



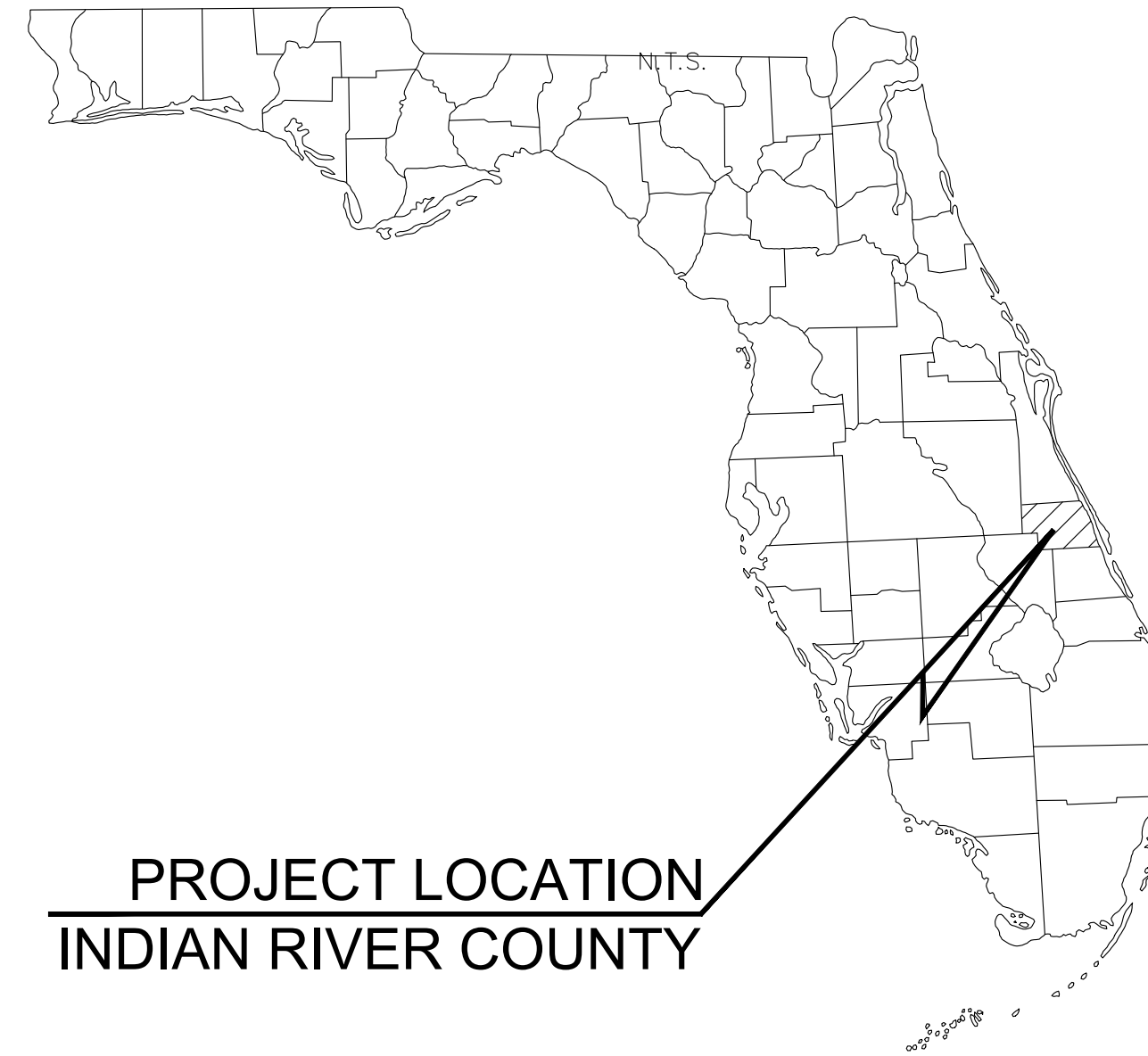
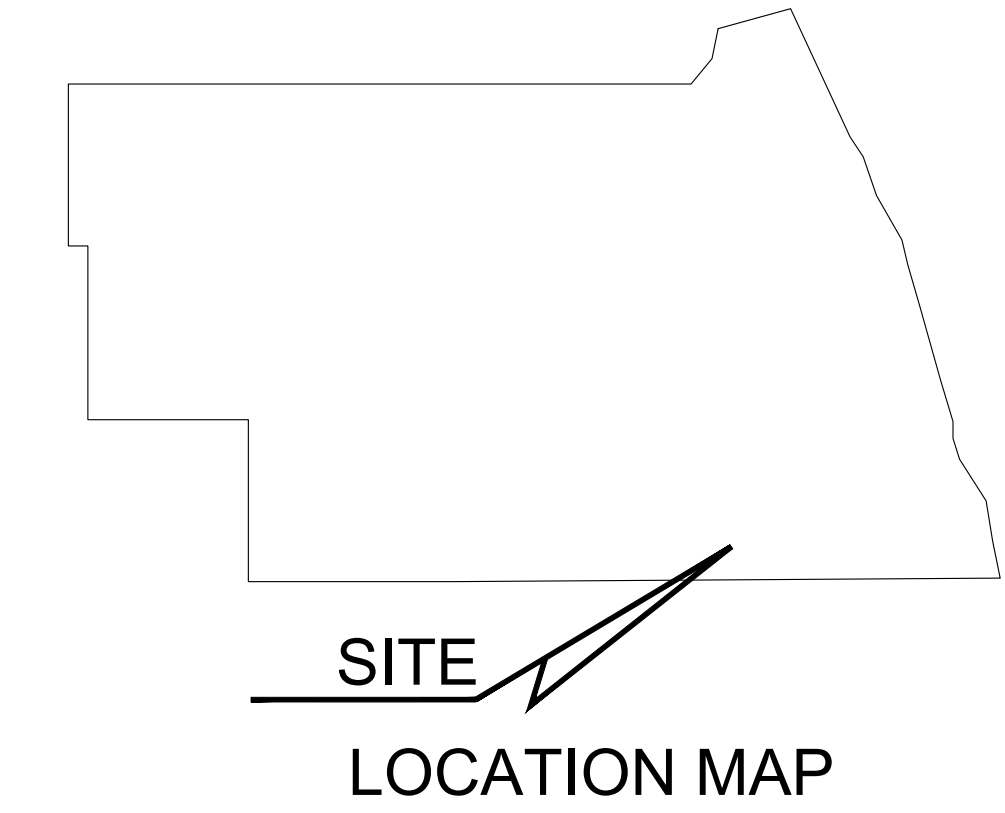
# IRC LANDFILL IMPROVEMENTS

1325 74TH AVENUE SW, VERO BEACH, FL 32968  
INDIAN RIVER COUNTY

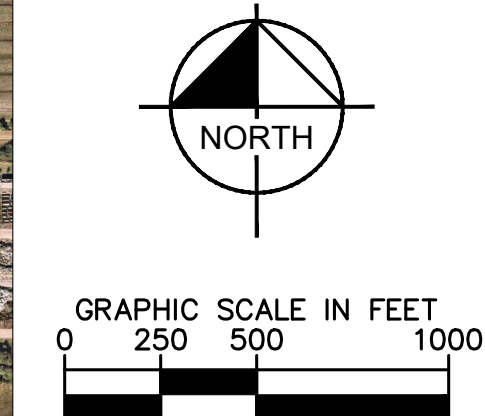
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TAX PARCEL ID: 33-38-25-00001-0070-00003.0

SEPTEMBER 2023



**ISSUED FOR BID  
NO. 2024-023**



### LIST OF CONTACTS:

#### STORMWATER

ST. JOHN RIVER  
WATER MANAGEMENT DISTRICT  
525 COMMUNITY COLLEGE PARKWAY  
PALM BAY, FL 329009  
CONTACT: MARK CROSBY  
321-676-6602

#### WATER AND SEWER

INDIAN RIVER COUNTY  
DEPARTMENT OF UTILITY SERVICES  
1801 27TH STREET  
VERO BEACH, FL 32960  
772-226-1824  
CONTACT: KEVIN OSTHUS

#### FIRE PREVENTION

INDIAN RIVER COUNTY  
FIRE DEPARTMENT  
1800 27TH STREET  
VERO BEACH, FL 32960  
772-567-3160 X109  
CONTACT: LT. SANDRA SEELEY, FIRE CHIEF

#### ENGINEERING

INDIAN RIVER COUNTY  
PUBLIC WORKS DEPARTMENT  
1800 27TH STREET  
VERO BEACH, FL 32960  
772-226-1283  
CONTACT: RICH SZPYRKA

#### NATURAL GAS PROVIDER

CITY GAS COMPANY FLORIDA  
4180 S. U.S. HWY 1  
ROCKLEDGE, FLORIDA 32955  
321-638-3419  
CONTACT: HOLLY COOMBS

#### PLANNING AND ZONING

INDIAN RIVER COUNTY  
PLANNING DEPARTMENT  
1801 27TH STREET  
VERO BEACH, FL 32960  
772-226-1235  
CONTACT: RYAN SWEENEY

#### BUILDING DIVISION

INDIAN RIVER COUNTY  
BUILDING DEPARTMENT  
1801 27TH STREET  
VERO BEACH, FL 32960  
772-226-1268  
CONTACT: SCOTT MCADAMS

#### TELEPHONE PROVIDER

AT&T DISTRIBUTION  
600 NW 79th AVE  
ROOM 336  
MIAMI, FL 33126  
305-260-8243  
CONTACT: DINNO FARRUGGIO

#### ELECTRIC PROVIDER

FLORIDA POWER AND LIGHT  
425 N WILLIAMSON BLVD.  
DAYTONA BEACH, FL 32114  
772-489-6212  
CONTACT: SEANA FALVEY

#### FLORIDA DEPARTMENT OF TRANSPORTATION

DISTRICT FOUR  
3400 WEST COMMERCIAL BLVD  
FT. LAUDERDALE, FL 33309  
954-777-4377  
CONTACT: CHRISTINE NABONG BACOMO

#### INDIAN RIVER FARMS WATER CONTROL DISTRICT

7305 4TH STREET  
VERO BEACH, FL 32968  
772-562-2141  
CONTACT: DAVID GUNTER

### OWNER:

INDIAN RIVER COUNTY  
1325 74TH AVENUE SW  
VERO BEACH, FLORIDA 32968  
772-226-3212

### LIST OF CONTACTS:

#### SURVEYOR

DAVID TAYLOR, P.S.M.  
MASTELLER, MOLER & TAYLOR, INC.  
1655 27TH STREET, SUITE 2  
VERO BEACH, FL 32960  
PHONE: 772-564-8050

#### LANDSCAPE ARCHITECT

BEN JOHNSON, P.L.A.  
KIMLEY-HORN AND ASSOCIATES, INC.  
445 24TH STREET SUITE 200  
VERO BEACH, FL 32960  
PHONE: 772-794-4100

#### CIVIL ENGINEER

BARTON FYE, P.E.  
KIMLEY-HORN AND ASSOCIATES, INC.  
355 ALHAMBRA CIR #1400  
CORAL GABLES, FL 33134  
PHONE: 305-535-7712

#### GEOTECHNICAL ENGINEER

KSM ENGINEERING AND TESTING  
11345 US HIGHWAY 1  
SEBASTIAN, FL 32958  
PHONE: 772-589-0712

VICINITY MAP

SUBJECT PROPERTY

### BOARD OF COUNTY COMMISSIONERS

SUSAN ADAMS	DISTRICT 1
JOSEPH E. FLESCHER	DISTRICT 2
JOE EARMAN	DISTRICT 3
DERYL LOAR	DISTRICT 4
LAURA MOSS	DISTRICT 5



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PHONE: 772-794-4100



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PHONE: 772-794-4100  
WWW.KIMLEY-HORN.COM REGISTRY 696

LICENSED PROFESSIONAL

KHA PROJECT 047035124

DATE SEPT 2023

SCALE AS SHOWN

DESIGNED BY

DRAWN BY JSW

CHECKED BY

DATE:

COVER SHEET

IRC LANDFILL IMPROVEMENTS PREPARED FOR INDIAN RIVER COUNTY FLORIDA

SHEET NUMBER G-100

Plotted By: Sastre, Ignacio Sheet Set: 047035127 Layout: G-100 Cover Sheet November 16, 2023 05:00:16pm K:\VIB-WaterResources\047035125-IRC Landfill Improvements\CADD\PlanSheets\C-100 Cover Sheet.dwg This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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LICENSED PROFESSIONAL

KHA PROJECT	047035124
DATE	SEPT 2023
SCALE	AS SHOWN
DESIGNED BY	JSW
DRAWN BY	JSW
CHECKED BY	---
DATE:	---

## SHEET INDEX

IRC LANDFILL  
 IMPROVEMENTS  
 PREPARED FOR  
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 FLORIDA



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SHEET NUMBER  
**G-101**



Plotted By: Sastre, Ignacio Street: Sat:04:20:35:17; Layout: G-200 Erosion Control Notes, November 16, 2023, 05:00:18:00; k:\VIB- WaterResources\047035125 - IRC Landfill Improvements\CADD\PlanSheets\G-200 Erosion Control Notes.dwg This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

**BEST MANAGEMENT PRACTICES (BMPs):**

THIS PLAN HAS BEEN PREPARED TO ENSURE COMPLIANCE WITH APPROPRIATE CONDITIONS OF THE INDIAN RIVER COUNTY LAND DEVELOPMENT REGULATIONS, THE RULES OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP), CHAPTER 17-25, F.A.C., ST. JOHNS RIVER WATER MANAGEMENT DISTRICT (SRWMD), CHAPTER 40D-4, F.A.C. AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) DOCUMENT NO. EPA 832/R-92-005 (SEPTEMBER 1992). THE PLAN ADDRESSES THE FOLLOWING:

- A. PREVENT LOSS OF SOIL DURING CONSTRUCTION BY STORMWATER RUNOFF AND/OR WIND EROSION, INCLUDING PROTECTING TOPSOIL BY STOCKPILING FOR REUSE.
B. SEDIMENTATION PROTECTION OF STORM SEWER OR RECEIVING STREAM.
C. PREVENT POLLUTING THE AIR WITH DUST AND PARTICULATE MATTER. THE VARIOUS TECHNIQUES OR ACTIONS IDENTIFIED UNDER EACH SECTION INDICATE THE APPROPRIATE SITUATION WHEN THE TECHNIQUES SHOULD BE EMPLOYED. ALSO IDENTIFIED IS A CROSS-REFERENCE TO A DIAGRAM OR FIGURE REPRESENTING THE TECHNIQUE. IT SHOULD BE NOTED THAT THE MEASURES IDENTIFIED ON THIS PLAN ARE ONLY SUGGESTED BMP(S). THE CONTRACTOR SHALL PROVIDE POLLUTION PREVENTION AND EROSION CONTROL MEASURES AS SPECIFIED IN ACCORDANCE WITH THE CURRENT FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS. CONTRACTOR SHALL PREPARE REQUIRED NPDES DOCUMENTATION AND OBTAIN PERMIT PRIOR TO COMMENCEMENT OF CONSTRUCTION. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE THE REQUIRED NPDES DOCUMENT AND OBTAIN THE NPDES PERMIT. ALL COST ASSOCIATED WITH SUCH WORK SHALL BE DEEMED INCIDENTAL TO THE PROJECT LUMP SUM COST.

**GENERAL EROSION CONTROL NOTES:**

- A. THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THIS DRAWING, THE STANDARD DETAILS, THE NPDES PERMIT (TO BE OBTAINED BY CONTRACTOR) AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THIS DRAWING AND THE STATE OF FLORIDA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP) IN ALL CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
1. FUEL SPILLS AND LEAKS PREVENTION
2. PREVENT/REDUCE VEHICLE AND EQUIPMENT WASHING AND STEAM CLEANING
3. VEHICLE AND EQUIPMENT MAINTENANCE AND REPAIR
4. PROPER OUTDOOR LOADING/UNLOADING OF MATERIALS
5. PREVENT/REDUCE OUTDOOR STORAGE OF RAW MATERIALS, PRODUCTS, AND BY-PRODUCTS
6. SOLID WASTE MANAGEMENT
7. HAZARDOUS WASTE MANAGEMENT
8. CONCRETE WASTE MANAGEMENT
9. SANDBLASTING WASTE MANAGEMENT
10. STRUCTURE CONSTRUCTION AND PAINTING
11. SPILL PREVENTION AND CONTROL
12. CONTAMINATED SOIL MANAGEMENT
13. SANITARY/SEPTIC WASTE MANAGEMENT
14. SOIL EROSION CONTROL
15. STORM WATER TURBIDITY MANAGEMENT
ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
D. BEST MANAGEMENT PRACTICES (BMPs) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. CONTRACTOR MUST MAINTAIN ALL PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS ON SITE AT ALL TIMES.
F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
G. CONTRACTOR SHALL BEGIN CLEARING AND GRUBBING THOSE PORTIONS OF THE SITE NECESSARY TO IMPLEMENT PERIMETER CONTROL MEASURES. CLEARING AND GRUBBING FOR THE REMAINING PORTIONS OF THE PROPOSED SITE SHALL COMMENCE ONCE PERIMETER CONTROLS ARE IN PLACE. PERIMETER CONTROLS SHALL BE ACTIVELY MAINTAINED UNTIL SAID AREAS HAVE BEEN STABILIZED AND SHALL BE REMOVED ONCE FINAL STABILIZATION IS COMPLETE.
H. GENERAL EROSION CONTROL BMPs SHALL BE EMPLOYED TO MINIMIZE SOIL EROSION AND POTENTIAL LAKE SLOPE CAVE-INS, WHILE THE VARIOUS TECHNIQUES REQUIRED WILL BE SITE AND PLAN SPECIFIC, THEY SHOULD BE EMPLOYED AS SOON AS POSSIBLE DURING CONSTRUCTION.
I. ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
J. TOPSOIL CANNOT BE STOCKPILED INSIDE THE PROPERTY FOR REFUSE.
K. SURFACE WATER QUALITY SHALL BE MAINTAINED BY EMPLOYING THE FOLLOWING BMP'S IN THE CONSTRUCTION PLANNING AND CONSTRUCTION OF ALL IMPROVEMENTS.
L. ALL CONSTRUCTION SERVICES SHALL BE IN ACCORDANCE WITH FDOT SPECIFICATIONS.

**STORM WATER EROSION CONTROL PRACTICES:**

- A. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
B. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
C. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION.
D. WHERE PRACTICAL, STORMWATER SHALL BE CONVEYED BY SWALES.
E. EROSION CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE TURBIDITY OF SURFACE WATERS LOCATED DOWNSTREAM OF ANY CONSTRUCTION ACTIVITY. WHILE THE VARIOUS MEASURES REQUIRED WILL BE SITE SPECIFIC, THEY SHALL BE EMPLOYED AS NEEDED IN ACCORDANCE WITH THE FOLLOWING:
1. IN GENERAL, EROSION SHALL BE CONTROLLED AT THE FURTHEST PRACTICAL UPSTREAM LOCATION.
2. STORMWATER INLETS SHALL BE PROTECTED DURING CONSTRUCTION. PROTECTION MEASURES SHALL BE EMPLOYED AS SOON AS PRACTICAL DURING THE VARIOUS STAGES OF INLET CONSTRUCTION. SILT BARRIERS SHALL REMAIN IN PLACE UNTIL SODDING AROUND INLETS IS COMPLETE.
3. A TEMPORARY SEDIMENT TRAP SHOULD BE CONSTRUCTED TO DETAIN SEDIMENT-LADEN RUNOFF FROM DISTURBED AREAS.
F. SILT BARRIERS, ANY SILT WHICH ACCUMULATES BEHIND THE BARRIERS, AND ANY FILL USED TO ANCHOR THE BARRIERS SHALL BE REMOVED PROMPTLY AFTER THE END OF THE MAINTENANCE PERIOD SPECIFIED FOR THE BARRIERS.
G. SLOPES OF BANKS OF RETENTION/DETENTION PONDS SHALL BE CONSTRUCTED NOT STEEPER THAN 3H:1V FROM TOP OF BANK TO TWO FEET BELOW NORMAL WATER LEVEL, AS APPLICABLE.
H. SOD SHALL BE PLACED FOR A 2-FOOT WIDE STRIP ADJOINING ALL CURBING AND AROUND ALL INLETS. SOD SHALL BE PLACED BEFORE SILT BARRIERS ARE REMOVED.
I. WHERE REQUIRED TO PREVENT EROSION FROM SHEET FLOW ACROSS BARE GROUND FROM ENTERING A LAKE OR SWALE, A TEMPORARY SEDIMENT SUMP SHALL BE CONSTRUCTED.
J. FILTER FABRIC SHOULD BE USED FOR STORM DRAIN INLET PROTECTION BEFORE FINAL STABILIZATION.

**WIND EROSION CONTROL PRACTICES:**

- A. WIND EROSION SHALL BE CONTROLLED BY EMPLOYING THE FOLLOWING METHODS AS NECESSARY AND APPROPRIATE:
1. BARE EARTH AREAS SHALL BE WATERED DURING CONSTRUCTION AS NECESSARY TO MINIMIZE THE TRANSPORT OF FUGITIVE DUST. IT MAY BE NECESSARY TO LIMIT CONSTRUCTION VEHICLE SPEED IF BARE EARTH HAS NOT BEEN EFFECTIVELY WATERED. IN NO CASE SHALL FUGITIVE DUST BE ALLOWED TO LEAVE THE SITE UNDER CONSTRUCTION.
2. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED (SEE PERMANENT STABILIZATION PRACTICES FOR DETAILS). THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN. CLEARLY TO SITE DEVELOPMENT AREAS NOT CONTINUALLY SCHEDULED FOR CONSTRUCTION ACTIVITIES SHALL BE COVERED WITH HAY OR OVERSEEDED AND PERIODICALLY WATERED SUFFICIENTLY TO STABILIZE THE TEMPORARY GROUND COVER (SEE TEMPORARY STABILIZATION PRACTICES FOR DETAILS).
3. AT ANY TIME BOTH DURING AND AFTER SITE CONSTRUCTION THAT WATERING AND/OR VEGETATION ARE NOT EFFECTIVE IN CONTROLLING WIND EROSION AND/OR TRANSPORT OF FUGITIVE DUST, OTHER METHODS AS ARE NECESSARY FOR SUCH CONTROL SHALL BE EMPLOYED. THESE METHODS SHOULD INCLUDE ERECTION OF DUST CONTROL FENCES. A 6-FT GEOTEXTILE FILTER FIBER SHOULD BE HANGING AGAINST THE EXISTING CHAIN LINK FENCE AND GATE.
B. ALL DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

**STABILIZATION PRACTICES:**

- A. TEMPORARY STABILIZATION - TOPSOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASE FOR AT LEAST 21 DAYS, SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH WITHIN 14 DAYS OF THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THE TEMPORARY SEED REQUIRED CAN BE FOUND IN TABLE 1.65 A OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, WHERE SOILS ARE ACIDIC 2 TONS OF PULVERIZED AGRICULTURAL LIMESTONE SHOULD BE ADDED PER ACRE AND 450 POUNDS OF 10-20-20 FERTILIZER SHALL BE APPLIED TO EACH ACRE. AFTER SEEDING, EACH AREA SHALL BE IMMEDIATELY MULCHED WITH STRAW OR EQUIVALENT EQUAL. AREAS OF THE SITE WHICH ARE TO BE PAVED SHALL BE TEMPORARILY STABILIZED BY APPLYING GEOTEXTILE AND STONE SUB-BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED.
B. PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASES SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE APPROPRIATE PERMANENT SEED MIX CAN BE FOUND IN TABLES 1.66A, 1.66B AND 1.66C OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, 2 TONS/ACRE OF FINELY GROUND AGRICULTURAL LIMESTONE AND 1 TON/ACRE OF FERTILIZER BASED ON THE TYPE OF SEEDING SHALL BE APPLIED TO EACH ACRE TO PROVIDE PLANT NUTRIENTS. AFTER SEEDING, EACH AREA SHALL BE MULCHED IMMEDIATELY.
C. STABILIZATION WILL BE INITIATED ON ALL DISTURBED AREAS WITHIN 14 DAYS OF WORK CEASING, UNLESS CONSTRUCTION ACTIVITY WILL RESUME IN THAT AREA WITHIN 21 DAYS AFTER WORK STOPPAGE. THE TEMPORARY SEDIMENT SUMP SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED ON THE GROUND DRAINING TO THE SUMP.
D. CONTRACTOR TO ENSURE THAT EXISTING VEGETATION ON OR ADJACENT TO THE PROPOSED SITE IS PRESERVED AND DISTURBED PORTIONS OF THE SITE ARE STABILIZED. STABILIZATION PRACTICES SHOULD BE INITIATED AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS WHERE CONSTRUCTION HAS TEMPORARILY CEASED.
E. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
F. SHALL BE IN ACCORDANCE WITH DEP DOCUMENT NO. 62-621.300(4)(g)

**SPILL CONTROL PRACTICES:**

- IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
A. SPILL CLEANUP INFORMATION SHALL BE POSTED ON SITE TO INFORM EMPLOYEES ABOUT CLEANUP PROCEDURES AND RESOURCES.
B. THE FOLLOWING CLEAN-UP EQUIPMENT MUST BE KEPT ON-SITE NEAR THE MATERIAL STORAGE AREA: GLOVES, MOPS, RAGS, BROOMS, DUST PANS, SAND, SAWDUST, LIQUID ABSORBER, GOGGLES, AND TRASH CONTAINERS.
C. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ONSITE AND READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
D. ALL SPILLS SHALL BE CLEANED UP AS SOON AS POSSIBLE.
E. WHEN CLEANING A SPILL, THE AREA SHOULD BE WELL VENTILATED AND THE EMPLOYEE SHALL WEAR PROPER PROTECTIVE COVERING TO PREVENT INJURY.
F. TOXIC SPILLS MUST BE REPORTED TO THE PROPER AUTHORITY REGARDLESS OF THE SIZE OF THE SPILL.
G. AFTER A SPILL, THE PREVENTION PLAN SHALL BE REVIEWED AND CHANGED TO PREVENT FURTHER SIMILAR SPILLS FROM OCCURRING. THE CAUSE OF THE SPILL, MEASURES TO PREVENT IT, AND HOW TO CLEAN THE SPILL UP SHALL BE RECORDED.
H. THE SUPERINTENDENT SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR AND IS RESPONSIBLE FOR THE DAY TO DAY SITE OPERATIONS. THE SUPERINTENDENT ALSO OVERSEES THE SPILL PREVENTION PLAN AND SHALL BE RESPONSIBLE FOR EDUCATING THE EMPLOYEES ABOUT SPILL PREVENTION AND CLEANUP PROCEDURES.

**STRUCTURAL PRACTICES:**

- A. EARTH DIKE - IF REQUIRED, AN EARTH DIKE SHALL BE CONSTRUCTED ALONG THE SITE PERIMETER. A PORTION OF THE DIKE SHALL DIVERT RUN-ON AROUND THE CONSTRUCTION SITE. THE REMAINING PORTION OF THE DIKE SHALL COLLECT RUNOFF FROM THE DISTURBED AREA AND DIRECT THE RUNOFF TO THE SEDIMENT BASIN.
B. SEDIMENT BASIN - A SEDIMENT BASIN SHALL BE CONSTRUCTED IN THE COMMON DRAINAGE AREA FOR THE SITE. ALL SEDIMENT COLLECTED IN THE BASIN MUST BE REMOVED FROM THE BASIN UPON COMPLETION OF CONSTRUCTION. SEDIMENT FROM THE BASIN MAY BE USED AS FILL ON THE SITE IF IT IS SUITABLE SOIL.
C. SHALL BE IN ACCORDANCE WITH DEP DOCUMENT NO. 62-621.300(4)(g)

**WASTE DISPOSAL:**

- A. WASTE MATERIALS - ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A METAL DUMPSTER WITH A SECURE LID IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITIES TO HAVE THE DUMPSTER EMPTIED AT LEAST TWICE A WEEK AND THE WASTE TAKEN TO AN APPROPRIATE LANDFILL. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE. THE SUPERINTENDENT SHALL ORGANIZE TRAINING FOR THE EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH WASTE MATERIALS. THE SUPERINTENDENT SHALL BE RESPONSIBLE FOR POSTING AND ENFORCING WASTE MATERIAL PROCEDURES.
B. HAZARDOUS WASTE - HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS OR AS DIRECTED BY THE MANUFACTURER. THE SUPERINTENDENT SHALL ORGANIZE THE PROPER TRAINING FOR EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH HAZARDOUS WASTE MATERIALS. THESE PROCEDURES SHALL BE POSTED ON THE SITE. THE PERSON WHO MANAGES THE SITE SHALL BE RESPONSIBLE FOR ENFORCING THE PROCEDURES.
C. SANITARY WASTE - SANITARY WASTE SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITY FOR COLLECTION OF THE SANITARY WASTE AT LEAST THREE TIMES A WEEK TO PREVENT SPILLAGE ONTO THE SITE.
D. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
E. ANY CONSTRUCTION DEBRIS GENERATED AS A RESULT OF THIS PROJECT WILL BE DISPOSED OF OFF-SITE AT AN APPROPRIATE WASTE FACILITY.
F. CONCRETE WASHOUT LOCATIONS WILL BE PROVIDED IN AREAS WHERE THE DISPOSAL MATERIALS WILL BE CONTAINED TO PREVENT DISCHARGE OUTSIDE OF THE PROJECT LIMITS AND INTO THE WATERWAYS.

**OFFSITE TRACKING:**

- A. STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO REDUCE SEDIMENT TRACKING OFFSITE. THE MAJOR ROAD CONNECTED TO THE PROJECT SHALL BE CLEANED ONCE A DAY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK RESULTING FROM CONSTRUCTION TRAFFIC. ALL TRUCKS HAULING MATERIALS OFFSITE SHALL BE COVERED WITH A TARP/AULIN.
B. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA. EMPLOYEE PARKING AREA, AND AREA FOR LOCATION OF PORTABLE FACILITIES, OFFICE, TRAILERS, AND TOILET FACILITIES, HEAVY CONSTRUCTION EQUIPMENT PARKING AND MAINTENANCE AREAS SHALL BE DESIGNED TO PREVENT OIL, GREASE, AND LUBRICANTS FROM ENTERING SITE DRAINAGE FEATURES INCLUDING STORMWATER COLLECTION AND TREATMENT SYSTEMS. CONTRACTORS SHALL PROVIDE BROAD DIKES, HAY BALES OR SILT SCREENS AROUND, AND SEDIMENT SUMPS WITHIN, SUCH AREAS AS REQUIRED TO CONTAIN SPILLS OF OIL, GREASE OR LUBRICANTS. CONTRACTORS SHALL HAVE AVAILABLE, AND SHALL USE, ABSORBENT FILTER PADS TO CLEAN UP SPILLS AS SOON AS POSSIBLE AFTER OCCURRENCE.
C. ALL WASH WATER FROM CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC. SHALL BE DETAINED ON SITE AND SHALL BE PROPERLY TREATED OR DISPOSED.
D. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
E. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

**INSPECTION AND MAINTENANCE:**

- ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETE PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
A. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
B. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
C. THE SILT FENCE SHALL BE INSPECTED PERIODICALLY FOR HEIGHT OF SEDIMENT AND CONDITION OF FENCE. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE SILT FENCE.
D. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
E. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
F. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. THE SEDIMENT BASINS/DITCHES SHALL BE CHECKED MONTHLY FOR DEPTH OF SEDIMENT. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 10% AND AFTER CONSTRUCTION IS COMPLETE.
G. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN SEVEN CALENDAR DAYS FOLLOWING THE INSPECTION.
H. DIVERSION DIKES SHALL BE INSPECTED MONTHLY. ANY BREACHES SHALL BE PROMPTLY REPAIRED.
I. A MAINTENANCE REPORT SHALL BE COMPLETED DAILY AFTER EACH INSPECTION OF THE SEDIMENT AND EROSION CONTROL METHODS. THE REPORTS SHALL BE FILED IN AN ORGANIZED MANNER AND RETAINED ON-SITE DURING CONSTRUCTION. AFTER CONSTRUCTION IS COMPLETED, THE REPORTS SHALL BE SAVED FOR AT LEAST THREE YEARS. THE REPORTS SHALL BE AVAILABLE FOR ANY AGENCY THAT HAS JURISDICTION OVER EROSION CONTROL.
J. ALL REPAIRS MUST BE MADE WITHIN 24 HOURS OF REPORT.
K. THE SUPERINTENDENT SHALL ORGANIZE THE TRAINING FOR INSPECTION PROCEDURES AND PROPER EROSION CONTROL METHODS FOR EMPLOYEES THAT COMPLETE INSPECTIONS AND REPORTS.

**SPILL PREVENTION AND CONTROL:**

- THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.
A. GOOD HOUSEKEEPING
1. SUPERINTENDENT SHALL INSPECT PROJECT AREA DAILY FOR PROPER STORAGE, USE, AND DISPOSAL OF CONSTRUCTION MATERIALS.
2. STORE ONLY ENOUGH MATERIAL ON SITE FOR PROJECT COMPLETION.
3. ALL SUBSTANCES SHOULD BE USED BEFORE DISPOSAL OF CONTAINER.
4. ALL CONSTRUCTION MATERIALS STORED SHALL BE ORGANIZED AND IN THE PROPER CONTAINER AND IF POSSIBLE, STORED UNDER A ROOF OR PROTECTIVE COVER.
5. PRODUCTS SHALL NOT BE MIXED UNLESS DIRECTED BY THE MANUFACTURER.
6. ALL PRODUCTS SHALL BE USED AND DISPOSED OF ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
B. HAZARDOUS PRODUCTS
1. MATERIALS SHOULD BE KEPT IN ORIGINAL CONTAINER WITH LABELS UNLESS THE ORIGINAL CONTAINERS CANNOT BE RESEALED. IF ORIGINAL CONTAINERS CANNOT BE USED, LABELS AND PRODUCT INFORMATION SHALL BE SAVED.
2. PROPER DISPOSAL PRACTICES SHALL ALWAYS BE FOLLOWED IN ACCORDANCE WITH MANUFACTURER AND LOCAL/STATE REGULATIONS.
C. PRODUCT SPECIFIC PRACTICES
1. PETROLEUM PRODUCTS MUST BE STORED IN PROPER CONTAINERS AND CLEARLY LABELED. VEHICLES CONTAINING PETROLEUM PRODUCTS SHALL BE PERIODICALLY INSPECTED FOR LEAKS. PRECAUTIONS SHALL BE TAKEN TO AVOID LEAKAGE OF PETROLEUM PRODUCTS ON SITE.
2. THE MINIMUM AMOUNT OF FERTILIZER SHALL BE USED AND MIXED INTO THE SOIL IN ORDER TO LIMIT EXPOSURE TO STORM WATER. FERTILIZERS SHALL BE STORED IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
3. PAINT CONTAINERS SHALL BE SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT MUST BE DISPOSED OF IN AN APPROVED MANNER.
4. CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

**PROJECT DESCRIPTION:**

PROJECT LOCATION: 1325 74TH AVENUE SW, VERO BEACH, FL 32968

- 1. CONSTRUCTION ACTIVITY: CONSTRUCTION OF A DRIVEWAY, AUTOMATED SCALE, STORAGE TANK ELECTRICAL AND INSTRUMENTATION, AND SEVERAL DRAINAGE IMPROVEMENTS..
2. MAJOR SOIL DISTURBING ACTIVITIES: CLEARING AND GRUBBING, INSTALLATION OF DRAINAGE SYSTEM, INSTALLATION OF UTILITIES
3. DEWATERING ACTIVITIES: DEWATERING IS ANTICIPATED FOR THIS SITE.
4. SOIL CHARACTERISTICS: THE SOIL TYPE WITHIN THE PROJECT'S LIMIT OF DISTURBANCE IS CLASSIFIED AS FILL IN.
5. RUNOFF COEFFICIENTS: EXISTING: 0.65
DURING: 0.65
CONSTRUCTION: 0.65
GRAVEL: 0.70

**SEQUENCE OF CONSTRUCTION:**

SEQUENCE OF SOIL DISTURBING ACTIVITIES AND IMPLEMENTATION OF CONTROLS:

- 1. PRIOR TO COMMENCEMENT OF ANY EARTH DISTURBING ACTIVITIES, INCLUDING CLEARING AND GRUBBING, INSTALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE EROSION CONTROL PLAN, STANDARD DETAILS, NPDES REQUIREMENTS, AND INDIAN RIVER COUNTY PUBLIC WORKS ENGINEERING STANDARD FOR DESIGN AND CONSTRUCTION MANUAL.
2. BEGIN CLEARING AND GRUBBING.
3. INSTALL DRAINAGE SYSTEM, INCLUDING: CONCRETE INLETS, DRAINAGE PIPES AND MANHOLES.
4. INSTALL INLET PROTECTION AND ROCK BAGS ON ALL INLETS AND MANHOLES IN THE LOCATIONS SHOWN ON THE PLANS AND PER THE STANDARD DETAILS PROVIDED AND INDIAN RIVER COUNTY PUBLIC WORKS ENGINEERING STANDARD FOR DESIGN AND CONSTRUCTION MANUAL.
5. PREPARE SUBBASE MATERIAL.
6. BEGIN ASPHALT AND CONCRETE INSTALLATION.
7. AFTER COMPLETION OF SITE WORK, BEGIN SITE STABILIZATION AND PERMANENT SEEDING.
8. ONCE SITE STABILIZATION IS COMPLETE, CONTRACTOR TO CLEAN ALL CONSTRUCTION DEBRIS FROM CONSTRUCTION SITE.
9. ONCE A UNIFORM 70% VEGETATIVE COVER OF PERENNIAL VEGETATION IS ACHIEVED ACROSS THE ENTIRE DISTURBED AREA THE REMOVAL OF TEMPORARY EROSION CONTROL MEASURES MAY BEGIN.

Table with columns for REVISIONS, No., and DATE. Includes a grid for tracking changes.

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Professional information table: KHA PROJECT 047035124, DATE SEPT 2023, SCALE AS SHOWN, DESIGNED BY, DRAWN BY JSW, CHECKED BY, LICENSED PROFESSIONAL.

EROSION CONTROL NOTES

IRC LANDFILL IMPROVEMENTS PREPARED FOR INDIAN RIVER COUNTY FLORIDA

ISSUED FOR BID

Sunshine811 logo and text: Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked. Check positive response codes before you dig!

