



**Town of Southwest Ranches  
Drainage and Infrastructure Advisory Board  
Meeting Agenda**

Tuesday October 17, 2023  
7:00 pm

Town Hall  
13400 Griffin Road  
Southwest Ranches, FL 33330-2628

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**Board Members**

George Morris  
Kirk Hobson-Garcia  
Bryon Houghtaling  
James Starkweather  
Lee Lester  
Yardiel Fuentes  
Ed Gonzalez

**Council Liaison**

Council Member Allbritton

**A. ROLL CALL**

**B. PLEDGE OF ALLEGIANCE**

**C. AGENDA AS FOLLOWS**

Approval of Previous Meeting's Minutes

**D. NEW BUSINESS**

Green Meadows Ph. II Project Public Meeting

**E. OLD BUSINESS**

Project Updates

**F. ITEMS FOR NEXT MEETING**

**G. BOARD MEMBER COMMENTS**

**H. STAFF COMMENTS**

**I. PUBLIC COMMENTS**

**J. ADJOURNMENT**

**PURSUANT TO FLORIDA STATUTES 286.0105, THE TOWN HEREBY ADVISES THE PUBLIC THAT IF A PERSON DECIDES TO APPEAL ANY DECISION MADE BY THIS BOARD OR COMMITTEE WITH RESPECT TO ANY MATTER CONSIDERED AT ITS MEETING OR HEARING, HE OR SHE WILL NEED A RECORD OF THE PROCEEDINGS, AND THAT FOR SUCH PURPOSE, THE AFFECTED PERSON MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDING IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED. THIS NOTICE DOES NOT CONSTITUTE CONSENT BY THE TOWN FOR THE INTRODUCTION OR ADMISSION OF OTHERWISE INADMISSIBLE OR IRRELEVANT EVIDENCE, NOR DOES IT AUTHORIZE CHALLENGES OR APPEALS NOT OTHERWISE ALLOWED BY LAW.**



**Town of Southwest Ranches**  
**Drainage and Infrastructure Advisory Board (DIAB)**  
**Meeting Minutes**

Tuesday, September 19, 2023  
7:00 PM

Town Hall  
13400 Griffin Road

**Call to Order 7:00 PM**

**Roll Call**

GM, George Morris, Chair – Here  
JS, James Starkweather, Vice Chair - Here  
KHG, Kirk Hobson-Garcia P.E., Secretary – Absent  
YF, Yardiel Fuentes, Member – Here  
EG, Ed Gonzalez, Member – Absent  
BH, Bryon Houghtaling, Member - Absent  
LL, Lee Lester, Member – Here

A Quorum was established.

Also **Present:** Steve Breitreuz, Mayor; Rod Ley P.E., Public Works Director; Jim Allbritton, Vice Mayor; Bob Hartmann, Council Member; Gary Jablonski, Council Member; David Kuczenski, Council Member,  
**Absent:** Bryon Houghtaling, Kirk Hobson-Garcia, Ed Gonzalez

**Pledge of Allegiance**

**Follow up Drainage Discussion**

**Motion: To approve previous meeting minutes**

<b>Result</b>	<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>	<b>GM</b>	<b>JS</b>	<b>KHG</b>	<b>YF</b>	<b>EG</b>	<b>BH</b>	<b>LL</b>
<i>Passed</i>	<i>JS</i>	<i>LL</i>	<i>Y</i>	<i>Y</i>	<i>Abs</i>	<i>Y</i>	<i>Abs</i>	<i>Abs</i>	<i>Y</i>

**Meeting Adjourned: 8:20 PM**

**Next meeting: Tuesday, November 21, 2023**

# SW RANCHES GREEN MEADOWS DRAINAGE

PREPARED FOR:  
TOWN OF SOUTHWEST RANCHES  
LOCATION:  
SOUTHWEST RANCHES, FLORIDA  
SECTION 36, TOWNSHIP 50S, RANGE 39E

## PROJECT TEAM

**CIVIL ENGINEER**  
KIMLEY-HORN AND ASSOCIATES, INC.  
STEFANO F. VIOLA, P.E.  
8201 PETERS ROAD, SUITE 2200  
PLANTATION, FL 33324  
PHONE: (954) 535-5100  
STEFANO.VIOLA@KIMLEY-HORN.COM

**OWNER**  
TOWN OF SOUTHWEST RANCHES  
13400 GRIFFIN ROAD  
SOUTHWEST RANCHES, FL 33330  
PHONE: (954) 434-0008  
CONTACT: ROD LEY, P.E.

## UTILITY PROVIDERS

**WATER AND SEWER:**  
CITY OF SUNRISE WATER AND SEWER  
CONTACT: JULIO GUERRA  
14150 W 8TH STREET  
SUNRISE, FL 33325  
(954) 888-6069

**FPL - BROWARD:**  
CONTACT: JOEL BRAY  
10705 QUAIL ROOST DR.  
MIAMI, FL 33157  
(386) 586-6403

**COMCAST:**  
CONTACT: RICHARD DAVIDSON  
6565 NOVIA DR.  
DAVIE, FL 33317  
(786) 586-8505

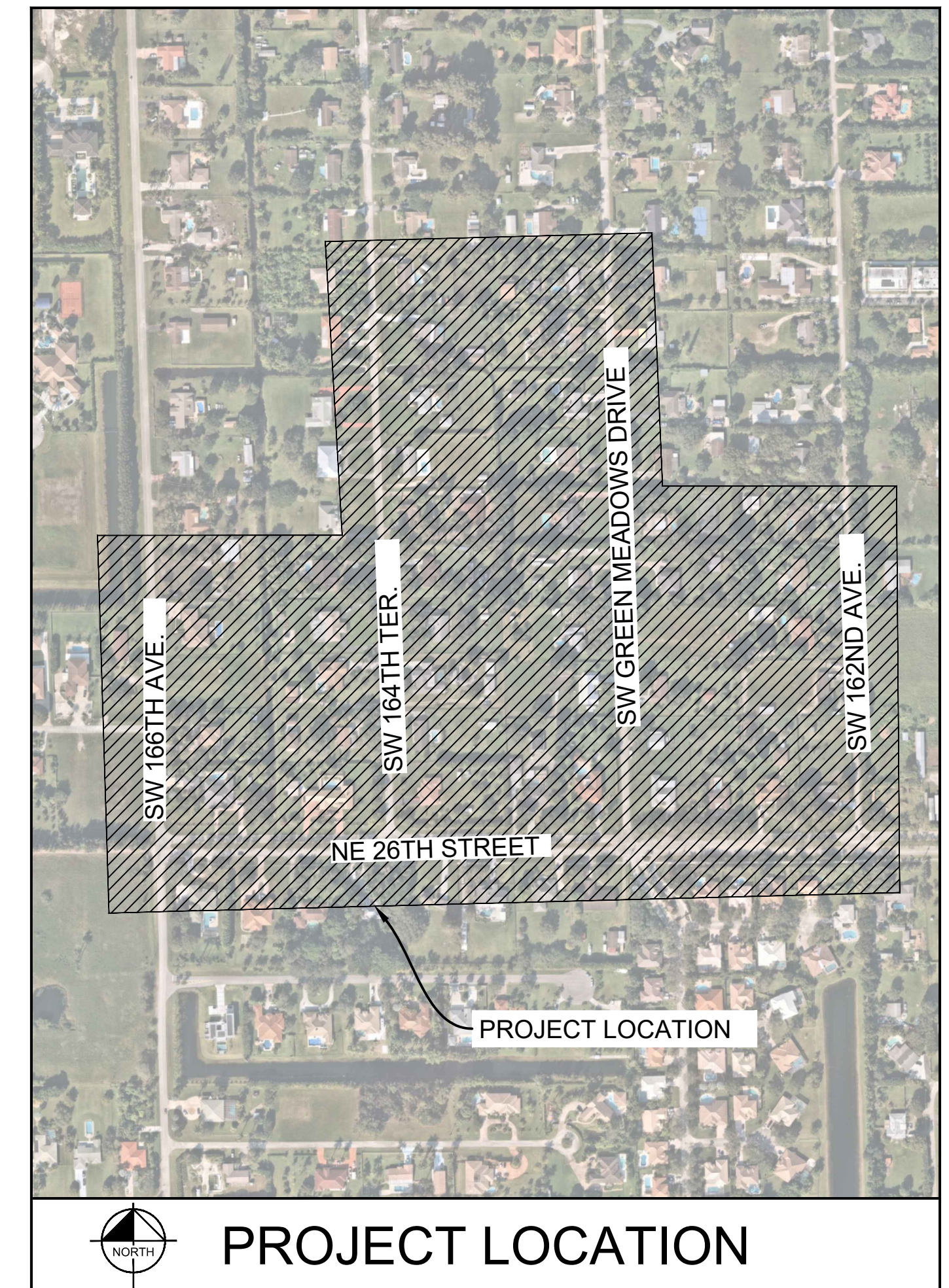
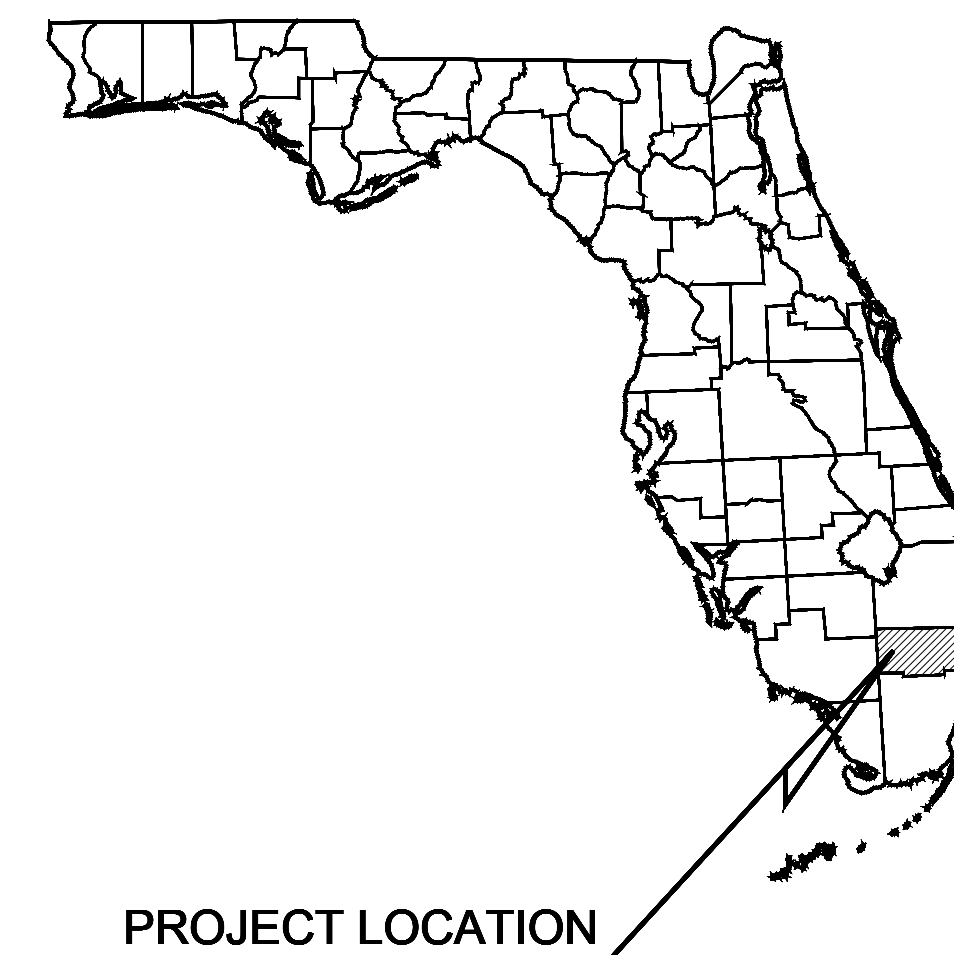
**AT&T:**  
CONTACT: DINO FARRUGGIO  
600 NW 79 AVE., RM356  
MIAMI, FL 33126  
(561) 683-2729

## COMMUNITY OFFICIALS

**MAYOR**  
VICE MAYOR  
COUNCILMEMBER  
COUNCILMEMBER  
COUNCILMEMBER  
ADMINISTRATOR  
ATTORNEY  
CLERK  
PUBLIC WORKS DIRECTOR

**DOUGH MCKAY**  
DENISE "DEE" SCHROEDER  
GARY JABLONSKI  
DELSA WINSLOW AMUNDSON  
BOB HARTMANN  
ANDREW "ANDY" BERNIS  
KEITH POLIAKOFF  
RUSSELL MUÑIZ  
ROD LEY, P.E.

Sheet List Table	
Sheet Number	Sheet Title
C000.0	Cover Sheet
C101.1	General Notes
C101.2	Key Map
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C200.2	Demolition and Erosion Control Plan
C200.3	Demolition and Erosion Control Plan
C200.4	Demolition and Erosion Control Plan
C200.5	Demolition and Erosion Control Plan
C200.6	Demolition and Erosion Control Plan
C200.7	Demolition and Erosion Control Plan
C200.8	Demolition and Erosion Control Plan
C200.9	Demolition and Erosion Control Plan
C201.0	Demolition and Erosion Control Details
C300.1	Engineering Plan
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C300.7	Engineering Plan
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C300.9	Engineering Plan
C301.0	Engineering Plan Details
C301.1	Engineering Plan Details
C301.2	Engineering Plan Details




**PROJECT**  
SW RANCHES GREEN MEADOWS DRAINAGE

**PROJECT NUMBER**  
143221005

**PROJECT LOCATION**  
SOUTHWEST RANCHES, FLORIDA

**PREPARED FOR:**



**PREPARED BY:**  
**Kimley»Horn**

© 2023 KIMLEY-HORN AND ASSOCIATES, INC.  
8201 PETERS ROAD, SUITE 2200, PLANTATION, FL 33324  
PHONE: 954-535-5100  
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

No.	REVISIONS	DATE	BY

DATE: 6/5/2023

**DESIGN DEVELOPMENT PLANS**

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON THE NAVD 88. TO CONVERT ELEVATIONS TO NGVD 29, ADD 1.56'

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

CALL 2 WORKING DAYS BEFORE YOU DIG **811**  
IT'S THE LAW! DIAL 811  
Know what's below. Call before you dig.  
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

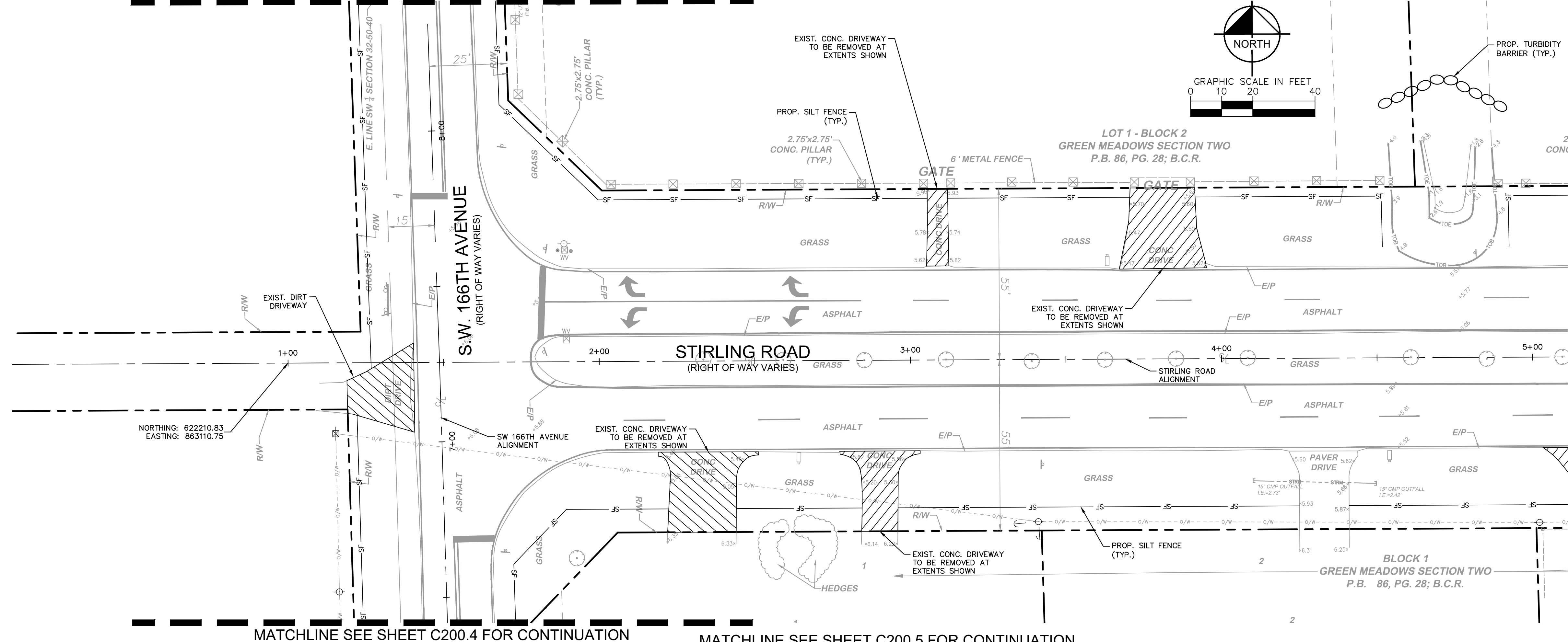
Plotted By: Stanton, Tiffany Sheet: SW Ranches Green Meadows Drainage Layout: C000.0 COVER SHEET October 02, 2023 04:13:28pm K:\H\civil\43 Jobs\143221005 sw ranches green meadows drainage\CAD\plansheets\C000.0 Cover Sheet.dwg This document, together with the concepts and designs presented herein, is an instrument of service, 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.





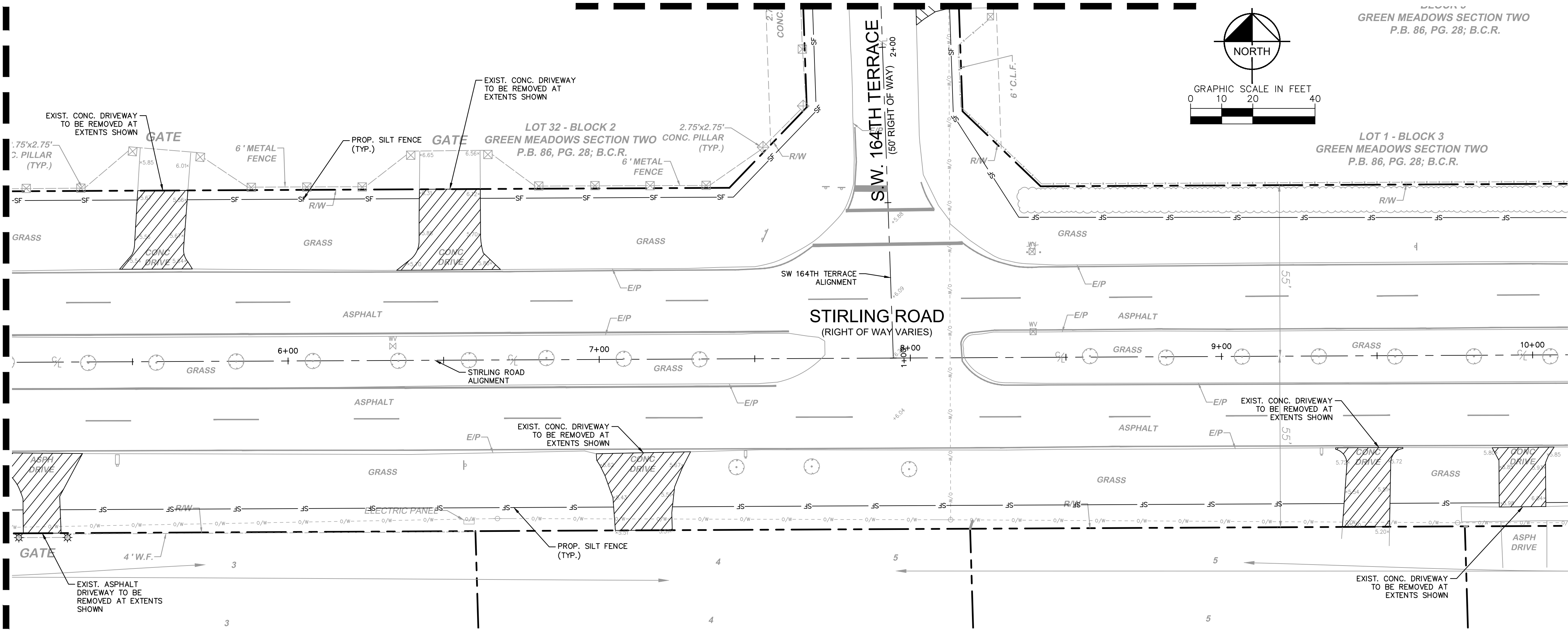
Plotted By: Stanton, Tiffany - Sheet Set: SW Ranches Green Meadows Drainage - Layout: C200.1 - Demolition and Erosion Plan - October 02, 2023 - 04:14:00pm - K:\Users\stati\OneDrive - Kimley-Horn and Associates, Inc. - 143221005 - sw\_ranches\_green\_meadows\_drainage\CAD\plansheets\C200.1 - Demolition and Erosion Control Plan.dwg  
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MATCHLINE SEE SHEET C200.4 FOR CONTINUATION



MATCHLINE SEE SHEET C200.4 FOR CONTINUATION

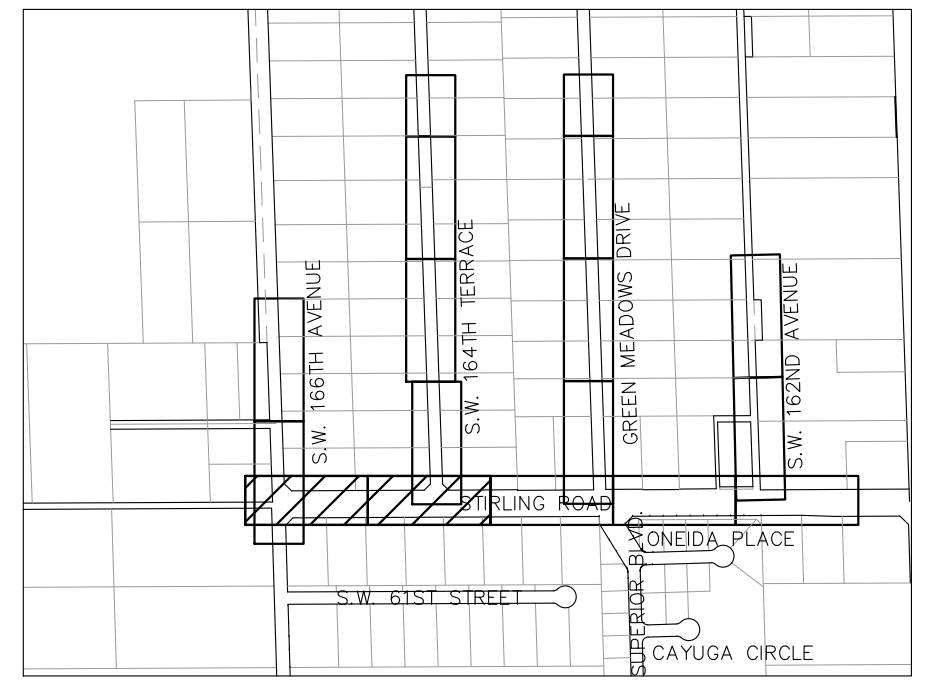
MATCHLINE SEE SHEET C200.5 FOR CONTINUATION



MATCHLINE SEE TOP RIGHT FOR CONTINUATION

MATCHLINE SEE SHEET C200.2 FOR CONTINUATION

**KEY MAP**



**LEGEND**

- PROPERTY LINE/RIGHT-OF-WAY
- - - PROPOSED ALIGNMENT
- SF - PROPOSED SILT FENCE
- - - EXISTING FENCE
- - - SAN - EXISTING SANITARY SEWER PIPE
- - - STRM - EXISTING STORM DRAIN PIPE
- - - W - EXISTING WATER PIPE
- - - GAS - EXISTING GAS LINE
- - - FM - EXISTING FORCEMAIN
- - - OHW - EXISTING OVERHEAD WIRE
- ⊕ EXISTING STORM CATCH BASIN
- ⊕ EXISTING STORM MANHOLE
- ⊕ EXISTING SANITARY SEWER MANHOLE
- ⊕ EXISTING SIGN
- ⊕ EXISTING LIGHT POLE
- ⊕ EXISTING WATER VALVE
- ⊕ EXISTING HYDRANT
- ▨ EXIST. TO BE REMOVED
- ⊕ PROPOSED DROP INLET SEDIMENT BARRIER
- ⊕ PROPOSED TURBIDITY BARRIER

**NOTES**

1. CONTRACTOR TO PERFORM SITE VISIT PRIOR TO BID SUBMITTAL FOR THE PROJECT TO VERIFY ANY PLAN DISCREPANCIES.
2. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
3. GENERAL EROSION CONTROL BMPs SHALL BE EMPLOYED TO MINIMIZE SOIL EROSION, WHILE THE VARIOUS TECHNIQUES REQUIRED WILL BE SITE AND PLAN SPECIFIC, THEY SHOULD BE EMPLOYED AS SOON AS POSSIBLE DURING CONSTRUCTION.
4. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR TO NOTIFY ENGINEER OF ANY CONFLICTS.
5. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO TAKE THE NECESSARY PRECAUTIONS TO ENSURE PROPER SAFETY AND WORKMANSHIP WHEN WORKING IN THE VICINITY OF EXISTING UTILITY LINES.
6. CONTRACTOR TO PROTECT EXISTING TREES DURING CONSTRUCTION PER FDOT INDEX 110-100. CONTRACTOR TO TRIM ANY LOW-HANGING TREE BRANCHES THAT CONFLICT WITH MINIMUM ADA CLEARANCE.
7. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM DETENTION PONDS AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
8. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
9. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEED AS NEEDED.
10. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
11. ALL TEMPORARY EROSION CONTROL WILL BE REMOVE UPON THE COMPLETION OF CONSTRUCTION.
12. ALL AREAS DAMAGED BY THE CONTRACTOR, INCLUDING BUT NOT LIMITED TO PAVEMENT MARKINGS, ASPHALT, SWALE, SIDEWALK, AND DRIVEWAYS, SHALL BE RESTORED, AT THE CONTRACTOR'S EXPENSE, TO ORIGINAL CONDITION.
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	LICENSED PROFESSIONAL STEFANO F. VIOLA, P.E. FLORIDA LICENSE NUMBER 74655 WWW.KIMLEY-HORN.COM	DATE: 10/2/2023 CHECKED BY: SV DRAWN BY: DC DESIGNED BY: TS SCALE: AS SHOWN DATE: 6/5/2023 PROJECT: 143221005	DEMOLITION AND EROSION CONTROL PLAN
	SW RANCHES GREEN MEADOWS DRAINAGE PREPARED FOR TOWN OF SOUTHWEST RANCHES SOUTHWEST RANCHES FLORIDA	SHEET NUMBER <b>C200.1</b>	

