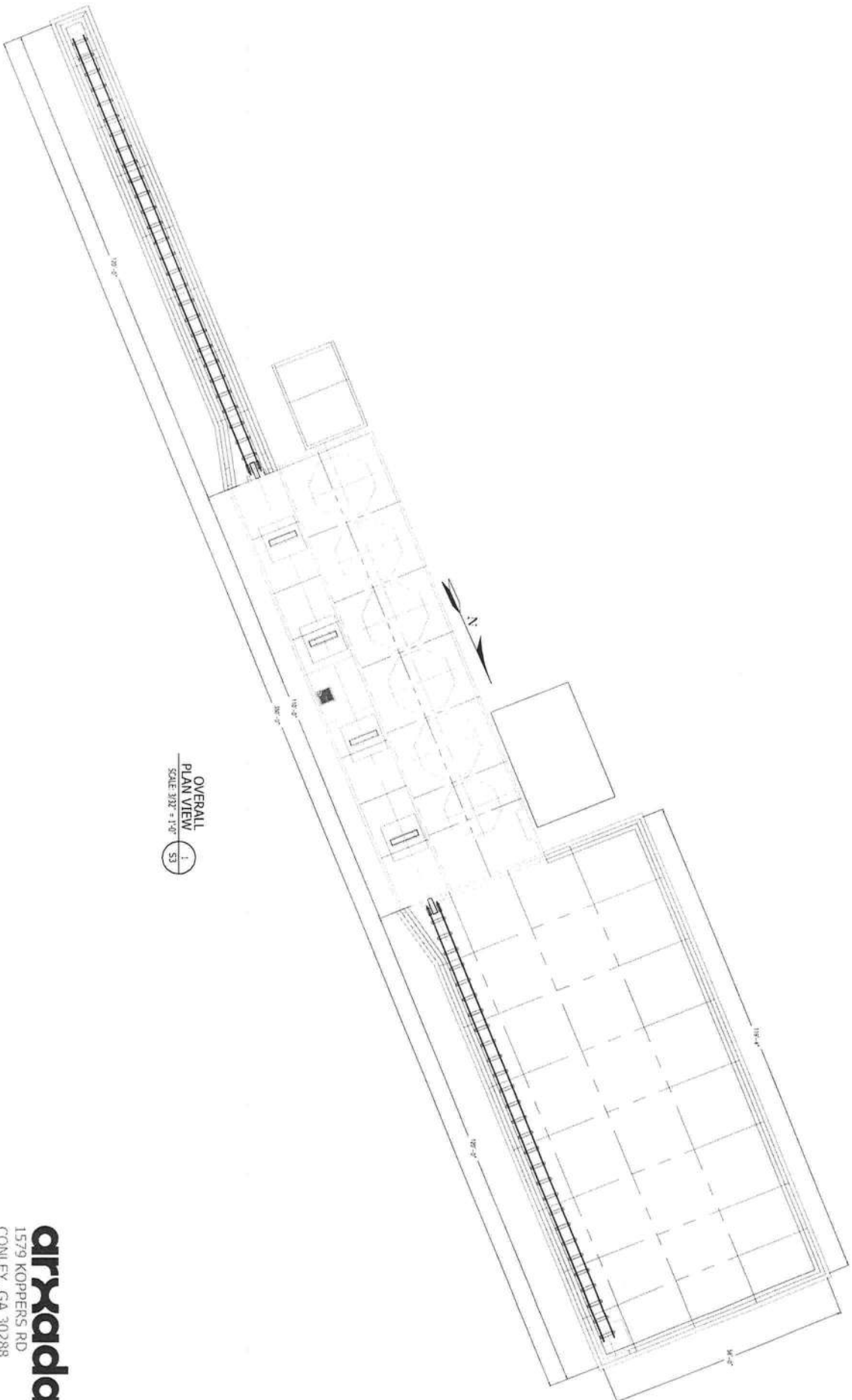
NORTH FLORIDA PROFESSIONAL SERVICES, INC.
P.O. BOX 3823
LAKE CITY, FL 32056
PH: 386-752-4575
LIC NO. LB8356

JOB NUMBER:
L22051R0B
EOR:
ROBERT P. BISHOP
P.E. NO.:
38546

SIGNATURE SHEET
WOOD TREATING PLANT FOUNDATION
COLUMBIA COUNTY, FL

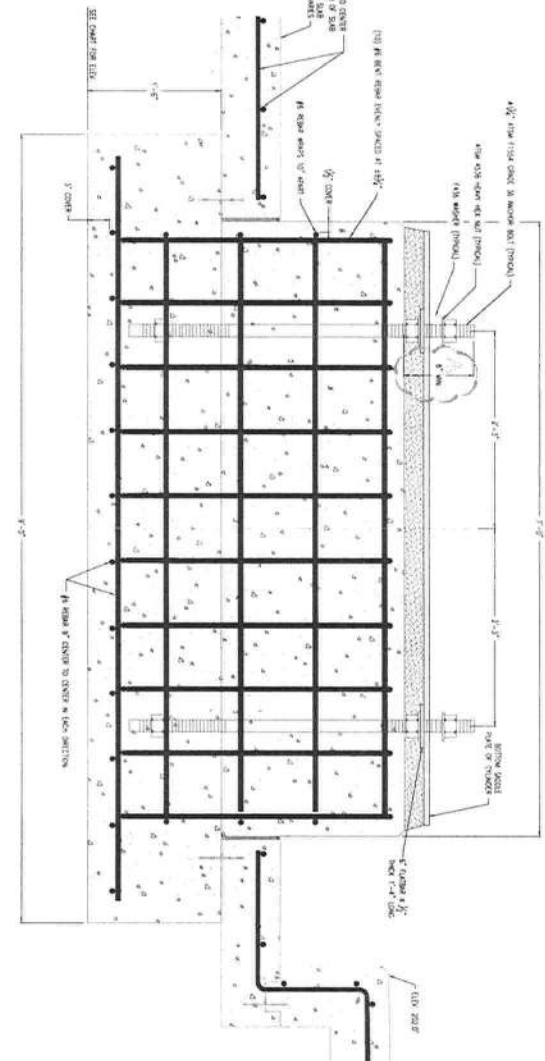
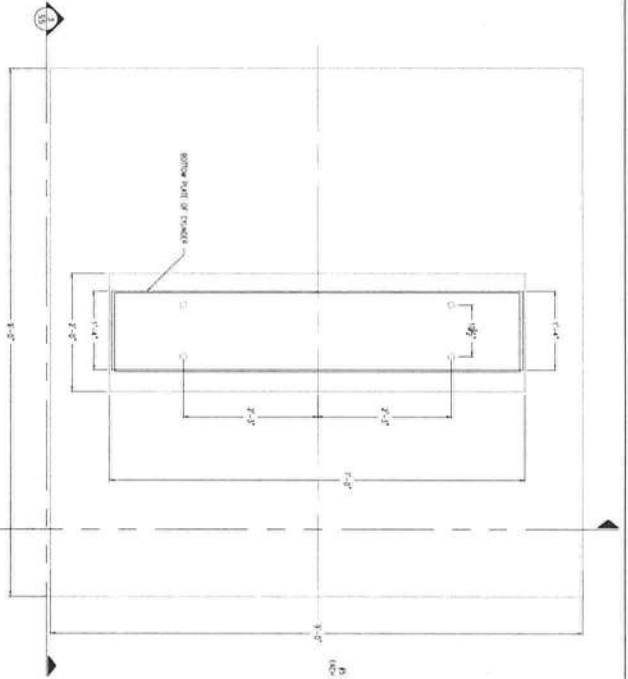
SHEET NO.
S2

aryxada
1579 KOPPERS RD
CONLEY, GA 30288



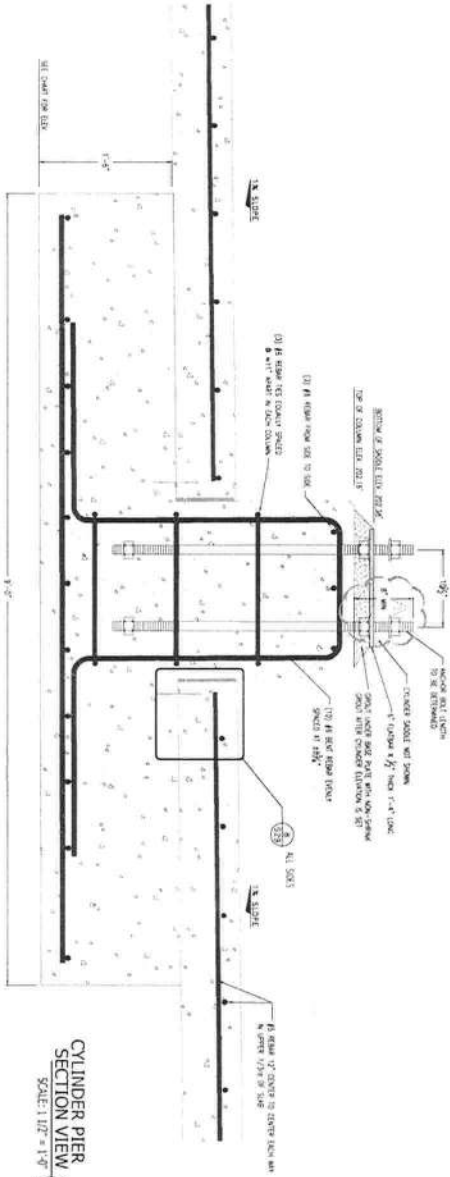
OVERALL
PLAN VIEW
SCALE 3/32" = 1'-0"
S3

