

# SITE ENGINEERING PLANS

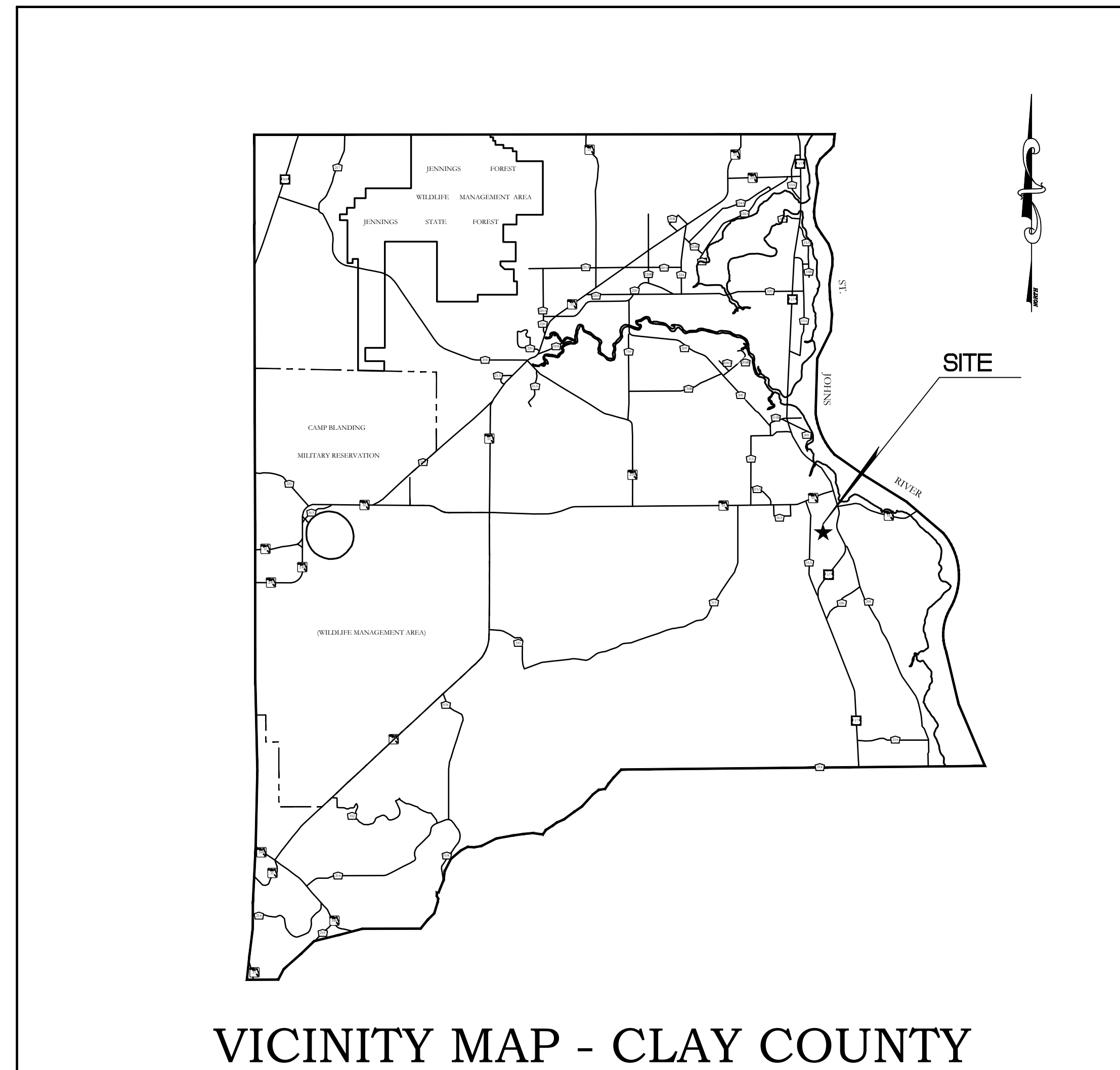
For

## THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

Developed By:



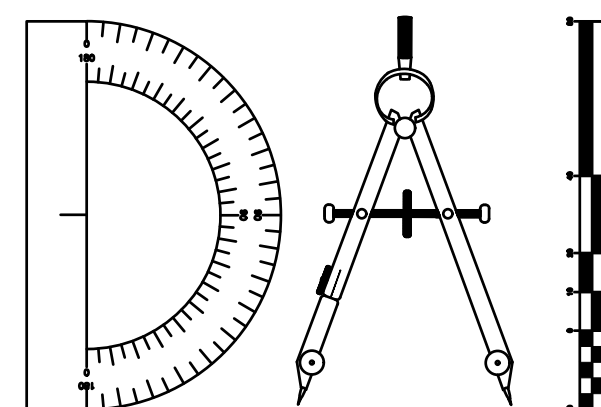
Project No. : 2008-499-2



### SUBMITTAL SCHEDULE

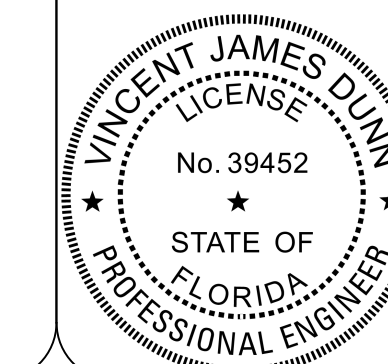
SUBMITTAL No.	DATE	MUNICIPALITY
1ST	6-23-23	GCS/CCUA
2ND	9-20-23	GCS

**Vincent J Dunn** Digitally signed  
by Vincent J Dunn  
Date: 2023.09.21  
08:34:37 -04'00'



**Dunn & Associates, Inc.**

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This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 09/21/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT J. DUNN ENGINEER NO. 39452    DAVID M. TAYLOR ENGINEER NO. 44184    GLEN R. WIEGER ENGINEER NO. 81419

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



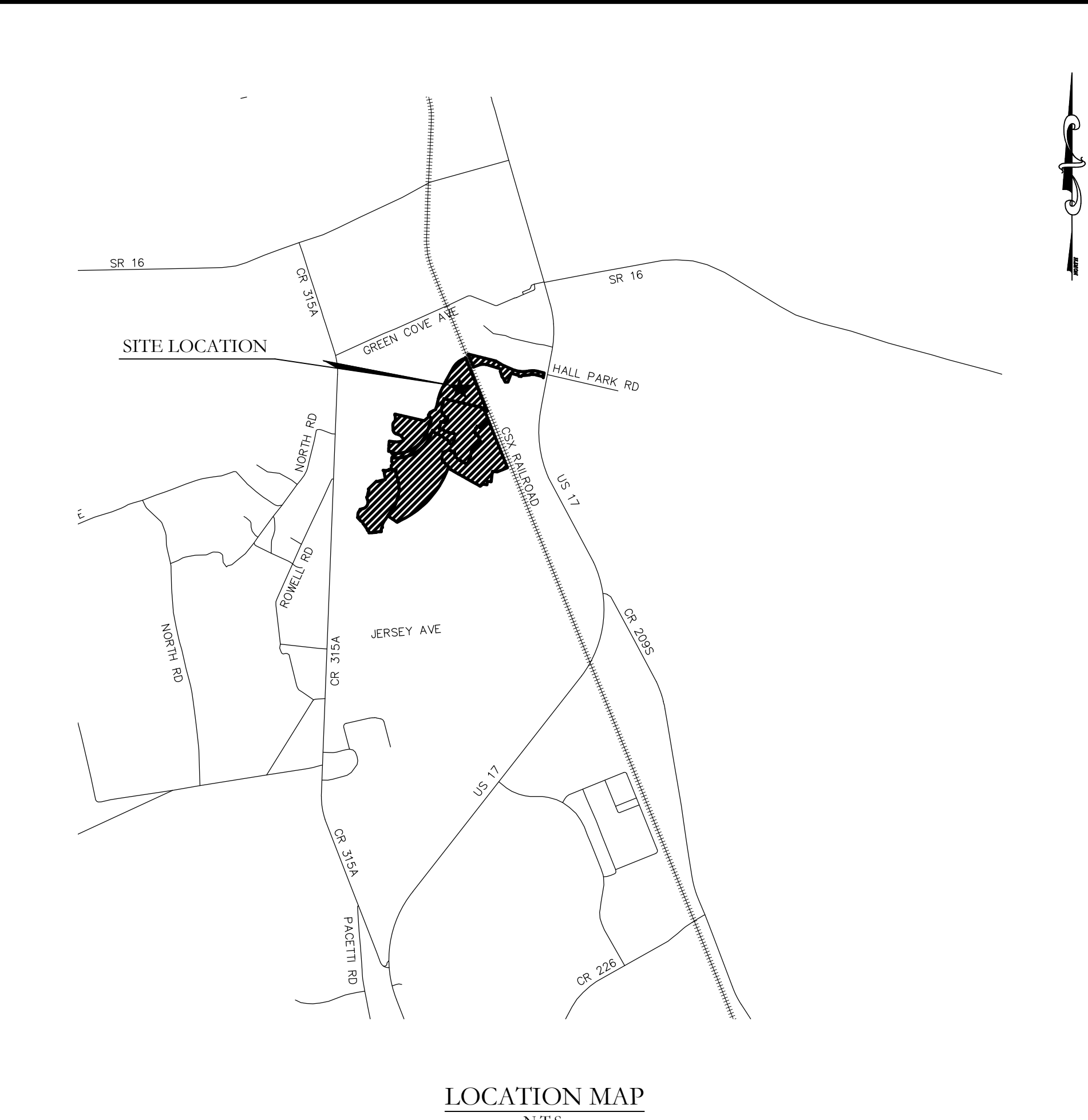
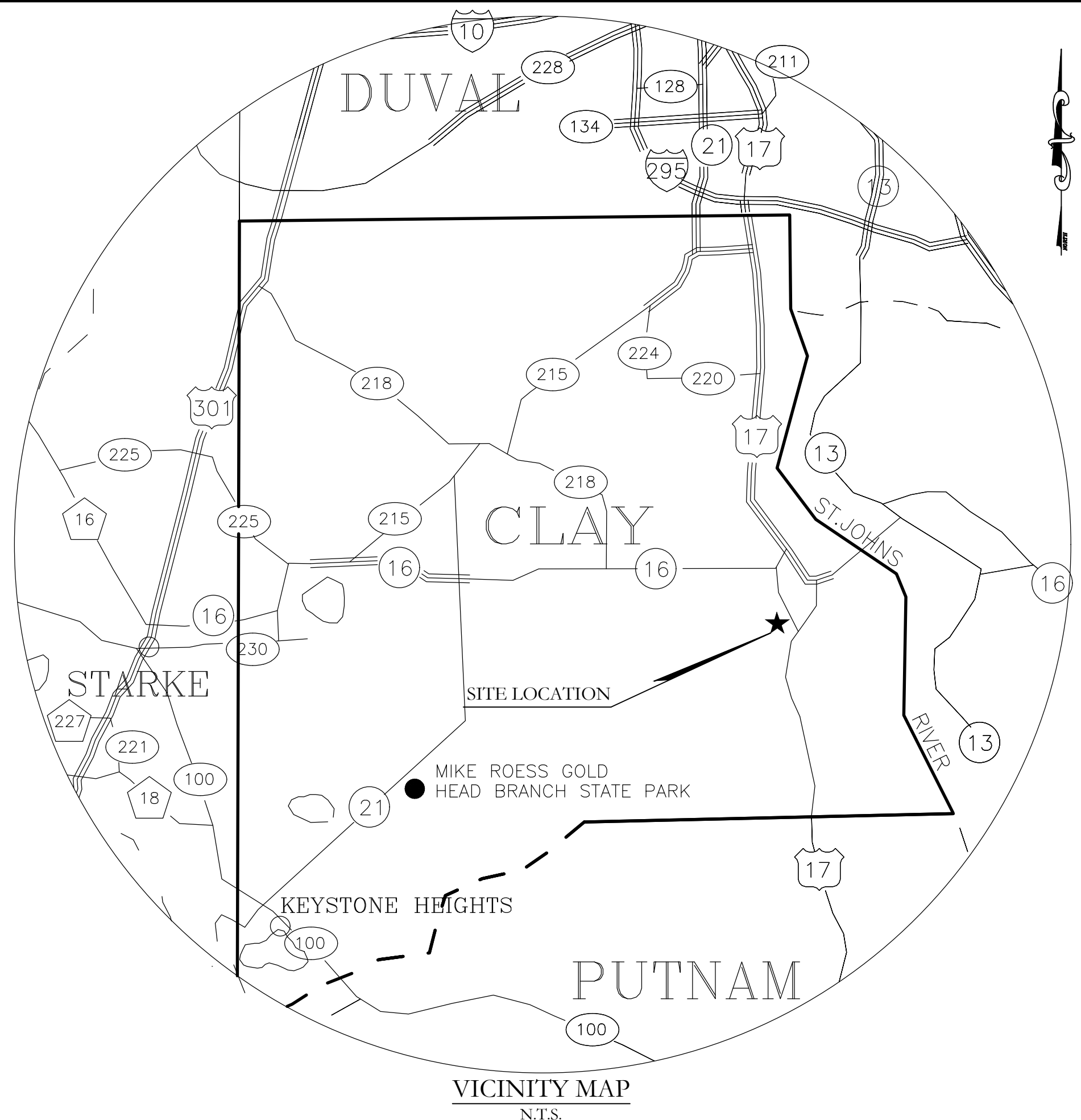