SHEET NUMBER G-200



# STRUCTURAL NOTES

**GENERAL NOTES:**

- The Governing Code for this project is the Florida Building Code, Seventh Edition (2020). This Code prescribes which Edition of each referenced standard applies to this project.
  - To the best of our knowledge, the Structural drawings and specifications comply with the applicable requirements of the Governing Building Code.
  - Construction is to comply with the requirements of the Governing Building Code and all other applicable Federal, State, and local Codes, Standards, Regulations and Laws.
  - The Structural documents are to be used in conjunction with the Architectural documents. Use these notes in conjunction with the project specifications. If a conflict exist, notify the Architect.
  - Details labeled "Typical" apply to all situations that are the same or similar to those specifically referenced, whether or not they are keyed in at each location. Questions regarding the applicability of typical details shall be resolved by the Architect.
  - Openings shown on Structural drawings are only pictorial. See the Architectural and M.E.P. drawings for the size and location of openings in the structure.
  - Contractors who discover discrepancies, omissions or variations in the contract documents during bidding shall immediately notify the Engineer. The Engineer will resolve the condition and issue a written clarification.
  - The General Contractor shall coordinate all contract documents with field conditions and dimensions and project shop drawings prior to construction. Do not scale drawings; use only printed dimensions. Report any discrepancies in writing to the Engineer prior to proceeding with work. Do not change size or location of Structural members without written instructions from the Structural Engineer of record.
  - The contractor shall protect adjacent property, his own work and the public from harm. The contractor is solely responsible for construction means and methods, and jobsite safety including all OSHA requirements.
  - The Structure is designed to be structurally sound when completed. Prior to completion, the Contractor is responsible for stability and temporary bracing, including, but not limited to, masonry walls. Wherever the Contractor is unsure of these requirements, the Contractor shall retain a Florida Licensed Engineer to design and inspect the temporary bracing and stability of the Structure.
- DESIGN SUPERIMPOSED LOADS:**
- | Occupancy                     | LIVE LOAD | RED. LL | DEAD LOAD | POINT LL |
|-------------------------------|-----------|---------|-----------|----------|
| DRIVEWAYS SUBJECT TO TRUCKING | 250 PSF   | -       | -         | -        |
- DESIGN WIND LOADS:**
- |                       |                             |
|-----------------------|-----------------------------|
| Governing Code        | ASCE 7-16                   |
| Basic Wind Speed      | Vult= 160 MPH/Vasd= 124 MPH |
| Risk Category         | III                         |
| Building Enclosure    | OPEN                        |
| Directionality Factor | Kd = 0.85                   |
| Exposure              | C                           |
| Mean Roof Height      | <15 FEET                    |
- FLOOD DESIGN CRITERIA:**
- |                    |            |
|--------------------|------------|
| Governing Code     | ASCE 24-14 |
| Flood Design Class | II         |
| Flood Zone         | X          |

**SHALLOW FOUNDATIONS:**

- Foundation design, soil preparation and compaction are based on geotechnical investigation, data and recommendations in report #2300801-b by KMS Engineering & Testing dated February 22, 2023.
- Footing sizes and reinforcing are based on an assumed allowable soil bearing capacity of 1,500 psf for the biogas equipment pad and 2,000 psf for the scale slab. All footings shall bear on compacted fill, natural soil or rock prepared per the geotechnical report.
- Subgrade preparation shall be field controlled and tested by a licensed soils Engineer in accordance with the geotechnical report. At completion, that Engineer shall prepare and submit to the owner, Architect, contractor and Structural Engineer a signed and sealed letter indicating that the recommendations of the geotechnical report have been followed.
- Center all footings under their respective columns or walls, u.o.n.

**REINFORCED CONCRETE:**

- Comply with ACI 301 and 318-14 and specification sections 03100, 03200 and 03300.
- Provide Structural Concrete with a minimum ultimate Compressive Design Strength of 4,000 psi in 28 days as follows:
 

Element	Strength
Footings	4,000 psi
Slabs on Grade	4,000 psi
- Use normal weight concrete for all Structural Members. u.o.n. with W/C ratio of 0.40.
- Provide ASTM A-615 Grade 60 reinforcing steel. Weldable Rebar shall be ASTM-706, Grade 60 per AWS D.1. Reinforcing shall be accurately placed, rigidly supported and firmly tied in place, with appropriate bar supports and spacers. Lap bottom steel over supports and top steel at midspan (u.o.n.). Hook discontinuous ends of all top bars and all bars in walls, u.o.n. Provide cover over reinforcing as follows:
 

Element	bottom	top	slabs
Footings	3"	2"	3"
Slabs on Grade	2"	1"	2"
- Where specified, provide plain, cold-drawn electrically-welded wire reinforcement conforming to ASTM A-185. Supply in flat sheets only. Lap splice two cross wire spacing.
- In addition to specified reinforcing, provide 2 tons of reinforcing bars to be detailed, fabricated, delivered to site and placed as directed by the Architect/Engineer to account for unforeseeable conditions.
- Utilities shall not penetrate beams or columns but may pass through slabs and walls individually, u.o.n. For openings 24" long or less, cut reinforcing and replace alongside opening with splice bars of equivalent area with 48 bar dia. lap. Prepare and submit shop drawings for openings longer than 24". For rectangular openings 12" long or longer, add 1#5 x 6' mid depth diagonal at all 4 corners.
- Where reinforcing steel congestion permits, conduit and pipes up to 1" diameter may be embedded in concrete per ACI 318, section 6.3. Space at 3 diameters o.c. Place between outer layers of reinforcing if conduits are significantly congested, additional reinforcing perpendicular to piping may be required. Requests to embed larger pipes shall be accompanied by a detailed description and be submitted to the Architect for evaluation.
- Provide construction joints in accordance with ACI 318, section 6.4. Provide keyways and adequate dowels. Submit drawings showing location of construction joints and direction of pour for review.
- Provide 3/4" chamfer for all exposed corners.
- Provide reinforcing steel placer with a set of Structural Drawings for field reference. Inspect reinforcing steel placing from Structural Drawings.
- Consolidate placed concrete with mechanical vibrating equipment in accordance with ACI 301.
- After applying float finish, apply first troweling and consolidate concrete by power-driven trowel. Continue troweling passes and straighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings. Do not add water to concrete surface. Do not apply hard-troweled finish to concrete, which has a total air content greater than 3 percent.

MIN. LAP SPLICE LENGTH SCHEDULE										
BAR TYPE	BAR SIZE									
	#3	#4	#5	#6	#7	#8	#9	#10	#11	
48 BAR DIAMETER	18"	24"	30"	36"	42"	48"	54"	61"	68"	
FOOTINGS	16"	16"	19"	23"	33"	37"	42"	47"	53"	
SLABS	16"	19"	28"	37"	60"	74"	-	-	-	

f<sub>c</sub> = 4000 PSI

**LAP SPLICE LENGTH SCHEDULE**

**SLABS ON GRADE:**

- Refer to geotechnical report for subgrade preparation more than 12" below bottom of slab.
- Above subgrade, use fill containing not more than 10% passing #200 sieve and maximum 1 inch diameter. Compact to 95% of maximum dry density as determined by modified proctor ASTM D-1557. Each layer of fill shall not exceed 6" loose thickness. Compact prior to placement of the next layer.
- Fill placement and compaction shall be monitored and accepted by the testing agency. Take a min. of one field density test (ASTM D-1556 or D-2922) for each 2,500 square feet of each layer. The testing agency shall randomly select test locations.
- Place concrete in long-strip construction method. Provide crack control joints at 15 feet maximum to limit areas between joints to 225 sq. ft. In all floating slabs on grade. Locate to conform to bay spacing whenever possible, add crack control joints at re-entrant corners which tend to invite cracks.

**EXCAVATION, BACKFILL AND DEWATERING:**

- The Contractor is solely responsible for all excavation procedures including lagging, shoring, and protection of adjacent property, structures, streets and utilities in accordance with the requirements of the local Building Department and OSHA regulations. Do not excavate within one foot of the angle of repose of any soil bearing foundation unless the foundation is properly protected against settlement.
- The Contractor is responsible for the disposal of all accumulated water in a manner that does not inconvenience or damage the work.

**POST-INSTALLED ANCHORS:**

- Unless otherwise indicated on plans, post-installed anchors shall consist of the following anchor types, or equivalent:

POST-INSTALLED ANCHOR SCHEDULE		
INSTALLED IN	ADHESIVE ANCHOR	MECHANICAL ANCHOR
SOLID CONCRETE	HILTI HIT-RE 500V3 SAFE SET SYSTEM HILTI HIT-HY 200 SAFE SET SYSTEM	HILTI KWIK HUS EZ HILTI KWIK BOLT TZ

- Substitution requests for alternate products must be approved in writing by the engineer of record prior to use. Contractor shall provide calculations demonstrating that the substituted product is capable of achieving the performance values of the specified product. Substitutions will be evaluated by their having an ICC ERS showing compliance with the relevant and current building code.
- Install anchors per the manufacturer instructions, as included in the anchor packaging.
- The contractor shall arrange an anchor manufacturer's representative to provide onsite installation training for all of their anchoring products specified. The structural engineer of record must receive documented confirmation that all of the Contractor's personnel who install anchors are trained prior to the commencement of installing anchors.
- See project specifications for post-installed anchor inspection requirements.
- Construction of post-installed anchors requires continuous inspection by the testing lab to ensure proper embedment and installation per manufacturer's specifications.
- Anchor capacity is dependent upon spacing between adjacent anchors and proximity of anchors to edge of concrete. Install anchors in accordance with spacing and edge clearances indicated on the drawings.
- Existing reinforcing bars and / or post-tensioned tendons in the concrete structure may conflict with specific anchor locations. The contractor shall review the existing structural drawings and shall undertake to locate the position of the reinforcing bars and/or post-tensioned tendons by non-destructive methods at the locations of the concrete anchors. Contractor shall immediately contact the engineer if a conflict is identified. If existing reinforcing and / or tendon layout prohibits the installation of anchors as indicated on the drawings, the contractor shall immediately notify the design professionals.
- If a conflict exists, the anchors position can be adjusted by no more than 1 inch. If a larger deviation is necessary, contact the Engineer.
- Post-installed anchors shall only be used where specified on the construction documents. The contractor shall obtain approval from the engineer of record prior to installing post-installed anchors in place of missing or misplaced cast-in-place anchors. Care shall be taken in placing post-installed anchors to avoid conflicts with existing rebar and / or post-tensioned tendons. Holes shall be drilled and cleaned in accordance with the manufacturer's written instructions. Substitution requests for products other than those specified, shall be submitted by the contractor to the engineer of record along with calculations that are prepared and sealed by a registered professional engineer. The calculations shall demonstrate that the substituted product is capable of achieving the pertinent equivalent performance values (minimum) of the specified product using the appropriate design procedure and / or standard(s) as required by the building code. Contact manufacturer's representative for the initial training and installation of anchors and for product related questions and availability.
- Post-installed concrete anchors shall be of size, type, and quantity as noted on details, as manufactured by hilti, simpson strong-tie anchors systems or powers fasteners. No other manufacturer permitted. Anchors from only one manufacturer shall be utilized on the project.
- Overhead and / or constant tension adhesive anchor installations not shown on the drawings shall not be permitted unless each condition is reviewed and approved in writing by the engineer of record.
- Proof testing of adhesive anchors shall be performed in accordance with the project specifications. Unless noted otherwise, adhesive anchor proof tension loads shall be per the adhesive anchor proof tension schedules. Proof testing of reinforcement for concrete housekeeping pads is not required.

**SHOP DRAWINGS AND OTHER SUBMITTALS:**

- Submit specific components, such as columns, footings, etc., in a single package. Submit similar floors together.
- On first submittal, clearly flag and cloud all differences from the contract documents. On resubmittals, flag and cloud all changes and additions to previous submittal; only clouded items will be reviewed.
- Submittals for special structural, load-carrying items that are required by codes or standards to resist forces must be prepared by, or under the direct supervision of, a delegated engineer as follows:

**SHOP DRAWING SUBMITTAL REQUIREMENTS**

COMPONENT	DRAWINGS/MATERIAL SHEETS	PRODUCT APPROVALS	SIGNED & SEALED DRAWINGS	SIGNED & SEALED CALCULATIONS
CONCRETE MIXES	X			
REINFORCEMENT	X			
CONCRETE ACCESSORIES	X			
EPOXY, EXPANSION, OR SCREW ANCHORS	X			
BOLLARD	X	X	X	X

- A delegated Engineer is defined as a Florida licensed Engineer who specializes in and undertakes the design of structural components or structural systems included in a specific submittal prepared for this project and is an employee or officer of, or consultant to, the contractor or fabricator responsible for the submittal. The delegated Engineer shall sign, seal and date the submittal, including calculations and drawings.
- The trade contractor is responsible for confirming and correlating dimensions at the job sites, for tolerances, clearances, quantities, fabrication processes and techniques of construction, coordination of the work with other trades and full compliance with the contract documents.
- The general contractor/construction manager shall review and approve submittals and shall sign and date each drawing prior to submitting to the Architect. This approval is to confirm that the submittal is complete, complies with the submittal requirements and is coordinated with field dimensions, other trades, erection sequencing and constructibility.
- The structural Engineer reviews submittals to confirm that the submittal is in general conformance with the design concept presented in the contract documents. Quantities and dimensions are not checked. Notations on submittals do not authorize changes to the contract sum. Checking of the submittal by the Structural Engineer shall not relieve the contractor of responsibility for deviations from the contract documents and from errors or omissions in the submittal.
- In addition to the above, the structural Engineer's review of delegated Engineer submittals is limited to verifying that the specified structural submittal has been furnished, signed and sealed by the delegated Engineer and that the delegated Engineer has understood the design intent and used the specified structural criteria. No detailed check of calculations will be made. The delegated Engineer is solely responsible for their design, including but not limited to the accuracy of their calculations and compliance with the applicable codes and standards.
- CAD files of Structural Drawings may be used as an aid in preparing shop drawings only upon the contractor signing an agreement. When Cad files or copies of the Structural Drawings are made available, it is under the following conditions:
  - All information contained in the CAD files or copies of the Structural Drawings are instruments of service of the Architect/ Engineer and shall not be used for other projects. Additions to the project or the completion of the project by others. CAD files and copies of the Structural Drawings remain the property of Kimley-Horn & Associates, Inc. and in no case shall their transfer be considered a sale.
  - Cad files or copies of the Structural Drawings are not contract documents. In the event of a conflict, the Structural Drawings shall govern.
  - The use of CAD files or copies of the Structural Drawings shall not in any way relieve the Contractor's responsibility for proper checking and coordination of dimensions, details, sizes and quantities of materials as required for the preparation of complete and accurate shop drawing; and
  - The Contractor shall revise all references to contract document sheet numbers and section marks and shall remove information that is not required for their work from the CAD files or copies of the Structural Drawings, including the title block.
  - Dimensions in the CAD files may not be precise and, in some cases, have been intentionally altered for presentation purposes. Do not scale dimensions electronically or otherwise.



LICENSED PROFESSIONAL

KHA PROJECT 047035124  
DATE SEPT 2023  
SCALE AS SHOWN  
DESIGNED BY  
DRAWN BY JSW  
CHECKED BY

GENERAL STRUCTURAL NOTES

IRC LANDFILL IMPROVEMENTS  
PREPARED FOR INDIAN RIVER COUNTY  
INDIAN RIVER COUNTY FLORIDA

SHEET NUMBER S-200

NO.	REVISIONS	DATE

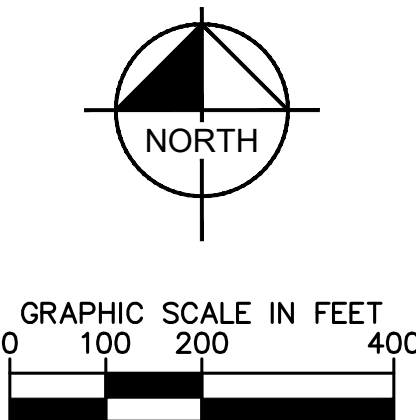
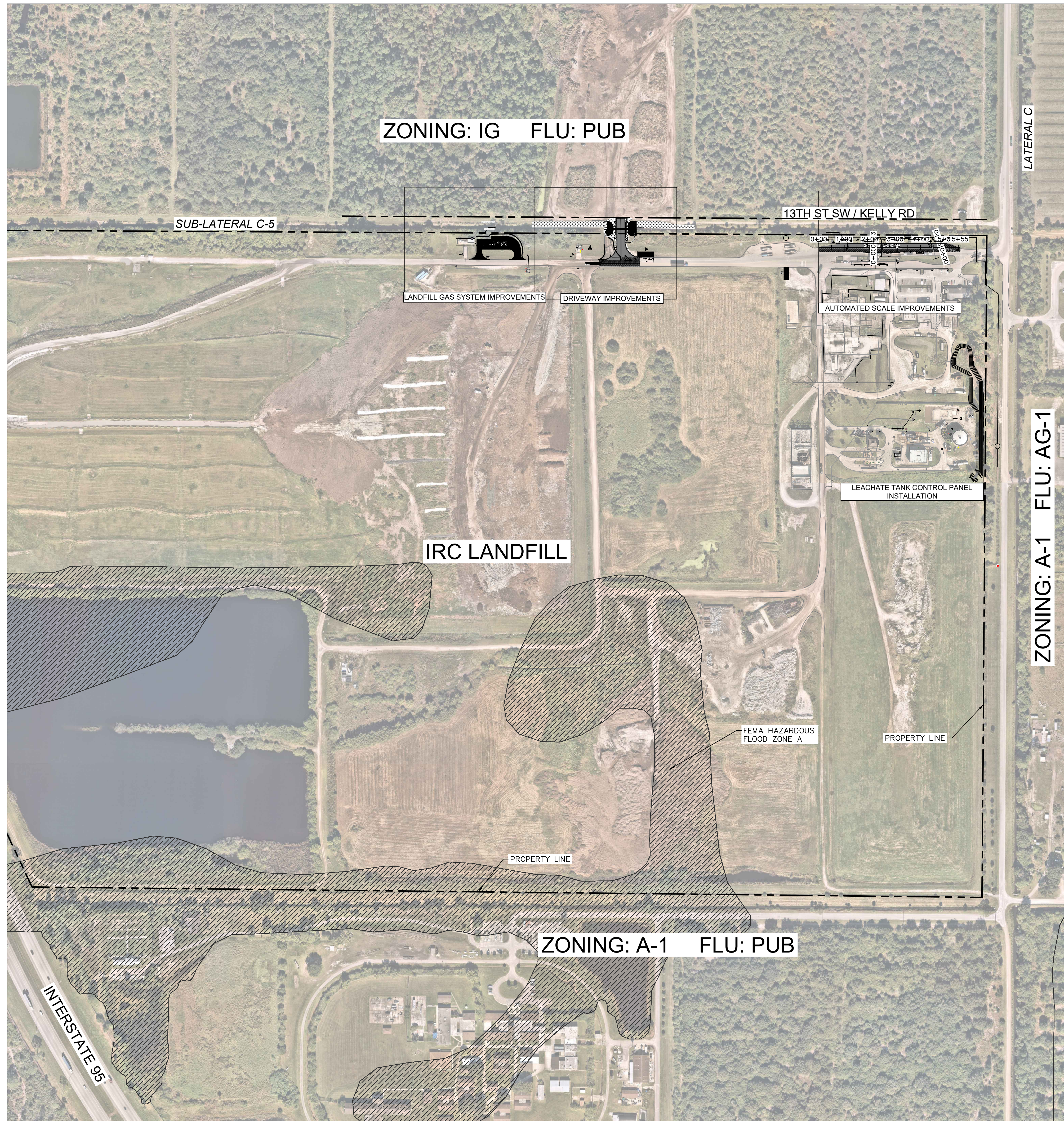
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**PROJECT LOCATION**  
 1325 74TH AVENUE SW, VERO BEACH, FL 32968  
 SECTION 25, TOWNSHIP 33, RANGE 38, INDIAN RIVER COUNTY, FL  
 TAX PARCEL ID: 33-38-25-00001-0090-00001.0

**ZONING**  
 EXISTING: A-1 (AGRICULTURAL-1)  
 PROPOSED: A-1 (AGRICULTURAL-1)  
**ADJACENT PROPERTIES:**  
 NORTH IG (GENERAL INDUSTRIAL DISTRICT)  
 SOUTH A-1 (AGRICULTURAL-1)  
 EAST A-1 (AGRICULTURAL-1)  
 WEST A-2 (AGRICULTURAL-2)

**FUTURE LAND USE**  
 EXISTING: PUB (PUBLIC FACILITIES)  
 PROPOSED: PUB (PUBLIC FACILITIES)  
**ADJACENT PROPERTIES:**  
 NORTH C/1 (COMMERCIAL/INDUSTRIAL)  
 SOUTH PUB (PUBLIC FACILITIES)  
 EAST AG-1 (AGRICULTURAL-1 (1 UNIT/5 ACRES))  
 WEST AG-2 (AGRICULTURAL-2 (1 UNIT/10 ACRES))

**BENCHMARK NOTE:**  
 THE PRIMARY BENCHMARK UTILIZED FOR THIS SURVEY IS IRC BM267009.  
 ELEVATION 20.50' (SEE CEC TOPOGRAPHIC SURVEY SHEET 1).

**UTILITY PROVIDERS:**  
 THE PROJECT WILL BE SERVED BY:  
 WATER/SEWER INDIAN RIVER COUNTY  
 ELECTRIC FLORIDA POWER AND LIGHT

**FLOOD ELEVATION**  
 F.I.R.M NO.: 12061C0355H  
 EFFECTIVE DATE: 12/04/2012  
 SPECIAL FLOOD HAZARD AREA ZONE: ZONE X/ZONE A  
 BASE FLOOD ELEVATION: N/A

**BUILDING HEIGHT**  
 BUILDING HEIGHT: 33.0' (MAX. 35.0' ALLOWED)

SITE AREA	EXISTING*		PHASE 1		PHASE 2		FINAL		AC	Pot
	SF	SF	SF	SF	SF	SF	SF			
BUILDING COVERAGE AREA	49,418	1,792	0	51,210	1.176	0.45%				
IMPERVIOUS AREA	1,537,411	34,185	3,878	1,575,474	36.168	13.97%				
PERVIOUS AREA										
NATURAL/UNPAVED	9,375,915	-50,640	-13,877	9,311,398	213.760	82.57%				
GRAVEL (SEE NOTE)	314,428	14,663	9,999	339,090	7.784	3.01%				
<b>TOTAL AREA</b>				11,277,172	258.888	100.00%				

\*EXISTING AREAS APPROXIMATED BASED ON AERIAL IMAGERY AND RECENT PLANS  
 NOTE: 70% IMPERVIOUS FOR STORMWATER CALCULATIONS

**PERIMETER SETBACK**

	REQUIRED	EXISTING	PROPOSED
NORTH (SIDE)	30 FT	352 FT	N/A (NO CHANGES PROPOSED)
EAST (FRONT)	30 FT	467.5 FT	N/A (NO CHANGES PROPOSED)
SOUTH (SIDE)	30 FT	2,085.5 FT	N/A (NO CHANGES PROPOSED)
WEST (REAR)	30 FT	4,029 FT	N/A (NO CHANGES PROPOSED)

**PARKING SPACE SUMMARY**

	REQUIRED	EXISTING	PROPOSED
STANDARD	N/A	10	N/A (NO CHANGES PROPOSED)
ACCESSIBLE	N/A	1	N/A (NO CHANGES PROPOSED)
<b>TOTAL</b>	N/A	11	N/A (NO CHANGES PROPOSED)

**STORMWATER DETENTION**  
 NET CHANGE IN DRY DETENTION AREA: 13020 SF (0.299 AC)

- JURISDICTIONAL AGENCY PERMITS**
- FDEP - LANDFILL OPERATIONS PERMIT
  - INDIAN RIVER COUNTY - TYPE "A" STORMWATER PERMIT
  - INDIAN RIVER COUNTY - TREE REMOVAL PERMIT
  - INDIAN RIVER COUNTY - IRC LAND CLEARING
  - INDIAN RIVER COUNTY - IRC MAJOR SITE PLAN
  - INDIAN RIVER COUNTY - UTILITY CONSTRUCTION PERMIT

INDIAN FARMS WATER CONTROL DISTRICT

**LEGEND**

	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD
	FEMA HAZARDOUS FLOOD ZONE A F.I.R.M. NO.: 12061C0355H

--- PROPERTY LINE

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**OVERALL SITE PLAN**  
 IRC LANDFILL IMPROVEMENTS  
 PREPARED FOR INDIAN RIVER COUNTY  
 FLORIDA

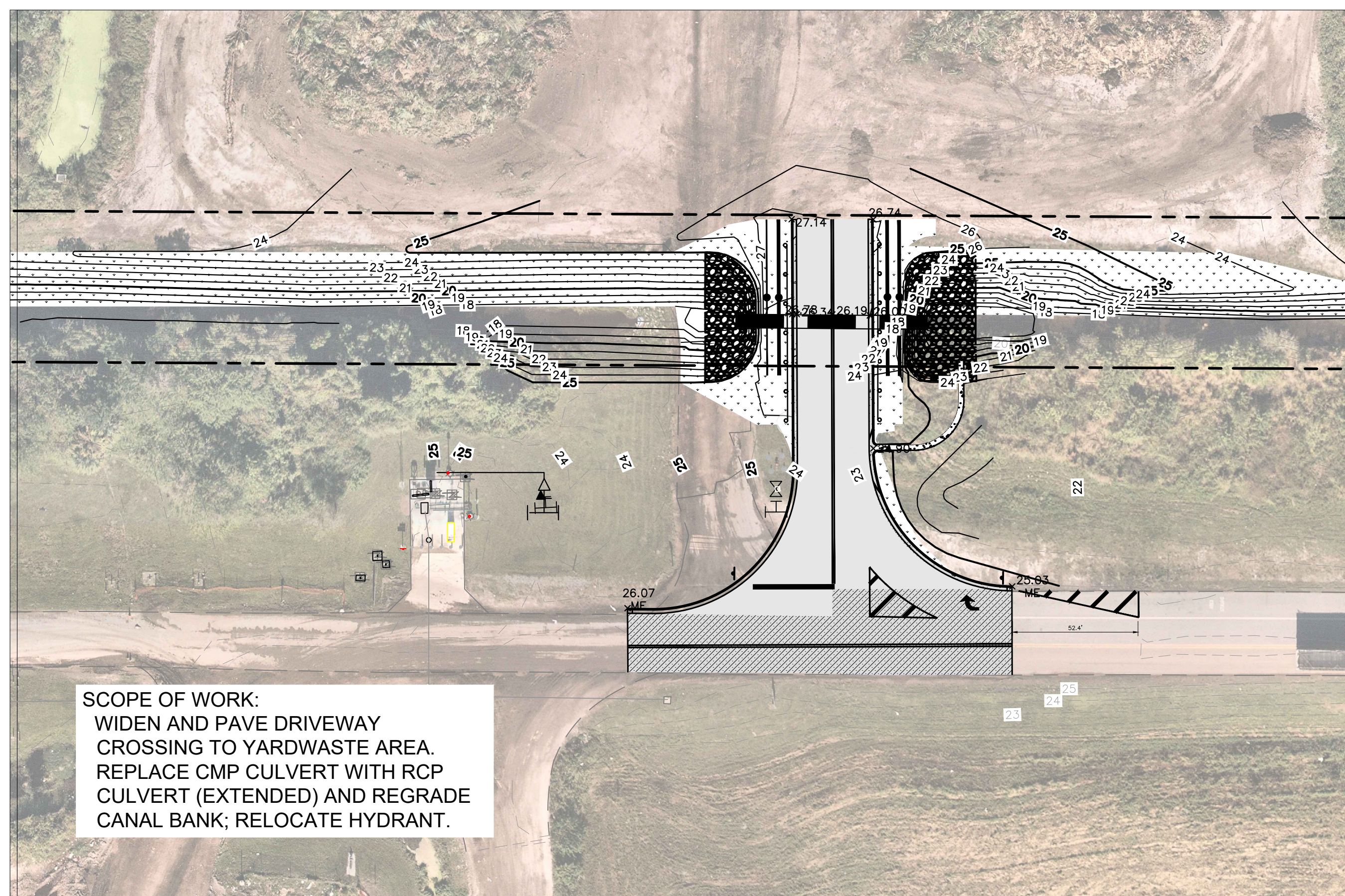
NO.	REVISIONS	DATE	BY

LICENSED PROFESSIONAL  
 KHA PROJECT 047035124  
 DATE SEPT 2023  
 SCALE AS SHOWN  
 DESIGNED BY  
 DRAWN BY JSW  
 CHECKED BY  
 DATE:

SHEET NUMBER  
**C-400**

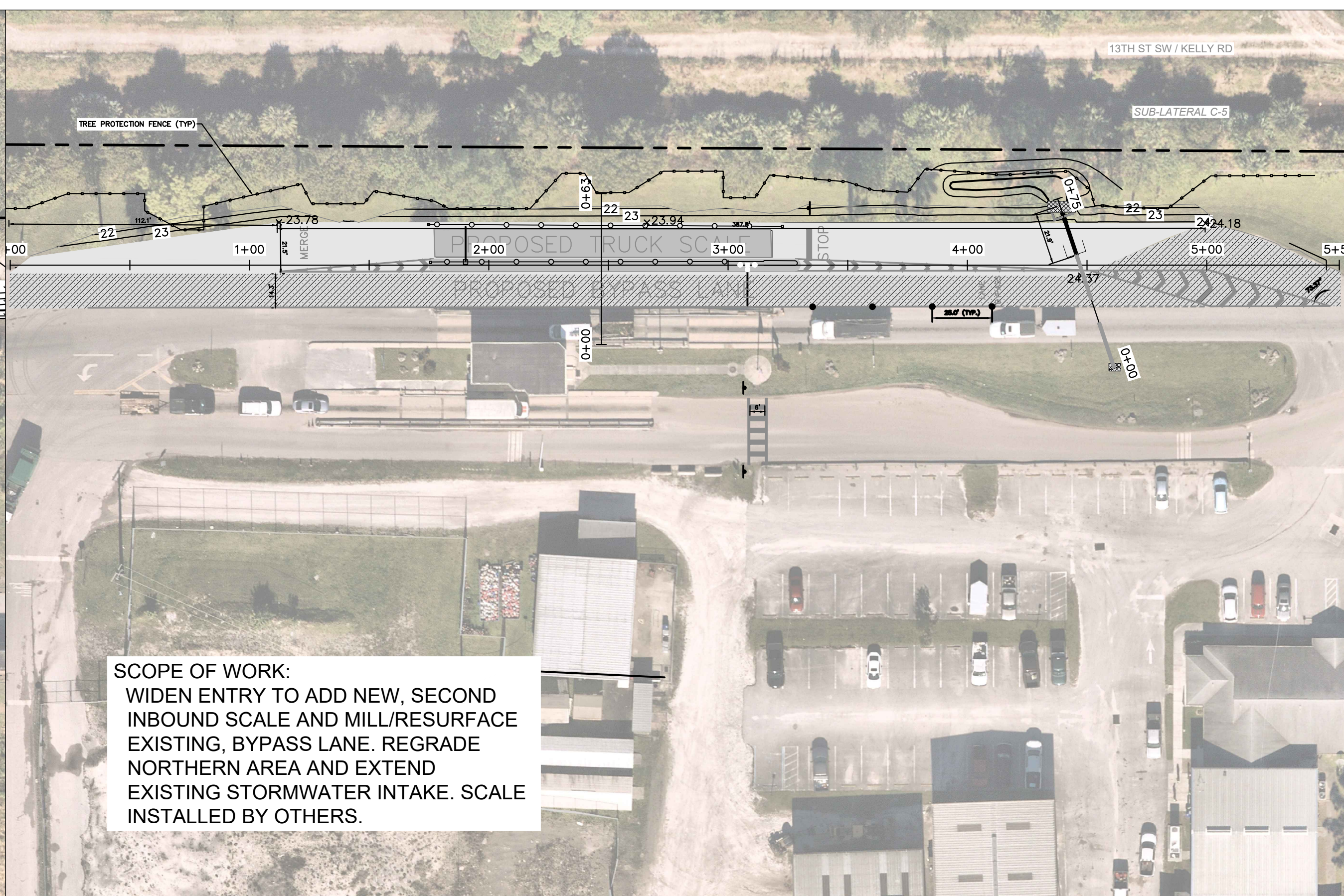


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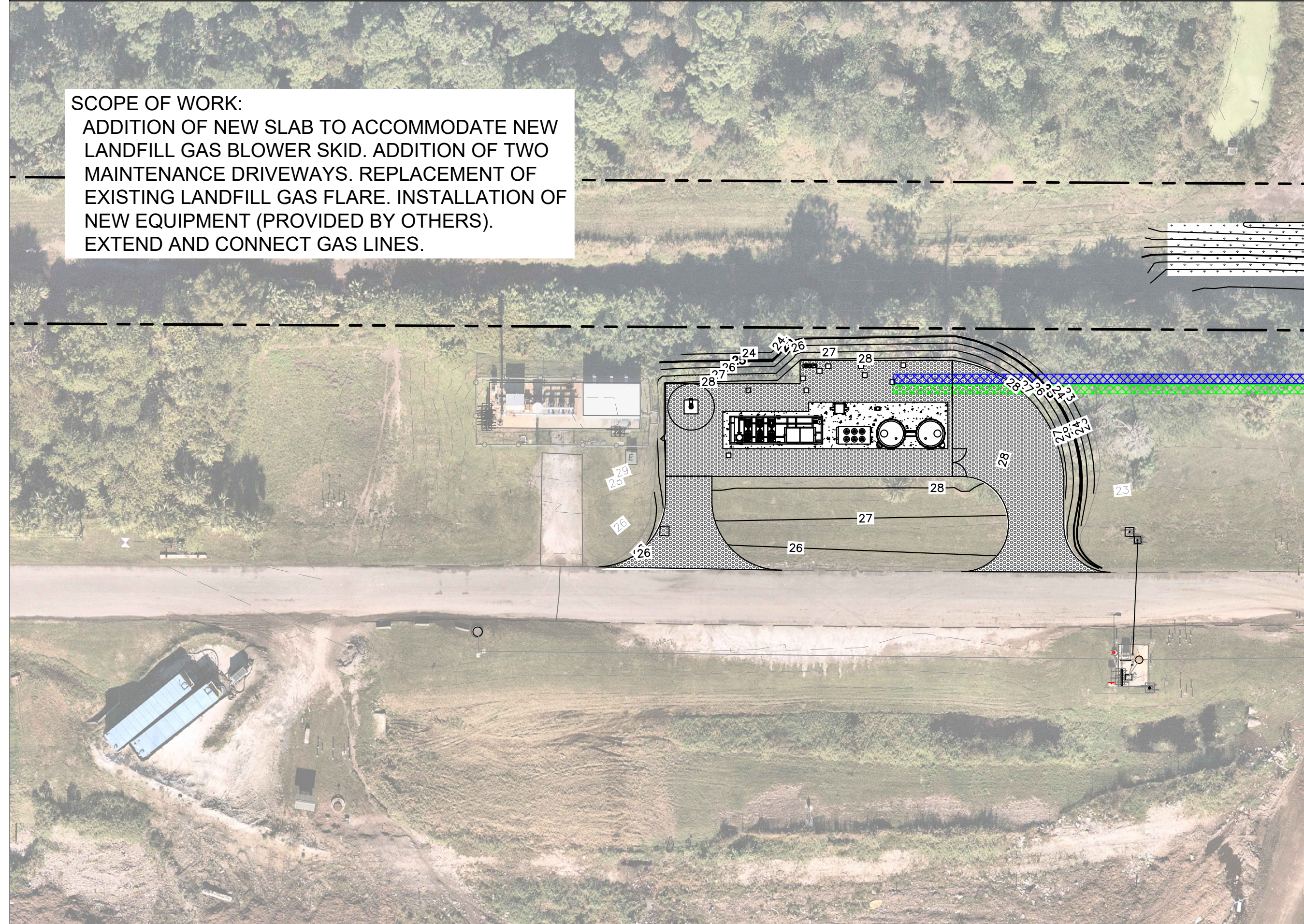
**SCOPE OF WORK:**  
 WIDEN AND PAVE DRIVEWAY CROSSING TO YARDWASTE AREA. REPLACE CMP CULVERT WITH RCP CULVERT (EXTENDED) AND REGRADE CANAL BANK; RELOCATE HYDRANT.

### DRIVEWAY IMPROVEMENTS



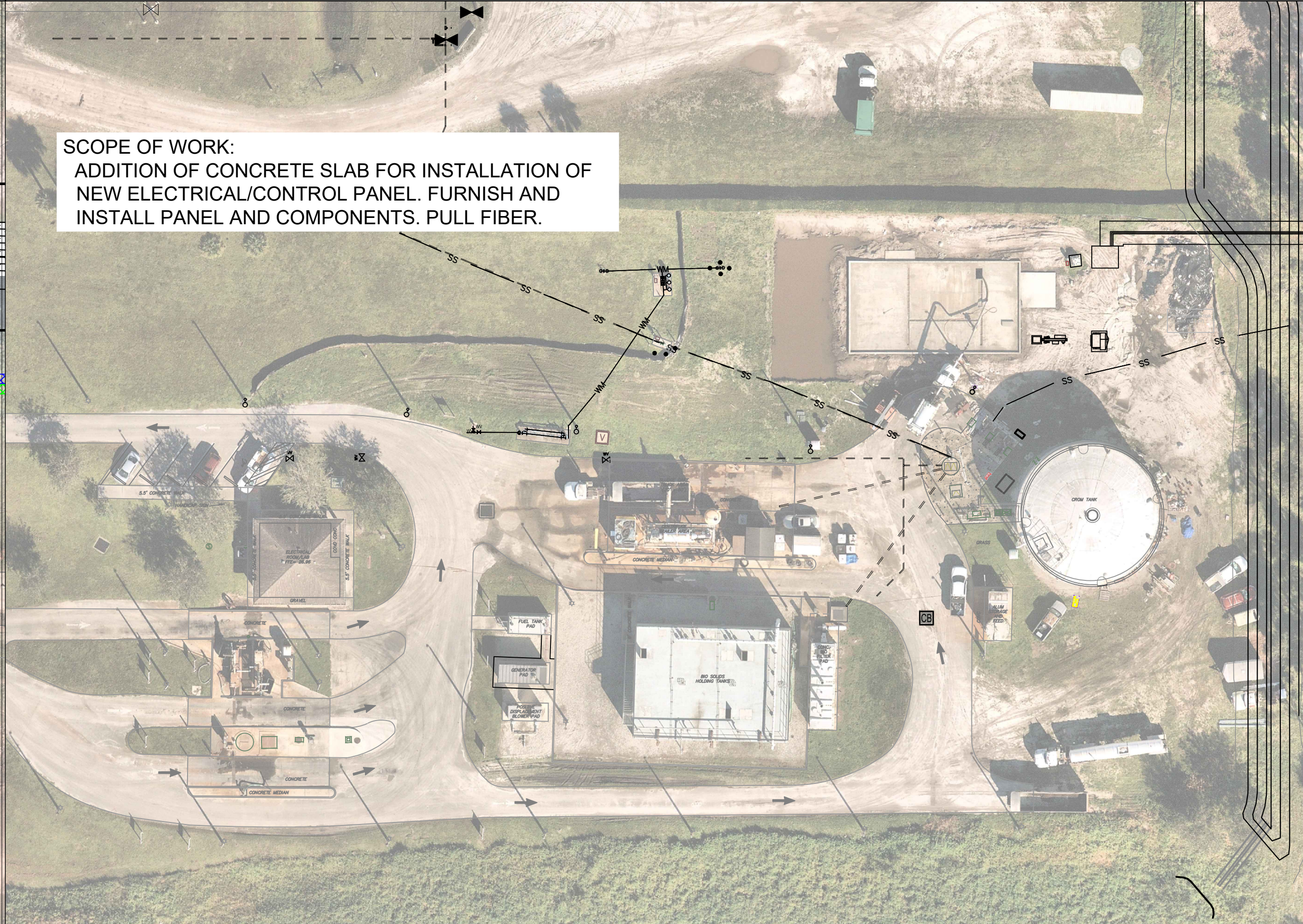
**SCOPE OF WORK:**  
 WIDEN ENTRY TO ADD NEW, SECOND INBOUND SCALE AND MILL/RESURFACE EXISTING, BYPASS LANE. REGRADE NORTHERN AREA AND EXTEND EXISTING STORMWATER INTAKE. SCALE INSTALLED BY OTHERS.

### AUTOMATED SCALE IMPROVEMENTS



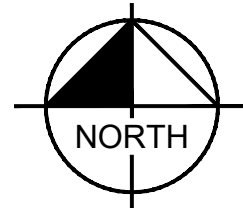
**SCOPE OF WORK:**  
 ADDITION OF NEW SLAB TO ACCOMMODATE NEW LANDFILL GAS BLOWER SKID. ADDITION OF TWO MAINTENANCE DRIVEWAYS. REPLACEMENT OF EXISTING LANDFILL GAS FLARE. INSTALLATION OF NEW EQUIPMENT (PROVIDED BY OTHERS). EXTEND AND CONNECT GAS LINES.

