JEWEL LAKE ALF
LAKE CITY, FL
SECTION 04, TOWNSHIP 4S, RANGE 16E

PROJECT LOCATION

SHEET INDEX

ATTACHMENT: SURVEY BY J. SHERMAN FRIER & ASSOCIATES, INC.

PLANS PREPARED FOR:

GARY SORENSEN
1400 WEST 22ND ST.
KEARNEY, NE 68845
(308) 237-1475

12/2020
COUNTY SITE PLAN MODIFICATION

GREGORY G. BAILEY LICENSE No. 43858 STATE OF FLORIDA PROFESSIONAL ENGINEER

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Gregory G Bailey

Digitally signed by Gregory G Bailey
DN: CN=Gregory G Bailey, OU=A01427E000001680E98940E00004253, O=NORTH FLORIDA PROFESSIONAL SERVICES INC., C=US
Date: 2020.12.16 17:01:52-05'00'

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED IN THE ELECTRONIC DOCUMENTS.

NORTH FLORIDA PROFESSIONAL SERVICES, INC.
P.O. BOX 3823
LAKE CITY, FL 32056
CERTIFICATE OF AUTHORIZATION: 29011
GREGORY G. BAILEY, P.E. NO. 43858

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

29
Site Survey MOB

North Florida Professional Services, Inc.
P.O. BOX 3823 Lake City, FL 32025
P.O. BOX 180998 Tallahassee, FL 32318

COVER SHEET

REVISIONS:

JOB NUMBER: L190107SMI
DESIGNED BY: TH
DRAFTED BY: JC
CHECKED BY: GB
ENGINEER OF RECORD: GREG BAILEY
DATE: 01/19
SHEET NO: C-1

File Location: X:\2019\L190107SMI\H.CADD\cSMIgen01\1 WATER COV
Date Created: December 15, 2020 Date Last Saved: December 16, 2020 Date Plotted: December 16, 2020

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE JOB SITE TO ENSURE THAT ALL NEW WORK WILL FIT IN THE MANNER INTENDED ON THE PLANS. SHOULD ANY CONDITIONS EXIST THAT ARE CONTRARY TO THOSE 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 FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION 10/2 SELF-CERTIFICATION TO USE A GENERAL PERMIT FOR A STORMWATER MANAGEMENT SYSTEM SERVING LESS THAN TEN ACRES TOTAL PROJECT AREA AND LESS THAN 2 ACRES IMPERVIOUS SURFACE.

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. BOUNDARY INFORMATION SHOWN, WAS OBTAINED FROM A BOUNDARY SURVEY PREPARED BY J. SHERMAN FRIER & ASSOCIATES, FLORIDA CERTIFICATE NO. 6332.

5. THE BENCHMARKS NOTED IN THE PLANS WERE DETERMINED FROM THE USGS QUADRANGLE MAP.

6. 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.

7. THE SITE IS LOCATED IN SECTION 4, TOWNSHIP 4 SOUTH, RANGE 16 EAST, COLUMBIA COUNTY, FLORIDA.

8. 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.

9. THE STORMWATER BASIN IS DESIGNED IN ACCORDANCE WITH SRWMD APPLICANT HANDBOOK VOLUME II AND 62-330 F.A.C.

10. ALL SLOPES OF THE STORMWATER BASIN SHALL BE GRASSED. ALL SLOPES STEEPER THAN 3:1 SHALL BE STAPLED SOD.

11. ALL DISTURBED AREAS NOT SODDED SHALL BE SEEDED 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 RYE. 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 MILLET.

12. 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.

13. ALL UTILITY CONSTRUCTION SHALL MEET THE CITY OF LAKE CITY WATER AND WASTEWATER UTILITY STANDARDS, AVAILABLE FROM CITY HALL OR PUBLIC WORKS.

14. ALL INLINE WATER FITTINGS SHALL HAVE ONE MEGALUG AND TWO RESTRAINTS BEFORE AND AFTER EACH FITTING.

15. ALL SITE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE COLUMBIA COUNTY LAND DEVELOPMENT REGULATIONS.

16. CONTRACTOR SHALL REVIEW AND BECOME FAMILIAR WITH ALL REQUIRED UTILITY CONNECTIONS PRIOR TO BIDDING. CONTRACTOR SHALL PROVIDE ALL WORK AND MATERIALS REQUIRED TO COMPLETE CONNECTION TO THE EXISTING UTILITIES. THIS INCLUDES BUT IS NOT LIMITED TO MANHOLE CORING, WET TAPS, PAVEMENT REPAIRS AND DIRECTIONAL BORING.

17. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER CONTRACTORS WITHIN PROJECT AREA.

18. CONTRACTOR SHALL PROVIDE ACTUAL INVERT ELEVATIONS ON ALL DRAINAGE STRUCTURES, INCLUDING CULVERTS, PRIOR TO PLACING ANY BASE MATERIAL. DEVIATIONS FROM THE PLANS SHALL BE APPROVED BY THE ENGINEER BEFORE CONTINUING WORK.

19. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE F.D.O.T. STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION), FLORIDA BUILDING CODE (CURRENT EDITION), AWWA SPECIFICATIONS, AND COLUMBIA COUNTY DEVELOPMENT STANDARDS UNLESS OTHERWISE NOTED.

20. IF UNSUITABLE MATERIAL IS ENCOUNTERED DURING GRADING, CONTRACTOR SHALL REMOVE UNSUITABLE MATERIAL TO A DEPTH OF 24" BELOW FINISHED GRADE WITHIN THE CONSTRUCTION LIMITS.

21. THE CONTRACTOR SHALL NOTIFY COLUMBIA COUNTY AT LEAST 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION.

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

23. THE CONTRACTOR SHALL NOTIFY THE CITY OF LAKE CITY AT LEAST 48 HOURS IN ADVANCE OF THE PRESSURE AND LEAKAGE TESTS.

24. NO FINAL TESTING OR PRESSURE TESTING WILL BE ACCEPTED UNLESS WITNESSED BY THE CITY OF LAKE CITY'S REPRESENTATIVE.

25. CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY MEETING THE REQUIREMENTS OF CHAPTER 61G17 F.A.C. FOR THE STORMWATER MANAGEMENT SYSTEMS. INCLUDE HORIZONTAL AND VERTICAL DIMENSIONAL DATA SO THAT IMPROVEMENTS ARE LOCATED AND DELINEATED RELATIVE TO THE BOUNDARY. PROVIDE SUFFICIENT DETAILED 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 AND THE ENGINEER.

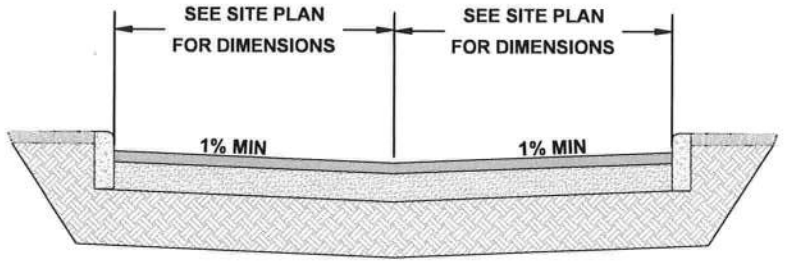
26. THE CONTRACTOR SHALL SUBMIT A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM NOTICE OF INTENT ALONG WITH SUPPORTING DOCUMENTATION TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AT LEAST 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMIT FEES.

27. 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 FLORIDAN AQUIFER SYSTEM, CORRECTIVE ACTIONS DESIGNED OR APPROVED BY A REGISTERED PROFESSIONAL SHALL BE TAKEN AS SOON AS PRACTICAL TO CORRECT THE FAILURE. A REPORT PREPARED BY A REGISTERED PROFESSIONAL MUST BE PROVIDED AS SOON AS PRACTICAL TO THE DEPARTMENT FOR REVIEW AND APPROVAL THAT PROVIDES REASONABLE ASSURANCE THAT THE BREACH WILL BE PERMANENTLY CORRECTED.

28. ALL CONCRETE SLABS ABUTTING EXTERIOR WALLS SHALL BE SOIL TREATED FOR TERMITES.

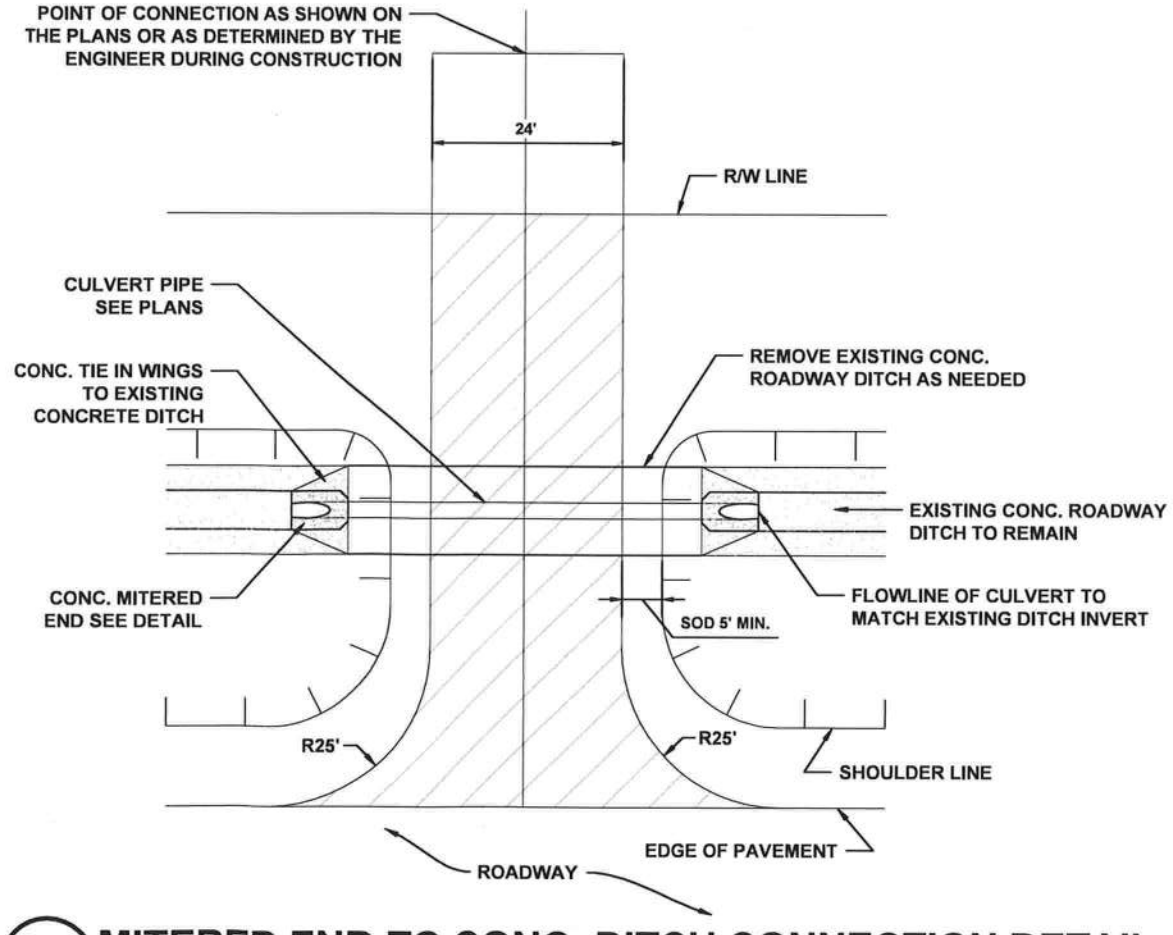
SITE DATA TABLE
JEWEL LAKE ALF

PARCEL ID NUMBER	04-4S-16-02745-003				
ZONING	CG				
LAND USE	COMMERCIAL				
CITY COUNCIL DISTRICT NUMBER	2				
PHYSICAL ADDRESS	354 SW MABREY GLEN LAKE CITY, FL 32024				
PROJECT PROPERTY BOUNDARY		SQ. FT.	ACRES	% OF SITE	
	TOTAL PROPERTY BOUNDARY AREA	274871	6.31	100.00%	
PROJECT AREA / LIMITS OF CONSTRUCTION (LOC)		95389	2.19	34.70%	% OF LOC
BOTH ON-SITE & OFF-SITE		274871	6.31	100.00%	100.00%
EXISTING IMPERVIOUS AREA ON-STIE					
	EXISTING ASPHALT PAVEMENT	0	0.00	0.00%	0.00%
	EXISTING CONCRETE	0	0.00	0.00%	0.00%
	EXISTING BUILDING	0	0.00	0.00%	0.00%
	EXISTING STORMWATER MANAGEMENT FACILITY	0	0.00	0.00%	0.00%
	TOTAL EXISTING IMPERVIOUS AREA ON-SITE	0	0.00	0.00%	0.00%
PROPOSED IMPERVIOUS AREA ON-SITE					
	EXISTING ASPHALT PAVEMENT TO REMAIN	0	0.00	0.00%	0.00%
	EXISTING CONCRETE TO REMAIN	0	0.00	0.00%	0.00%
	EXISTING BUILDING TO REMAIN	0	0.00	0.00%	0.00%
	EXISTING STORMWATER MANAGEMENT FACILITY TO REMAIN	0	0.00	0.00%	0.00%
	PROPOSED ASPHALT PAVEMENT	17028	0.39	6.19%	17.85%
	PROPOSED CONCRETE	2780	0.06	1.01%	2.91%
	PROPOSED BUILDING	22838	0.52	8.31%	23.94%
	PROPOSED STORMWATER MANAGEMENT FACILITY	15246	0.35	5.55%	15.98%
	TOTAL PROPOSED IMPERVIOUS AREA ON-SITE	57892	1.33	21.06%	60.69%
	TOTAL PROPOSED PERVIOUS AREA	216979	4.98	78.94%	39.31%
PROPOSED PARKING LANDSCAPE AREA ON-SITE		3064	0.07	1.11%	3.21%
REQUIRED PARKING		68 BEDS @ 1 SPACE PER 3 BEDS = 23 SPACES INCLUDING 1 HANDICAP SPACE			
PROVIDED PARKING		23 SPACES + 2 HANDICAP SPACES = 25 SPACES TOTAL			