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

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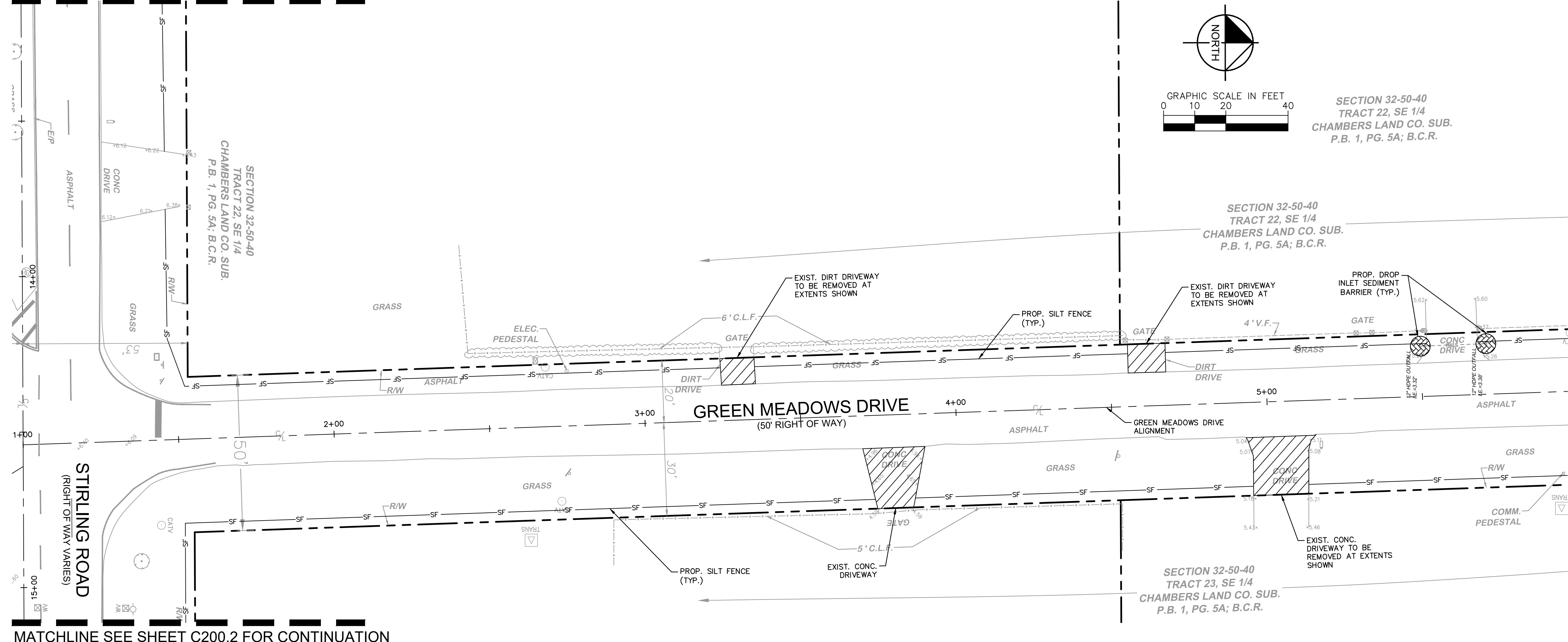




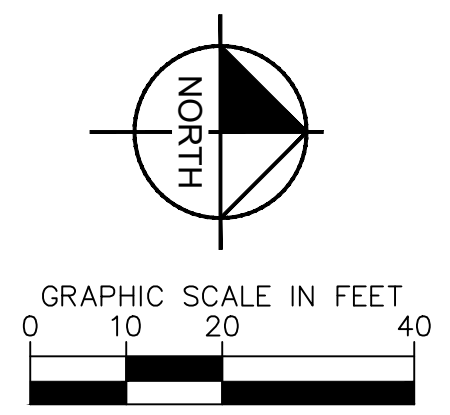


Plotted By: Stanton, Tiffany - Sheet Set: SW Ranches Green Meadows Drainage - Lovelace C200.7 Demolition and Erosion Plan - October 02, 2023 04:14:24pm - K:\Users\stati\OneDrive\Documents\Projects\SW Ranches Green Meadows Drainage\CAD\Drawings\C200.7 Demolition and Erosion Control Plan.dwg  
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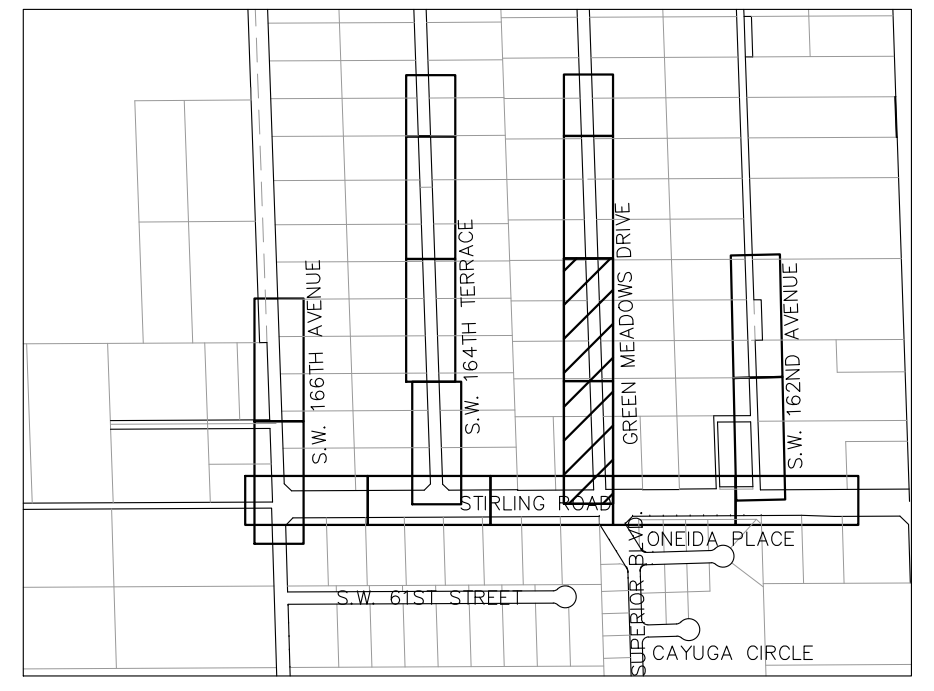


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SECTION 32-50-40  
 TRACT 22, SE 1/4  
 CHAMBERS LAND CO. SUB.  
 P.B. 1, PG. 5A; B.C.R.

**KEY MAP**

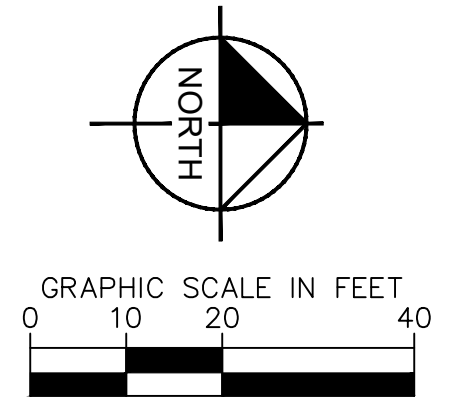


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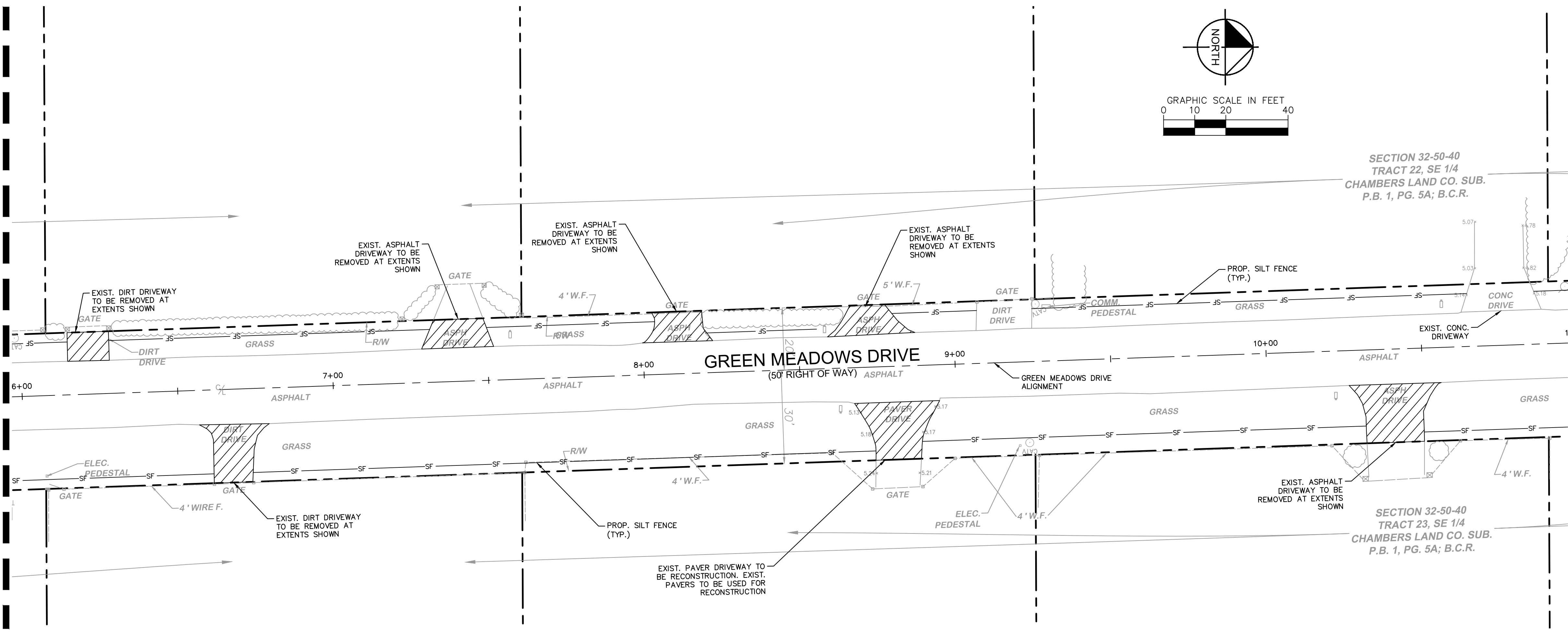
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SECTION 32-50-40  
 TRACT 22, SE 1/4  
 CHAMBERS LAND CO. SUB.  
 P.B. 1, PG. 5A; B.C.R.

MATCHLINE SEE TOP RIGHT FOR CONTINUATION



MATCHLINE SEE SHEET C200.8 FOR CONTINUATION

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

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SW RANCHES GREEN MEADOWS DRAINAGE PREPARED FOR TOWN OF SOUTHWEST RANCHES SOUTHWEST RANCHES	FLORIDA	SHEET NUMBER <b>C200.7</b>	DATE 10/2/2023	CHECKED BY SV	DRAWN BY DC	DESIGNED BY TS	SCALE AS SHOWN	DATE 6/5/2023	PROJECT 143221005	LICENSED PROFESSIONAL STEFANO F. VIOLA, P.E.	REGISTRY NO. 74655	FLORIDA LICENSE NUMBER 74655	PHONE: 954-535-5100 FAX: 954-739-2247	WWW.KIMLEY-HORN.COM	REVISIONS	DATE





Plotted By: Stanton, Tiffany - Sheet: SW-Ranches-Drainage - Layout: C201.0 - Demolition and Erosion Control Details - October 02, 2023 - 04:14:35pm - K:\V\143\Jobs\143221005 - SW-Ranches-Drainage - Layout: C201.0 - Demolition and Erosion Control Details - October 02, 2023 - 04:14:35pm - 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 or improper use of this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

### A. HAZARD MANAGEMENT PRACTICES (BMPS)

- THIS PLAN HAS BEEN PREPARED TO ENSURE COMPLIANCE WITH APPROPRIATE CONDITIONS OF THE BROWARD COUNTY LAND DEVELOPMENT REGULATIONS, THE RULES OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP), CHAPTER 17-25, F.A.C., THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD), CHAPTER 400-4, 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:
  - PREVENT LOSS OF SOIL DURING CONSTRUCTION BY STORMWATER RUNOFF AND/OR WIND EROSION, INCLUDING PROTECTING TOPSOIL BY STOCKPILING FOR REUSE.
  - SEDIMENT PROTECTION OF STORM SEWER OR RECEIVING STREAM.
  - PREVENT POLLUTING THE AIR WITH DUST AND PARTICULATE MATTER. THE VARIOUS TECHNIQUES OR ACTIONS IDENTIFIED UNDER EACH SECTION CROSS-REFER TO 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 LISTED 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 POLLUTION 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 COST AND SHALL BE INCLUDED IN THE BID.

### B. GENERAL EROSION CONTROL NOTES

- THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THESE EROSION CONTROL MEASURES, THE STANDARD DETAILS, THE GENERAL PERMIT (TO BE OBTAINED BY CONTRACTOR) AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- 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) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- CONTRACTOR SHALL OBTAIN ANY NECESSARY DEWATERING PERMITS AS SITE CONDITIONS AND CONSTRUCTION ACTIVITIES REQUIRE.
- CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP) IN ALL CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
  - FUEL SPILLS AND LEAKS PREVENTION
  - PREVENT/REDUCE VEHICLE AND EQUIPMENT WASHING AND STEAM CLEANING
  - VEHICLE AND EQUIPMENT MAINTENANCE AND REPAIR
  - PROPER OUTDOOR LOADING/UNLOADING OF MATERIALS
  - PREVENT/REDUCE OUTDOOR STORAGE OF RAW MATERIALS, PRODUCTS, AND BY-PRODUCTS
  - SOLID WASTE MANAGEMENT
  - HAZARDOUS WASTE MANAGEMENT
  - CONCRETE WASTE MANAGEMENT
  - SANDBLASTING WASTE MANAGEMENT
  - STRUCTURE CONSTRUCTION AND PAINTING
  - SPILL PREVENTION AND CONTROL
  - CONTAMINATED SOIL MANAGEMENT
  - SANITARY/SEPTIC WASTE MANAGEMENT
  - SOIL EROSION CONTROL
  - 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.
- BEST MANAGEMENT PRACTICES (BMPS) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL, PRACTICES, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- 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.
- CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- 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.
- 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.
- 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.
- SURFACE WATER QUALITY SHALL BE MAINTAINED BY EMPLOYING THE FOLLOWING BMPS IN THE CONSTRUCTION PLANNING AND CONSTRUCTION OF ALL IMPROVEMENTS.
- IT SHOULD BE NOTED THAT THE MEASURE IDENTIFIED ON THIS PLAN ARE ONLY SUGGESTED BMP(S). THE CONTRACTOR SHALL PROVIDE POLLUTION PREVENTION AND EROSION CONTROL MEASURES AS NECESSARY TO CONFORM TO CURRENT CITY, FDEP AND SFWMD CODES AND SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION OR WATER QUALITY PROBLEMS THAT RESULT FROM THE CONSTRUCTION ACTIVITIES.

### C. STORM WATER EROSION CONTROL PRACTICES

- CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM DETENTION PONDS AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (COMPOST SOCK DEVICES, ETC.) TO PREVENT EROSION.
- WHERE PRACTICAL, STORMWATER SHALL BE CONVEYED BY SWALES.
- 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 NECESSARY IN ACCORDANCE WITH THE FOLLOWING:
  - IN GENERAL, EROSION SHALL BE CONTROLLED AT THE FURTHEST PRACTICAL UPSTREAM LOCATION.
  - 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.
  - WHEN NEEDED A TEMPORARY SEDIMENT TRAP SHOULD BE CONSTRUCTED TO DETAIN SEDIMENT-LADEN RUNOFF FROM DISTURBED AREAS.
- 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.
- 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.
- 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.
- WHERE REQUIRED TO PREVENT EROSION FROM SHEET FLOW ACROSS BARE GROUND FROM ENTERING A LAKE OR SWALE, A TEMPORARY SEDIMENT SUMP SHALL BE CONSTRUCTED.
- FILTER FABRIC SHOULD BE USED FOR STORM DRAIN INLET PROTECTION BEFORE FINAL STABILIZATION.
- FLOATING TURBIDITY BARRIERS SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND INSTALLATION OF DRAINAGE OUTFALL PIPE AND ENDWALL.
- EXISTING DRAINAGE FLOW PATTERNS AND POSITIVE DRAINAGE TO EXISTING OUTFALLS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
- ALL NEW INLETS INSTALLED UNDER THIS PROJECT SHALL RECEIVE IN LET PROTECTION.

### D. WIND EROSION CONTROL PRACTICES

- WIND EROSION SHALL BE CONTROLLED BY EMPLOYING THE FOLLOWING METHODS AS NECESSARY AND APPROPRIATE:
  - 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.
  - 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, CLEARED 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).
  - 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 NEEDED NECESSARY FOR SUCH CONTROL SHALL BE EMPLOYED. THESE METHODS SHOULD INCLUDE ERECTION OF DUST CONTROL FENCES. A 6-FT GEOTEXTILE FILTER FABRIC SHOULD BE HANGING AGAINST THE EXISTING CHAIN LINK FENCE AND GATE.
- 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.

### E. STABILIZATION PRACTICES

- SHALL BE IN ACCORDANCE WITH DEP DOCUMENT NO 62-621.300(4)(c).
- DISTURBED PORTIONS OF SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASE FOR AT LEAST 21 DAYS, SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY PERMANENTLY CEASES SHALL BE STABILIZED WITH SOD NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

### F. STRUCTURAL PRACTICES

- SHALL BE IN ACCORDANCE WITH DEP DOCUMENT NO 62-621.300(4)(c)

### G. WASTE DISPOSAL

- 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.

- 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.
- 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. 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.

### H. OFFSITE TRACKING

- 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 TARPULIN.
- 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 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.
- ALL WASH WATER FROM CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC. SHALL BE DETAINED ON SITE AND SHALL BE PROPERLY TREATED OR DISPOSED.
- 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 RELEASED OFF THE SITE.
- ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

### I. 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 GOOD HOUSEKEEPING OR FILL PREVENTION OR CLEANUP. 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:
  - INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
  - ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE RESEED, WATERED, AND REPAIRED AS NEEDED TO DISPLACE EROSION.
  - THE COMPOST ROCK FILTRATION DEVICE SHALL BE INSPECTED PERIODICALLY FOR HEIGHT OF SEDIMENT AND CONDITION OF DEVICE. COMPOST SOCK SHALL BE REPAIRED TO ITS ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE COMPOST SOCK WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE COMPOST SOCK.
  - 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 UNDER VARYING CONDITIONS.
  - 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.
  - STRUCTURES IN THE SEDIMENTATION 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.
  - ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN SEVEN CALENDAR DAYS FOLLOWING THE INSPECTION. DIVERSION DIKES SHALL BE INSPECTED MONTHLY. ANY BREACHES SHALL BE PROMPTLY REPAIRED.
  - 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.
  - ALL REPAIRS MUST BE MADE WITHIN 24 HOURS OF REPORT.
  - THE SUPERINTENDENT SHALL ORGANIZE THE TRAINING FOR INSPECTION PROCEDURES AND PROPER EROSION CONTROL METHOD. ALL EMPLOYEES THAT COMPLETE INSPECTIONS AND REPORTS.
  - SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
  - THE EROSION CONTROL FEATURES INSTALLED BY THE CONTRACTOR SHALL BE ACCEPTABLY MAINTAINED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.