### LANDFILL GAS SYSTEM IMPROVEMENTS

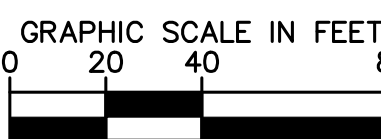


**SCOPE OF WORK:**  
 ADDITION OF CONCRETE SLAB FOR INSTALLATION OF NEW ELECTRICAL/CONTROL PANEL. FURNISH AND INSTALL PANEL AND COMPONENTS. PULL FIBER.

### LEACHATE TANK CONTROL PANEL INSTALLATION



NORTH



GRAPHIC SCALE IN FEET

LEGEND	
	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD
	RIPA-RAP
	PROPERTY LINE
	SANITARY SEWER
	FENCE
	PROPOSED RNG PIPING CORRIDOR
	PROPOSED IRC PIPING CORRIDOR

NO.	REVISIONS	DATE	BY

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KHA PROJECT	047035124
DATE	SEPT 2023
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	JSW
CHECKED BY	
DATE:	

## SITE PLAN

IRC LANDFILL IMPROVEMENTS  
 PREPARED FOR  
 INDIAN RIVER COUNTY  
 FLORIDA

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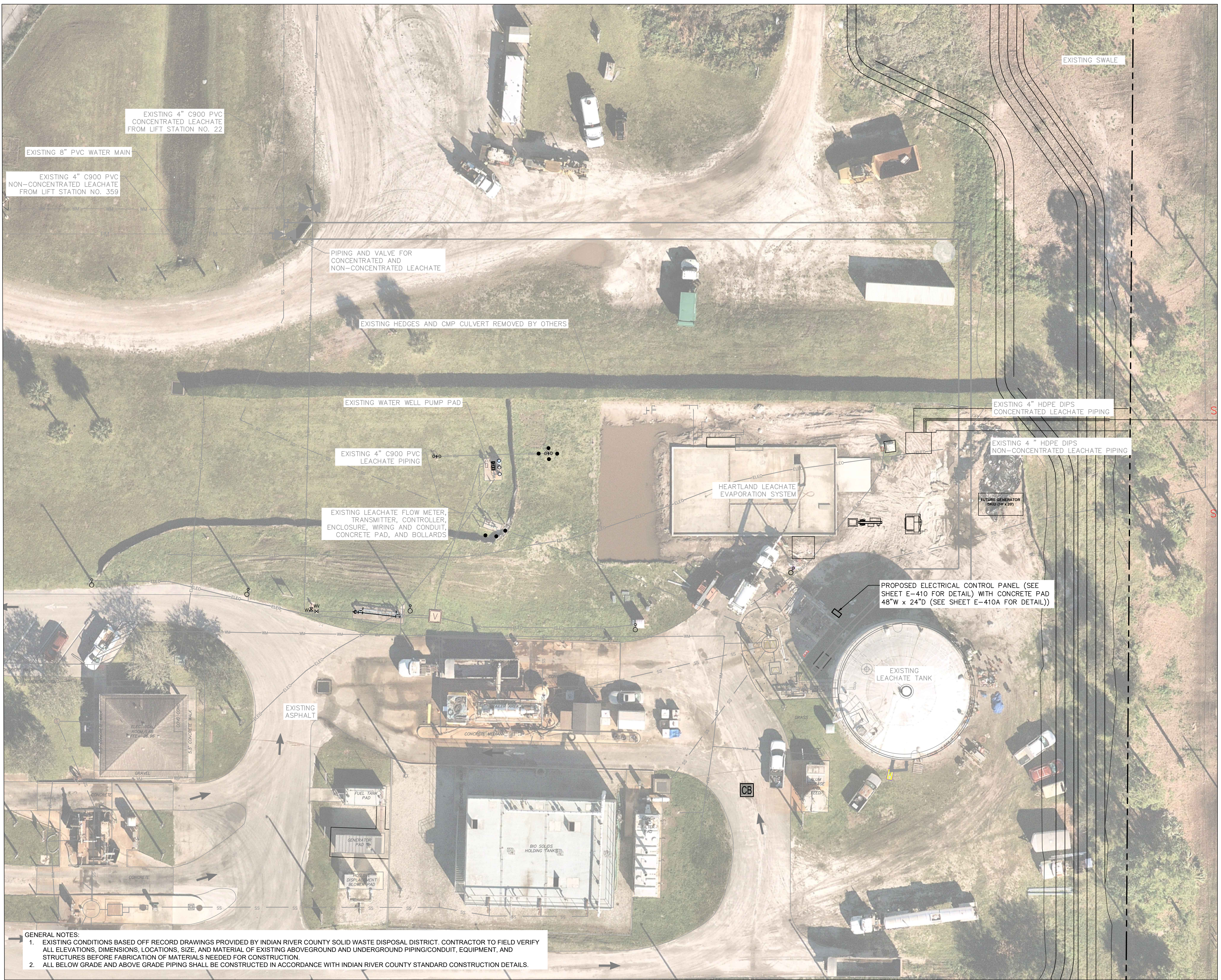
SHEET NUMBER  
**C-401**







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**GENERAL NOTES:**

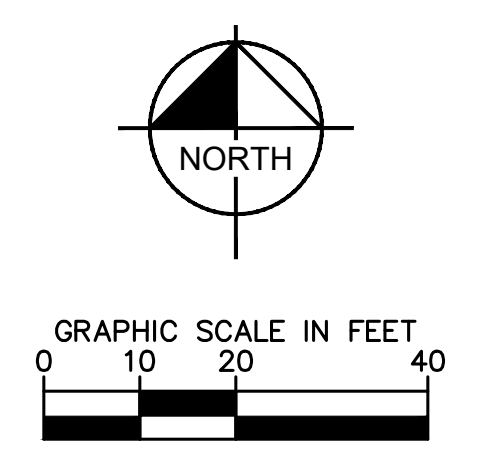
- EXISTING CONDITIONS BASED OFF RECORD DRAWINGS PROVIDED BY INDIAN RIVER COUNTY SOLID WASTE DISPOSAL DISTRICT. CONTRACTOR TO FIELD VERIFY ALL ELEVATIONS, DIMENSIONS, LOCATIONS, SIZE, AND MATERIAL OF EXISTING ABOVEGROUND AND UNDERGROUND PIPING/CONDUIT, EQUIPMENT, AND STRUCTURES BEFORE FABRICATION OF MATERIALS NEEDED FOR CONSTRUCTION.
- ALL BELOW GRADE AND ABOVE GRADE PIPING SHALL BE CONSTRUCTED IN ACCORDANCE WITH INDIAN RIVER COUNTY STANDARD CONSTRUCTION DETAILS.

**LEGEND**

	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD

— WM —	WATER MAIN
— ELEC —	ELECTRIC
— STM —	STORMWATER
— SS —	SANITARY SEWER
— FM —	LEACHATE FORCE MAIN
- - -	PROPERTY LINE

**NOTE:**  
 1. SITE CIVIL IMPROVEMENTS CONSTRUCTED BY OTHERS. SHOWN FOR INTENTIONAL PURPOSES ONLY.



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LICENSED PROFESSIONAL

KHA PROJECT	047035124
DATE	SEPT 2023
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	JSW
CHECKED BY	
DATE:	

**PROPOSED SITE PLAN  
 LEACHATE EVAPORATION  
 SYSTEM AND CENTRATE TANK  
 MODIFICATIONS**

**IRC LANDFILL  
 IMPROVEMENTS  
 PREPARED FOR  
 INDIAN RIVER COUNTY**

FLORIDA

**Sunshine 811**

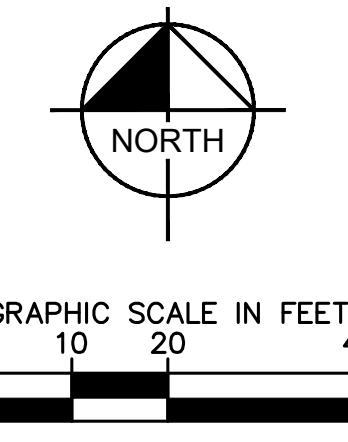
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SHEET NUMBER  
**C-410A**



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LEGEND	
	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD
	SS SANITARY SEWER
	OHW OVERHEAD WIRE
	PROPERTY LINE
	STM STORMWATER

No.	REVISIONS	DATE	BY

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KHA PROJECT	047035124
DATE	SEPT 2023
SCALE	AS SHOWN
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DRAWN BY	JSW
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DATE:	

EXISTING  
 CONDITIONS  
 AUTOMATED SCALE  
 IMPROVEMENTS

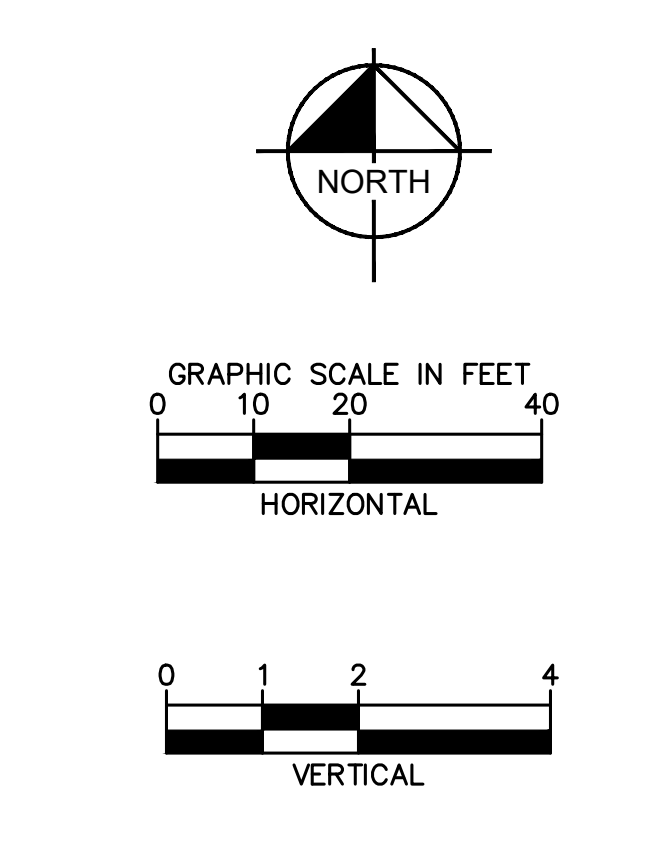
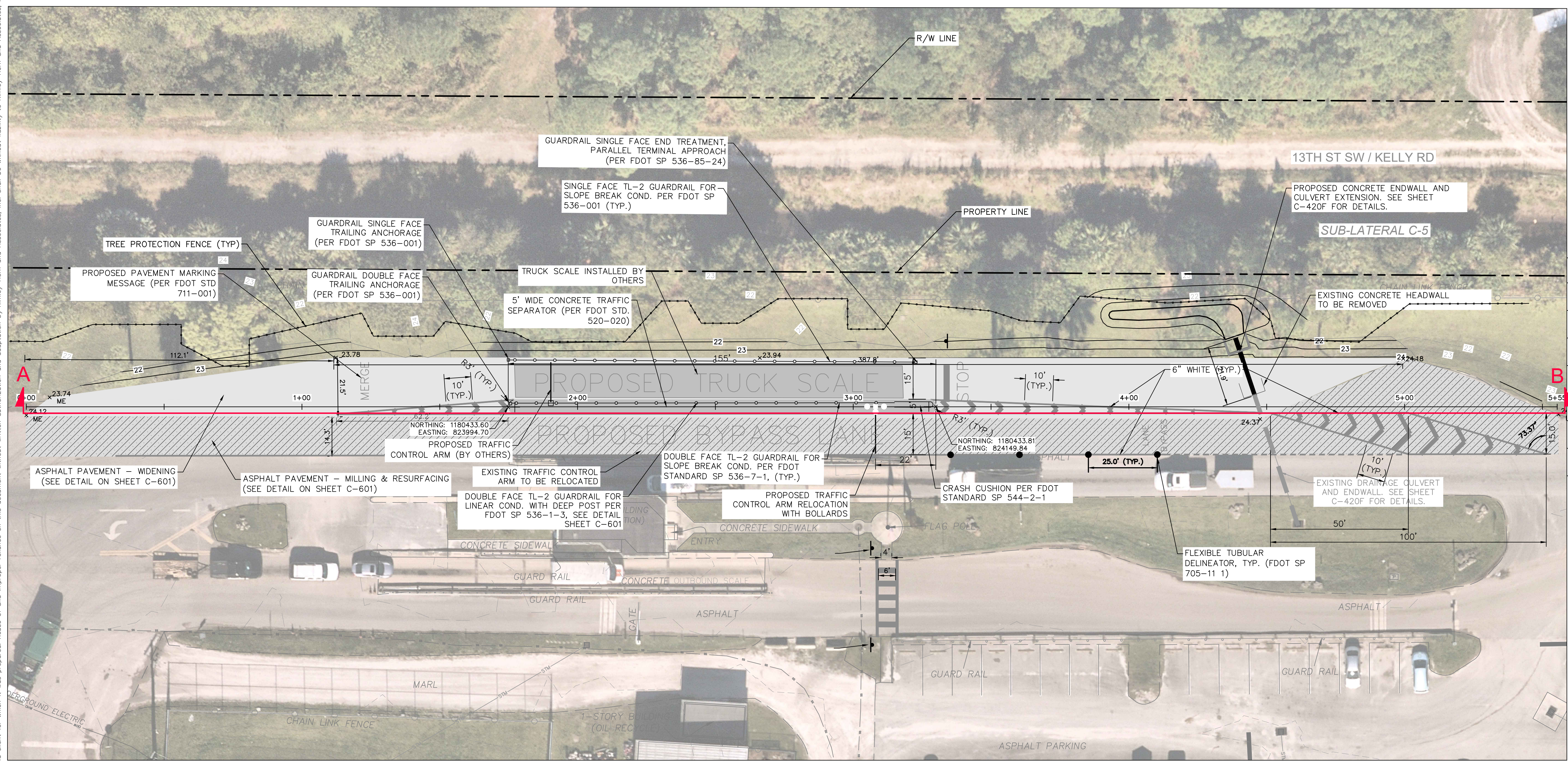
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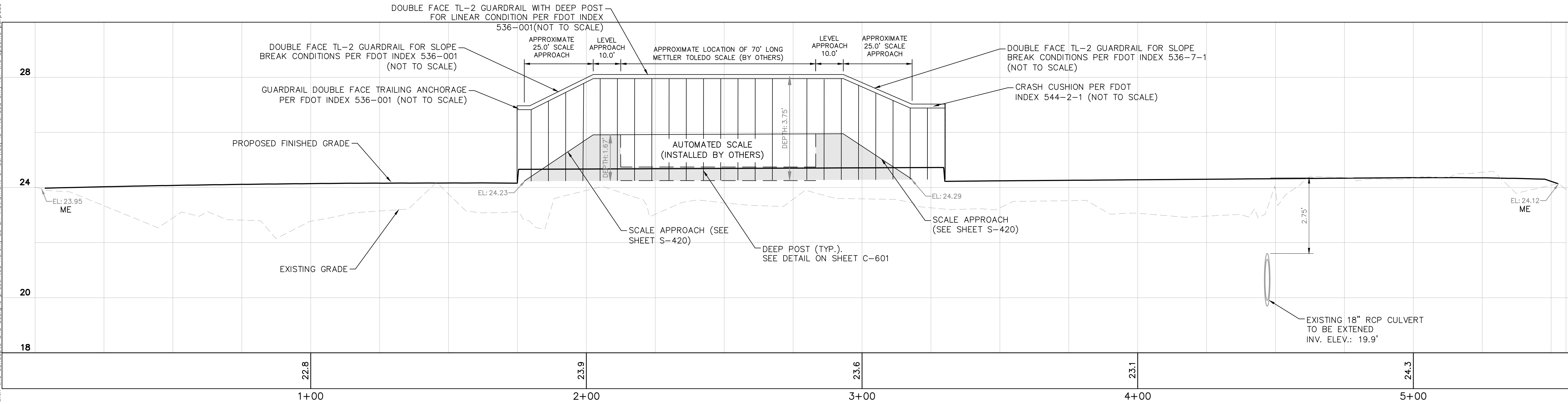
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**LEGEND**

	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD
	FENCE
	SANITARY SEWER
	OVERHEAD WIRE
	PROPERTY LINE
	STORMWATER
	PROPOSED ELEVATION
	MATCH EXISTING ELEVATION

**NOTES:**  
 1. ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)



**DATUM NAVD88**  
 A-B C-420A PROPOSED AUTOMATED SCALE DRIVEWAY PROFILE VIEW  
 SCALE: 2"=1'-0"

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LICENSED PROFESSIONAL  
 KHA PROJECT 047035124  
 DATE SEPT 2023  
 SCALE AS SHOWN  
 DESIGNED BY JSW  
 DRAWN BY JSW  
 CHECKED BY JSW  
 DATE:

PROPOSED SITE PLAN  
 AUTOMATED SCALE IMPROVEMENTS

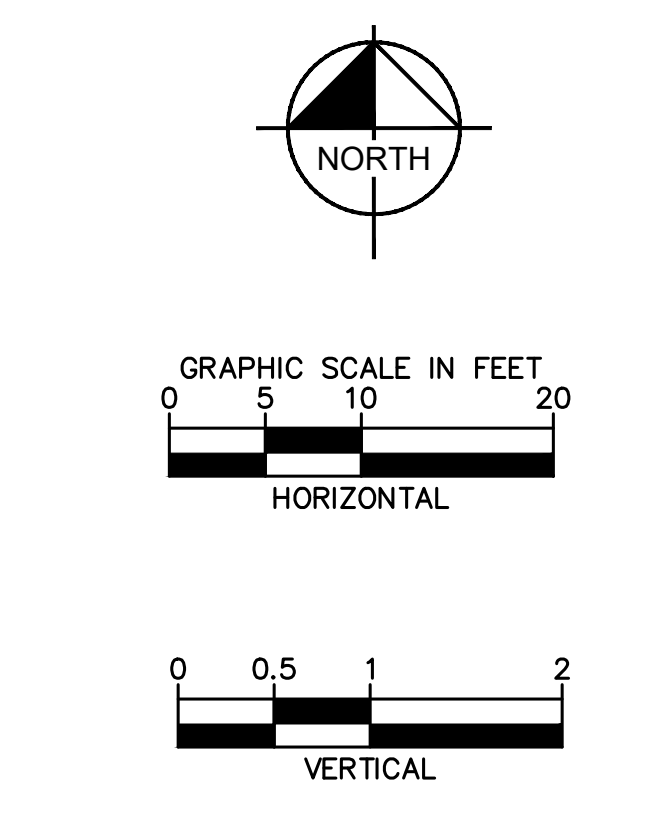
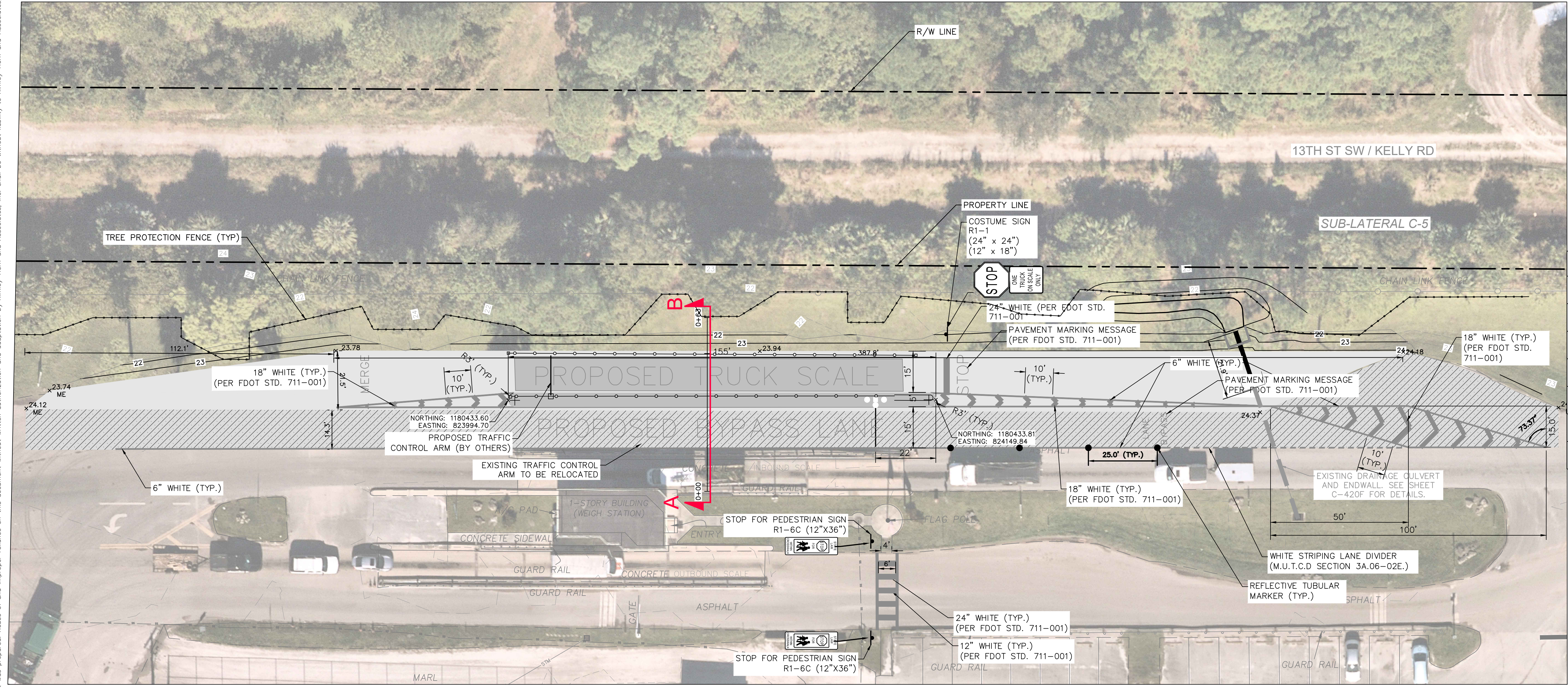
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SHEET NUMBER  
**C-420A**

REVISIONS  
 No. DATE BY

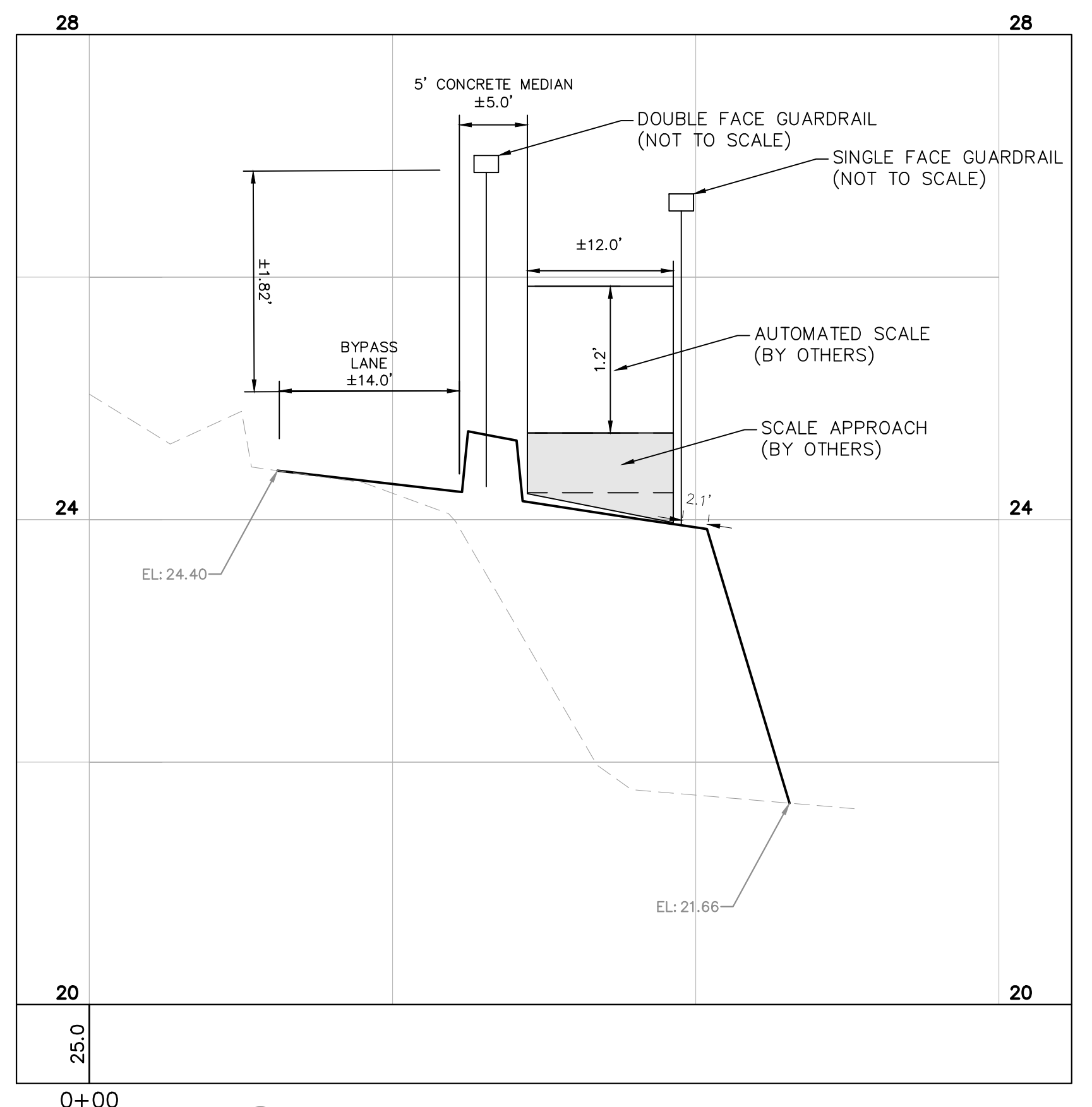


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LEGEND	
	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD
	FENCE
	SANITARY SEWER
	OVERHEAD WIRE
	PROPERTY LINE
	STORMWATER

NOTES:  
 1. ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)



DATUM NAVD88  
 A-B PROPOSED AUTOMATED SCALE DRIVEWAY CROSS SECTION  
 C-420B SCALE: 1"=1'-0"

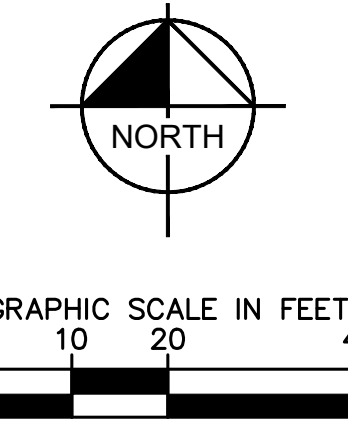
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<p style="font-size: 18pt; font-weight: bold;">PROPOSED SITE PLAN</p> <p style="font-size: 18pt; font-weight: bold;">AUTOMATED SCALE IMPROVEMENTS</p>	<p style="font-size: 12pt;">INDIAN RIVER COUNTY FLORIDA</p> <p style="font-size: 12pt;">PREPARED FOR</p> <p style="font-size: 12pt;">INDIAN RIVER COUNTY</p>						
<p style="font-size: 12pt;">SHEET NUMBER</p> <p style="font-size: 18pt; font-weight: bold;">C-420B</p>	<p style="font-size: 12pt;">REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.	DATE	BY			
No.	DATE	BY					



Plotted By: Sastre, Ignacio - Sheet Set: 047035127 - Layout: C-420C - Erosion Control Plan - November 16, 2023 - 05:02:28pm - K:\VRB\_MaterialResources\047035125 - IRC Landfill Improvements CADD\PlanSheets\C-400.dwg  
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LEGEND	
	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD
	SILT FENCE
	SANITARY SEWER
	OVERHEAD WIRE
	PROPERTY LINE
	STORMWATER

- NOTE:
- CONTRACTOR TO MAINTAIN SILT FENCE IN SURROUNDING CONSTRUCTION LIMITS AND COORDINATE WITH LANDFILL STAFF/MANAGER FOR SITE ACCESS DURING CONSTRUCTION
  - ALL DISTURBED AREAS TO BE SODDED

No.	REVISIONS	DATE	BY

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KHA PROJECT	047035124
DATE	SEPT 2023
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	JSW
CHECKED BY	
LICENSED PROFESSIONAL	

## EROSION CONTROL PLAN

IRC LANDFILL IMPROVEMENTS  
 PREPARED FOR  
 INDIAN RIVER COUNTY  
INDIAN RIVER COUNTY FLORIDA

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**C-420C**



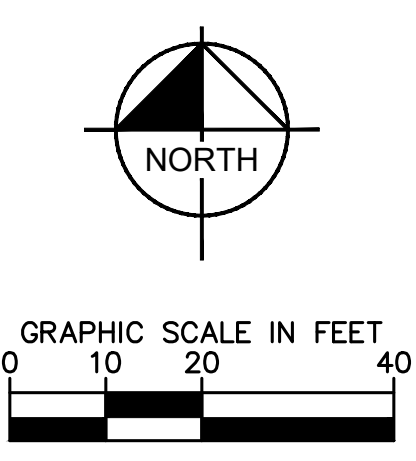
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### TREE DISPOSITION LIST

KHA TREE NO.	SCIENTIFIC NAME	COMMON NAME	DBH (In.)	HEIGHT (FT.)	DISPOSITION	MITIGATION(SQFT.)
1	<i>Sabal Palmetto</i>	Cabbage Palm	12	24	Relocate	n/a
2	<i>Sabal Palmetto</i>	Cabbage Palm	15	21	Relocate	n/a
3	<i>Sabal Palmetto</i>	Cabbage Palm	10	17	Relocate	n/a
4	<i>Sabal Palmetto</i>	Cabbage Palm	10	18	Relocate	n/a
5	<i>Sabal Palmetto</i>	Cabbage Palm	10	21	Relocate	n/a
6	<i>Sabal Palmetto</i>	Cabbage Palm	14	26	Relocate	n/a
7	<i>Sabal Palmetto</i>	Cabbage Palm	12	18	Relocate	n/a
8	<i>Sabal Palmetto</i>	Cabbage Palm	12	19	Relocate	n/a

### TREE DISPOSITION GRAPHIC LEGEND

	DESCRIPTION PALM TO BE RELOCATED		DESCRIPTION PROPOSED LOCATION OF RELOCATED PALM
	TREE PROTECTION FENCE		



#### LEGEND

	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD
	FENCE
	PROPERTY LINE

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KHA PROJECT	047035124
DATE	SEPT 2023
SCALE	AS SHOWN
DESIGNED BY	JSW
DRAWN BY	JSW
CHECKED BY	

## TREE DISPOSITION PLAN

IRC LANDFILL IMPROVEMENTS  
 PREPARED FOR  
 INDIAN RIVER COUNTY  
 FLORIDA

SHEET NUMBER  
**C-420D**

No.	REVISIONS	DATE	BY



# TREE REMOVAL AND TREE TO REMAIN PRUNING SPECIFICATIONS

## PART 1 - DEFINITIONS

- A. Natural Resource - Existing trees or palms.
- B. Critical Root Zone - The minimum volume of roots necessary to have for tree health and stability.
- C. DBH - Diameter Breast High - Indicates the location on the trunk, approximately 4.5' above ground, to measure the diameter of a tree.
- D. Preserved Trees - Trees that are to be saved/remain in place.
- E. Owner's Representative - A representative, hired and paid for by the owner, that supervises the construction of the procedures shown on the tree disposition plans.
- F. Tree Protection Zone (TPZ) - The area surrounding a tree defined by a specified distance, which excavation and other construction related activities should be avoided. The TPZ is variable depending on species, factors, age and health of the plant, soil conditions, and proposed construction.
- G. Contractor's Certified Arborist - an independent ISA Certified Arborist, hired and paid for by the contractor, that supervises the construction of the procedures shown on the tree disposition plans.

## PART 2 - TREE BARRIER

- A. Tree Protector Barrier Material.
  1. Six (6) foot tall wire mesh construction fence supported by eight (8) foot tall metal T-Bar Posts and Post Caps.
  2. The tree protector barrier shall have a two (2) foot by two (2) foot "tree protection zone" sign affixed to the fence every twenty (20) feet placed in such a manner to be clearly visible to the construction workers. The sign must be made up of weather resistant material.
  3. The eight (8) foot tall metal T-Bar Post and Post Cap shall be placed a maximum of six (6) foot intervals.

## PART 3 - EXECUTION

- A. If hazards are determined by qualified certified arborist in an individual tree then those hazards can be mitigated according to the specifications given by the Qualified Certified Arborist.
  1. The tree disposition list. This item is to be coordinated by the Qualified Certified Arborist with the Owner's Representative.
  2. All pruning shall be done in accordance with ANSI A300 (Part 1) Pruning and best management practices.
  3. The Contractor's Certified Arborist shall be present during all pruning operations.
- B. Root Pruning - Refer to Arborist Report.
  1. Trenching locations shall be approved in the field by the Owner's Representative and the Contractor's Certified Arborist.
  2. All roots shall be cut by hand.
  3. The trench shall be backfilled minus debris and large rocks, as directed by the Contractor's Certified Arborist.
  4. Phased root pruning timeframes vary by species. Contractor's certified arborist shall direct pruning schedule.
- C. Tree Protector Barrier.
  1. See detail in this sheet.
  2. Tree Protector Barrier shall be placed by the Contractor around each tree to remain as directed by the Contractor's Certified Arborist.
- D. Tree Removals.
  1. Contractor shall remove and discard all trees shown as "Remove" on the Tree Disposition Plan and the Tree Disposition List. Tree stump shall be ground below grade. Care shall be taken to not damage the existing trees marked to remain and their critical root zones shall not be compacted by equipment.
  2. If Tree Protector Barrier is damaged, repair shall be performed immediately.
  3. Contractor shall remove and haul away from the job site all wood generated from tree removals, including stumps, the same day the removal happens.
  4. Burn pits are not allowed.

## PART 4 - PENALTIES

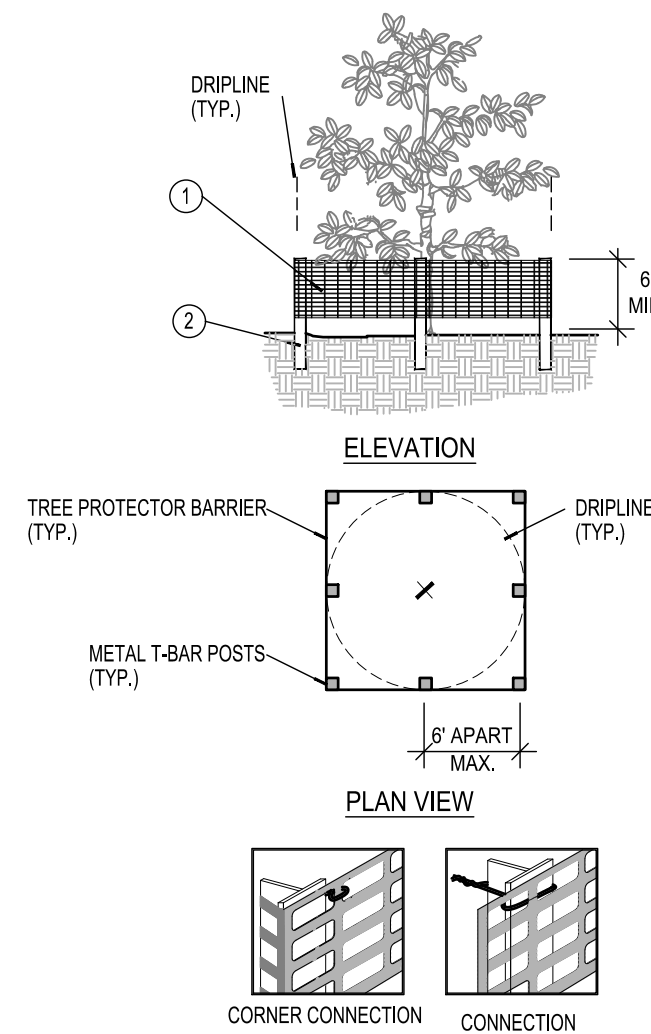
- A. Repair of Damaged Trees To Remain.
  1. If any damage to trees to remain or other natural resources should occur by accident or negligence during the construction period, shall be immediately inspected by Qualified Certified Arborist who shall determine the prescription of care at the Contractor's expense.

## PART 5 - TREE PROTECTION

- A. Contractor's Certified Arborist to determine the location of the Tree Protector Barrier around each tree to remain based on his/her analysis of each existing tree to remain that is adjacent to construction improvements such as utility installation, pavement addition and/or restoration, etc.
- B. Contractor shall maintain and repair the Tree Protector Barrier during site construction operations.
- C. Contractor's access to the fenced tree protection areas will be permitted only with approval of Owner's Representative and Contractor's Certified Arborist's written directive.
- D. There shall no be change in grade within the critical root zone as per ANSI Standards.
- E. Contractor shall clear by hand all vegetation to grade within the critical root zones of trees to remain.
- F. Contractor shall not install conduit, sprinklers, or any utility line in any critical root zone areas without the approval of the Contractor's Certified Arborist and Owner's Representative.

## PART 6 - IRRIGATION

- A. Contractor shall irrigate trees as specified by Landscape Architect and Qualified Certified Arborist.
- B. On a monthly basis an irrigation audit shall be conducted by an irrigation specialist for review by Landscape Architect or Qualified Certified Arborist.



**A** TREE/SHRUB PROTECTOR  
Barrier Detail

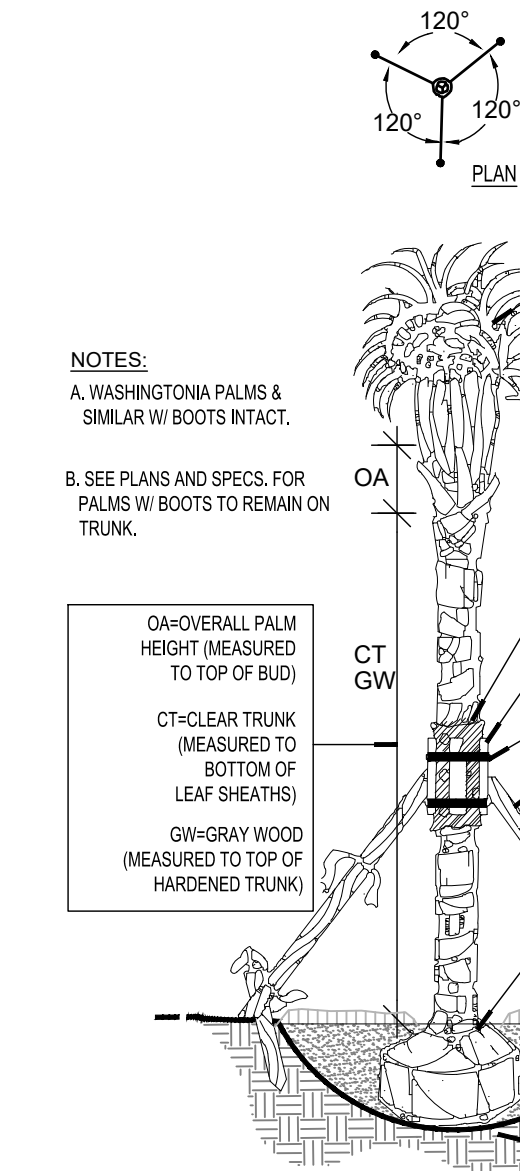
- 1. SIX (6) FOOT TALL WIRE MESH CONSTRUCTION FENCE BY EIGHT (8) FOOT TALL METAL T-BAR POSTS AND POST CAPS. SUBMIT PRODUCT INFORMATION FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- 2. WEATHER RESISTANT MATERIAL 2' X 2' "TREE PROTECTION ZONE" SIGN. SUBMIT PRODUCT INFORMATION FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- 3. EIGHT (8) FOOT TALL METAL T-BAR POSTS, 24" MINIMUM BURIAL BELOW GRADE OR AS REQUIRED TO CREATE A SAFE CONDITION, WHICHEVER GREATEST. SUBMIT PRODUCT INFORMATION FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

INSTALLATION NOTES:  
A. POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWD CONTROL INSTALLATIONS. METAL "T" POSTS OR ARE TYPICALLY USED FOR CONSTRUCTION AND OTHER APPLICATIONS.