1 C-2 **PARKING APRON TYPICAL SECTION**
SCALE: N.T.S.

1-1/2" TYPE SP 12.5 ASPHALTIC CONCRETE
6" LIMEROCK BASE COURSE
12" COMPACTED SUBGRADE
MINIMUM L.B.R. 40



2 C-2 **MITERED END TO CONC. DITCH CONNECTION DETAIL**
SCALE: N.T.S.

North Florida Professional Services, Inc.
P.O. BOX 180998 Tallahassee, FL 32318
P.O. BOX 3823 Lake City, FL 32025

GENERAL NOTES
JEWEL LAKE ALF

REVISIONS:

JOB NUMBER: L190107SMI | DESIGNED BY: TH | DRAFTED BY: JC | CHECKED BY: GB
ENGINEER OF RECORD: GREG BAILEY
DATE: 01/19
SHEET NO: C-2

File Location: X:\2019\L190107SMI\H.CADD\cSMIgen0112 GEN
Date Created: December 15, 2020 Date Last Saved: December 16, 2020 Date Plotted: December 16, 2020
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

JEWEL LAKE

35' WETLAND BUFFER

15' LANDSCAPE BUFFER

5' BUILDING SETBACK

JEWEL LAKE

5' BUILDING SETBACK

WETLAND BOUNDARY

35' WETLAND BUFFER

WETLAND BOUNDARY

CONSTRUCT SWMF
SEE SHEET C-9

PROP. BUILDING
22,838 SF
68 BEDS

30' LANDSCAPE BUFFER

SAN

CONSTRUCT ±211 LF
TYPE "F" CURB PER FDOT
STANDARD PLAN 520-001

PROPERTY BOUNDARY

CONSTRUCT ±400 LF
TYPE "F" CURB PER FDOT
STANDARD PLAN 520-001

CONSTRUCT CONCRETE
DUMPSTER PAD & ENCLOSURE

30' LANDSCAPE BUFFER

CONSTRUCT ±25 LF
24" SOLID WHITE STOP BAR
WITH "ONE WAY DO NOT ENTER"

CONSTRUCT ±233 LF
TYPE "F" CURB PER FDOT
STANDARD PLAN 520-001

CONSTRUCT ±16 LF
24" SOLID WHITE STOP BAR
WITH ±24 LF
6" SOLID DOUBLE YELLOW LINES

CONSTRUCT DRIVEWAY CONNECTION
TO EXISTING PAVEMENT

20' BUILDING SETBACK

FENCE TO BE
REMOVED BY OWNER

20' BUILDING SETBACK

CONSTRUCT R1-1
STOP SIGN

RIGHT OF WAY LINE

PINEMOUNT ROAD (CR-252)

EDGE OF PAVEMENT

GRAPHIC SCALE

40 0 20 40 80 FEET

NOTE:

SEE DETAIL # 2 ON SHEET C-15 FOR GRADING AT BUILDING

North Florida Professional Services, Inc.
P.O. BOX 180998
Tallahassee, FL 32318
P.O. BOX 3823
Lake City, FL 32025

OVERALL SITE PLAN
JEWEL LAKE ALF

REVISIONS:

JOB NUMBER: L190107SMI
DESIGNED BY: TH
DRAFTED BY: JC
CHECKED BY: GB
DATE: 01/19
ENGINEER OF RECORD: GREG BAILEY
SHEET NO: C-3

File Location: X:\2019\L190107SMI\H.CADD\cSMI\dsn01\3 OVERALL
Date Created: December 16, 2020
Date Last Saved: December 16, 2020
Date Plotted: December 16, 2020
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File Location: X:\2019\L190107SMI\H.CADD\cSMIdsn01\4 SITE
Date Created: December 16, 2020 Date Last Saved: December 16, 2020 Date Plotted: December 16, 2020
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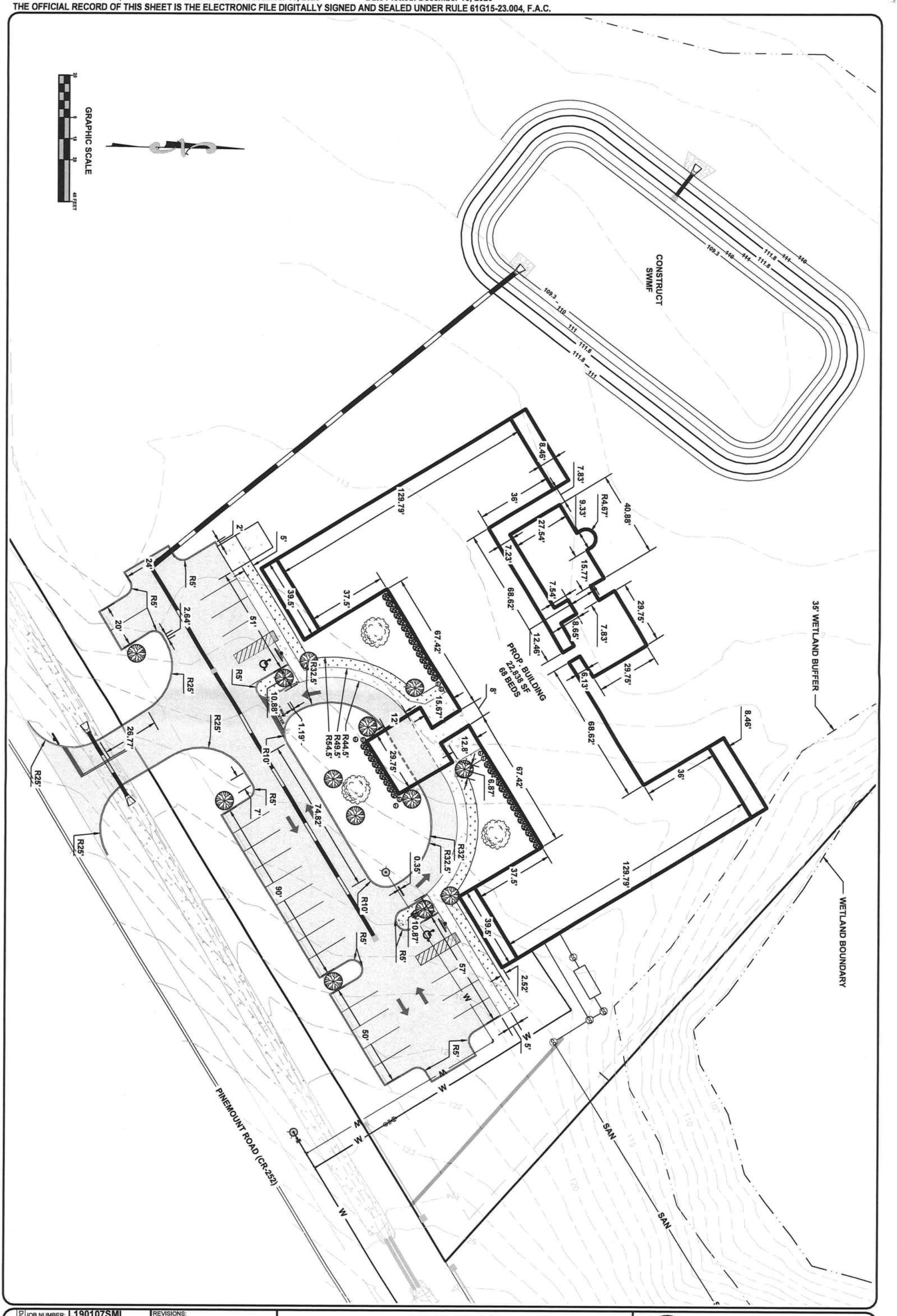

JOB NUMBER: L190107SMI		
DESIGNED BY:	DRAFTED BY:	CHECKED BY:
TH	JC	GB

ENGINEER OF RECORD: GREG BAILEY

DATE: 01/19
SHEET NO: C-4

REVISIONS:

SITE PLAN

JEWEL LAKE ALF

North Florida Professional Services, Inc.
P.O. BOX 3823, Lake City, FL 32025
P.O. BOX 180998, Tallahassee, FL 32318

File Location: X:\2019\L190107SMI\H.CADD\cSMIgra01\C-5 GRADING PLAN
Date Created: December 16, 2020 Date Last Saved: December 16, 2020 Date Plotted: December 16, 2020
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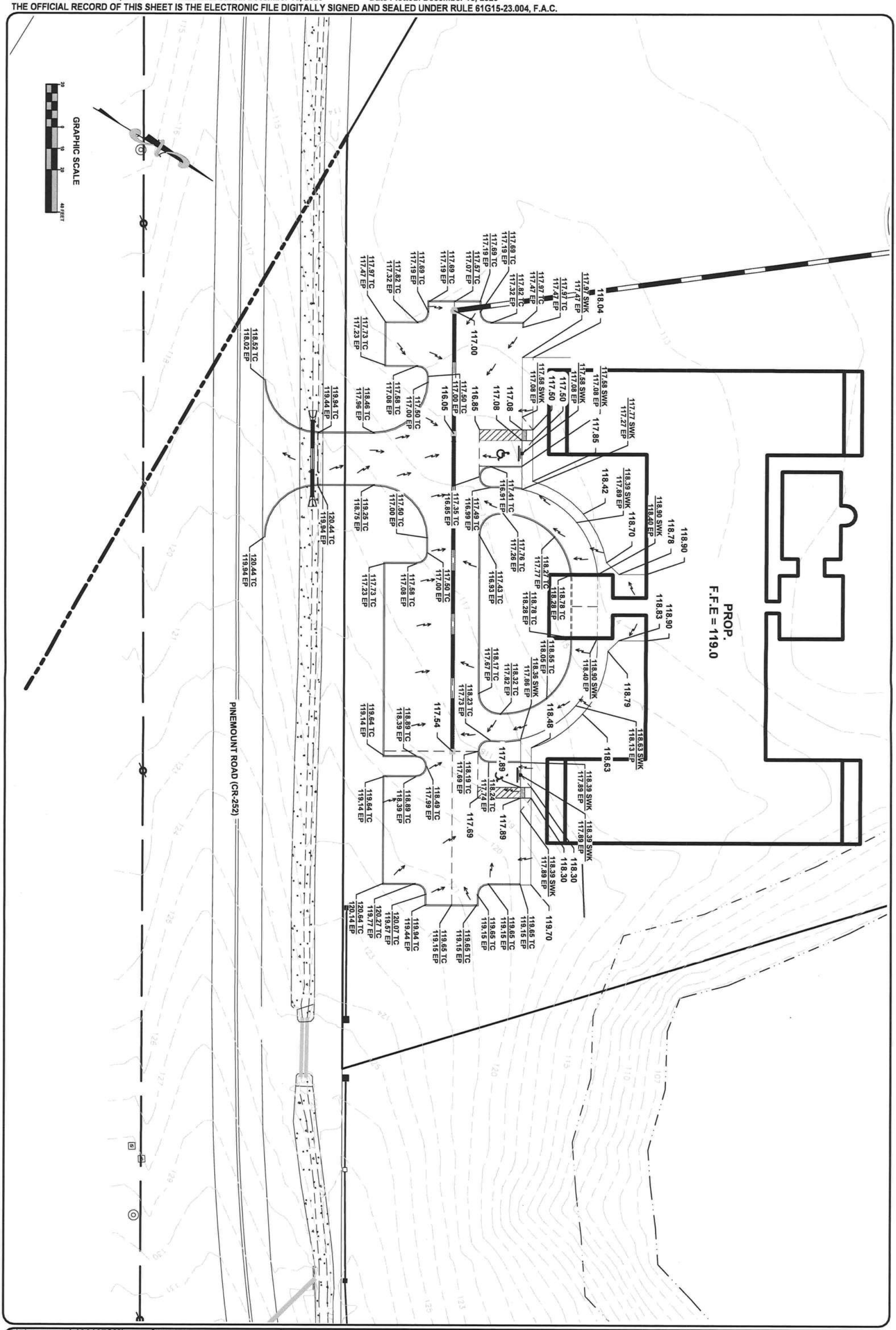