REVISIONS		DATE
DESCRIPTION		
NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32856 PH: 386/52-4875 LIC NO. LB8536 2551 BLAIRSTONE PINES DR. TALLAHASSEE, FL 32301 WWW.NFPS.NET CAM 23011		
JOB NUMBER: L228531ROB EOR: ROBERT P. BISHOP P.E. NO.: 38546		
OVERALL PLAN VIEW WOOD TREATING PLANT FOUNDATION COLUMBIA COUNTY, FL		
aryxada 1579 KOPPEKS RD CONLEY, GA 30288		
S3		



FOOTER
PLAN VIEW
1
SCALE 1/4" = 1'-0"

FOOTER/COLUMN
ELEVATION VIEW
2
SCALE 1/4" = 1'-0"



CYLINDER PIERS			
	PIER A & D	PIER B & C	
TOP OF COLUMN	202.16'	202.16'	
BOTTOM OF SADDLE	202.38'	202.38'	
BOTTOM OF FOOTER	198.63'	198.34'	
FOOTER SIZE**	9'x9'x1'-6"	9'x9'x1'-6"	

CYLINDER PIER
SECTION VIEW
3
SCALE 1/4" = 1'-0"

REVISIONS		JOB NUMBER:		CYLINDER PIERS	
DATE	DESCRIPTION	NO.	BY	NO.	BY
09/23/23	1. LENGTHENED ANCHOR BOLTS	1	SS	1	SS

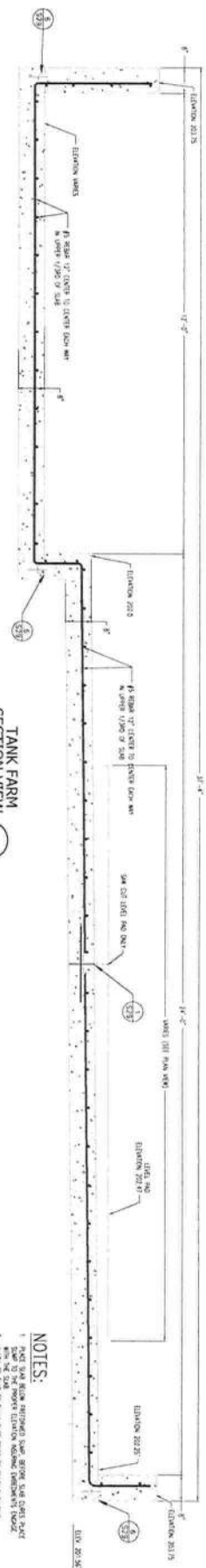
NORTH FLORIDA PROFESSIONAL SERVICES, INC.
 P.O. BOX 3823
 LAKE CITY, FL 32096
 PH. 386-752-4675
 WWW.NFPS.NET
 LIC NO. LB8356

JOB NUMBER:
 L229531R08
 EOR:
 ROBERT P. BISHOP
 P.E. NO.:
 38546

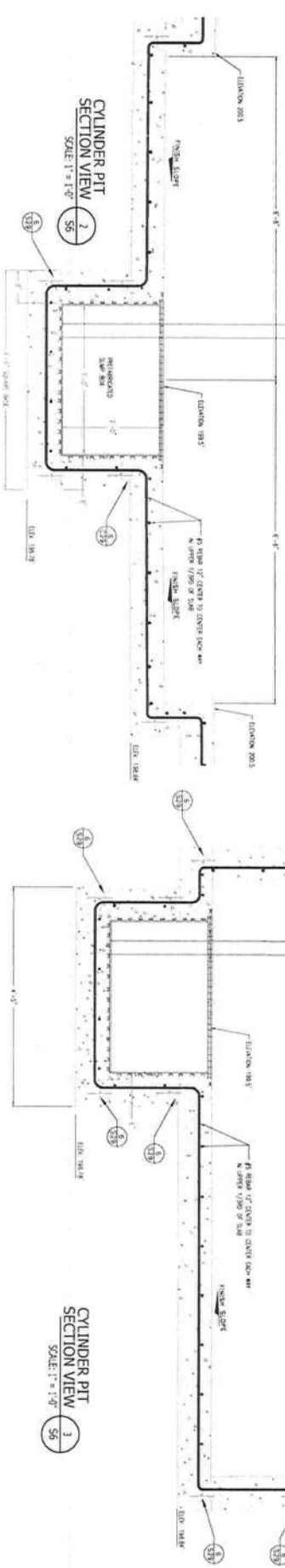
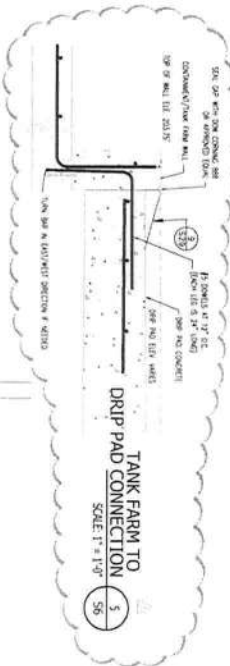
WOOD TREATING PLANT FOUNDATION
 COLUMBIA COUNTY, FL

1579 KOPPERS RD
 CONLEY, GA 30028

SHEET
 NO.
 S5

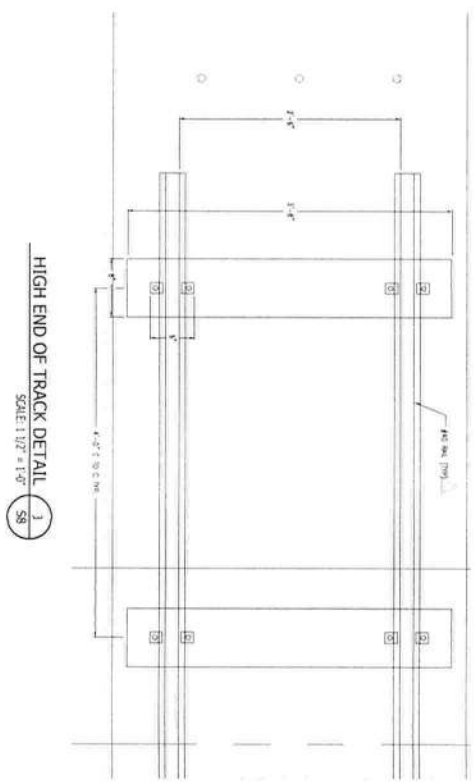
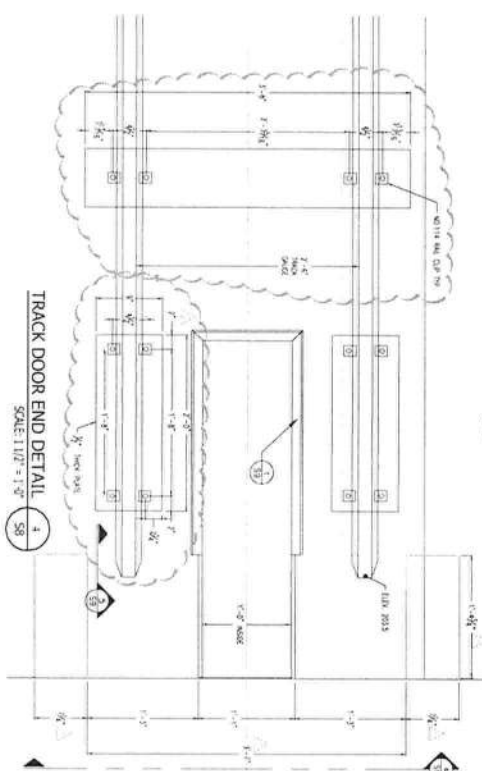
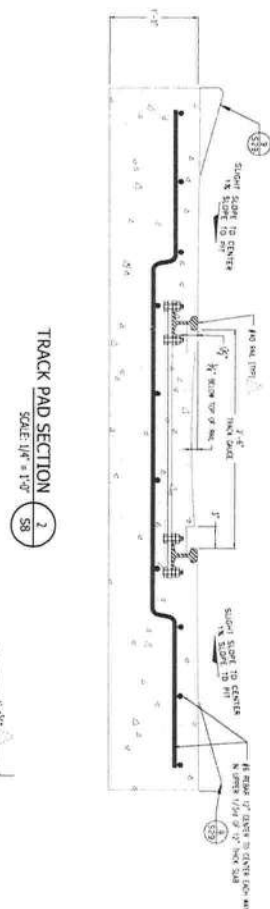
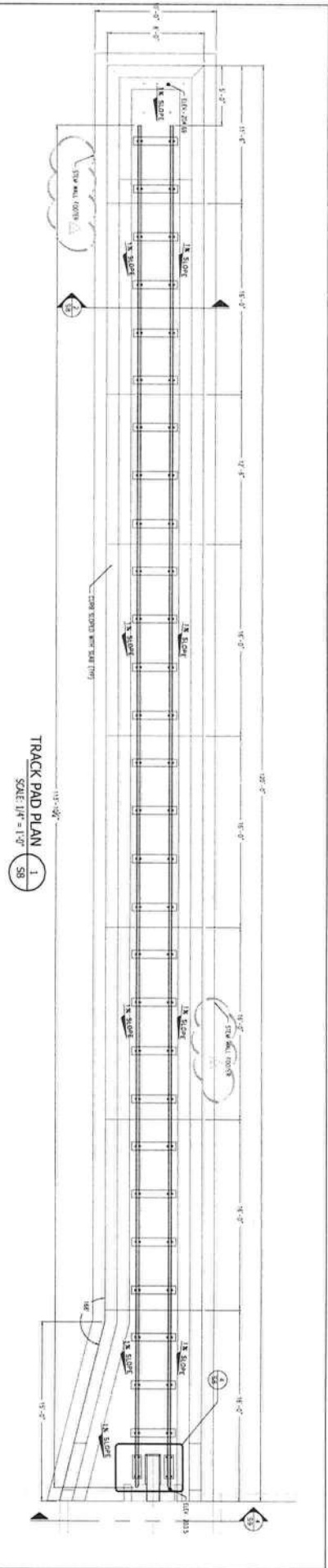