B. POSTS SHALL BE DRIVEN INTO THE GROUND TO A DEPTH OF TWO (2) FEET MINIMUM OR AS REQUIRED TO ENSURE A SAFE CONDITION. SPACE POSTS 6' MAXIMUM ON CENTER.

C. SECURE FENCING TO POST WITH NYLON CABLE TIES (AVAILABLE FROM CONWED PLASTICS). WOOD STRIPS MAY BE ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.

NOTE: IF WIRE TIES ARE USED, AVOID DIRECT CONTACT WITH PROTECTOR BARRIER. WIRE MAY DAMAGE PROTECTOR BARRIER OVER TIME.



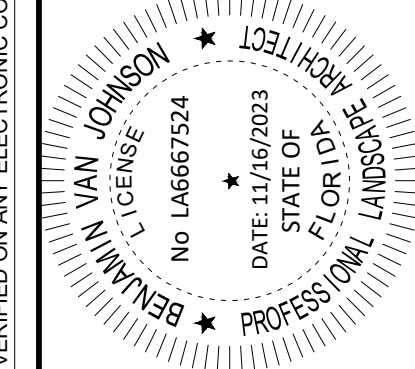
**B** Palm Planting and Staking  
SECTION

- 1. MINIMUM OF NINE (9) GOOD PALM FRONDS. PRUNE AND THE FRONDS WITH HEAVY TWINE. SERIAL PALMS TO BE SELECTIVELY "HURRICANE CUT", LEAVING ONLY NEWLY-EMERGING GROWTH.
- 2. 5 LAYERS OF BURLAP TO PROTECT TRUNK.
- 3. FIVE (5) 18" L. 2X4 WOOD BATTENS, UNTREATED, #2.
- 4. SECURE BATTENS WITH TWO (2) 3/4" CARBON STEEL BANDS TO HOLD BATTENS IN PLACE. NO NAILS SHALL BE DRIVEN INTO PALM. HEIGHT OF BATTENS SHALL BE LOCATED PROPORTIONATELY TO THE HEIGHT OF THE PALM FOR ADEQUATE BRACING.
- 5. THREE (3) 8L 2X4 SUPPORTS, NAIL, DRILL AND NAIL IF NECESSARY TO BATTENS AND 2" X 4" STAKES. PALMS SHALL BE PLUMB VERTICALLY UNLESS OTHERWISE NOTED.
- 6. PROVIDE FLAGGING AT MIDPOINT AND BASE OF SUPPORTS.
- 7. TOP-MOST ROOT SHALL BE VISIBLE AT THE SURFACE OF THE ROOTBALL, SLIGHTLY ABOVE SURROUNDING GRADE.
- 8. 3" SPECIFIED MULCH.
- 9. FINISH GRADE.
- 10. 24" L (MIN.) 2X4 P.T. WOOD STAKES, NAIL TO SUPPORT POLES.
- 11. PREPARED PLANTING SOIL AS SPECIFIED.
- 12. ALTERNATE PALM ANCHORING SYSTEMS MAY BE SUBSTITUTED UPON APPROVAL BY OWNER OR OWNER'S REPRESENTATIVE.

PRE-APPROVED SYSTEMS:  
\*BROOKS TREE BRACE SYSTEM  
\*ARBOR TIE TREE BRACING

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KHA PROJECT  
047035124  
DATE  
SEPT 2023  
SCALE AS SHOWN  
DESIGNED BY  
DRAWN BY JSW  
CHECKED BY

## TREE DISPOSITION NOTES

IRC LANDFILL IMPROVEMENTS  
PREPARED FOR  
INDIAN RIVER COUNTY  
FLORIDA

SHEET NUMBER  
**C-420E**

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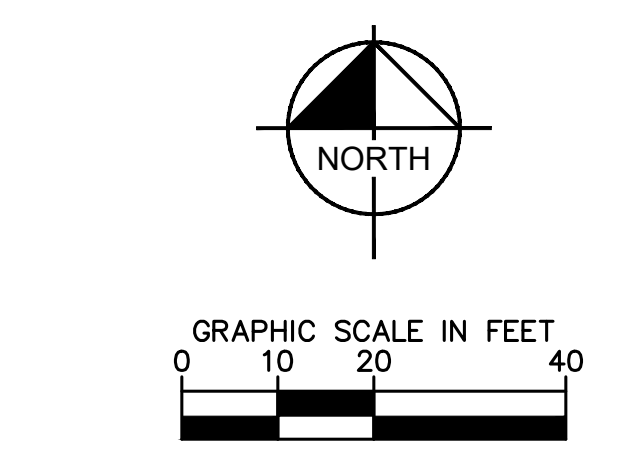
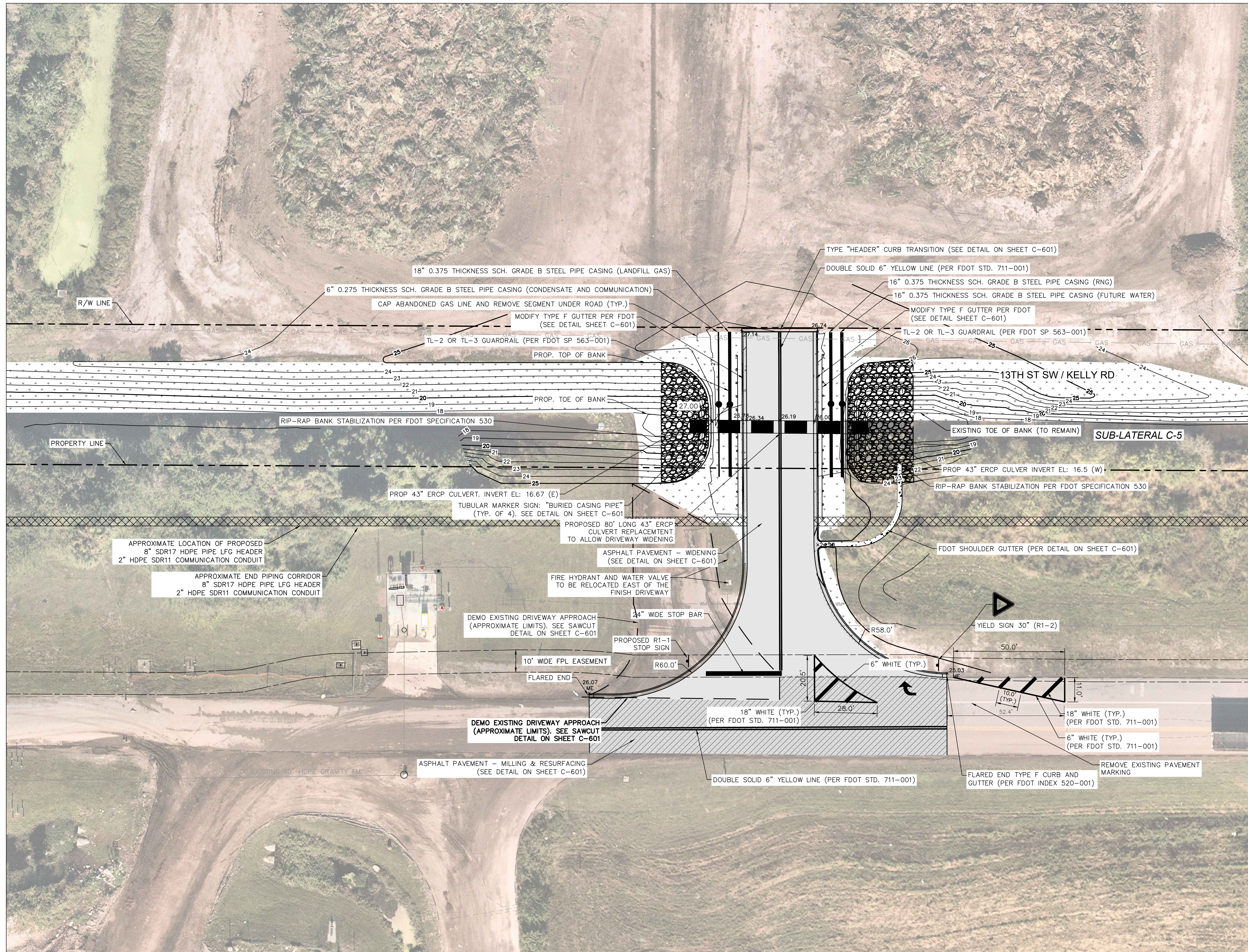








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	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD
	RIP-RAP

	WM	WATER MAIN
	GAS	GAS LINE
	FM	LEACHATE FORCE MAIN
		PROPERTY LINE
	XX	PROPOSED ELEVATION
	ME	MATCH EXISTING ELEVATION

- NOTE:
- CONTRACTOR TO PHASE FENCE AND CONSTRUCTION TO MAINTAIN VEHICULAR ACCESS TO YARD WASTE AREA AT ALL TIMES.
  - CONTRACTOR TO REMOVE ABANDON GAS LINE TO THE ROAD EXTENT AND CAP IT AT BOTH ENDS.
  - REFER TO IRFWCD PERMIT FOR CANAL REQUIREMENTS (PERMIT NO.: U-23-05 AND 23-17).
  - CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH FDOT SPECIFICATION 110.
  - EXCAVATION AND COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH FDOT SPECIFICATION 120.
  - ALL ELEVATIONS SHOWN REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

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 KHA PROJECT 047035124  
 DATE SEPT 2023  
 SCALE AS SHOWN  
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 CHECKED BY JSW  
 DATE:

**PROPOSED SITE PLAN  
 DRIVEWAY  
 IMPROVEMENTS**

IRC LANDFILL  
 IMPROVEMENTS  
 PREPARED FOR  
 INDIAN RIVER COUNTY  
 FLORIDA

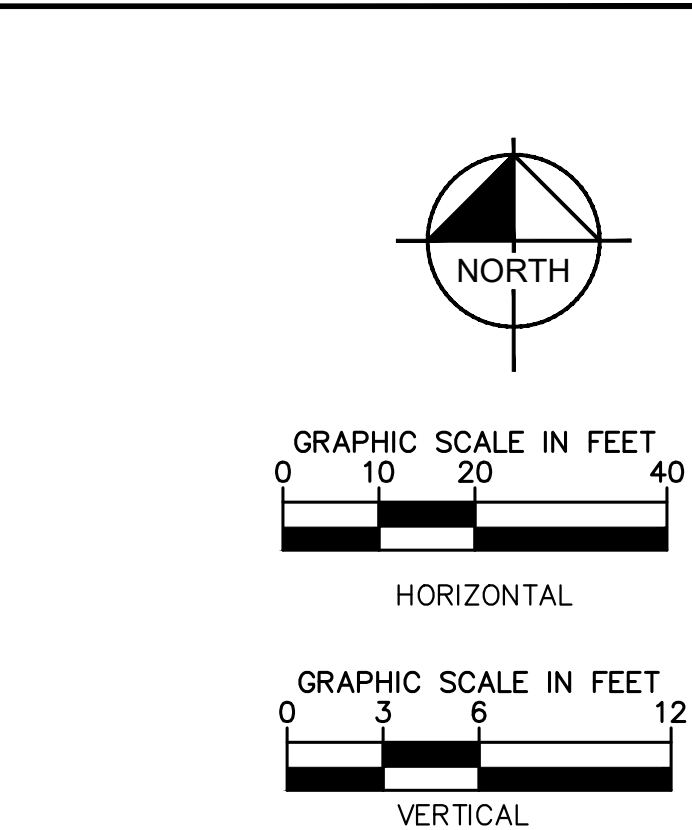
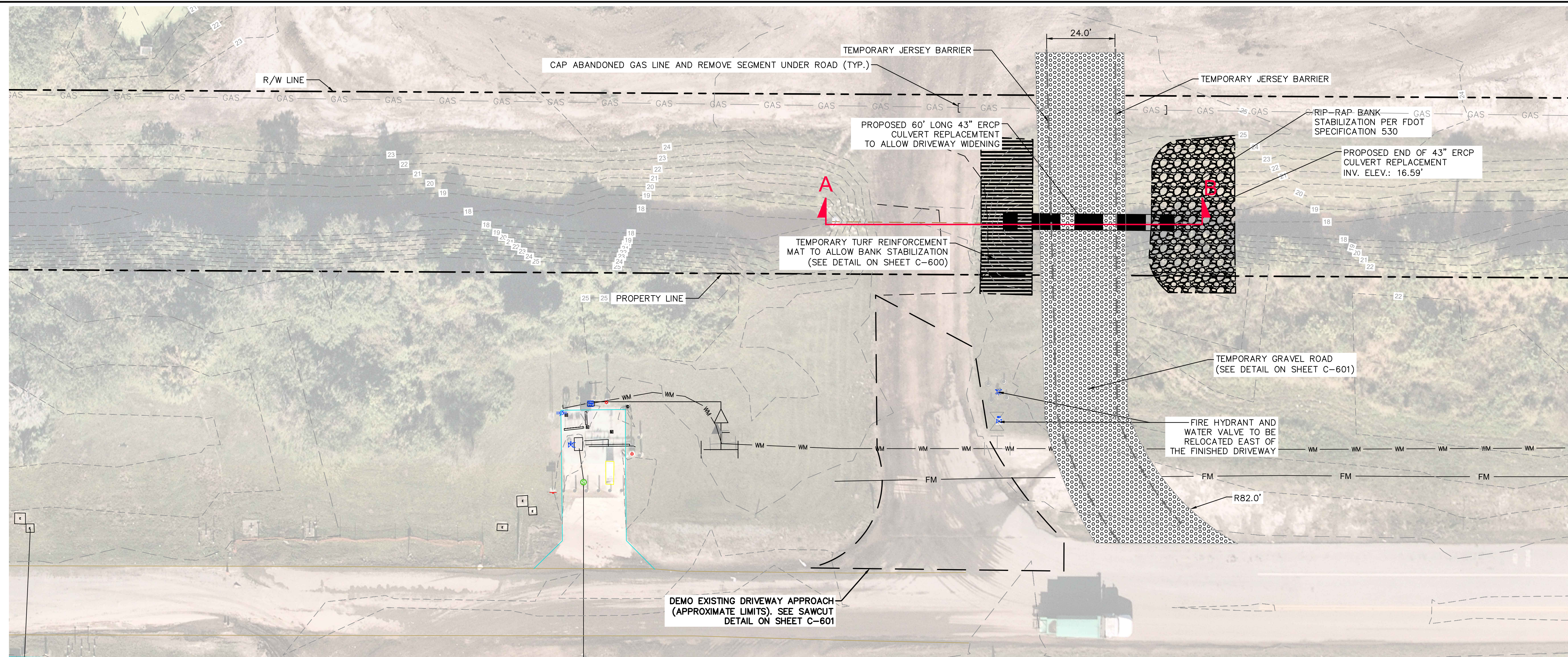
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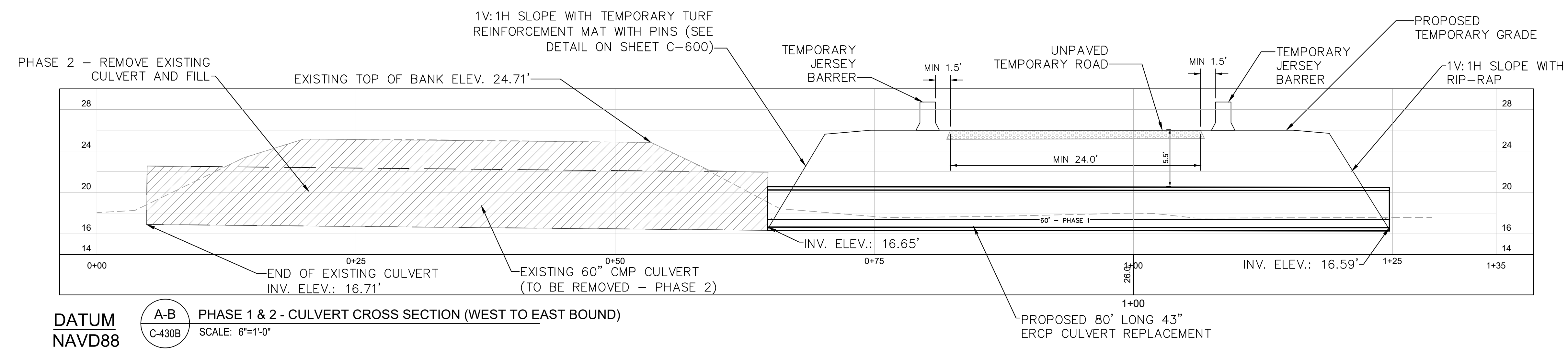
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	PROPOSED SOD
	RIP-RAP
	TURF REINFORCEMENT MAT
	WM WATER MAIN
	GAS GAS LINE
	FM LEACHATE FORCE MAIN
	PROPERTY LINE



**SEQUENCING PLAN (PHASE 1):**

**OBJECTIVE:**  
 WIDEN AND IMPROVE CURRENT ACCESS ROAD TO YARD WASTE AREA WHILE ALLOWING TRAFFIC FLOW DURING CONSTRUCTION ACTIVITIES. THE EASTERN SIDE OF CURRENT ROAD WILL BE CONSTRUCTED IN PHASE 1 OF THE SEQUENCING PLAN AND FINISHED WITH A TEMPORARY GRAVEL MATERIAL TO ALLOW TRAFFIC ACCESS DURING THE NEXT CONSTRUCTION PHASE.

- STEPS:**
1. INSTALL NEW 60 FT LENGTH SECTION OF 43" ERCP VIA TEMPORARY COUPLING AND EXTEND PIPE TO THE EAST OF EXISTING CMP CULVERT.
  2. BACKFILL EXPOSED PIPING AREA AND CONSTRUCT ROAD CROSSING PER PLANS INCLUDING GRADING THE SWALE AND INSTALLATION OF RIP-RAP BANK STABILIZATION MATERIAL.
  3. COMPACT AND GRADE PLANS TO ALLOW TEMPORARY ROAD ACCESS.

**SEQUENCING PLAN (PHASE 2):**

**OBJECTIVE:**  
 ALLOW VEHICULAR TRAFFIC ON PHASE 1 COMPLETED ROADWAY WHILE EXCAVATING EXISTING CULVERT TO BE REMOVED.

- STEPS:**
1. EXCAVATE TO DEPTH OF EXISTING 60" CMP CULVERT, REMOVE AND REPLACE THE EXISTING 60" CMP CULVERT AND INSTALL 20 FT LONG OF 43" ERCP CULVERT AS SHOWN IN PLANS

**NOTES:**

1. CONTRACTOR TO PROVIDE BARRIER AND PHASING TO MAINTAIN FULL VEHICULAR ACCESS TO YARDWASTE AREA AT ALL TIMES.
2. AN MOT PLAN SHOULD BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER PRIOR TO THE BEGINNING OF CONSTRUCTION.
3. TURF REINFORCEMENT MAT SHALL CONSIST OF EAST COAST EROSION CONTROL BLANKET OR APPROVED EQUAL. TURF REINFORCEMENT MAT SHALL BE INSTALLED AND ANCHORED ACCORDING TO MANUFACTURERS INSTALLATION GUIDELINES.

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REVISIONS  
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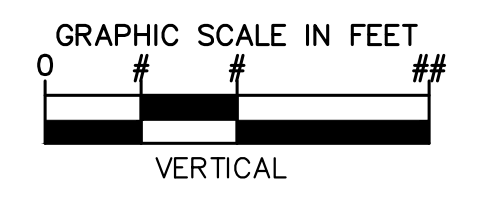
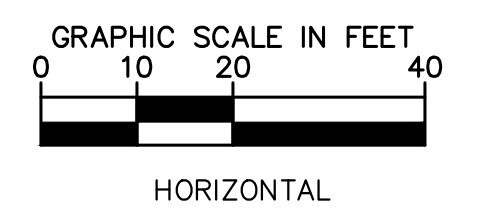
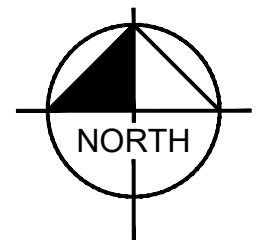
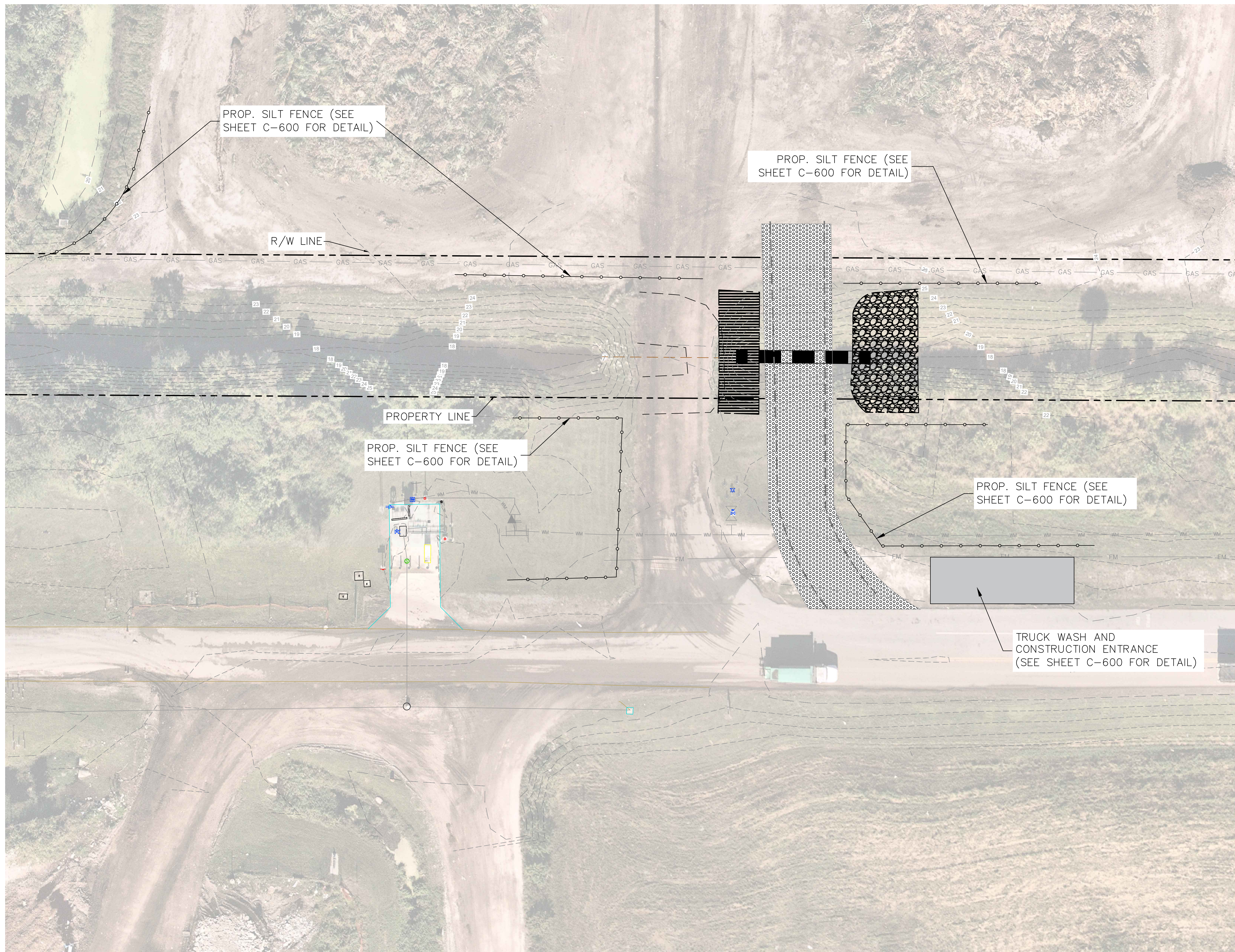
PROPOSED DRIVEWAY IMPROVEMENT SEQUENCING PLAN I

IRC LANDFILL IMPROVEMENTS PREPARED FOR INDIAN RIVER COUNTY FLORIDA

SHEET NUMBER C-430B



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	WM WATER MAIN
	GAS GAS LINE
	FM LEACHATE FORCE MAIN
	PROPERTY LINE

- NOTE:
1. CONTRACTOR TO PHASE FENCE AND CONSTRUCTION TO MAINTAIN VEHICULAR ACCESS TO YARD WASTE AREA AT ALL TIMES.
  2. CONTRACTOR TO PROVIDE PRIOR CONSTRUCTION MAINTENANCE OF TRAFFIC PLAN TO ENSURE CONTINUES ACCESS TO YARD WASTE AREA.
  3. CONTRACTOR TO MEET TURBIDITY REQUIREMENTS OF IRFWCD PERMIT AT ALL TIMES. SHEET PILE DAM MAY BE REQUIRED (WITH OVERFLOW) IF TURBIDITY CANNOT BE MET.
  4. REFER TO IRFWCD PERMIT FOR CANAL REQUIREMENTS (PERMIT NO.: U-23-05 AND 23-17)

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CHECKED BY	
LICENSED PROFESSIONAL	

**EROSION CONTROL PLAN**

IRC LANDFILL IMPROVEMENTS PREPARED FOR INDIAN RIVER COUNTY FLORIDA

**ISSUED FOR BID**

**Sunshine811**  
 Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.  
 Check positive response codes before you dig!

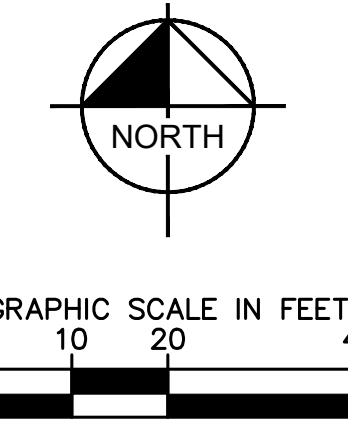
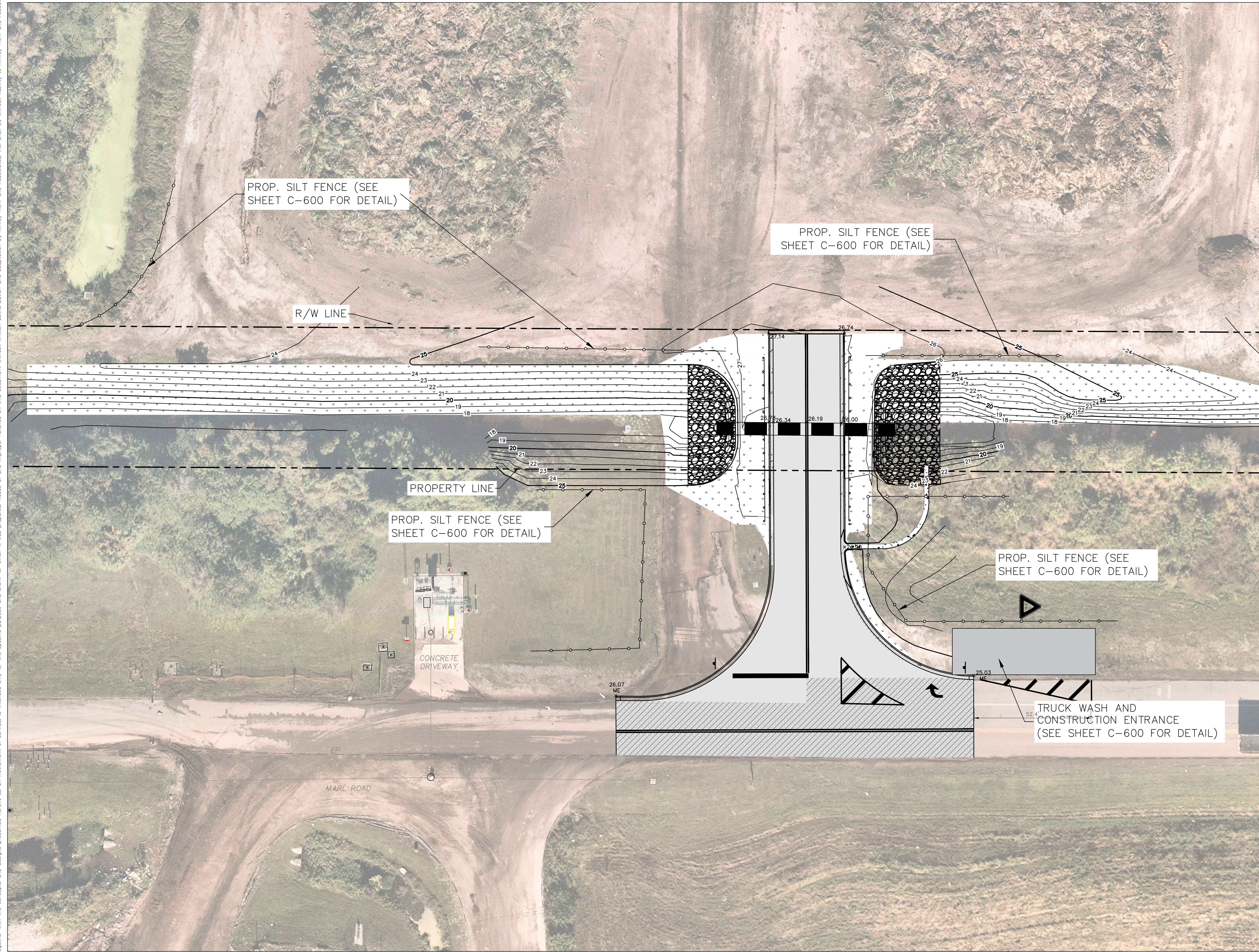
SHEET NUMBER  
**C-430C**







Plotted By: Sastre, Ignacio - Sheet Set: 047035127 - Layout: C-430E Erosion Control Plan, November 16, 2023, 05:11:28pm - k:\VRB-WaterResources\047035125 - IRC Landfill Improvements\CADD\PlanSheets\C-400.dwg  
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LEGEND	
	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD
	RIP-RAP

- - - - - PROPERTY LINE  
 ○ ○ ○ ○ ○ SILT FENCE

- NOTE:
- CONTRACTOR TO PHASE FENCE AND CONSTRUCTION TO MAINTAIN VEHICULAR ACCESS TO YARD WASTE AREA AT ALL TIMES.
  - CONTRACTOR TO PROVIDE PRIOR CONSTRUCTION MAINTENANCE OF TRAFFIC PLAN TO ENSURE CONTINUOUS ACCESS TO YARD WASTE AREA.
  - CONTRACTOR TO MEET TURBIDITY REQUIREMENTS OF IRFVCD PERMIT AT ALL TIMES. SHEET PILE DAM MAY BE REQUIRED (WITH OVERFLOW) IF TURBIDITY CANNOT BE MET.
  - REFER TO IRFVCD PERMIT FOR CANAL REQUIREMENTS (PERMIT NO.: U-23-05 AND 23-17)

NO.	REVISIONS	DATE	BY

**Kimley & Horn**  
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 445 24th ST SUITE 200, VERO BEACH, FL 32960  
 PHONE: 772-794-4100  
 WWW.KIMLEY-HORN.COM REGISTRY 696

KHA PROJECT	DATE	SCALE	AS SHOWN	DESIGNED BY	DRAWN BY	CHECKED BY	DATE
047035124	SEPT 2023	AS SHOWN					

**EROSION CONTROL PLAN**

IRC LANDFILL IMPROVEMENTS  
 PREPARED FOR  
 INDIAN RIVER COUNTY  
 FLORIDA

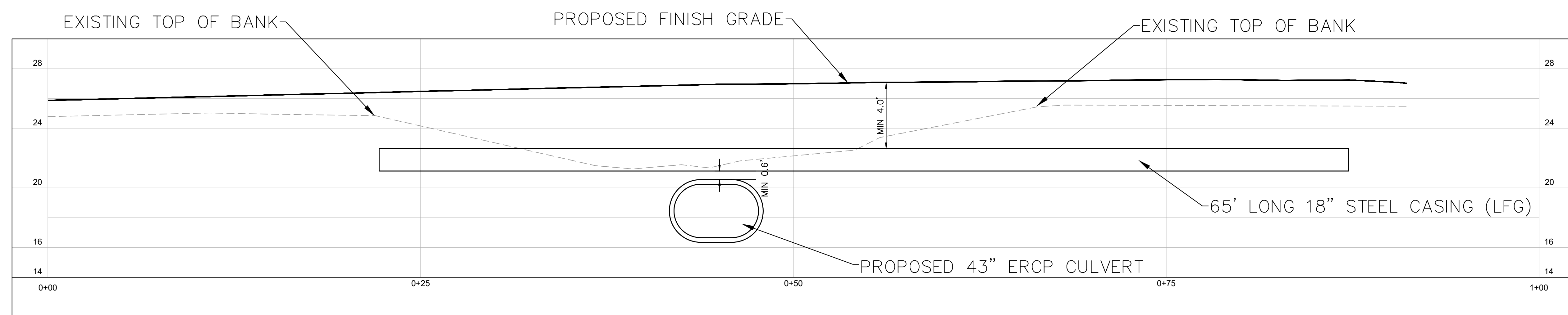
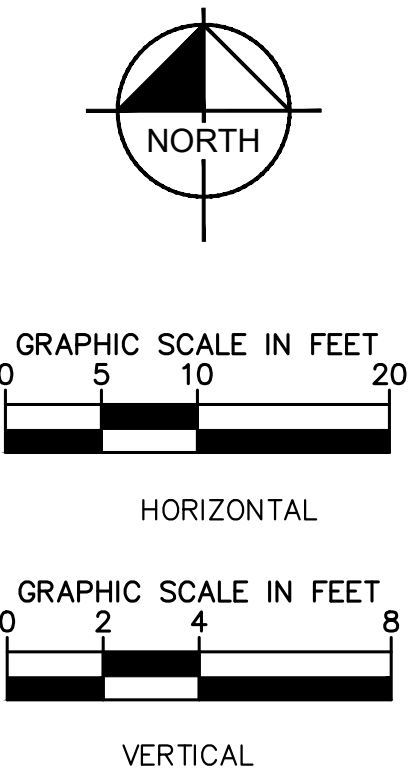
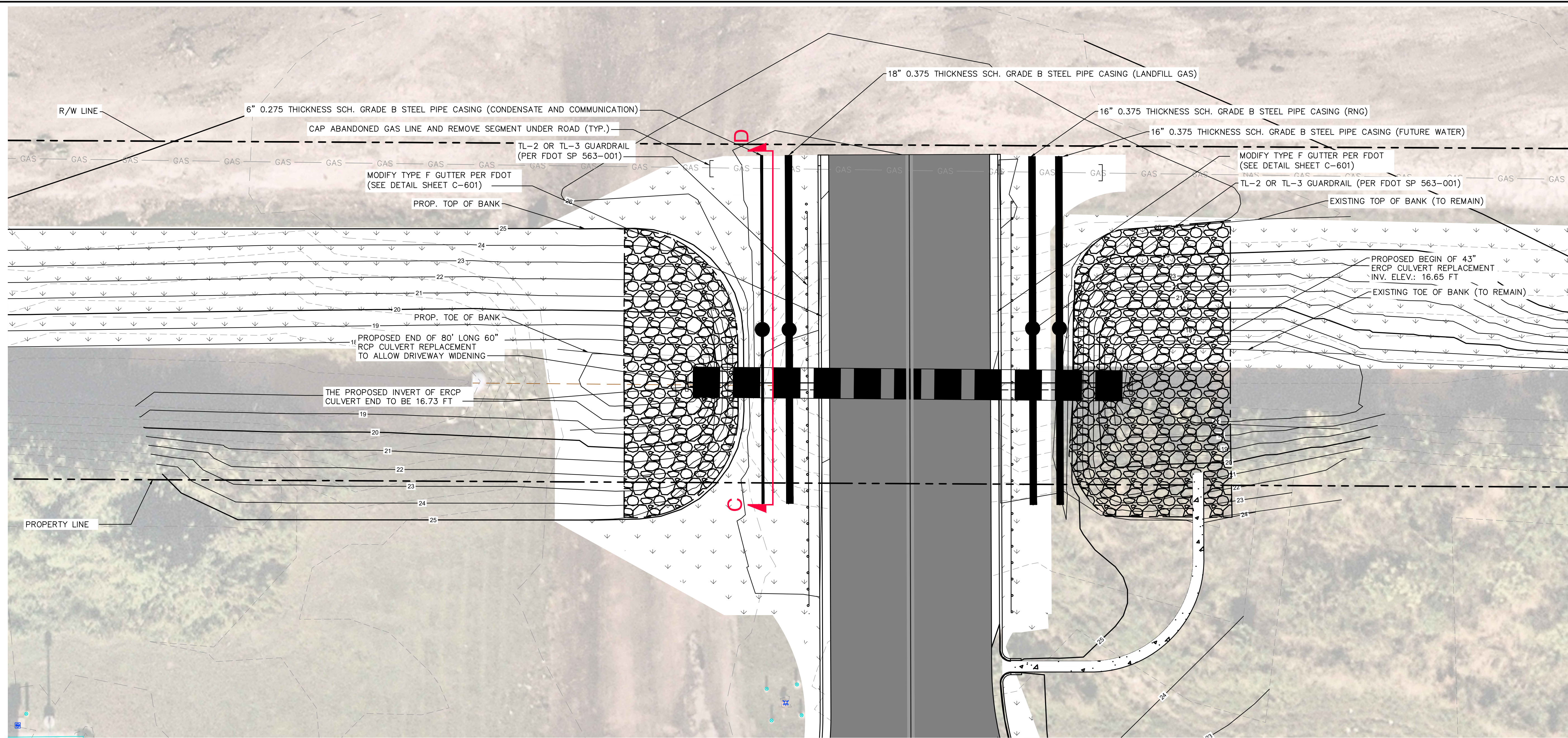
ISSUED FOR BID

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SHEET NUMBER  
**C-430E**



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DATUM NAVD88

C-D DRIVEWAY CROSS SECTION (SOUTH TO NORTH BOUND)  
C-430F SCALE: 4"=1'-0"