JOB NUMBER: L190107SMI		
DESIGNED BY: TH	DRAFTED BY: JC	CHECKED BY: GB
ENGINEER OF RECORD: GREG BAILEY		

DATE: 01/19
SHEET NO: C-5

REVISIONS:

GRADING PLAN
JEWEL LAKE ALF

North Florida Professional Services, Inc.
P.O. BOX 3823, Lake City, FL 32025
P.O. BOX 180998, Tallahassee, FL 32318

File Location: X:\2019\L190107SMI\H.CADD\cSMIdsn01\6 UTIL
Date Created: December 16, 2020 Date Last Saved: December 16, 2020 Date Plotted: December 16, 2020
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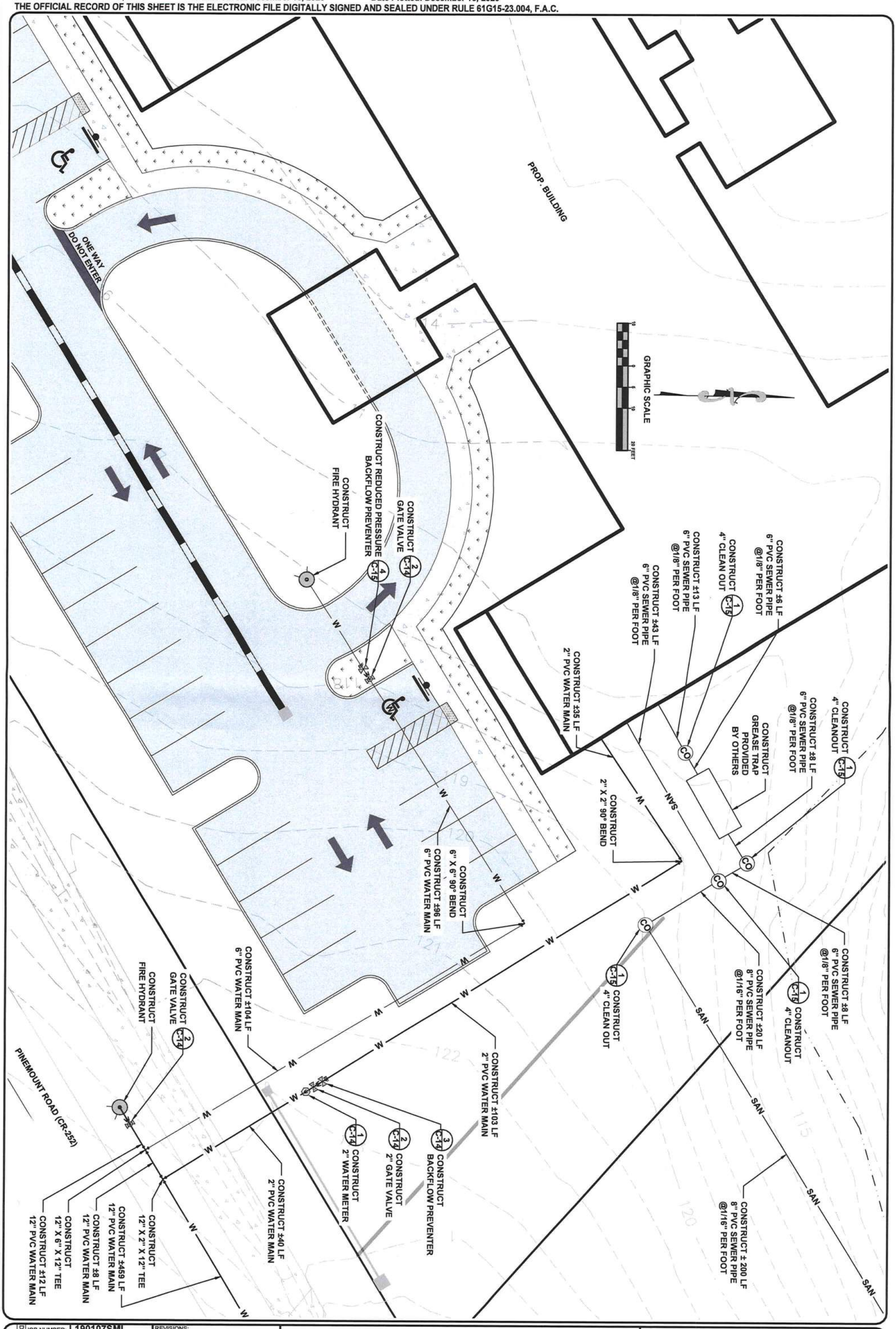

JOB NUMBER: L190107SMI		
DESIGNED BY: TH	DRAFTED BY: JC	CHECKED BY: GB
ENGINEER OF RECORD: GREG BAILEY		

DATE: 01/19
SHEET NO. C-6

REVISIONS:

UTILITY PLAN
JEWEL LAKE ALF

North Florida Professional Services, Inc.
P.O. BOX 3823, Lake City, FL 32025
P.O. BOX 180998, Tallahassee, FL 32318

File Location: X:\2019\L190107SMI\H.CADD\cSMIdsn01\6 UTIL (2)
Date Created: December 16, 2020 Date Last Saved: December 16, 2020 Date Plotted: December 16, 2020
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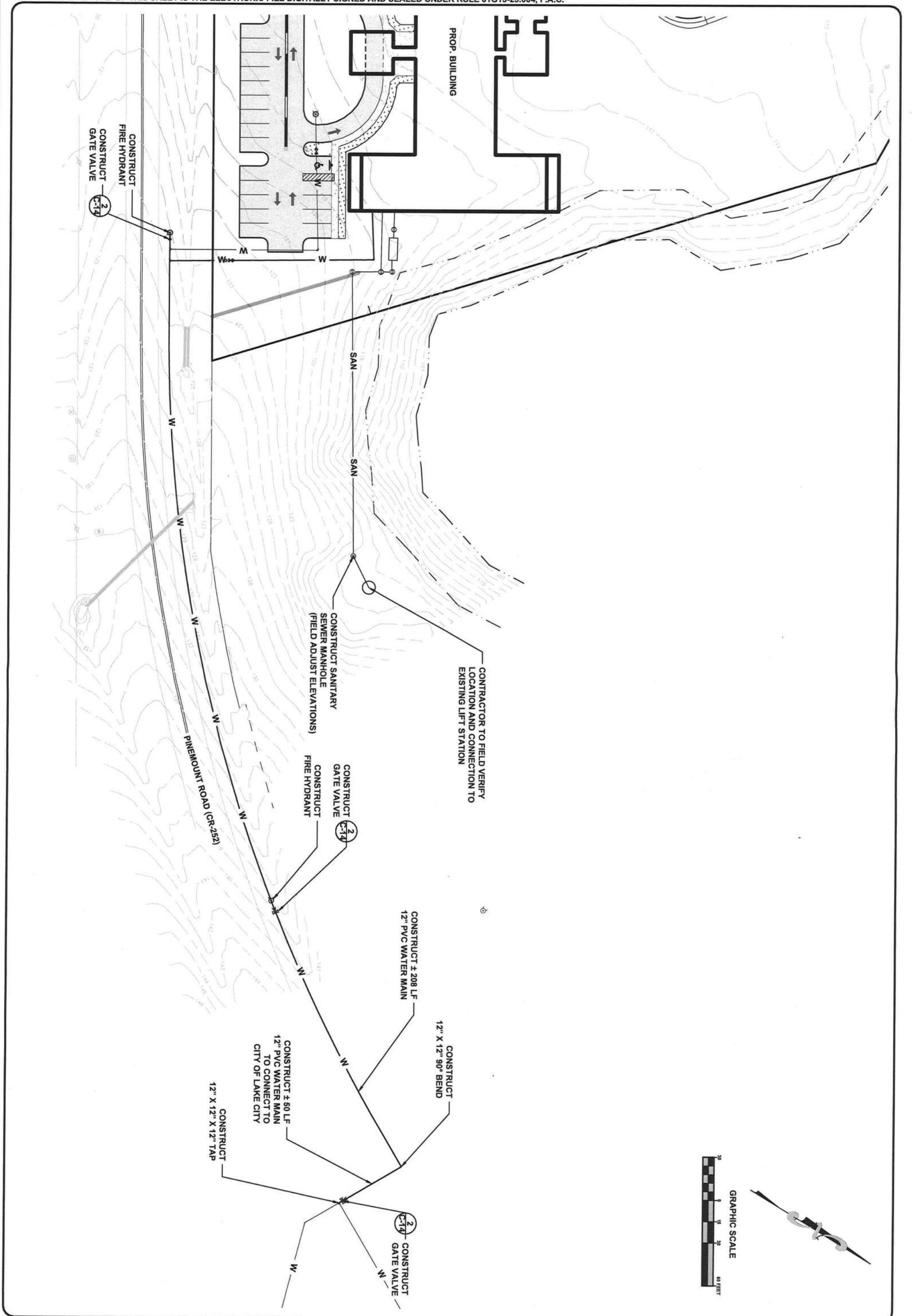

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DESIGNED BY: TH	DRAFTED BY: JC	CHECKED BY: GB
ENGINEER OF RECORD: GREG BAILEY		

DATE: 01/19
SHEET NO. C-7

REVISIONS:

UTILITY PLAN
JEWEL LAKE ALF

North Florida Professional Services, Inc.
P.O. BOX 3823, Lake City, FL 32025
P.O. BOX 180998, Tallahassee, FL 32318

File Location: X:\2019\L190107SMI\H.CADD\cSMIgra01\C-8 STORMWATER PLAN
Date Created: December 16, 2020 Date Last Saved: December 16, 2020 Date Plotted: December 16, 2020
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GRAPHIC SCALE
30 0 15 30 60 FEET

CONSTRUCT MES (1)
FDOT STANDARD PLAN 430-022

CONSTRUCT STM STRC 2
TYPE "C" DBI
FDOT STANDARD PLAN 425-052
GRATE EL. 116.05
SUMP EL. 109.13
18" A2000 PVC OR EQUIVALENT (NE) INV IN:109.73
18" A2000 PVC OR EQUIVALENT (SW) INV OUT:109.63

CONSTRUCT STM PIPE 5
38 L.F. 18" A2000 PVC OR EQUIVALENT

CONSTRUCT MES (2)
FDOT STANDARD PLAN 430-022

PINEMOUNT ROAD (CR-252)

CONSTRUCT STM PIPE 1
149 L.F. 18" A2000 PVC OR EQUIVALENT

CONSTRUCT STM PIPE 2
58 L.F. 18" A2000 PVC OR EQUIVALENT

CONSTRUCT STM STRC 3
MANHOLE
FDOT STANDARD PLAN 425-001
GRATE EL. 117.00
SUMP EL. 108.97
18" A2000 PVC OR EQUIVALENT (NE) INV IN:109.57
24" A2000 PVC OR EQUIVALENT (NW) INV OUT:109.47

CONSTRUCT STM STRC 1
TYPE "C" DBI
FDOT STANDARD PLAN 425-052
GRATE EL. 117.54
SUMP EL. 109.39
18" A2000 PVC OR EQUIVALENT (SW) INV OUT:109.89