- NOTES:**
1. ALL DIMENSIONS ARE IN FEET AND INCHES.
 2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
 3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
 4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
 5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.



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1579 KOPPERS RD
CONLEY, GA 30288

DATE	REVISIONS	DESCRIPTION	SHEET NO.
09/29/23	2	ADDED SECTION VIEW TO SHEET	S6
NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32056 PH: 386-752-6975 WWW/NFPS.NET LIC NO. LB8356 JOB NUMBER: EOR: 22053110B FOR: ROBERT P. BISHOP P.E. NO.: 38546 SECTION VIEWS WOOD TREATING PLANT FOUNDATION COLUMBIA COUNTY, FL			



DATE	DESCRIPTION	REVISIONS
09/22/23	1. MODIFIED DIMS TO MATCH VIEW 429 AND CALLED OUT RAIL SIZE	
10/04/23	3. CHANGED RAIL CLIP AND ADDED DIMENSIONS	



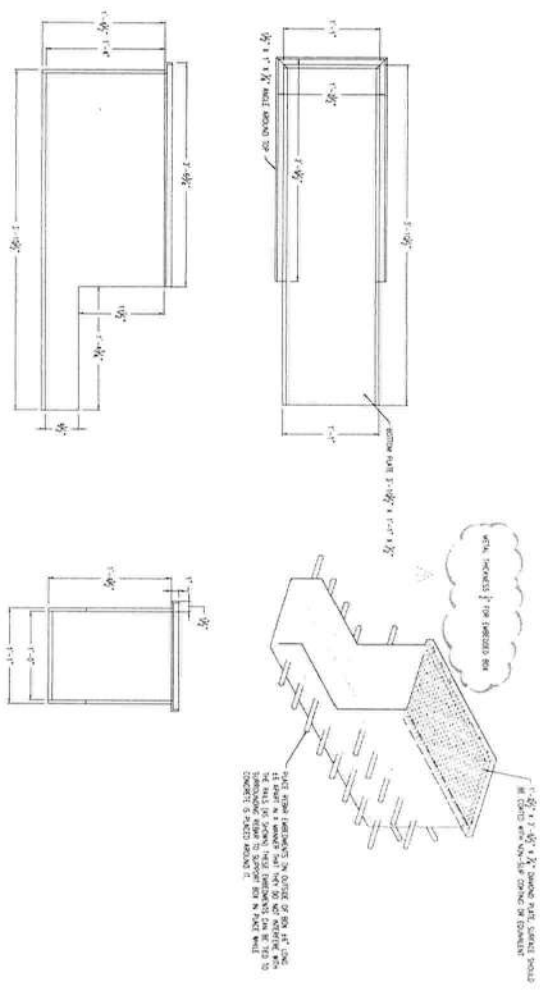
NORTH FLORIDA PROFESSIONAL SERVICES, INC.
P.O. BOX 3823
LAKE CITY, FL 32056
PH. 386-752-4675
WWW.NFPS.NET
CAR 29011

JOB NUMBER:
L220531R0B
FOR:
ROBERT P. BISHOP
P.E. NO.:
38546

TRACK PAD DETAILS
WOOD TREATING PLANT FOUNDATION
COLUMBIA COUNTY, FL

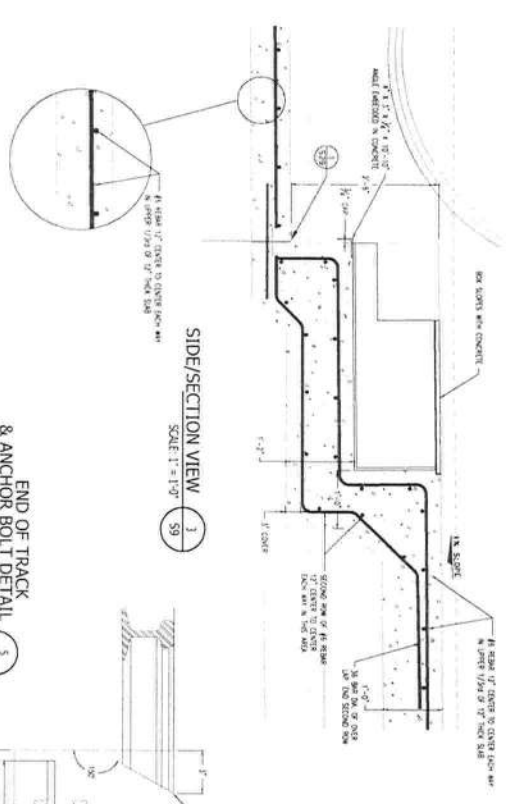
aryxada
1579 KOPPERS RD
CONLEY, GA 30288

SHEET NO.
S8



4 VIEWS EMBEDDED BOX FOR HYD. BRIDGE RAIL
SCALE: 1/16" = 1'-0"

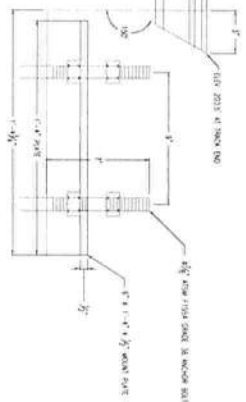
3D VIEW
SCALE: NONE



SIDE/SECTION VIEW
SCALE: 1" = 1'-0"

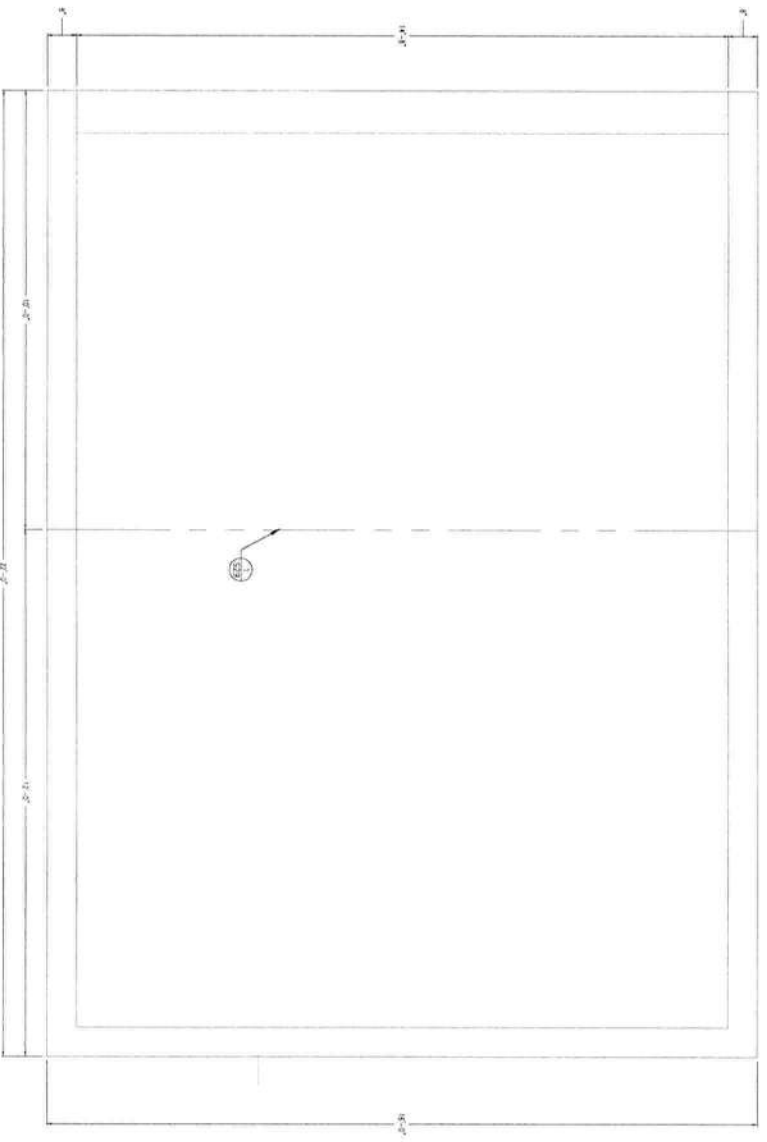
SIDE/SECTION VIEW
SCALE: 1" = 1'-0"