ISSUED FOR BID

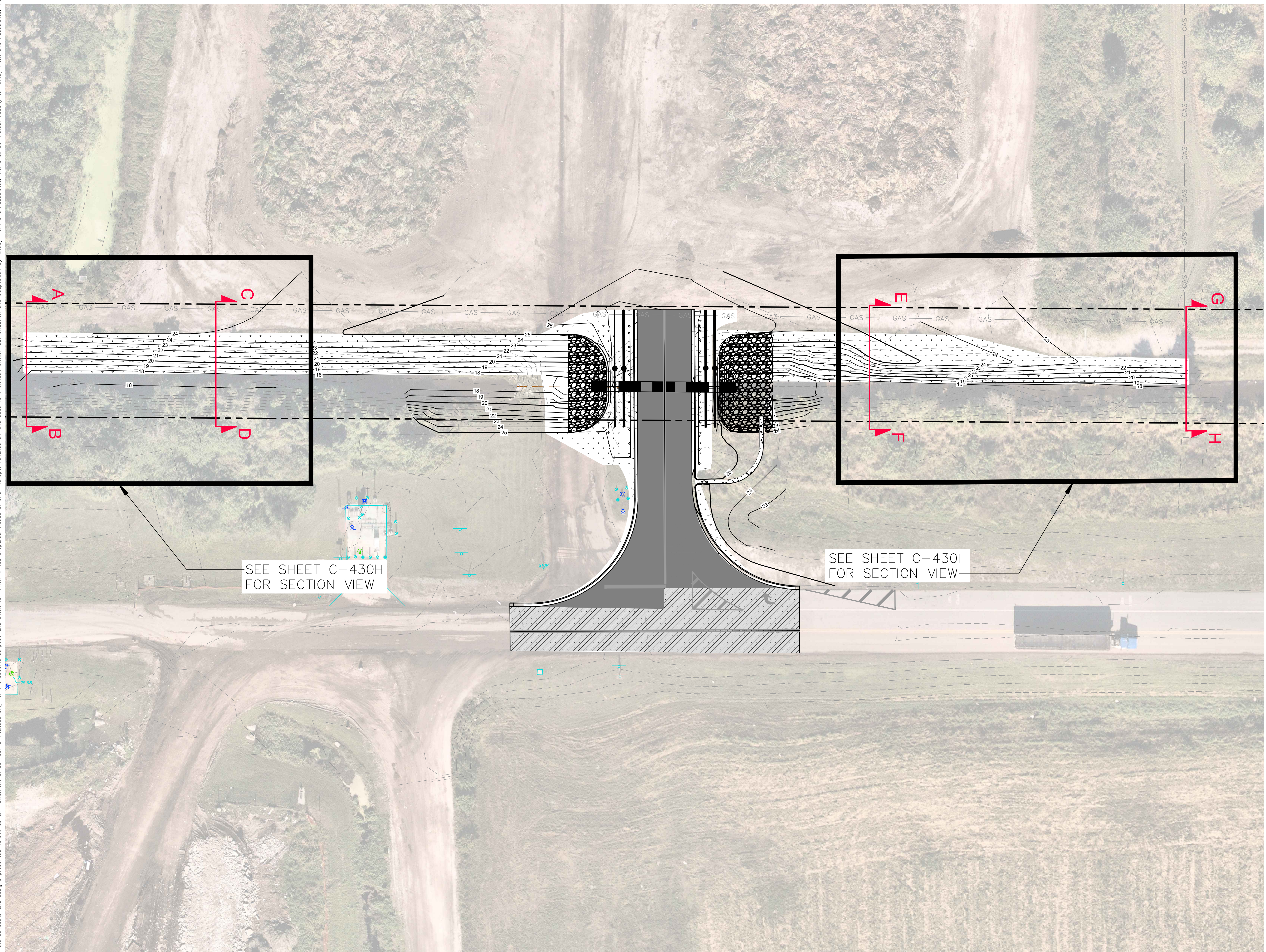
**Sunshine811**

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KIMLEY-HORN & ASSOCIATES, INC. 445 24th ST SUITE 200, VERO BEACH, FL 32960 PHONE: 772-794-4100 WWW.KIMLEY-HORN.COM REGISTRY 696	
KHA PROJECT 047035124 DATE SEPT 2023 SCALE AS SHOWN DESIGNED BY DRAWN BY JSW CHECKED BY DATE:	
LICENSED PROFESSIONAL	
DRIVEWAY IMPROVEMENT PROFILE	
IRC LANDFILL IMPROVEMENTS PREPARED FOR INDIAN RIVER COUNTY FLORIDA	
SHEET NUMBER C-430F	

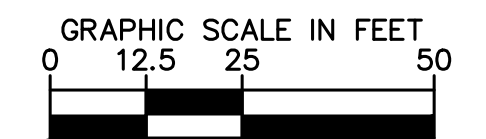
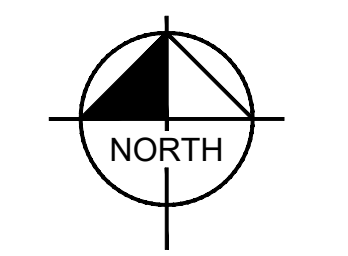


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SEE SHEET C-430H  
FOR SECTION VIEW

SEE SHEET C-430I  
FOR SECTION VIEW



**LEGEND**

	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD
	RIP-RAP
	WM WATER MAIN
	GAS GAS LINE
	FM LEACHATE FORCE MAIN
	PROPERTY LINE

No.	REVISIONS	DATE	BY

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LICENSED PROFESSIONAL  
 KHA PROJECT 047035124  
 DATE SEPT 2023  
 SCALE AS SHOWN  
 DESIGNED BY  
 DRAWN BY JSW  
 CHECKED BY  
 DATE:

**OVERALL CANAL  
RESTORATION**

IRC LANDFILL  
IMPROVEMENTS  
PREPARED FOR  
INDIAN RIVER COUNTY  
FLORIDA

SHEET NUMBER  
**C-430G**

**ISSUED FOR BID**

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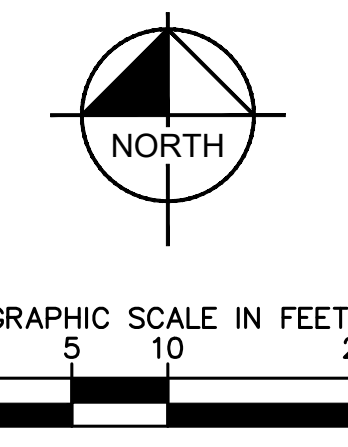
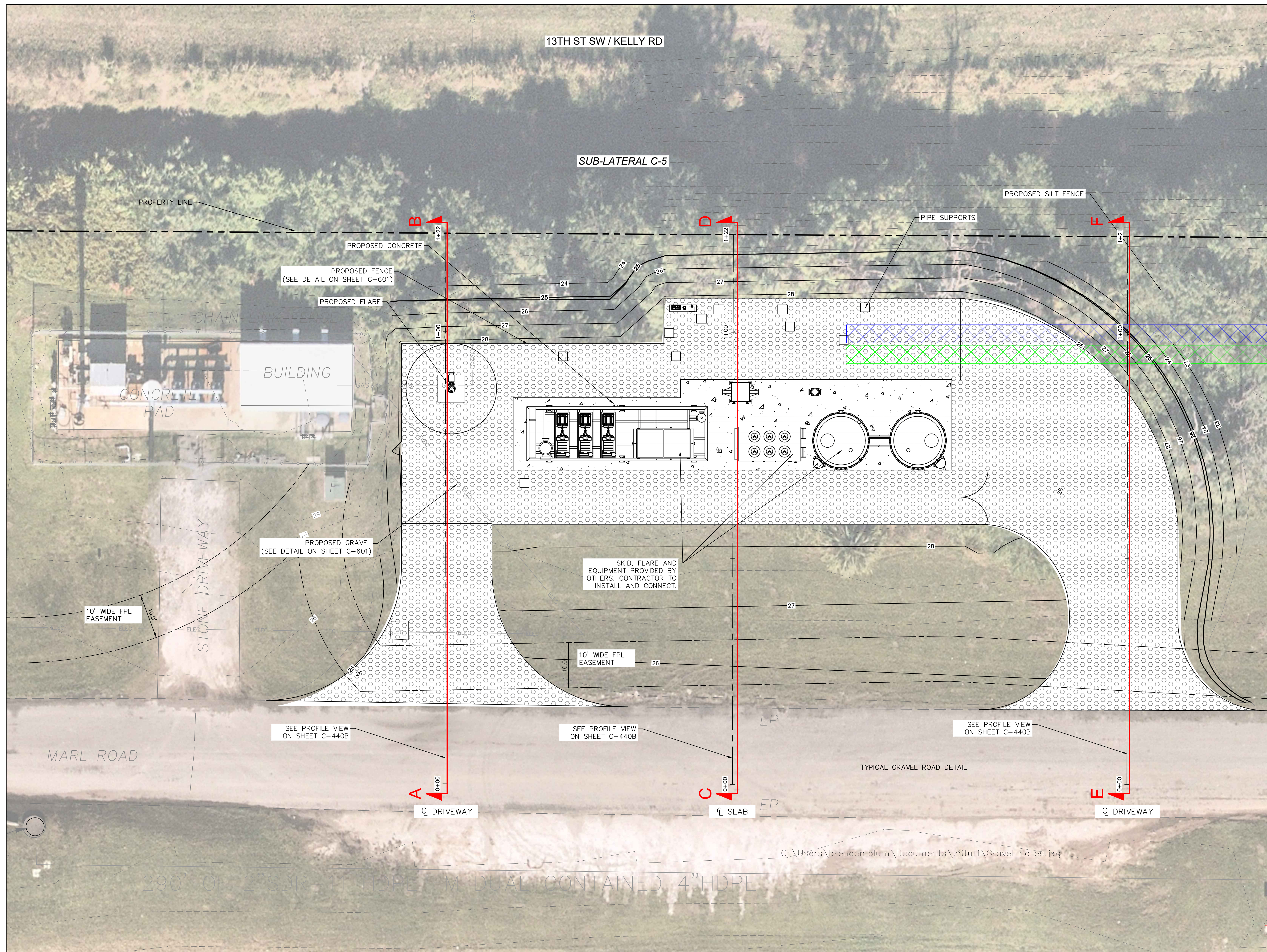








Plotted By: Sastre, Ignacio. Sheet Set: 047035127. Layout: C-440A. Proposed Site: Plan Landfill Gas System Improvements. November 16, 2023. 08:12:44pm. K:\VRB-WaterResources\047035125-IRC Landfill Improvements\CADD\PlanSheets\C-400.dwg  
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LEGEND	
	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD

	PROPOSED RNG PIPING CORRIDOR
	PROPOSED IRC PIPING CORRIDOR
	FENCE
	ELECTRIC
	GAS LINE
	PROPERTY LINE

NOTE:  
 1. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH FDOT SPECIFICATION 110.  
 2. EXCAVATION AND COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH FDOT SPECIFICATION 120.

- NOTES:**
- FOR SITE SURVEY DETAILS REFER DRAWING NO. 6366-13A (3 SHEETS).
  - COORDINATE INSTALLATION OF THE LFG HEADER WITH OPERATIONS TO LIMIT TRAFFIC INTERFERENCE.
  - CONTRACTOR TO FIELD VERIFY THE UTILITY LOCATION AT SITE PRIOR TO DIGGING; CALL SUNSHINE 811 AT LEAST TWO DAYS PRIOR TO DIGGING IN CASE UTILITIES HAVE TO BE LOCATED AND MARKED.
  - RNG AND IRC PIPING TO TERMINATE APPROX. 200 FT. OF EAST OF DRIVEWAY AND CONNECT TO EXISTING PIPELINES (INSTALLED BY OTHERS).

ISSUED FOR BID

**Sunshine 811**

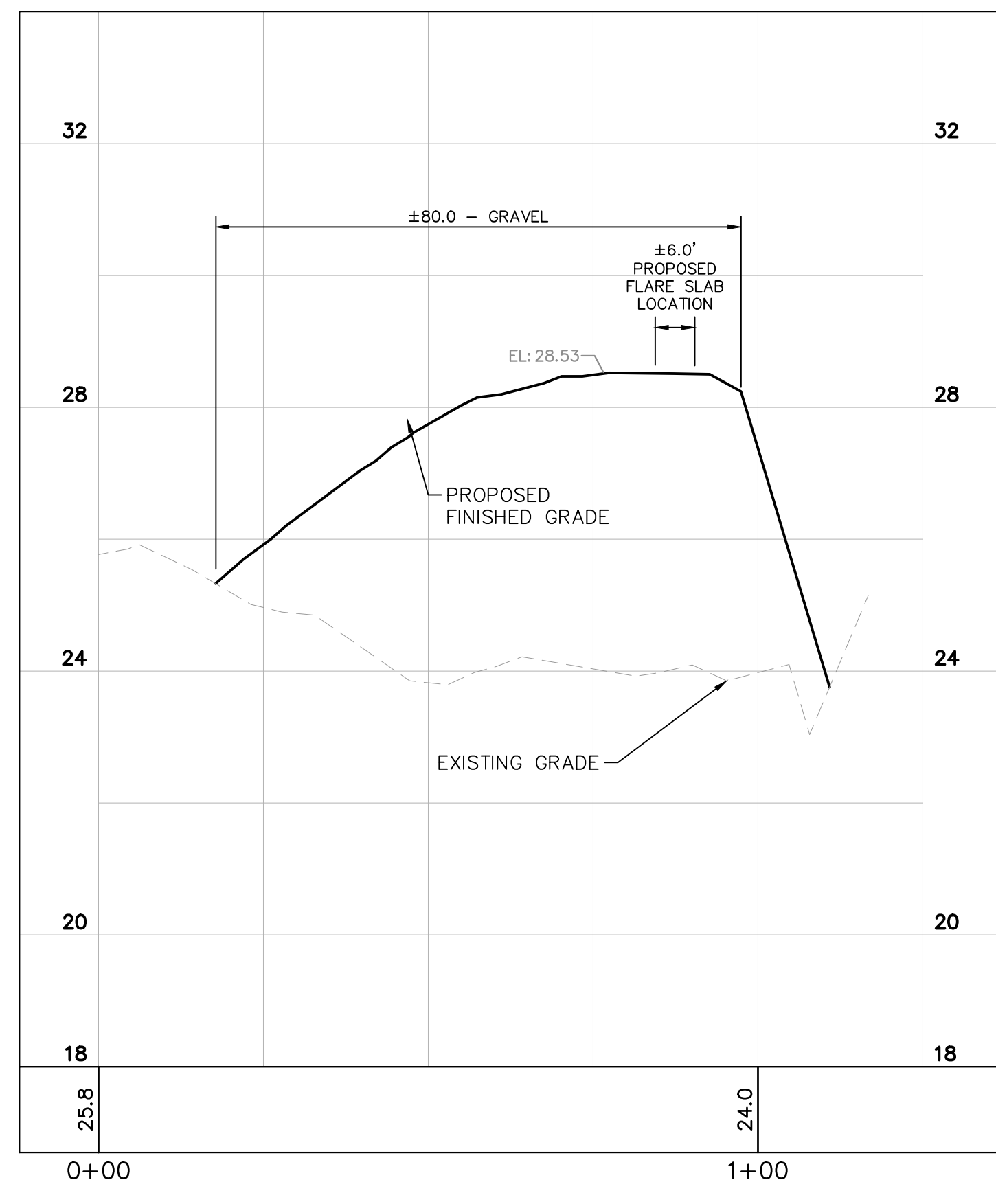
Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.  
 Check positive response codes before you dig!

<p style="font-size: 24pt; font-weight: bold; margin: 0;">Kimley &amp; Horn</p> <p style="font-size: 8pt; margin: 0;">© 2023 KIMLEY-HORN AND ASSOCIATES, INC.        445 24th ST SUITE 200, VERO BEACH, FL 32960        WWW.KIMLEY-HORN.COM    PHONE: 772-794-4100    REGISTRY 696</p>	<p style="font-size: 12pt; font-weight: bold; margin: 0;">PROPOSED SITE PLAN        LANDFILL GAS        SYSTEM        IMPROVEMENTS</p>
KHA PROJECT: 047035124 DATE: SEPT 2023 SCALE: AS SHOWN DESIGNED BY: [blank] DRAWN BY: JSW CHECKED BY: [blank] DATE: [blank]	LICENSED PROFESSIONAL [blank]
IRC LANDFILL IMPROVEMENTS PREPARED FOR INDIAN RIVER COUNTY FLORIDA	SHEET NUMBER <b>C-440A</b>



Plotted By: Sastre, Ignacio; Sheet Set: 047035127; Layout: C-440B; Profile View of Proposed LFG System Improvements; November 16, 2023; 08:12:47pm; K:\VFB-WaterResources\047035127 - IRC Landfill Improvements\CADD\PlanSheets\C-400.dwg  
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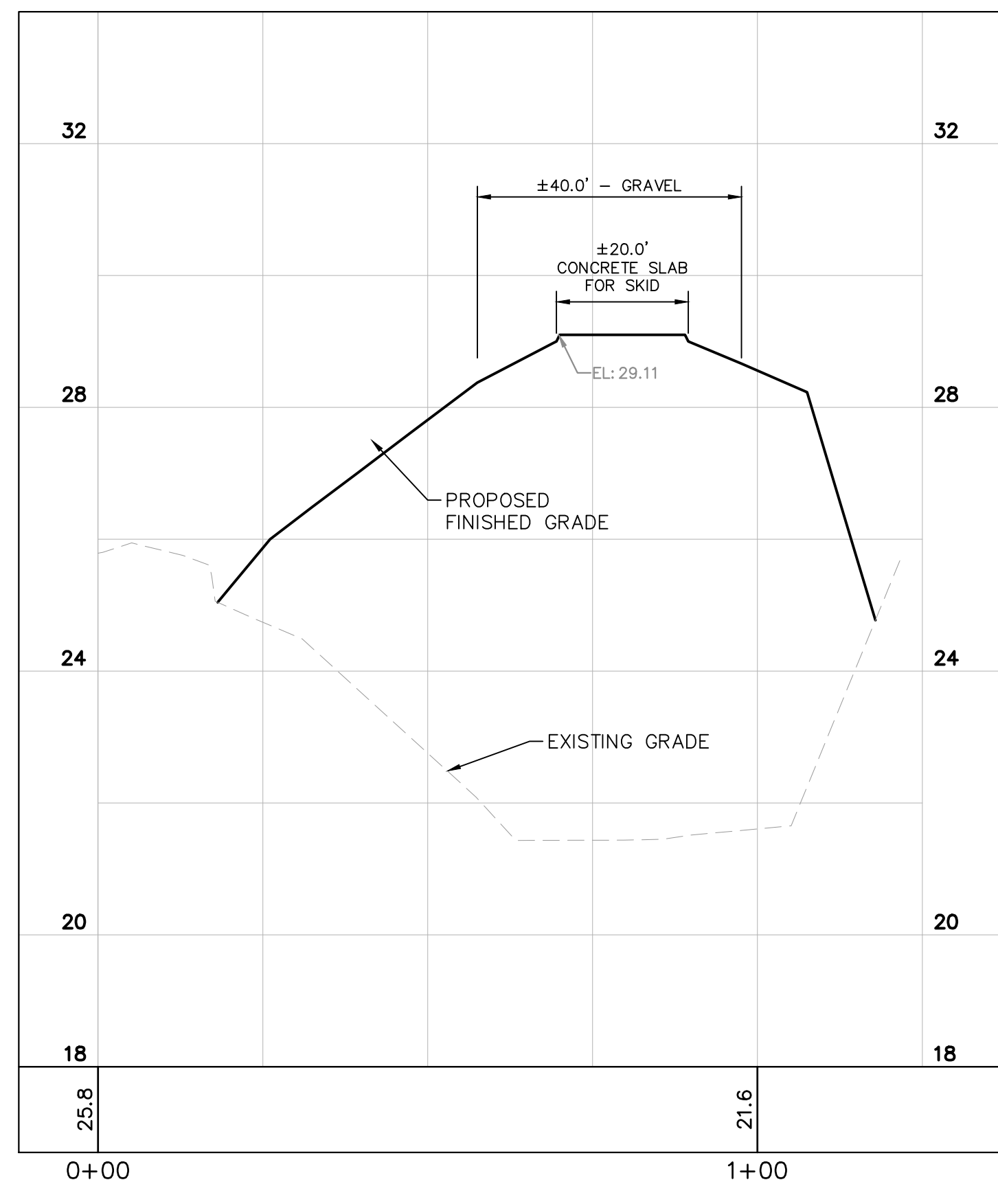
- NOTES:**
- FOR SITE SURVEY DETAILS REFER DRAWING NO. 6366-13A (3 SHEETS).
  - COORDINATE INSTALLATION OF THE LFG HEADER WITH OPERATIONS TO LIMIT TRAFFIC INTERFERENCE.
  - CONTRACTOR TO FIELD VERIFY THE UTILITY LOCATION AT SITE PRIOR TO DIGGING; CALL SUNSHINE 811 AT LEAST TWO DAYS PRIOR TO DIGGING IN CASE UTILITIES HAVE TO BE LOCATED AND MARKED.
  - RNG AND IRC PIPING TO TERMINATE APPROX. 200 FT. OF EAST OF DRIVEWAY AND CONNECT TO EXISTING PIPELINES (INSTALLED BY OTHERS).
  - ALL ELEVATION REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)



**DATUM**  
NAVD88

**A-B**  
C-440A

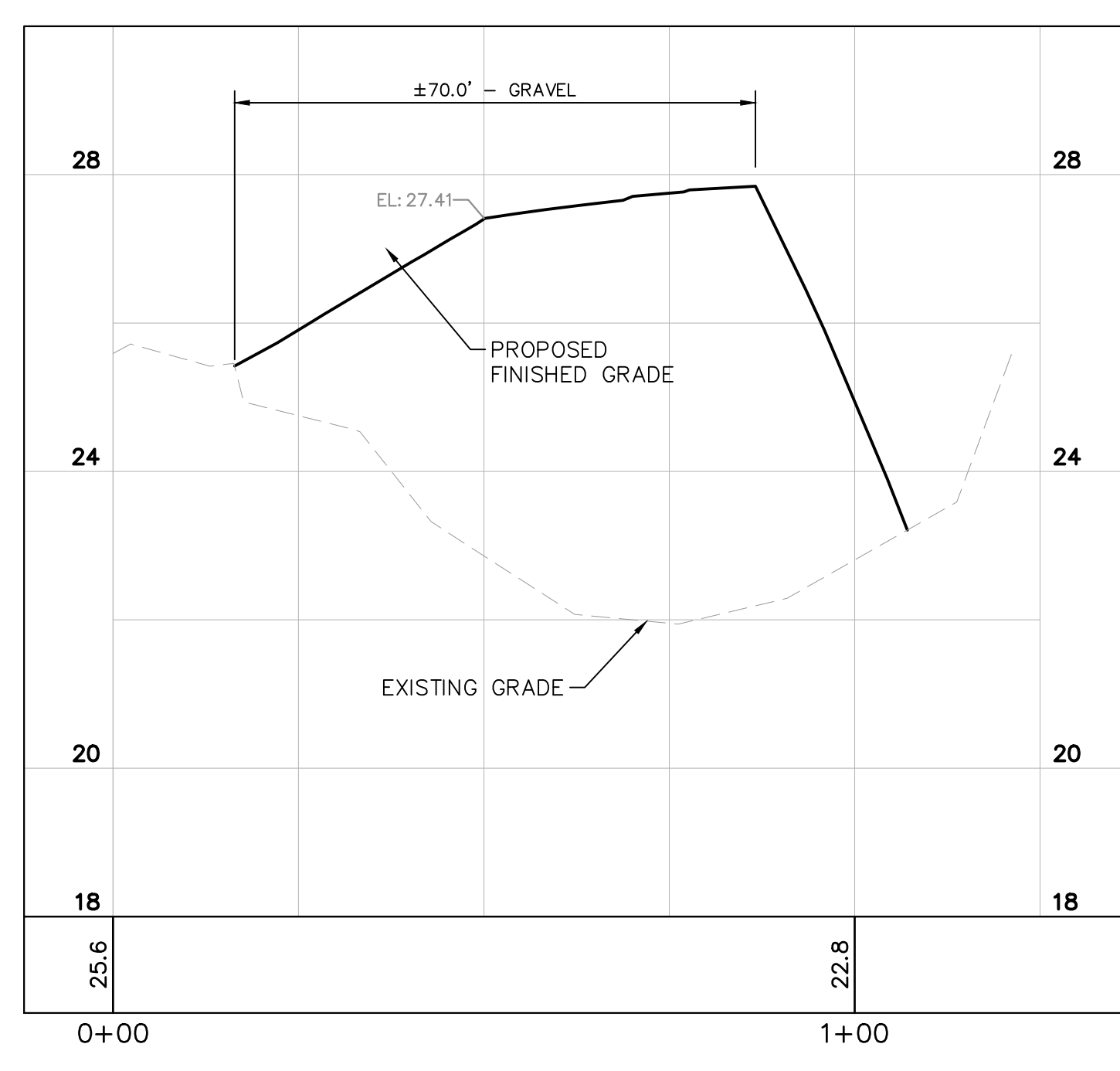
CENTER ALIGNMENT OF PROPOSED SKID WEST DRIVEWAY  
SCALE: 2"=1'-0"



**DATUM**  
NAVD88

**C-D**  
C-440A

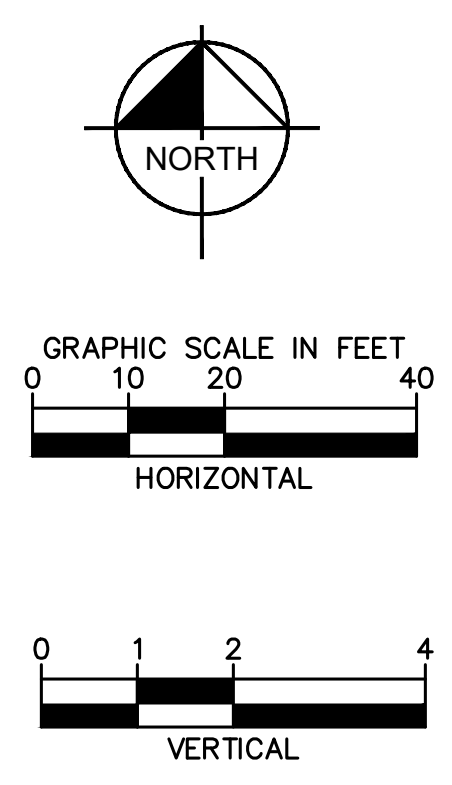
CENTER ALIGNMENT OF PROPOSED SKID CONCRETE SLAB  
SCALE: 2"=1'-0"



**DATUM**  
NAVD88

**F-G**  
C-440A

CENTER ALIGNMENT OF PROPOSED SKID EAST DRIVEWAY  
SCALE: 2"=1'-0"



No.	REVISIONS	DATE	BY

**Kimley-Horn**

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LICENSED PROFESSIONAL	
KHA PROJECT	047035124
DATE	SEPT 2023
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	JSW
CHECKED BY	
DATE:	

**PROFILE VIEW OF  
 PROPOSED LFG  
 SYSTEM  
 IMPROVEMENTS**

IRC LANDFILL  
 IMPROVEMENTS  
 PREPARED FOR  
 INDIAN RIVER COUNTY  
 FLORIDA

SHEET NUMBER  
**C-440B**

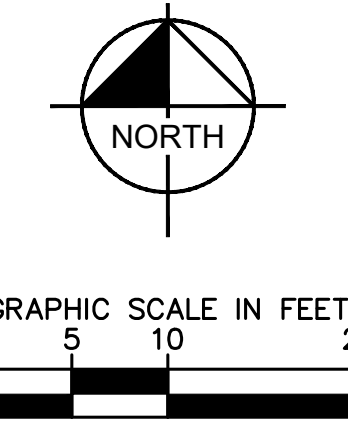
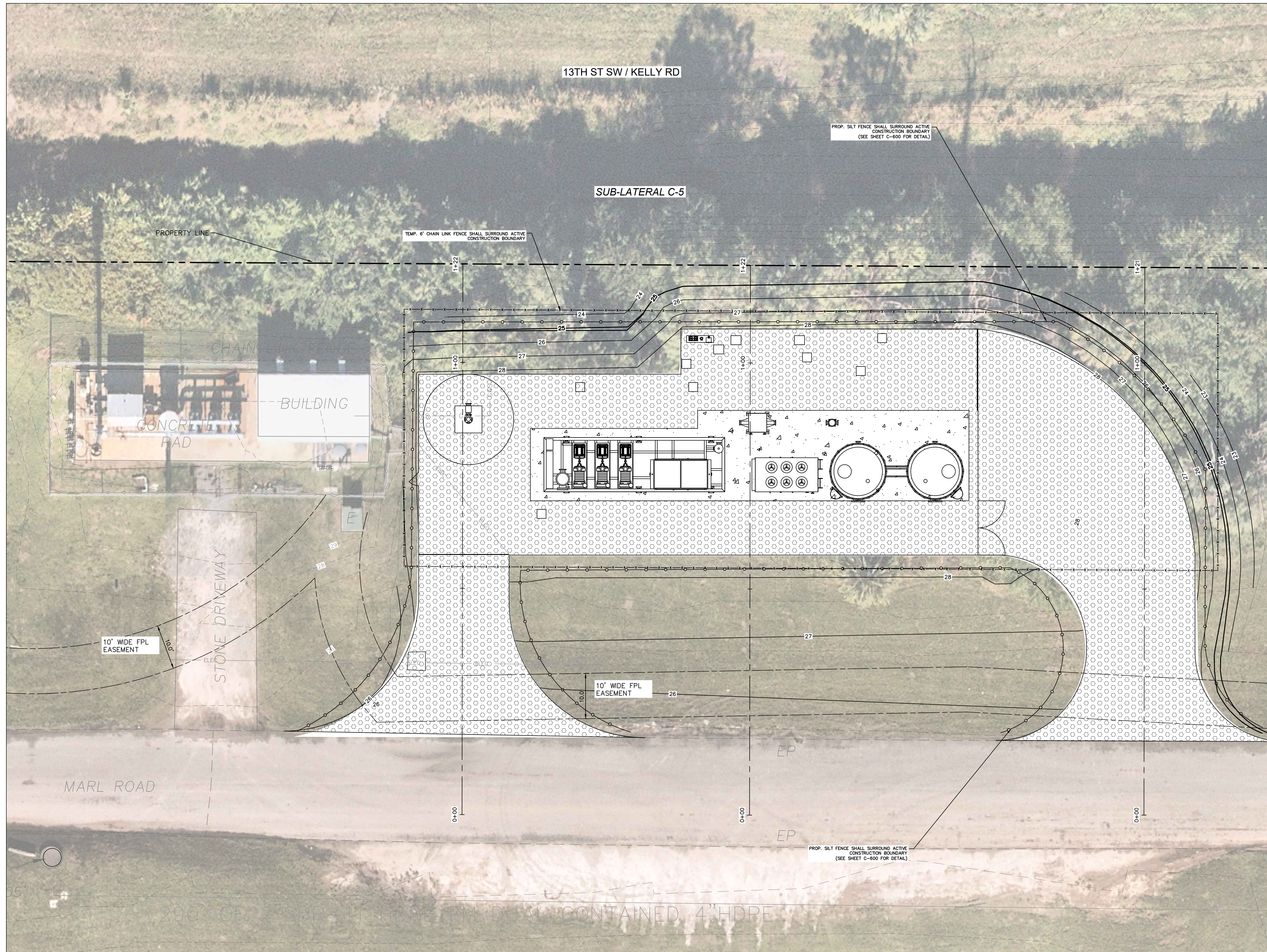
**ISSUED FOR BID**

**Sunshine 811**

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Plotted By: Sastre, Ignacio - Sheet Set: 047035127 - Layout: C-440C Drainage and Erosion Control Plan - November 16, 2023 - 05:12:56pm - K:\VRB - WaterResources\047035125 - IRC Landfill Improvements\CADD\PlanSheets\C-400.dwg  
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LEGEND	
	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD
	SILT FENCE
	ELECTRIC
	GAS LINE
	PROPERTY LINE
	CHAIN LINK FENCE

- NOTES:**
- FOR SITE SURVEY DETAILS REFER DRAWING NO. 6366-13A (3 SHEETS).
  - COORDINATE INSTALLATION OF THE LFG HEADER WITH OPERATIONS TO LIMIT TRAFFIC INTERFERENCE.
  - CONTRACTOR TO FIELD VERIFY THE UTILITY LOCATION AT SITE PRIOR TO DIGGING; CALL SUNSHINE 811 AT LEAST TWO DAYS PRIOR TO DIGGING IN CASE UTILITIES HAVE TO BE LOCATED AND MARKED.

ISSUED FOR BID

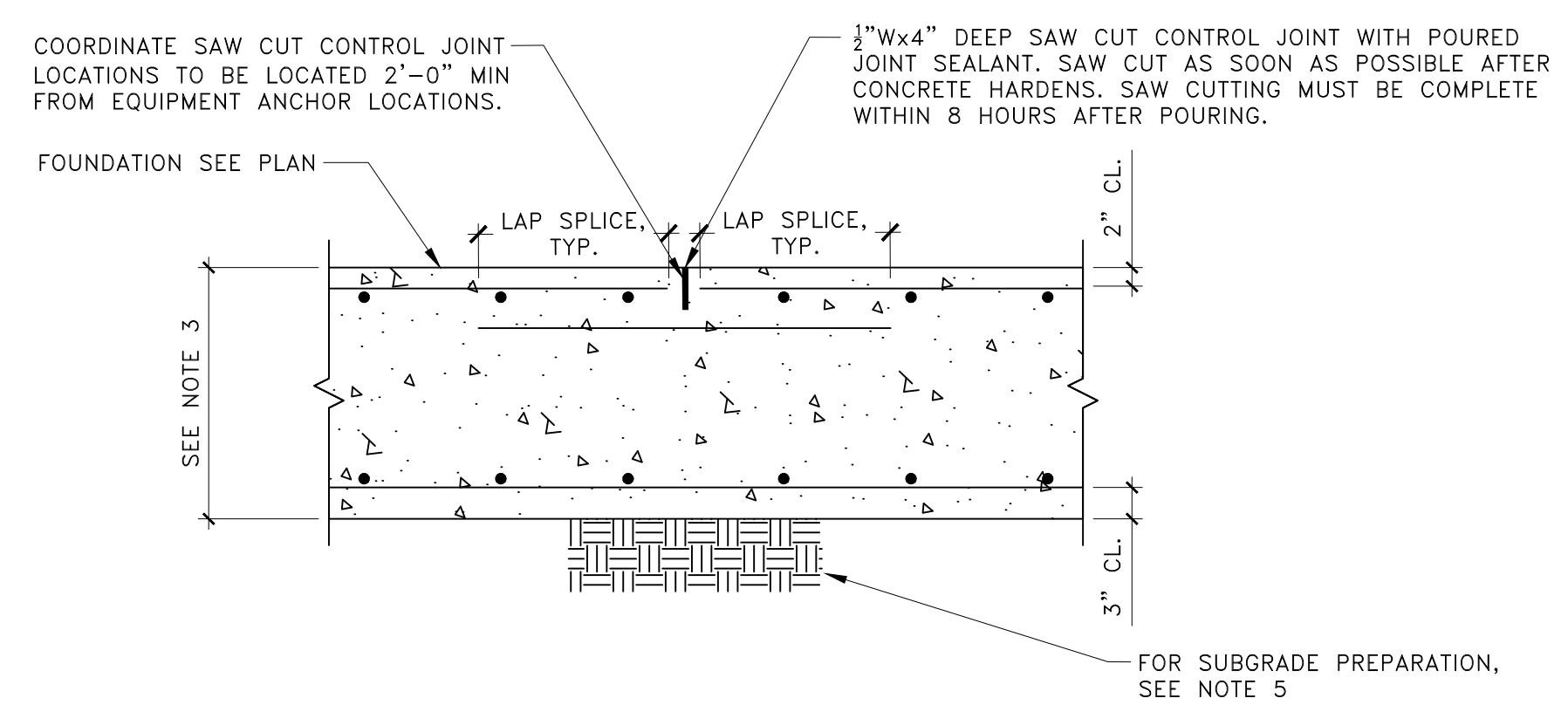
**Sunshine 811**  
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 Check positive response codes before you dig!