CONSTRUCT STM PIPE 3
225 L.F. 24" A2000 PVC OR EQUIVALENT

PROP. BUILDING

WETLAND BOUNDARY

35' WETLAND BUFFER

CONSTRUCT MES (3)
FDOT STANDARD PLAN 430-022
INV IN:109.30 A2000 PVC OR EQUIVALENT

109.3 — 110 — 111 — 111.8 — 111.8 — 111

C-9

CONSTRUCT MES (4)
FDOT STANDARD PLAN 430-022
INV OUT:109.30 A2000 PVC OR EQUIVALENT

CONSTRUCT STM PIPE 4
17 L.F. 18" A2000 PVC OR EQUIVALENT

STORMWATER PLAN

JEWEL LAKE ALF

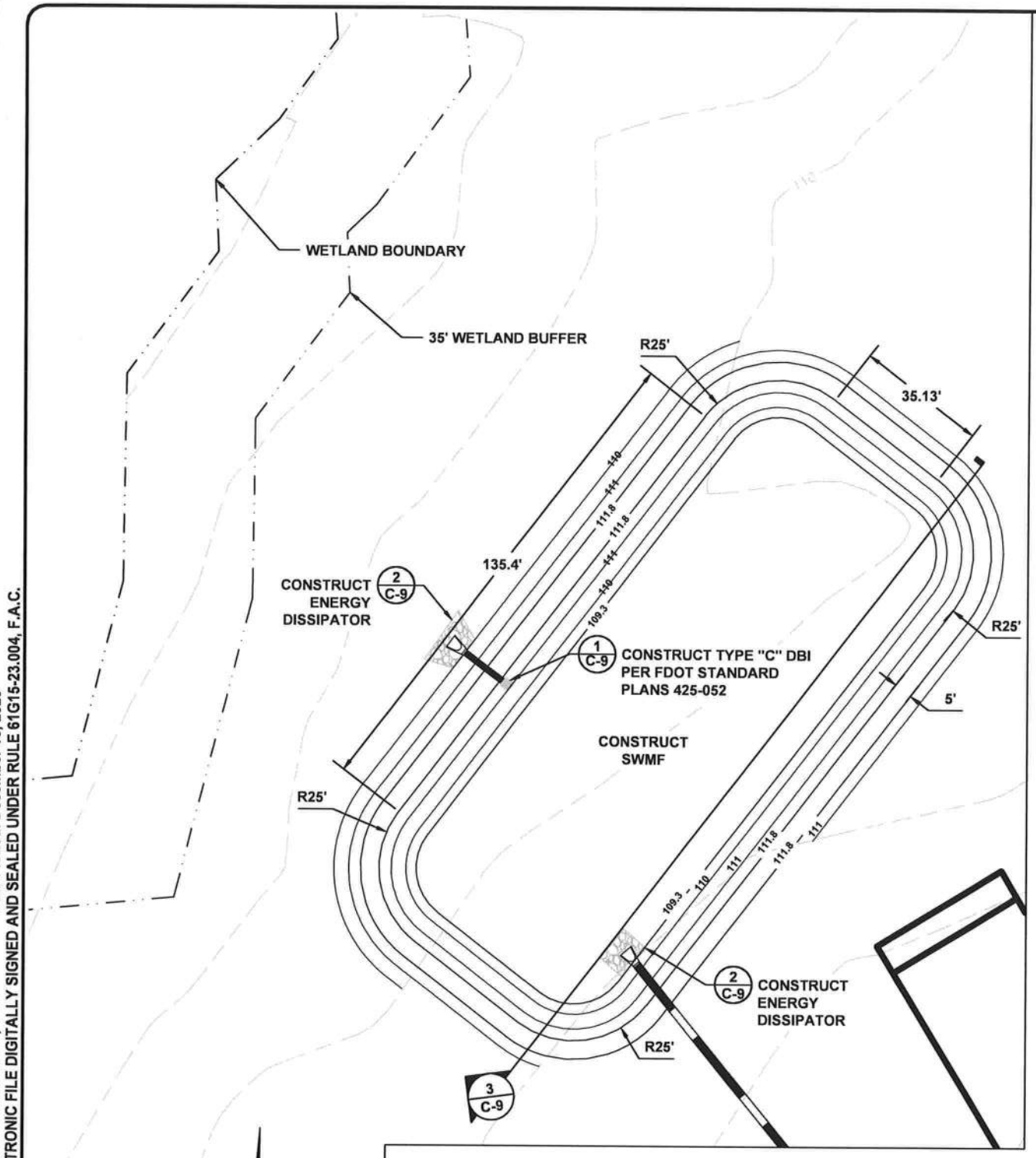
JOB NUMBER: L190107SMI	DESIGNED BY: TH	DRAFTED BY: JC	CHECKED BY: GB

DATE: 01/19
SHEET NO. C-8

ENGINEER OF RECORD
GREG BAILEY

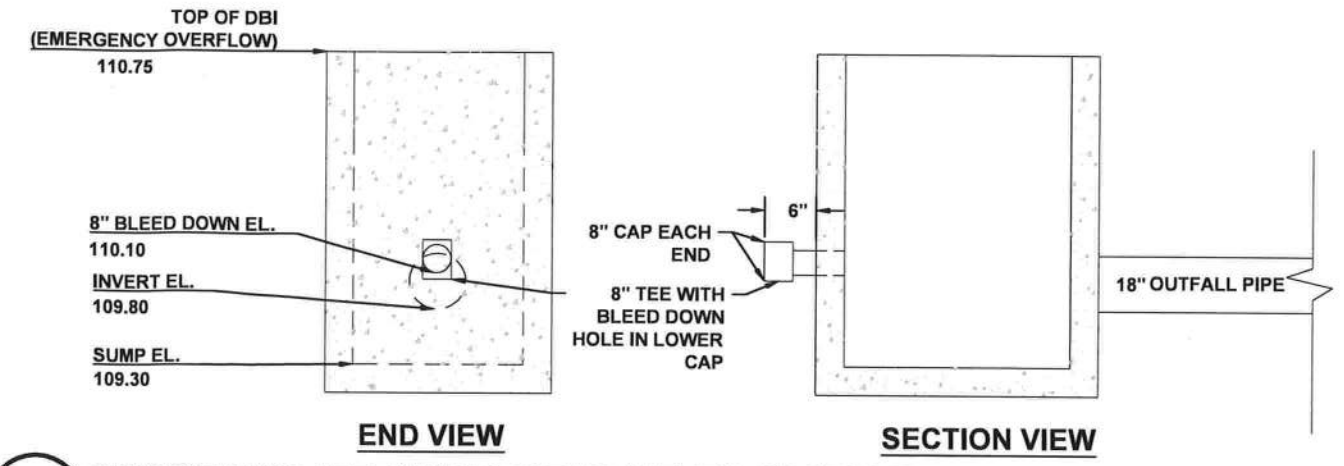
REVISIONS:

North Florida Professional Services, Inc.
P.O. BOX 3923
Lake City, FL 32025
P.O. BOX 180998
Tallahassee, FL 32318

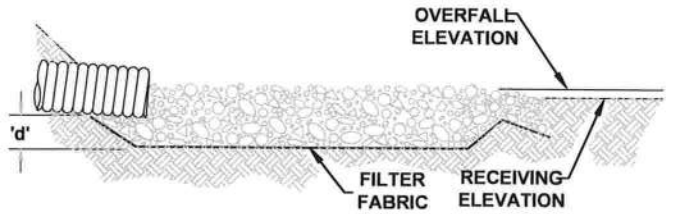


GRAPHIC SCALE

20 0 10 20 40 FEET



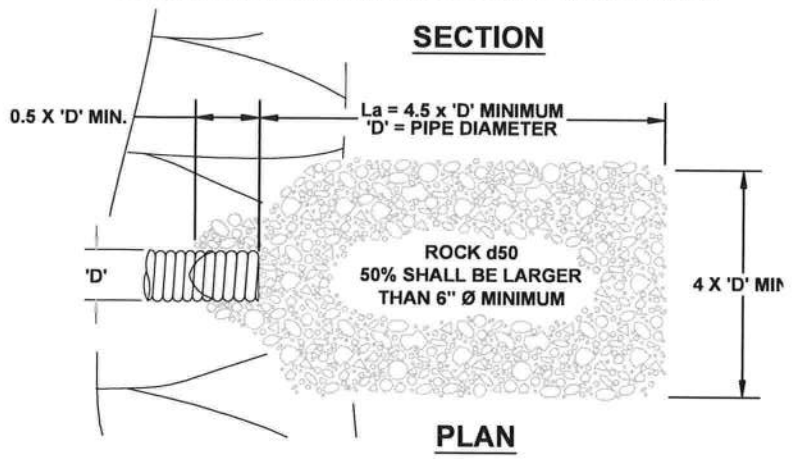
1 C-9 STORMWATER MANAGEMENT FACILITY DETAIL
SCALE: N.T.S.



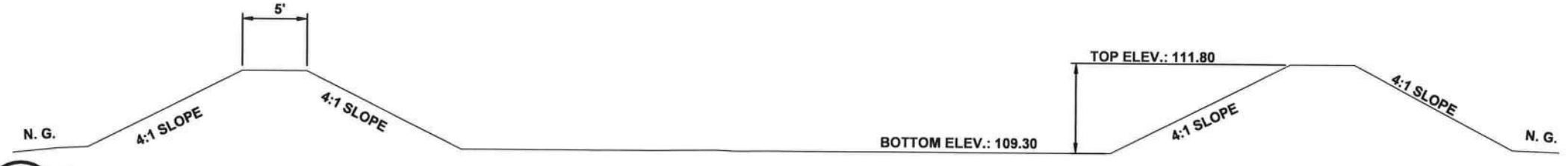
THICKNESS ('d') = 1.5 x MAXIMUM AGGREGATE DIAMETER - 6" MINIMU

NOTES:

1. 'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER FABRIC SHALL EXTEND 6" PAST AGGREGATE LIMITS



2 C-9 ENERGY DISSIPATOR DETAIL
SCALE: N.T.S.



3 C-9 STORMWATER MANAGEMENT FACILITY DETAIL
SCALE: N.T.S.

North Florida Professional Services, Inc.
P.O. BOX 180998 Tallahassee, FL 32318
P.O. BOX 3823 Lake City, FL 32025

SWMF PLAN
JEWEL LAKE ALF

REVISIONS:

JOB NUMBER: L190107SMI | DESIGNED BY: TH | DRAFTED BY: JC | CHECKED BY: GB
ENGINEER OF RECORD:
DATE: 01/19
SHEET NO. C-9

File Location: X:\2019\L190107SMI\H.CADD\cSMIdsn0118 SWMF
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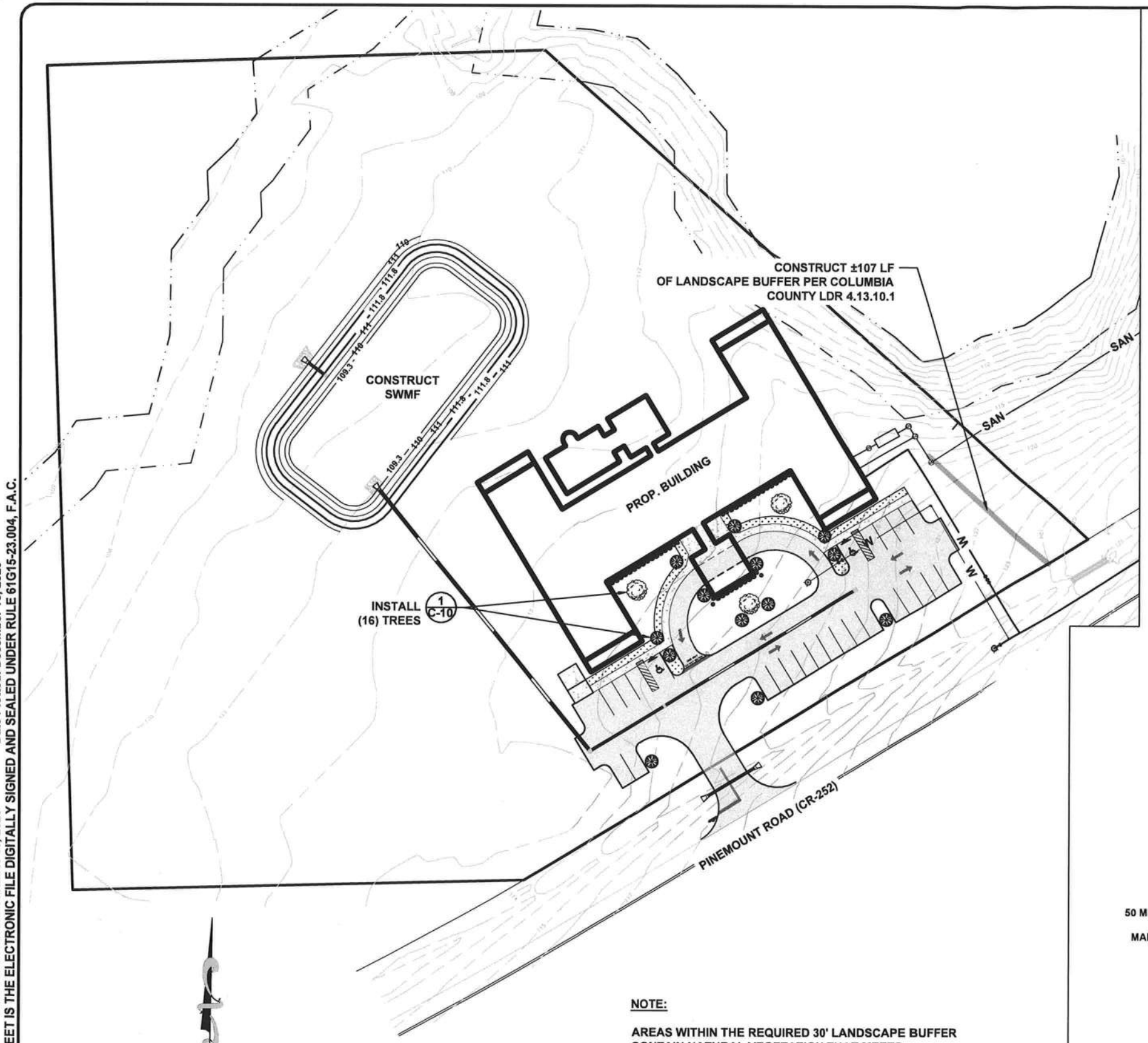


GRAPHIC SCALE

40 0 20 40 80 FEET

NOTE:

AREAS WITHIN THE REQUIRED 30' LANDSCAPE BUFFER CONTAIN NATURAL VEGETATION THAT MEETS THE REQUIREMENTS OF COLUMBIA COUNTY's LDR 4.13.10.1