END OF TRACK & ANCHOR BOLT DETAIL
SCALE: 3" = 1'-0"

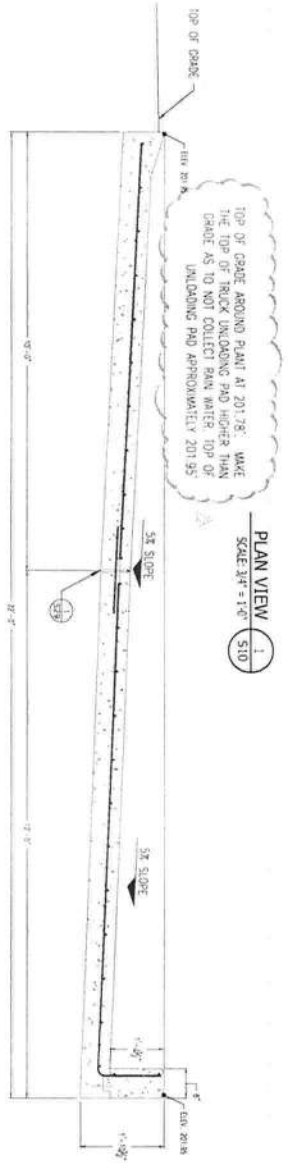


DATE	DESCRIPTION	REVISIONS
09/24/23	ADDED METAL THICKNESS CALLOUT FOR EMBEDDED BOX	
NORTH FLORIDA PROFESSIONAL SERVICES, INC. P.O. BOX 3823 LAKE CITY, FL 32056 PH. 386-752-6875 WWW/NFPS.NET LIC NO. LB8356 JOB NUMBER: L220531808 FOR: ROBERT P. BISHOP P.E. NO.: 38546 BRIDGE-RAIL CONCRETE DETAILS WOOD TREATING PLANT FOUNDATION COLUMBIA COUNTY, FL		
SHEET NO.		S9

aryxada
1579 KOPPERS RD
CONLEY, GA 30288



PLAN VIEW
SCALE 3/4" = 1'-0"
S10



SECTION VIEW
SCALE 3/4" = 1'-0"
S10

REVISIONS		JOB NUMBER		PROJECT	
DATE	DESCRIPTION	NO.	BY	PROJECT	LOCATION
10/23/23	5. NOTED GRADE ELEVATION	L22051508	ROBERT P. BISHOP	TRUCK UNLOADING PAD	WOOD TREATING PLANT FOUNDATION



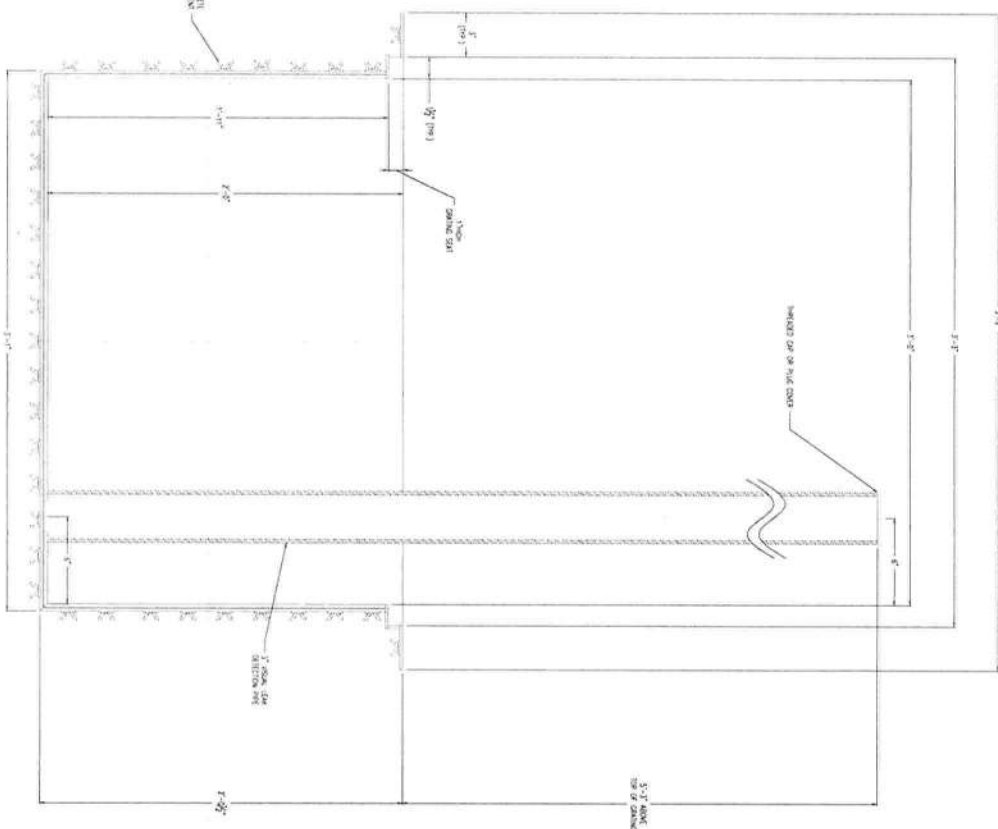
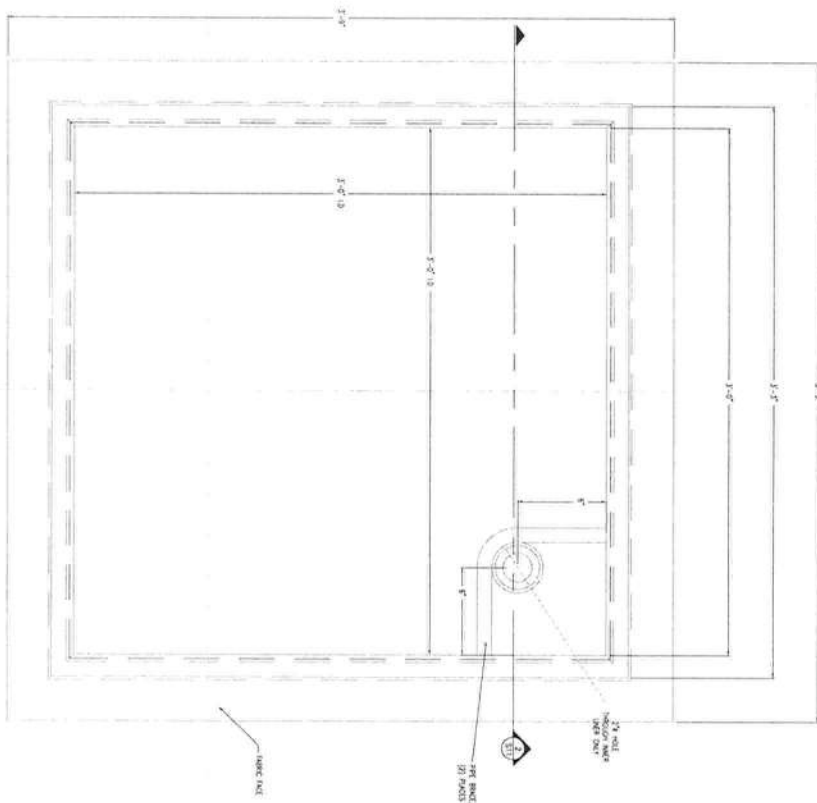
NORTH FLORIDA PROFESSIONAL SERVICES, INC.
P.O. BOX 3823
LAKE CITY, FL 32056
PH. 386-752-4675
LIC NO. 188356

2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
WWW.NFPS.NET
CA# 29011

TRUCK UNLOADING PAD
WOOD TREATING PLANT FOUNDATION
COLUMBIA COUNTY, FL

SHEET NO.
S10

aryxada
1579 KOPERS RD
CONLEY, GA 30288



NOTES:

1. LINER, MAT'L - HDPE OR APPROVED EQUAL
2. 3/8" x 3/8" x 1" H. FIBERGLASS COATING (NOT SHOWN)
3. SET SUMP IN PLACE PRIOR TO PLACING CONCRETE UP TO THE SIDES OF THE SUMP

DUAL CONTAINMENT HDPE CPL SUMP

REVISIONS	
DATE	DESCRIPTION



NORTH FLORIDA PROFESSIONAL SERVICES, INC.
P.O. BOX 3823
LAKE CITY, FL 32056
PH. 386-752-4675
LIC NO. LB0356

2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
WWW.NFPS.NET
CA# 29011

PROFESSIONAL SERVICES, INC.
2551 BLAIRSTONE PINES DR.
TALLAHASSEE, FL 32301
WWW.NFPS.NET
CA# 29011

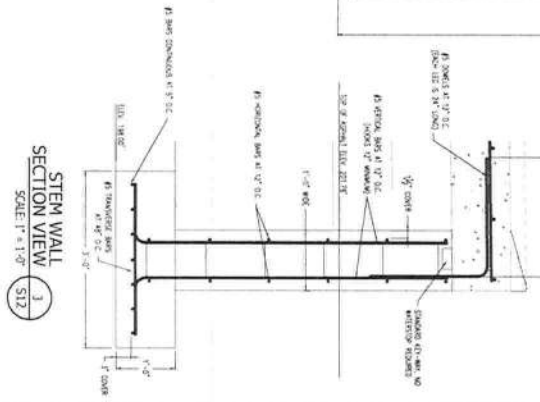
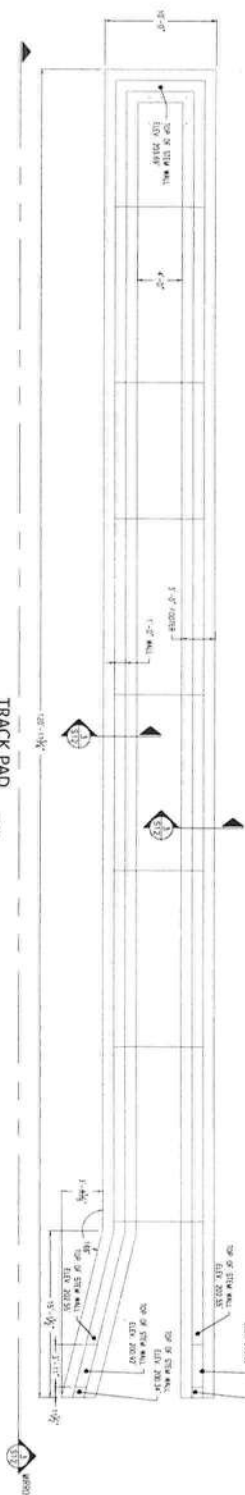
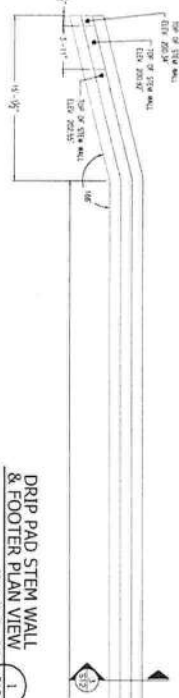
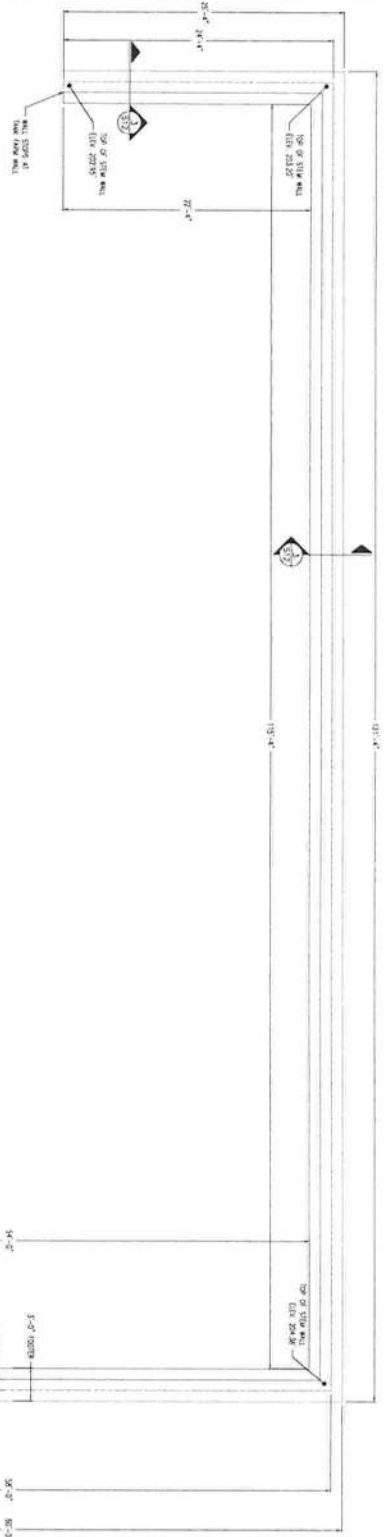
JOB NUMBER:
L220531ROB
EOR:
ROBERT P. BISHOP
P.E. NO.:
38546

PREFORMED SUMP BOX
WOOD TREATING PLANT FOUNDATION
COLUMBIA COUNTY, FL

aryada
1579 KOPPERS RD
CONLEY, GA 30288

NO
SHER

S11



REVISIONS		JOB NUMBER:	
DATE	DESCRIPTION	L22051508	
09/29/21	2. ADDED SHEET S12 (THIS SHEET) TO SET	FOR:	
10/03/21	3. ADDED ELEVATIONS	ROBERT P. BISHOP	
		P. E. NO.:	
		38546	



NORTH FLORIDA PROFESSIONAL SERVICES, INC.
 P.O. BOX 3821
 LAKE CITY, FL 32056
 PH. 386-752-4675
 WWW.NFPS.NET
 CAA# 29011
 LIC NO. 1B8356

STEM WALL

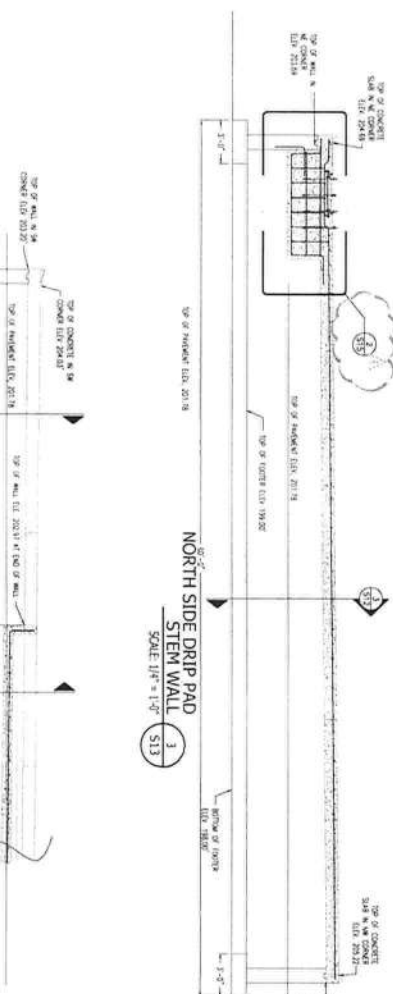
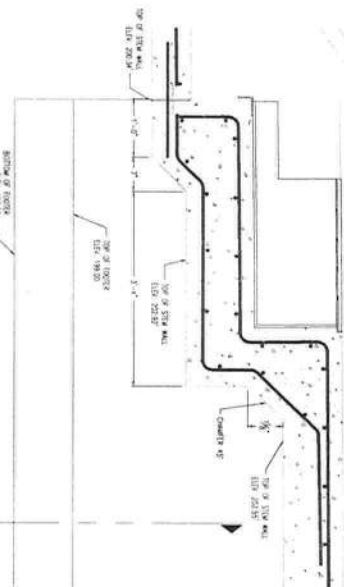
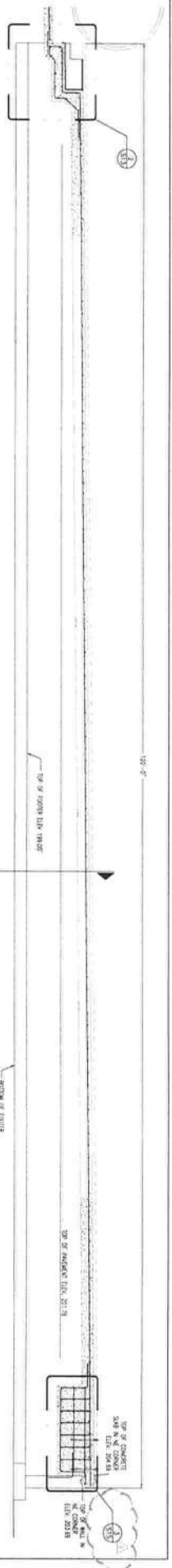
WOOD TREATING PLANT FOUNDATION

COLUMBIA COUNTY, FL

SHEET NO.