<p style="font-size: 2em; font-weight: bold; margin: 0;">DRAINAGE AND EROSION CONTROL PLAN</p>	<p style="font-size: 1.2em; font-weight: bold; margin: 0;">INDIAN RIVER COUNTY FLORIDA</p>
<p style="font-size: 1.2em; font-weight: bold; margin: 0;">KIMLEY-HORN</p> <p style="font-size: 0.8em; margin: 0;">             © 2023 KIMLEY-HORN AND ASSOCIATES, INC.              445 24th ST SUITE 200, VERO BEACH, FL 32960              PHONE: 772-794-4100              WWW.KIMLEY-HORN.COM    REGISTRY 696           </p>	<p style="font-size: 0.8em; margin: 0;">             LICENSED PROFESSIONAL              KHA PROJECT 047035124              DATE SEPT 2023              SCALE AS SHOWN              DESIGNED BY              DRAWN BY JSW              CHECKED BY              DATE:           </p>
<p style="font-size: 0.8em; margin: 0;">SHEET NUMBER <b>C-440C</b></p>	<p style="font-size: 0.8em; margin: 0;">             REVISIONS              No. _____              BY _____              DATE _____           </p>

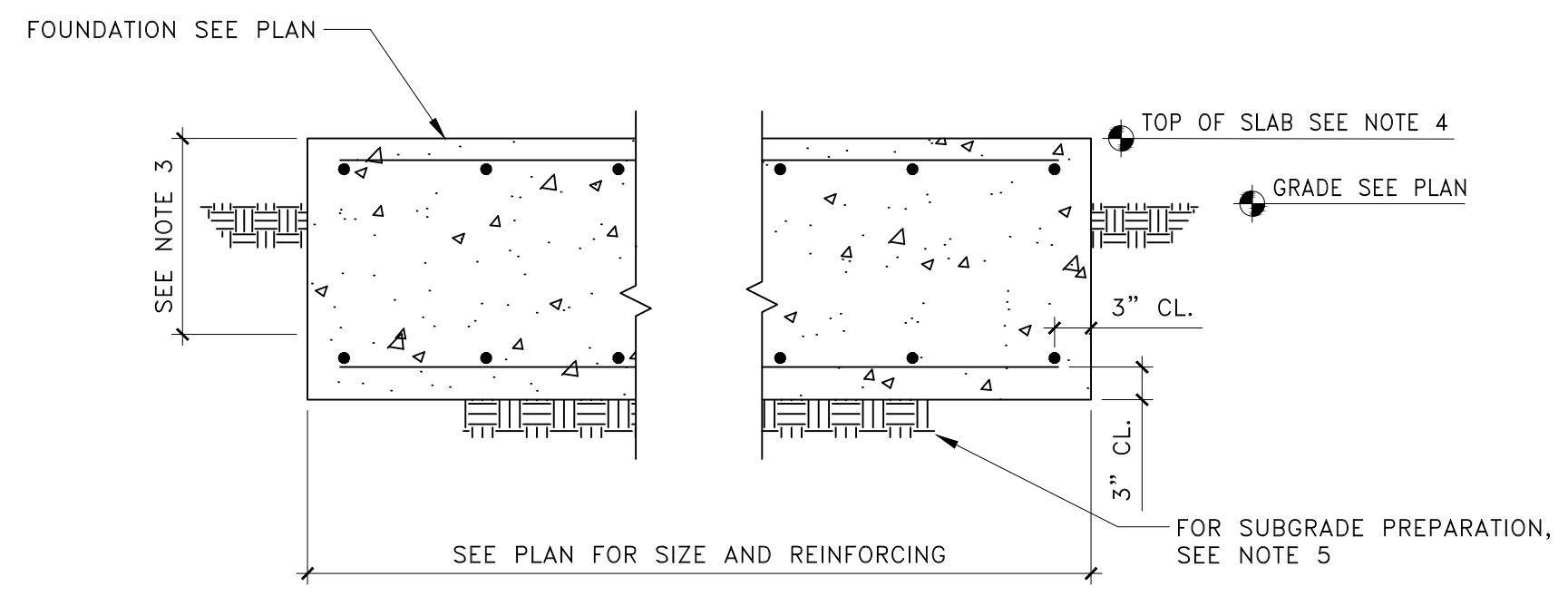


Plotted By: Sastre, Ignacio Sheet: 047035127 Layout: S-440 Biogas Skid November 16, 2023 05:13:07pm K:\VRB-WaterResources\047035125 - IRC Landfill Improvements\CADD\PlanSheets\S-440 Biogas Skid.dwg  
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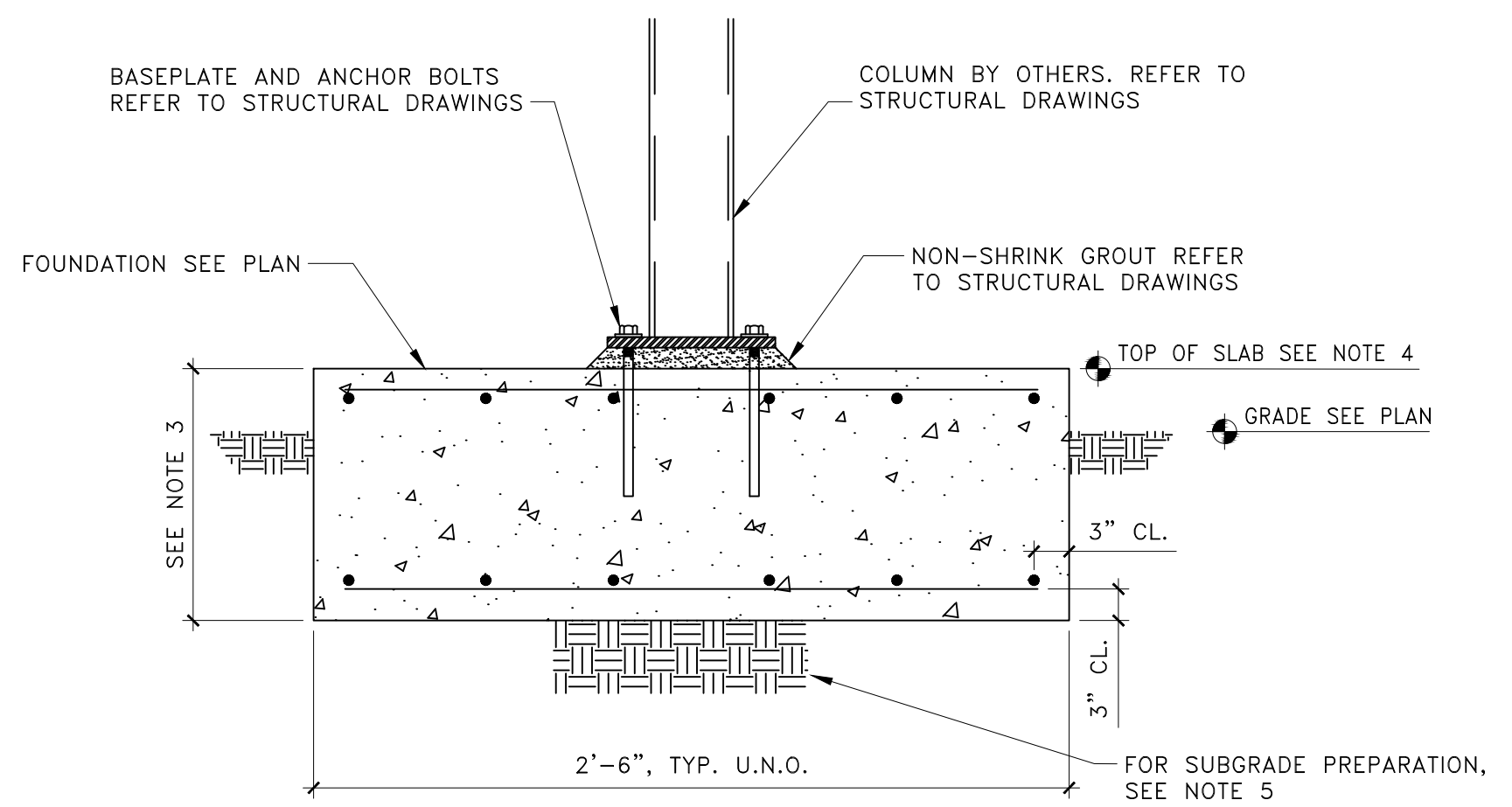
Table of Equipment								
Item	Description	Qty	Weight (lbs/unit)	Weight (lbs)	Width (ft)	Length (ft)	Height (ft)	Stand height (ft)
1	Blowers	3	4,800	14,400	10.00	3.25	4.15	1.50
2	Aftercooler	1	9,000	9,000	7.00	12.00	2.50	7.50
3	Control Panels	1	500	500	11.00	1.50	6.00	1.50
4	Skid Frame	1	18,000	18,000	12.00	40.00	1.50	-
5	Downstream separator	1	900	900	1.33	-	5.75	2.50
6	Upstream separator	1	1,400	1,400	3.00	-	6.75	2.50
7	Chiller	1	16,500	16,500	7.50	14.00	9.00	-
8	Media Vessel	2	190,000	380,000	12.00	-	22.25	-
9	Flare	1	2,300	2,300	0.83	-	45.00	-
10	Heat exchange	1	1,500	1,500	4.33	4.17	4.33	2.50
11	Filter	1	800	800	1.33	-	6.00	1.50



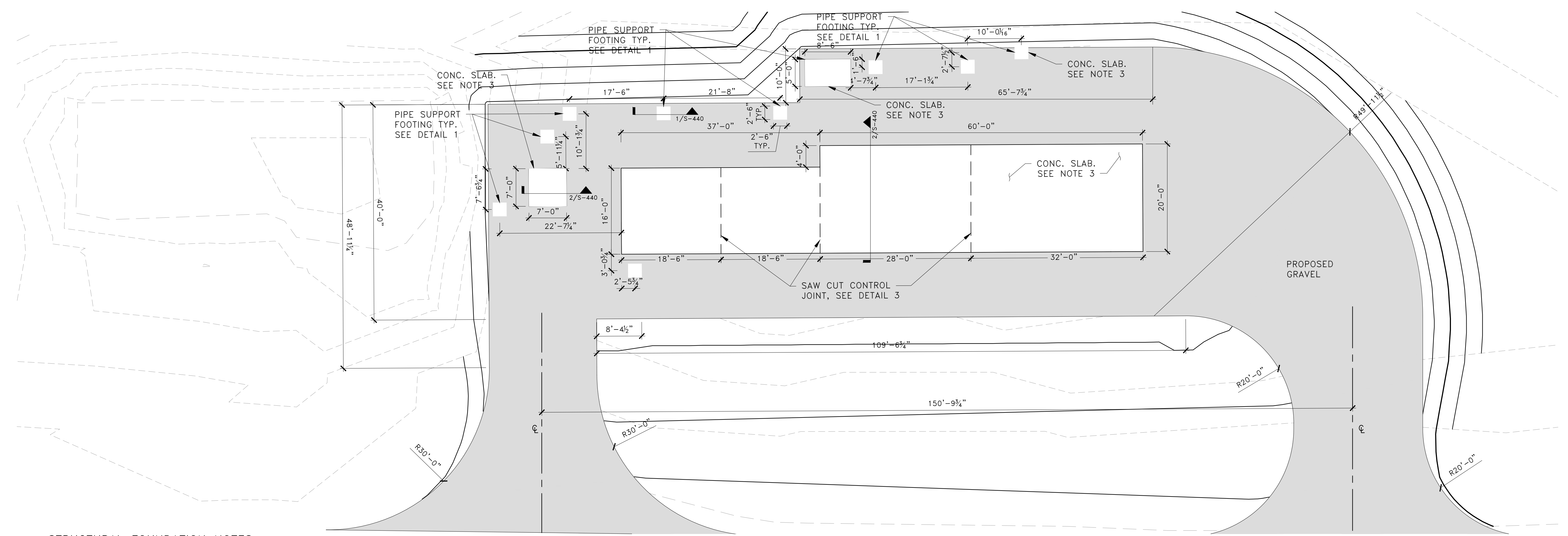
3 TYP. SLAB CONTROL JOINT  
SCALE: 3/4"=1'-0"



2 TYP. SLAB-ON-GRADE FOUNDATION  
SCALE: 3/4"=1'-0"



1 TYP. PIPE SUPPORT FOOTING  
SCALE: 3/4"=1'-0"

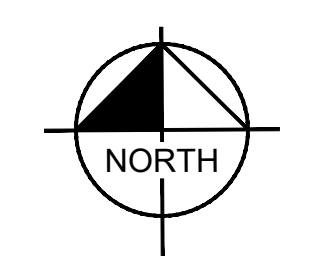


**STRUCTURAL FOUNDATION NOTES:**

- COORDINATE ELEVATIONS WITH SITE PLAN.
- REFER TO SKID AND FLARE MECHANICAL AND STRUCTURAL DRAWINGS FOR EQUIPMENT SIZE, CONFIGURATION, BASE STAND FRAMING, AND CONNECTIONS TO FOUNDATIONS.
- CONC. SLAB IS 24" CAST-IN-PLACE SLAB ON GRADE REINFORCED WITH #5@12" EACH WAY TOP AND BOTTOM.
- TYPICAL SLAB ELEVATION IS +30'-6".
- REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION BELOW FOUNDATIONS AND SLABS. AFTER CLEARING AND GRUBBING, SUBGRADE SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY TO A DEPTH OF 2 FT. BELOW GRADE. STRUCTURAL FILL FOR GRADING SHALL BE PLACED IN LIFTS NOT MORE THAN 12 INCHES AND COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY. TESTING SHALL BE DONE AND VERIFIED BY THE GEOTECHNICAL ENGINEER TO CONFIRM THE LEVEL OF COMPACTION HAS BEEN ACHIEVED.

**LANDFILL GAS SYSTEM FOUNDATION PLAN**

SCALE: 1" = 10'



ISSUED FOR BID

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 Check positive response codes before you dig!

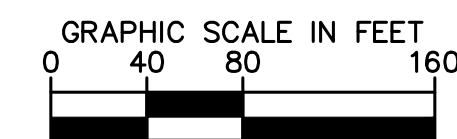
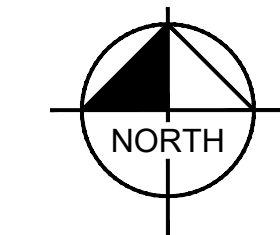
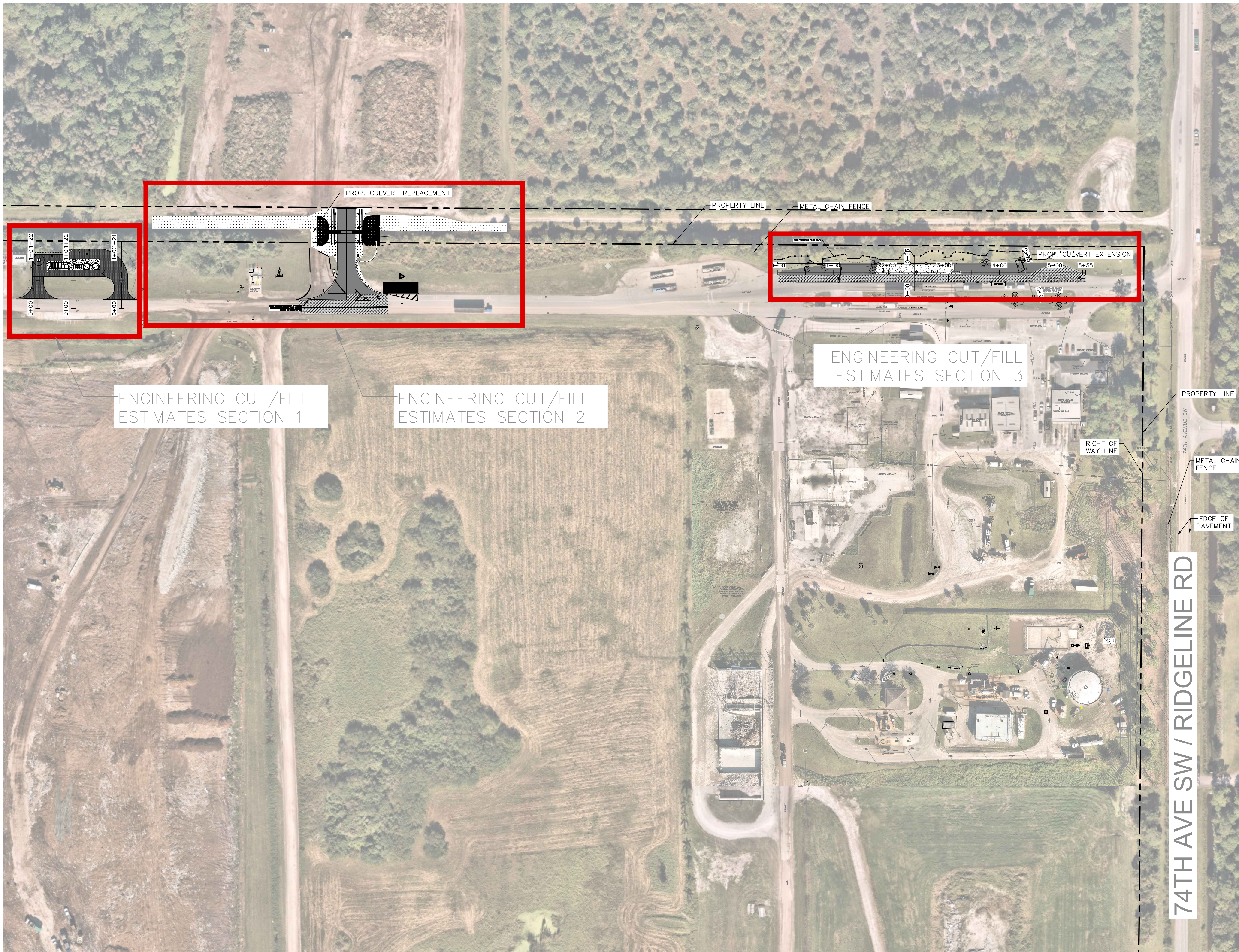
 445 24th ST SUITE 200, VERO BEACH, FL 32960 PHONE: 772-794-4100 WWW.KIMLEY-HORN.COM REGISTRY 696	LICENSED PROFESSIONAL _____ DATE: _____
	KHA PROJECT 047035124 DATE SEPT 2023 SCALE AS SHOWN DESIGNED BY _____ DRAWN BY JSW CHECKED BY _____ DATE: _____
<b>PROP. STR. PLAN LANDFILL GAS BLOWER SKID &amp; FLARE IMPROVEMENTS</b>	FLORIDA
<b>IRC LANDFILL IMPROVEMENTS PREPARED FOR INDIAN RIVER COUNTY</b>	SHEET NUMBER <b>S-440</b>







Plotted By: Sastre, Ignacio - Sheet Set: 047035127 - Layout: C-510 Overall Cut and Fill Estimates - November 16, 2023 - 05:13:23pm - K:\WEB-WaterResources\047035125 - IRC Landfill Improvements CAD\PlanSheets\C-400.dwg  
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**LEGEND**

	EXISTING CONCRETE
	EXISTING GRAVEL
	PROPOSED CONCRETE
	PROPOSED GRAVEL
	NEW ASPHALT PAVEMENT
	ASPHALT MILLING & RESURFACING
	PROPOSED SOD

	FENCE
	WM WATER MAIN
	ELEC ELECTRIC
	STM STORMWATER
	SS SANITARY SEWER
	FM LEACHATE FORCE MAIN
	PROPERTY LINE

**SECTION 1**

CUT/FILL ESTIMATES (CUBIC YARD)	
CUT	0.13
FILL	2944.94
NET	2944.81 (FILL)

**SECTION 2**

CUT/FILL ESTIMATES (CUBIC YARD)	
CUT	640.41
FILL	1526.96
NET	886.55 (FILL)

**SECTION 3**

CUT/FILL ESTIMATES (CUBIC YARD)	
CUT	54.78
FILL	700.85
NET	646.07 (FILL)

ENGINEERING CUT/FILL ESTIMATES SECTION 1

ENGINEERING CUT/FILL ESTIMATES SECTION 2

ENGINEERING CUT/FILL ESTIMATES SECTION 3

74TH AVE SW / RIDGELINE RD

ISSUED FOR BID

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 Check positive response codes before you dig!

NO.	REVISIONS	DATE	BY

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 PHONE: 772-794-4100  
 WWW.KIMLEY-HORN.COM REGISTRY 696