TREE AND SHRUBBERY REQUIREMENTS

MAP SYMBOL	COMMON NAME	SCIENTIFIC NAME	NO.	NOTES
	GRASS / SOD			
	DWARF AZALEAS / KNOCK OUT ROSE	RHODODENDRON ATLANTICUM / ROSA RADRAZZ	8	
	CREPE MYRTLE	LAGERSTROEMIA	13	
	BOX WOODS	BUXUS	37	
	OAK TREE	QUERCUS	3	

LANDSCAPE REQUIREMENTS

COLUMBIA COUNTY LDR 4.2.17.10

LANDSCAPE
CALCULATION FOR REQUIRED LANDSCAPE AREA:
10% OF OFFSTREET PARKING PROVIDED

10% OF 17,028 SF OFFSTREET PARKING =
1,703 SF OF REQUIRED LANDSCAPE AREA

TOTAL LANDSCAPED AREA PROVIDED = 3,064 SF

TREES
CALCULATION FOR REQUIRED NUMBER OF TREES:
1 PER 200 SF OF REQUIRED LANDSCAPED AREA

3,064 SF / 200 SF = 15.32 TREES (15) REQUIRED

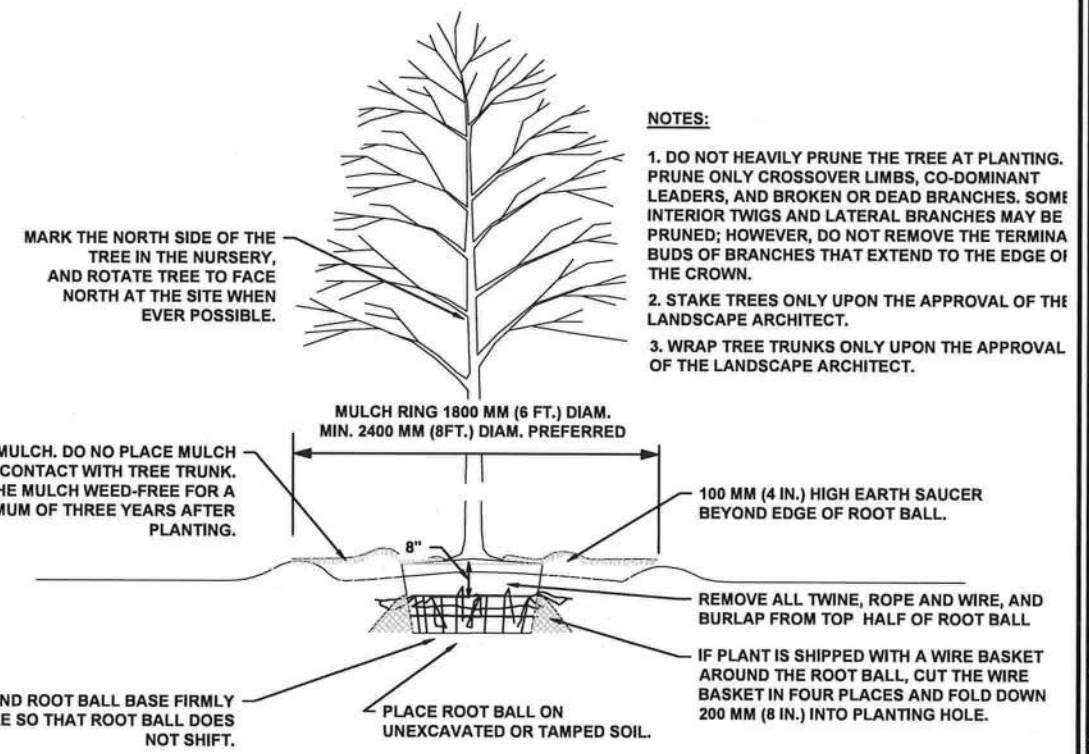
TOTAL NUMBER OF TREES PROVIDED = 16

COLUMBIA COUNTY LDR 4.2.13.2

SUBSTITUTION FOR LANDSCAPE BUFFER AREAS CAN BE A 6' HIGH MASONRY OR WOOD OPAQUE FENCE

COLUMBIA COUNTY LDR 4.13.10.1

REQUIRES A MINIMUM OF A 30' WIDE LANDSCAPE BUFFER FOR THE REAR AND SIDE YARDS WHEN LOCATED ADJACENT TO RESIDENTIAL DISTRICTS



NOTES:

1. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINA BUDS OF BRANCHES THAT EXTEND TO THE EDGE OI THE CROWN.
2. STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT.
3. WRAP TREE TRUNKS ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT.

1 C-10 TREE PLANTING DETAIL
SCALE: N.T.S.

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LANDSCAPE PLAN
JEWEL LAKE ALF

REVISIONS:

JOB NUMBER: L190107SMI | DRAFTED BY: TH | CHECKED BY: GB
DESIGNED BY: | ENGINEER OF RECORD: GREG BAILEY
DATE: 01/19
SHEET NO: C-10

File Location: X:\2019\L190107SMI\H.CADD\cSM\dsn0119 LAND
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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, SRWMD, AND OTHER GOVERNING AUTHORITIES FOR EROSION AND SEDIMENT CONTROL REGULATIONS. IF THE CONTRACTOR NEEDS TO CHANGE THIS PLAN TO MORE EFFECTIVELY CONTROL EROSION AND SEDIMENTATION, THE CONTRACTOR SHALL USE BMP's 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 GRASSED AND RIP RAP 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 CLEANED 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 BALES 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 AREA 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.

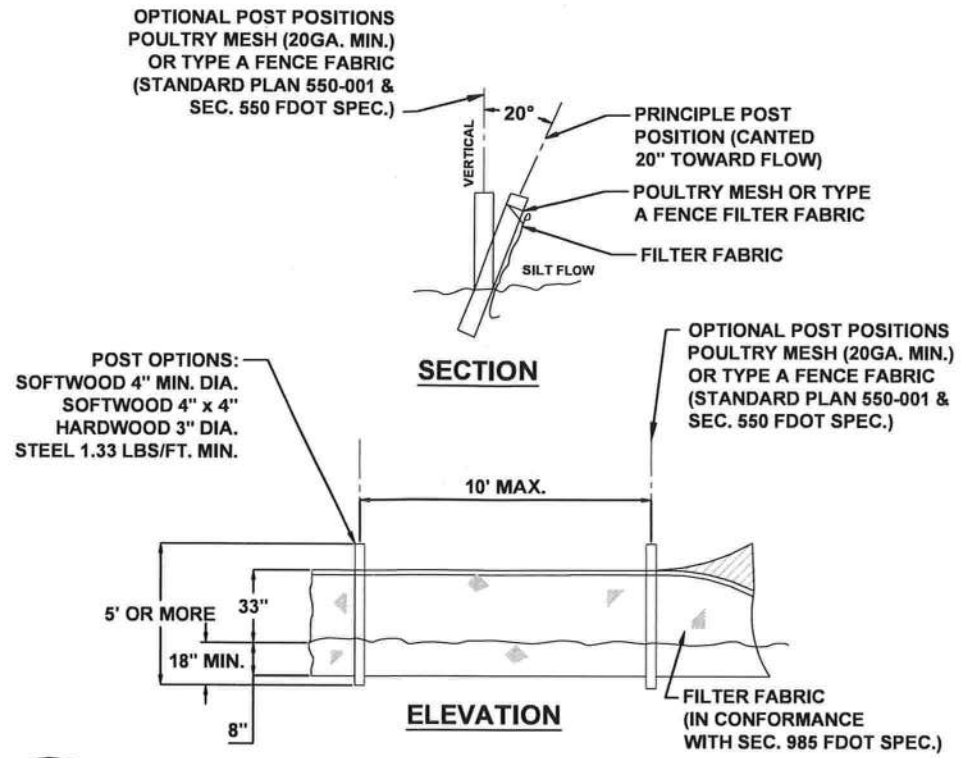
16. LOADED HAUL TRUCKS SHALL BE COVERED WITH TARPS.

17. EXCESS DIRT SHALL BE REMOVED DAILY.

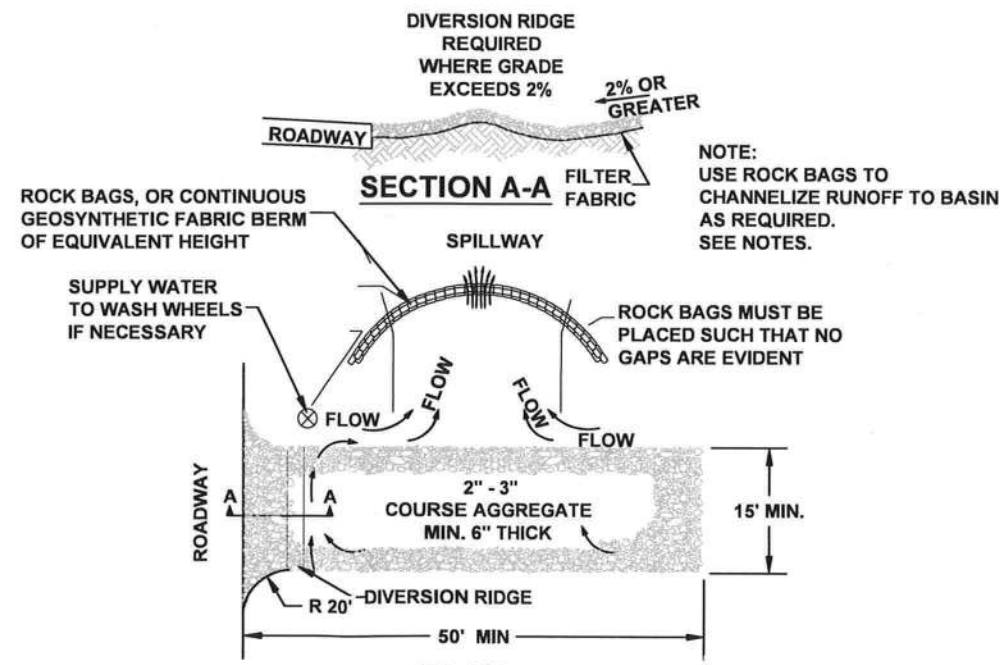
18. THIS PROJECT SHALL COMPLY WITH ALL WATER QUALITY STANDARDS. PERMIT REQUIRED FROM SRWMD HAS BEEN OBTAINED.

19. QUALIFIED PERSONNEL SHALL INSPECT THE AREA USED FOR STORAGE OF STOCKPILES, THE SILT FENCE AND STRAW BALES, THE LOCATION WHERE VEHICLES ENTER OR EXIT THE SITE, AND THE DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED, AT LEAST ONCE 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.



1 C-11 TYPE IV SILT FENCE
SCALE: N.T.S.



NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. ROCK BAGS OR SANDBAGS SHALL BE PLACED SUCH THAT NO GAPS ARE EVIDENT.

2 C-11 TEMPORARY CONSTRUCTION ENTRANCE
SCALE: N.T.S.

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EROSION CONTROL NOTES & DETAILS
JEWEL LAKE ALF

REVISIONS:

JOB NUMBER: L190107SMI | DESIGNED BY: TH | DRAFTED BY: JC | CHECKED BY: GB
DATE: 01/19
ENGINEER OF RECORD: GREG BAILEY
SHEET NO: C-11