ABBREVIATION	DESCRIPTION
A	ARC
AC	ACRE
B.O.C.	BACK OF CURB
BFP	BACK FLOW PREVENTER
BLDG	BUILDING
BM	BENCHMARK
BOT.	BOTTOM
C	CENTERLINE
C&G	CURB AND GUTTER
CL	CURB INLET
C.O.	CLEAN OUT
CB	CHORD BEARING
CH	CHORD
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
CONN.	CONNECT
CONST	CONSTRUCT
CONT.	CONTINUATION
COORD.	COORDINATE
DBL.C.I.	DOUBLE CURB INLET
D.E.	DRAINAGE EASEMENT
DHW	DESIGN HIGH WATER
D.I.P.	DUCTILE IRON PIPE
Δ	DELTA
E	EAST
E.O.P.	EDGE OF PAVEMENT
EL.	ELEVATION
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
ESMT	EASEMENT
EXIST	EXISTING
F.F.	FINISHED FLOOR
FH	FIRE HYDRANT
F.H.S.	LIMITED SPACE FIRE HYDRANT
FL	FLOW LINE
FM	FORCE MAIN
F.P.	FIRE PROTECTION MAIN
FV	FLUSHING VALVE
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HDWL	HEADWALL
HWL	HIGH WATER LEVEL
INV.	INVERT
L	LENGTH
LF	LINEAR FEET
M.E.S.	MITERED END SECTION
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
N	NORTH
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NWL	NORMAL WATER LEVEL
PL	PROPERTY LINE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
P.I.P.	POUR IN PLACE
POB	POINT OF BEGINNING
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
P.U.D.E.	PRIVATE UNOBSTRUCTED DRAINAGE EASEMENT
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INFLECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PVC	POLYVINYL CHLORIDE PIPE
R	RADIUS
R.P.	RADIUS POINT
R/W	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
RED	REDUCER
RPZ/BFP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
S	SOUTH
SAN.	SANITARY
SEP	SEPARATION
SL	SLOPE
S.P.	SAMPLE POINT
SHT	SHEET
SS	SANITARY SEWER
STA	STATION
STB	STAKED TURBIDITY BARRIER
SWMF	STORM WATER MANAGEMENT FACILITY
T.O.B.	TOP OF BANK
SWR	SEWER
T.O.C.	TOP OF CURB
TRI.C.I.	TRIPLE CURB INLET
TYP	TYPICAL
U.A.D.E.	UNOBSTRUCTED ACCESS & DRAINAGE EASEMENT
U.D.E.	UNOBSTRUCTED DRAINAGE EASEMENT
U.E.	UTILITY EASEMENT
V.C.	VERTICAL CURVE
W	WEST
WM	WATER MAIN

PAVING AND DRAINAGE LEGEND	
DESCRIPTION	SYMBOL
STORM PIPE	---
UNDER DRAIN	---
STORM WATER INLET	⊥
CURB INLET	⊥
MITERED END SECTION	⊥
HEADWALL	⊥
STORM SEWER MANHOLE	⊥
STORM WATER STRUCTURE NUMBER	⊥
EXISTING SPOT ELEVATION	(28.9)
PROPOSED SPOT ELEVATION	28.7
EXISTING CONTOUR ELEVATION	- - 21 - -
PROPOSED CONTOUR ELEVATION	- - 12 - -
DRAINAGE DIVIDE	---
DRAINAGE AREA (ACRES)	DA = 0.56 Ac
DRAINAGE FLOW DIRECTION	---
SWALE FLOW DIRECTION	---
ROAD SLOPE	0.3%
SILT FENCE	---
STAKED TURBIDITY BARRIER	STB
BENCH MARK ELEVATION	BM23.75
PROPOSED ROADWAY ELEVATION	10.00

WATER AND SEWER LEGEND	
DESCRIPTION	SYMBOL
PROPOSED WATER MAIN W/SIZE	W
EXISTING WATER MAIN W/SIZE	W
PROPOSED GATE VALVE W/BOX & COVER	⊥
EXISTING GATE VALVE W/BOX & COVER	⊥
PROPOSED REDUCER/INCREASER	⊥
PROPOSED FIRE HYDRANT W/VALVE, BOX COVER	⊥
PROPOSED LIMITED SPACE FIRE HYDRANT W/VALVE, BOX COVER	⊥
SINGLE WATER SERVICE	---
FLUSHING VALVE	⊥
PROPOSED SANITARY SEWER MAIN	S
EXISTING SANITARY SEWER MAIN	S
PROPOSED SANITARY SEWER MANHOLE	○
EXISTING SANITARY SEWER MANHOLE	○
SANITARY SEWER CLEAN OUT	C.O.
SANITARY SEWER SERVICE LATERAL	---
SANITARY SEWER MANHOLE NUMBER	①
PROPOSED SANITARY SEWER FORCE MAIN	FM
EXISTING SANITARY SEWER FORCE MAIN	FM
EXIST. FIRE HYDRANT	⊥
PROPOSED FIRE PROTECTION MAIN	FP
EXISTING FIRE PROTECTION MAIN	FP
REDUCED PRESSURE ZONE BACK FLOW PREVENTER W/BY-PASS METER	⊥
REDUCED PRESSURE ZONE BACK FLOW PREVENTER	⊥
WATER MAIN CROSSING TYPE	⊥
SAMPLE POINT(S.P.)	⊥
END OF WATER MAIN PLUG	⊥
DUAL WATER SERVICE	⊥

GEOMETRY LEGEND	
DESCRIPTION	SYMBOL
LINE NUMBER	L1
CURVE NUMBER	C1
BASELINE	---
STATION NUMBER	12+00
LOT NUMBER	58
BUILDING NUMBER	②
NUMBER OF PARKING SPACES	⊙

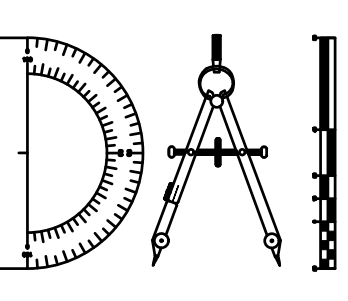


INDEX OF SHEETS		
SHEET No.	DWG. No.	DESCRIPTIONS
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4	I-3	INDEX - LEGEND
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38	PRE-1	PRE DEVELOPMENT PLAN
39	PST-1	POST DEVELOPMENT PLAN
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74	2B W-2	2B WATER PLAN
75	2B R-2	2B REUSE PLAN
76	2B W-3	2B WATER PLAN
77	2B R-3	2B REUSE PLAN
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84 - 92	2B S-1 - 2B S-9	2B SEWER PLANS
93 - 103	RSP-1 - RSP-11	ROADWAY AND SEWER PROFILES
104	PS-1	PUMP STATION PLAN
105	PSD-1	PUMP STATION DETAILS
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107 - 111	WD-1 - WD-5	CCUA WATER DETAILS
112 - 113	RD-1 - RD-2	CCUA REUSE DETAILS
114	SD-1	CCUA SEWER DETAILS
115	UTC-1	CCUA UTILITY PLACEMENT DETAILS
116	WSN-1	COGCS WATER & SEWER TECHNICAL SPECIFICATIONS
117	WD-6	COGCS WATER DETAILS
118 - 119	RD-3 - RD-4	COGCS REUSE DETAILS
120 - 121	SD-2 - SD-3	COGCS SEWER DETAILS
122 - 128	PDD-1 - PDD-7	PAVING AND DRAINAGE DETAILS
129 - 130	SPP-1 - SPP-2	STORMWATER POLLUTION PREVENTION PLANS

ADDITIONAL PLANS		
SHEET No.	DWG. No.	DESCRIPTIONS

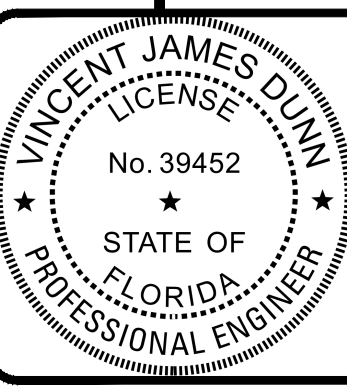
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI	BY:
DRAWN BY: MR/NS/SM/SS	
CHECKED BY: VJD	
SCALE: N/A	
DATE: 9/21/2023	
PROJ. NO.: 2008-499-2	



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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 INDEX - LEGEND



This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 09/21/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGGER ENGINEER NO. 81412

Sheet No. 4 of 130  
 I-3  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2 INDEX.DWG/21/2023 6:08 AM Mike Reilly

PROJECT SPECIFIC NOTES

**GEOMETRY NOTES**

- BOUNDARY, TOPOGRAPHIC AND RIGHT OF-WAY INFORMATION OBTAINED FROM SURVEY SUPPLIED BY OWNER
- STATIONING REFERS TO CENTERLINE OF PAVEMENT.
- ALL DIMENSIONING REFERS TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL WORK WITHIN RIGHT OF WAY SHALL COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
- CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING STRUCTURES, IMPROVEMENTS, UTILITIES, PROPERTY LINES AND SETBACKS AND CONFIRM ALL PROPOSED DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION ORDERING OF MATERIALS.
- GEOMETRY INFORMATION SHOWN IS FOR REFERENCE ONLY. CONTRACTORS SURVEYOR SHALL RE-COMPUTE/CONFIRM GEOMETRIC INFORMATION SHOWN PRIOR TO FIELD STAKING. DISCREPANCIES, IF ANY, WITH THESE PLANS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION.

**PAVING AND DRAINAGE NOTES**

- ALL GRADING AND PLACEMENT OF COMPACTED FILL SHALL BE IN ACCORDANCE WITH THE LATEST CLAY COUNTY SPECIFICATIONS.
- ALL AREAS WITHIN THE PROPERTY SHALL BE CLEARED & GRUBBED TO REMOVE ALL ROOTS & MISCELLANEOUS VEGETATION EXCEPTING SPECIFIC TREES OR CLUSTERS OF TREES WHICH WILL BE FLAGGED BY THE OWNER & SHALL BE PROTECTED FROM DAMAGE.
- ALL PIPE LENGTHS ARE APPROXIMATE DIMENSIONS. ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED TO CONFORM WITH TYPICAL SECTIONS & DETAILS AS SHOWN ON THE PAVING & DRAINAGE DETAIL SHEETS & IN ACCORDANCE WITH THE LATEST CLAY COUNTY SPECIFICATIONS.
- THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF PAVING & DRAINAGE WITH ALL OTHER CONSTRUCTION. FOR WATER & SEWER FACILITIES, SEE WATER & SEWER PLAN DRAWINGS.
- LOCATION, EXISTENCE OR NONEXISTENCE OF ANY UTILITY DOES NOT CONSTITUTE RESPONSIBILITY OF THE ENGINEER.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION FOR VERIFICATION & LOCATION OF ANY UTILITY.
- ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.
- GRADES SHOWN ON PLANS ARE FINISHED GRADES, UNLESS OTHERWISE NOTED.
- CONTRACTORS SHALL SUBMIT SHOP DRAWINGS FOR ALL WATER & SEWER PIPES, FITTINGS, VALVES, MANHOLES, ETC., TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
- CONTRACTORS SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURES TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
- ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE GRASSED & MULCHED IN ACCORDANCE WITH F.D.O.T. SPECIFICATIONS.
- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE PLANS & SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF SEDIMENT-LADEN RUNOFF RESULTING FROM STORM EVENTS DURING THE CONSTRUCTION PHASE. EROSION CONTROL FACILITIES SHOULD BE INSTALLED EARLY DURING THE CONSTRUCTION PERIOD SO AS TO PREVENT THE TRANSPORT OF SEDIMENT INTO SURFACE WATERS. REVEGETATION & STABILIZATION OF DISTURBED AREAS SHOULD BE ACCOMPLISHED AS SOON AS POSSIBLE TO REDUCE THE POTENTIAL FOR FUTURE SOIL EROSION.
- IN THE EVENT THAT UNSUITABLE MATERIAL IS ENCOUNTERED DURING ROADWAY EXCAVATION, THIS MATERIAL SHALL BE REMOVED AND REPLACED WITH PROPER ALLOWANCE FOR SUBSEQUENT COMPACTION. ALL SUBMERGE STUMPS, ROOTS, MUCK, OR OTHER PERISHABLE MATTER ENCOUNTERED IN THE PREPARATION OF THE SUBGRADE SHALL BE REMOVED TO A DEPTH OF AT LEAST THREE FEET BELOW FINISHED SUBGRADE AND 3' BEYOND PAVEMENT.
- TWO SETS OF SIGNED AND SEALED AS-BUILTS ARE TO BE SUBMITTED FIVE (5) DAYS PRIOR TO THE FINAL INSPECTION WITH A COPY PROVIDED ON DISK IN AUTOCAD FORMAT.
- CONSTRUCTION WARNING SIGNS ARE TO BE POST-MOUNTED AND ERECTED BEFORE CONSTRUCTION CAN COMMENCE. THEY WILL FOLLOW THE STANDARDS SET FORTH BY THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- BENCHMARK DATUM (PROVIDED BY OWNER'S SURVEYOR) INFORMATION FOR THIS PROJECT IS SHOWN UNDER THE "PROJECT DATUM ELEVATION" HEADING ON THIS SHEET. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY BENCHMARK ELEVATIONS SHOWN ON PLANS PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN ELEVATION PRIOR TO ANY CONSTRUCTION.
- CLAY COUNTY REQUIRES 24-HR NOTICE ON ALL TESTING OR MEETINGS.
- DENSITIES FOR ALL CROSSINGS ARE TO BE TAKEN AT 1' LIFTS.
- THE CONTRACTOR SHALL NOT COMMENCE CONSTRUCTION UNTIL ALL APPLICABLE PERMITS ARE OBTAINED.
- THE CONTRACTORS SHALL CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC., AT 811 OR 1-800-432-4770, 48 HOURS PRIOR TO ANY EXCAVATION IN ANY ESTABLISHED / EXISTING RIGHT-OF-WAY OR EASEMENT.
- THE CONTRACTOR SHALL PROVIDE 20" LF OF 6" UNDERDRAIN STUBOUT EACH SIDE OF CURB INLET, UNLESS OTHERWISE NOTED ON PLANS.
- UNDERDRAIN CLEANOUTS (C.O.) TO BE LOCATED AT THE UPSTREAM END, AT EACH 90° BEND AND EVERY 300' ALONG UNDERDRAIN.
- ALL UNSUITABLE MATERIAL SHALL BE REMOVED TWO FEET (2') BEYOND THE BACK OF THE CURB AND TWO FEET (2') BELOW FINISHED GRADE.
- IF UNSUITABLE MATERIALS IS FOUND WITHIN THE LIMITS OF THE ROAD OR IF MATERIAL IS HAULED IN FOR ROADWAY FILL AT A DEPTH GREATER THAN ONE FOOT (1') THEN THE ENTIRE ROADWAY SHALL BE UNDER DRAINED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND INSTALLED PER THE APPROVED CLAY COUNTY DETAIL.
- ALL STORM SEWER PIPES SHALL BE CUT FLUSH WITH THE INTERIOR WALL OF ANY TYPE MANHOLE OR CURB AND DITCH BOTTOM INLETS.
- COMPACTION DENSITY TEST FOR ALL STORM SEWER PIPE SHALL START AT THE SPRING LINE OF THE PIPE.
- IF THE APPROVAL DESIGN REQUIRES THE INLET OR STORM RUN BE SURCHARGED ALL INLETS SHALL BE INSPECTED BEFORE BEING EXPOSED TO THE SYSTEM.
- TEST CYLINDERS SHALL BE RUN FOR ALL CONCRETE STRUCTURES. THERE WILL BE THREE (3) TESTS PER EACH DAY POUR WITH A ONE (1) SEVEN (7) DAYBREAK AND TWO (2) TWENTY-EIGHT (28) DAYS BREAKS.
- THE ASPHALT SHALL BE CORED FOR THICKNESS AND WILL BE GIVEN A ONE-QUARTER INCH (1/4") TOLERANCE. IF HOWEVER THE COUNTY'S REPRESENTATIVE IS PRESENT AT POUR AND FEELS COMFORTABLE WITH REQUIREMENTS THEN HE OR SHE MAY WAIVE THIS POLICY.
- LIMEROCK BEARING RATIOS FOR SUBGRADE AT FORTY (40) AND LIMEROCK OR ALTERNATIVE BASE COURSE AT ONE HUNDRED (100) THERE WILL BE NO UNDER TOLERANCE.