LICENSED PROFESSIONAL

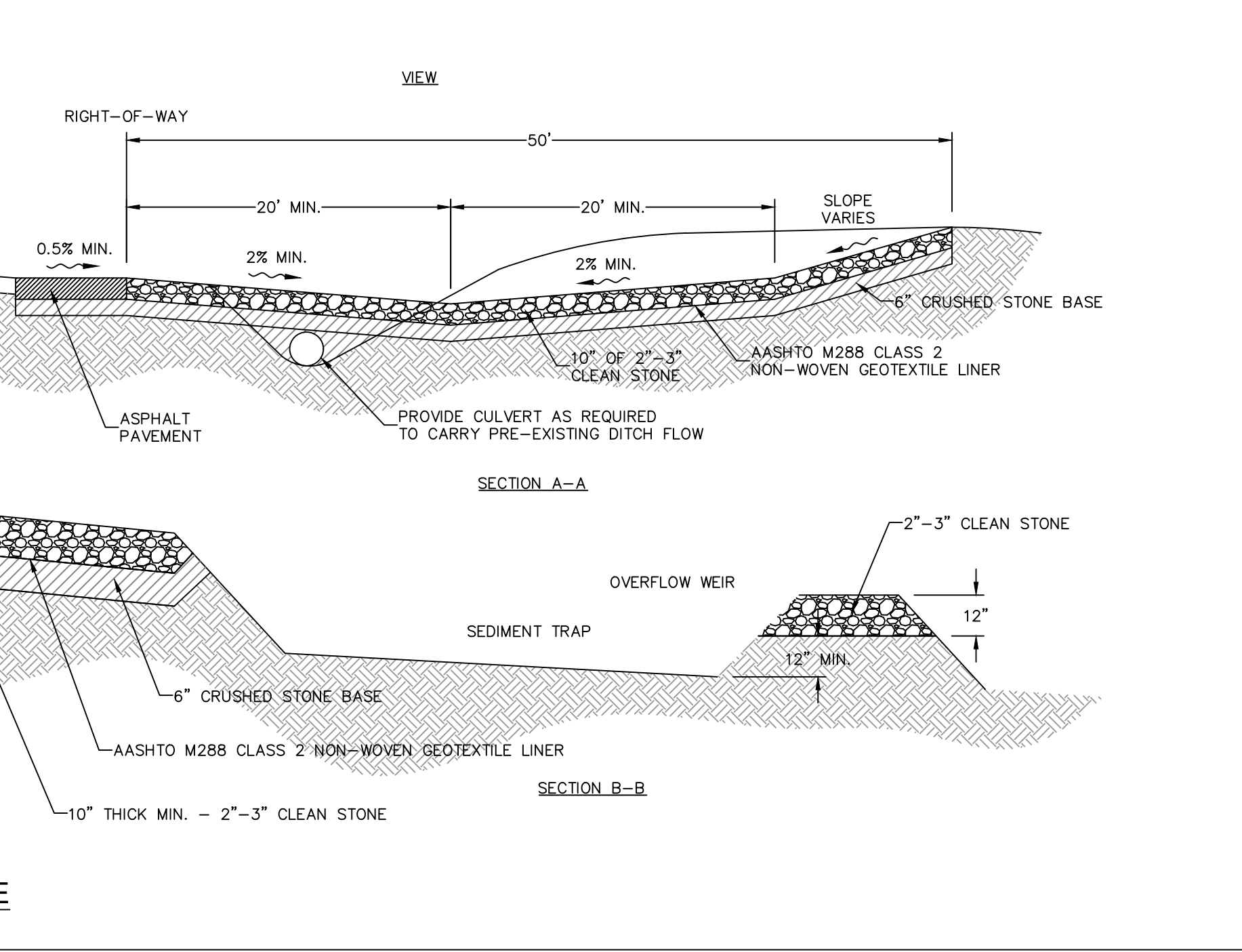
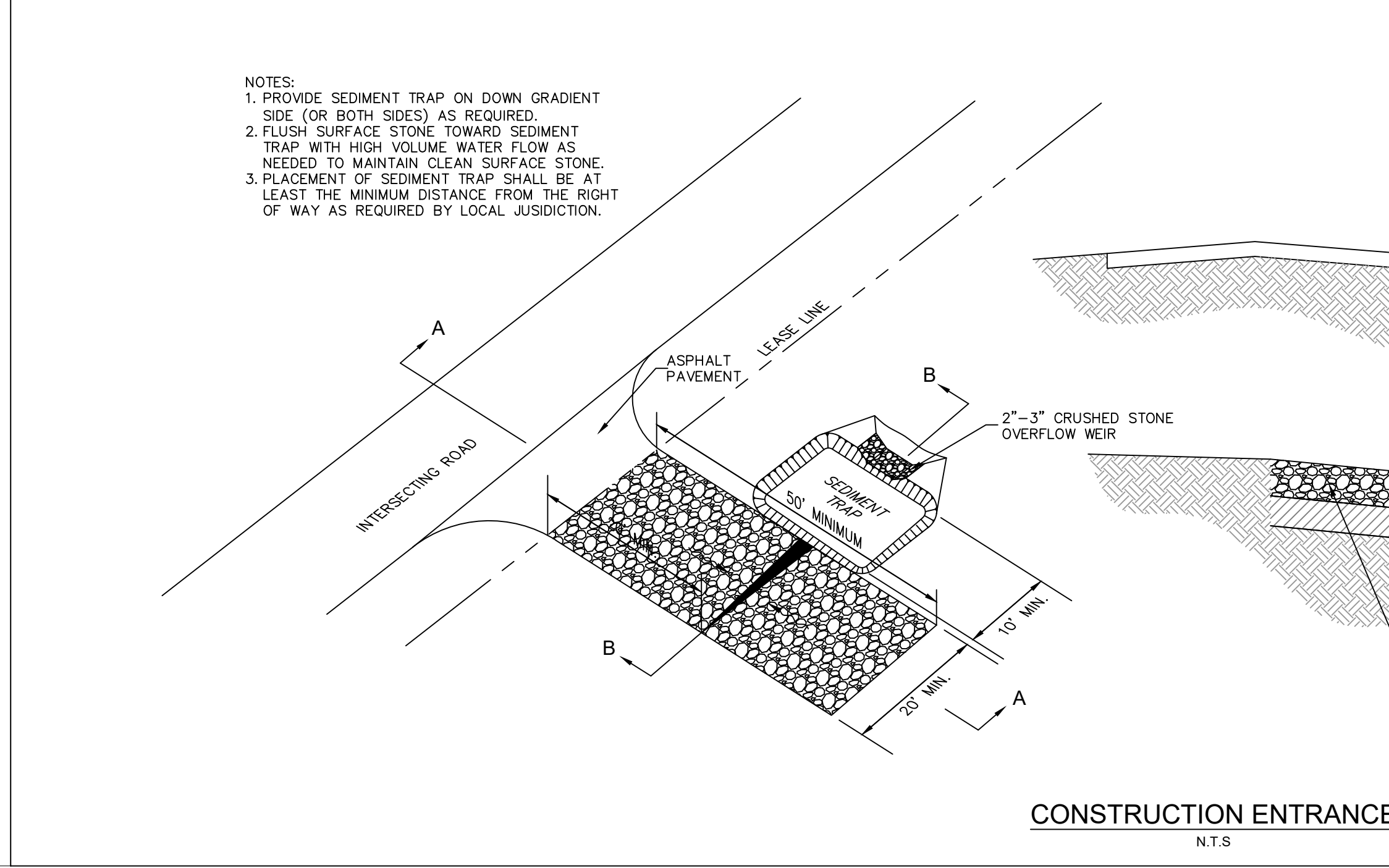
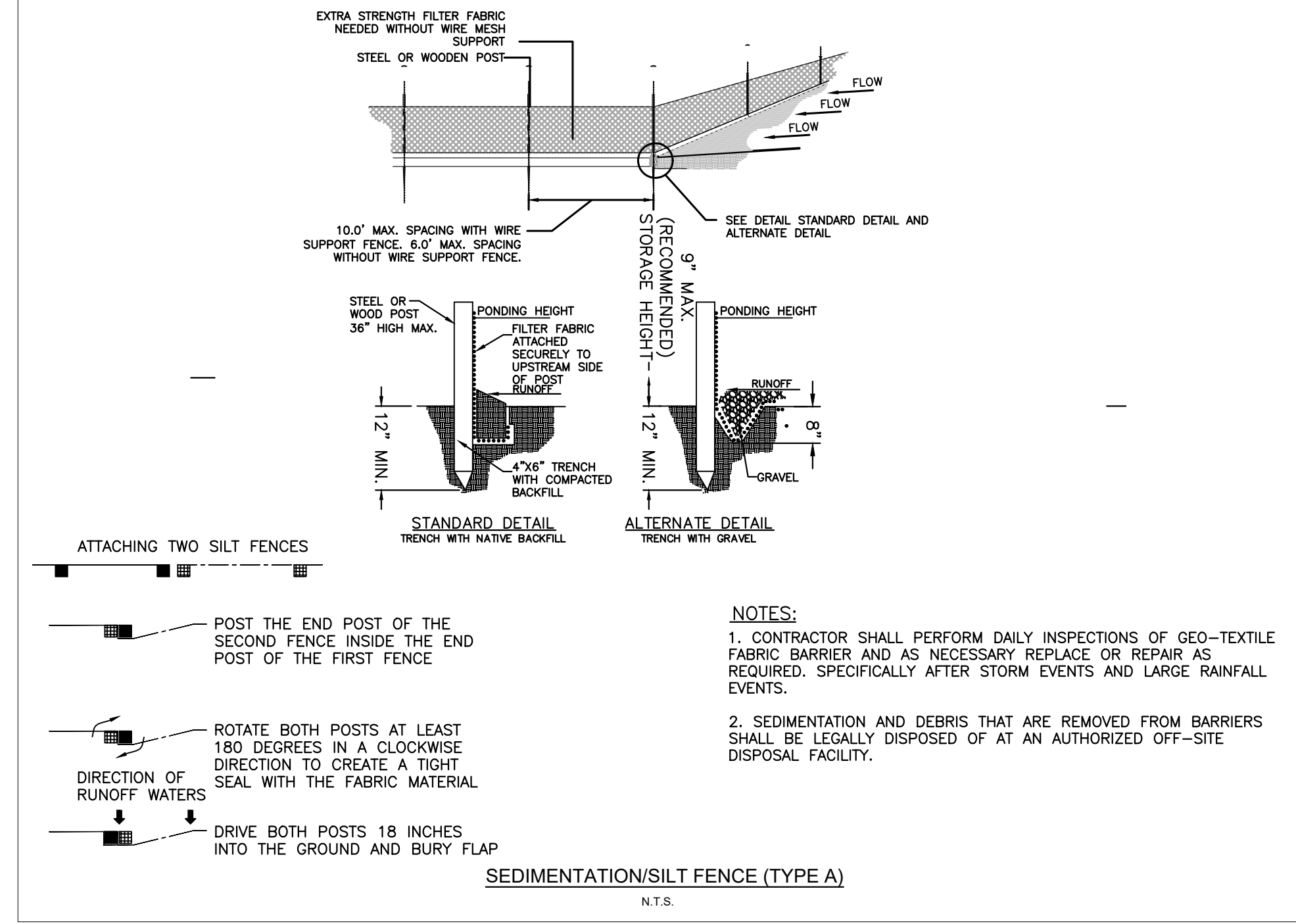
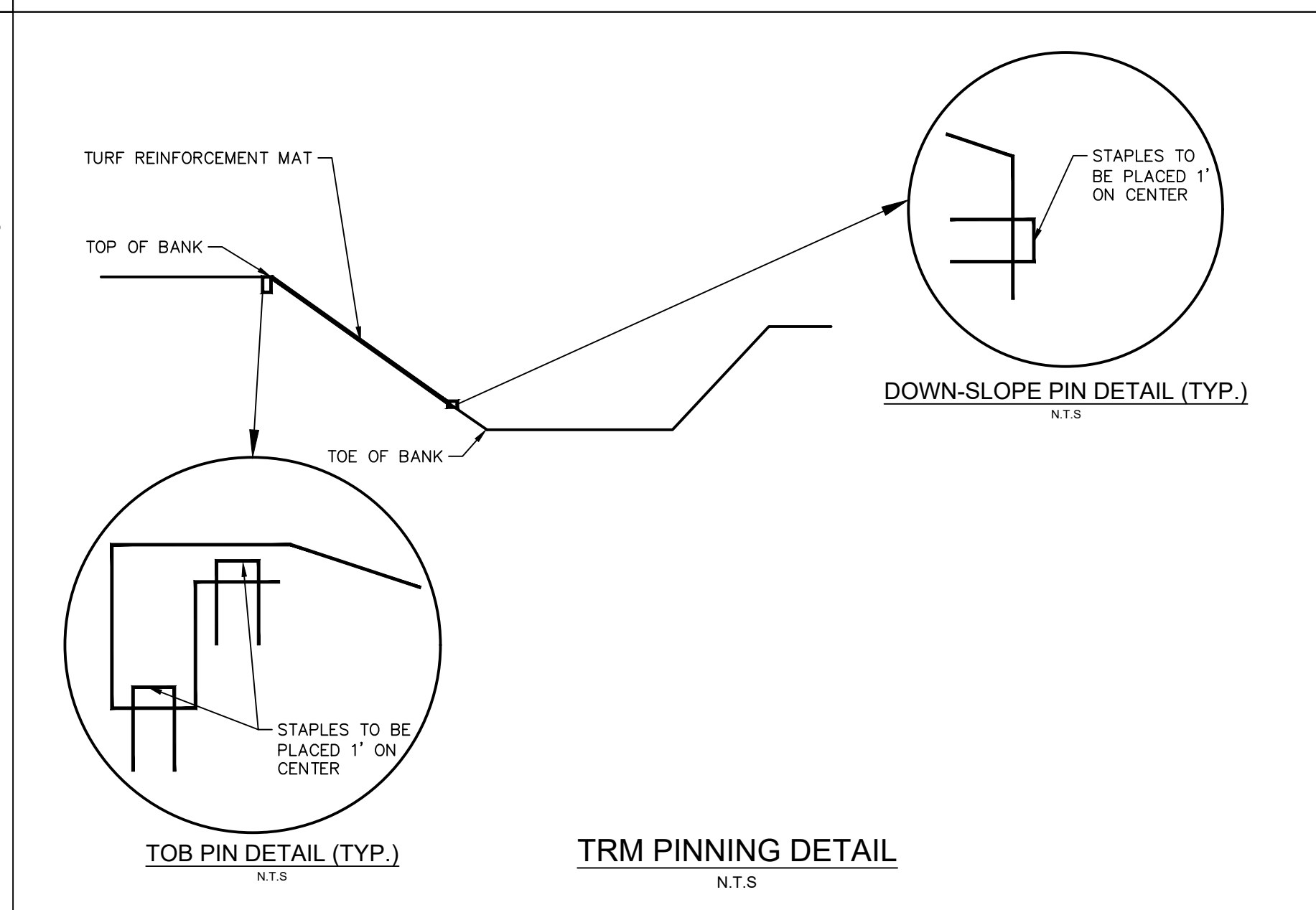
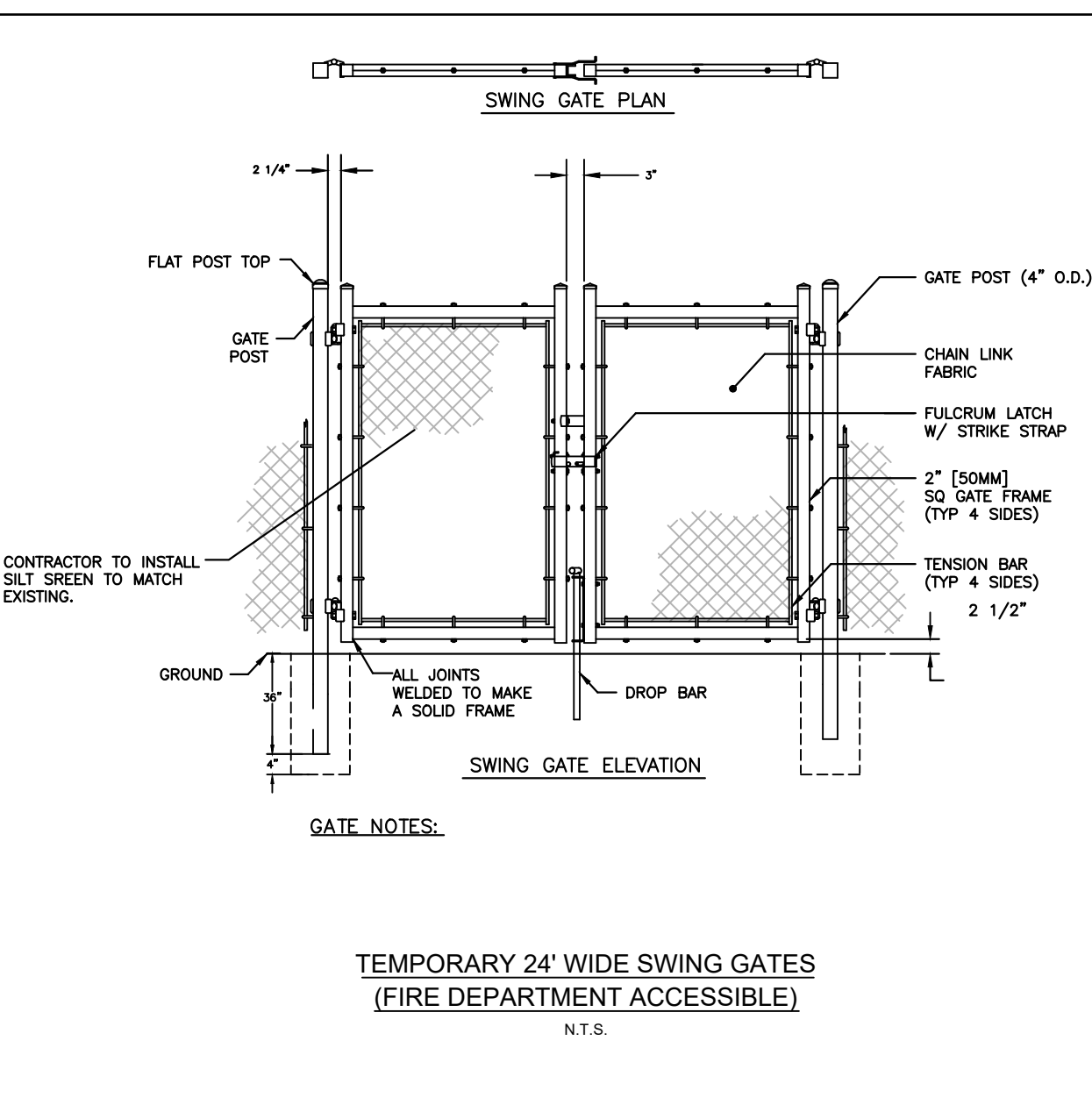
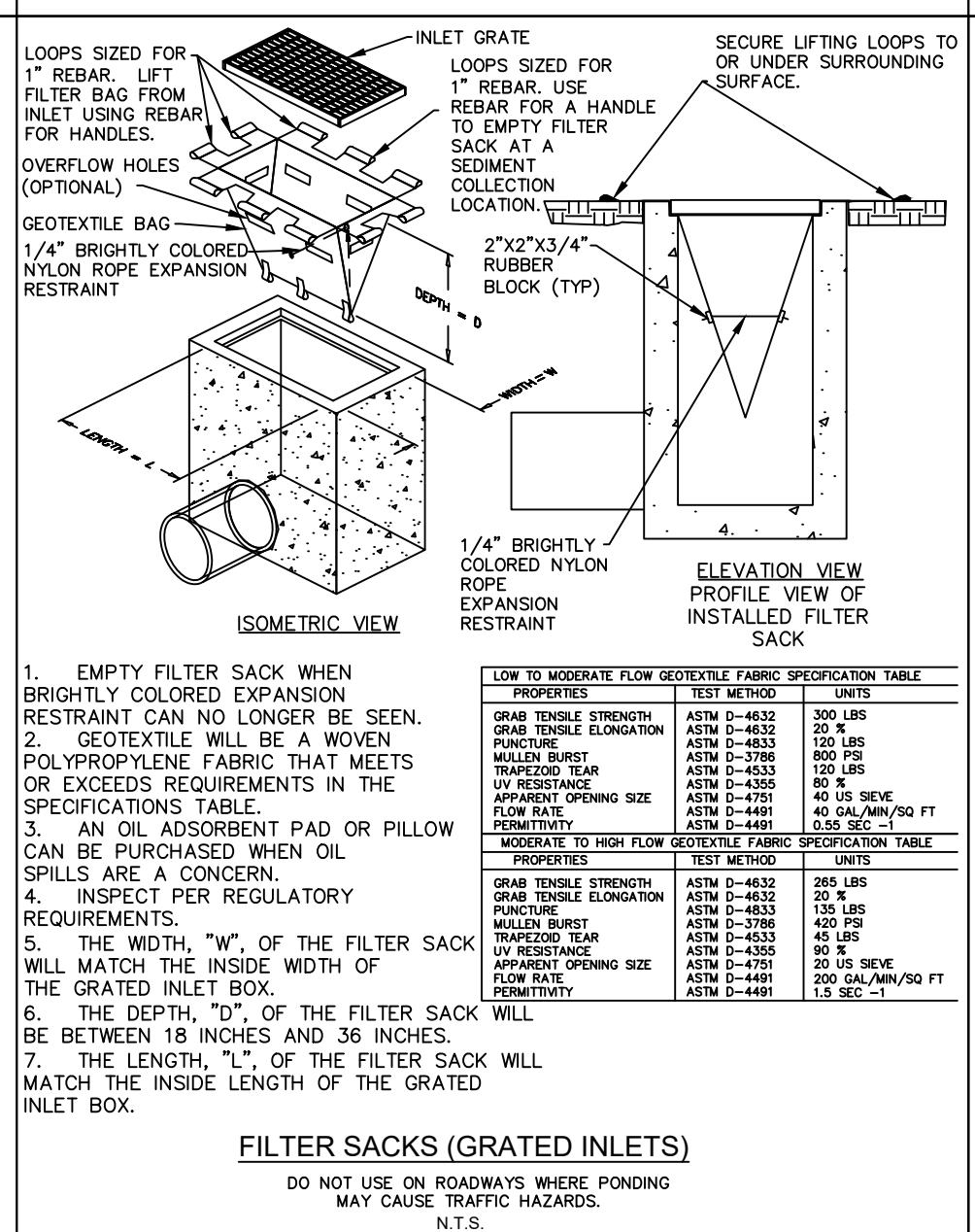
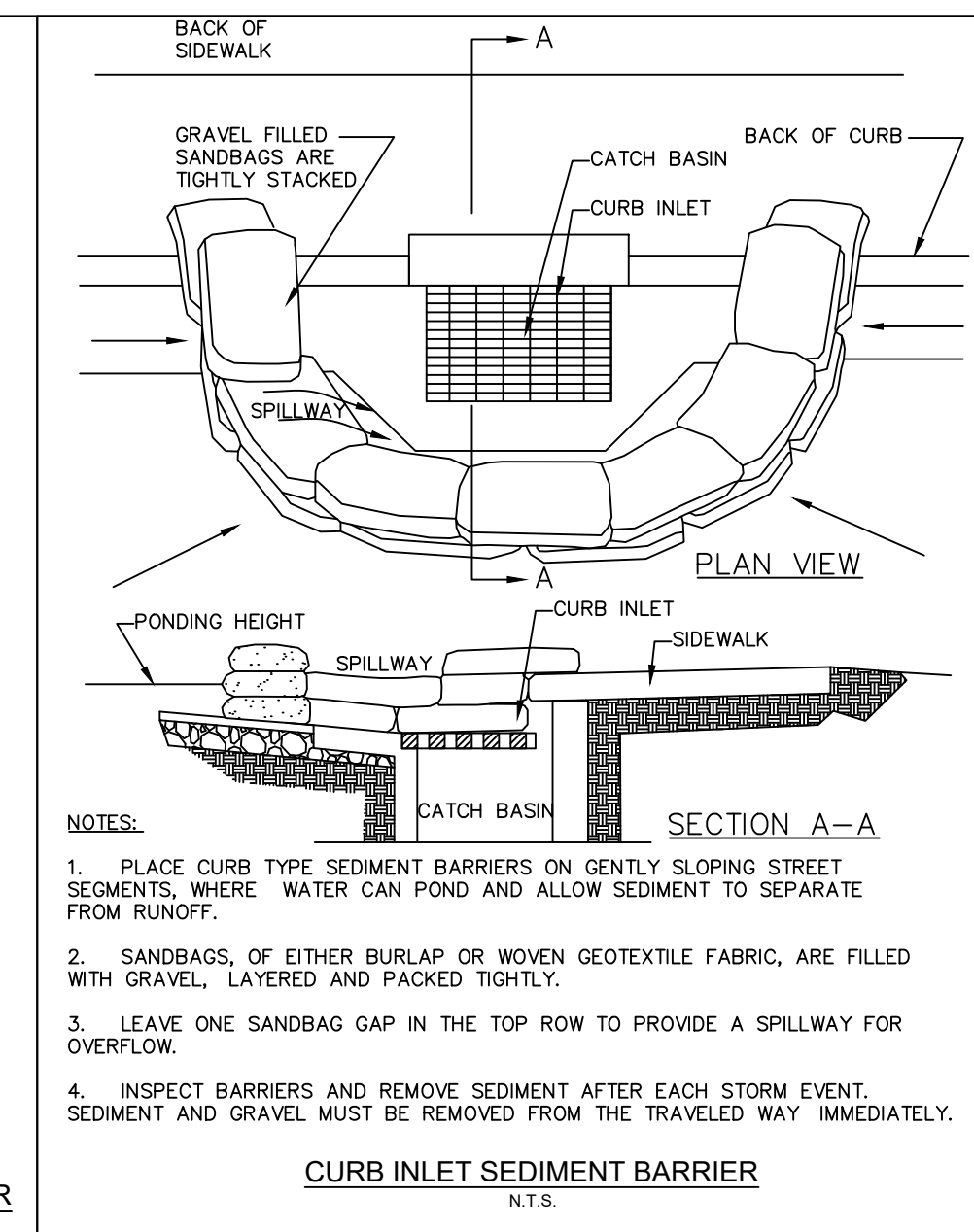
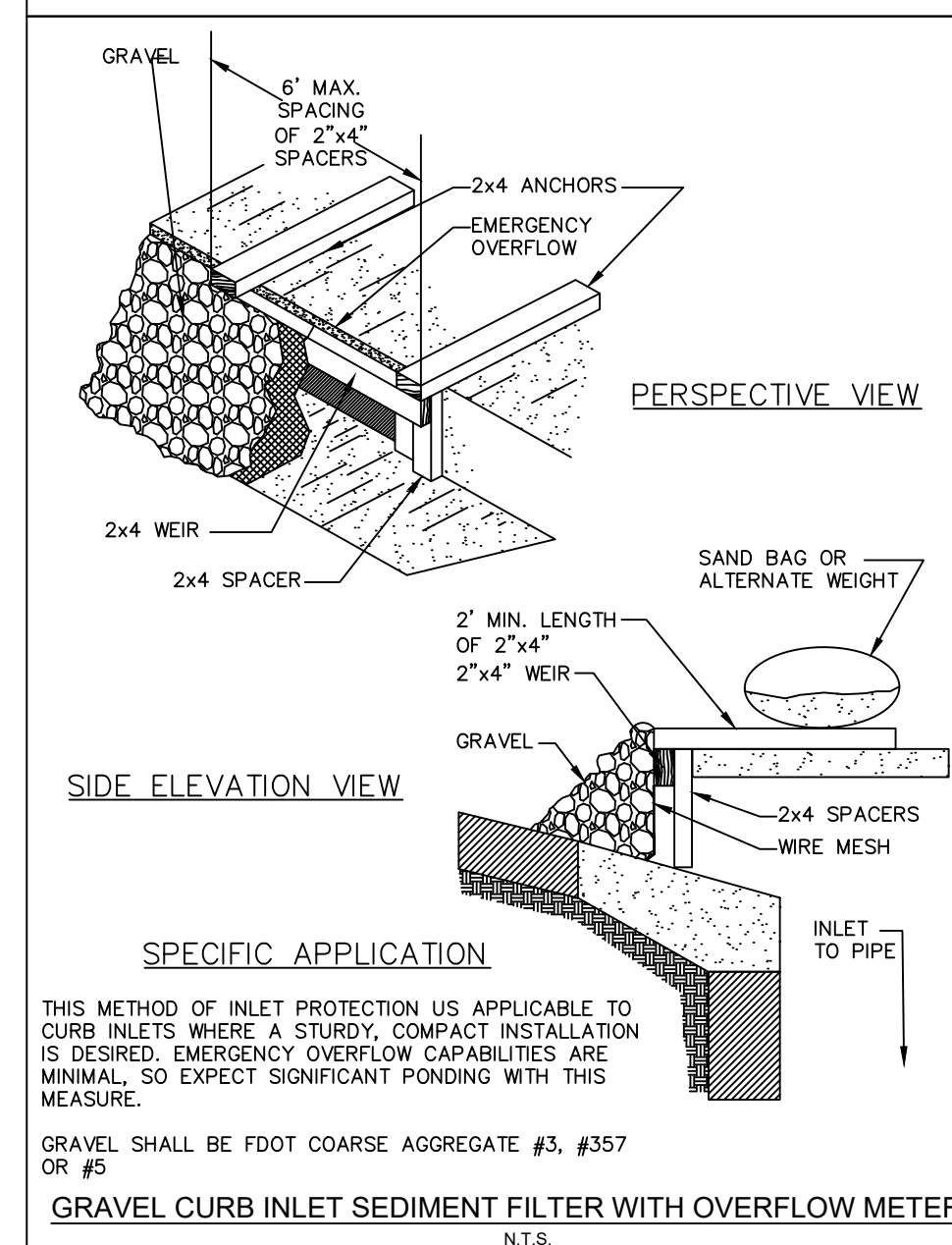
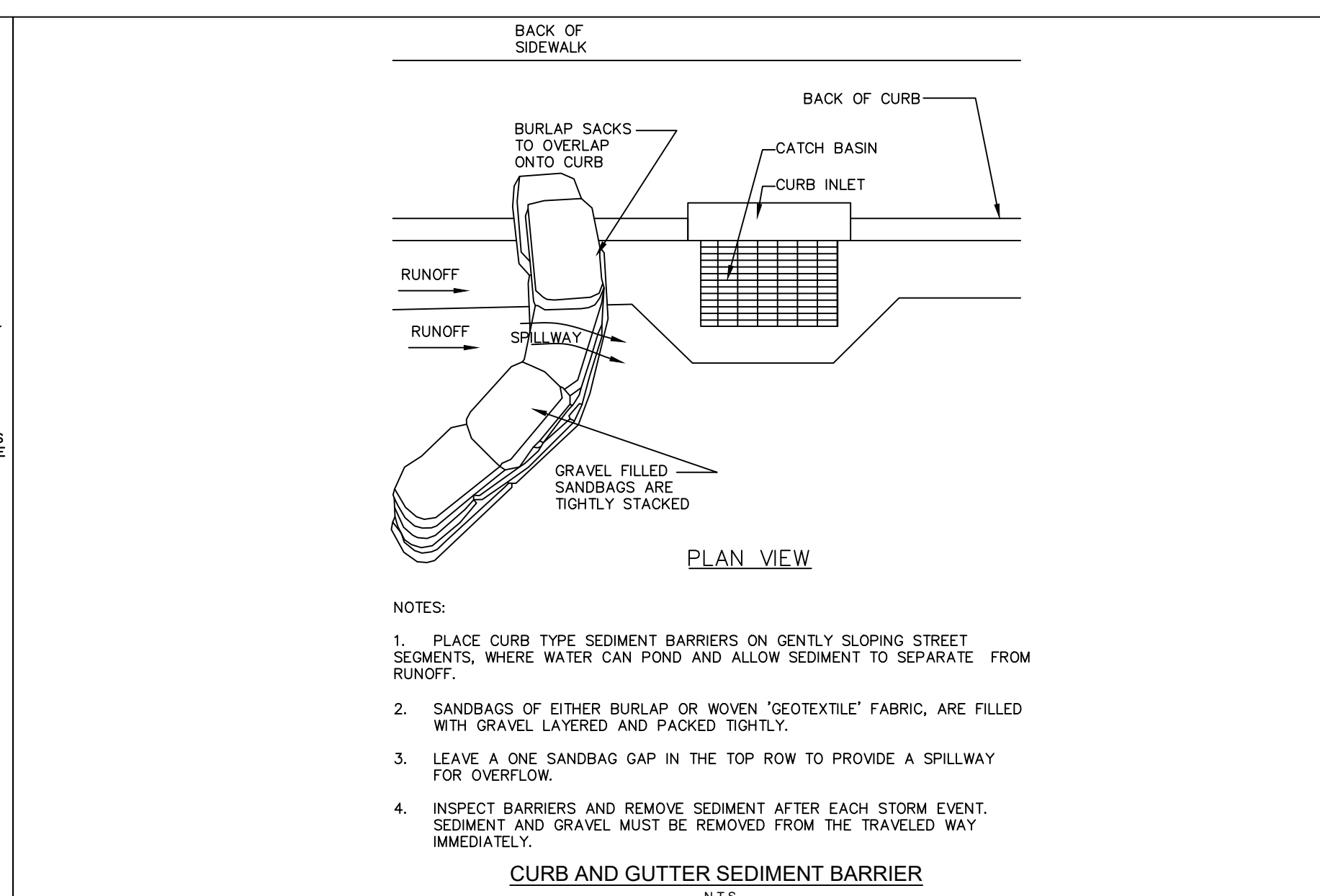
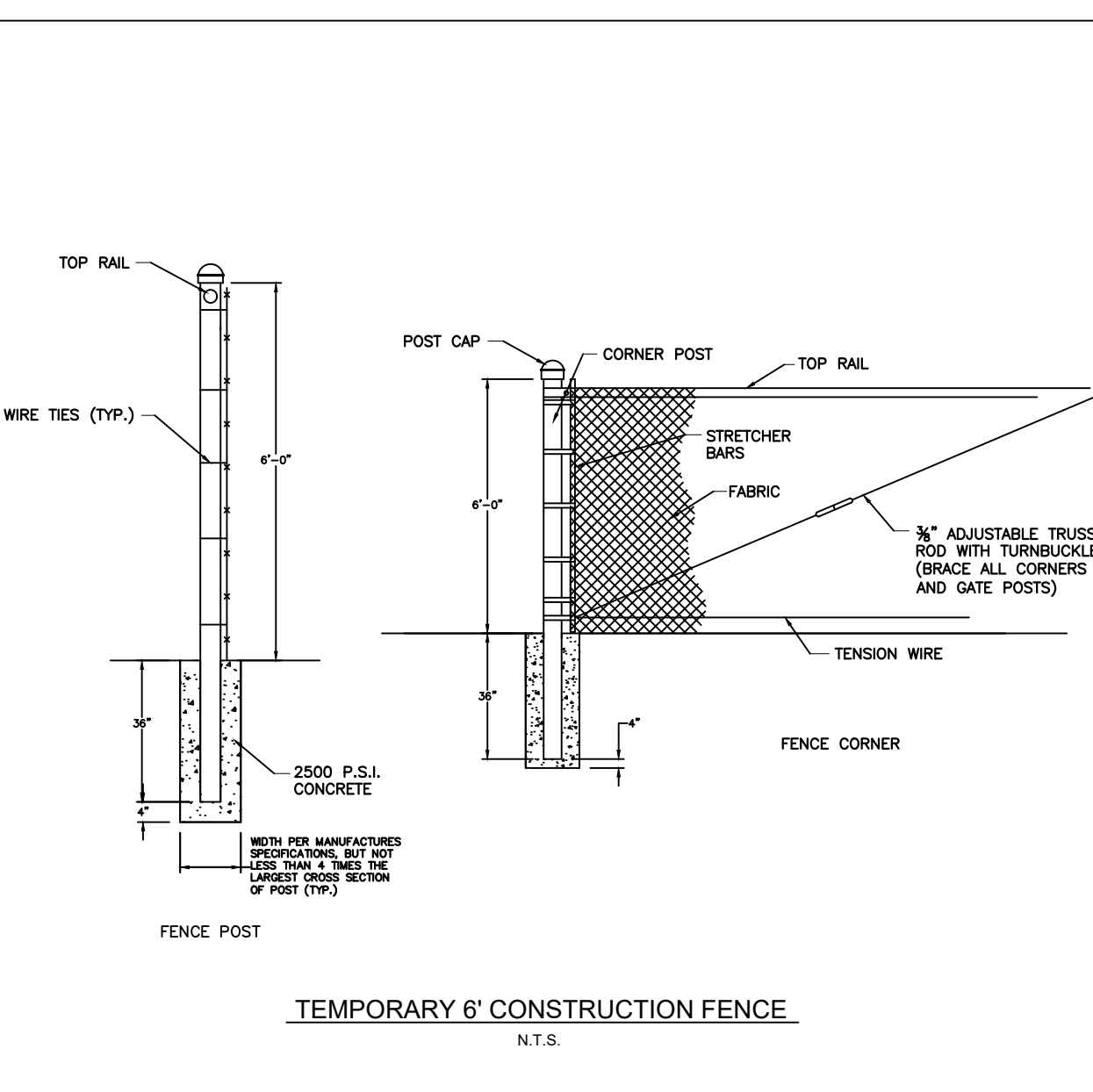
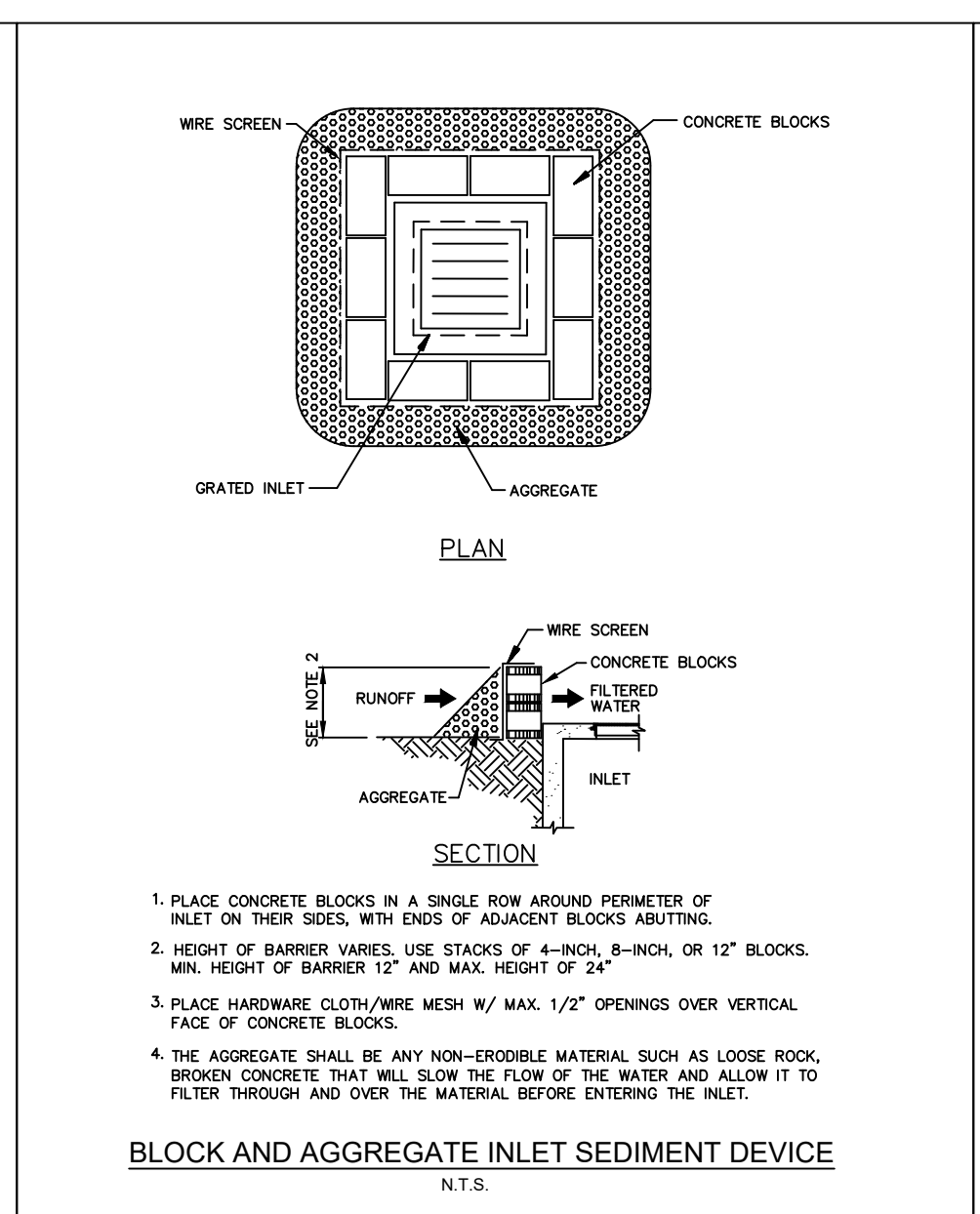
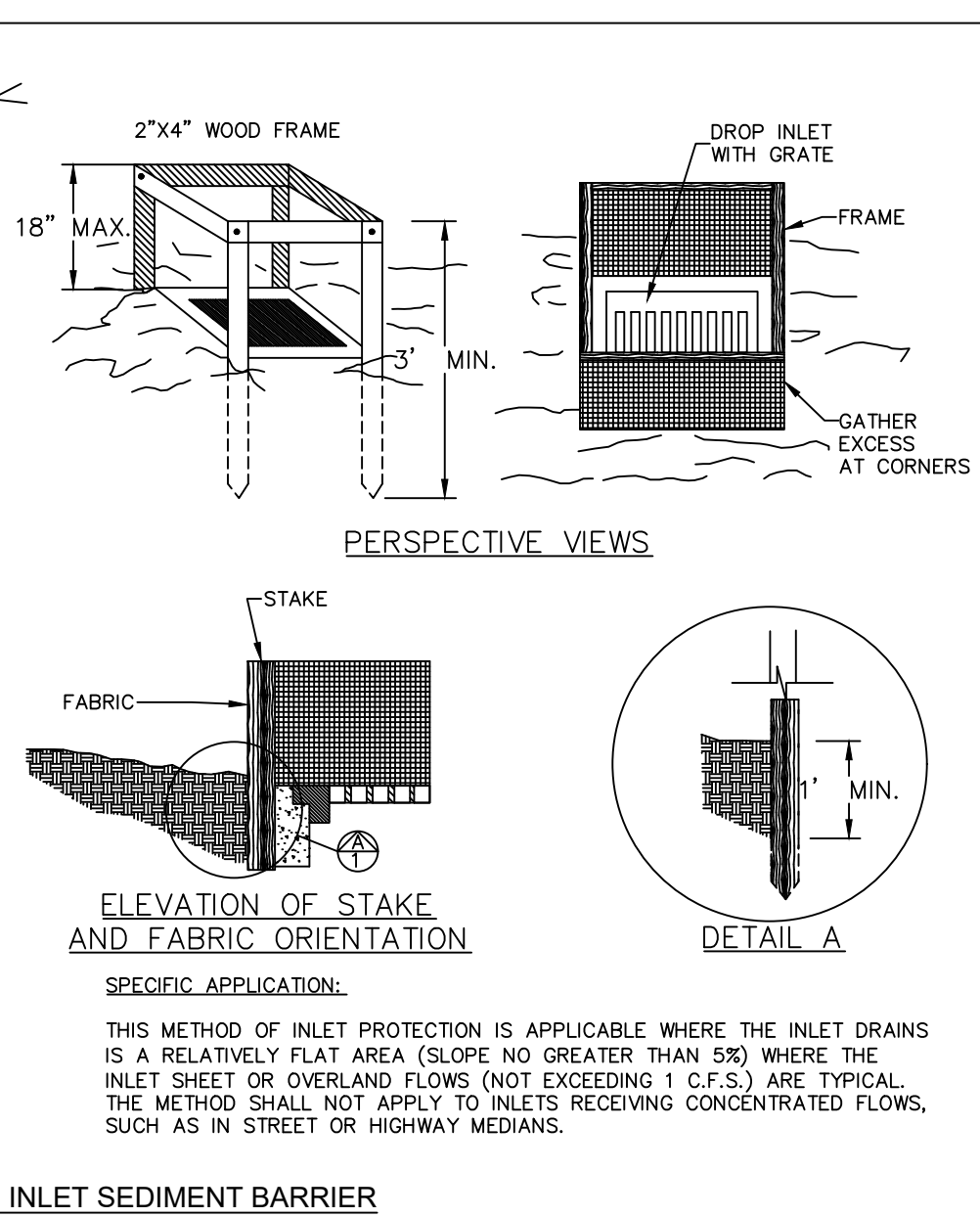
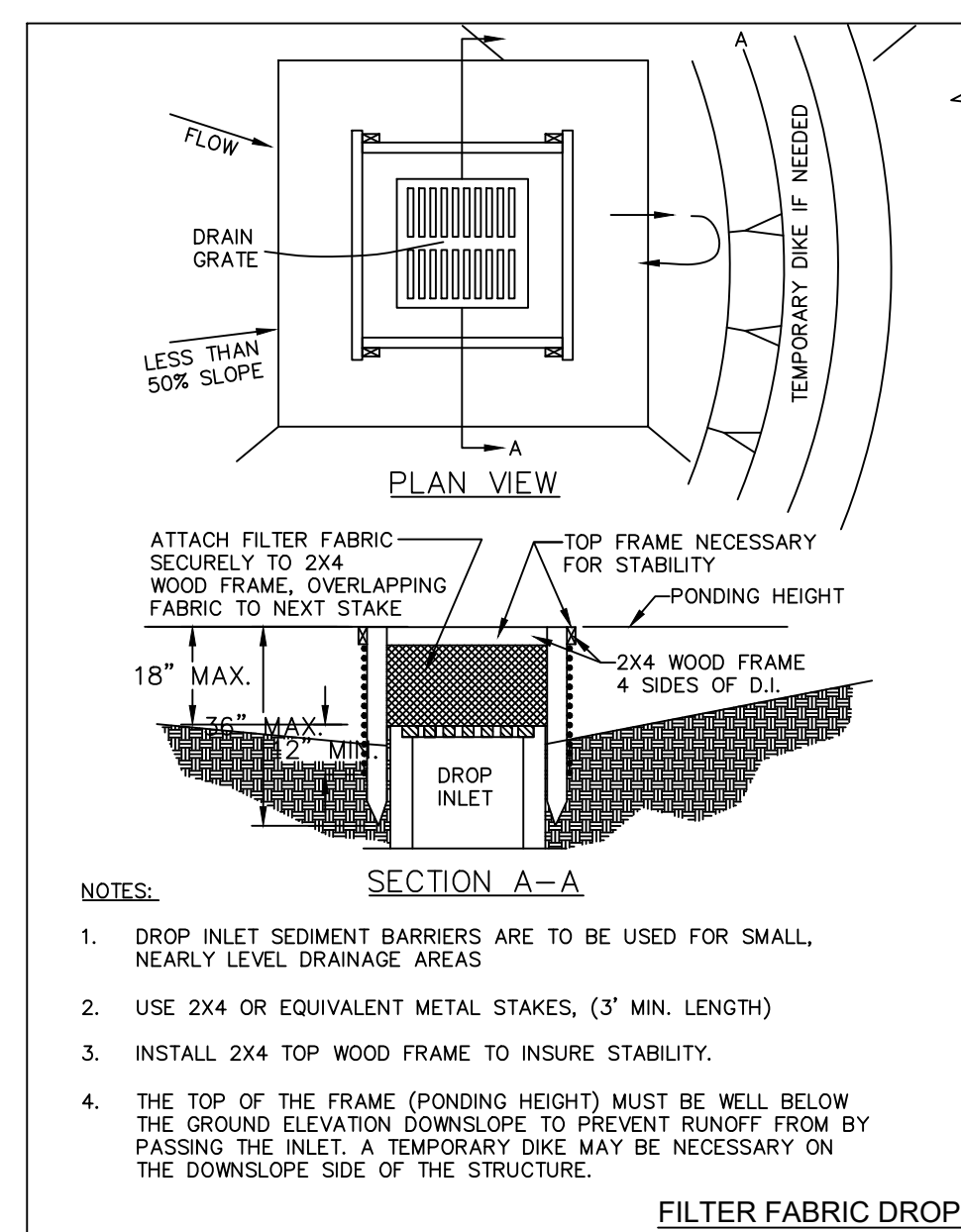
KHA PROJECT	047035124
DATE	SEPT 2023
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	JSW
CHECKED BY	
DATE:	

**OVERALL CUT AND FILL ESTIMATES**

IRC LANDFILL IMPROVEMENTS PREPARED FOR INDIAN RIVER COUNTY FLORIDA  
 SHEET NUMBER C-510



Plotted By: Sastre, Ignacio Sheet: 047035127 Layout: C-600 Erosion Control Details November 16, 2023 05:13:28pm K:\VRR-WaterResources\047035125 - IRC Landfill Improvements\CADD\PlanSheets\C-320 EROSION CONTROL DETAILS.dwg  
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NO.	REVISIONS	DATE	BY

**Kimley-Horn**

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PHONE: 772-794-4100 REGISTRY # 696  
WWW.KIMLEY-HORN.COM

LICENSED PROFESSIONAL

KHA PROJECT 047035124

DATE: SEPT 2023

SCALE: AS SHOWN

DESIGNED BY: JSW

DRAWN BY: JSW

CHECKED BY: JSW

**EROSION CONTROL DETAILS**

IRC LANDFILL IMPROVEMENTS PREPARED FOR INDIAN RIVER COUNTY FLORIDA

**SHEET NUMBER C-600**

**ISSUED FOR BID**

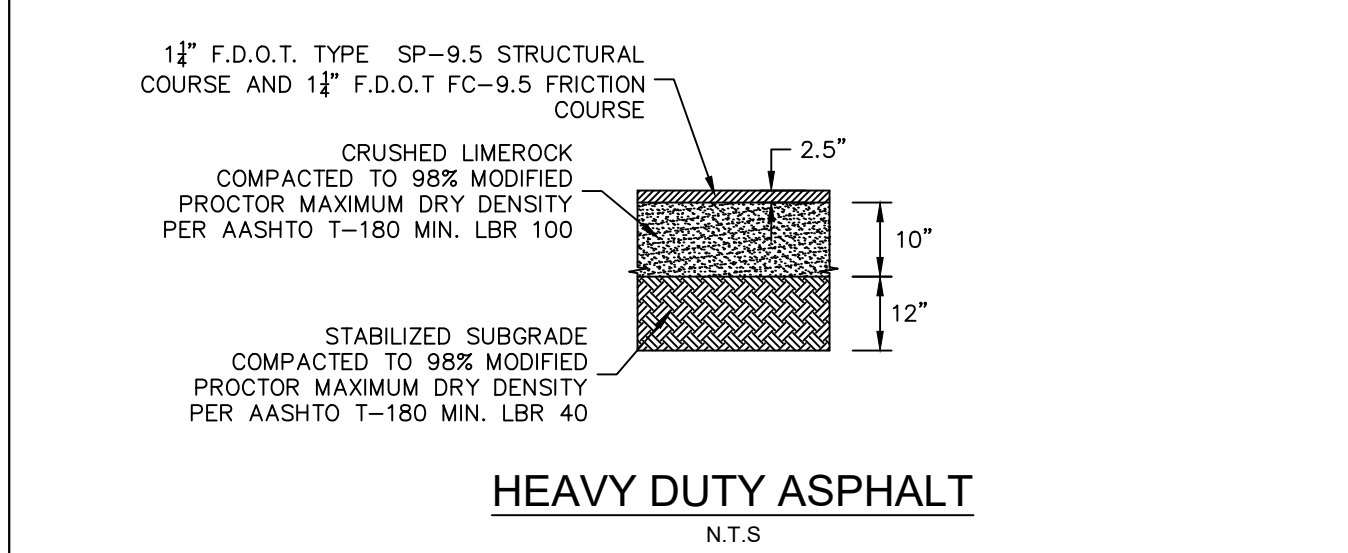
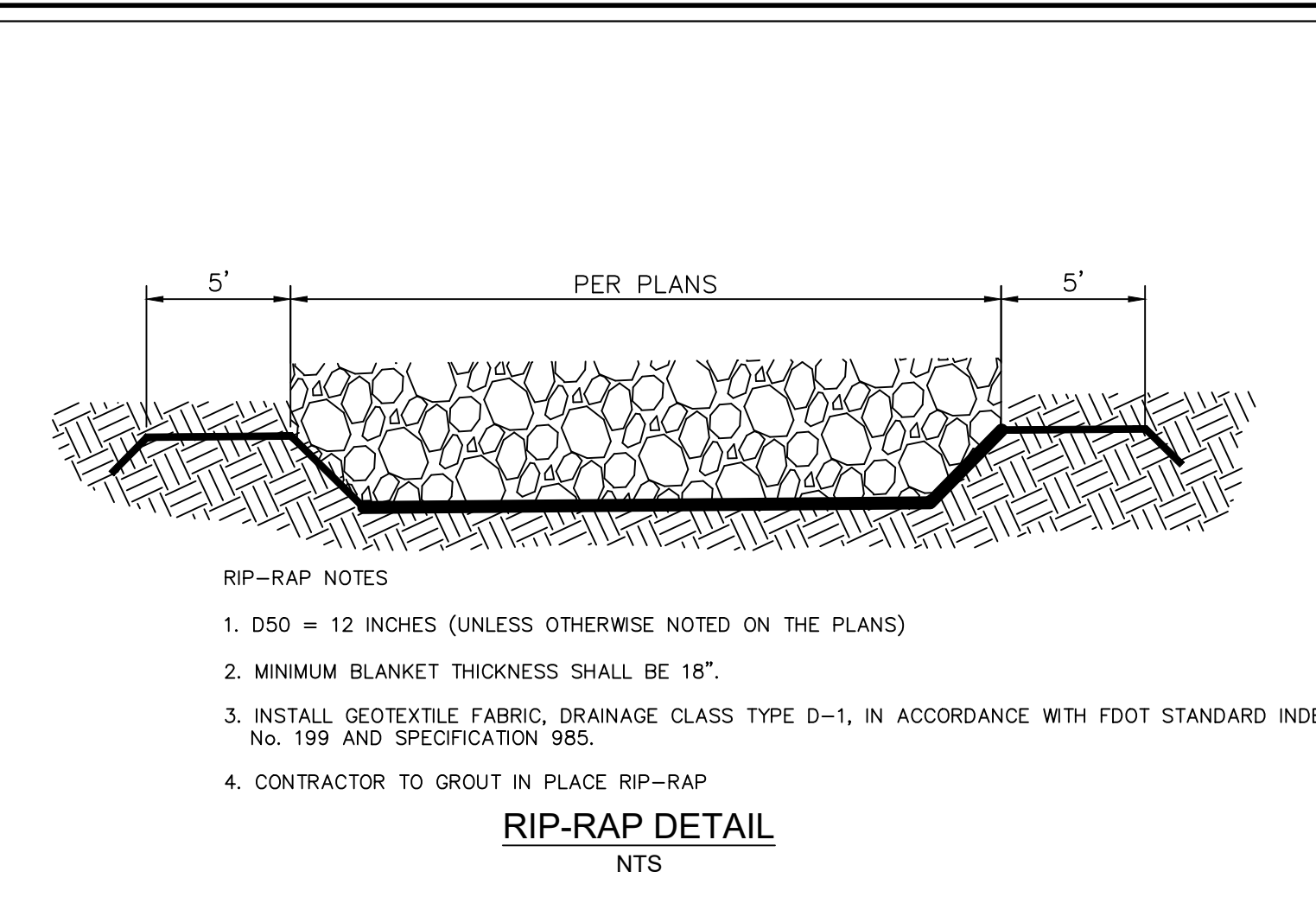
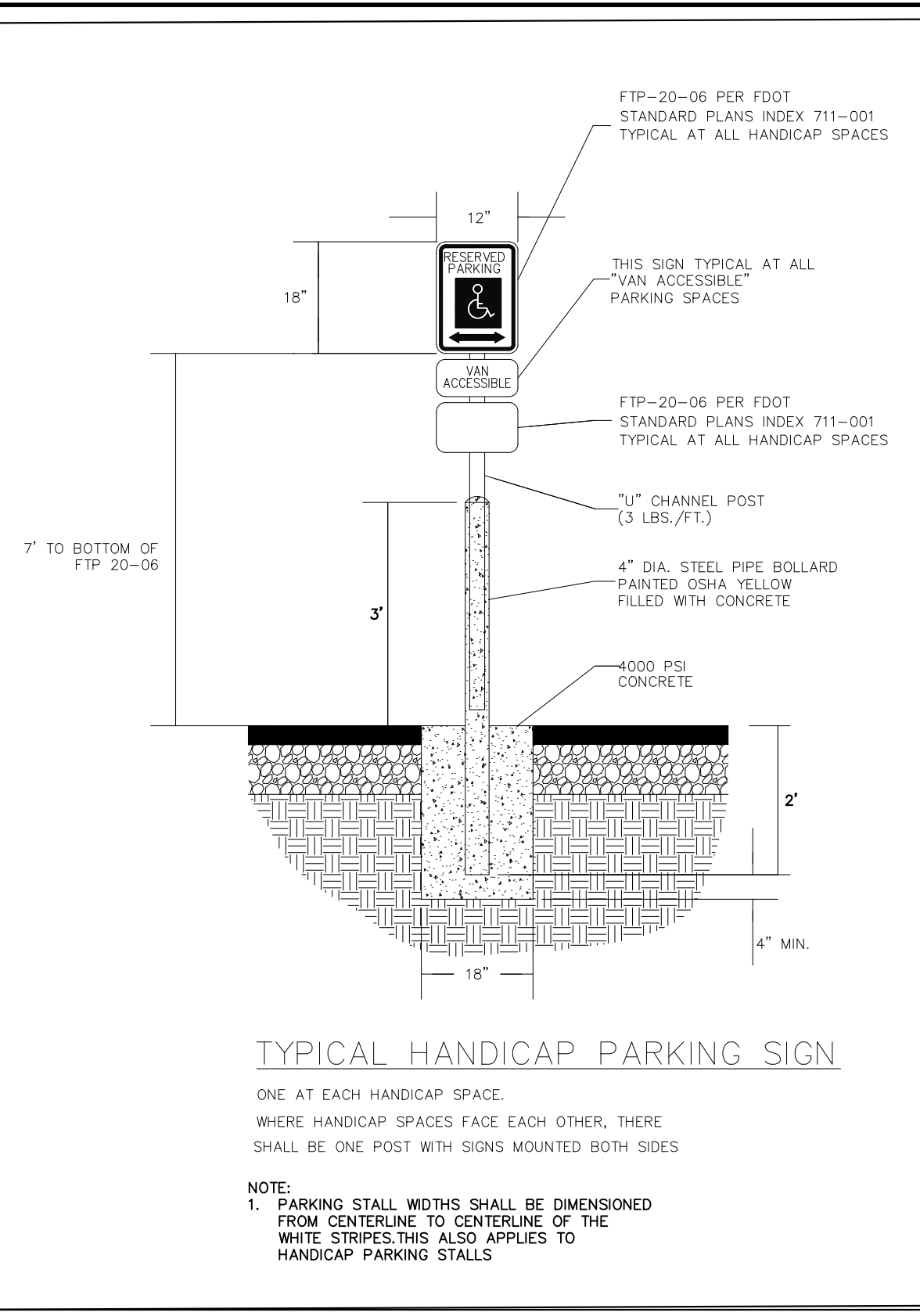
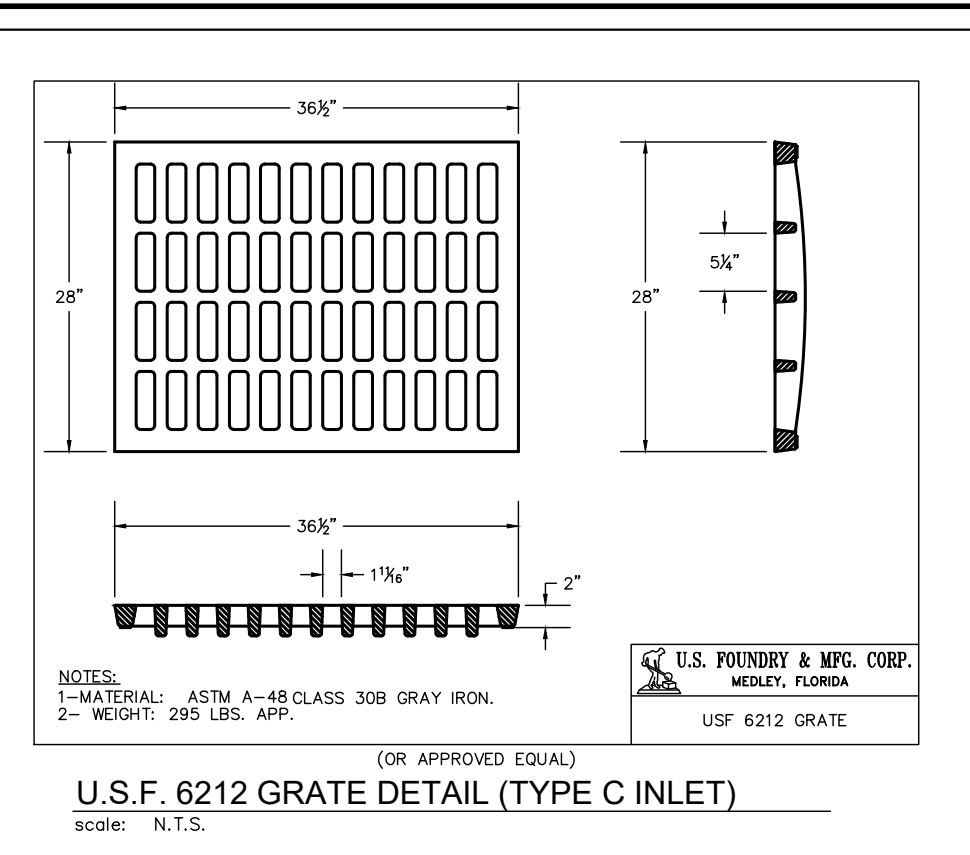
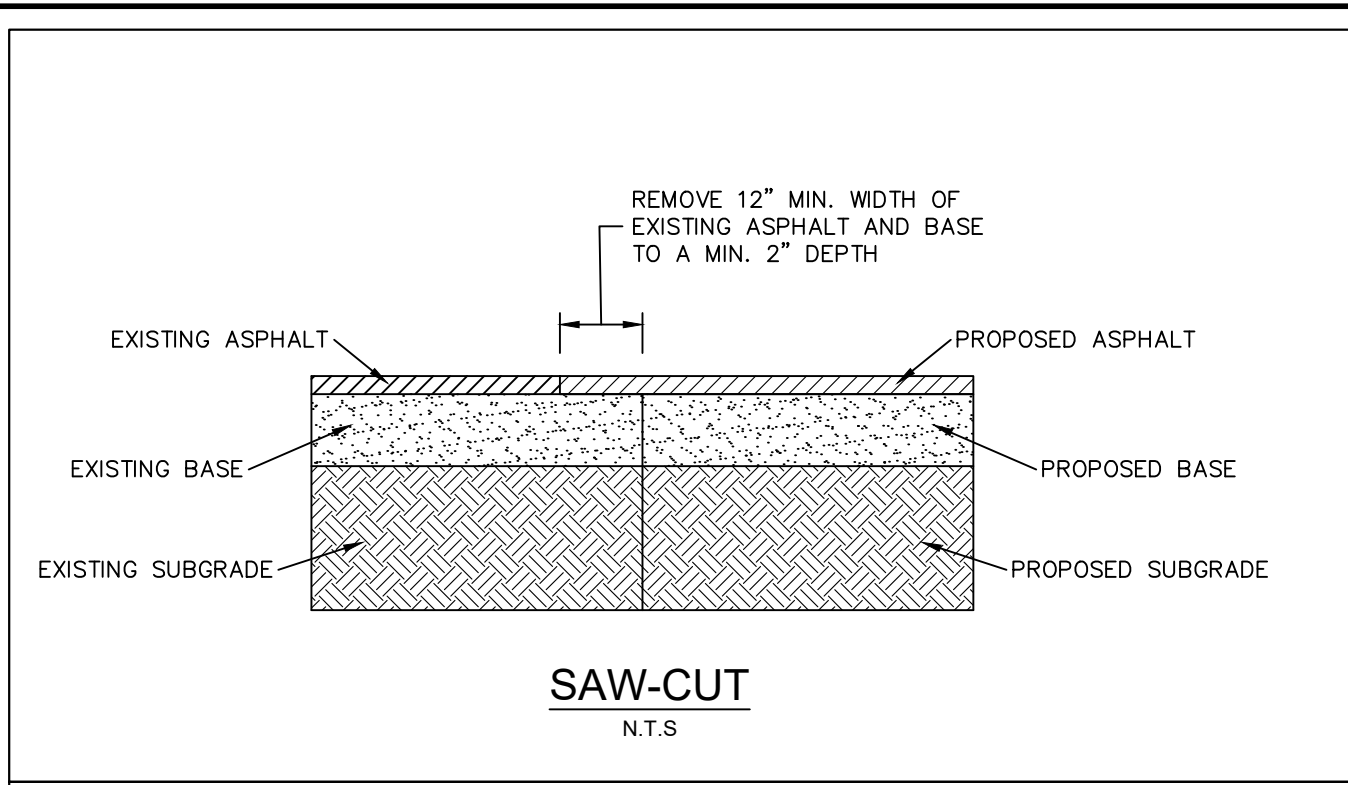
**Sunshine811**

Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.