### J. SPILL PREVENTION AND CONTROL

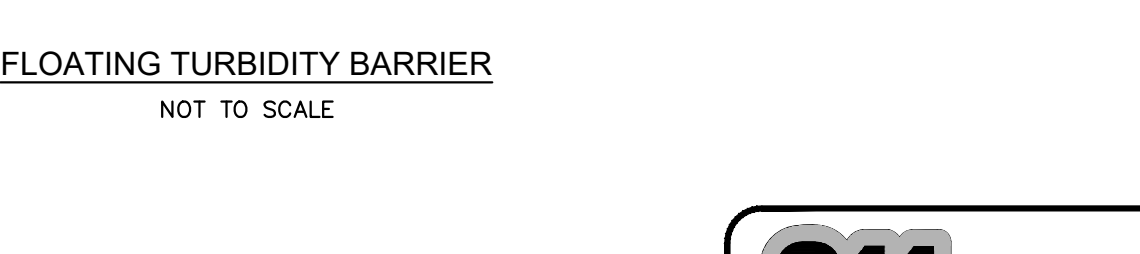
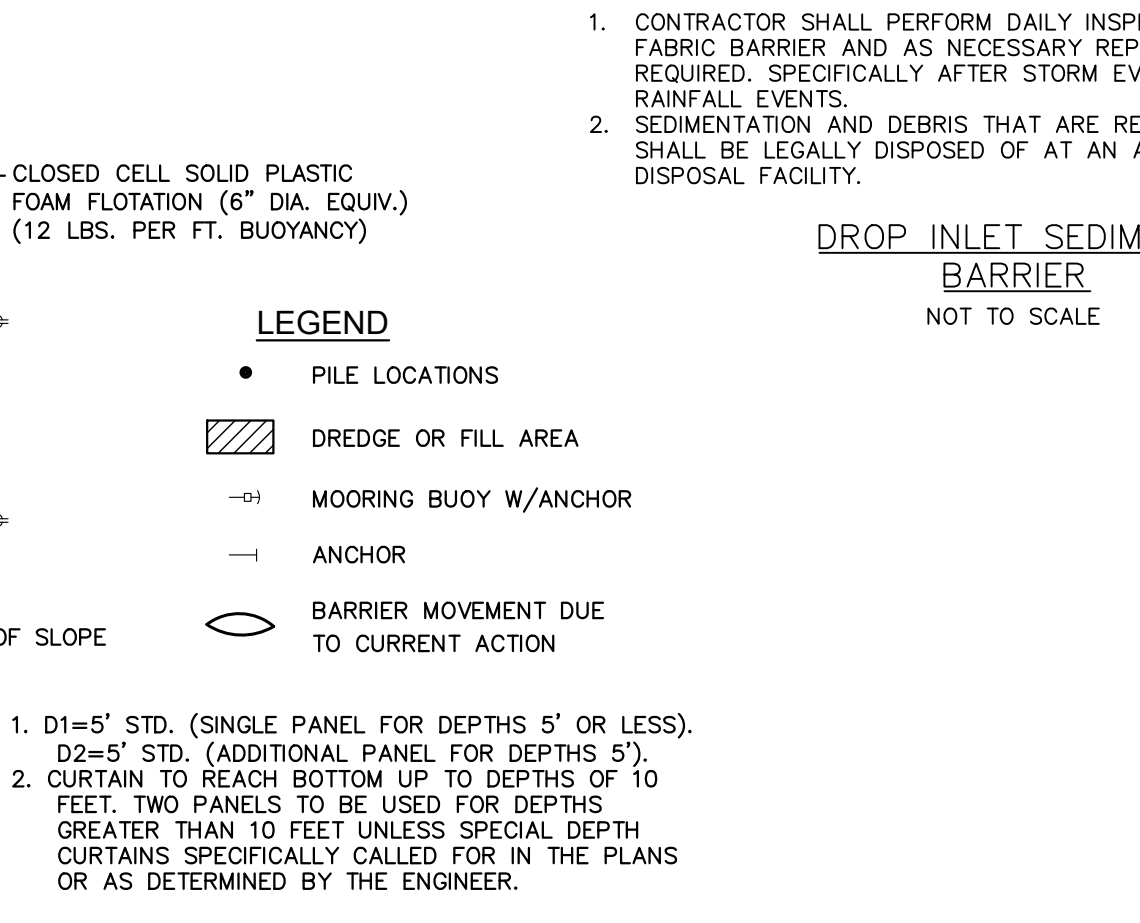
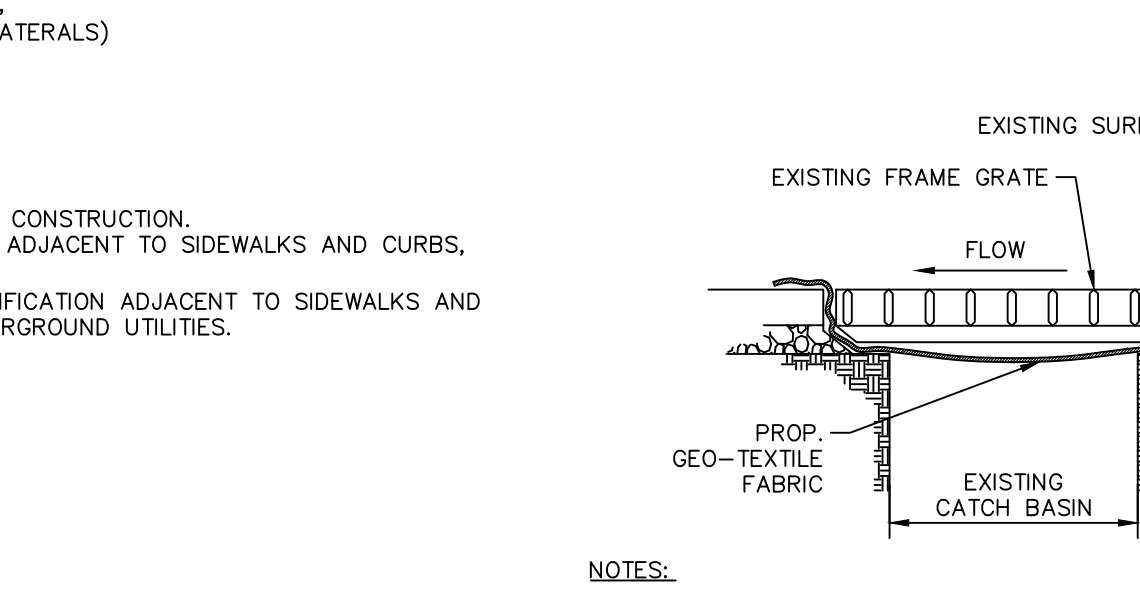
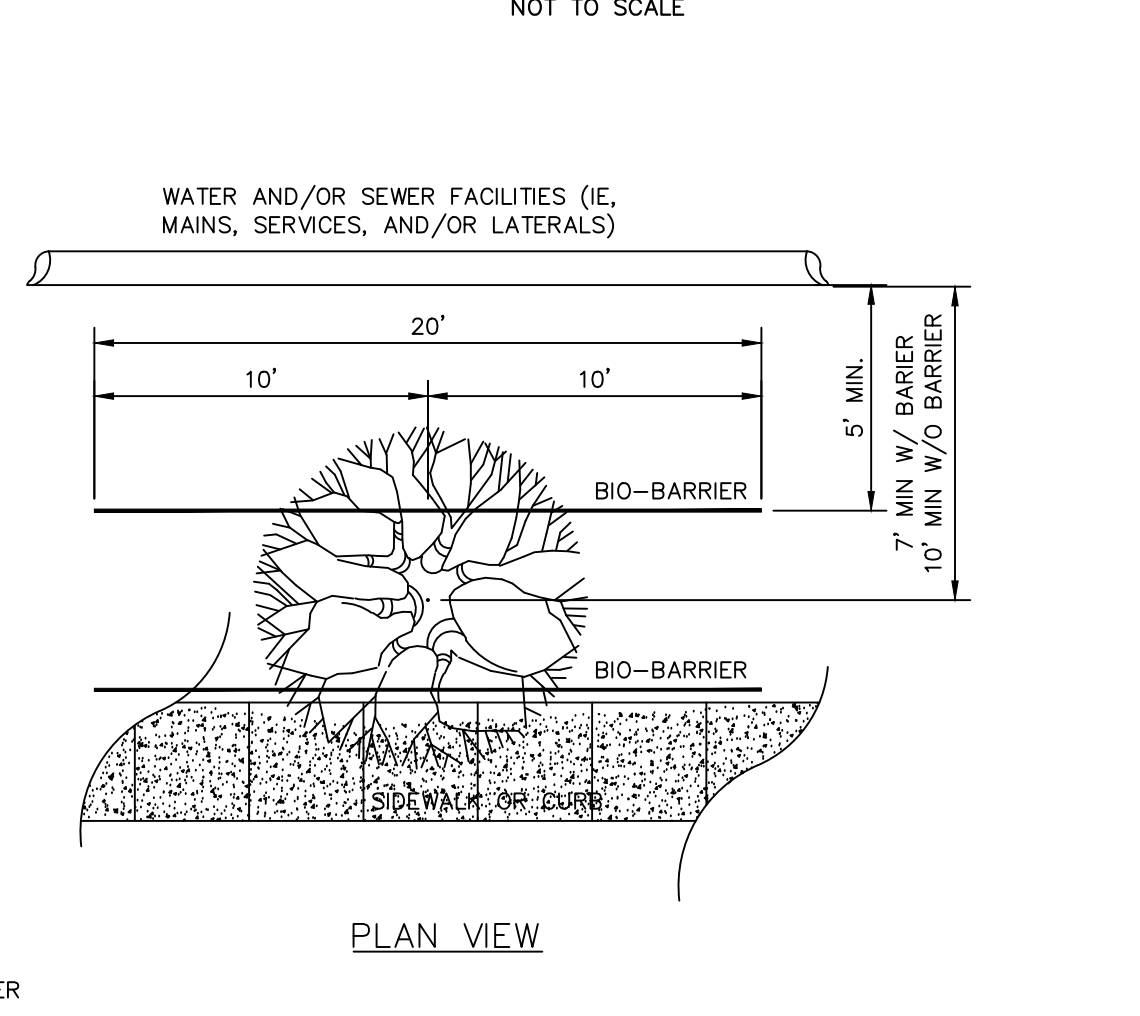
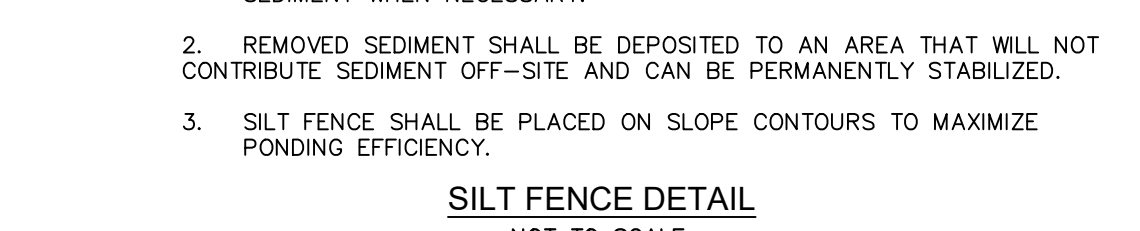
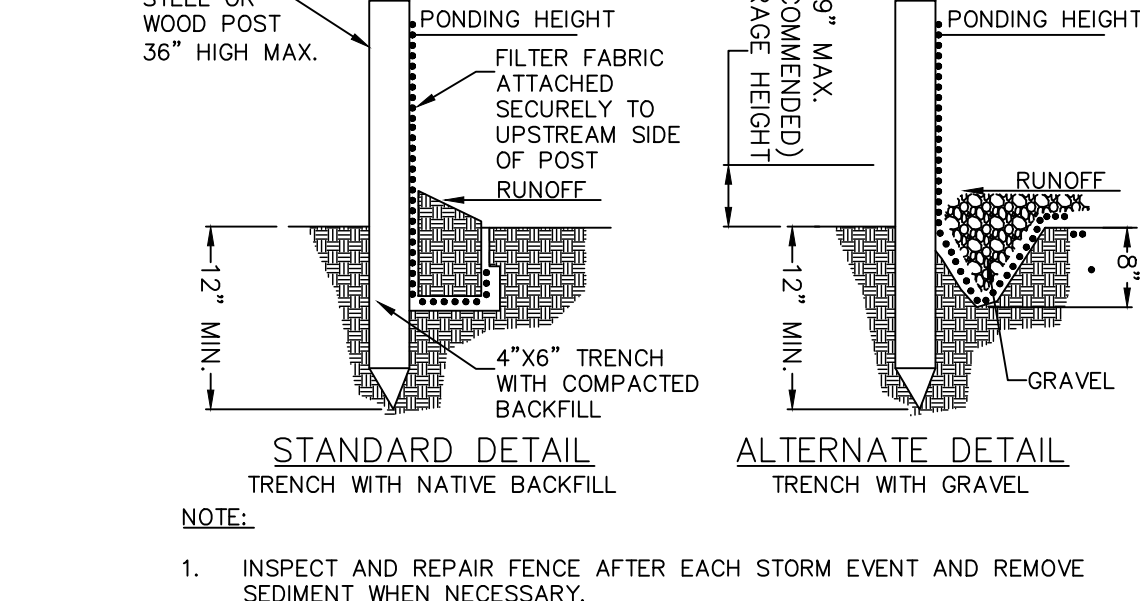
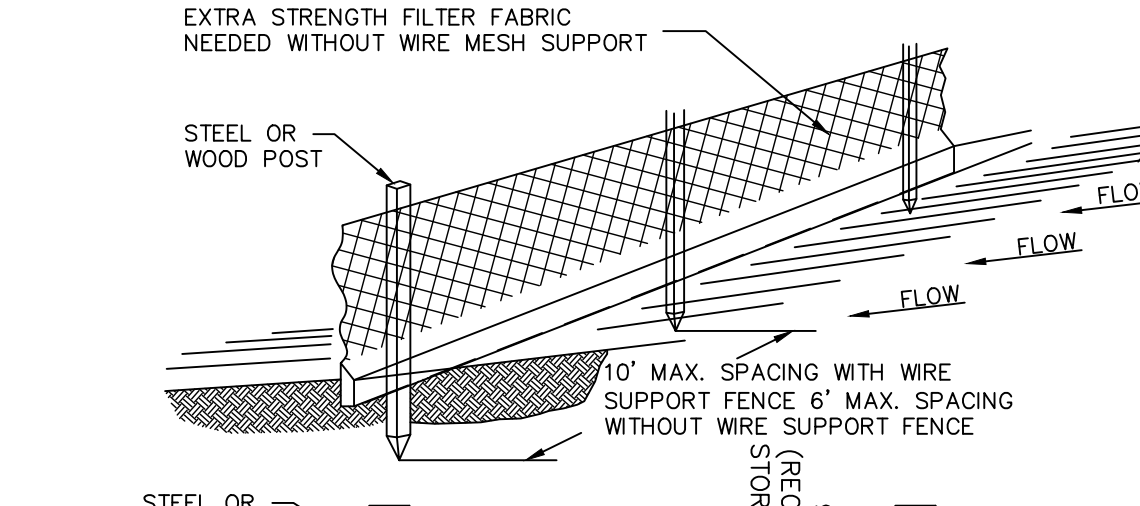
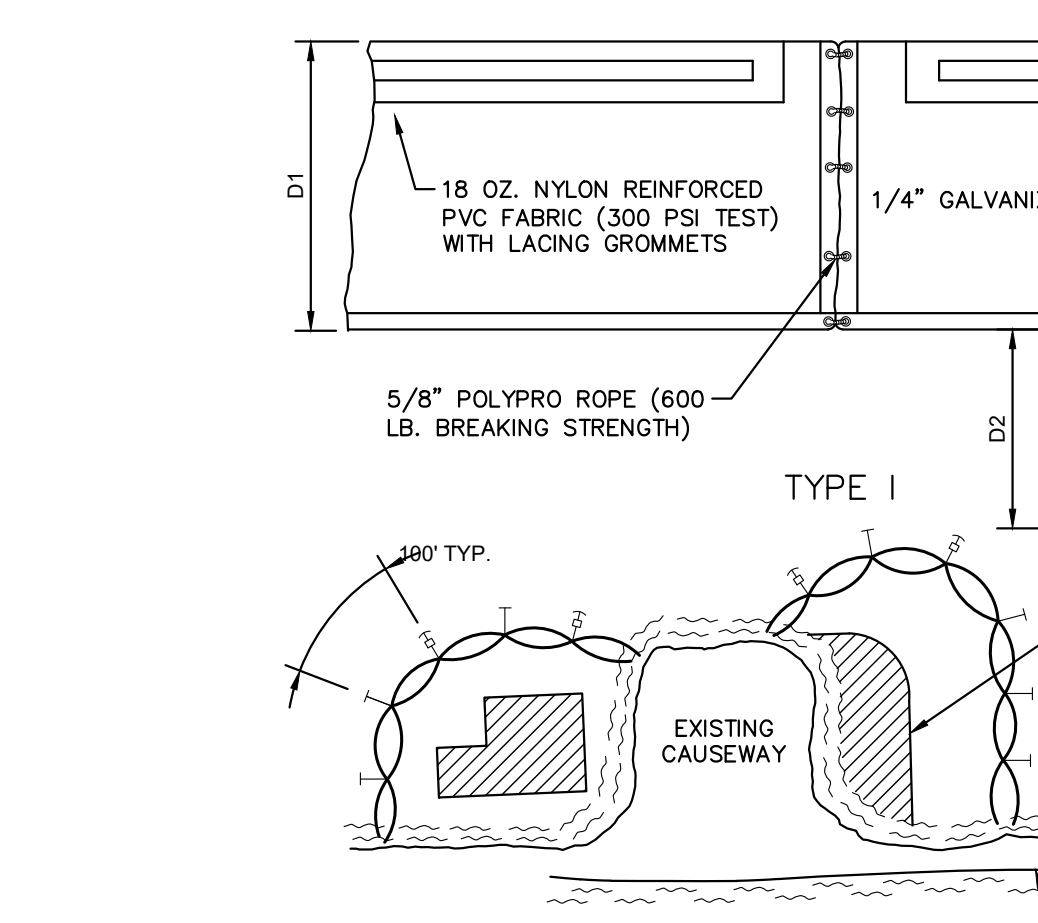
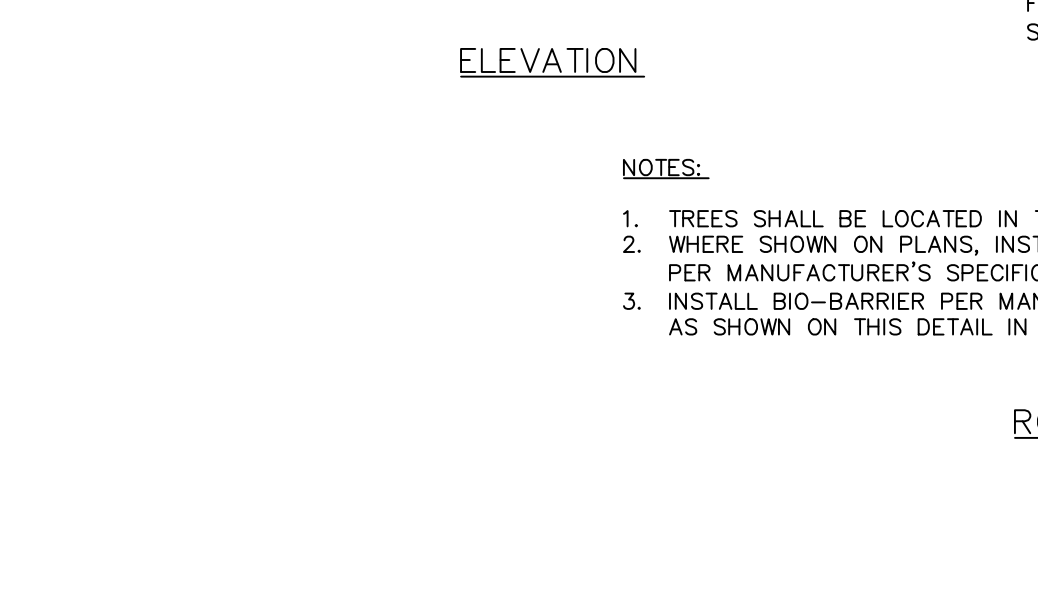
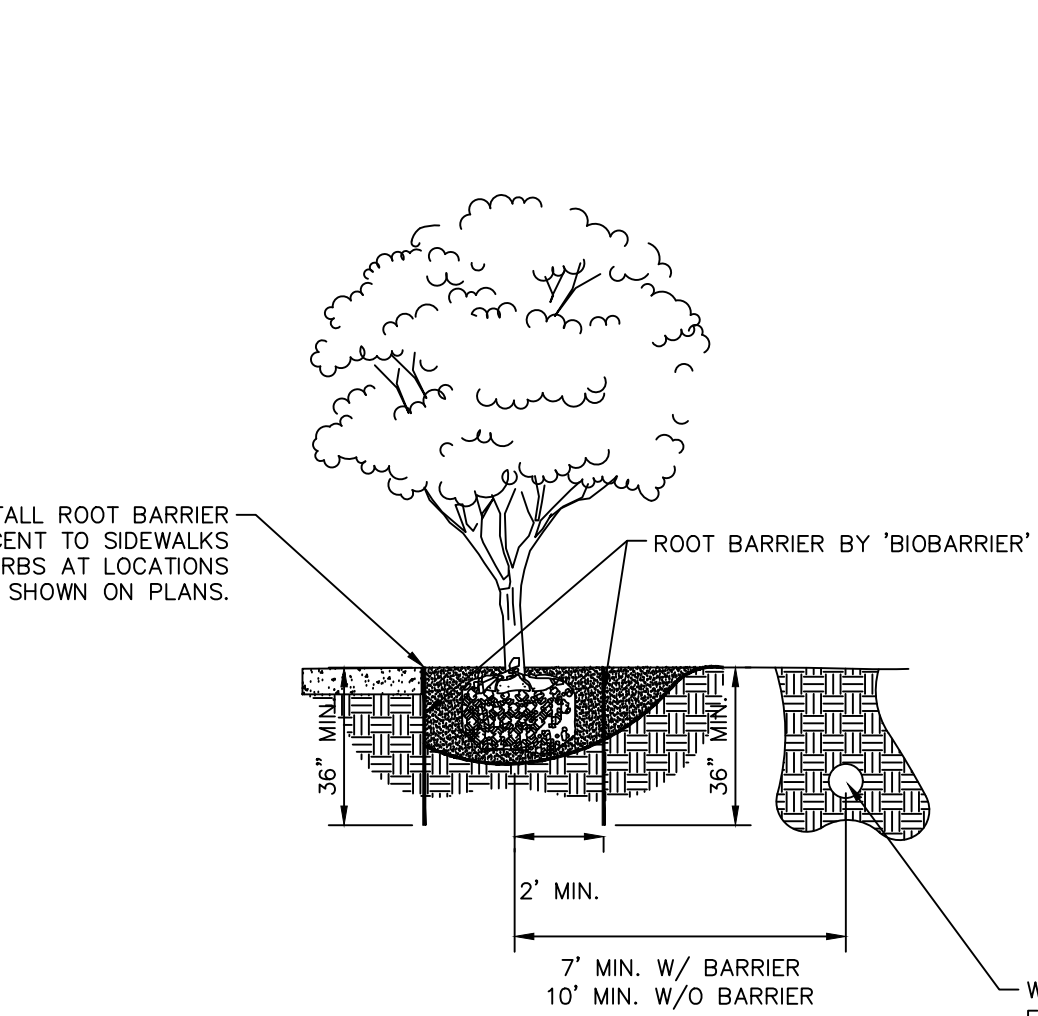
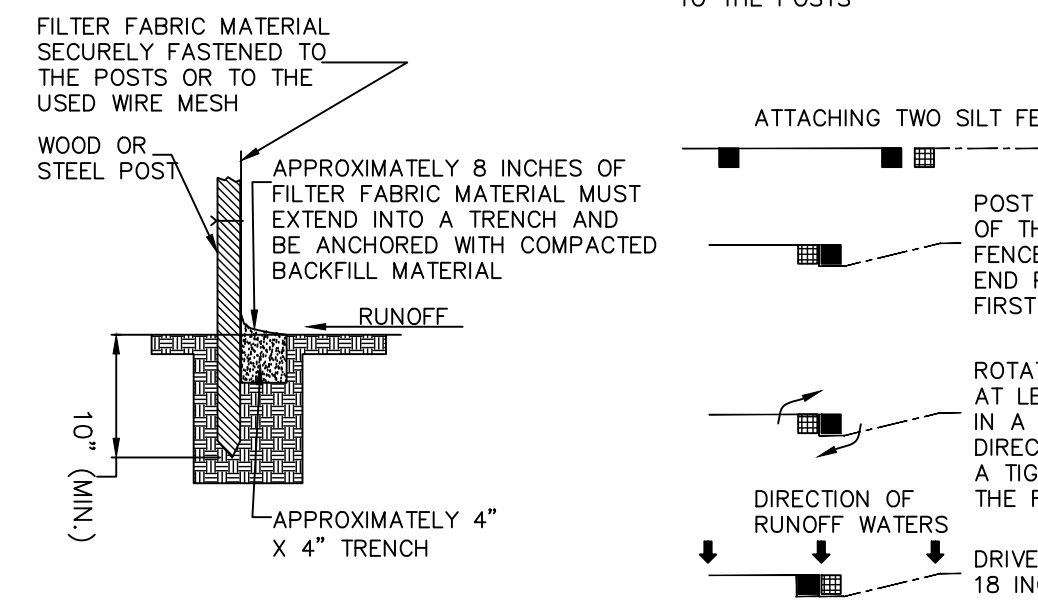
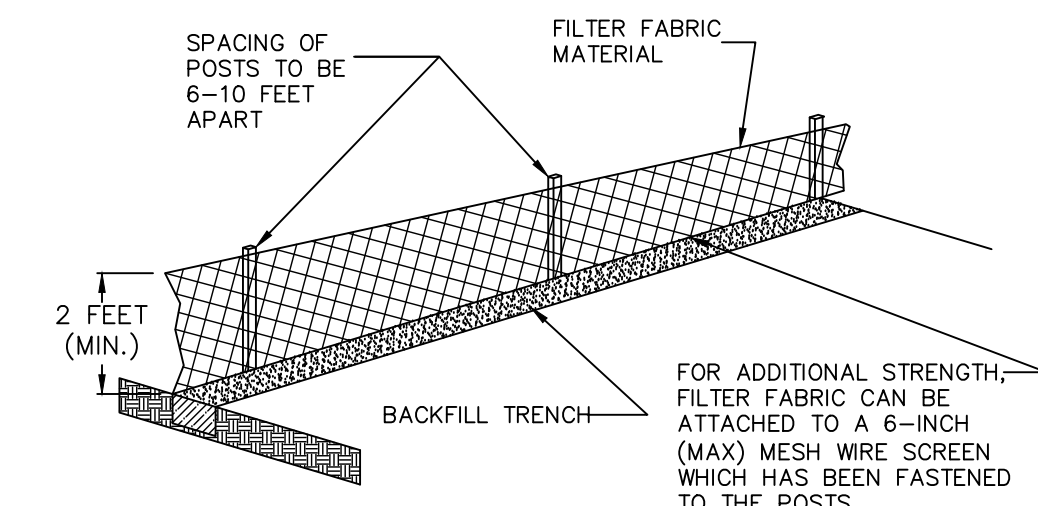
- THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.
- GOOD HOUSEKEEPING
    - SUPERINTENDENT SHALL INSPECT PROJECT AREA DAILY FOR PROPER STORAGE, USE, AND DISPOSAL OF CONSTRUCTION MATERIALS.
    - STORE ONLY ENOUGH MATERIAL ON SITE FOR PROJECT COMPLETION
    - ALL SUBSTANCES SHOULD BE USED BEFORE DISPOSED OF CONTAINER.
    - ALL CONSTRUCTION MATERIALS STORED SHALL BE ORGANIZED AND IN THE PROPER CONTAINER AND IF POSSIBLE, STORED UNDER A ROOF OR PROTECTIVE COVER.
    - PRODUCTS SHALL NOT BE MIXED UNLESS DIRECTED BY THE MANUFACTURER.
    - ALL PRODUCTS SHALL BE USED AND DISPOSED OF ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
    - PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
  - HAZARDOUS PRODUCTS
    - 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.
    - PROPER DISPOSAL PRACTICES SHALL ALWAYS BE FOLLOWED IN ACCORDANCE WITH MANUFACTURER AND LOCAL/STATE REGULATIONS.
  - PRODUCT SPECIFIC PRACTICES
    - 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.
    - 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.
    - PAINT CONTAINERS SHALL BE SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT MUST BE DISPOSED OF IN AN APPROVED MANNER.
    - EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
    - CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

### K. SPILL CLEAN UP

- IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED ABOVE, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION OR CLEANUP:
  - SPILL CLEANUP INFORMATION SHALL BE POSTED ON SITE TO INFORM EMPLOYEES ABOUT CLEANUP PROCEDURES AND RESOURCES.
  - 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.
  - 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.
  - ALL SPILLS SHALL BE CLEANED UP AS SOON AS POSSIBLE.
  - WHEN CLEANING A SPILL, THE AREA SHOULD BE WELL VENTILATED AND THE EMPLOYEE SHALL WEAR PROPER PROTECTIVE COVERING TO PREVENT INJURY.
  - TOXIC SPILLS MUST BE REPORTED TO THE PROPER AUTHORITY REGARDLESS OF THE SIZE OF THE SPILL.
  - 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.
  - 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.

### L. SEQUENCE OF CONSTRUCTION

- UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE, AND INSTALL INLET PROTECTION, TURBIDITY BARRIERS, AND SILT FENCE
- DEMOLISH EXISTING STRUCTURES, (IF APPLICABLE)
- INSTALL AND STABILIZE ANY NECESSARY HYDRAULIC CONTROL STRUCTURES (DIKES, CHECK DAMS, OUTLET TRAPS, ETC.)
- PREPARE CLEARING AND GRUBBING OF THE SITE, (IF APPLICABLE)
- PERFORM MASS GRADING, ROUGH GRADE TO ESTABLISH PROPOSED DRAINAGE PATTERNS
- TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DISTURBED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE AS REQUIRED BY GENERIC PERMIT
- IN THE EVENT OF BMP ISSUES, HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEER CONSULTANT TO PERFORM INSPECTION AND CORRECTION OF BMPS. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
- CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING ALL DEWATERING PERMITS NECESSARY FOR CONSTRUCTION.