**POND BANK COMPACTION/CONSTRUCTION NOTES**

- CONTRACTOR SHALL COMPACT ALL POND BANKS.
- POND BANK FILL SHOULD CONSIST OF "CLEAN" FINE SAND WITH LESS THAN 5% SOIL FINES.
- CONTRACTOR MAY USE FILL MATERIALS WITH SOIL FINES BETWEEN 5% & 12%, BUT STRICT MOISTURE CONTROL MAY BE REQUIRED.
- TOP 2" OF SOIL UNDER BERM SHALL BE COMPACTED TO A MIN DENSITY OF 95% OF MODIFIED PROCTOR MAX. DENSITY.
- PLACE FILL IN UNIFORM 10"-12" LOOSE LIFTS AND COMPACT EACH LIFT TO A MIN. DENSITY OF 95% OF MODIFIED PROCTOR MAXIMUM DENSITY.
- PERFORM COMPLIANCE TESTS WITHIN THE FILL AT THE FREQUENCY OF NOT LESS THAN ONE TEST PER 300' LF OF POND BANK, OR A MIN. OF 2 TESTS IN ANY AREA LESS THAN 300' IN LENGTH.

**WATER AND SEWER NOTES**

- ALL ELEVATIONS ARE SHOWN IN FEET.
- IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND AVOID ALL UTILITIES, STRUCTURES AND OBSTRUCTIONS, BOTH NEW AND EXISTING, ABOVE AND BELOW THE GROUND SURFACE. ALL DAMAGES RESULTING FROM THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL CONTACT ENGINEER IF CONFLICT OCCURS PRIOR TO INSTALLATION OF NEW UTILITIES.
- THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES IN THE AREA OF THIS PROJECT NOT LESS THAN ONE WEEK PRIOR TO CONSTRUCTION OF WATER AND SEWER FACILITIES.
- WHERE WATER MAIN IS LAID UNDER DITCHES, CULVERTS OR OTHER PIPELINES WITHOUT FITTINGS, THE MAXIMUM DEFLECTION SHALL NOT EXCEED 50% OF THE MAXIMUM DEFLECTION RECOMMEND BY THE MANUFACTURER OF THE PIPE FURNISHED, UNLESS OTHERWISE SHOWN ON DRAWINGS.
- THE CONTRACTOR SHALL NOT PROVIDE LESS THAN A 1.5' FT. VERTICAL CLEARANCE BETWEEN ALL UTILITIES UNLESS OTHERWISE DIRECTED. NO SPECIAL PAYMENT ALLOWED.
- EXISTING TOPOGRAPHIC FEATURES AND UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS WERE TAKEN FROM EXISTING RECORDS AND ARE TO BE USED FOR GENERAL INFORMATION ONLY. CONTRACTOR SHALL VERIFY PRIOR TO CONSTRUCTION.
- ALL NEW WATER PIPE SHALL HAVE A MINIMUM DEPTH OF COVER OF 36" IN PAVED AREAS AND 36" IN UNPAVED AREAS, MEASURED FROM THE TOP OF THE PIPE TO GROUND SURFACE, EXCEPT AS OTHERWISE NOTED ON DRAWINGS. VERTICAL AND HORIZONTAL ALIGNMENT MAY BE ADJUSTED TO MEET ADVERSE FIELD CONDITIONS UPON APPROVAL BY THE ENGINEER. ALL NEW FORCE MAIN SHALL HAVE A MINIMUM DEPTH OF 60".
- CLASS V, TYPE I BEDDING SHALL BE USED FOR THIS PROJECT UNLESS EXISTING SOILS ARE UNSUITABLE FOR USE A BEDDING, IN WHICH CASE CLASS B, TYPE II BEDDING WILL BE USED.
- THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF WATER AND SEWER FACILITIES WITH ALL OTHER CONSTRUCTION AND PAVING AND DRAINAGE CONSTRUCTION, SEE DRAWINGS.
- ALL SANITARY SEWER LINES TO MAINTAIN A MINIMUM OF 10' OFFSET FROM WATERMANS AND TREES UNLESS OTHERWISE NOTED ON DRAWINGS OR UNLESS DIRECTED BY ENGINEER.
- CLAY COUNTY UTILITY AUTHORITY STANDARD JOINT RESTRAINTS ARE REQUIRED AT ALL FITTINGS AND TERMINATION POINTS (SEE RESTRAINT SCHEDULE DWG NO. WD-3).
- FOR WATER, RECLAIMED AND SEWER DETAILS SEE WD, RD, AND SD SHEETS.
- SEWER LINES ARE DESIGNED TO BE FINISHED GRADE AND SHALL BE PROTECTED FROM DAMAGE UNTIL FINISH WORK IS COMPLETED.
- AS-BUILT DRAWINGS SHALL BE FURNISHED TO THE CLAY COUNTY UTILITY AUTHORITY AND TO THE ENGINEER IN ACCORDANCE WITH THE LATEST CLAY COUNTY UTILITY AUTHORITY SPECIFICATIONS.
- CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AT THE SITE PRIOR TO CONSTRUCTION.
- IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE PROPERTY LINES AND RIGHT-OF-WAY LINES PRIOR TO CONSTRUCTION.
- SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER ADD TO CLAY COUNTY UTILITY AUTHORITY PRIOR TO CONSTRUCTION OF WATER AND SEWER FACILITIES.
- ENDS OF ALL SEWER CONNECTIONS TO BE NOTED ON "AS-BUILT" DRAWING.
- WATER TO BE FLUSHED AND PRESSURE TESTED IN ACCORDANCE WITH THE CLAY COUNTY UTILITY AUTHORITY STANDARDS AND SPECIFICATIONS.
- WATER MAIN TO BE MARKED ON PIPE IN ACCORDANCE WITH CLAY COUNTY UTILITY AUTHORITY STANDARDS AND SPECIFICATIONS.
- SHOP DRAWINGS ON ALL BACKFLOW PREVENTERS SHALL BE SUBMITTED TO CLAY COUNTY UTILITY AUTHORITY DEPARTMENT PRIOR TO INSTALLATION.
- ALL WATER AND SEWER CONSTRUCTION SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FLORIDA STATUTES.
- THE CONTRACTOR SHALL NOT COMMENCE CONSTRUCTION UNTIL ALL APPLICABLE PERMITS ARE OBTAINED.
- THE CONTRACTOR SHALL CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC., AT 1-800-432-4770, 48 HOURS PRIOR TO ANY EXCAVATION IN ANY ESTABLISHED / EXISTING RIGHT-OF-WAY OR EASEMENT.
- COMPACTION DENSITY TESTS FOR ALL WATER AND SEWER CROSSINGS SHALL BE IN ACCORDANCE WITH CCUA SPECIFICATIONS.

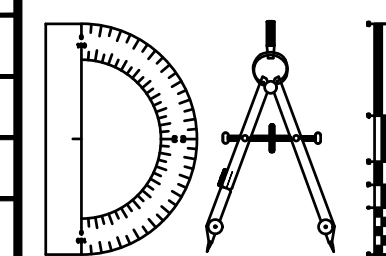
**PROJECT DATUM ELEVATION**

- PROJECT DESIGN IS BASED ON NAVD 88 DATUM SEE PLANS FOR BENCH MARK ELEVATION & LOCATION(S)

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2 INDEX.DWG/21/2023 6:08 AM Mike Reilly

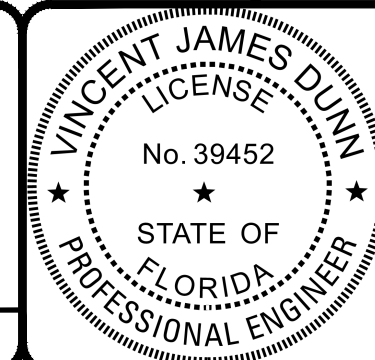
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI
DRAWN BY: MR/NS/SM/SS
CHECKED BY: VJD
SCALE: N/A
DATE: 9/21/2023
PROJ. NO.: 2008-499-2



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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 INDEX - PROJECT NOTES



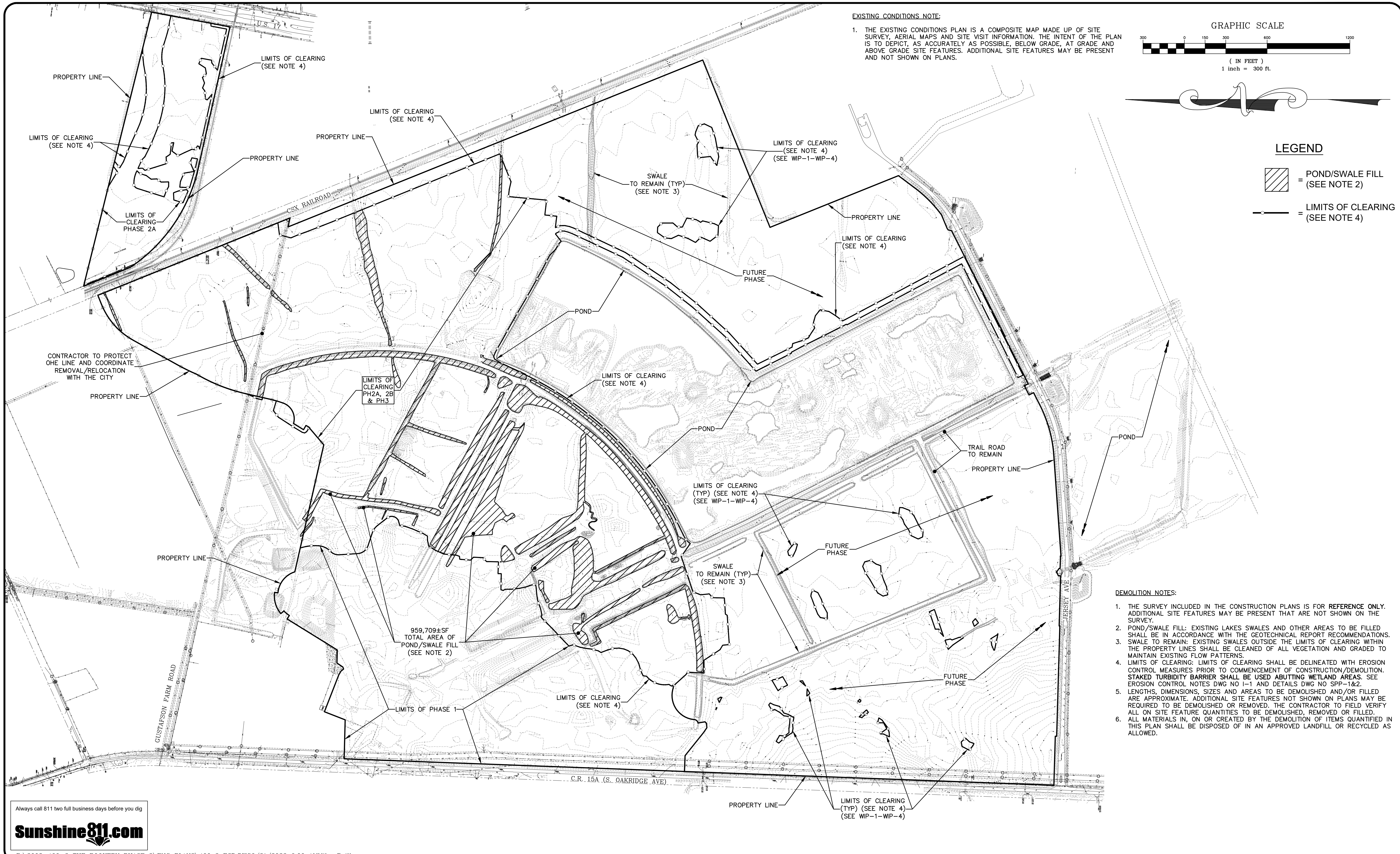
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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81419

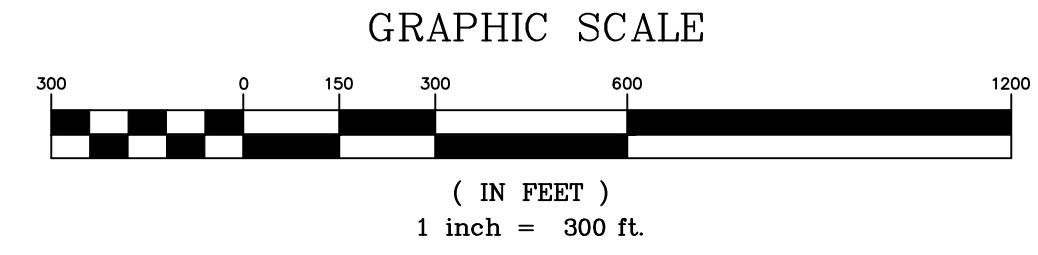
Sheet No. 5 of 130

I-4

DWG. NO.