S12

aryada
1579 KOPPERS RD
CONLEY, GA 30288



WEST SIDE DRIP PAD
STEM WALL
SCALE: 1/4" = 1'-0"
S13

SOUTH SIDE DRIP PAD
STEM WALL
SCALE: 1/4" = 1'-0"
S13

NORTH SIDE DRIP PAD
STEM WALL
SCALE: 1/4" = 1'-0"
S13

REVISIONS		DATE	
NO.	DESCRIPTION	DATE	BY
2	ADDED SHEET TO SET	09/29/23	4
4	ADDED CALCULATIONS	10/10/23	4



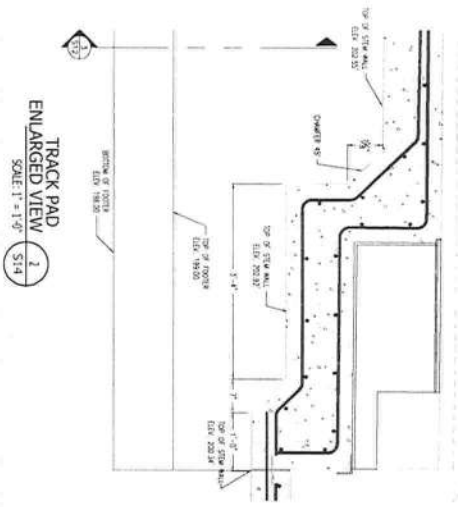
NORTH FLORIDA PROFESSIONAL SERVICES, INC.
P.O. BOX 3823
LAKE CITY, FL 32056
PH. 386-752-4675
LIC NO. LB8336

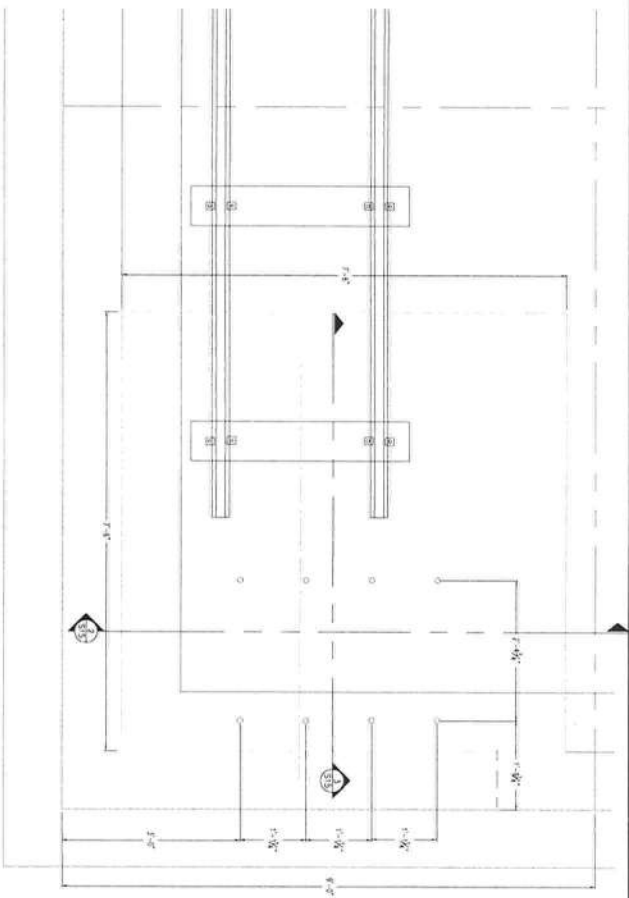
JOB NUMBER:
FOR: ROBERT P. BISHOP
P.E. NO.: 38546

STEM WALL ELEVATIONS
WOOD TREATING PLANT FOUNDATION
COLUMBIA COUNTY, FL

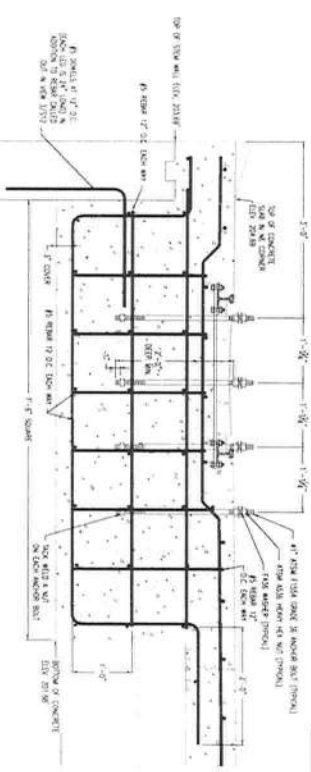
aryxada
1579 KOPERS RD
CONLEY, GA 30288

SHEET NO.
S13

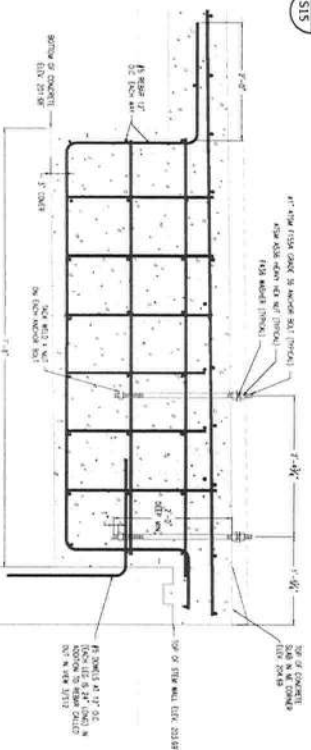




D RIP PAD
ENLARGED PLAN VIEW
 SCALE: 1" = 1'-0"
 1
 S15



D RIP PAD
SECTION
 SCALE: 1" = 1'-0"
 2
 S15



D RIP PAD
SECTION
 SCALE: 1" = 1'-0"
 3
 S15

REVISIONS		DATE
DESCRIPTION		
4. ADDED SHEET TO SET		10/10/23



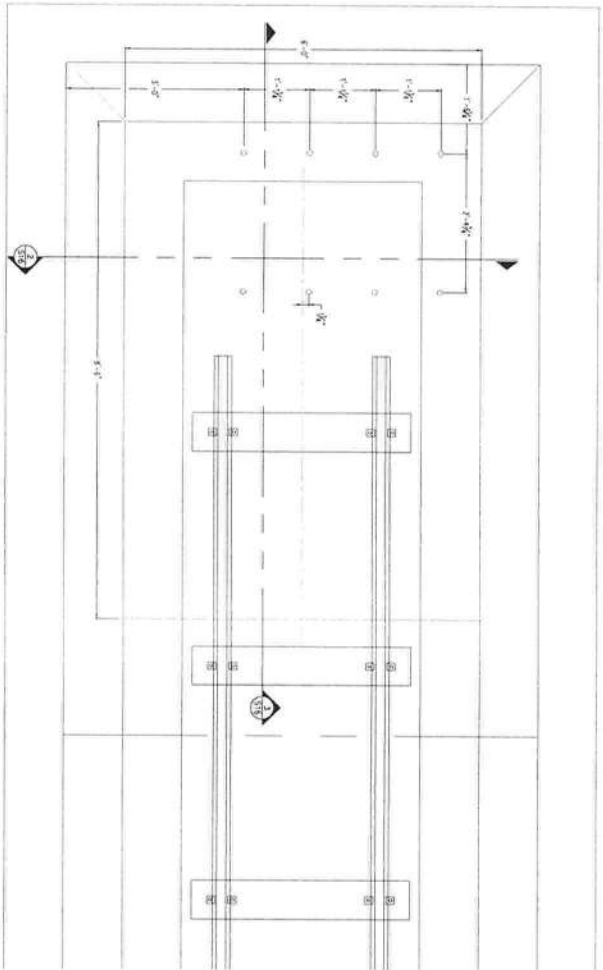
NORTH FLORIDA PROFESSIONAL SERVICES, INC.
 P.O. BOX 3823
 LAKE CITY, FL 32056
 PH. 386-752-4675
 LIC NO. 18B3356