KIMLEY-HORN & ASSOCIATES, INC.		DATE	BY
8201 PETERS ROAD, SUITE 2000, PLANTATION, FL 33324		NO.	NO.
PHONE: 954-545-5100 FAX: 954-739-2247		REVISIONS	DATE
WWW.KIMLEY-HORN.COM		NO.	NO.
STEFANO F. VIOLA, P.E.		DATE	BY
FLORIDA LICENSE NUMBER 74655		NO.	NO.
DESIGNED BY TS		DATE	BY
DRAWN BY DC		NO.	NO.
CHECKED BY SV		DATE	BY
KHA PROJECT 143221005		DATE	BY
SCALE AS SHOWN		DATE	BY
6/5/2023		DATE	BY
DESIGNED BY TS		DATE	BY
DRAWN BY DC		DATE	BY
CHECKED BY SV		DATE	BY
10/2/2023		DATE	BY
SW RANCHES GREEN MEADOWS DRAINAGE EROSION CONTROL DETAILS		DATE	BY
PREPARED FOR TOWN OF SOUTHWEST RANCHES		DATE	BY
SOUTHWEST RANCHES		DATE	BY
FLORIDA		DATE	BY
SHEET NUMBER C201.0		DATE	BY

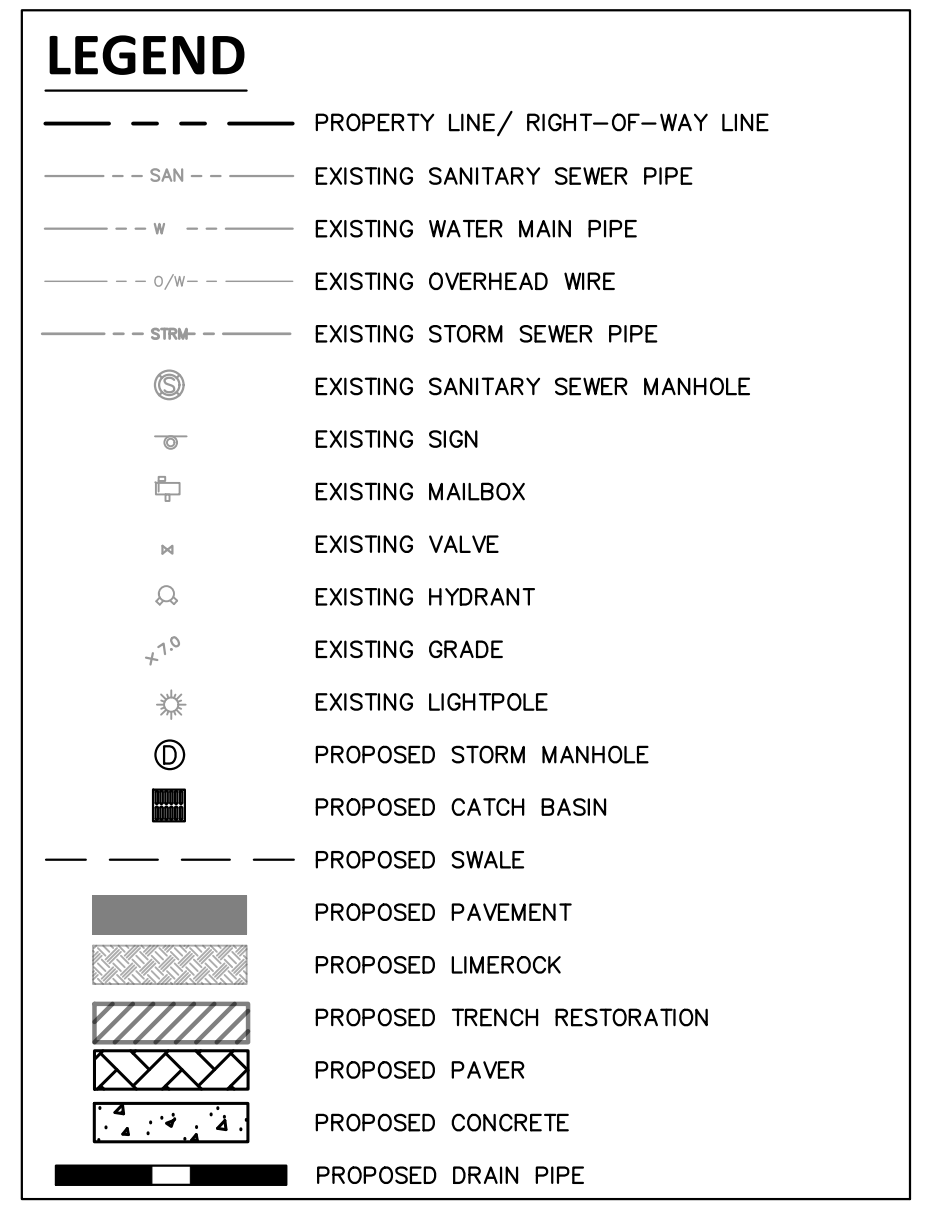
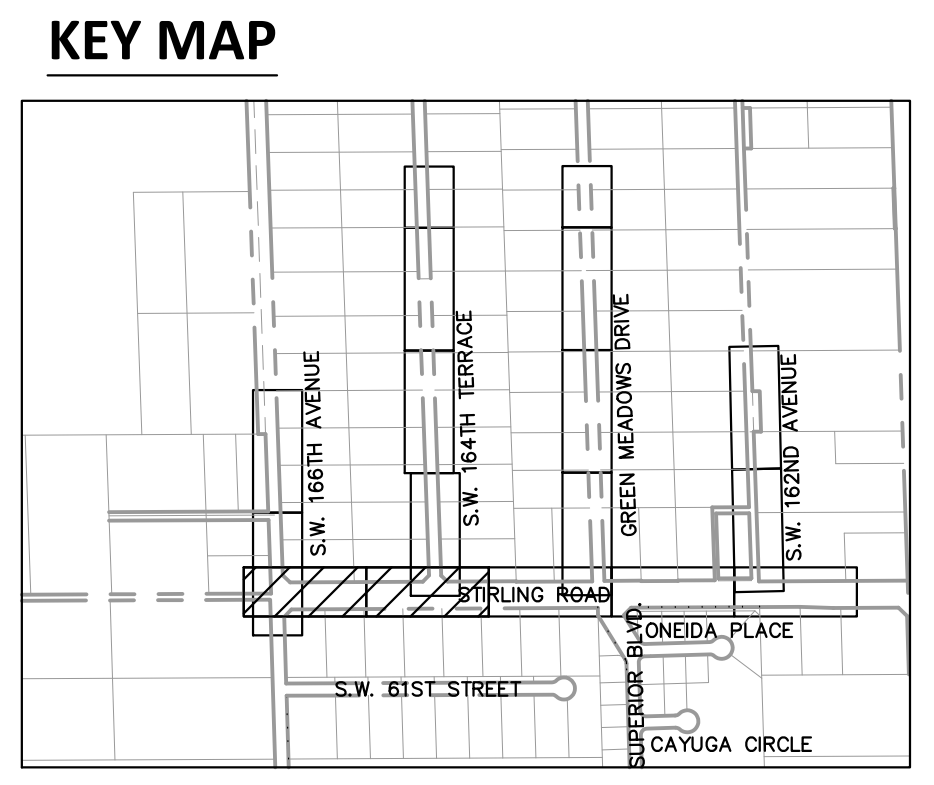
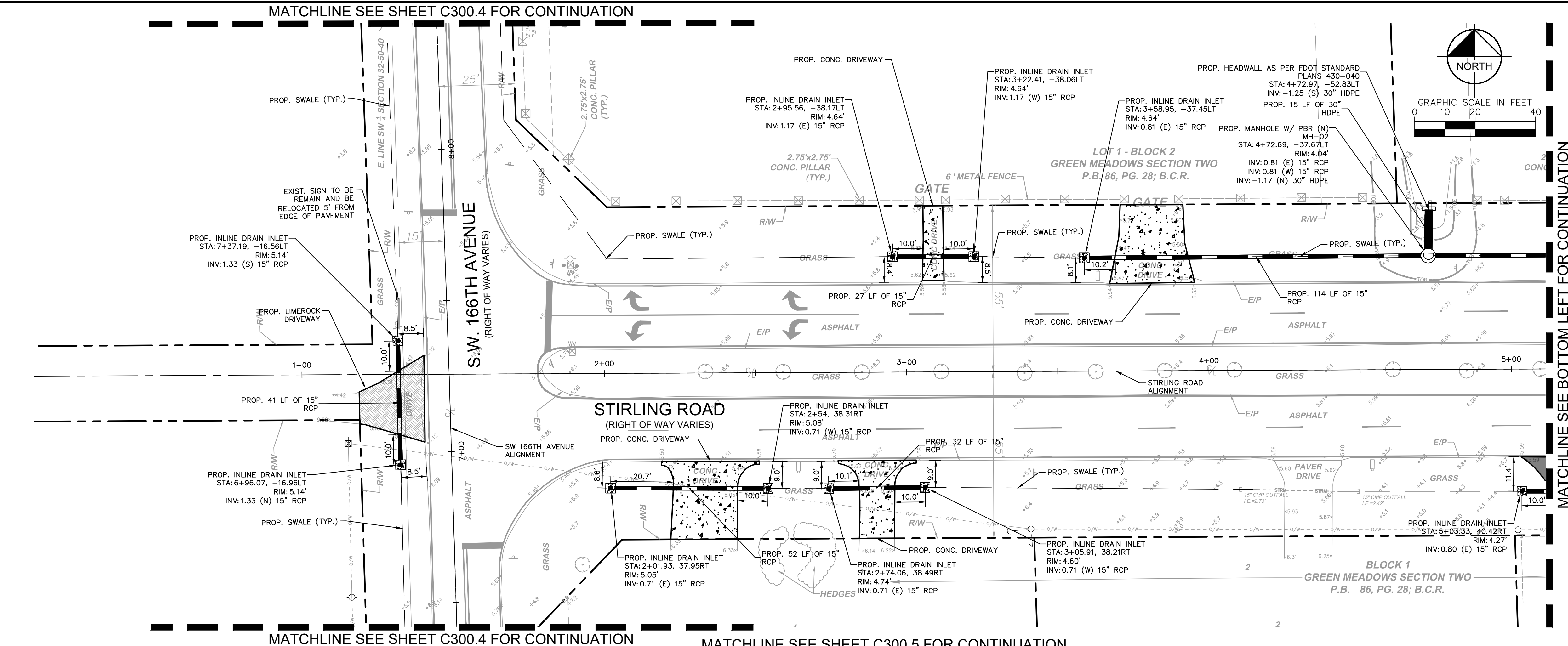
THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

KNOW WHAT'S BELOW ALWAYS CALL 811 BEFORE YOU DIG

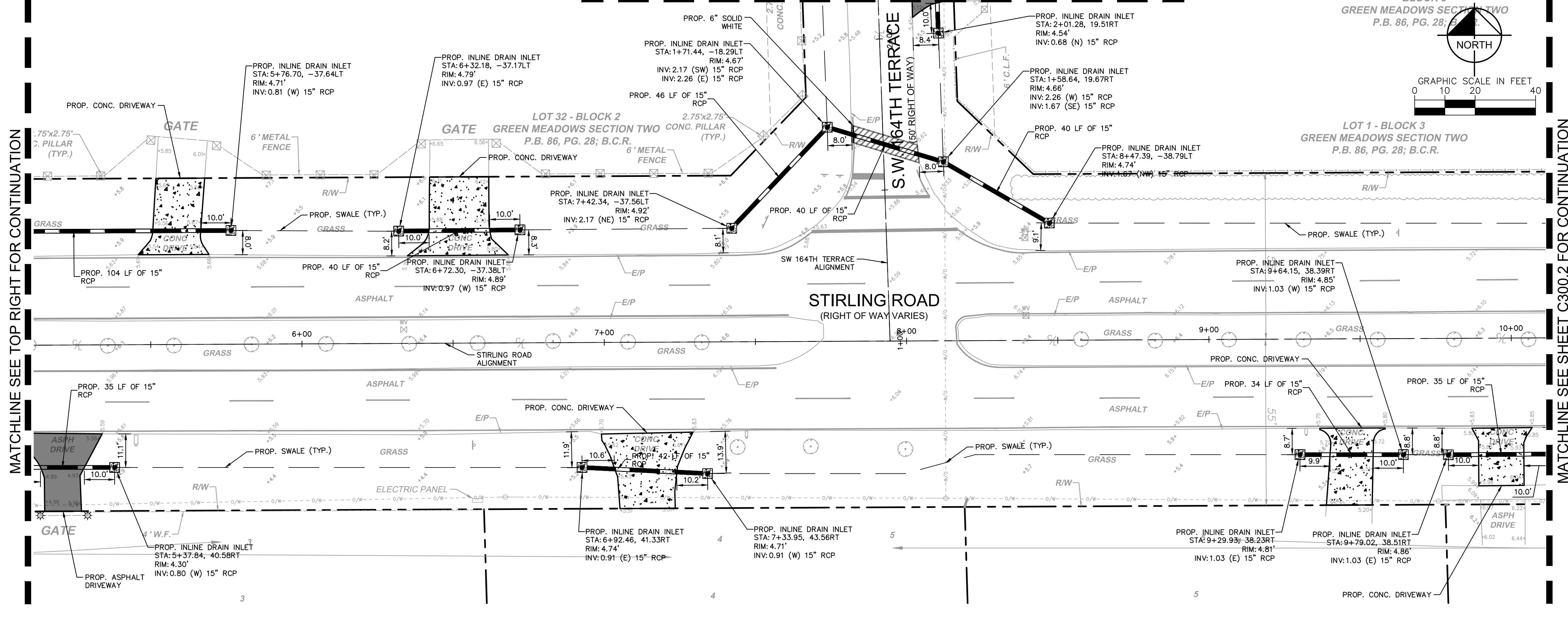
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- NOTES**
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**SW RANCHES GREEN MEADOWS DRAINAGE ENGINEERING PLAN**

PREPARED FOR TOWN OF SOUTHWEST RANCHES

**Kimley-Horn**

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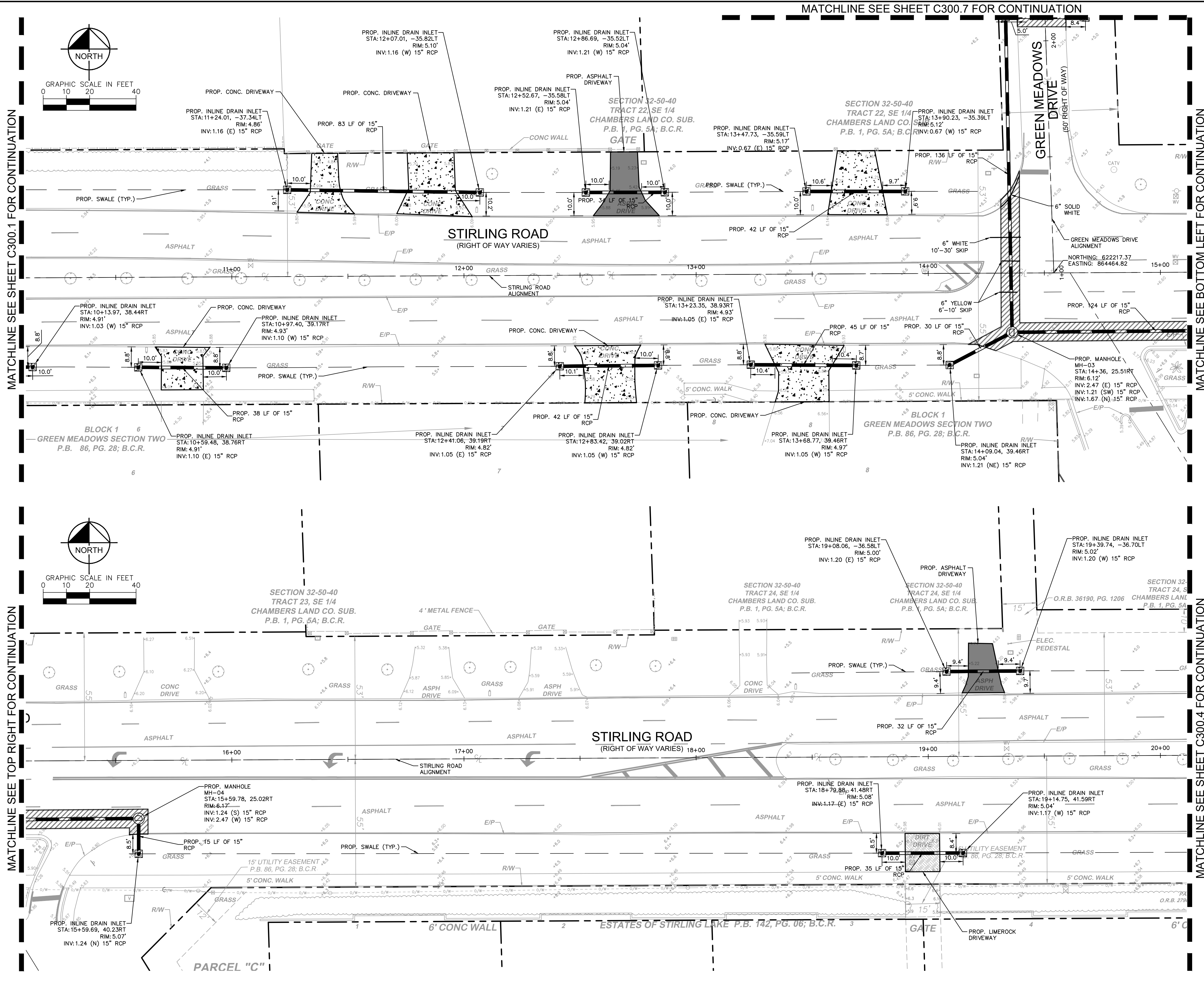
LICENSED PROFESSIONAL: STEFANO F. VIOLA, P.E.  
 DATE: 6/5/2023  
 SCALE: AS SHOWN  
 DESIGNED BY: TS  
 DRAWN BY: DC  
 CHECKED BY: SV  
 DATE: 10/2/2023

SHEET NUMBER: C300.1

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.



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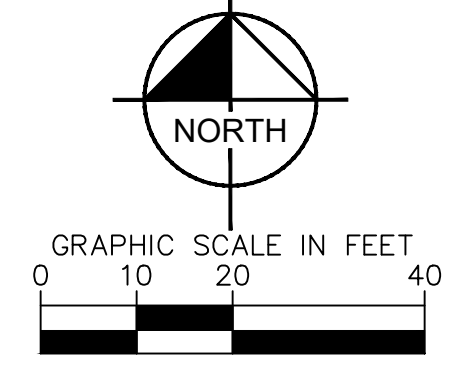
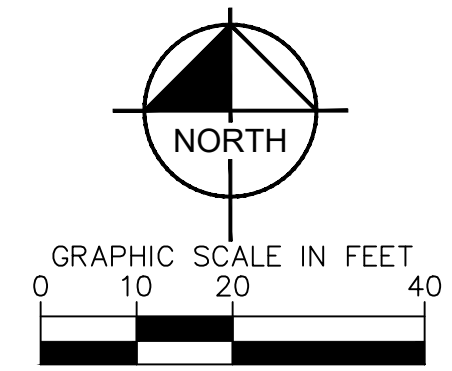


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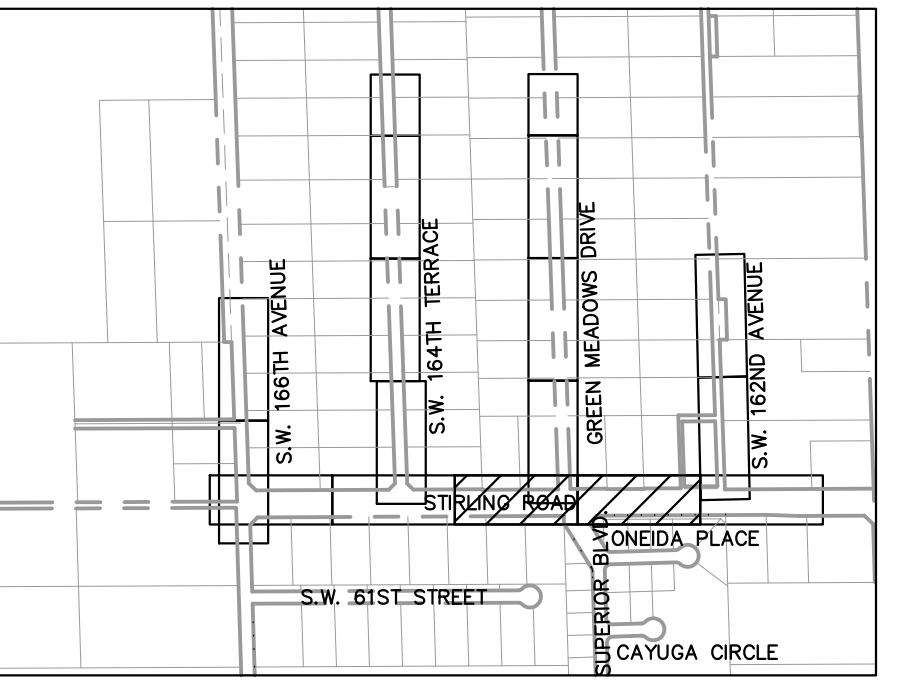
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MATCHLINE SEE BOTTOM LEFT FOR CONTINUATION

MATCHLINE SEE SHEET C300.4 FOR CONTINUATION



**KEY MAP**



**LEGEND**

- PROPERTY LINE/ RIGHT-OF-WAY LINE
- SAN --- EXISTING SANITARY SEWER PIPE
- W --- EXISTING WATER MAIN PIPE
- O/W --- EXISTING OVERHEAD WIRE
- SSM --- EXISTING STORM SEWER PIPE
- --- EXISTING SANITARY SEWER MANHOLE
- --- EXISTING SIGN
- --- EXISTING MAILBOX
- --- EXISTING VALVE
- --- EXISTING HYDRANT
- --- EXISTING GRADE
- --- EXISTING LIGHTPOLE
- --- PROPOSED STORM MANHOLE
- --- PROPOSED CATCH BASIN
- --- PROPOSED SWALE
- --- PROPOSED PAVEMENT
- --- PROPOSED LIMEROCK
- --- PROPOSED TRENCH RESTORATION
- --- PROPOSED PAVER
- --- PROPOSED CONCRETE
- --- PROPOSED DRAIN PIPE

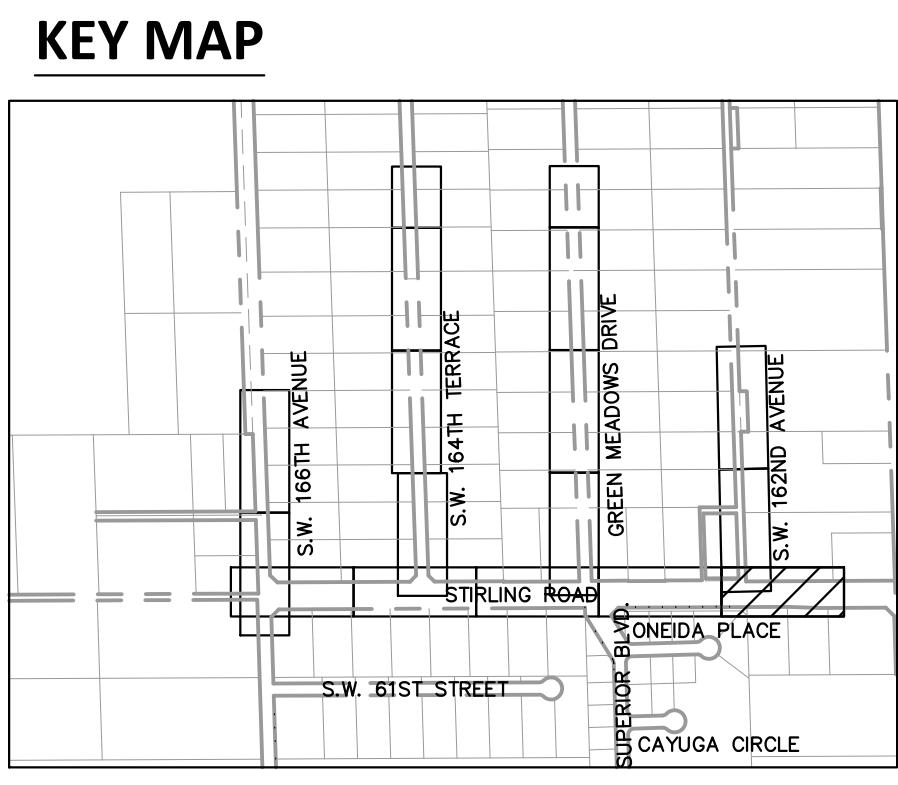
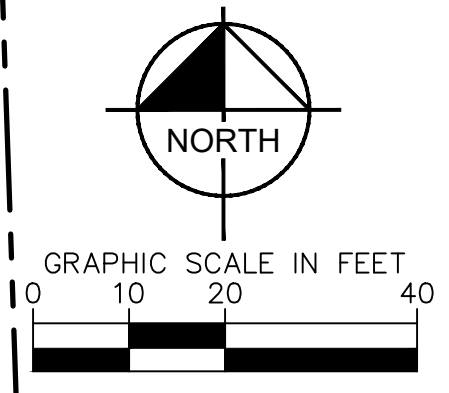
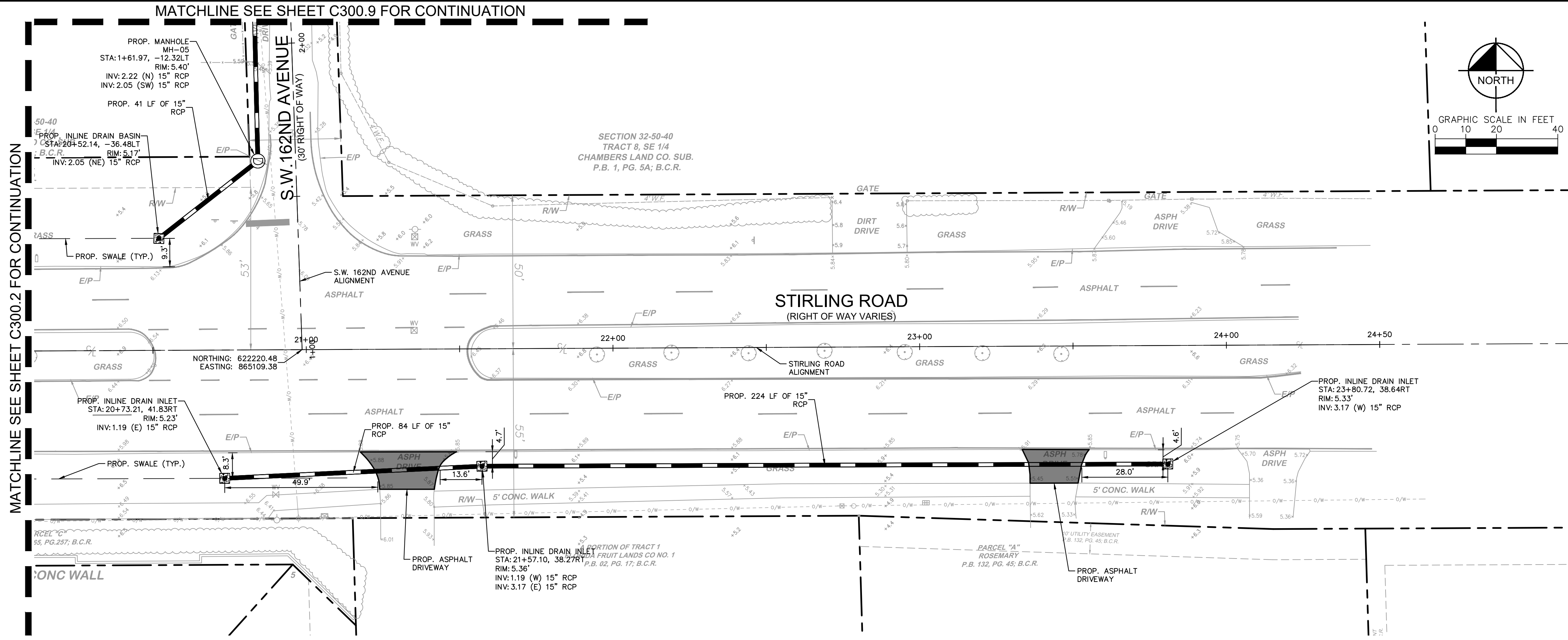
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<b>Kimley»Horn</b>		LICENSED PROFESSIONAL STEFANO F. VIOLA, P.E. 6/5/2023 SCALE: AS SHOWN DESIGNED BY: TS DRAWN BY: DC CHECKED BY: SV DATE: 10/2/2023
<b>ENGINEERING PLAN</b> SW RANCHES GREEN MEADOWS DRAINAGE PREPARED FOR TOWN OF SOUTHWEST RANCHES SOUTHWEST RANCHES, FLORIDA		SHEET NUMBER <b>C300.2</b>

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

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**LEGEND**

	PROPERTY LINE/ RIGHT-OF-WAY LINE
	EXISTING SANITARY SEWER PIPE
	EXISTING WATER MAIN PIPE
	EXISTING OVERHEAD WIRE
	EXISTING STORM SEWER PIPE
	EXISTING SANITARY SEWER MANHOLE
	EXISTING SIGN
	EXISTING MAILBOX
	EXISTING VALVE
	EXISTING HYDRANT
	EXISTING GRADE
	EXISTING LIGHTPOLE
	PROPOSED STORM MANHOLE
	PROPOSED CATCH BASIN
	PROPOSED SWALE
	PROPOSED PAVEMENT
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	PROPOSED PAVER
	PROPOSED CONCRETE
	PROPOSED DRAIN PIPE

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NO.	REVISIONS	DATE

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LICENSED PROFESSIONAL	STEFANO F. VIOLA, P.E.
KHA PROJECT	143221005
DATE	6/5/2023
SCALE	AS SHOWN
DESIGNED BY	TS
DRAWN BY	DC
CHECKED BY	SV
DATE:	10/2/2023