**EXISTING CONDITIONS NOTE:**  
 1. THE EXISTING CONDITIONS PLAN IS A COMPOSITE MAP MADE UP OF SITE SURVEY, AERIAL MAPS AND SITE VISIT INFORMATION. THE INTENT OF THE PLAN IS TO DEPICT, AS ACCURATELY AS POSSIBLE, BELOW GRADE, AT GRADE AND ABOVE GRADE SITE FEATURES. ADDITIONAL SITE FEATURES MAY BE PRESENT AND NOT SHOWN ON PLANS.



**LEGEND**  
 = POND/SWALE FILL (SEE NOTE 2)  
 = LIMITS OF CLEARING (SEE NOTE 4)

**DEMOLITION NOTES:**  
 1. THE SURVEY INCLUDED IN THE CONSTRUCTION PLANS IS FOR REFERENCE ONLY. ADDITIONAL SITE FEATURES MAY BE PRESENT THAT ARE NOT SHOWN ON THE SURVEY.  
 2. POND/SWALE FILL: EXISTING LAKES SWALES AND OTHER AREAS TO BE FILLED SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS.  
 3. SWALE TO REMAIN: EXISTING SWALES OUTSIDE THE LIMITS OF CLEARING WITHIN THE PROPERTY LINES SHALL BE CLEANED OF ALL VEGETATION AND GRADED TO MAINTAIN EXISTING FLOW PATTERNS.  
 4. LIMITS OF CLEARING: LIMITS OF CLEARING SHALL BE DELINEATED WITH EROSION CONTROL MEASURES PRIOR TO COMMENCEMENT OF CONSTRUCTION/DEMOLITION. STAKED TURBIDITY BARRIER SHALL BE USED ABUTTING WETLAND AREAS. SEE EROSION CONTROL NOTES DWG NO I-1 AND DETAILS DWG NO SPP-1&2.  
 5. LENGTHS, DIMENSIONS, SIZES AND AREAS TO BE DEMOLISHED AND/OR FILLED ARE APPROXIMATE. ADDITIONAL SITE FEATURES NOT SHOWN ON PLANS MAY BE REQUIRED TO BE DEMOLISHED OR REMOVED. THE CONTRACTOR TO FIELD VERIFY ALL ON SITE FEATURE QUANTITIES TO BE DEMOLISHED, REMOVED OR FILLED.  
 6. ALL MATERIALS IN, ON OR CREATED BY THE DEMOLITION OF ITEMS QUANTIFIED IN THIS PLAN SHALL BE DISPOSED OF IN AN APPROVED LANDFILL OR RECYCLED AS ALLOWED.

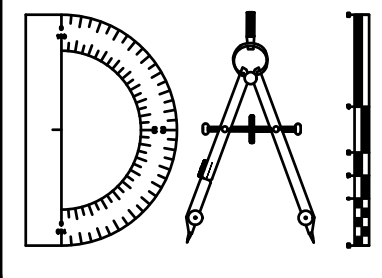
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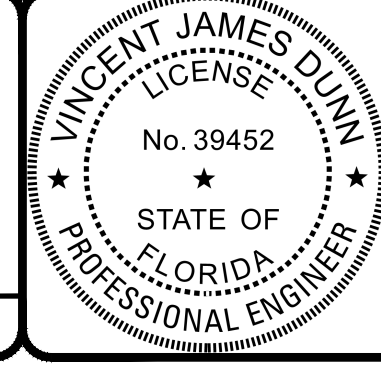
REVISIONS		BY:
NO.	DATE	DESCRIPTION

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 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 300'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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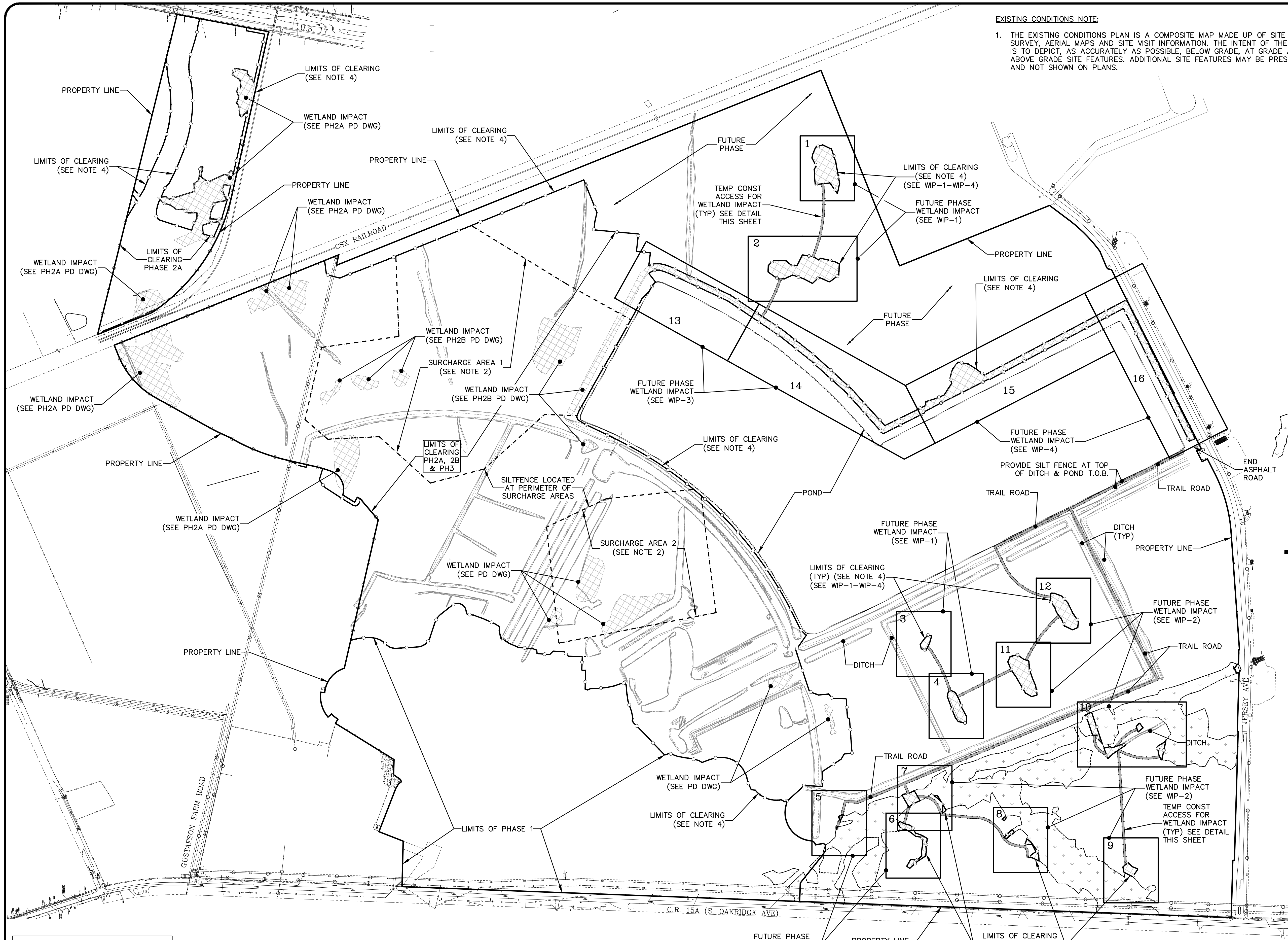
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 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 EXISTING CONDITIONS AND DEMOLITION PLAN



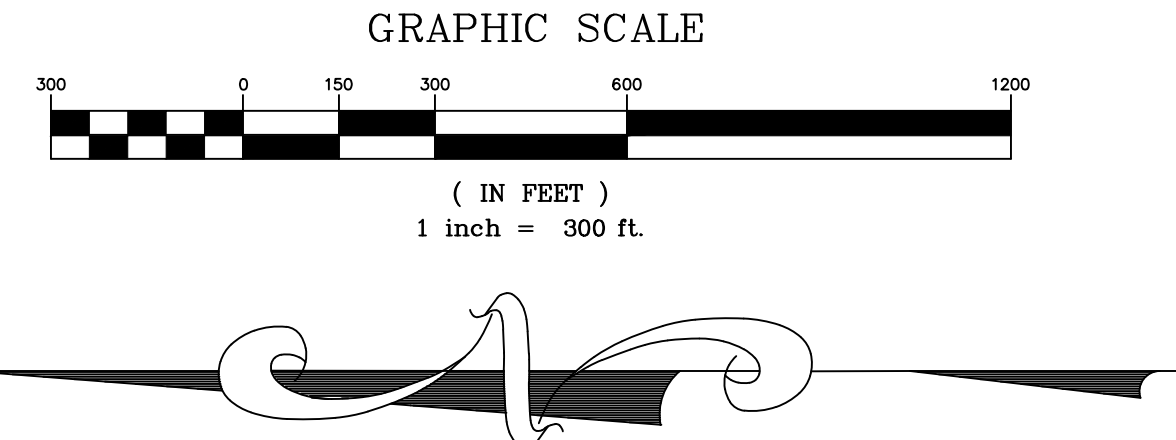
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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEBER ENGINEER NO. 81419

Sheet No. 6 of 130  
**ECD-1**  
 DWG. NO.

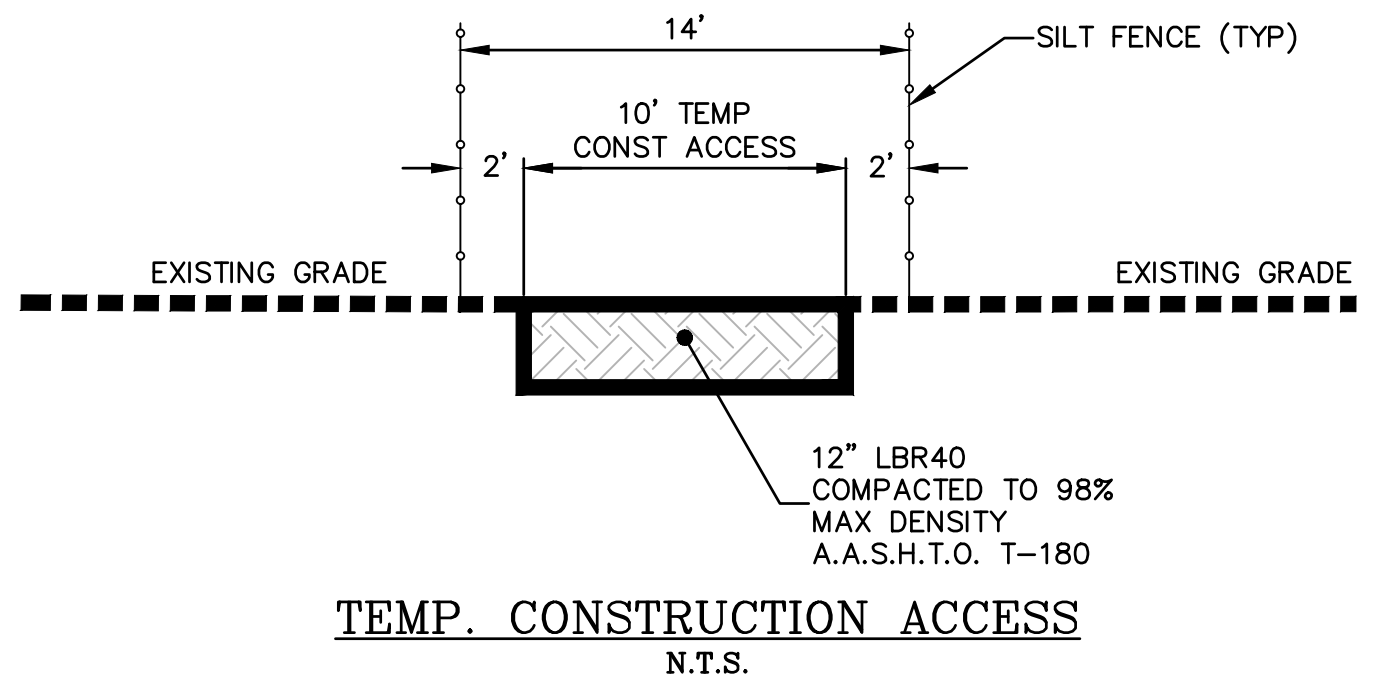
THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