JOB NUMBER:
 L220531808
FOR:
 ROBERT P. BISHOP
P.E. NO.:
 38546

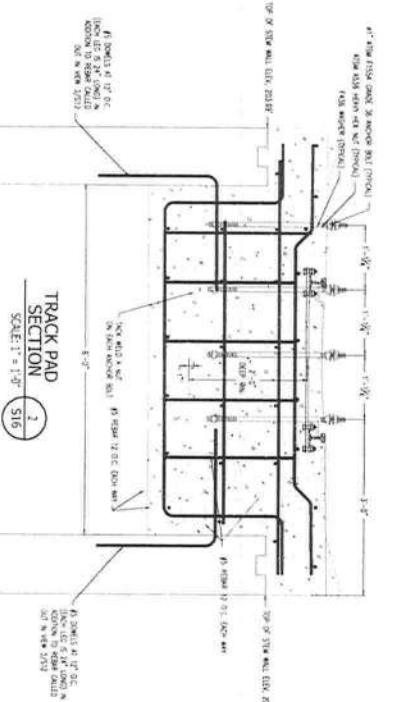
D RIP PAD WINCH CONCRETE
WOOD TREATING PLANT FOUNDATION
COLUMBIA COUNTY, FL

SHEET NO.
S15

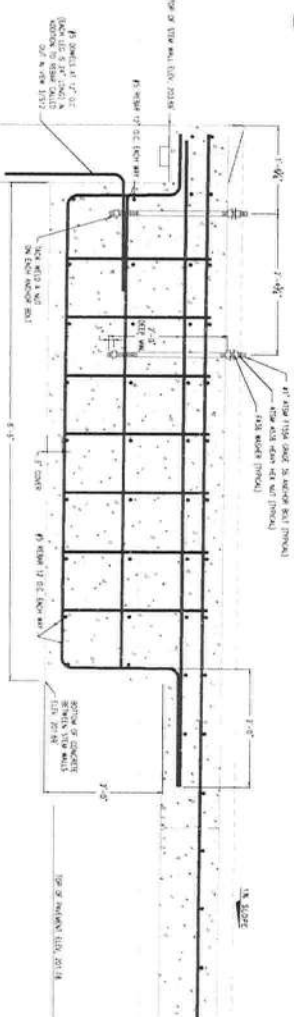
aryxada
 1579 KOPERS RD
 CONLEY, GA 30288



TRACK PAD
ENLARGED PLAN VIEW
SCALE: 1" = 1'-0"
S16



TRACK PAD
SECTION 2
SCALE: 1" = 1'-0"
S16



TRACK PAD
SECTION 3
SCALE: 1" = 1'-0"
S16

REVISIONS

DATE	DESCRIPTION
10/10/23	4. ADDED SHEET TO SET



NORTH FLORIDA PROFESSIONAL SERVICES, INC.
P.O. BOX 3823
LAKE CITY, FL 32056
PH. 386-792-4875
WWW.NFPS.NET
LIC NO. LB8356
CAF 29011

JOB NUMBER:
L220531R08
EOR:
ROBERT P. BISHOP
P.E. NO.:
38546

TRACK PAD WINTCH CONCRETE
WOOD TREATING PLANT FOUNDATION
COLUMBIA COUNTY, FL

aryxada
15779 KOPERS RD
CONLEY, GA 30288

SHEET
NO.

S16

DATE	DESCRIPTION	REVISIONS	SHEET NO.
			S28

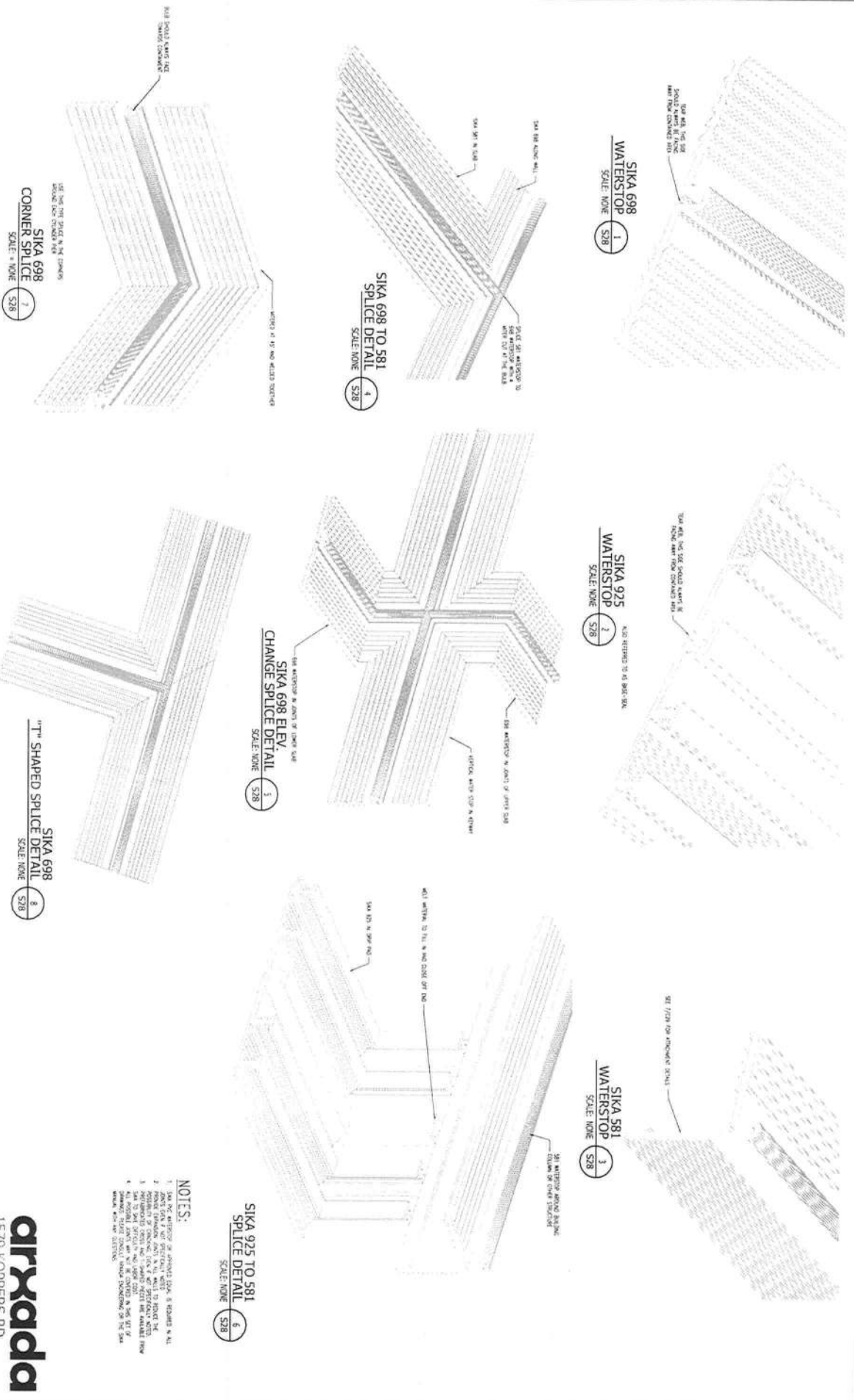


NORTH FLORIDA PROFESSIONAL SERVICES, INC.
P.O. BOX 3823
LAKE CITY, FL 32056
PH. 386-752-4675
LIC. NO. LB8336

JOB NUMBER:
L220531R08
FOR:
ROBERT P. BISHOP
P.E. NO.:
38546

WATERSTOP SPLICE DETAILS
WOOD TREATING PLANT FOUNDATION
COLUMBIA COUNTY, FL

arxada
1579 KOPPERS RD
CONLEY, GA 30288



- NOTES:**
1. Sika 698 Waterstop or Sika 925 Waterstop is required in all applications.
 2. Sika 581 Waterstop is required in all applications.
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 4. Sika 925 Waterstop is required in all applications.
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 7. Sika 925 Waterstop is required in all applications.
 8. Sika 581 Waterstop is required in all applications.

DESIGN:

1. ALL STRESSES IN CONCRETE AND REINFORCING DESIGN PROCEDURES AS APPLICABLE SHALL CONFORM TO A.C.I. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318).
2. THIS DESIGN IS INTENDED TO MEET OR EXCEED THE DRIP PRO REQUIREMENTS FOUND IN SUBPART K, MOIST PRESERVING, DEMONSTRATION AND LISTING OF HAZARDOUS WASTE, FINAL RULE 55, FEDERAL REGISTER 50450, DECEMBER 5, 1990/1992.