**ENGINEERING PLAN**

SW RANCHES GREEN MEADOWS DRAINAGE PREPARED FOR TOWN OF SOUTHWEST RANCHES SOUTHWEST RANCHES FLORIDA

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

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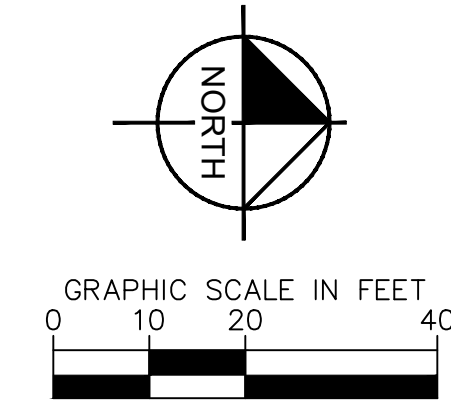
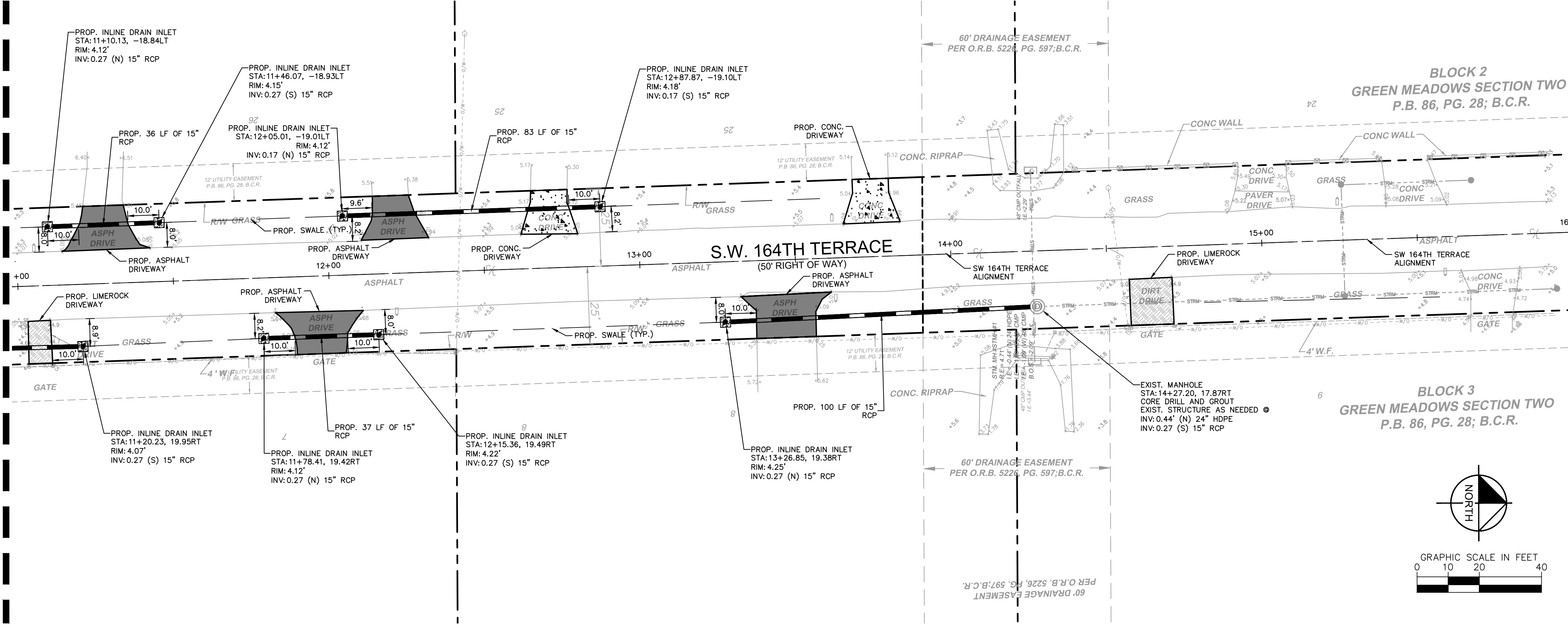
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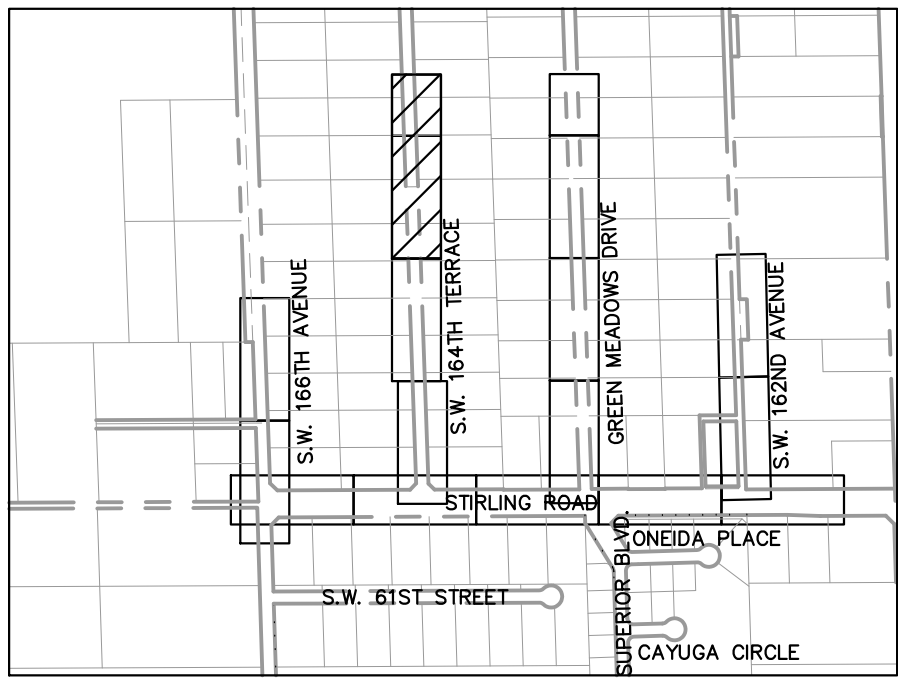


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MATCHLINE SEE SHEET C-300.5 FOR CONTINUATION



**KEY MAP**



**LEGEND**

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- WM --- EXISTING WATER MAIN PIPE
- OW --- EXISTING OVERHEAD WIRE
- SS --- EXISTING STORM SEWER PIPE
- SM --- EXISTING SANITARY SEWER MANHOLE
- S --- EXISTING SIGN
- M --- EXISTING MAILBOX
- V --- EXISTING VALVE
- H --- EXISTING HYDRANT
- G --- EXISTING GRADE
- L --- EXISTING LIGHTPOLE
- P --- PROPOSED STORM MANHOLE
- CB --- PROPOSED CATCH BASIN
- SW --- PROPOSED SWALE
- PAV --- PROPOSED PAVEMENT
- L --- PROPOSED LIMEROCK
- TR --- PROPOSED TRENCH RESTORATION
- P --- PROPOSED PAVER
- C --- PROPOSED CONCRETE
- DP --- PROPOSED DRAIN PIPE

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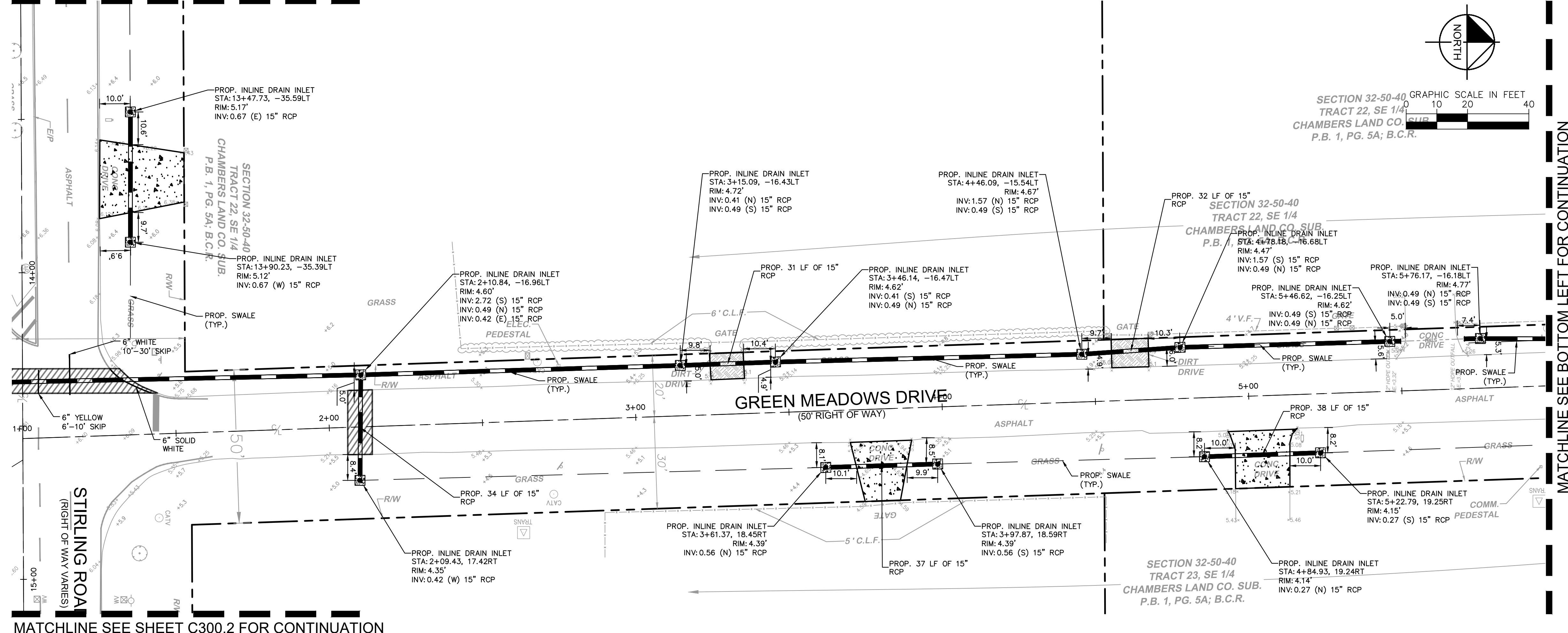
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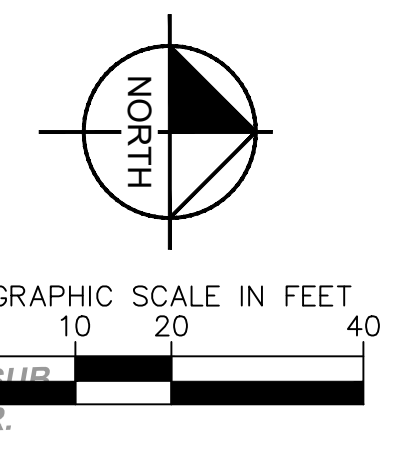
<p><b>Kimley»Horn</b></p> <p>© 2023 KIMLEY-HORN AND ASSOCIATES, INC.                  8201 PETERS ROAD, SUITE 2200, PLANTATION, FL 33324                  PHONE: 954-535-5100 FAX: 954-739-2247                  WWW.KIMLEY-HORN.COM REGISTRY No. 696</p>	<p>LICENSED PROFESSIONAL</p> <p>STEFANO F. VIOLA, P.E.</p> <p>FLORIDA LICENSE NUMBER 74655</p> <p>CHECKED BY SV DATE: 10/2/2023</p>						
	<p>KHA PROJECT 143221005</p> <p>DATE 6/5/2023</p> <p>SCALE AS SHOWN</p> <p>DESIGNED BY TS</p> <p>DRAWN BY DC</p> <p>CHECKED BY SV</p>						
<p><b>ENGINEERING PLAN</b></p>	<p>FLORIDA</p>						
<p>SW RANCHES GREEN MEADOWS DRAINAGE PREPARED FOR TOWN OF SOUTHWEST RANCHES</p>	<p>SHEET NUMBER <b>C300.6</b></p>						
<p>SOUTHWEST RANCHES</p>	<p>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					

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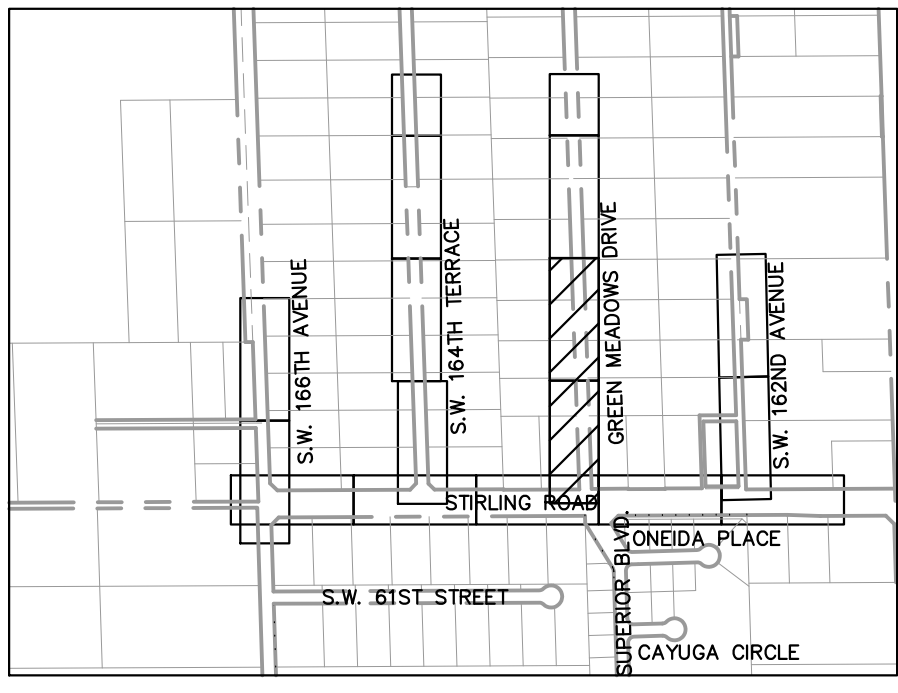
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MATCHLINE SEE SHEET C300.2 FOR CONTINUATION



**KEY MAP**



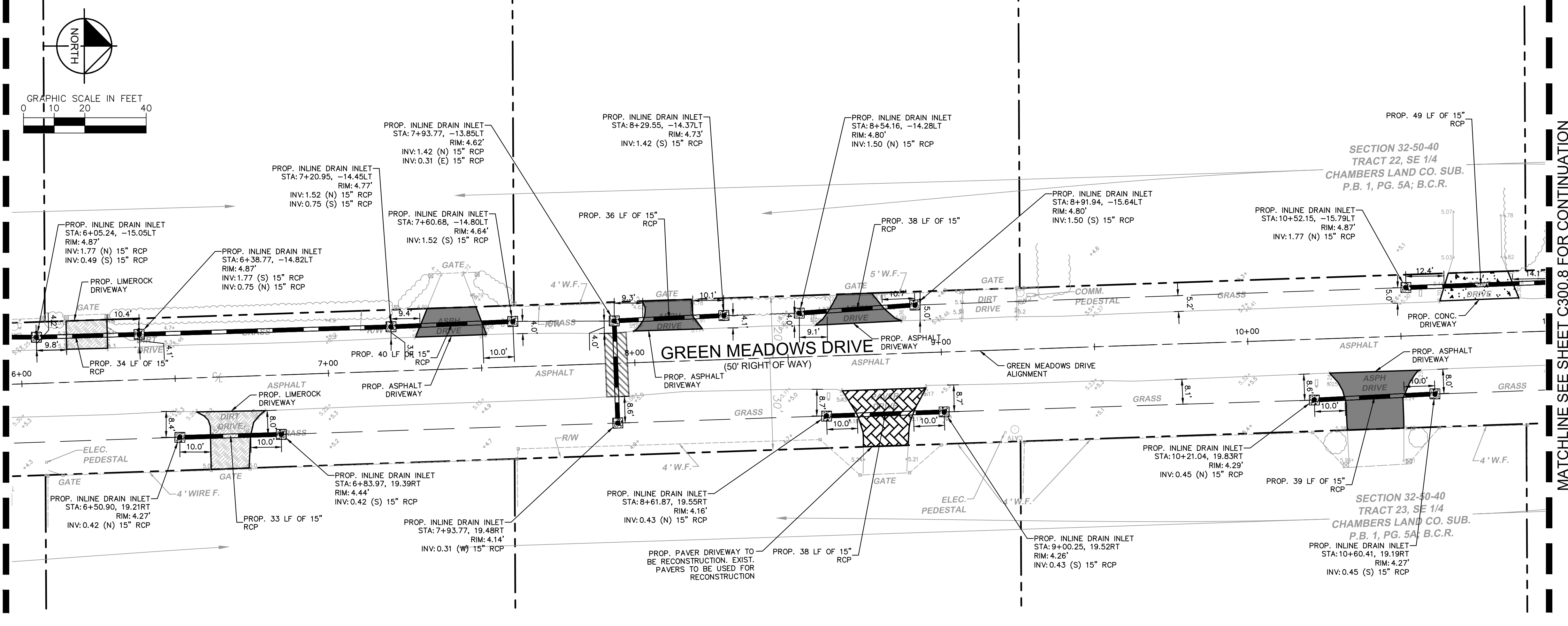
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- G --- EXISTING GRADE
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- D --- PROPOSED DRAIN PIPE

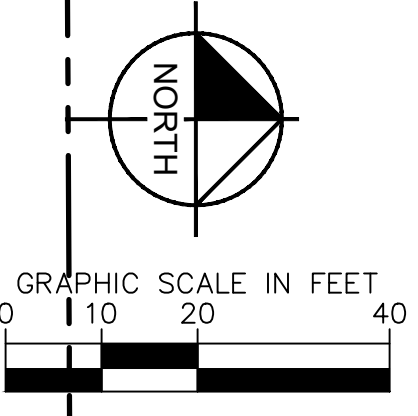
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MATCHLINE SEE SHEET C300.8 FOR CONTINUATION

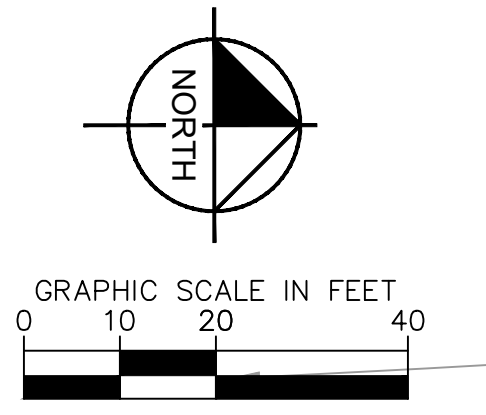
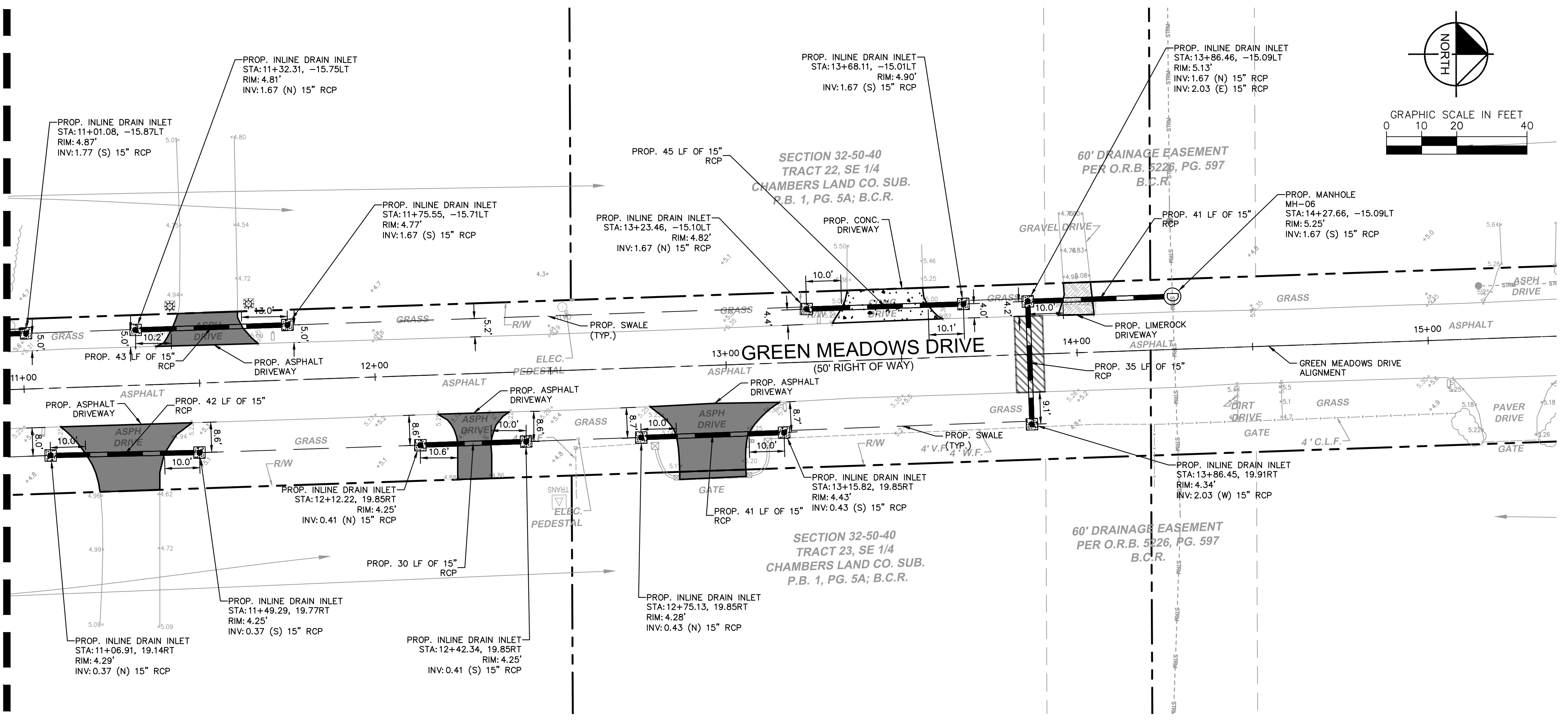


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KHA PROJECT 143221005	DATE 6/5/2023	SCALE AS SHOWN
DESIGNED BY TS	DRAWN BY DC	CHECKED BY SV
<b>ENGINEERING PLAN</b>		FLORIDA
SW RANCHES GREEN MEADOWS DRAINAGE	PREPARED FOR	TOWN OF SOUTHWEST RANCHES
SHEET NUMBER		C300.7
REVISIONS		DATE

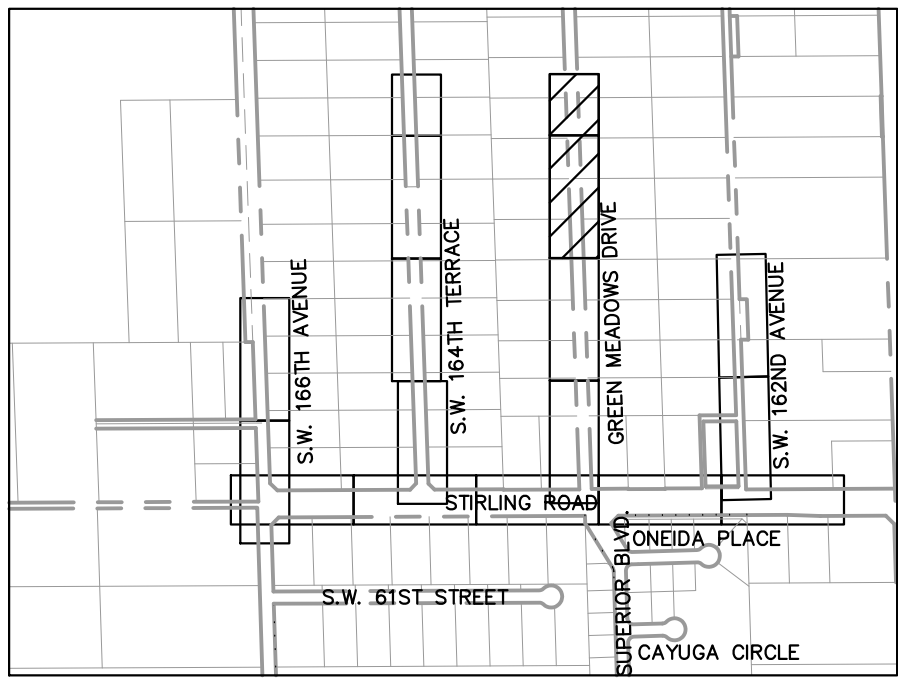
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MATCHLINE SEE SHEET C300.7 FOR CONTINUATION



**KEY MAP**



**LEGEND**

- SAN --- PROPERTY LINE/ RIGHT-OF-WAY LINE
- SAN --- EXISTING SANITARY SEWER PIPE
- W --- EXISTING WATER MAIN PIPE
- O/W --- EXISTING OVERHEAD WIRE
- S/S --- EXISTING STORM SEWER PIPE
- S/S --- EXISTING SANITARY SEWER MANHOLE
- S --- EXISTING SIGN
- M --- EXISTING MAILBOX
- V --- EXISTING VALVE
- H --- EXISTING HYDRANT
- G --- EXISTING GRADE
- L --- EXISTING LIGHTPOLE
- M --- PROPOSED STORM MANHOLE
- C --- PROPOSED CATCH BASIN
- S --- PROPOSED SWALE
- P --- PROPOSED PAVEMENT
- L --- PROPOSED LIMEROCK
- T --- PROPOSED TRENCH RESTORATION
- P --- PROPOSED PAVER
- C --- PROPOSED CONCRETE
- D --- PROPOSED DRAIN PIPE

**NOTES**

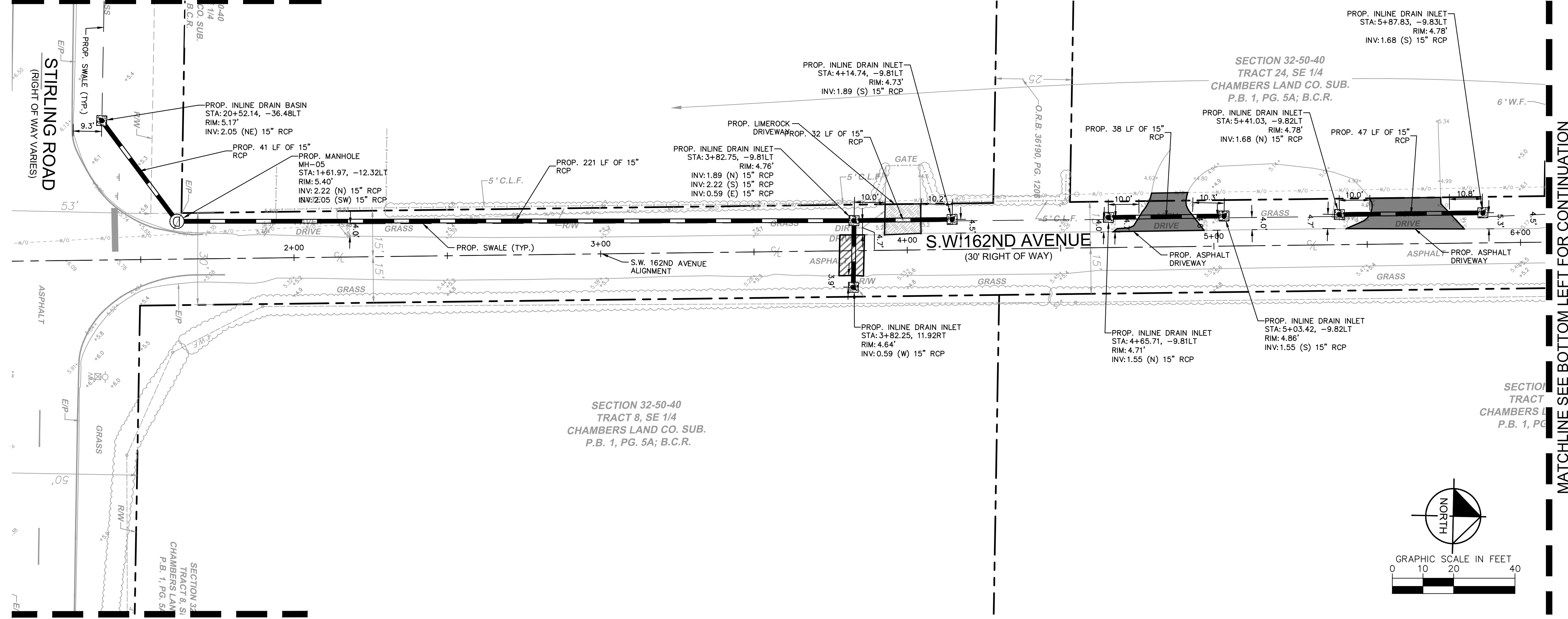
1. ALL AREAS DAMAGED BY THE CONTRACTOR, INCLUDING BUT NOT LIMITED TO PAVEMENT MARKINGS, ASPHALT, SWALE, SIDEWALK, AND DRIVEWAYS, SHALL BE RESTORED, AT THE CONTRACTOR'S EXPENSE, TO ORIGINAL CONDITION.
2. CONTRACTOR TO MAINTAIN DRAINAGE FLOW DURING AND AFTER CONSTRUCTION.
3. NO EXISTING TREES SHALL BE REMOVED UNLESS OTHERWISE SPECIFIED.
4. SHOULD ANY EXISTING TREE BE REQUIRED TO BE REMOVED OR RELOCATED BASED ON PROPOSED WORK, CONTRACTOR TO COORDINATE MODIFIED WORK WITH ENGINEER. SHOULD TREE REMOVAL/RELOCATION BE REQUIRED, CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS.
5. ALL EXISTING MAILBOXES IMPACTED BY CONSTRUCTION SHALL BE MODIFIED/RELOCATED AS NECESSARY AT THE CONTRACTOR'S EXPENSE.
6. ALL SIDEWALKS TO BE 4" THICK, EXCEPT THOSE TRAVERSING DRIVEWAYS SHALL BE 6" THICK, AS PER SIDEWALK DETAIL.
7. PROPOSED SIDEWALK SLOPE SHALL NOT EXCEED MAXIMUM CROSS SLOPE OF 2% AND LONGITUDINAL SLOPE OF 5%.
8. ALL SIDEWALK RAMPS AND DETECTABLE WARNINGS TO MEET FDOT STANDARDS.
9. ALL ASPHALT TO BE REMOVED SHALL BE SAW CUT ADJACENT TO REMAINING IMPROVEMENTS.
10. DRIVEWAYS IMPACTED BY DRAINAGE PIPE PLACEMENT SHALL BE RESTORED AND REPLACED WITH LIKE MATERIAL.
11. CONTRACTOR TO FOLLOW TYPICAL TOWN OF SOUTHWEST RANCHES DRIVEWAY DETAIL. IF DEVIATIONS FROM THE DETAIL ARE REQUIRED IT NEEDS TO BE APPROVED BY THE TOWN OR EOR.