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- LEGEND**
- = WETLANDS (FLAGGED)
  - = WETLANDS (AERIAL INTERPRETATION)
  - = WETLAND IMPACTS
  - = LIMITS OF CLEARING (SEE NOTE 4)



- DEMOLITION NOTES:**
1. THE SURVEY INCLUDED IN THE CONSTRUCTION PLANS IS FOR REFERENCE ONLY. ADDITIONAL SITE FEATURES MAY BE PRESENT THAT ARE NOT SHOWN ON THE SURVEY.
  2. SURCHARGE AREA: AREA TO BE SURCHARGED PER RECOMMENDATIONS IN GEOTECHNICAL ENGINEERING REPORT BY ECS FLORIDA, LLC.
  3. WETLAND IMPACT: ALL FUTURE WETLAND IMPACTS SHOWN SHALL BE IMPACTED WITH PHASE 2 CONSTRUCTION & PHASE 3 CLEARING PER DETAILS ON DWG NO.'S WIP-1 THRU WIP-4.
  4. LIMITS OF CLEARING: LIMITS OF CLEARING SHALL BE DELINEATED WITH EROSION CONTROL MEASURES PRIOR TO COMMENCEMENT OF CONSTRUCTION/DEMOLITION. STAKED TURBIDITY BARRIER SHALL BE USED ABUTTING WETLAND AREAS. SEE EROSION CONTROL NOTES DWG NO I-1 AND DETAILS DWG NO SPP-1&2.
  5. LENGTHS, DIMENSIONS, SIZES AND AREAS TO BE DEMOLISHED AND/OR FILLED ARE APPROXIMATE. ADDITIONAL SITE FEATURES NOT SHOWN ON PLANS MAY BE REQUIRED TO BE DEMOLISHED OR REMOVED. THE CONTRACTOR TO FIELD VERIFY ALL ON SITE FEATURE QUANTITIES TO BE DEMOLISHED, REMOVED OR FILLED.

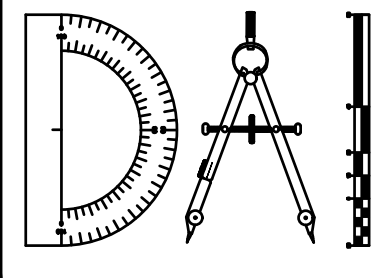
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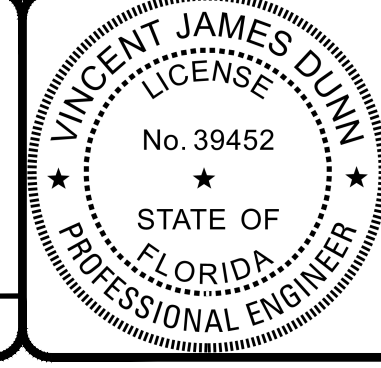
REVISIONS		
NO.	DATE	DESCRIPTION

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 DRAWN BY: MR/NS/SM/SS  
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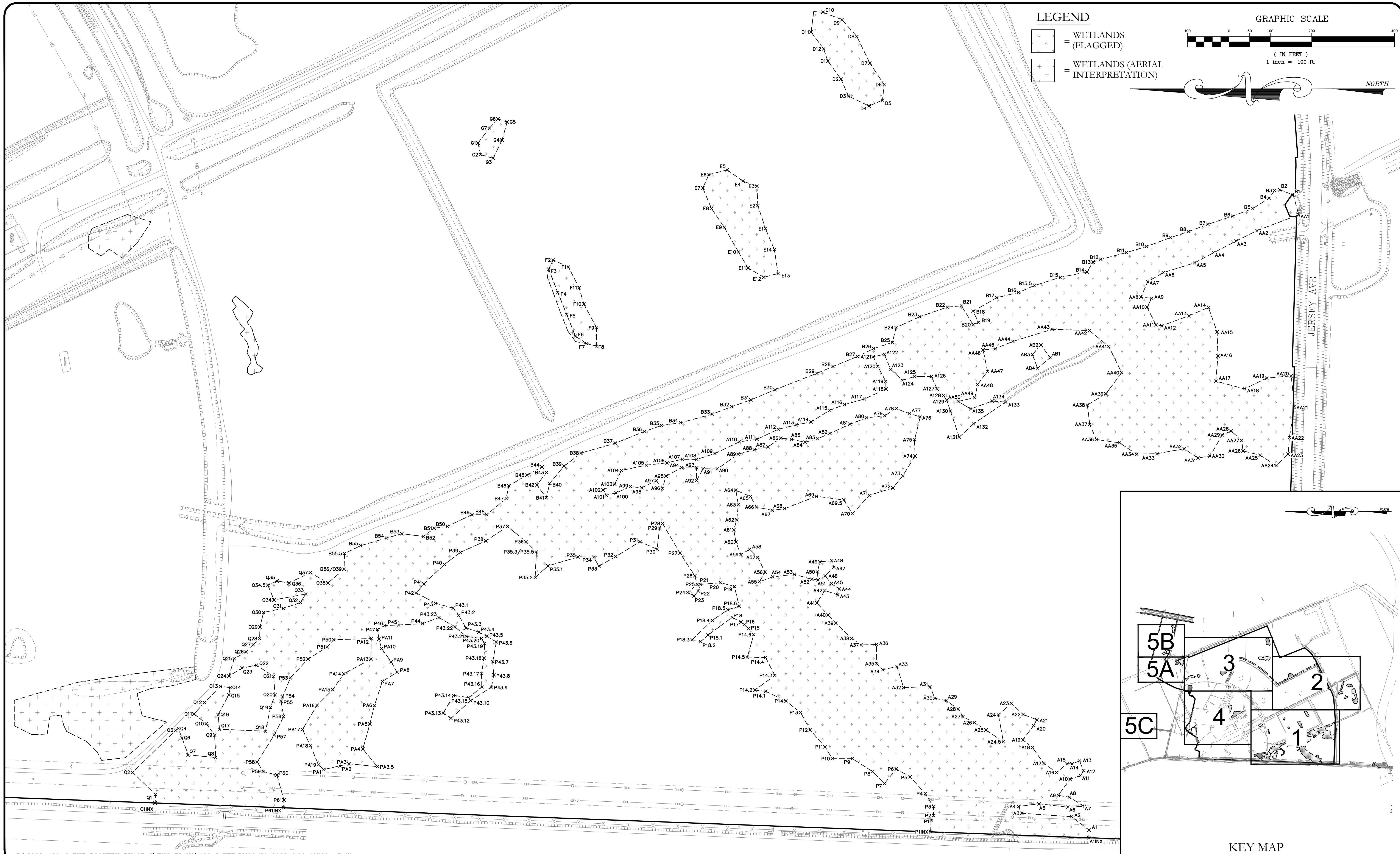
**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
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 CLAY COUNTY, FLORIDA  
 EXISTING CONDITIONS - WETLAND IMPACT MAP



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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEBER ENGINEER NO. 81412

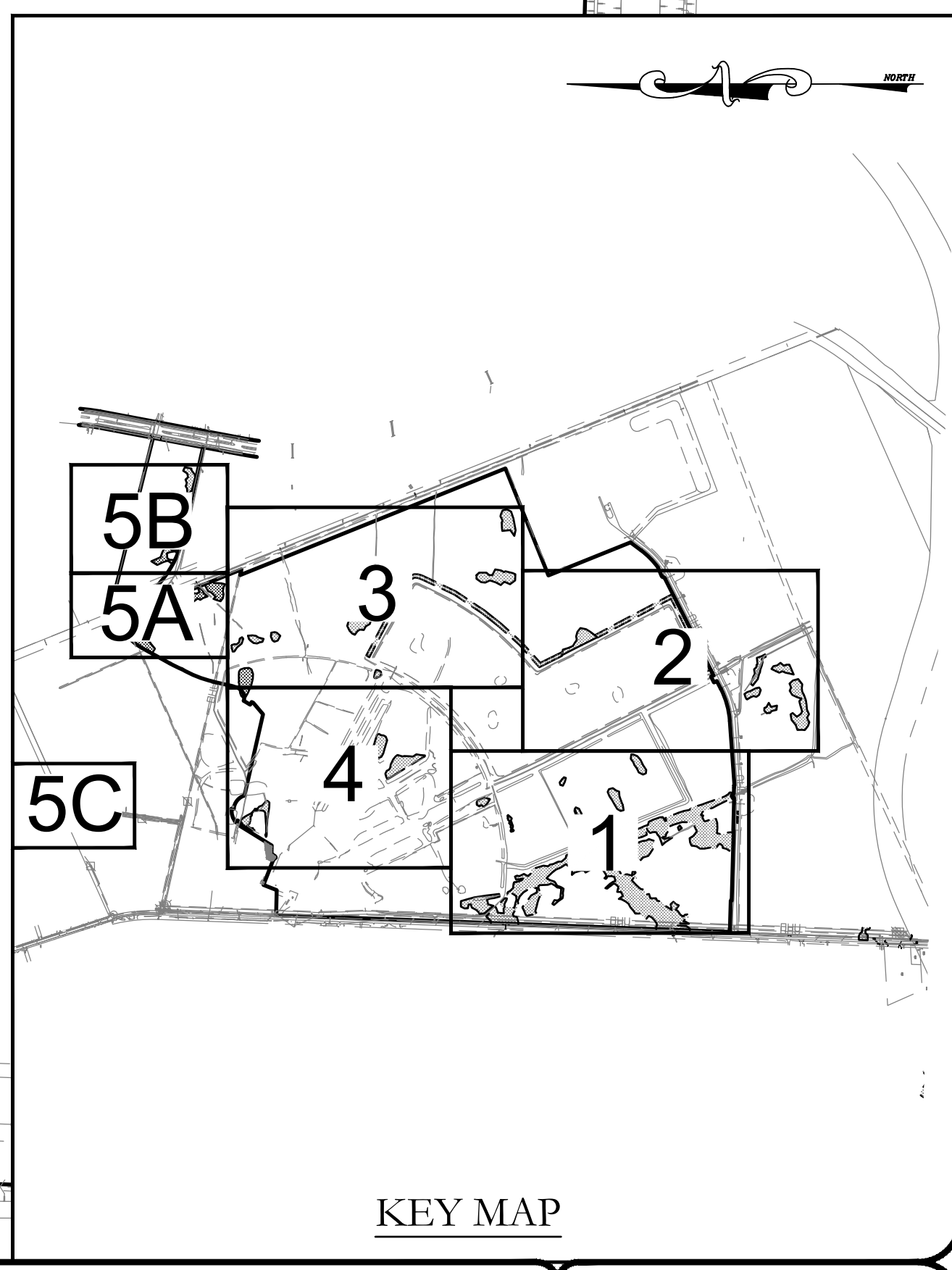
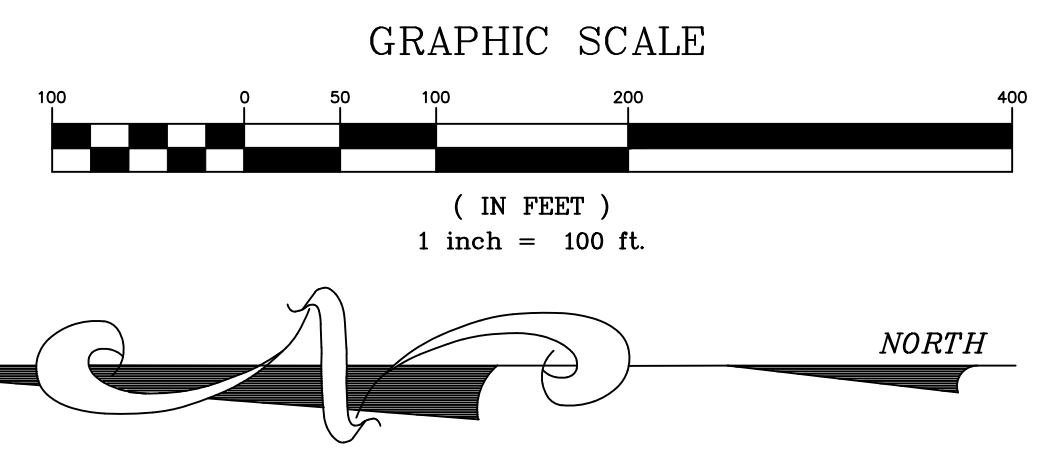
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**ECD-2**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



**LEGEND**

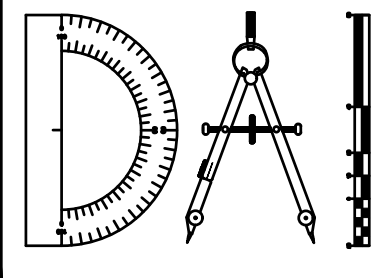
- = WETLANDS (FLAGGED)
- + = WETLANDS (AERIAL INTERPRETATION)



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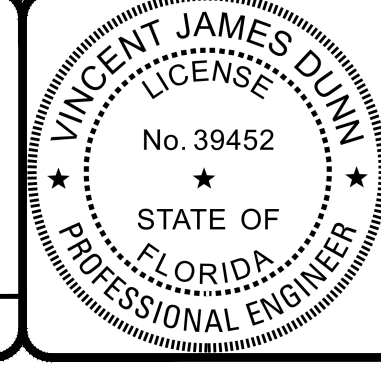
REVISIONS		
NO.	DATE	DESCRIPTION

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 CLAY COUNTY, FLORIDA  
**WETLAND FLAG PLAN**



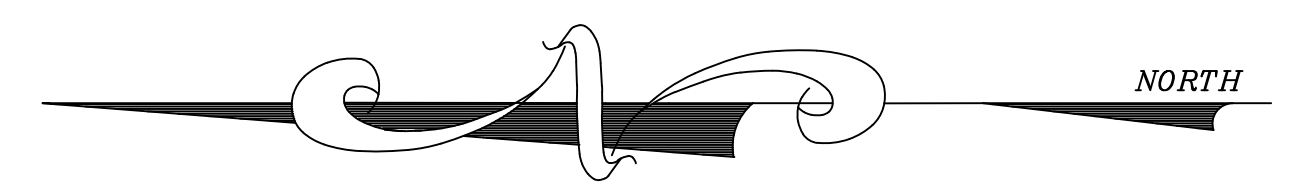
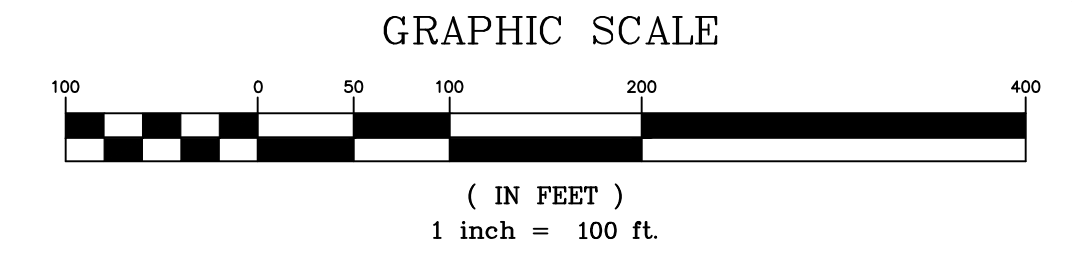
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 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 8 of 130  
**WFP-1**  
 DWG. NO.