CONCRETE:

1. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4"
2. REINFORCING BARS SHALL BE NEW BILLET STEEL IN ACCORDANCE WITH ASTM A615 GRADE 60.
3. ALL #4, #5 & #6 REBAR TO BE ON 1'-0" CENTERS UNLESS OTHERWISE NOTED.
4. DOUGL BARS SHALL BE 1" X 2'-0" LONG.
5. DOUGL PLACEMENT SHALL NOT BE ANY CLOSER THAN 12" FROM ANY CONCRETE CONDITION.
6. CONCRETE COVER ON REINFORCING SHALL BE AS FOLLOWS, EXCEPT WHERE NOTED ON DETAIL DRAWINGS, GROUND 3" MIN. ALL OTHERS:
 - A. 1 1/2" FOR #5 REBAR OR SMALLER
 - B. 2" FOR #6 REBAR OR LARGER
7. WHERE FIELD SPACING IS REQUIRED, BARS TO LAP 36 DIAMETERS UNLESS OTHERWISE NOTED.
8. ALL FOOTINGS SHALL REST ON UNDISTURBED SOIL, BELOW FROSTLINE.
9. ALL REINFORCING WATERTIGHT SPACING SHALL BE MADE USING A CONTROLLED ELECTRICAL SOURCE OF HEAT, NO LAP SPACING.
10. STRUCTURAL ENGINEER AND CONTRACTOR TO INSPECT AND VERIFY REBAR PLACEMENT PRIOR TO CONCRETE PLACEMENT.
11. THE OWNER MAY CHOOSE FROM THE FOLLOWING CONCRETE FINISHES:
 - A. ALUMINUM FLOAT FINISH (MEDIUM WITH LIGHT BROOD FINISH)
 - B. ALUMINUM FLOAT FINISH (SLICK OR POWER TROWEL)
12. SLOPE CONCRETE IN THE DIRECTION OF SLOPE ARROWS AS SHOWN ON FOUNDATION PLAN.
13. ALLOWABLE SOIL BEARING CAPACITY SHALL BE 2000 P.S.F., MIN. COMPACTION SHALL BE 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE STANDARD PROCTOR METHOD. SOIL BEARING AND COMPACTION TO BE DETERMINED BY ON-SITE TESTING PRIOR TO CONSTRUCTION.
14. CONCRETE TO BE VIBRATED TO REMOVE AIR POCKETS BEFORE DRYING.
15. ALL CONCRETE SURFACES MUST RECEIVE A WET CURE. APPROVED PROCEDURES ARE LISTED BELOW.
 - A. FABRIC COVERS SUCH AS BURLAP, COTTON WASH, OR OTHER WASTES RETAINING FABRICS CAN BE USED. BURLAP MUST BE FREE OF SIZES OR ANY SUBSTANCE THAT IS HARMFUL TO CONCRETE OR CAUSES DISCOLORATION. NEW BURLAP SHALL BE THOROUGHLY RINSED IN WATER TO REMOVE SOLUBLE SUBSTANCES AND MUST BE PLACED WHERE ABSORBENT. THE FABRICS SHOULD BE PLACED AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT SURFACE DAMAGE. THE COVERS SHOULD BE KEPT CONTINUOUSLY MOIST SO THAT A FILM OF WATER REMAINS ON THE CONCRETE SURFACE. PLASTIC SHEETS PLACED OVER THE BURLAP WILL ELIMINATE THE NEED FOR CONTINUOUS WATERING OF THE CONCRETE.
 - B. WET COVERS OF EARTH, SAND, OR SAND/SLIT ARE EFFECTIVE FOR CURING AND ARE OFTEN USED ON SMALL JOBS. A LAYER APPROXIMATELY 2" THICK SHOULD BE EVENLY DISTRIBUTED OVER THE PREVIOUSLY WETTED SURFACE OF THE CONCRETE AND KEPT WET. A DISADVANTAGE OF THIS PROCESS IS THE POSSIBILITY OF DISCOLORING THE CONCRETE.
 - C. WET HAY OR STRAW CAN BE USED TO CURE FLAT SURFACES. IF USED IT SHALL BE PLACED 6" THICK AND COVERED WITH BURLAP OR PLASTIC TO PREVENT IT FROM BEING BLOWN OFF BY WIND. THIS PROCESS ALSO HAS THE ABILITY TO DISCOLOR THE CONCRETE.
16. SUBGRADE SHALL BE SMOOTH TO ALLOW FOR LATERAL MOVEMENT OF SLAB AND COMPONENTS. (REFER TO ACI 302.1 R7 2-4 1994)
17. JOINTS SHALL NOT BE FILLED WITH SEALER UNTIL CONCRETE WORK IS OTHERWISE COMPLETE AND/OR COATING APPLIED.

READY MIXED CONCRETE:

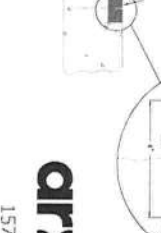
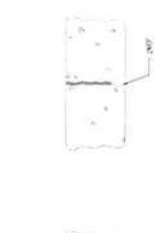
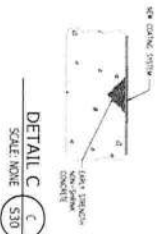
1. CONCRETE SHALL BE TYPE 1 OR 1A IN ACCORDANCE WITH ASTM SPECIFICATION C150 FOR PORTLAND CEMENT.
2. CONCRETE SHALL BE AIR ENHANCED (4-6%) AND SHALL DEVELOP 4000 P.S.I. @ 28 DAYS. (THIS REQUIRES AN AVERAGE COMPRESSION STRENGTH OF 5,200 P.S.I.) (REFER TO ACI 318 5.3.2.2 1994) AIR ENTRAINMENT PERCENTAGE SHALL BE MODIFIED TO ACCOMMODATE FINISH.
3. WATER CEMENT RATIO 45. UNPASTICIZED SLUMP NOT TO EXCEED 2" AT POINT OF PLACEMENT. (IF THE SLUMP IS NOT TESTED ON SITE, DOCUMENTATION OF THIS TEST SHALL BE PROVIDED TO THE OWNER'S ENGINEER.)
4. A HIGH RANGE WATER REDUCER (HWR) (SUPER PLASTICIZER) MAY BE ADDED TO ACHIEVE WORKABILITY. MAXIMUM ALLOWABLE CHEMICALLY ADDED SLUMP SHALL BE SPECIFIED BY THE OWNER'S ENGINEER OR BY THE ARCHITECT'S ENGINEERING DEPARTMENT.
5. CONCRETE SHALL BE PLACED IN TEMPERATURES OF 40°F OR GREATER. THIS TEMPERATURE SHALL BE MAINTAINED FOR A CONTINUOUS 48 HOURS.
6. ENHANCED REINFORCING FIBERS SHALL BE USED IN ALL CONCRETE AS SPECIFIED AND IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AS TO TYPE AND AMOUNT. THE RECOMMENDED AMOUNT SHALL BE 1 1/2 LBS PER CUBIC YARD. ONLY FIBRILLATED FIBERS DESIGNED AND MANUFACTURED SPECIFICALLY FOR USE IN CONCRETE FROM 100% VIRGIN POLYPROPYLENE AND SO CERTIFIED BY THE MANUFACTURER SHALL BE ACCEPTABLE.
7. MAXIMUM FIBER LENGTH 3/4".
8. CONCRETE MIX DESIGN TO BE SUBMITTED FOR APPROVAL BY ENGINEERS OF RECORD.
9. COMPRESSIVE STRENGTH TESTING IN ACCORDANCE WITH ASTM C31 AND C39 SHALL BE DONE FOR EVERY 100 CUBIC YARDS OF CONCRETE.

COATING SYSTEM FOR SLABS AND CURBS:

1. COATING SHALL BE CHEMICALLY RESISTANT WITH A PERMEABILITY OF LESS THAN 1X10⁻¹⁰ CM PER SECOND.
2. CONCRETE SURFACE SHALL BE FREE OF ANY FOREIGN CONSTITUENTS THAT WILL NOT ALLOW FOR PROPER BONDING TO TAKE PLACE BETWEEN COATING AND CONCRETE SURFACE.
3. COATING SYSTEM SHALL BE DETERMINED BY THE CUSTOMER AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

CRACK REPAIR:

1. CHASE CONCRETE @ A 45° ANGLE TO OPEN UP CRACKS. (DETAIL A)
2. GRIND COATING BACK FROM AREA TO BE REPAIRED APPROXIMATELY 1/2" TO 1" (DETAIL B)
3. WIRE BRUSH AREA, REMOVE DUST, SOIL, AND DEBRIS.
4. MIX APPROVED CONCRETE REPAIR MATERIAL.
5. TROWEL REPAIR MATERIAL INTO THE JOINT UNTIL IT IS FLUSH WITH THE ADJACENT SLAB. ALLOW REPAIR MATERIAL TO CURE FOR 7 DAYS.
6. COAT OVER REPAIRED AREA (DETAIL C)
7. SAW CUTTING MAY BE THE ONLY ALTERNATIVE IN THOSE AREAS THAT HAVE EXPERIENCED EXTENSIVE CRACKING AND/OR JOINTS THAT HAVE BAD EDGES. SAWCUT 3" ON BOTH SIDES OF THE EXISTING CRACK. THE DEPTH OF THE CUT SHALL BE 2" TO 3". INSTALL GROUT. SAWCUT GROUT 1/2" WIDE BY 1" DEEP TO PREVENT CRACKING OF NEW MATERIAL. APPLY COATING AND INSTALL 3/8" BUCKER ROD AND CAULK (DETAIL D)
8. FOR CRACKS THAT HAVE BEEN REPAIRED AND HAVE CRACKED AGAIN, USE STEP (7) UNDER CRACK REPAIR.
9. DOCUMENT REPAIRS AND MAINTAIN RECORDS.



REVISIONS

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