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

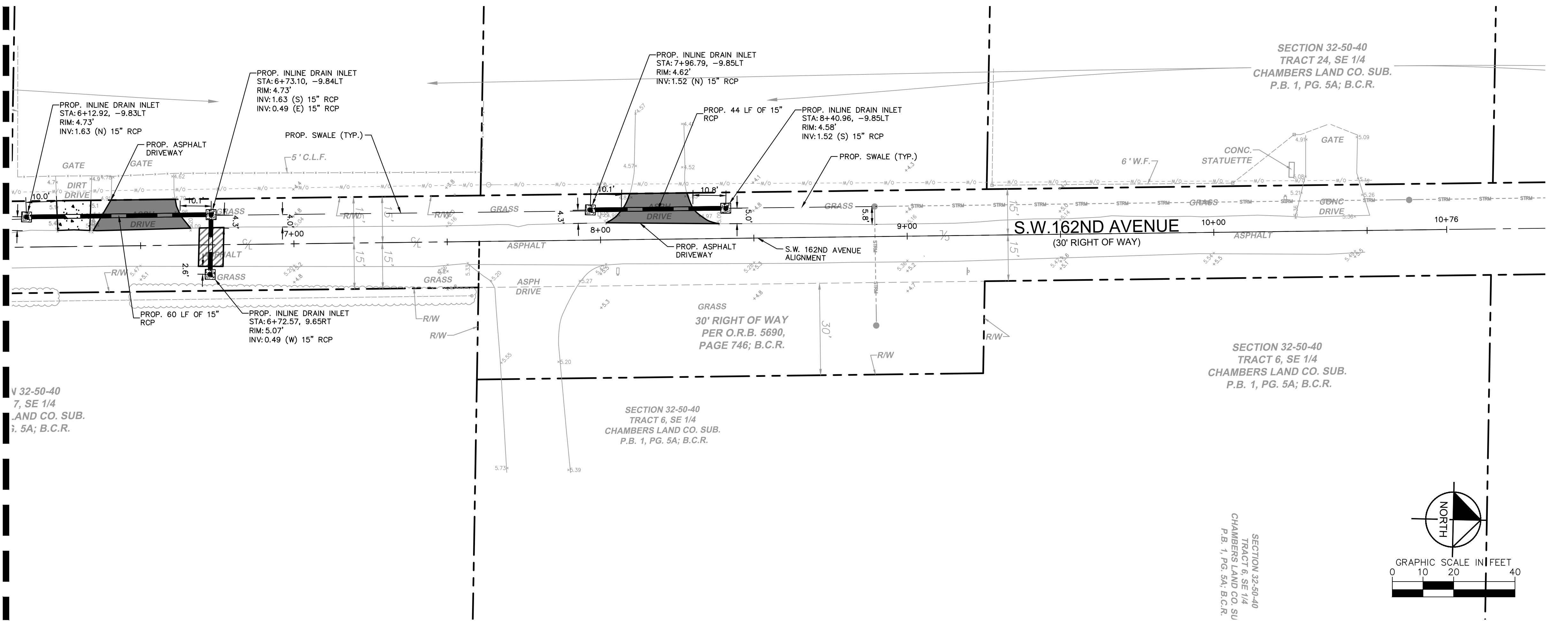
<p><b>Kimley»Horn</b></p> <p>© 2023 KIMLEY-HORN AND ASSOCIATES, INC.                  8201 PETERS ROAD, SUITE 2200, PLANTATION, FL 33324                  PHONE: 954-535-5100 FAX: 954-739-2247                  WWW.KIMLEY-HORN.COM REGISTRY No. 696</p>	<p>LICENSED PROFESSIONAL</p> <p>STEFANO F. VIOLA, P.E.</p> <p>FLORIDA LICENSE NUMBER 74655</p> <p>DATE: 10/2/2023</p>	<p>KHA PROJECT 143221005</p> <p>DATE 6/5/2023</p> <p>SCALE AS SHOWN</p> <p>DESIGNED BY TS</p> <p>DRAWN BY DC</p> <p>CHECKED BY SV</p>	<p><b>ENGINEERING PLAN</b></p>	<p>FLORIDA</p>			
	<p>SW RANCHES GREEN MEADOWS DRAINAGE PREPARED FOR TOWN OF SOUTHWEST RANCHES</p>	<p>SHEET NUMBER C300.8</p>	<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>No.</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> </tr> </table>	No.	DATE		
No.	DATE						

Plotted By: Stanton, Tiffany - Sheet: SW Ranches Green Meadows Drainage - Layout: C300.9 Engineering Plan - October 02, 2023 - 04:16:04pm - K:\V\civil\143\_Jobs\143221005\_sw\_ranches\_green\_meadows\_drainage\CAD\plan\sheet\C300.9\_Engineering\_Plan.dwg  
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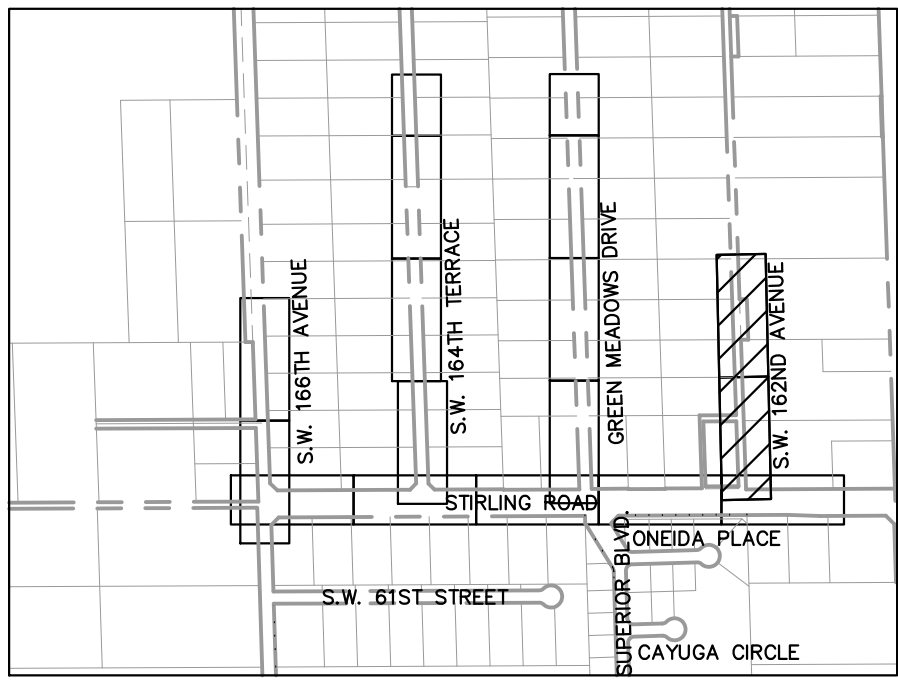


MATCHLINE SEE SHEET C300.3 FOR CONTINUATION



MATCHLINE SEE TOP RIGHT FOR CONTINUATION

**KEY MAP**



**LEGEND**

- SAN --- EXISTING SANITARY SEWER PIPE
- W --- EXISTING WATER MAIN PIPE
- O/W --- EXISTING OVERHEAD WIRE
- STRM --- EXISTING STORM SEWER PIPE
- SMH --- EXISTING SANITARY SEWER MANHOLE
- S --- EXISTING SIGN
- M --- EXISTING MAILBOX
- V --- EXISTING VALVE
- H --- EXISTING HYDRANT
- G --- EXISTING GRADE
- L --- EXISTING LIGHTPOLE
- PMH --- PROPOSED STORM MANHOLE
- CB --- PROPOSED CATCH BASIN
- SW --- PROPOSED SWALE
- P --- PROPOSED PAVEMENT
- L --- PROPOSED LIMEROCK
- TR --- PROPOSED TRENCH RESTORATION
- P --- PROPOSED PAVER
- C --- PROPOSED CONCRETE
- DP --- PROPOSED DRAIN PIPE

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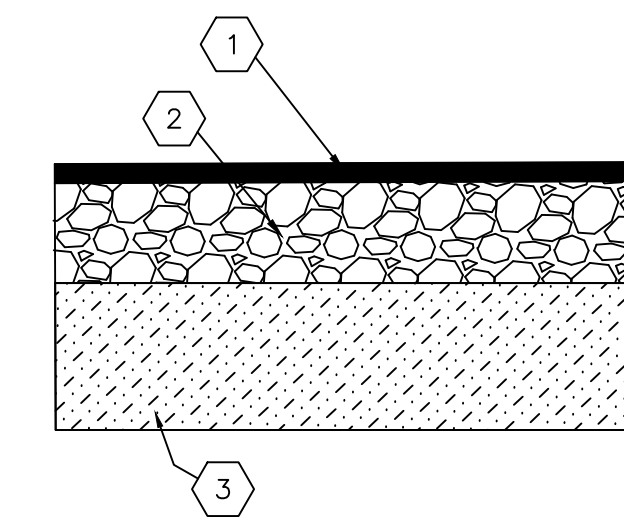
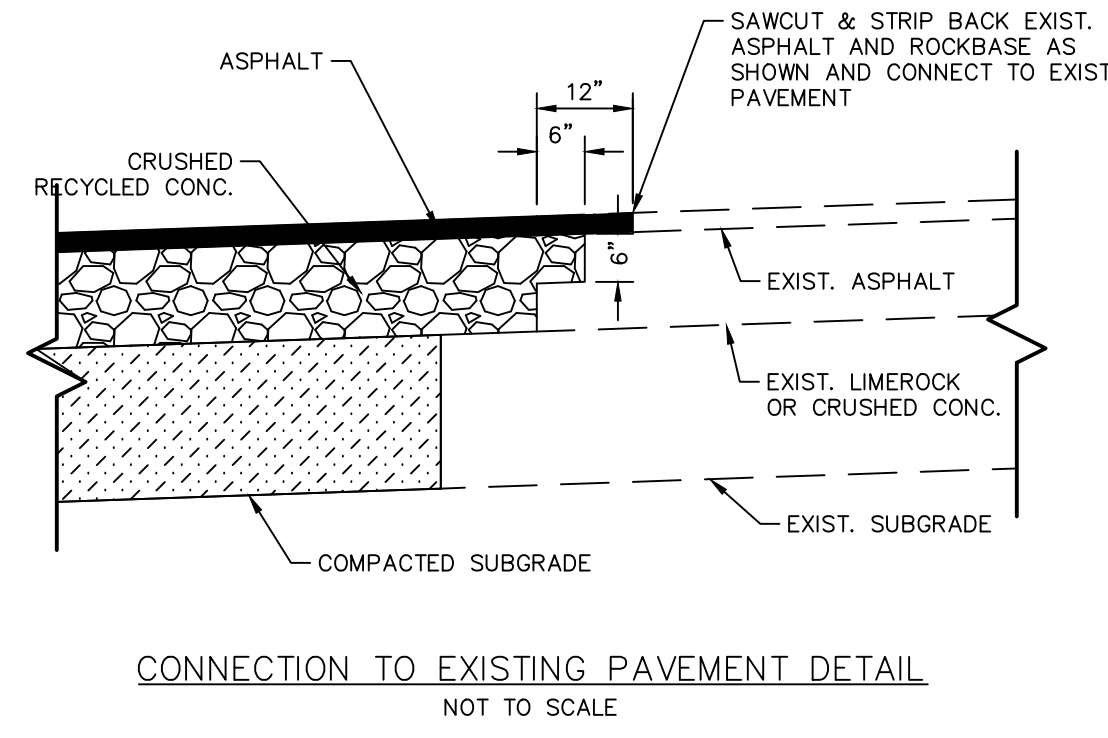
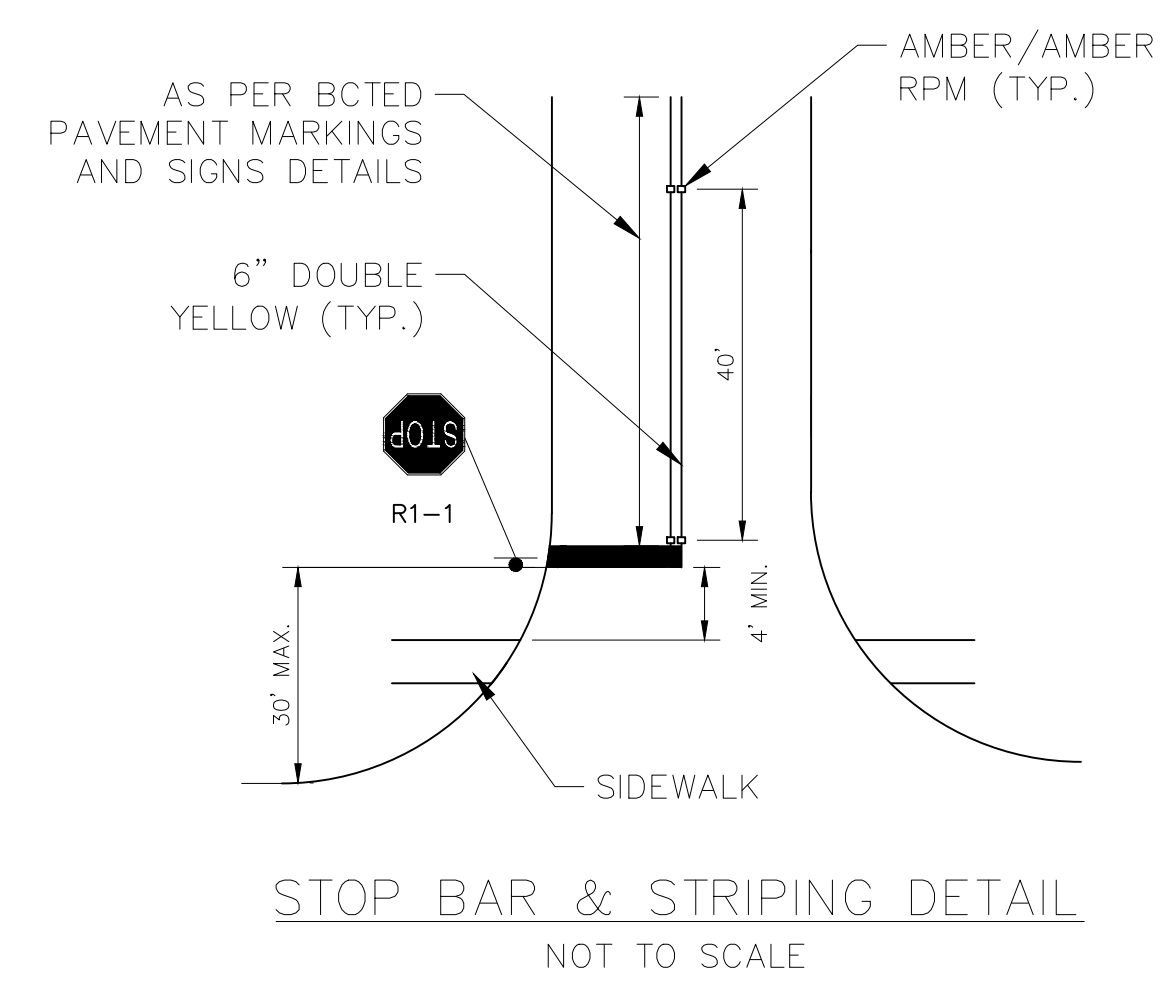
<b>Kimley»Horn</b>		LICENSED PROFESSIONAL STEFANO F. VIOLA, P.E. 8201 PETERS ROAD, SUITE 2200, PLANTATION, FL 33324 PHONE: 954-535-5100 FAX: 954-739-2247 WWW.KIMLEY-HORN.COM REGISTRY No. 696
KHA PROJECT 143221005	DATE 6/5/2023	SCALE AS SHOWN
DESIGNED BY TS	DRAWN BY DC	CHECKED BY SV
<b>ENGINEERING PLAN</b>		FLORIDA
<b>SW RANCHES GREEN MEADOWS DRAINAGE</b>		PREPARED FOR
<b>TOWN OF SOUTHWEST RANCHES</b>		<b>RANCHES</b>
SHEET NUMBER <b>C300.9</b>		DATE 10/2/2023

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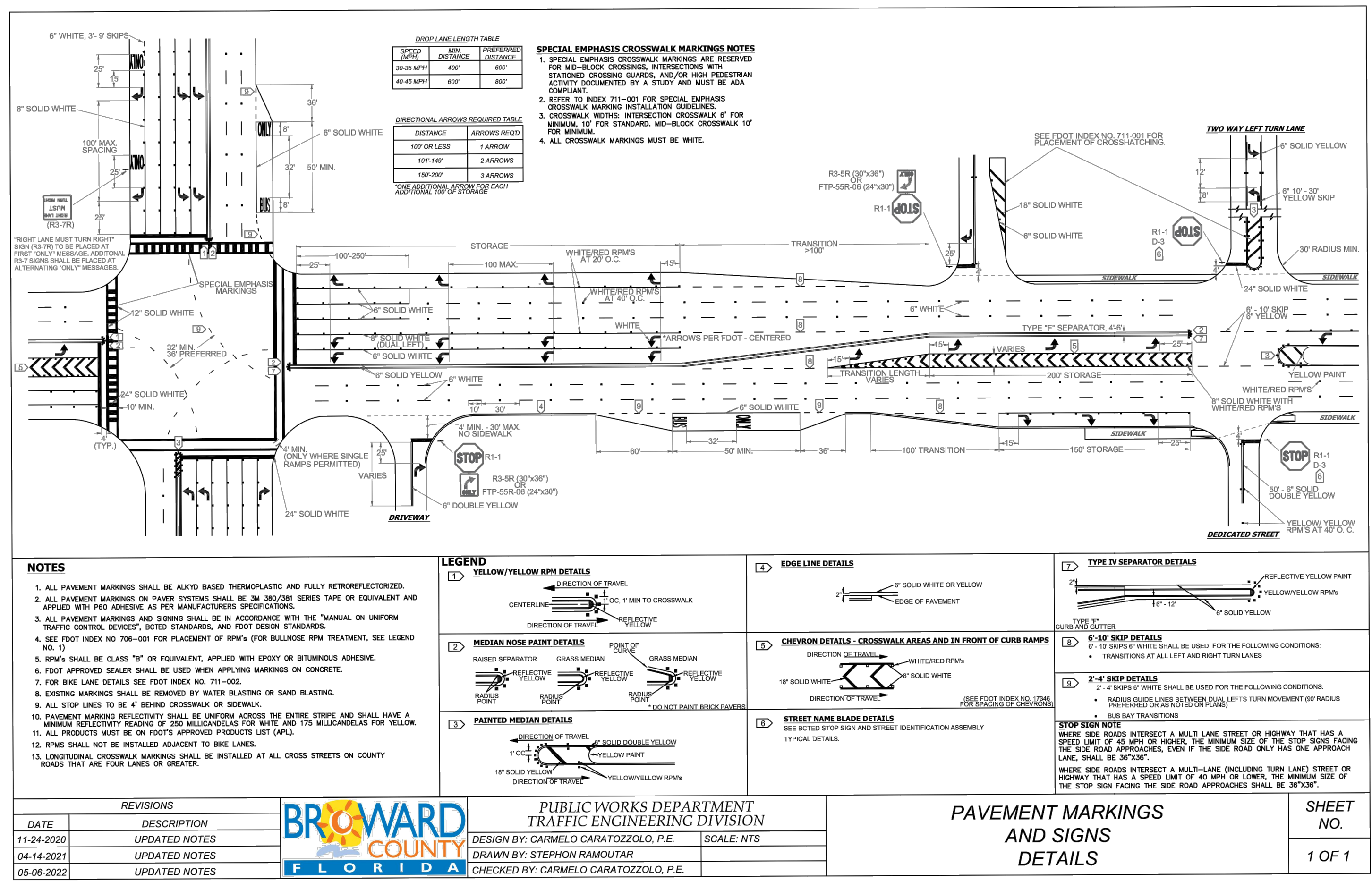
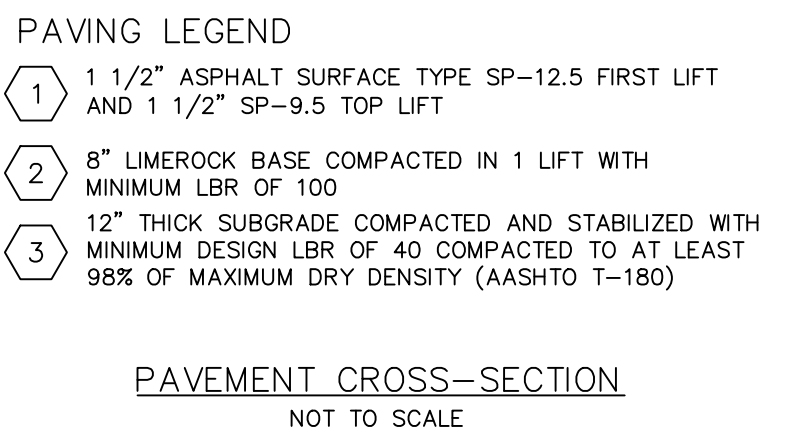
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- NOTES:
- EXISTING STOP SIGNS AND STOP BARS SHALL BE RELOCATED AS NEEDED TO COMPLY WITH MINIMUM/MAXIMUM DIMENSIONS SHOWN. ALL RELOCATIONS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
  - ALL STOP BARS SHALL BE LOCATED AS PER BROWARD COUNTY STANDARD DETAILS.
  - DETAILS IN FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) ROADWAY AND TRAFFIC DESIGN STANDARDS, AND BROWARD COUNTY PUBLIC WORKS MANUAL SHALL BE USED WHERE APPLICABLE.
  - REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED AS NOTED IN PLANS AND DETAILS. ALL STRIPING SHALL BE THERMOPLASTIC.
  - ALL EXISTING SIGNS SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL REMAIN. CONTRACTOR IS RESPONSIBLE TO REPLACE/REPAIR ANY DAMAGE TO SIGNAGE AS A RESULT OF CONSTRUCTION AT NO COST TO THE OWNER.
  - ALL EXISTING PAVEMENT MARKINGS SHALL BE REPLACED FOLLOWING RESURFACING.
  - WHERE NEEDED, EXTEND EXISTING SOLID DOUBLE YELLOW TO MEET BCTD STANDARDS.



DATE	DESCRIPTION	DESIGN BY	SCALE
11-24-2020	UPDATED NOTES	CARMELO CARATOZZOLO, P.E.	NTS
04-14-2021	UPDATED NOTES	STEPHON RAMOUTAR	
05-06-2022	UPDATED NOTES	CARMELO CARATOZZOLO, P.E.	