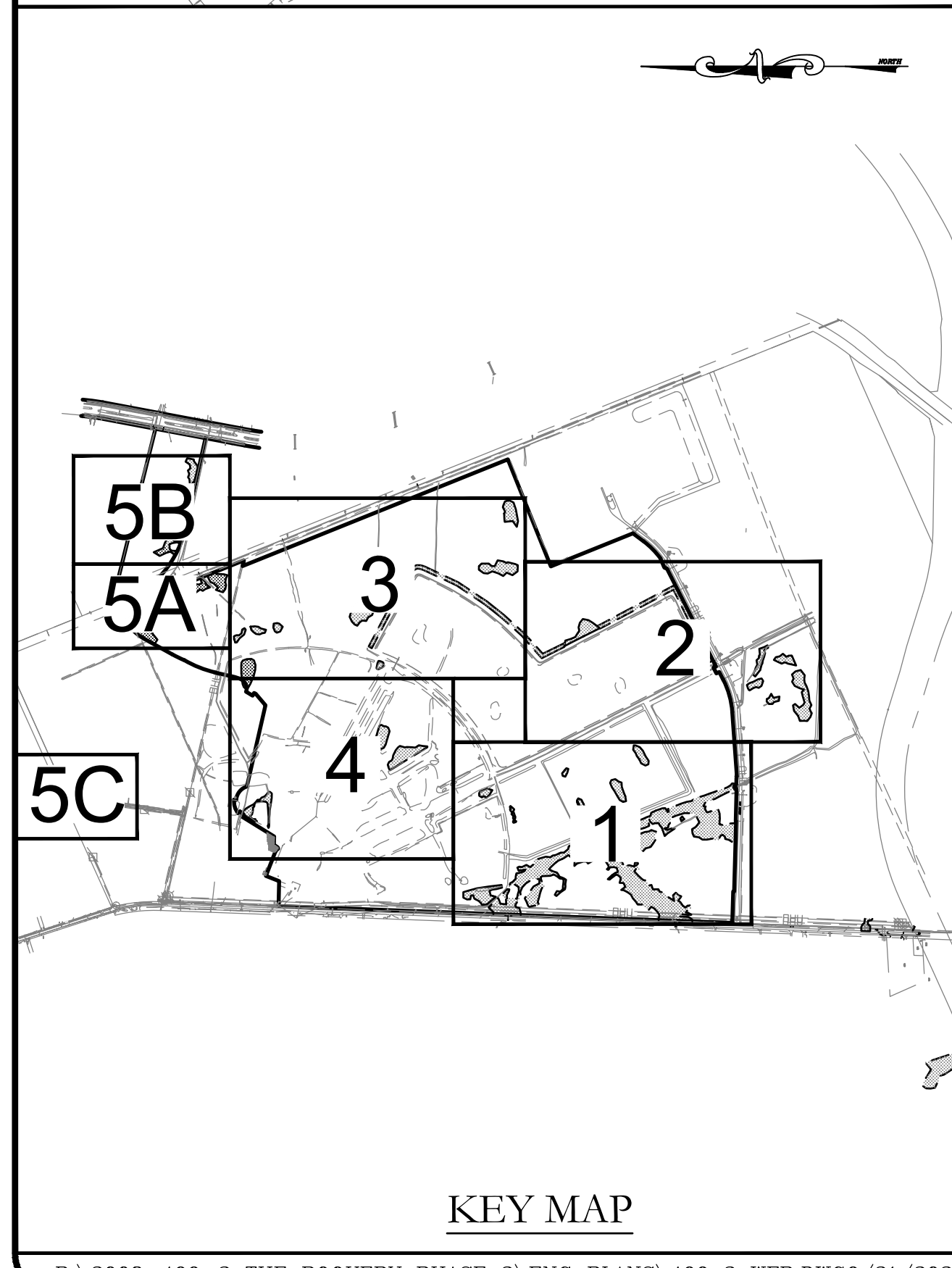
THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)





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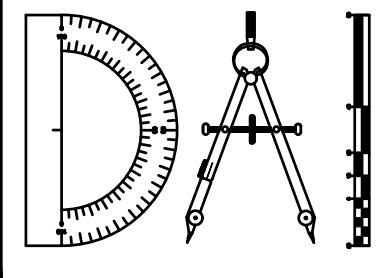
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- = WETLANDS (AERIAL INTERPRETATION)



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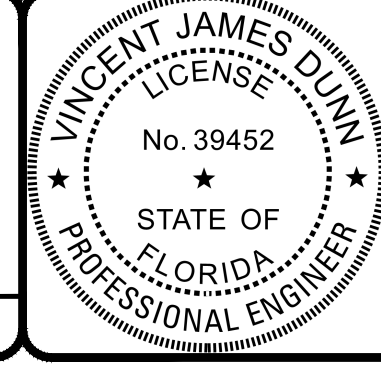
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 CLAY COUNTY, FLORIDA  
**WETLAND FLAG PLAN**

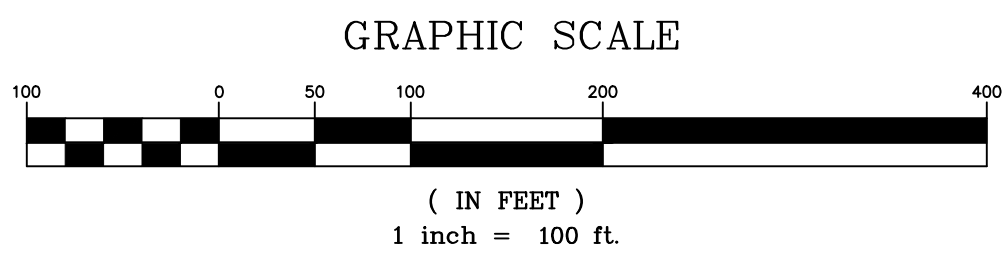


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Sheet No. 9 of 130  
**WFP-2**  
 DWG. NO.

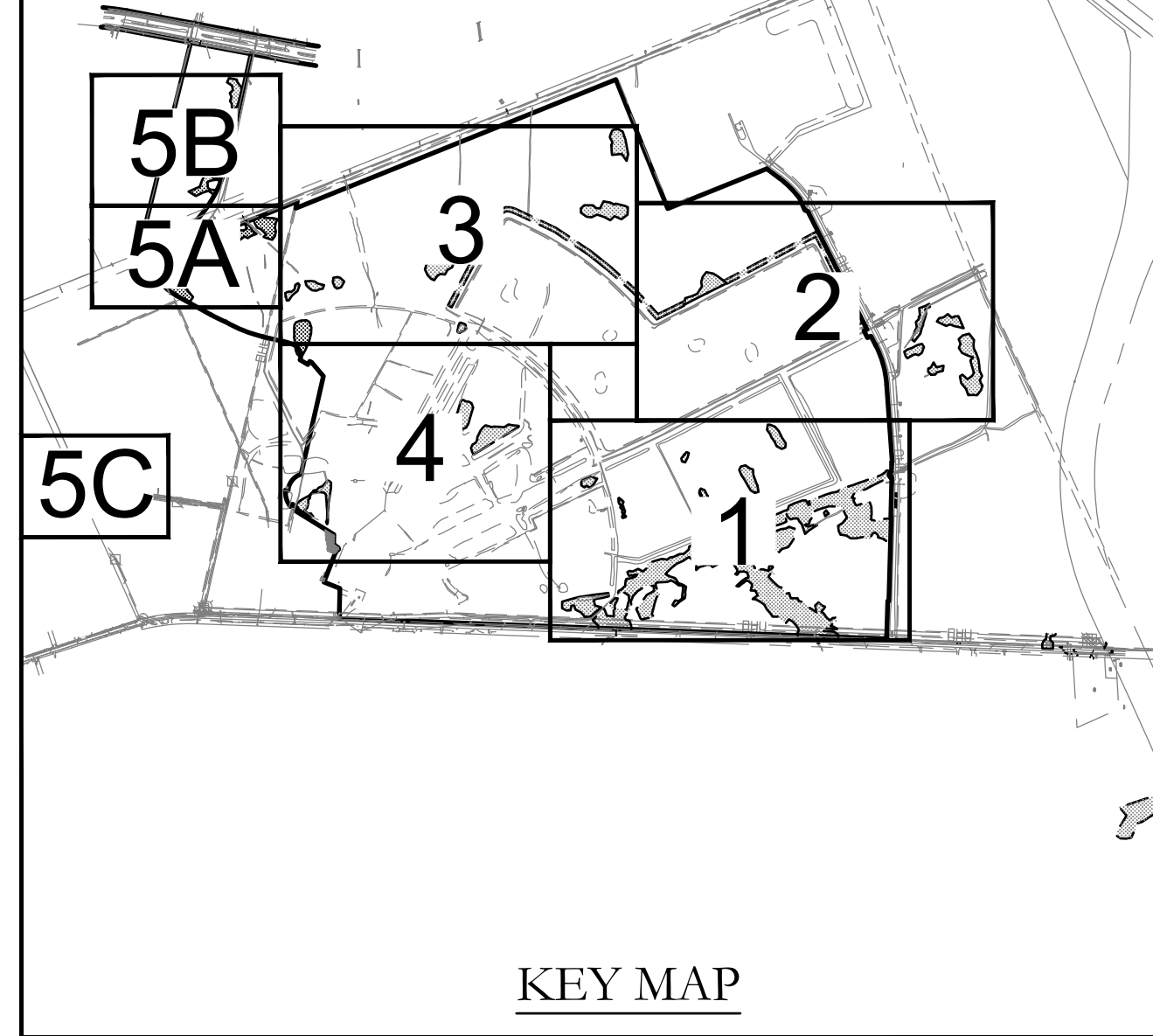
THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



NORTH

LEGEND

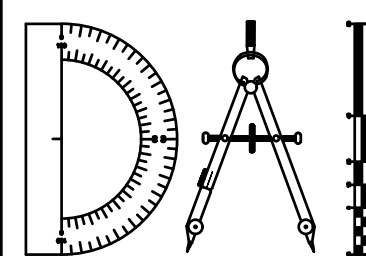
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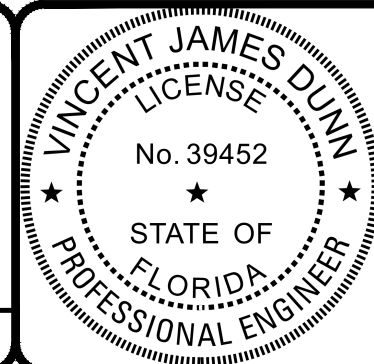
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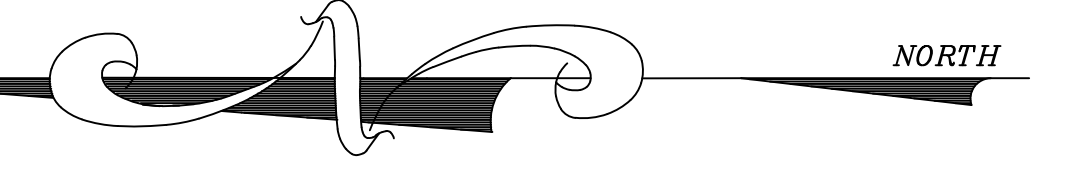
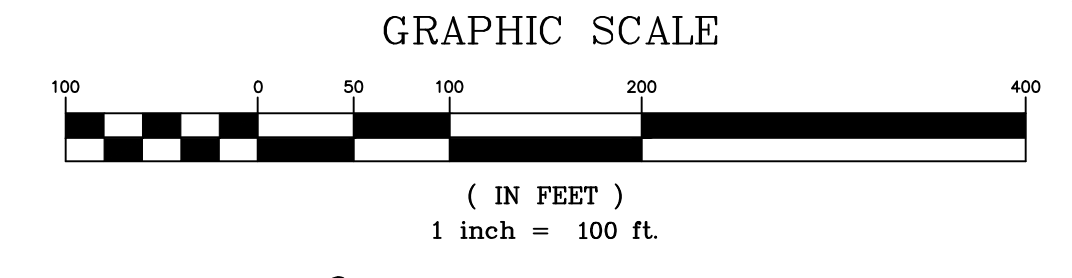
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 WETLAND FLAG PLAN