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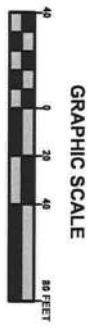
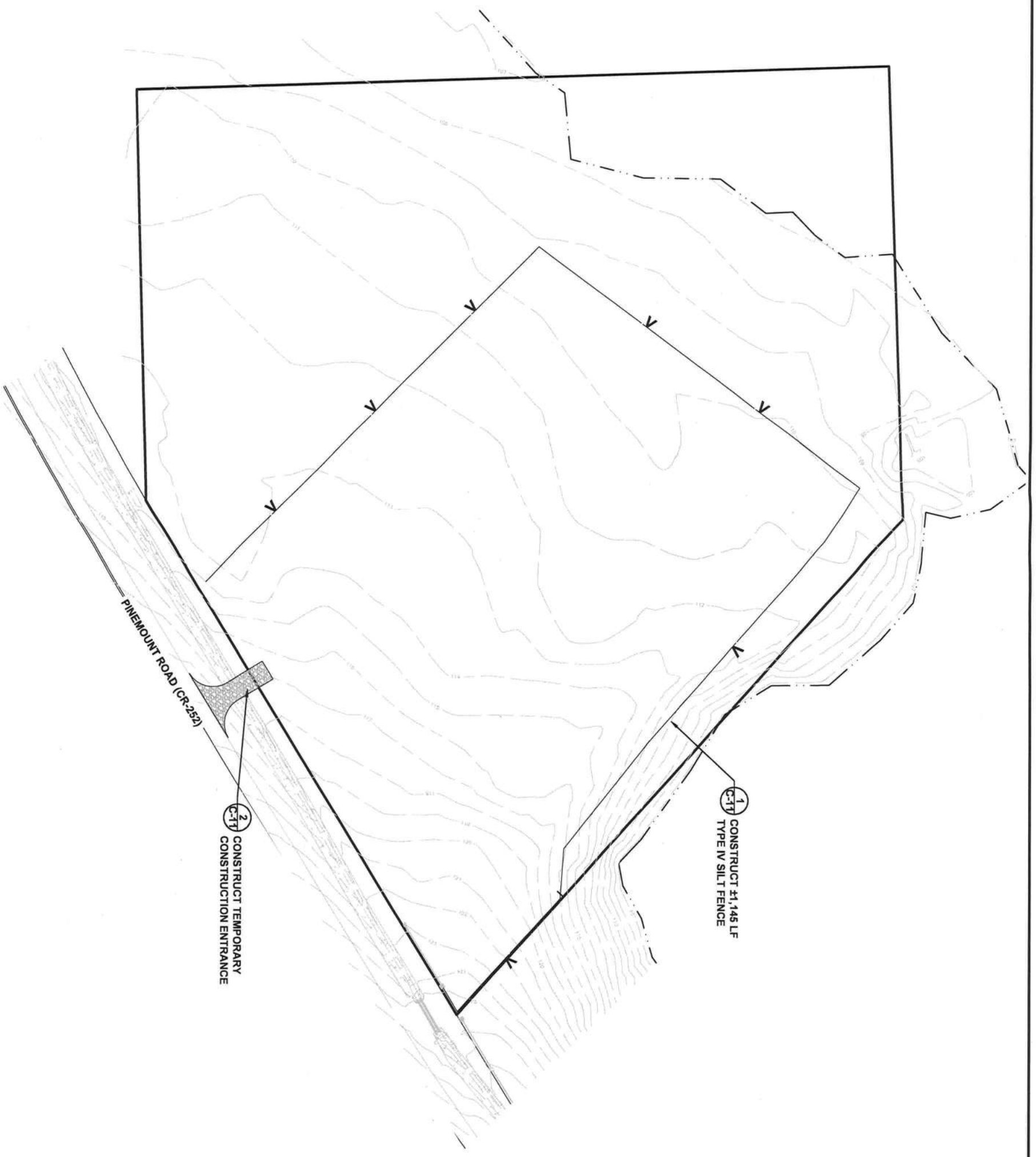


GRAPHIC SCALE



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DESIGNED BY: TH	DRAFTED BY: JC	CHECKED BY: GB	
ENGINEER OF RECORD: GREG BAILEY			

DATE: 01/19
SHEET NO: C-12

EROSION CONTROL PLAN

JEWEL LAKE ALF

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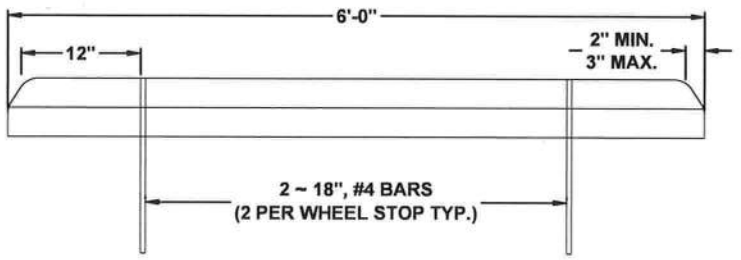
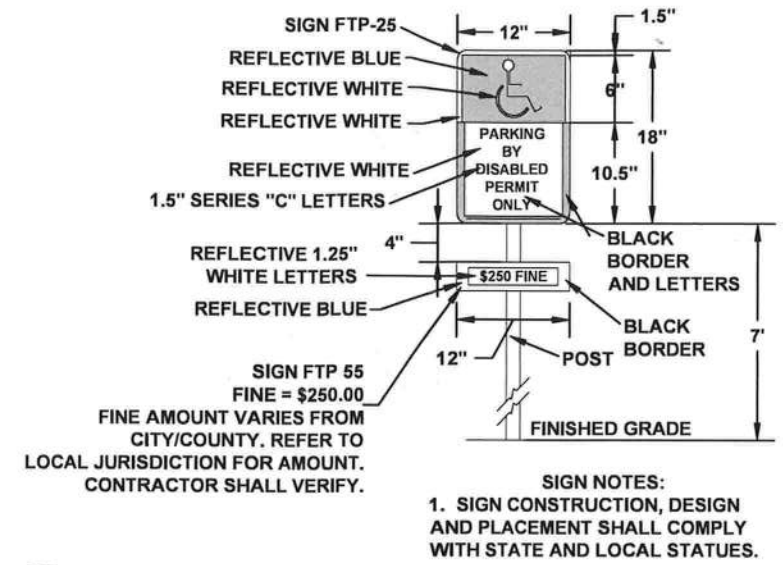
Tallahassee, FL 32318

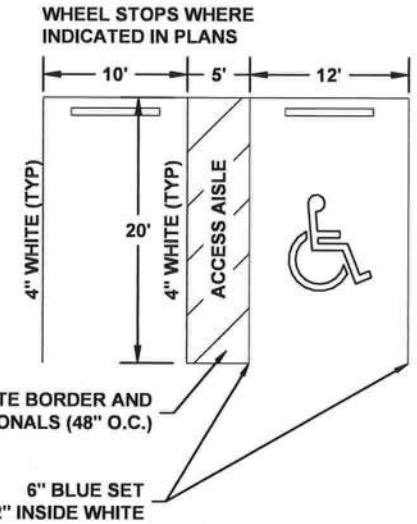


1 C-13 WHEEL STOP DETAIL
SCALE: N.T.S.



SIGN NOTES:
1. SIGN CONSTRUCTION, DESIGN AND PLACEMENT SHALL COMPLY WITH STATE AND LOCAL STATUES.

2 C-13 HANDICAP PARKING SIGN DETAIL
SCALE: N.T.S.

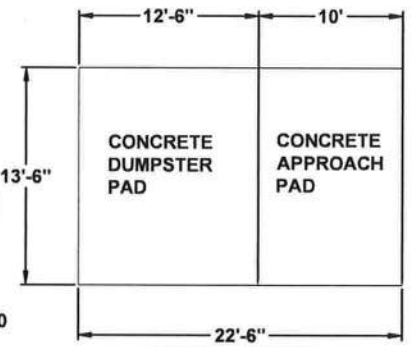


1. SIGN SHALL BE PLACED IN FRONT OF ALL DESIGNATED HANDICAPPED SPACES. SIGN HEIGHT SHALL BE 7' FROM PAVEMENT TO BOTTOM OF SIGN.
2. 5' HANDICAPPED AISLE MAY BE PLACED ON THE RIGHT OR LEFT SIDE OF PARKING STALL.
3. HANDICAPPED PARKING SYMBOL SHALL BE 3 OR 5 FT. HIGH.
4. BLUE PAVEMENT MARKINGS SHALL BE TINTED TO MATCH SHADE 15180 OF FEDERAL STANDARDS 595A.

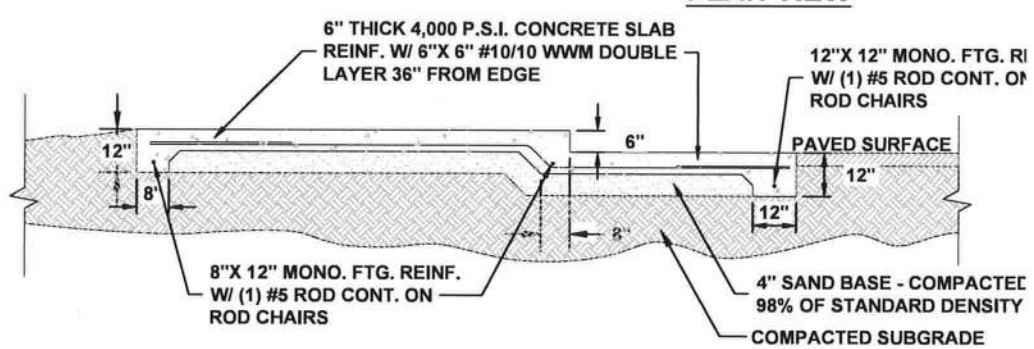
3 C-13 HANDICAP PARKING STALL DETAIL
SCALE: N.T.S.

CONCRETE NOTES:

1. THE DESIGN OF FOUNDATIONS AND SLAB-ON-GRADE IS BASED ON AN ASSUMED 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 FOREIGN MATERIALS REMOVED PRIOR TO THEIR CONSTRUCTION. FILL MATERIAL AND BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, CONSTRUCTION DEBRIS, LARGE ROCKS, AND ANY OTHER FOREIGN MATERIAL.
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 WIRE FABRIC.....ASTM A-185

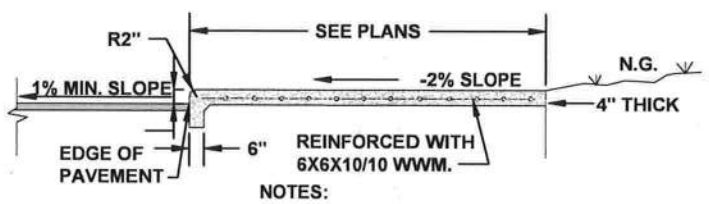


PLAN VIEW



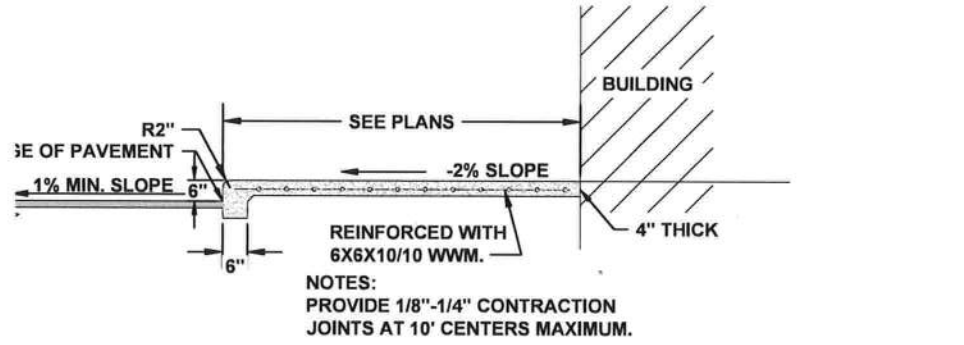
SECTION VIEW

4 C-13 DUMPSTER PAD DETAIL
SCALE: N.T.S.



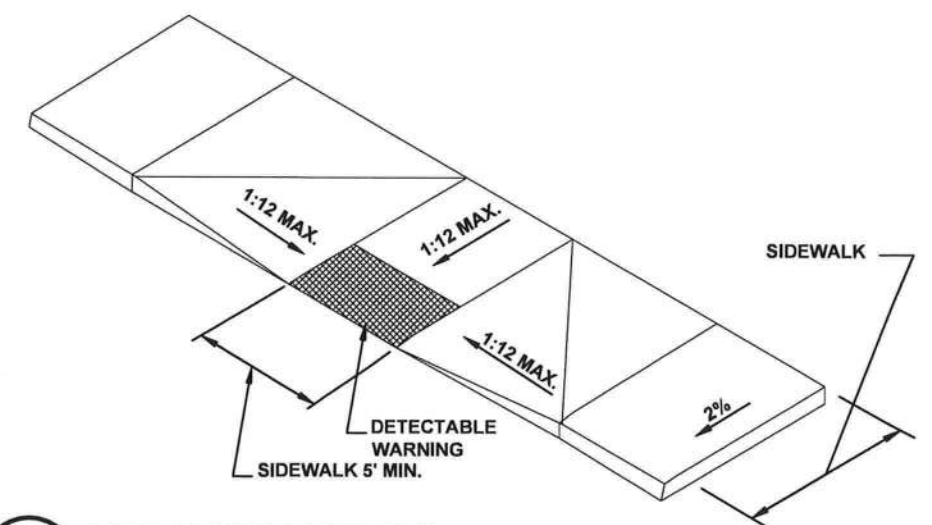
NOTES:
PROVIDE 1/8"-1/4" CONTRACTION JOINTS AT 10' CENTERS MAXIMUM.

5 C-13 SIDEWALK DETAIL - B
SCALE: N.T.S.



NOTES:
PROVIDE 1/8"-1/4" CONTRACTION JOINTS AT 10' CENTERS MAXIMUM.