REVISIONS	DESCRIPTION	DATE
1	UPDATED NOTES	11-24-2020
2	UPDATED NOTES	04-14-2021
3	UPDATED NOTES	05-06-2022

**Kimley-Horn**  
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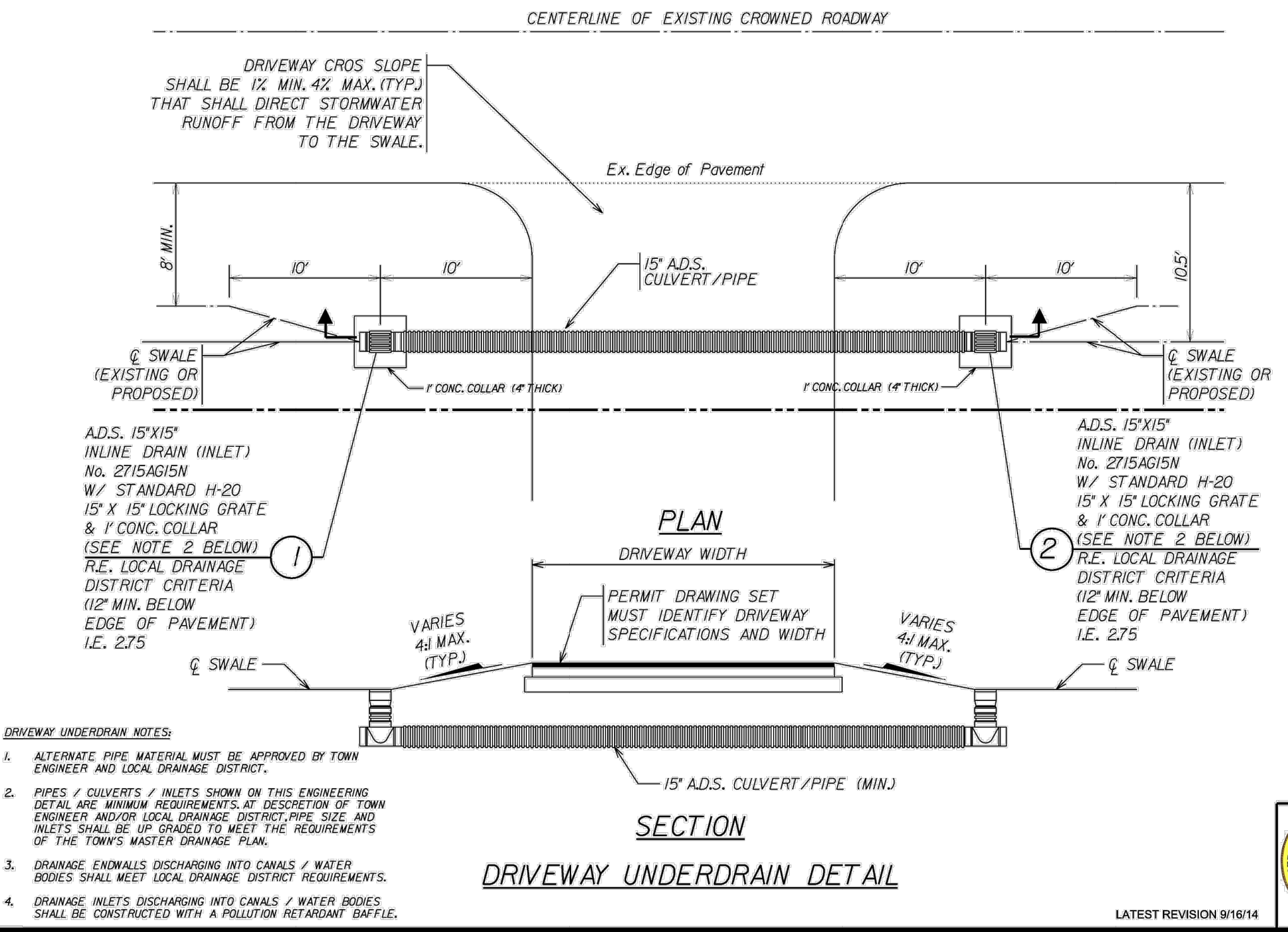
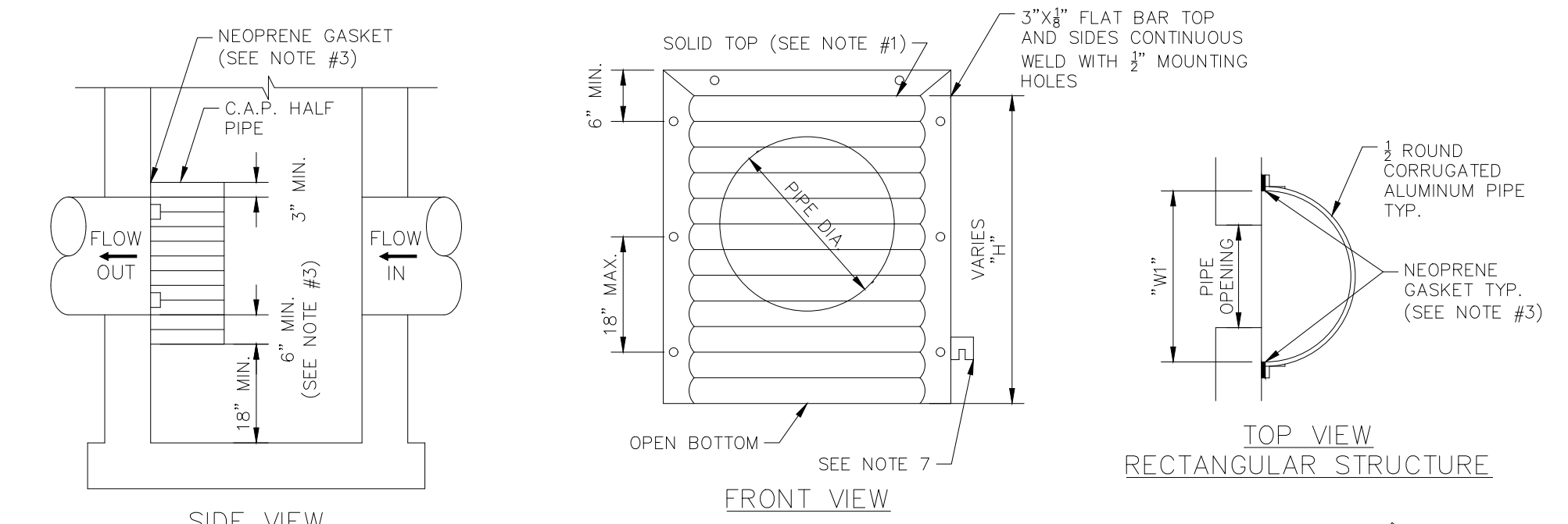
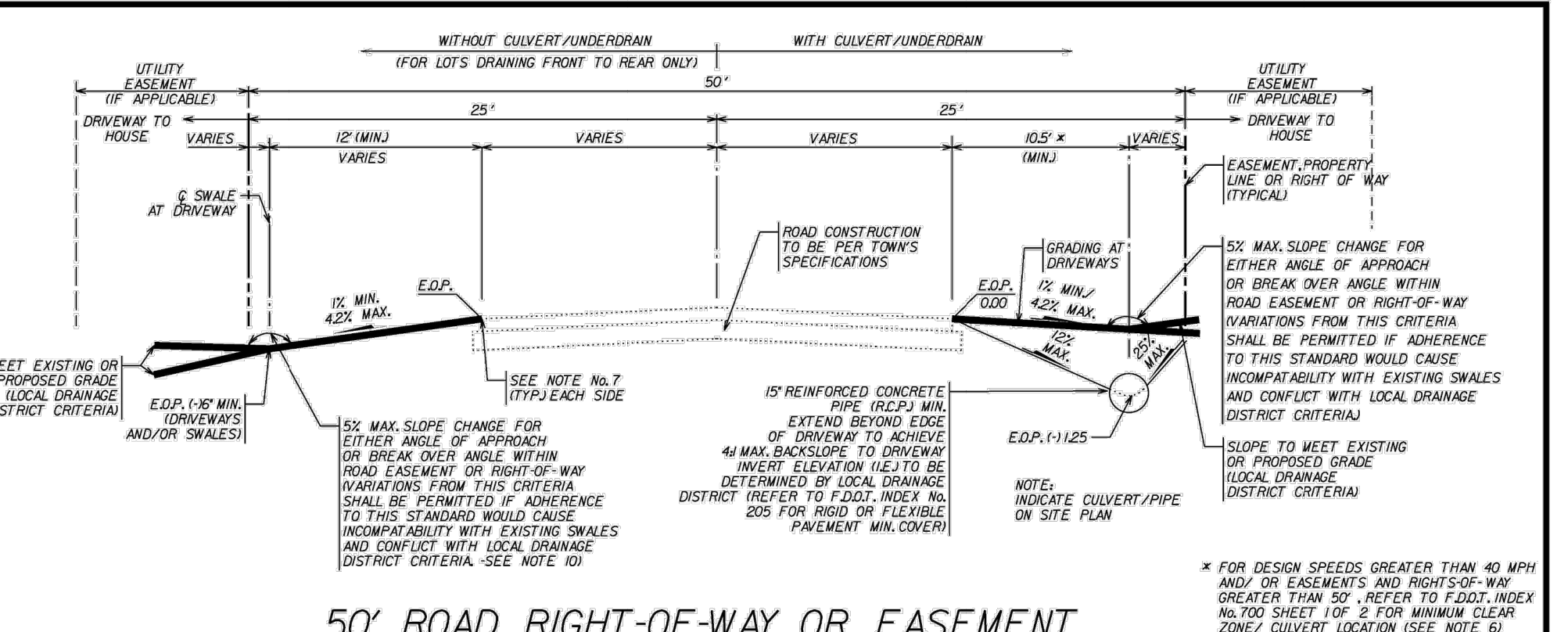
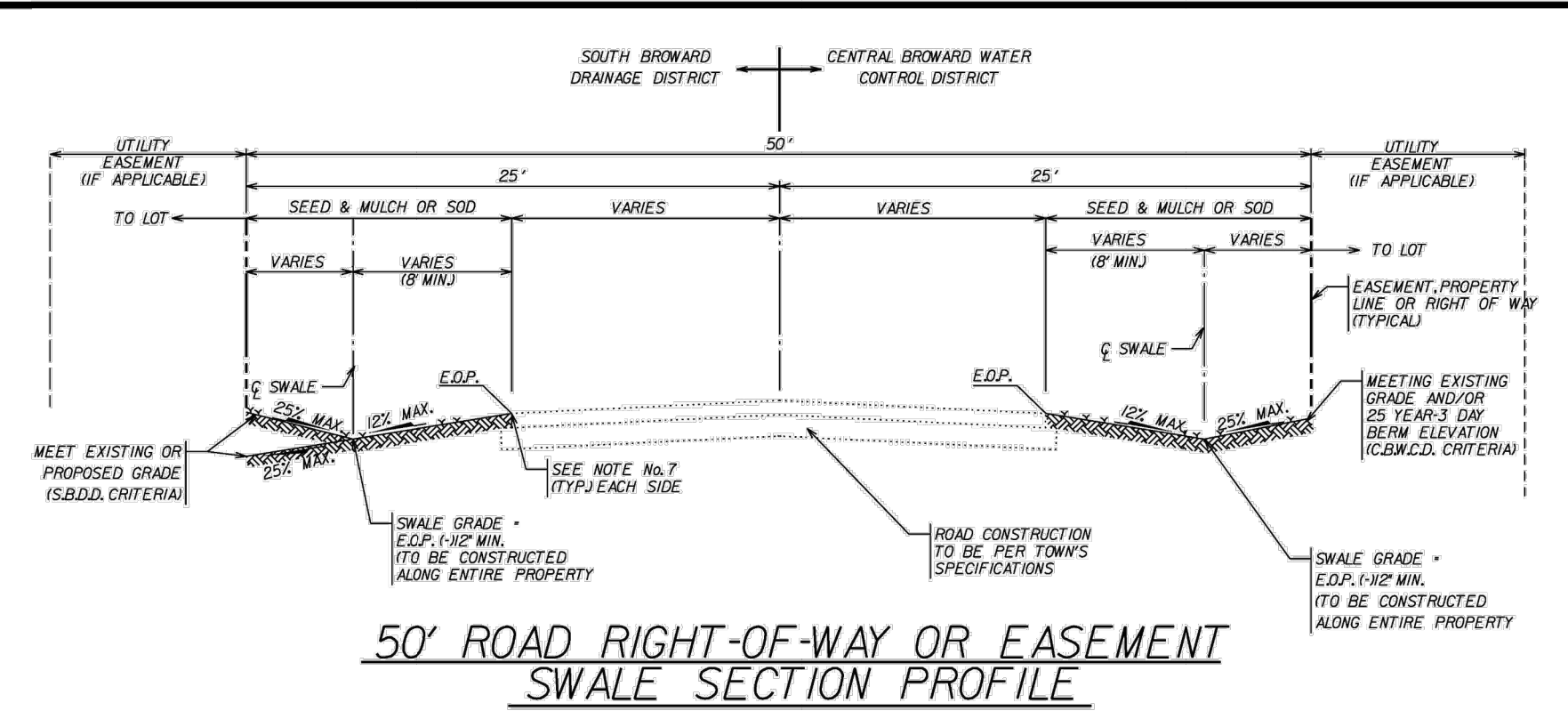
LICENSED PROFESSIONAL  
 STEFANO F. VIOLA, P.E.  
 DATE: 6/5/2023  
 SCALE: AS SHOWN  
 DESIGNED BY: TS  
 DRAWN BY: DC  
 CHECKED BY: SV  
 DATE: 10/2/2023

**ENGINEERING PLAN**  
**DETAILS**

SW RANCHES GREEN MEADOWS DRAINAGE PREPARED FOR TOWN OF SOUTHWEST RANCHES

FLORIDA  
 SOUTHWEST RANCHES

DATE: BY: REVISIONS: NO.



**DRIVEWAY UNDERDRAIN DETAIL**

DRIVEWAY UNDERDRAIN NOTES:

- ALTERNATE PIPE MATERIAL MUST BE APPROVED BY TOWN ENGINEER AND LOCAL DRAINAGE DISTRICT.
- PIPES / CULVERTS / INLETS SHOWN ON THIS ENGINEERING DETAIL ARE MINIMUM REQUIREMENTS. AT DESCRIPTION OF TOWN ENGINEER AND/OR LOCAL DRAINAGE DISTRICT PIPE SIZE AND INLETS SHALL BE UPGRADED TO MEET THE REQUIREMENTS OF THE TOWN'S MASTER DRAINAGE PLAN.
- DRAINAGE ENDS DISCHARGING INTO CANALS / WATER BODIES SHALL MEET LOCAL DRAINAGE DISTRICT REQUIREMENTS.
- DRAINAGE INLETS DISCHARGING INTO CANALS / WATER BODIES SHALL BE CONSTRUCTED WITH A POLLUTION RETARDANT BAFFLE.

DRIVEWAY UNDERDRAIN NOTES:

- DRIVEWAYS MUST NOT ADVERSELY IMPACT APPLICANT'S PROPERTY OR ADJACENT PROPERTIES NOR INCLUDE SIGNIFICANT AMOUNT OF FILLING.
- ALL IMPROVEMENTS MUST MEET THE REQUIREMENTS OF THE BROWARD COUNTY LAND DEVELOPMENT CODE, MINIMUM CONSTRUCTION STANDARDS FOR ROADWAYS UNDER BROWARD COUNTY JURISDICTION, AND LOCAL DRAINAGE DISTRICT CRITERIA.
- SECTIONS SHOWN ABOVE PERTAIN TO A MINIMUM 50' R/W OR EASEMENT WIDTH. WIDTHS GREATER THAN 50' SHALL MEET SAME CRITERIA.
- AT TIME OF PERMIT APPLICATION SUBMITTAL, APPLICANT MUST PROVIDE THE TOWN OF SOUTHWEST RANCHES WITH PROOF OF LEGAL ACCESS MEETING THE BROWARD COUNTY LAND DEVELOPMENT CODE, OR OBTAIN SAME PRIOR TO RECEIVING THE BUILDING PERMIT.
- FOR LOCAL SUBDIVISION TYPE STREETS, A MAXIMUM CROSS SLOPE OF 1% AND MINIMUM CROSS SLOPE OF 3% SHALL BE REQUIRED FOR THE ROADWAY SHOULDER AND SWALE. DEPTH ADJACENT TO THE ROADWAY AS SHOWN ABOVE FOR THE ENTIRE PROPERTY LINE.
- FOR PROPERTIES ADJACENT TO RURAL HIGH SPEED STREETS A CROSS SECTION IN THE SWALE BETWEEN THE ADJACENT ROADWAY AND PROPERTY SHALL BE REQUIRED CONFORMING TO THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS CHAPTER 100 WITH RESPECT TO SHOULDERS, ROADSIDE SLOPES, BACK SLOPES, CLEAR ZONES, GUARDRAILS, ETC. AND BROWARD COUNTY LAND DEVELOPMENT CODE, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA.
- FINISHED GRADE OF TURF / SOD SHALL BE MINIMUM 2" MAXIMUM BELLOW EDGE OF PAVEMENT.
- CONTRACTOR OWNER TO PROVIDE DETAILS FOR DRIVEWAYS INCLUDING, BUT NOT LIMITED TO TYPE (CONCRETE, ASPHALT, PAVERS, ETC.), WIDTH, THICKNESS AND SLOPE.
- SURFACES WITHIN R/W EASEMENT OTHER THAN ASPHALT OR PLAIN CONCRETE SHALL BE SUBJECT TO A SPECIAL MAINTENANCE / INDemnIFICATION AGREEMENT WITH THE TOWN.
- PRIOR TO CONSTRUCTION OF ALL DRIVEWAYS AND/OR CULVERTS/UNDERDRAINS WITHIN ROADWAY EASEMENT OR RIGHT-OF-WAY, CONTRACTOR MUST CONTACT TOWN INSPECTOR.
- ALL CONSTRUCTION SHALL CONFORM TO TOWN'S MASTER DRAINAGE PLAN.
- THESE DETAILS ARE MINIMUM REQUIREMENTS AND MAY OR MAY NOT BE APPLICABLE TO MASTER DRAINAGE PLANS.

LEGEND

- SLOPE AND DIRECTION
- EARTH
- FLOW ARROWS (DRAINAGE)
- RIGHT-OF-WAY (OWNER'S PROPERTY LINE)
- CENTER LINE
- CENTER LINE OF SWALE
- EASEMENT
- DRIVEWAY
- EDGE OF PAVEMENT
- C.B.W.C.D. CENTRAL BROWARD WATER CONTROL DISTRICT
- S.B.D.D. SOUTH BROWARD DRAINAGE DISTRICT

Town of Southwest Ranches Engineering Department  
 Town Hall • 13400 Griffin Road • Southwest Ranches, FL 33330

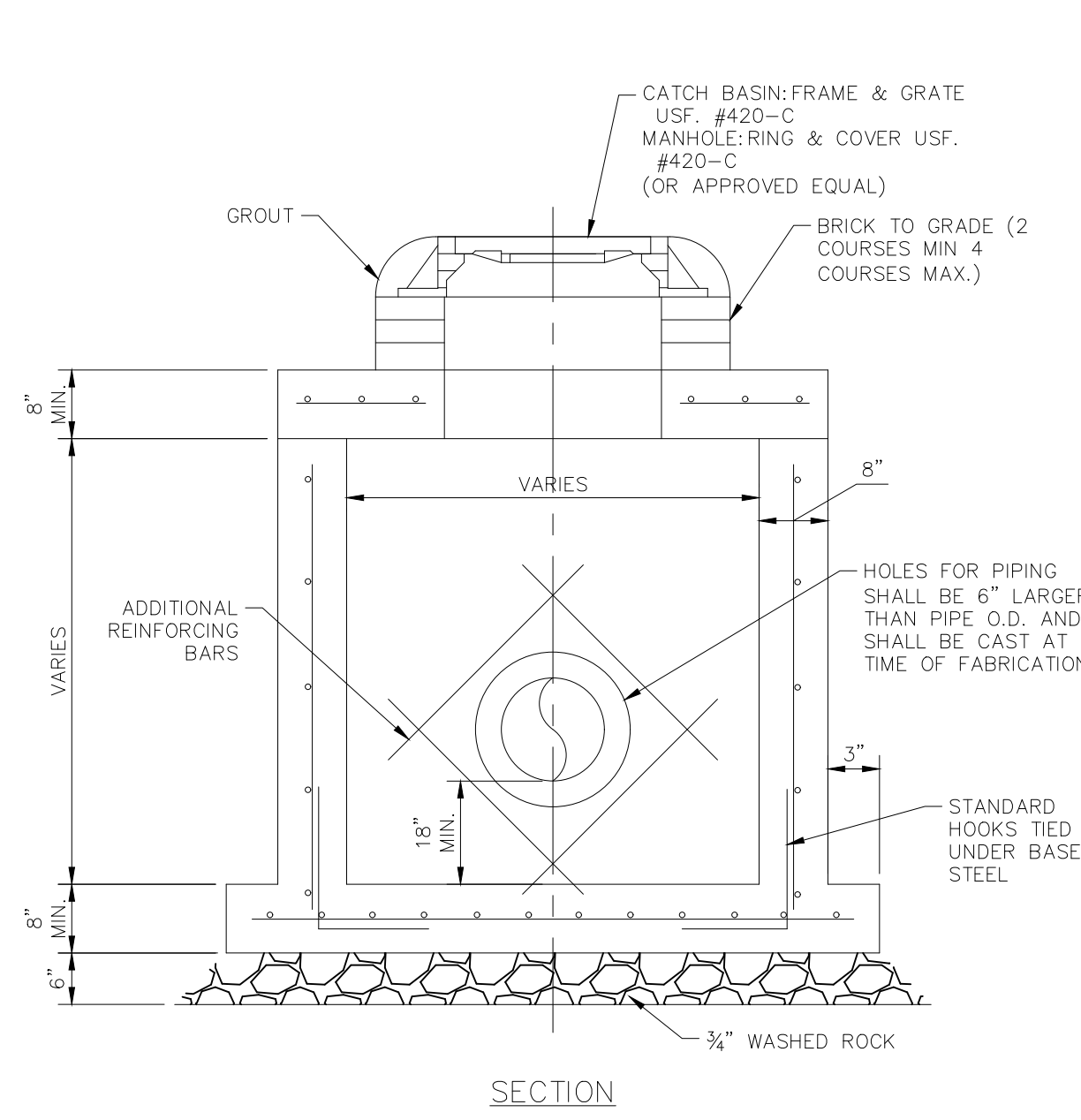
DRIVEWAY AND SWALE EXHIBIT FOR RESIDENTIAL LOTS

DRAWN: WPI DATE: 302 SHEET: DSR01  
 CHECKED: WPI DATE: 302

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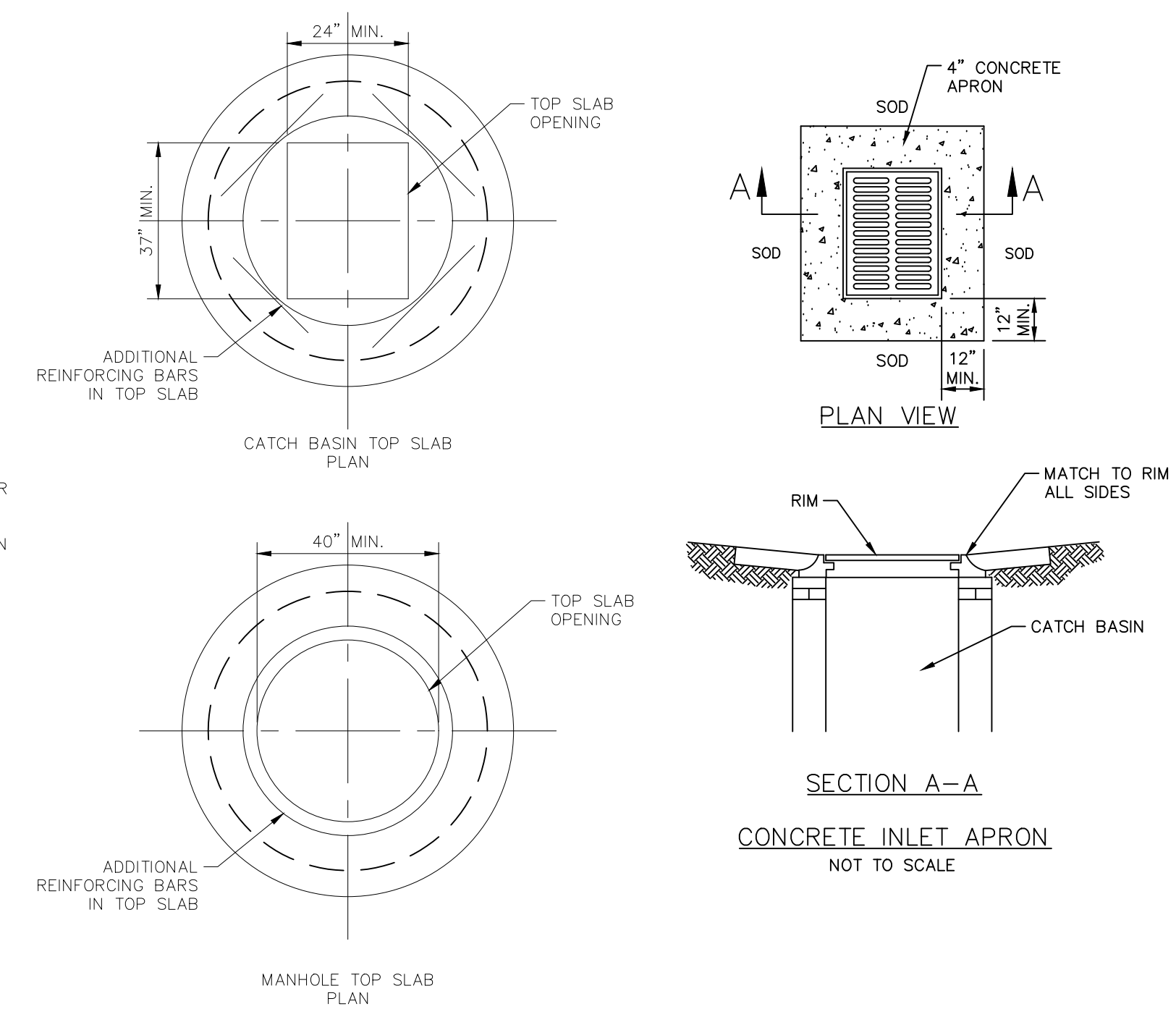
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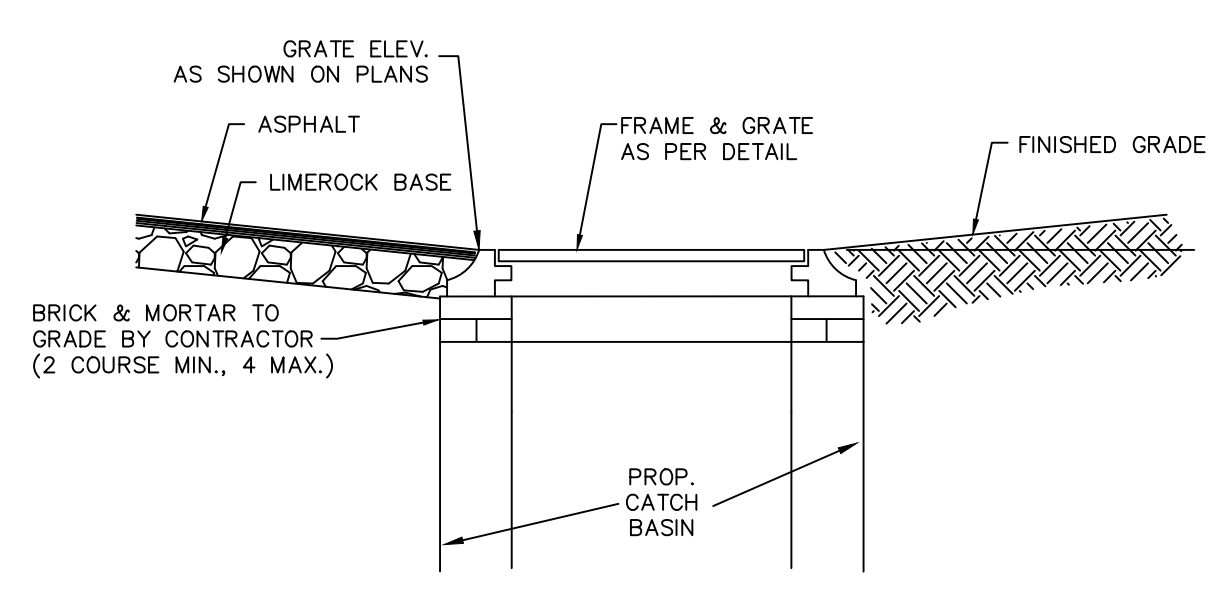


NOTES:  
1. ALL FDOT TYPE STRUCTURES ARE APPROVED.