Check positive response codes before you dig!

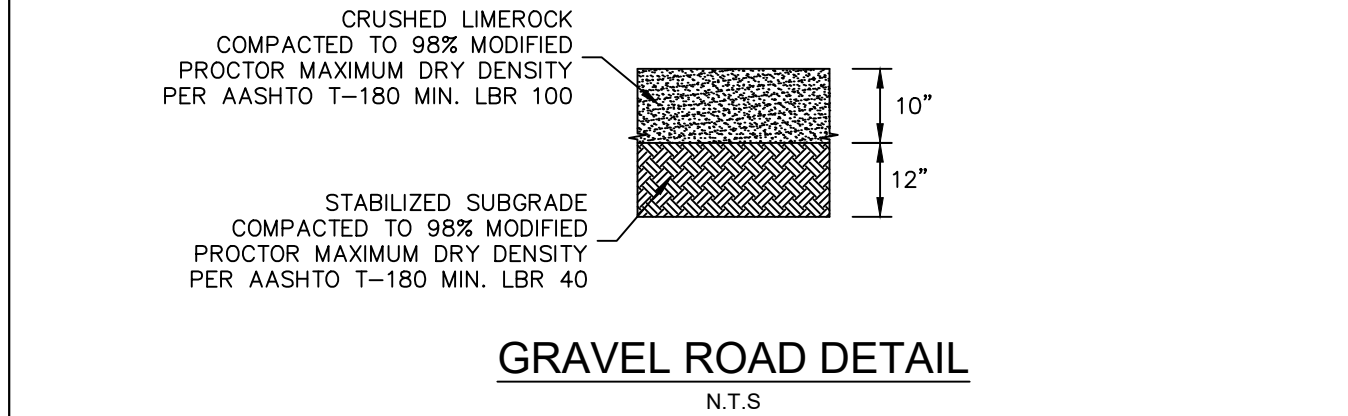


Plotted By: Sastre, Ignacio | Sheet Set: 047035127 - Layout: C-601 | Paving, Grading, Drainage Details | November 16, 2023 | 05:13:31pm | K:\VRRB - WaterResources\047035125 - IRC Landfill Improvements\CADD\PlanSheets\C-601 PAVING, GRADING, DRAINAGE DETAILS.dwg  
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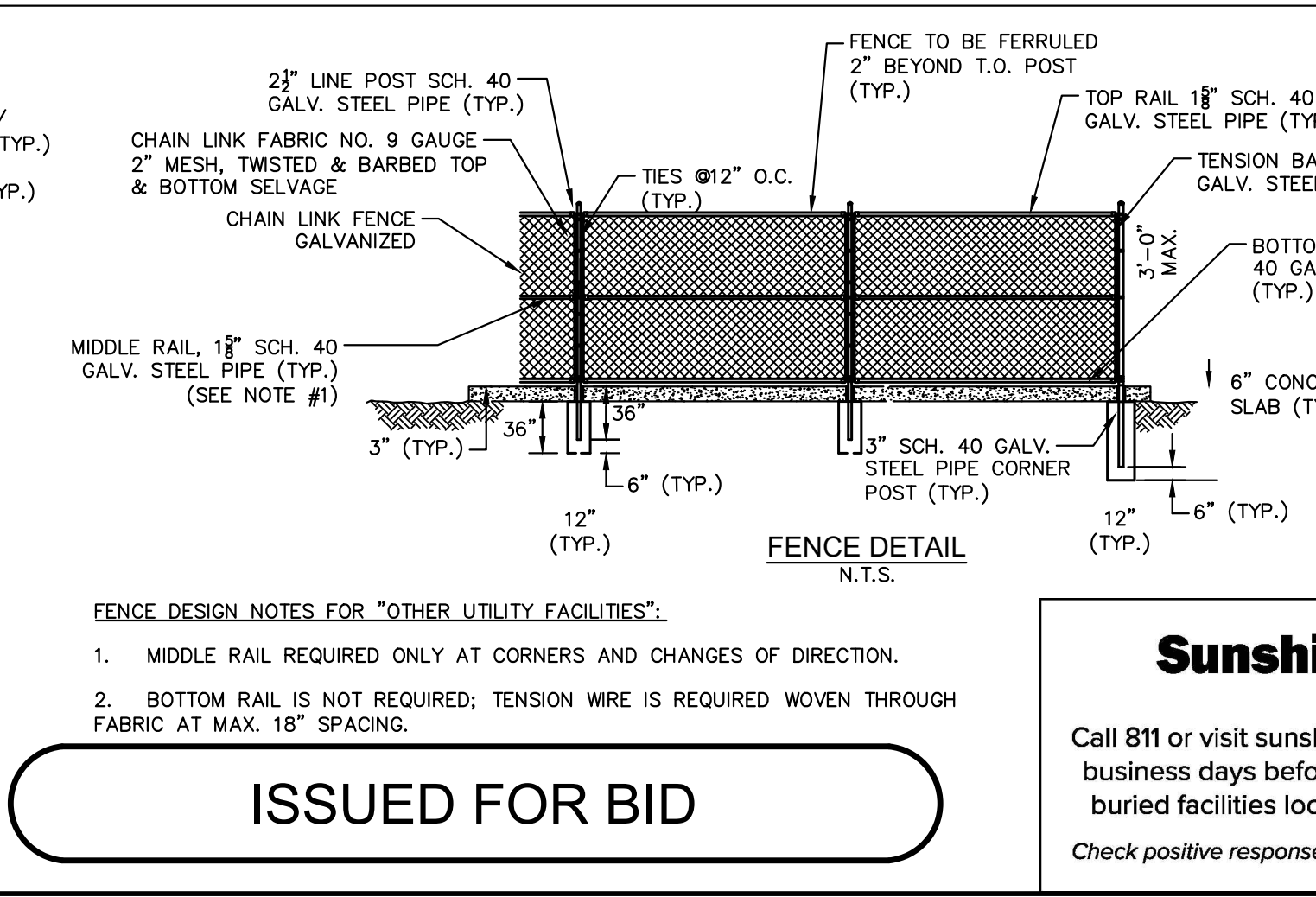
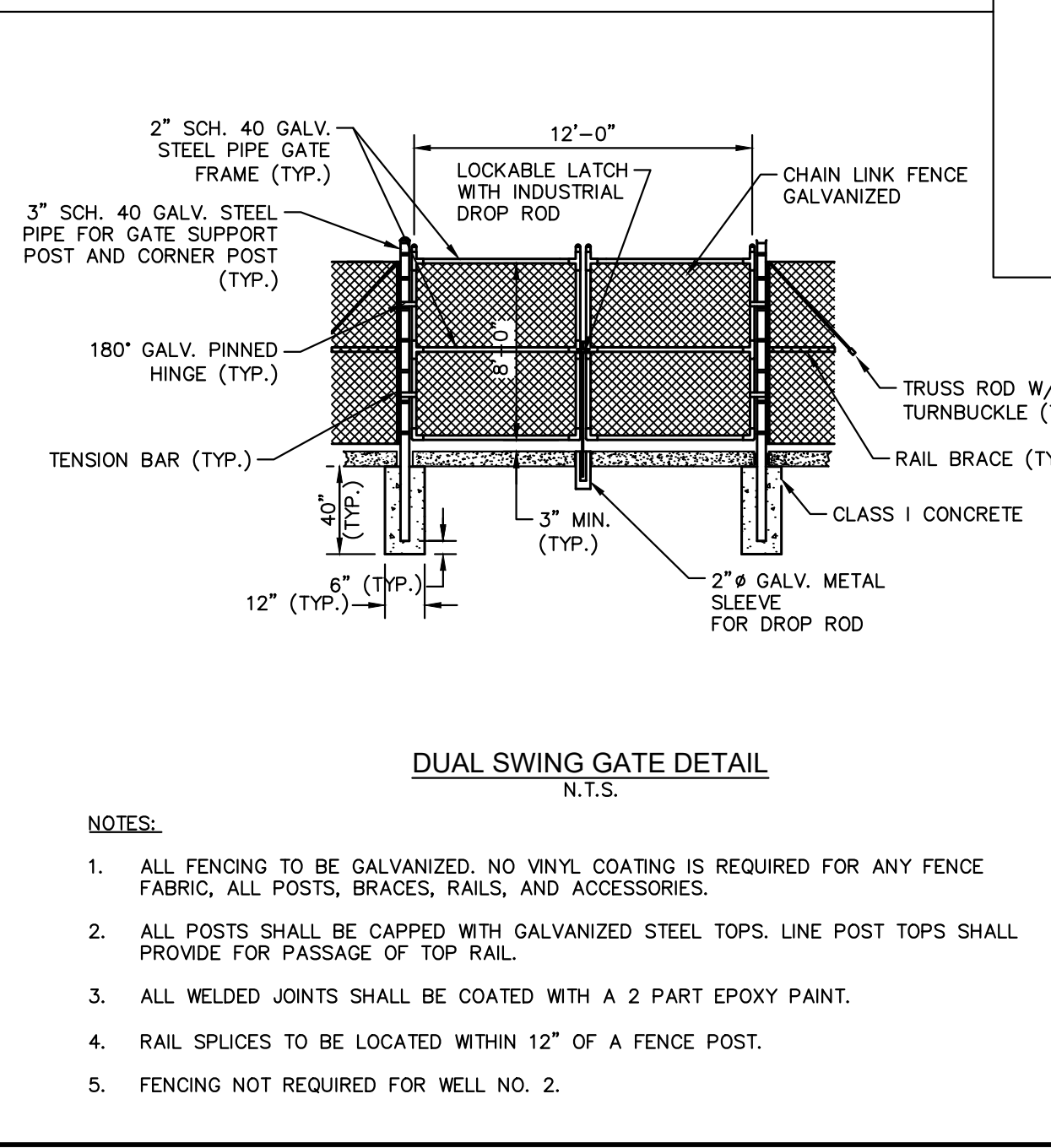
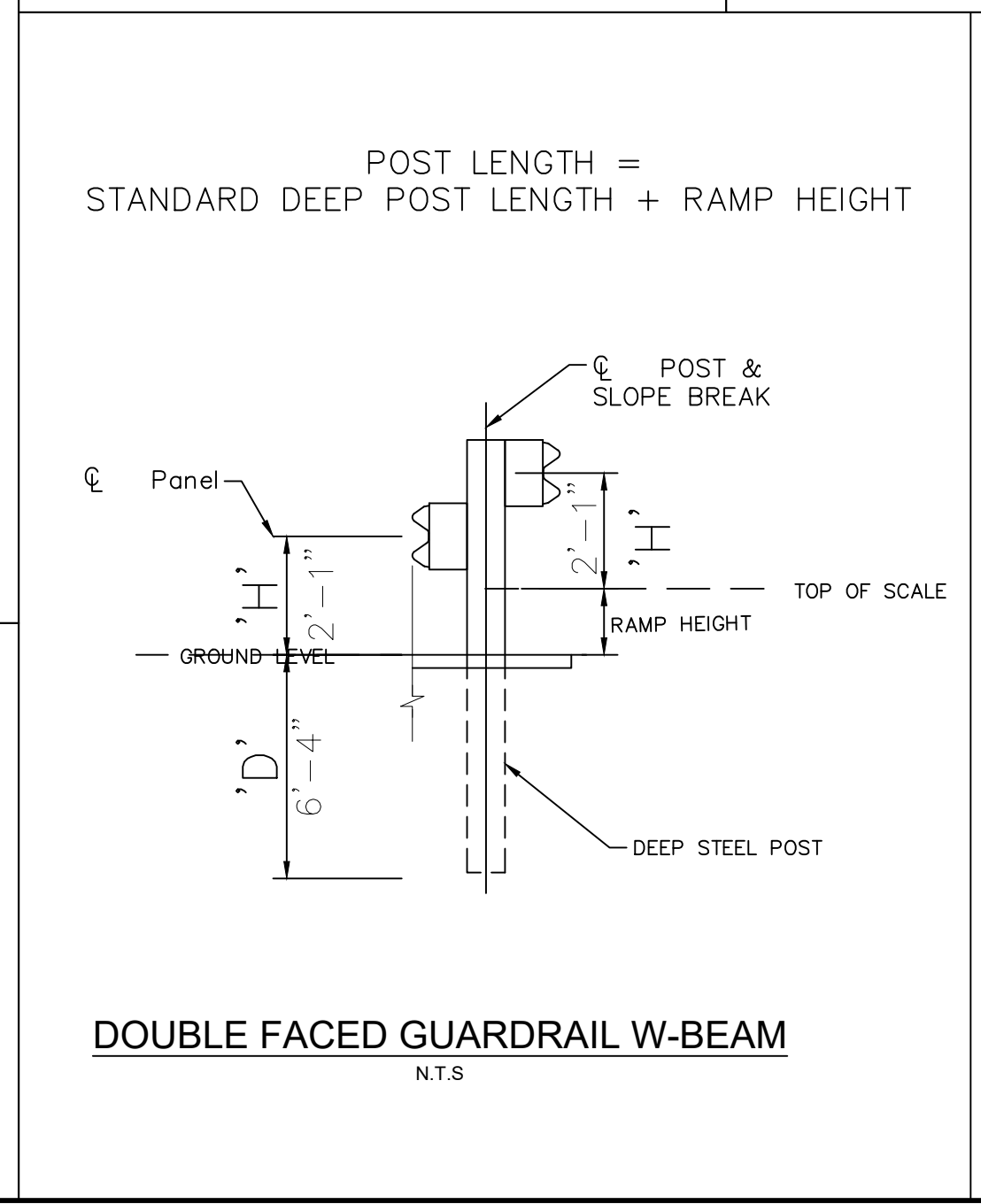
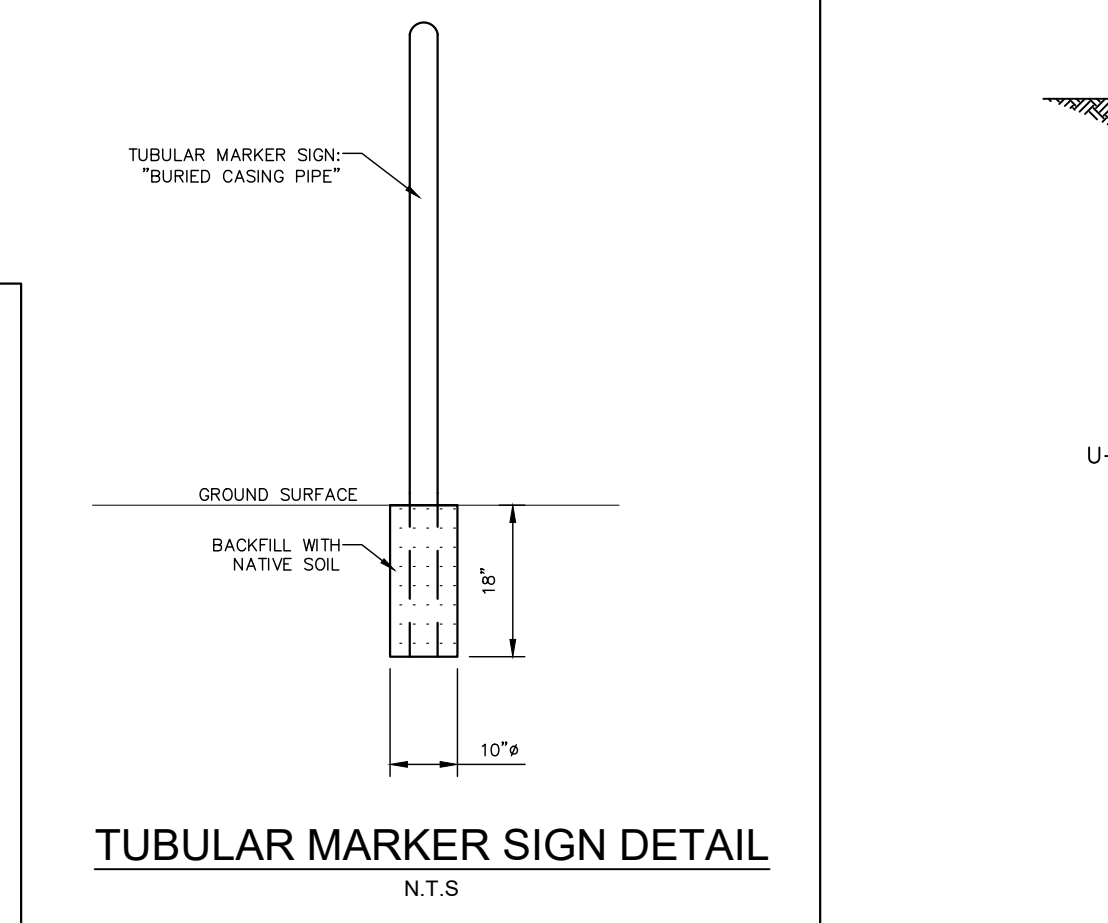
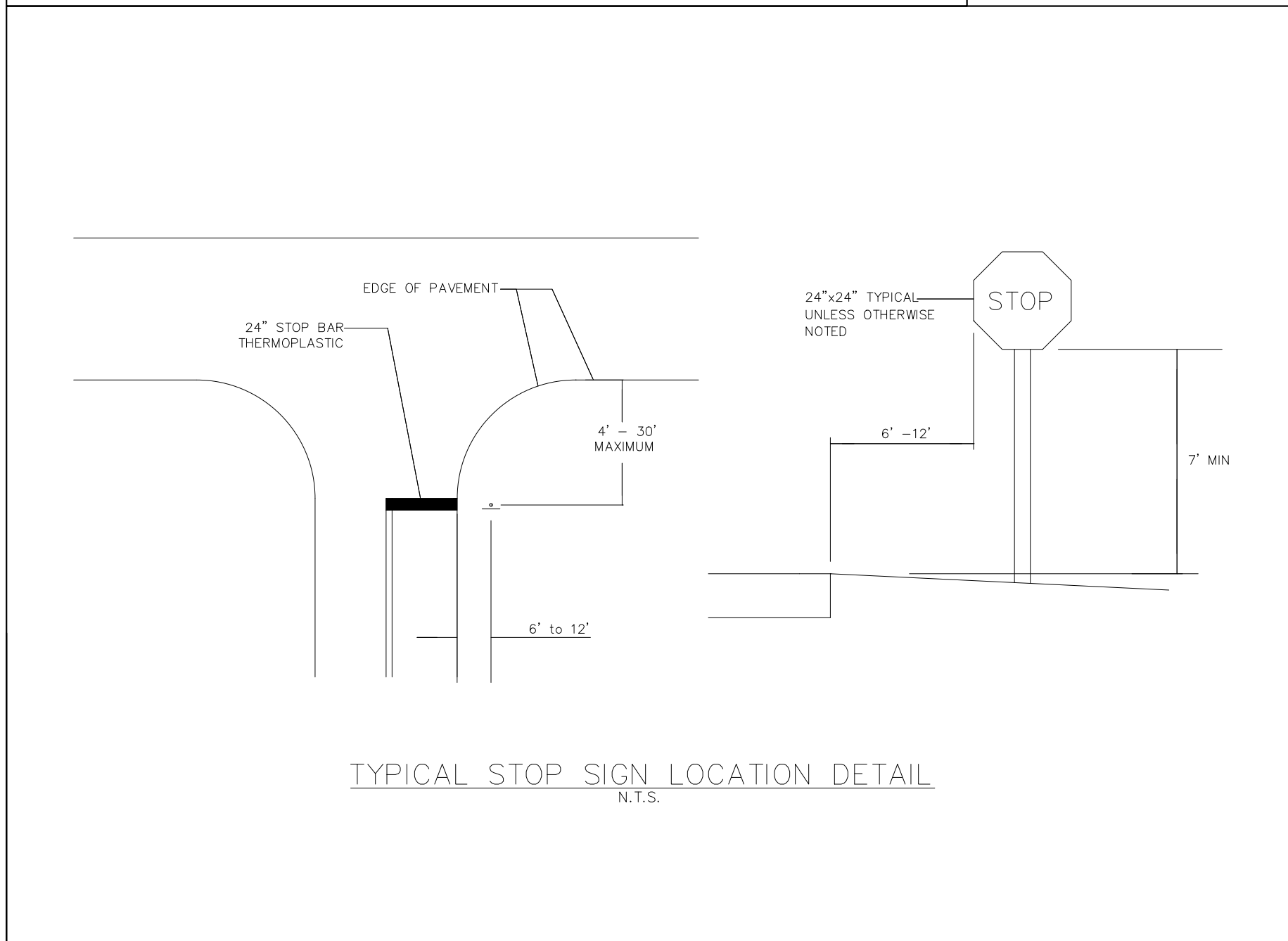
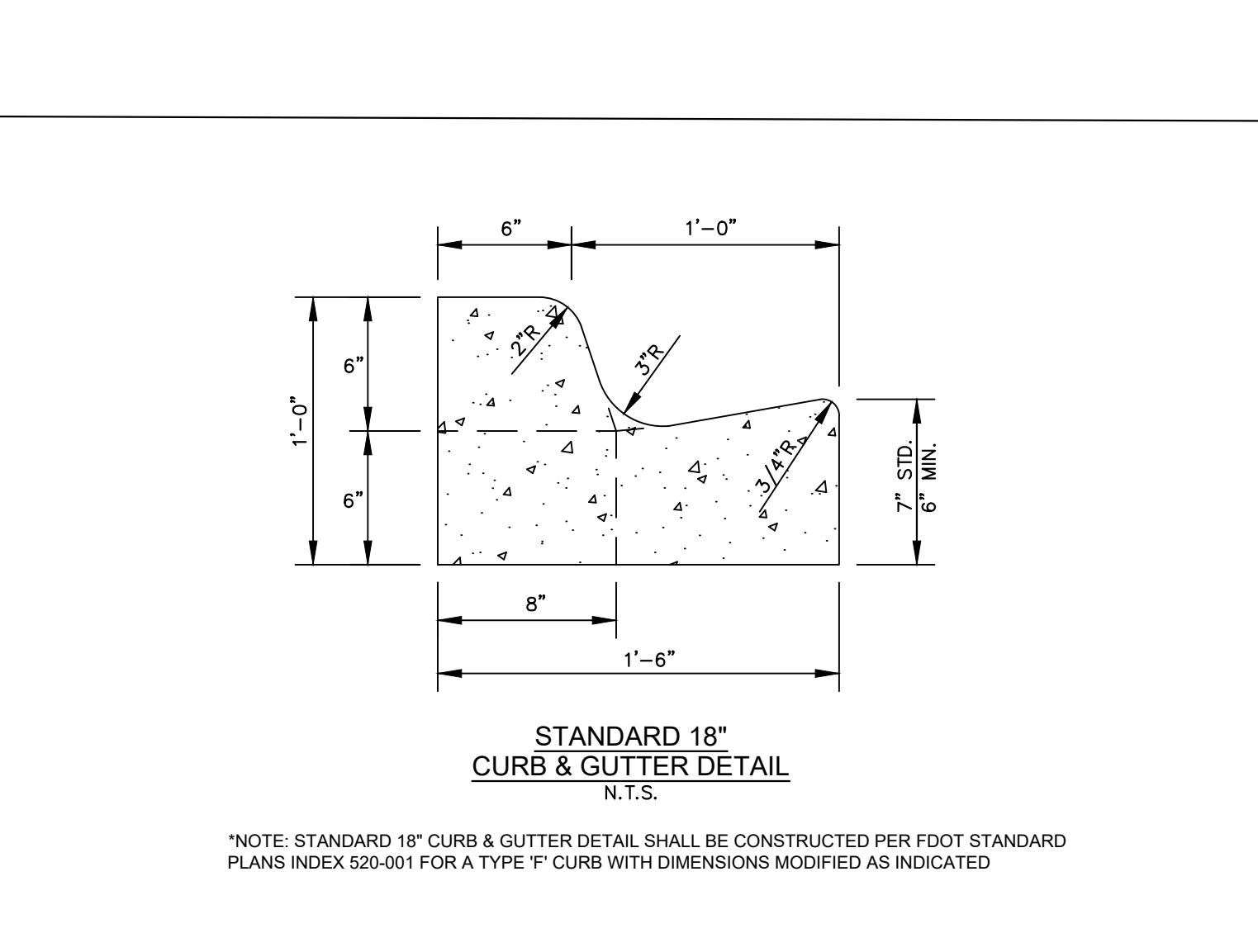
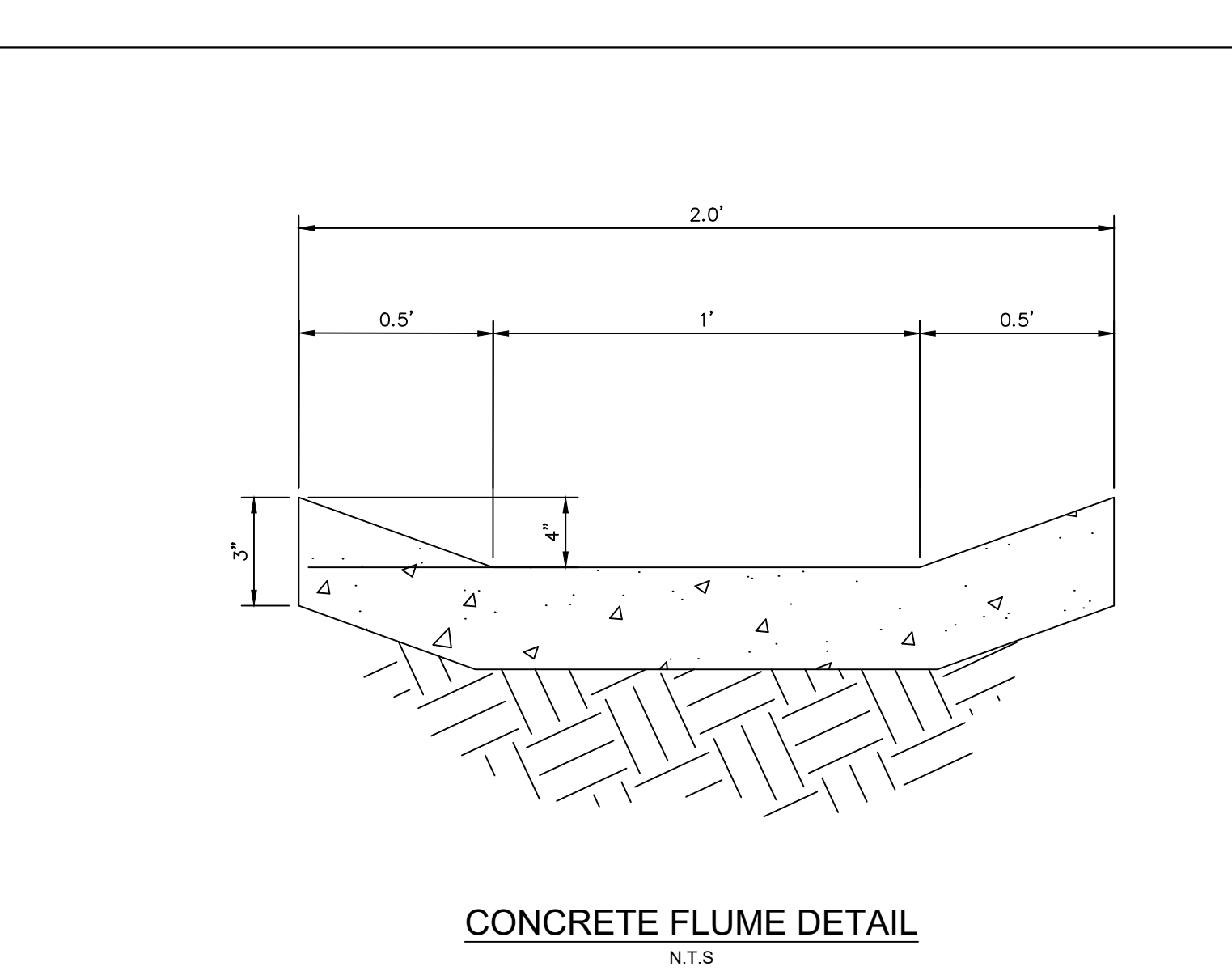
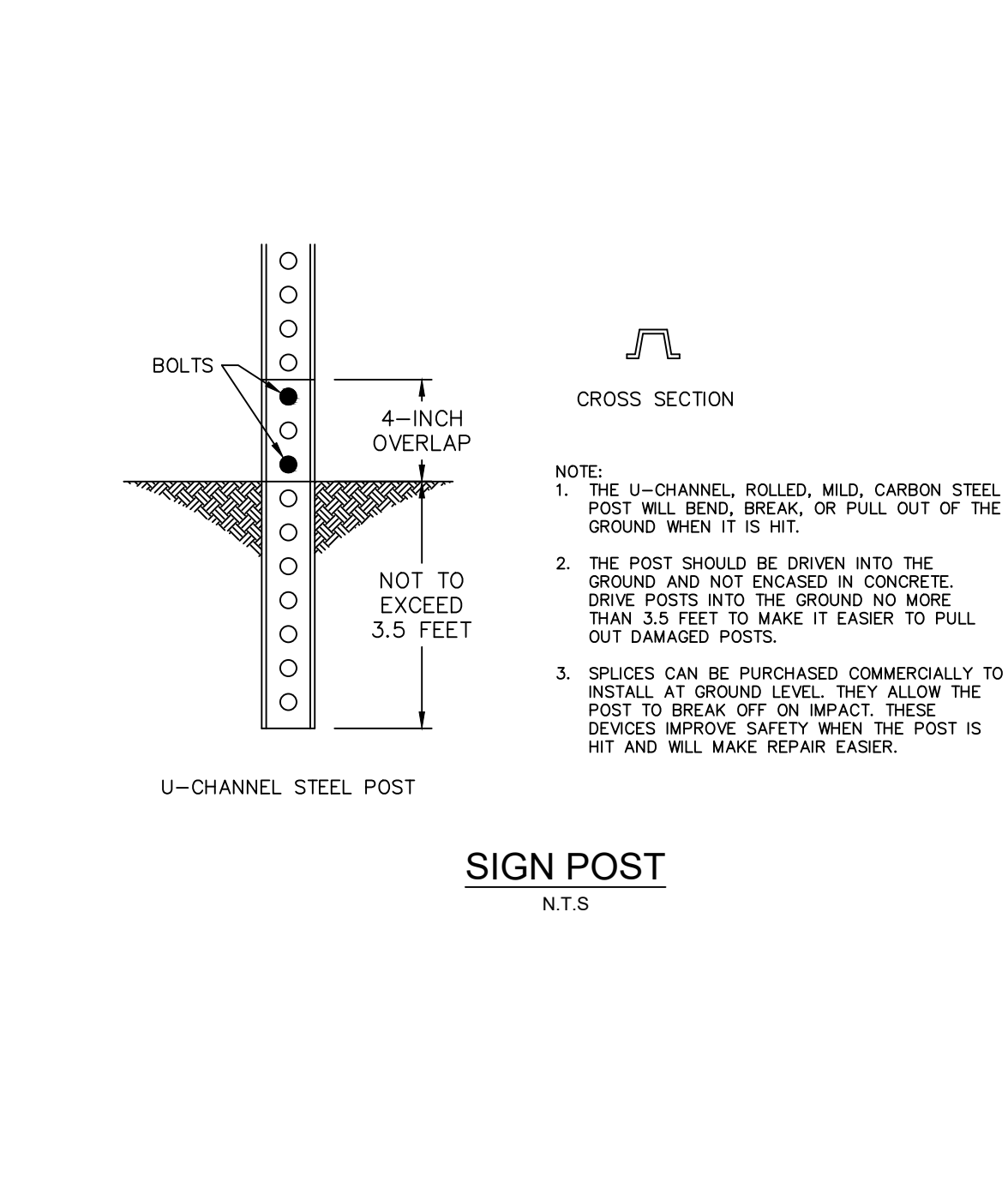
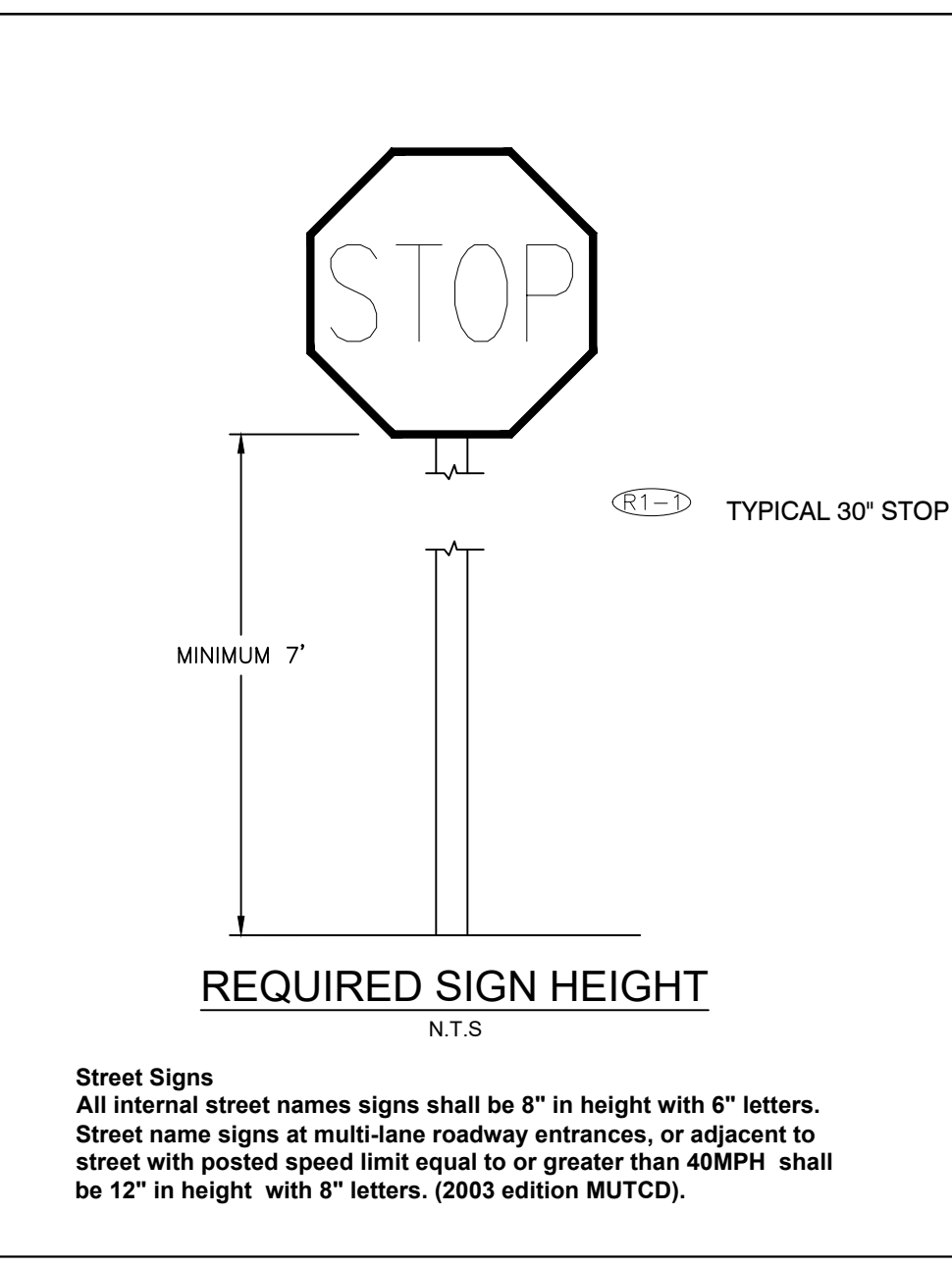
**PAVEMENT NOTES:**

- CONTRACTOR TO REFER TO THE GEOTECHNICAL REPORT FOR SITE WORK SPECIFICATIONS.
- CORE WEARING SURFACE OF ASPHALT PAVEMENT TO EVALUATE MATERIAL THICKNESS AND COMPOSITION AT A MINIMUM FREQUENCY OF 3,000 SF OR TWO LOCATIONS PER DAY'S PRODUCTION.
- MATERIALS USED IN PAVEMENT CONSTRUCTION SHALL COMPLY WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
- ALL PARKING LOT SUBGRADE SOILS SHALL BE COMPACTED TO AT LEAST 98% OF THE MODIFIED PROCTOR - MAX DRY DENSITY (ASTM D 1557) TO A DEPTH AT LEAST 2" BELOW BOTTOM OF BASE, OR THE FULL DEPTH OF NEW FILL AND THE TOP 12 INCHES OF EXISTING SUBGRADE SOILS, WHICHEVER IS GREATER.
- COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH FDOT SPECIFICATION 120.



**PAVEMENT MILLING AND RESURFACING**

- MILL 1" AVG DEPTH OF EXISTING ASPHALT PAVEMENT AND RESURFACE WITH 1 1/4" AVG DEPTH OF FC-9.5 FRICTION COURSE (TRAFFIC C, PG 76-22 W/ POLYMER)



**ISSUED FOR BID**

**Sunshine811**  
Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.  
Check positive response codes before you dig!

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WWW.KIMLEY-HORN.COM REGISTRY 696

LICENSED PROFESSIONAL  
KHA PROJECT 047035124  
DATE SEPT 2023  
SCALE AS SHOWN  
DESIGNED BY JSW  
DRAWN BY JSW  
CHECKED BY JSW  
DATE: \_\_\_\_\_

**PAVING, GRADING, DRAINAGE DETAILS**

**IRC LANDFILL IMPROVEMENTS**  
PREPARED FOR INDIAN RIVER COUNTY FLORIDA  
SHEET NUMBER C-601