6 C-13 SIDEWALK DETAIL- A
SCALE: N.T.S.



7 C-13 ADA RAMP DETAIL
SCALE: N.T.S.

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MISC. DETAILS
JEWEL LAKE ALF

REVISIONS:

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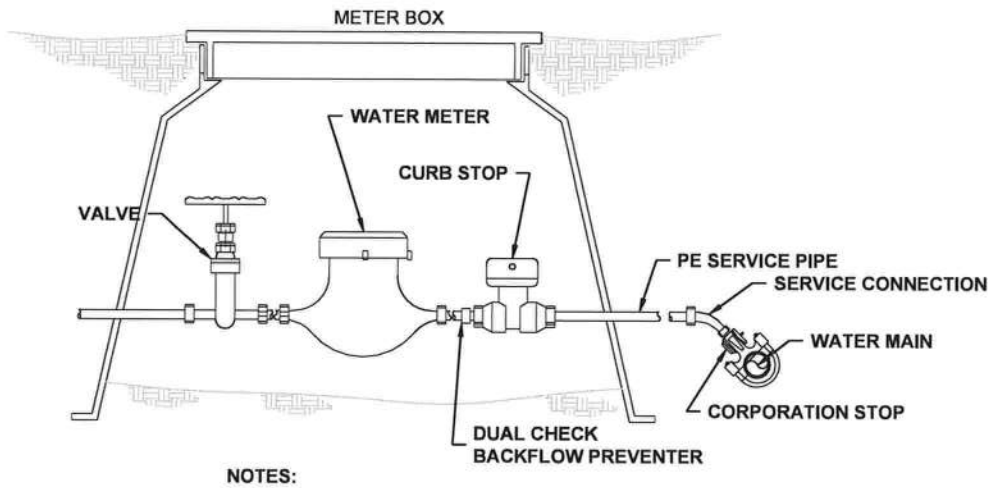
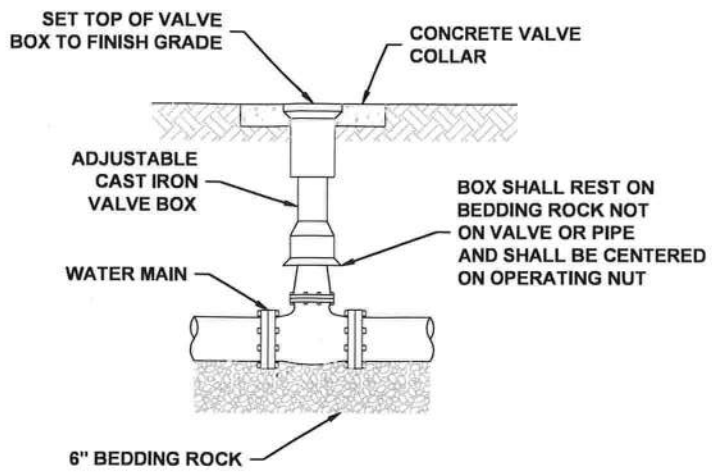


NOTES:

1. P.E. TUBING IS TO BE BACKFILLED BY HAND UP TO THE TOP OF THE SERVICE.

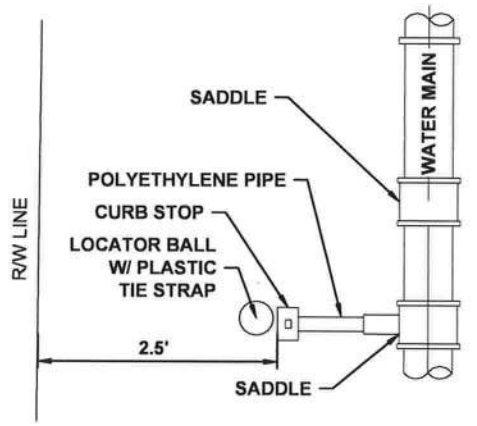
1 C-14 METER BOX ASSEMBLY
SCALE: N.T.S.



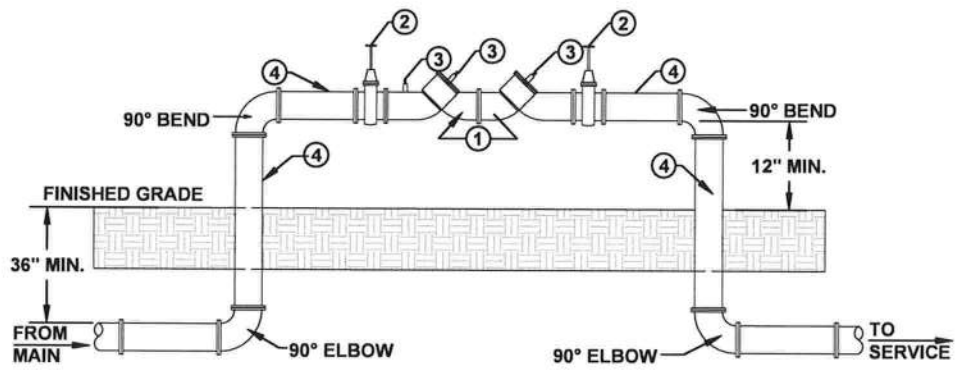
NOTES:

1. PVC EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO COME UP TO 4 FOOT DEPTH BELOW FINISHED GRADE.

2 C-14 VALVE AND BOX DETAIL
SCALE: N.T.S.



PLAN

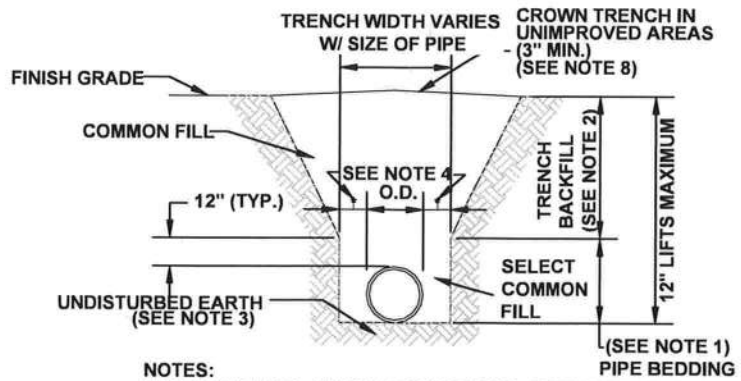


MATERIALS	
ITEM	DESCRIPTION
1	BACKFLOW PREVENTER
2	GATE VALVE
3	TEST COCKS
4	DUCTILE IRON PIPE - FLANGED END x FLANGED END

NOTES:

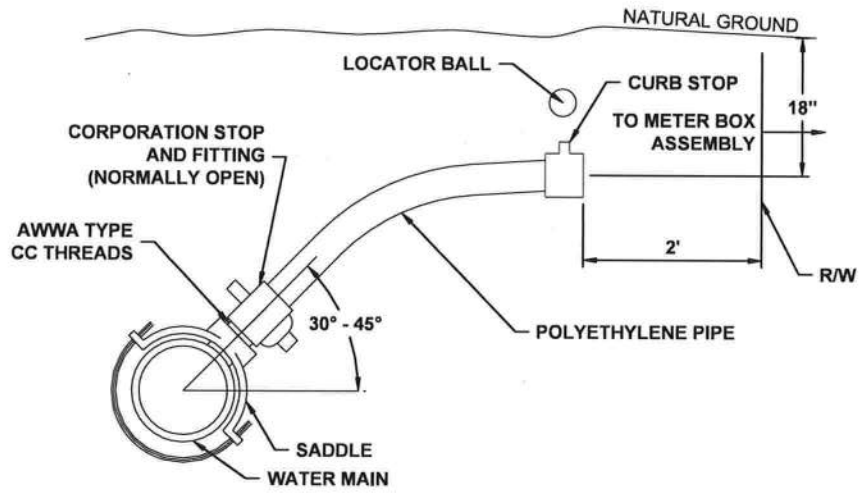
1. UNDER NO CONDITION WILL ANY CONNECTION BE ALLOWED BETWEEN THE SERVICE METER AND A BACKFLOW PREVENTER USED FOR SYSTEM CONTAINMENT. BACKFLOW PREVENTER SHALL ALWAYS BE INSTALLED DOWNSTREAM OF METER.
2. UNDER NO CIRCUMSTANCES, SHALL TEST PORTS BE MODIFIED OR UTILIZED FOR THIS OR OTHER APPLICATION OTHER THAN BACKFLOW DEVICE TESTING.
3. PROVIDE AND INSTALL COVER OVER BACKFLOW PREVENTER AS REQ'D BY LOCAL AUTHORITIES

3 C-14 DOUBLE CHECK BACKFLOW PREVENTER
SCALE: N.T.S.



NOTES:
1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. PIPE BEDDING UTILLIZING SELECT COMMON FILL OR BEDDING ROCK WILL BE REQUIRED IFOVER-EXCAVATION OCCURS.
4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. PROVIDE TRENCH SLOPING AND BRACING AS REQUIRED FOR SAFETY.
8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN PAVED AREAS SHALL COMPLY WITH THE REQUUIREMENTS OF THE ROAD CONSTRUCTION SPECIFICATIONS.

4 C-14 TRENCH AND BACKFILL DETAILS
SCALE: N.T.S.



SINGLE SERVICE PROFILE

NOTES:
1. ALL FITTINGS SHALL BE BRASS WITH COMPRESSION/ PACK JOINT TYPE CONNECTIONS.
2. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
3. EACH SERVICE SHALL TERMINATE AT A CURB STOP WHICH SHALL BE BURIED APPROXIMATELY 3" BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2" x 2" x 18" STAKE WITH THE TOP PAINTED BLUE AND MARKED WITH THE NUMBER OF THE LOT TO BE SERVED.
4. CONTRACTOR SHALL PROVIDE LOCATOR BALLS W/ PLASTIC TIE STRAPS. LOCATOR BALLS SHOULD BE SECURED TO LATERAL W/ TIE STRAP.

5 C-14 WATER SERVICE CONNECTION DETAILS
SCALE: N.T.S.

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P.O. BOX 3823 Lake City, FL 32025

MISC. DETAILS
JEWEL LAKE ALF

REVISIONS:

JOB NUMBER: L190107SMI	DESIGNED BY: TH	DRAFTED BY: JC	CHECKED BY: GB
DATE: 01/19	ENGINEER OF RECORD: GREG BAILEY		

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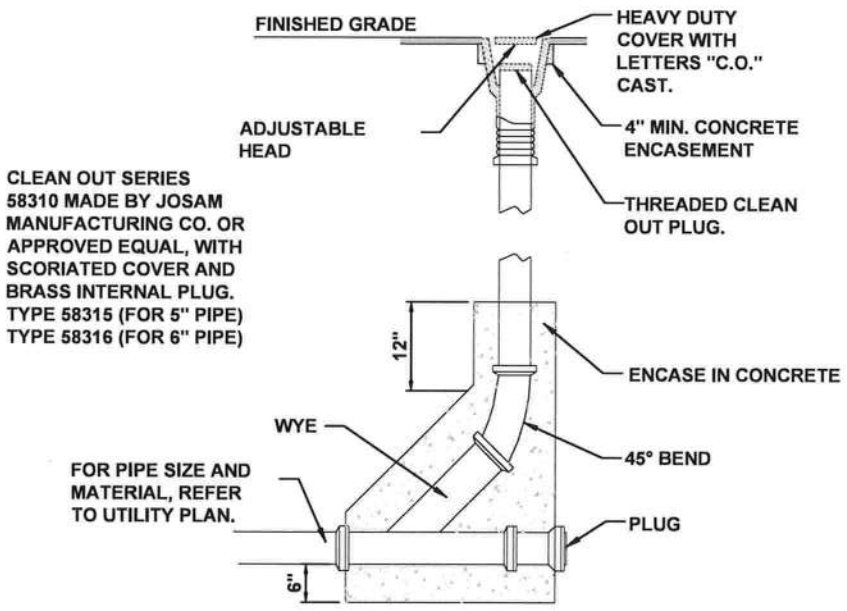
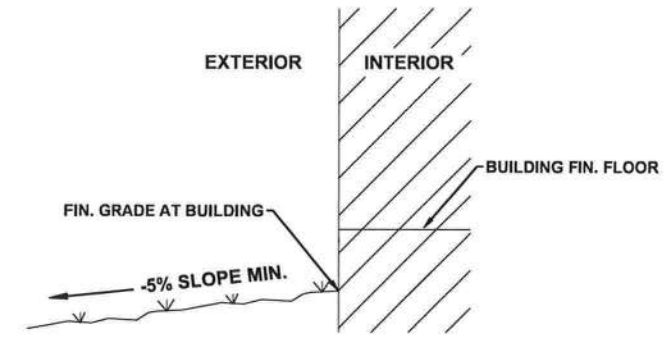
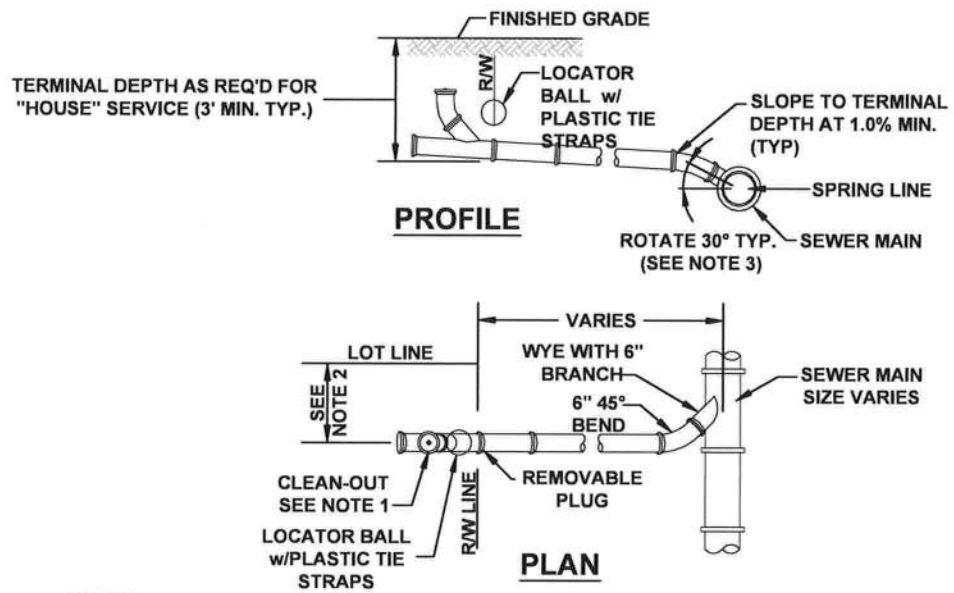


1 C-15 CLEANOUT DETAIL
SCALE: N.T.S.



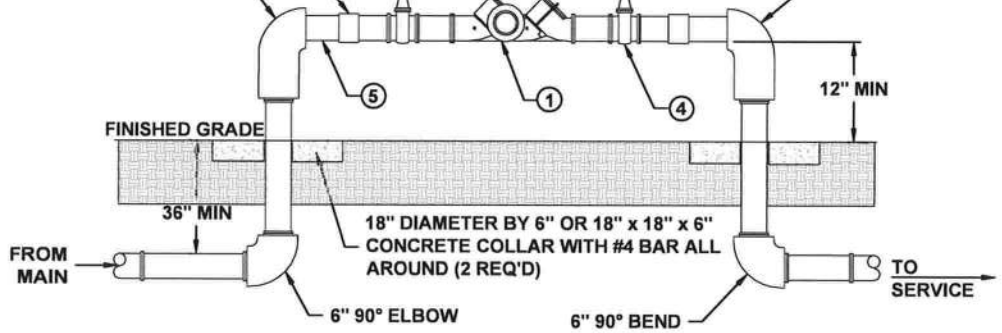
2 C-15 GRADE AT BUILDING DETAIL
SCALE: N.T.S.