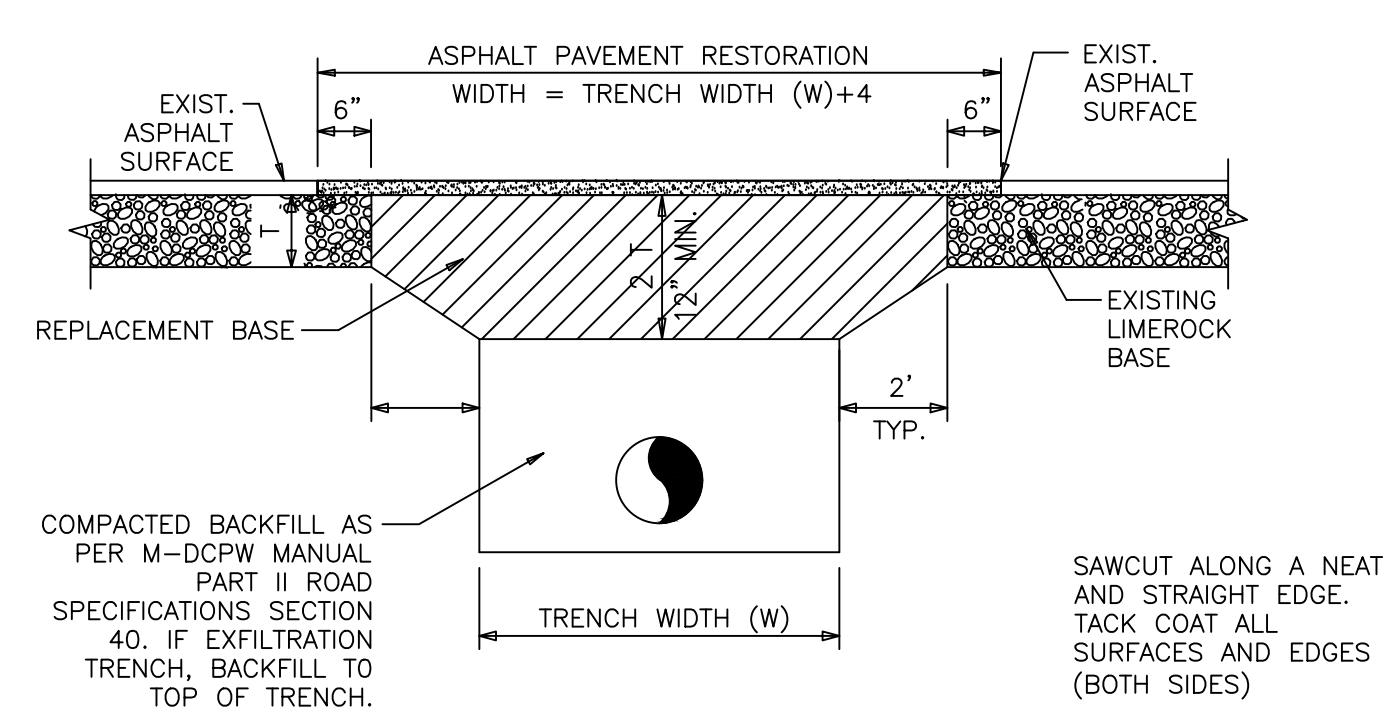
PRECAST DRAINAGE MANHOLE  
NOT TO SCALE



SECTION A-A  
CONCRETE INLET APRON  
NOT TO SCALE



CATCH BASIN TOP DETAIL  
NOT TO SCALE

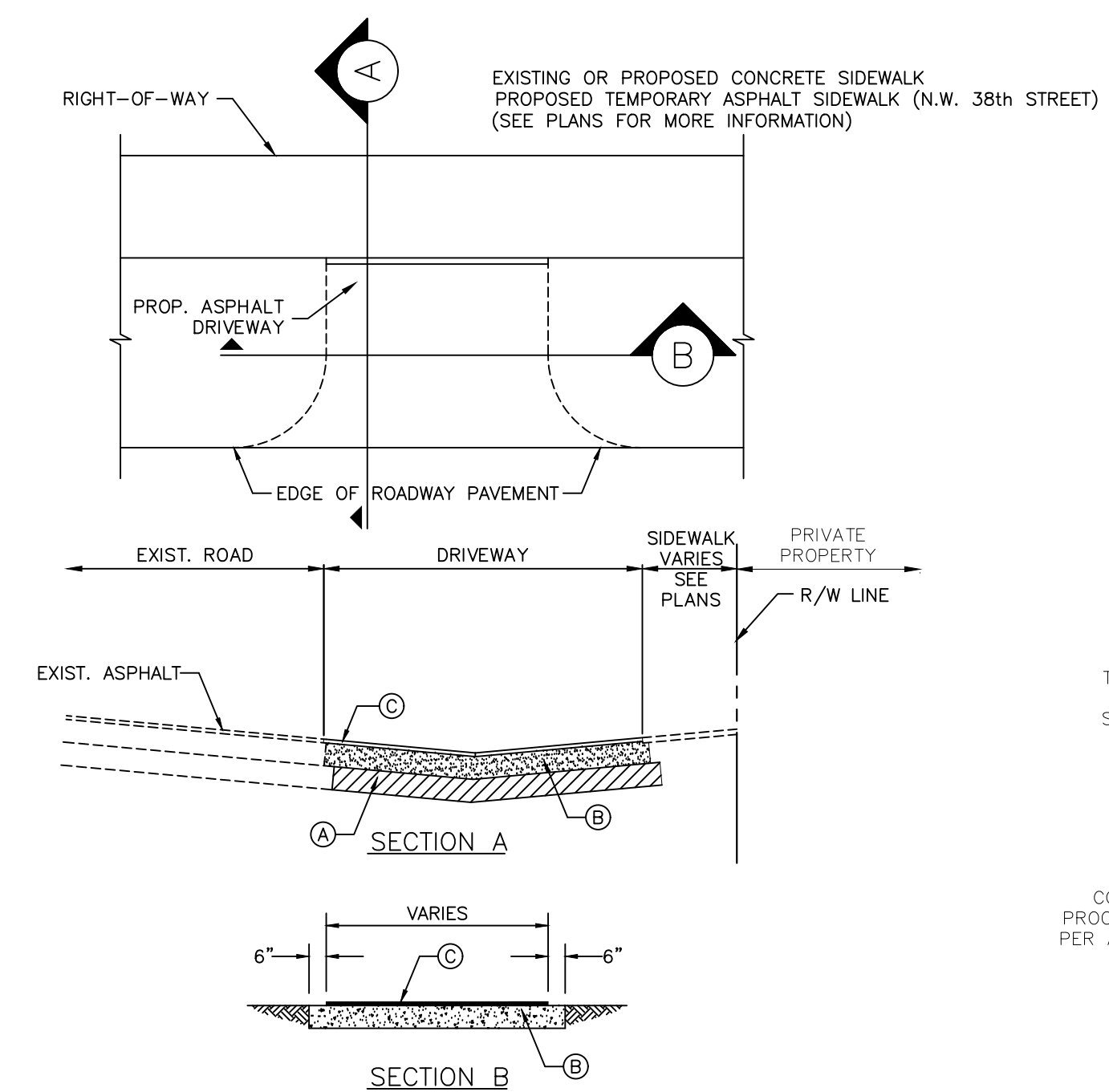


GENERAL NOTES:

1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE, BUT NOT LESS THAN 12".
2. BASE MATERIAL SHALL BE PLACED IN 6 INCH MAXIMUM LAYERS AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO 98% OF MAXIMUM DENSITY, PER AASHTO T-180. BASE MATERIAL SHALL HAVE A MINIMUM LBR OF 100.
3. ASPHALTIC CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
4. SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPPED AND FEATHERED.
5. SURFACE MATERIAL SHALL BE TYPE S-1 ASPHALTIC CONCRETE STRUCTURAL COURSE (1-1/4" THICK). MATCH EXISTING GRADES AT LIMITS OF SAWCUT.
6. UPON COMPLETION OF TRENCHING AND TRENCH/PAVEMENT RESTORATION FOR THE ENTIRE PROJECT, RESURFACE ENTIRE ROADWAY WIDTH WITH TYPE S-3 ASPHALTIC CONCRETE SURFACE COURSE (3/4" MINIMUM THICKNESS).
7. BID PRICES FOR PIPE AND/OR FRENCH DRAIN SHALL INCLUDE PAVEMENT RESTORATION TO MATCH EXISTING GRADES. CONTRACTOR SHALL NOT LEAVE MORE THAN 1,000-FEET OF EXPOSED LIMEROCK BASE AT ANY TIME DURING THE TRENCH/PAVEMENT RESTORATION PROCESS. ONLY TYPE S-3 ASPHALTIC CONCRETE SURFACE COURSE WILL BE PAID SEPARATELY.
8. WHEN TRENCHING OUTSIDE THE ROADWAY PAVEMENT AREA, RESTORE SURFACE TO PRE-CONSTRUCTION GRADES AND RESTORE OR REPLACE ANY PUBLIC OR PRIVATE PROPERTY TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO COMMENCEMENT OF CONSTRUCTION. SUITABLE MATERIALS AND METHODS SHALL BE USED FOR SUCH RESTORATION. ALL COST SHALL BE INCLUDED AS PART OF THE SWALE RESTORATION PAY ITEM.
9. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL SOILS INFORMATION TO UNDERSTAND EXISTING CONDITIONS.

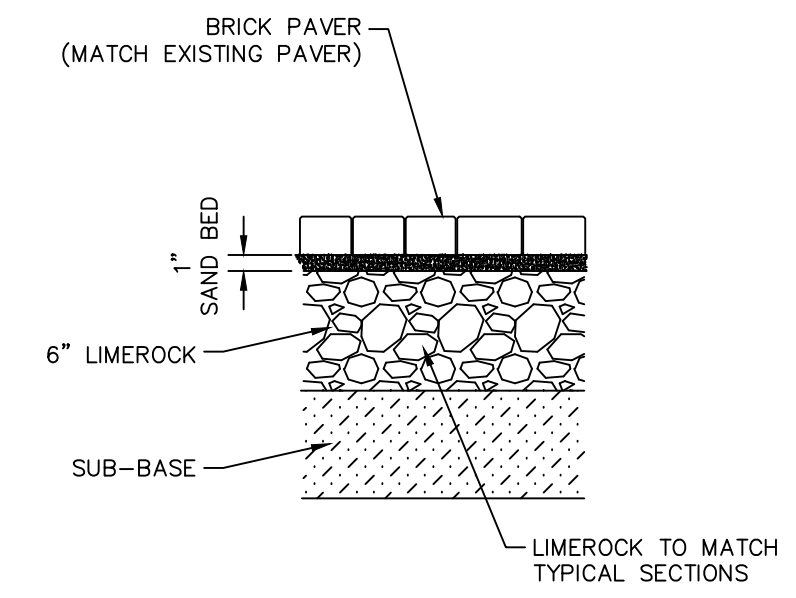
TRENCH / PAVEMENT RESTORATION  
SCALE: NOT TO SCALE

NOTE: GRADING AND PREPARATION OF SUBGRADE SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO APPLICATION OF PAVING MATERIALS.

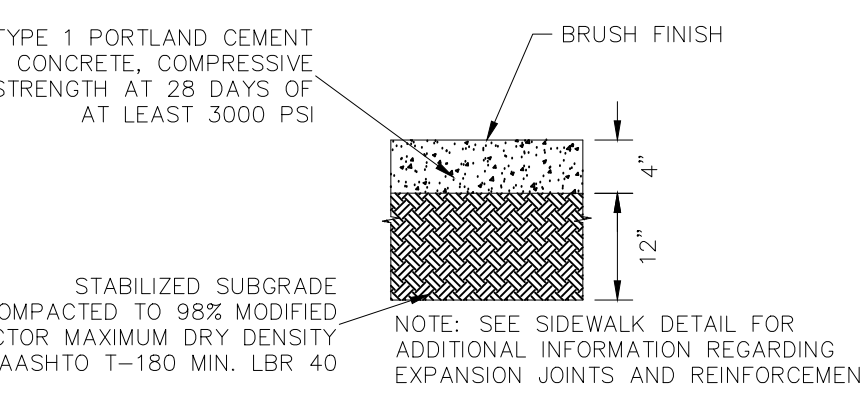


- 12" COMPACTED SUBGRADE COMPACTED TO 98% DENSITY PER AASHTO T-180 (LBR 40)
- LIMEROCK BASE COURSE (6" THICK MIN.) COMPACTED TO 98% DENSITY PER AASHTO T-180 (LBR 100) (RESIDENTIAL)
- LIMEROCK BASE COURSE (6" THICK MIN.) COMPACTED TO 98% DENSITY PER AASHTO T-180 (LBR 100) (INDUSTRIAL)
- ASPHALTIC SURFACE COURSE:  
1" THICK MIN. TYPE S-III COMPACTED (RESIDENTIAL)  
2" THICK MIN. 3/4" TYPE S-III 1-1/4" TYPE S-I COMPACTED (COMMERCIAL & INDUSTRIAL)

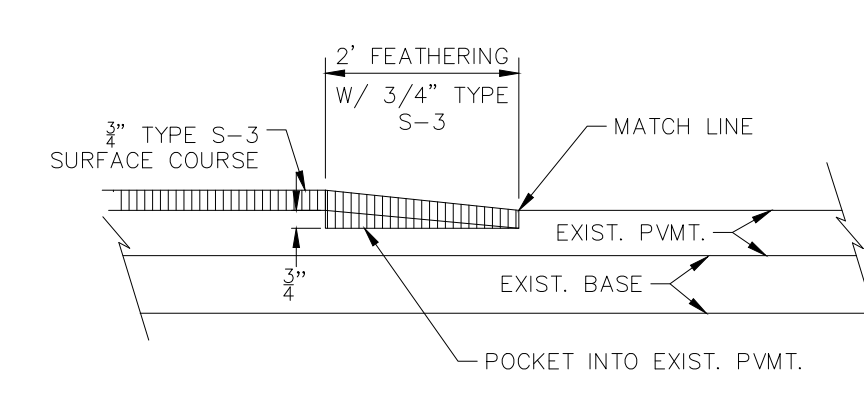
DRIVEWAYS DETAIL  
SCALE: N.T.S.



TYPICAL BRICK PAVEMENT DETAIL  
NOT TO SCALE



STANDARD DUTY CONCRETE



ASPHALT TRANSITION DETAIL AT BEGINNING OR ENDING OF ASPHALT LIFT OR NEW CONSTRUCTION  
NOT TO SCALE

**NYLOPLAST 15" INLINE DRAIN: 2715AG \_\_ X**

ADAPTER SIZE	B
4"	13.25
6"	12.75
8"	12.25
10"	13.50
12"	12.75
15"	7.00

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS 14-10	15960GP	7001-110-207
STANDARD	MEETS 14-20	15960GS	7001-110-208
SOLID COVER	MEETS 14-20	15960GSC	7001-110-209
PEDESTRIAN BRONZE	N/A	15960GPB	7001-110-210
STONE	N/A	15960GD	7001-110-211
DROP IN GRATE	LIGHT DUTY	15910I	7001-110-073

1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-90-05, WITH THE EXCEPTION OF THE BRONZE GRATE.  
2. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-90-05.  
3. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D2321 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.  
4. DIMENSIONS ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY.  
5. DIMENSIONS ARE IN INCHES.  
6. SEE DRAWING NO. 7001-110-275 FOR ADS N-12 & HANCOR DUAL WALL BELL INFORMATION & DRAWING NO. 7001-110-364 FOR N-12 HP BELL INFORMATION.

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DATE 04-03-06  
DRAWN BY EBC  
REVISY BY NMI  
DATE 03-15-16  
PROJECT NO NAME  
TITLE 15 IN INLINE DRAIN QUICK SPEC INSTALLATION DETAIL  
DWG NO. 7001-110-206  
SCALE 1:20  
SHEET 1 OF 1  
REV E

NO.	REVISIONS	DATE	BY

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8201 PETERS ROAD, SUITE 2200, PLANTATION, FL 33324  
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REGISTRY No. 696

LICENSED PROFESSIONAL  
STEFANO F. VIOLA, P.E.  
FLORIDA LICENSE NUMBER 74655  
DATE: 10/2/2023

KHA PROJECT 143221005	DATE 6/5/2023	SCALE AS SHOWN	DESIGNED BY TS	DRAWN BY DC	CHECKED BY SV
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**ENGINEERING PLAN  
DETAILS**

SW RANCHES GREEN MEADOWS DRAINAGE PREPARED FOR TOWN OF SOUTHWEST RANCHES SOUTHWEST RANCHES FLORIDA

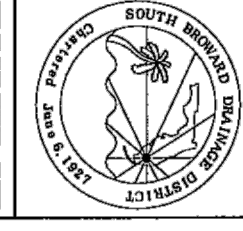
SHEET NUMBER C301.1

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

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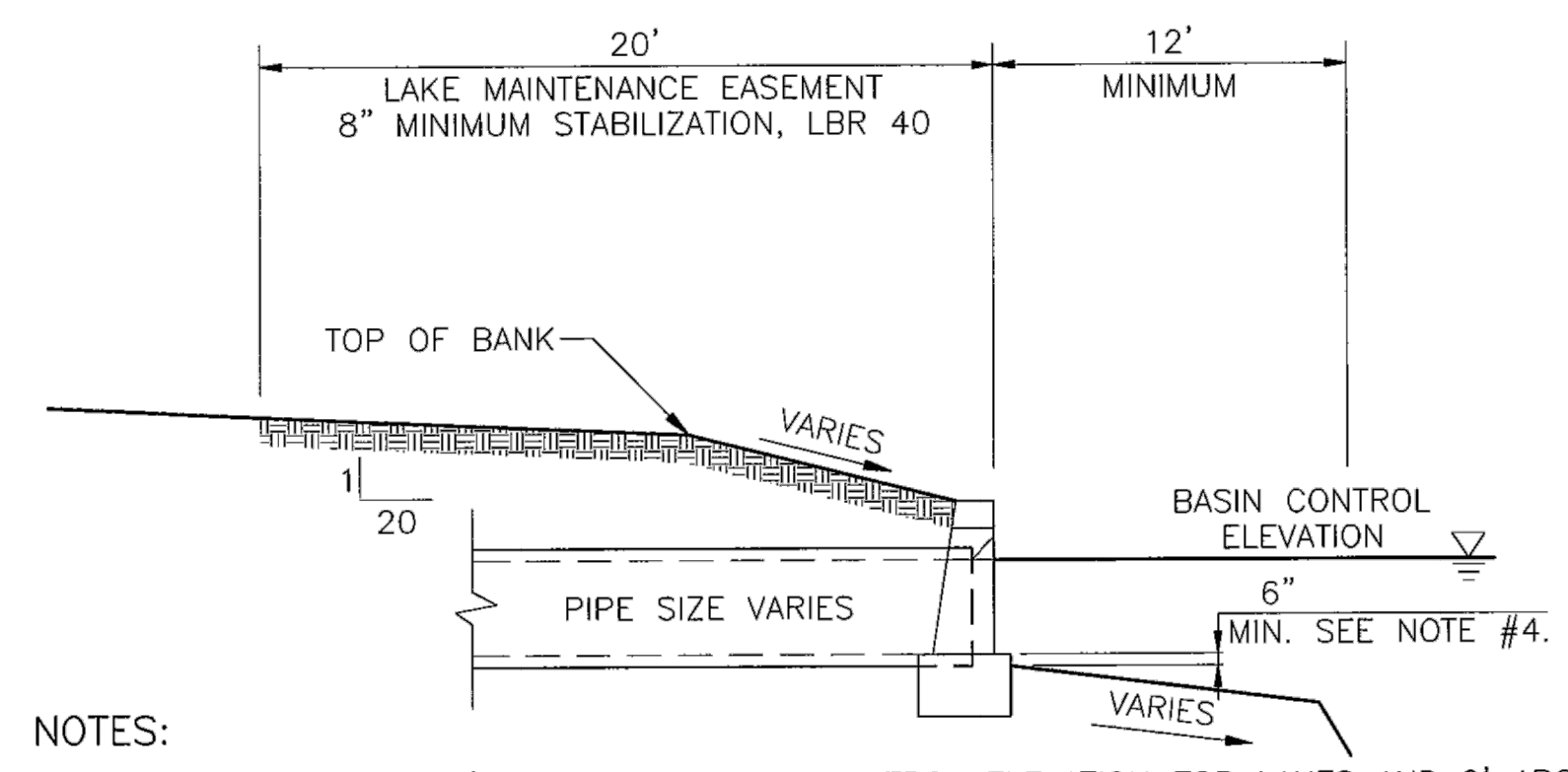
Plotted By: Stanton, Tiffany - Sheet Set: SW Ranches Green Meadows Drainage - Layout: C301.2 - Engineering Plan Details - October 02, 2023 - 04:16:12pm - K:\In-Civil\143-Jobs\143221005-sw ranches green meadows drainage\CAD\plan sheets\C301.2\_Engineering\_Plan.dwg  
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EXHIBIT  
21



SEAL

SOUTH BROWARD DRAINAGE DISTRICT  
DESIGN CRITERIA MANUAL  
EXHIBIT TITLE  
OUTFALL DETAIL WITH HEADWALL



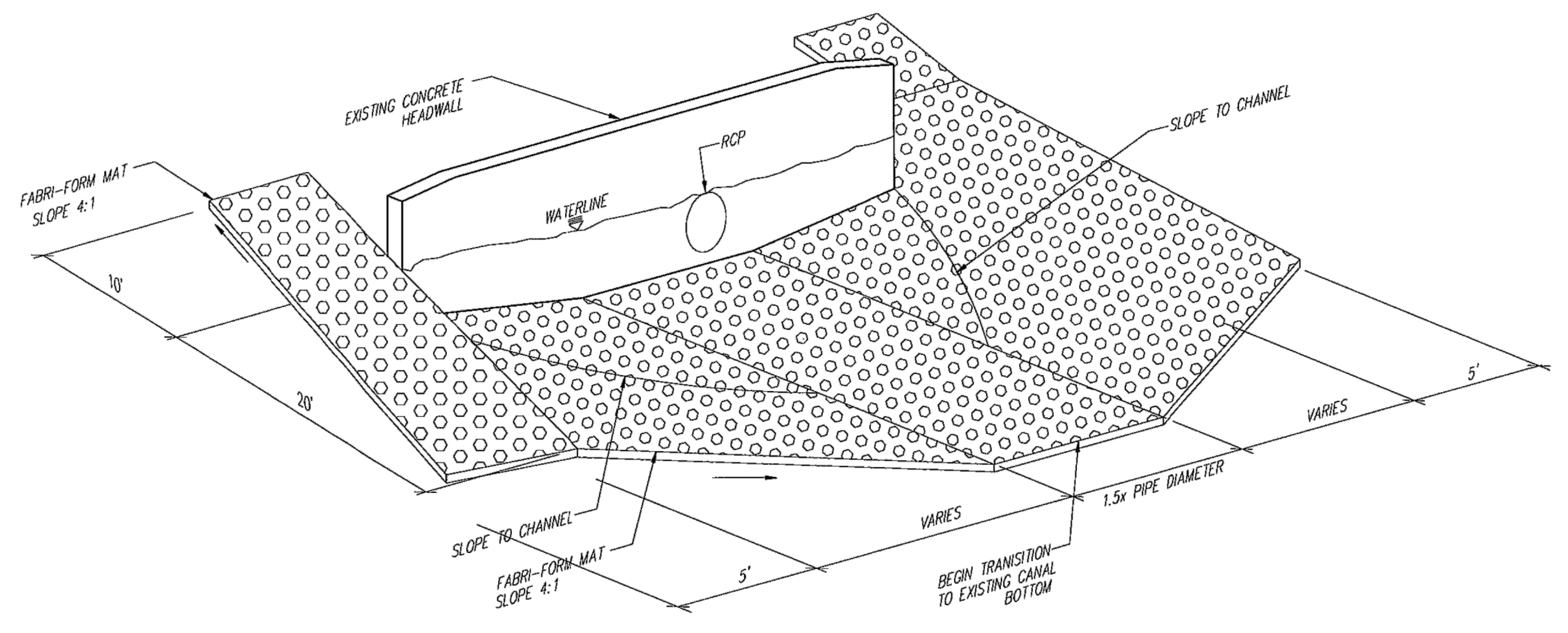
- NOTES:
1. TOP OF CAP TO BE 1' ABOVE THE BASIN CONTROL ELEVATION FOR LAKES AND 2' ABOVE BASIN CONTROL ELEVATION FOR CANALS, UNLESS OTHERWISE APPROVED BY THE DISTRICT.
  2. HEADWALLS ARE REQUIRED FOR ALL LAKE AND CANAL INTERCONNECTS.
  3. CONCRETE AND RIP-RAP ENDWALLS ARE ACCEPTED PER FDOT INDEX 250-255 AND INDEX 258 WITH EXCEPTIONS AS NOTED IN SECTION 3.7.7 OF THE SBDD DESIGN CRITERIA MANUAL.
  4. CHANNEL IN FRONT OF PIPE TO BE MIN 6" BELOW THE INVERT OF THE PIPE AND AT LEAST 1 1/2 TIMES THE DIA. OF THE PIPE TO THE DEEP CUT LINE AND CENTERED ON THE PIPE.
  5. FACE OF HEADWALL TO BE LOCATED AT DESIGN EDGE OF WATER.

EXHIBIT  
26



SEAL

SOUTH BROWARD DRAINAGE DISTRICT  
DESIGN CRITERIA MANUAL  
EXHIBIT TITLE  
FABRICFORM REVETMENT ENDWALL STABILIZATION DETAIL



THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.



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 DATE: 10/2/2023

KHA PROJECT  
143221005  
 DATE  
6/5/2023  
 SCALE AS SHOWN  
 DESIGNED BY TS  
 DRAWN BY DC  
 CHECKED BY SV

**ENGINEERING PLAN  
DETAILS**

SW RANCHES GREEN MEADOWS DRAINAGE PREPARED FOR TOWN OF SOUTHWEST RANCHES SOUTHWEST RANCHES FLORIDA

SHEET NUMBER  
**C301.2**