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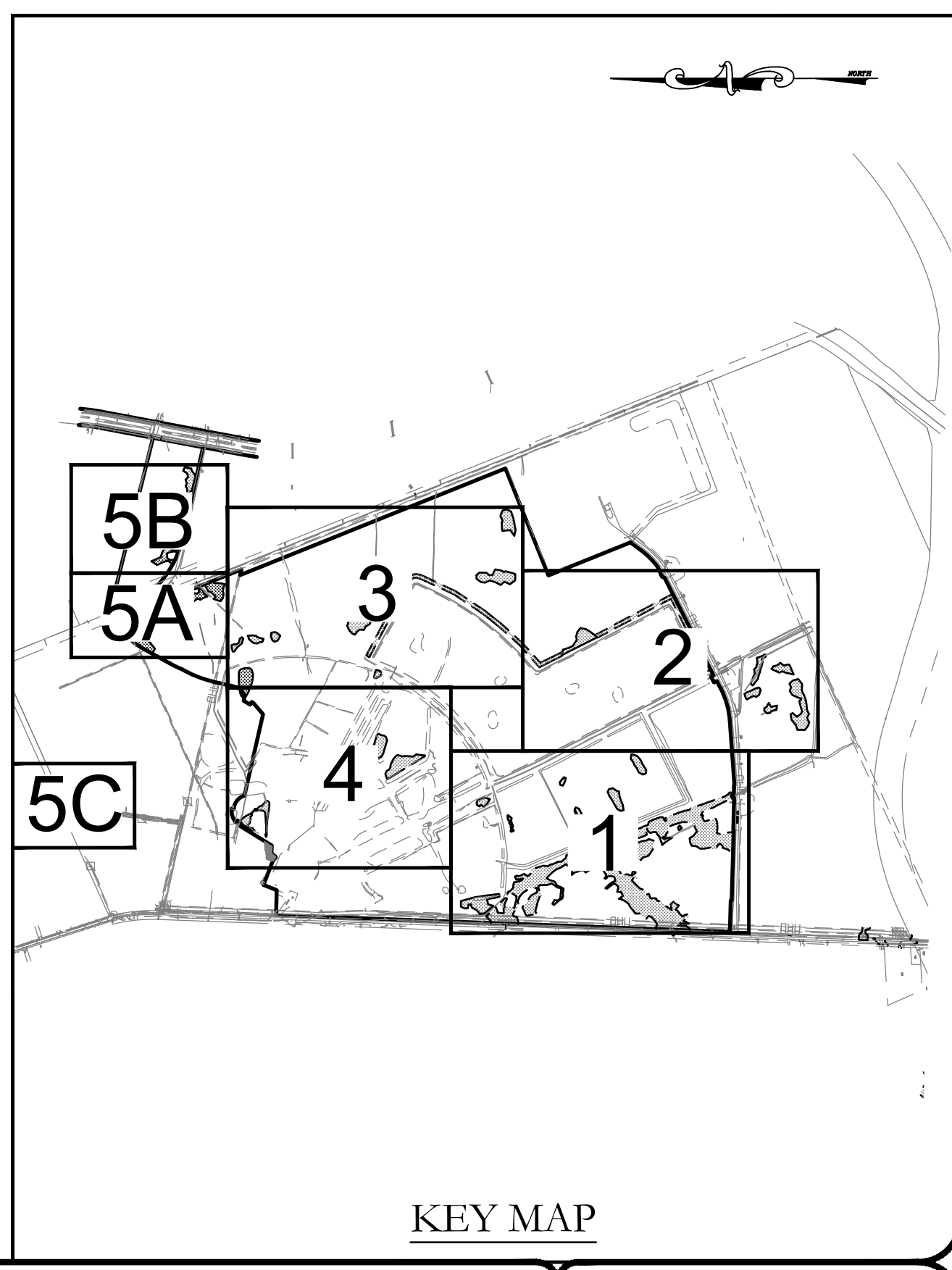
VINCENT J. DUNN ENGINEER NO. 39452    DAVID M. TAYLOR ENGINEER NO. 44184    GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 10 of 130  
**WFP-3**  
 DWG. NO.



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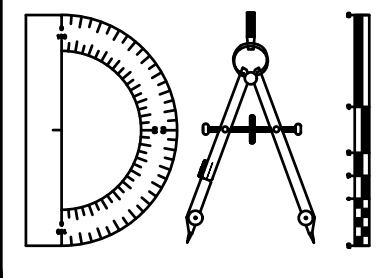
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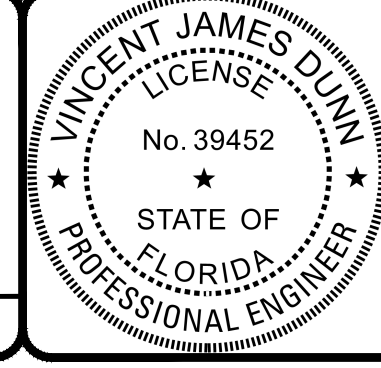
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NO.	DESCRIPTION

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 CLAY COUNTY, FLORIDA  
**WETLAND FLAG PLAN**

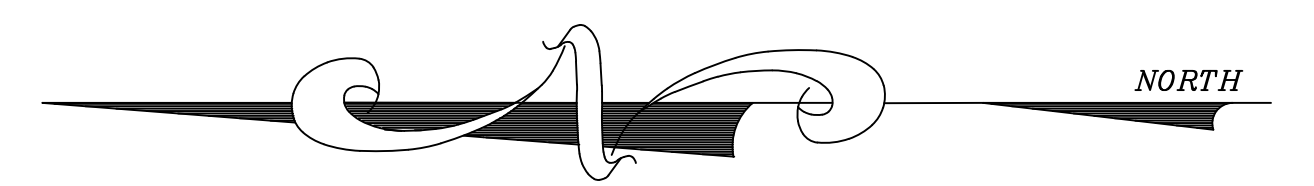
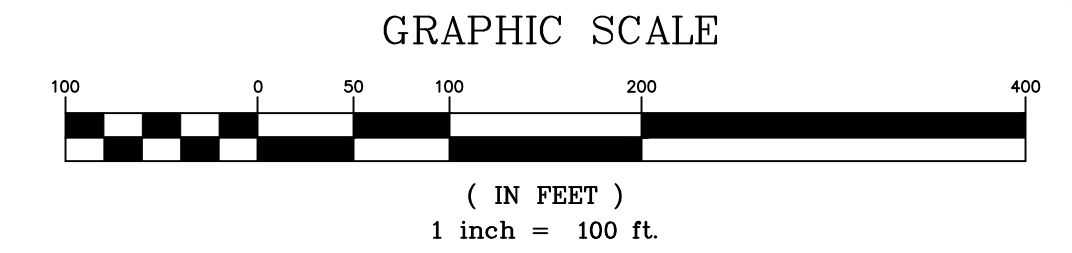