NOTES:

1. CLEAN-OUT (SHOWN LIGHTER) SHALL BE INSTALLED BY THE BUILDER IN ACCORDANCE WITH STANDARD PLUMBING CODE.
2. LOCATE SINGLE LATERAL AS CLOSE TO LOT LINE AS POSSIBLE, 25' MAXIMUM.
3. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW SPRING LINE.
4. CONTRACTOR SHALL PROVIDE LOCATOR BALLS w/PLASTIC TIE STRAPS. LOCATOR BALLS SHALL BE SECURED TO LATERAL w/PLACTIC TIE STRAPS.

3 C-15 SANITARY SEWER SERVICE LATERALS
SCALE: N.T.S.



MATERIALS	
ITEM	DESCRIPTION
1	6" BACKFLOW PREVENTER
2	6" GATE VALVE
3	6" UNION
4	6" TEST COCKS
5	6" THREADED NIPPLE

NOTES:

1. UNDER NO CONDITION WILL ANY CONNECTION BE ALLOWED BETWEEN THE SERVICE METER AND A BACKFLOW PREVENTER USED FOR SYSTEM CONTAINMENT. BACKFLOW PREVENTER SHALL ALWAYS BE INSTALLED DOWNSTREAM OF METER.
2. IF A PRESSURE MONITOR IS TO BE INSTALLED, ADD A TEE, VALVE FITTINGS, AND MOUNT ON SUPPLY SIDE PRIOR TO BACKFLOW PREVENTION DEVICE: UNDER NO CIRCUMSTANCE, SHALL TEST PORTS BE MODIFIED OR UTILIZED FOR THIS OR OTHER APPLICATION OTHER THAN BACKFLOW DEVICE TESTING.
3. A CONBRACO SERIES 40-000 FREEZE PROTECTION VALVE SHALL BE INCLUDED.
4. PROVIDE AND INSTALL COVER OVER BACKFLOW PREVENTER AS REQ'D BY LOCAL AUTHORITIES
5. BACKFLOW PREVENTER SHALL COMPLY WITH NFPA 24.

4 C-15 REDUCED PRESSURE BACKFLOW PREVENTER
SCALE: N.T.S.

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MISC. DETAILS
JEWEL LAKE ALF

REVISIONS:

JOB NUMBER: L190107SMI
DESIGNED BY: TH | DRAFTED BY: JC | CHECKED BY: GB
DATE: 01/19
ENGINEER OF RECORD: GREG BAILEY
SHEET NO: C-15

File Location: X:\2019\L190107SMI\H.CADD\cSMIdet01\DET 3
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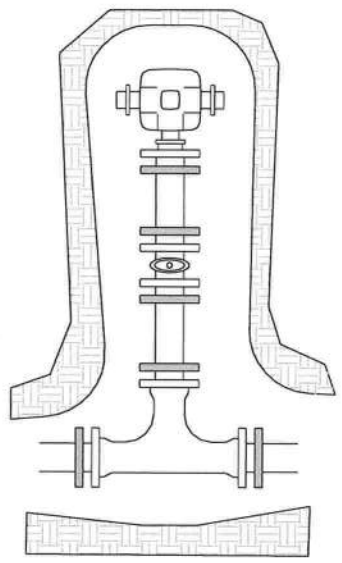
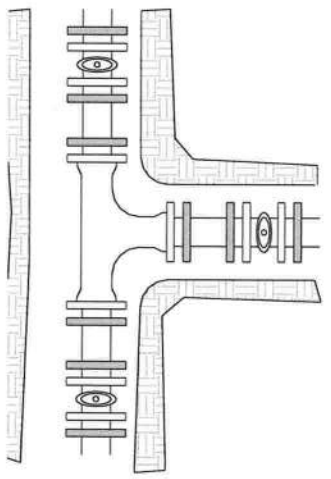
LENGTH (L) TO BE RESTRAINED

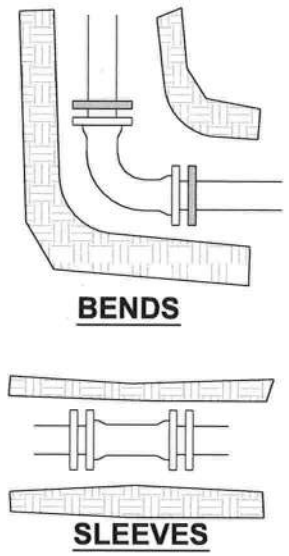
NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS		VALVES OR DEAD-ENDS
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	45° BENDS (SEE NOTE 4) LU (FT.)	Li (FT.)	L (FT.)
4	20	8	4	2	20	3	50
6	28	10	5	2	28	4	70
8	36	14	6	3	36	5	90
10	40	18	8	4	45	6	110
12	50	20	9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



HYDRANT LEADS

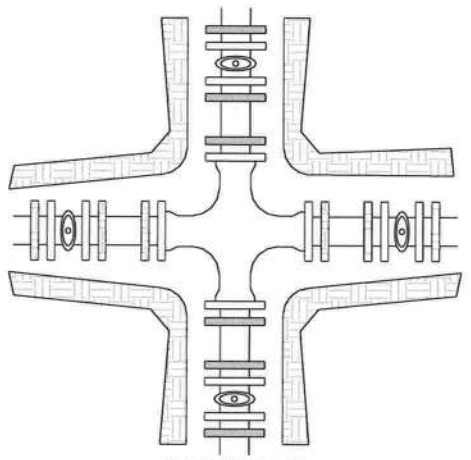


TEES



BENDS

SLEEVES



CROSSES

DENOTES MEGALUGS

PIPE RESTRAINT NOTES:

1. DUCTILE IRON FITTINGS TO BE RESTRAINED TO PVC (C900) PIPE WITH SERIES 2000 PVC MECHANICAL RESTRAINT GLANDS AS MANUFACTURED BY EBAA IRON, INC. OR EQUAL.

2. PVC (C900) PIPE TO BE RESTRAINED EACH SIDE OF FITTINGS FOR LENGTHS AS NOTED IN TABLE BELOW. RESTRAINT WILL BE ACCOMPLISHED WITH DUCTILE IRON RESTRAINT HARNESS CONFORMING TO ASTM A-536. RESTRAINT HARNESS TO BE SERIES 1600 AS MANUFACTURED BY EBAA IRON, INC. OR EQUAL.

3. THE TABLE BELOW SHOWS TYPICAL NUMBERS OF 20' LENGTH SECTIONS OF PIPE TO BE MECHANICALLY RESTRAINED FOR THE FOLLOWING ASSUMPTIONS (1) DEPTH OF COVER = 36", (2) TEST PRESSURE = 150 PSI, (3) SAFETY FACTOR = 1.5, (4) LAYING CONDITIONS = PIPE EMBEDDED IN LOOSE CLEAN SAND AND COMPACTED TO TOP OF PIPE (APPROXIMATELY 90% STANDARD PROCTOR)

4. MEGALUGS TO BE USED ARE MECHANICAL JOINTS.

5. PLACE CONCRETE BLOCK UNDER ALL GATE VALVES AND HYDRANTS.

6. PLACE RESTRAINTS AT ALL TEES, BENDS, AND AT HYDRANTS.

7. ALL BOLTS INCLUDING T-BOLTS SHALL BE STAINLESS STEEL.

TEES (NOTE 5)		
RUN SIZE	BRANCH SIZE	L (FT.)
4"	4"	F.O.
6"	6" 4"< LESS	10 F.O.
8"	8" 6"< LESS	30 F.O.
10"	10" 8" 6"< LESS	48 14 F.O.
12"	12" 10" 8"< LESS	65 35 F.O.
16"	16" 12" 10"< LESS	100 40 F.O.
20"	20" 16" 12"< LESS	130 80 F.O.
24"	24" 20" 16" 12"< LESS	130 90 40 F.O.
30"	30" 24" 20" 16"< LESS	140 80 50 F.O.
36"	36" 30" 24" 20"< LESS	180 120 50 F.O.
42"	42" 36" 30" 24" 20"< LESS	220 160 80 40 F.O.
48"	48" 42" 36" 30" 24"< LESS	250 180 90 40 F.O.

F.O. = FITTING ONLY

REDUCERS	
SIZE	L (FT.)
6X4	35
8X6	35
8X4	65
10X8	35
10X6	65
12X10	35
12X8	65
16X12	65
16X10	95
20X18	35
20X16	65
20X12	120
24X20	65
24X18	95
24X16	120
30X24	80
30X20	150
36X30	80
36X24	150
42X36	80
42X30	150
48X42	80
48X36	150

PVC PIPE RESTRAINT NOTES:

1. THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RECLAIMED WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE, AT A MINIMUM. UNLESS OTHERWISE INDICATED, ALL REQUIRED RESTRAINTS SHALL BE INCLUDED IN PRICE OF FITTING, VALVE OR PIPE.

2. ASSUMPTIONS: PVC PIPE, SAFETY FACTOR = 1.5, TEST PRESSURE = 150 PSI, SOIL = GM OR SM, TRENCH TYPE 3, DEPTH OF COVER = 30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 36 INCHES FOR 24" AND LARGER PIPE SIZE.

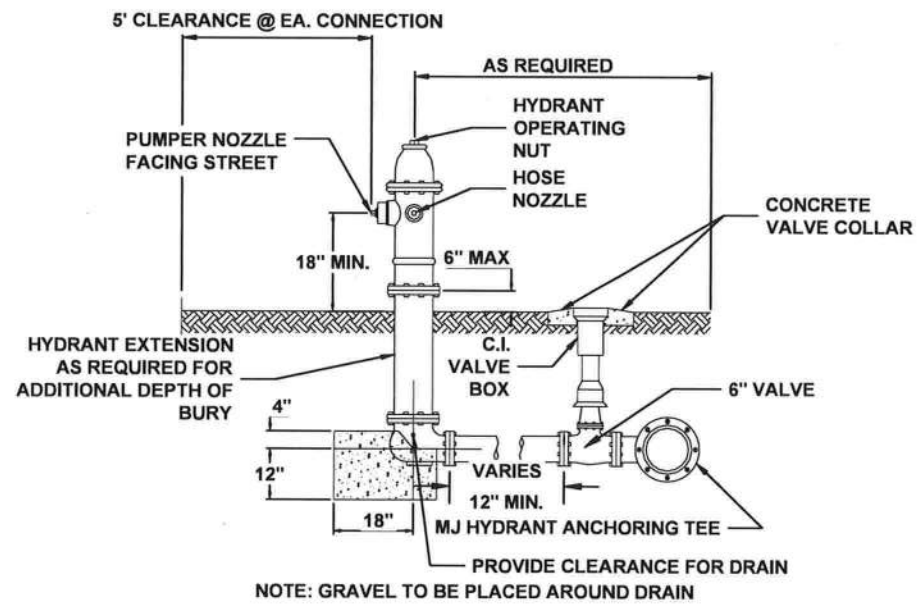
3. BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.

4. VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, Lu IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL. Li IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.

5. TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE " BRANCH" LINE.

6. HDPE TO PVC TRANSITION: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).

7. THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERHOMING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.



NOTE: GRAVEL TO BE PLACED AROUND DRAIN

1 C-16 **MEGALUG DETAILS**
SCALE: N.T.S.

2 C-16 **FIRE HYDRANT ASSEMBLY**
SCALE: N.T.S.

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