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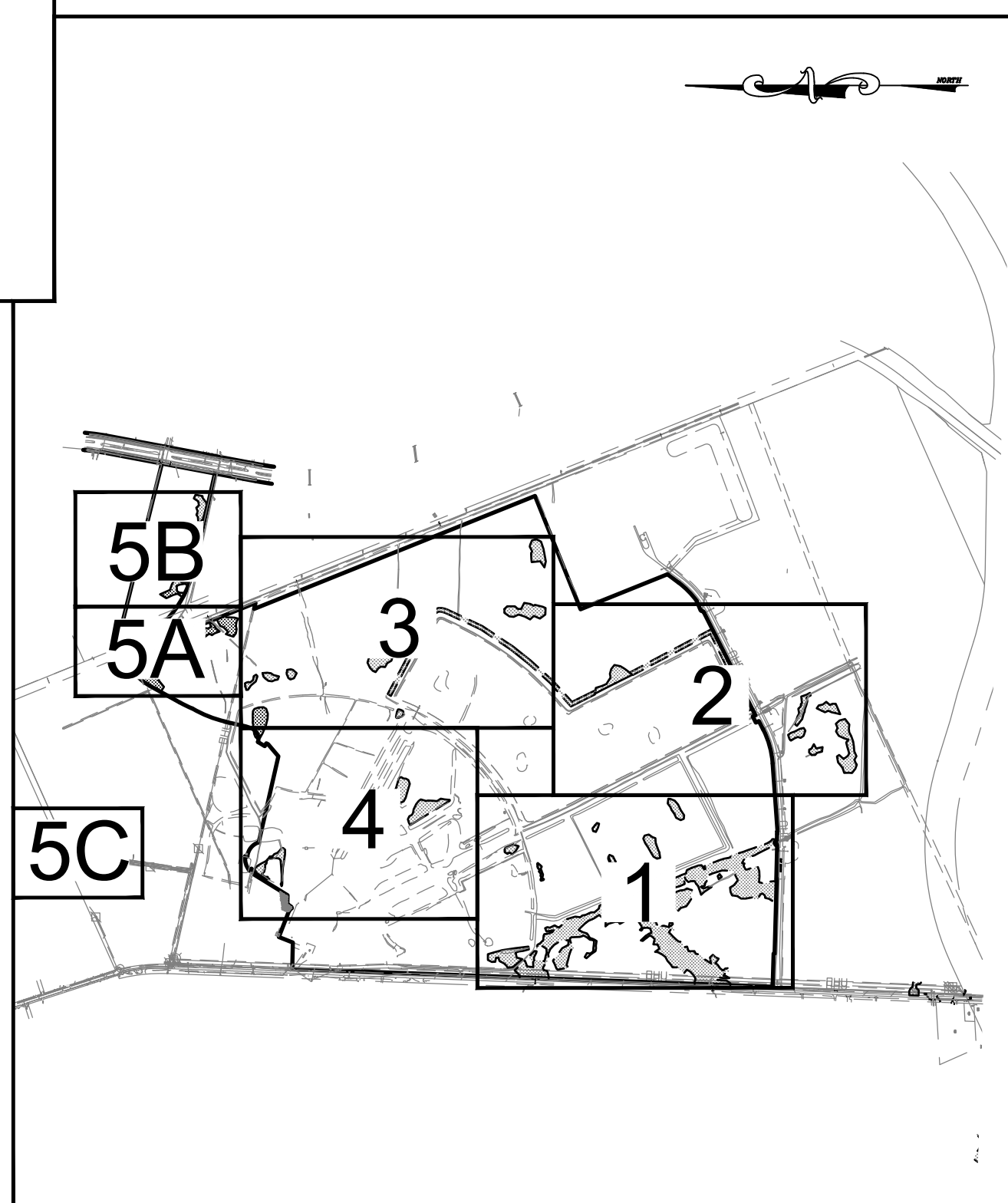
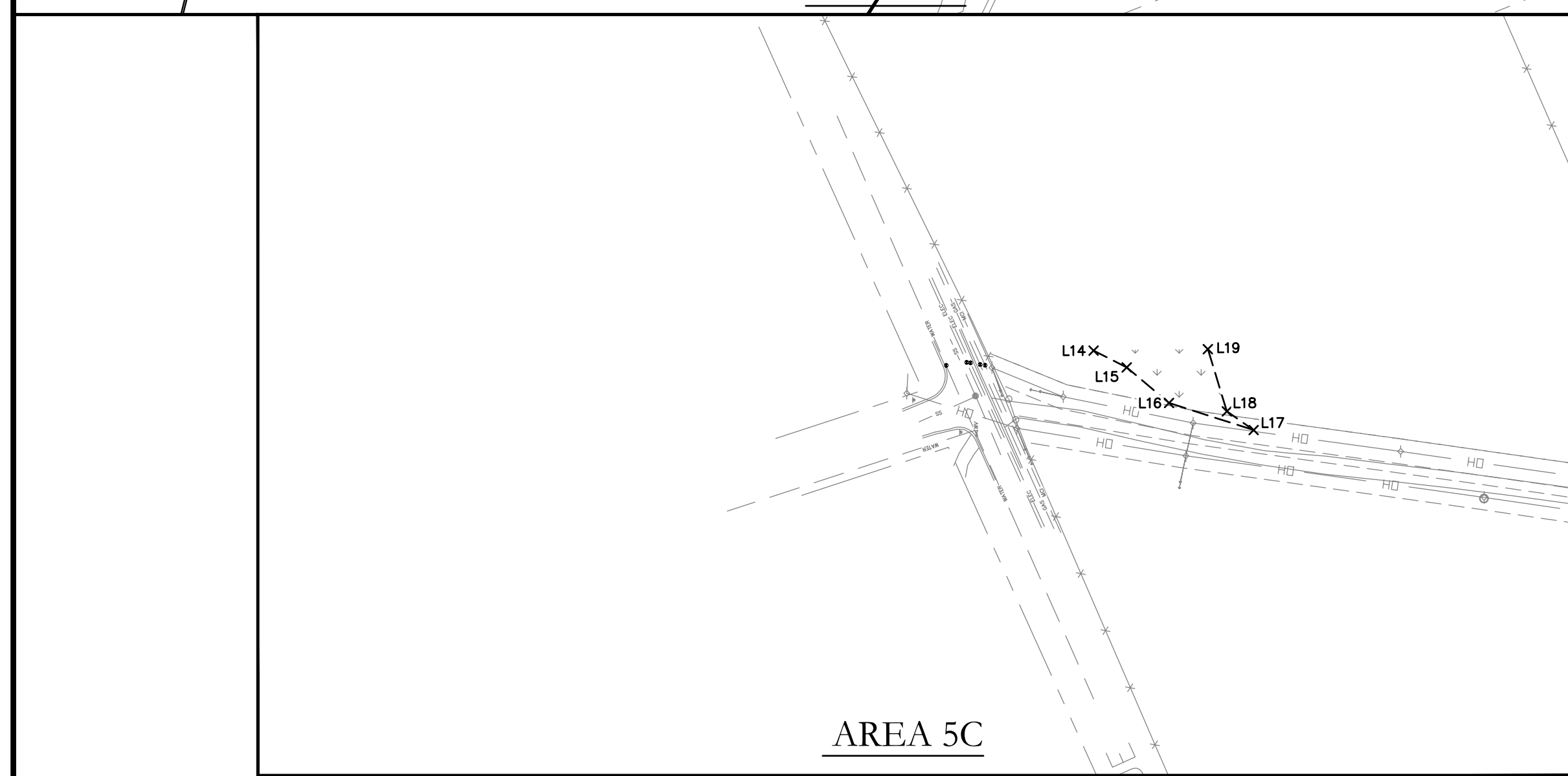
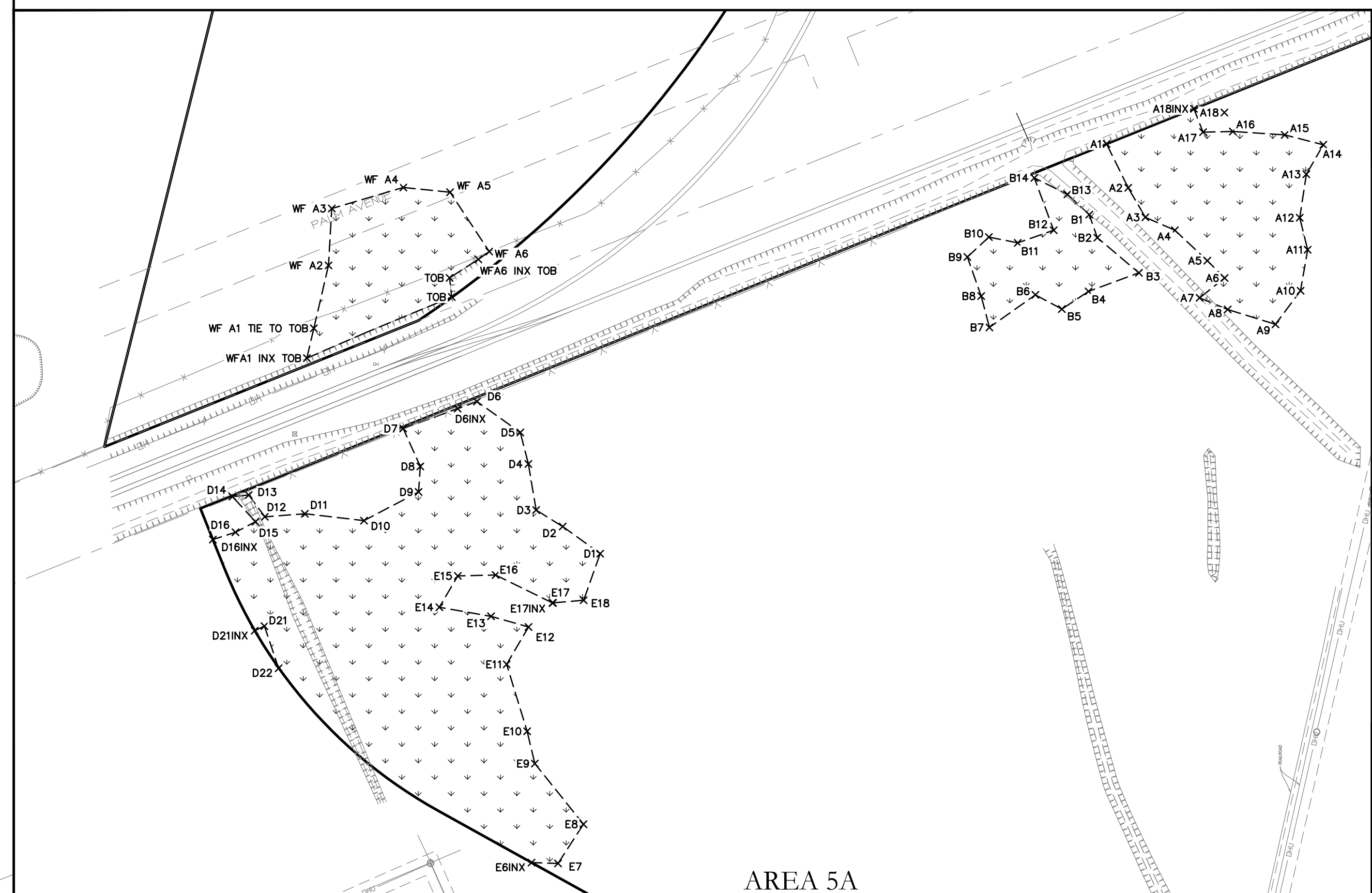
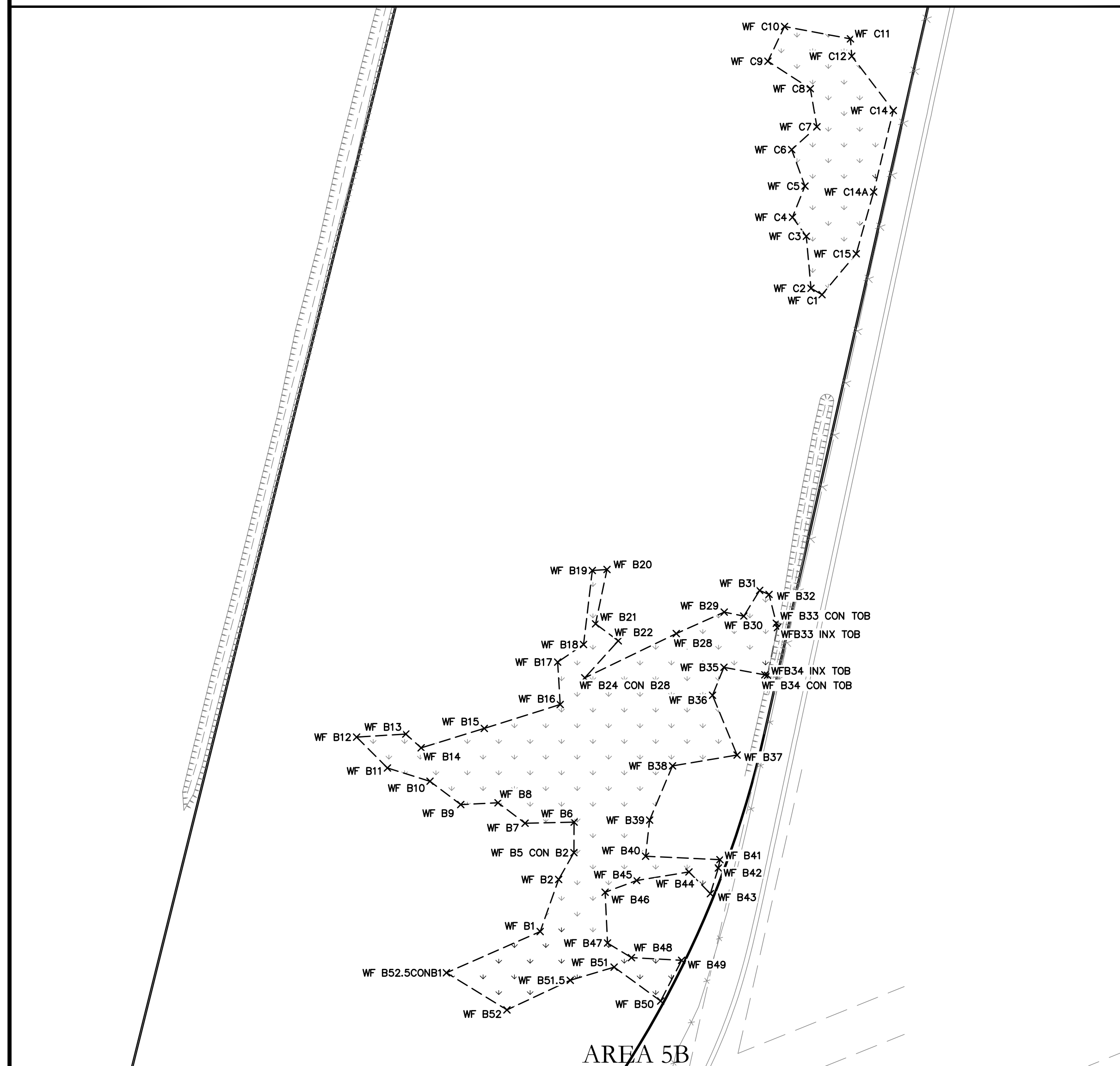
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 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



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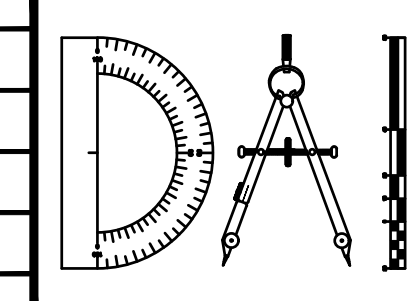
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-  = WETLANDS (AERIAL INTERPRETATION)



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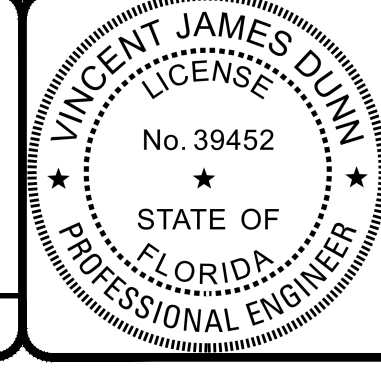
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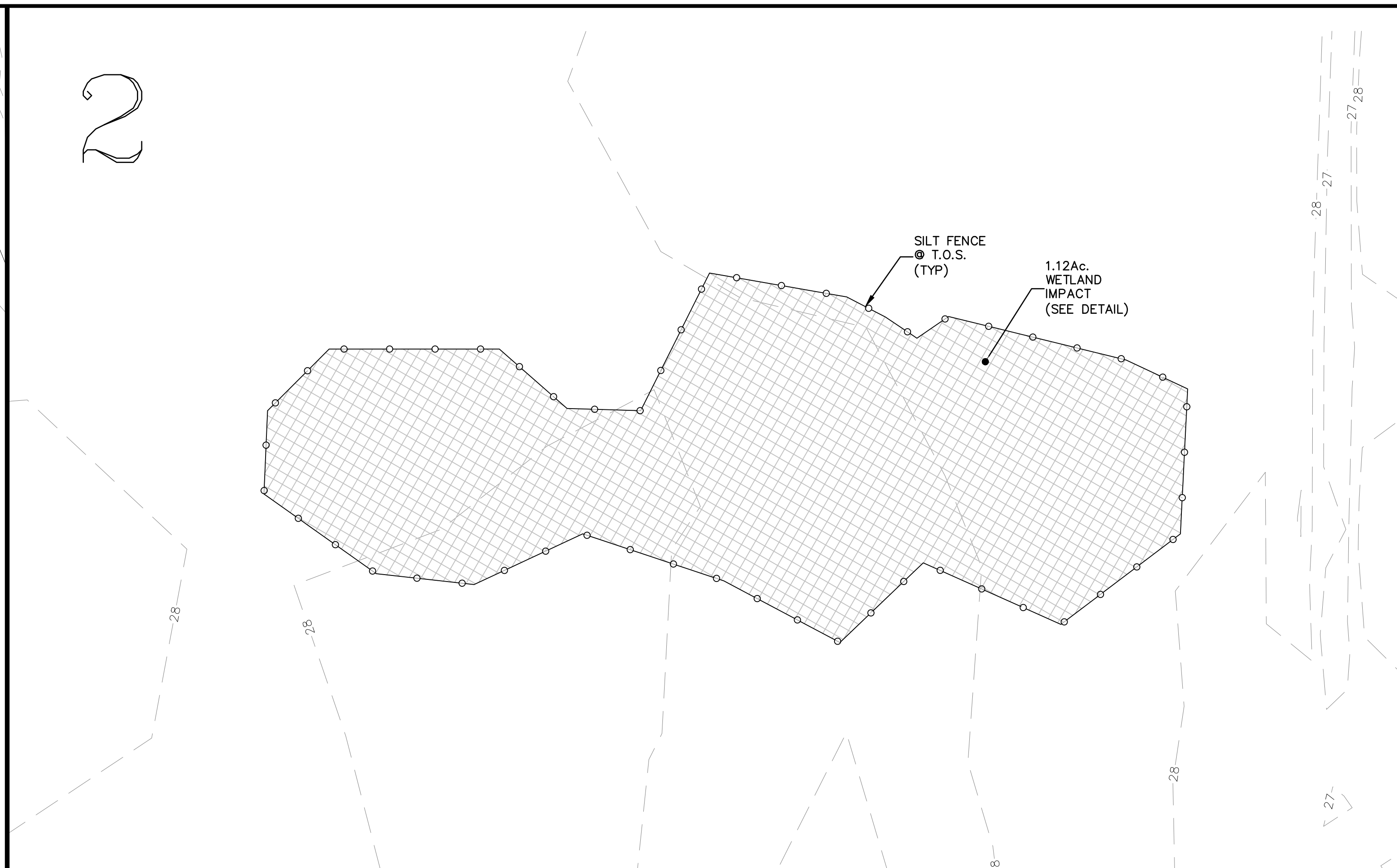
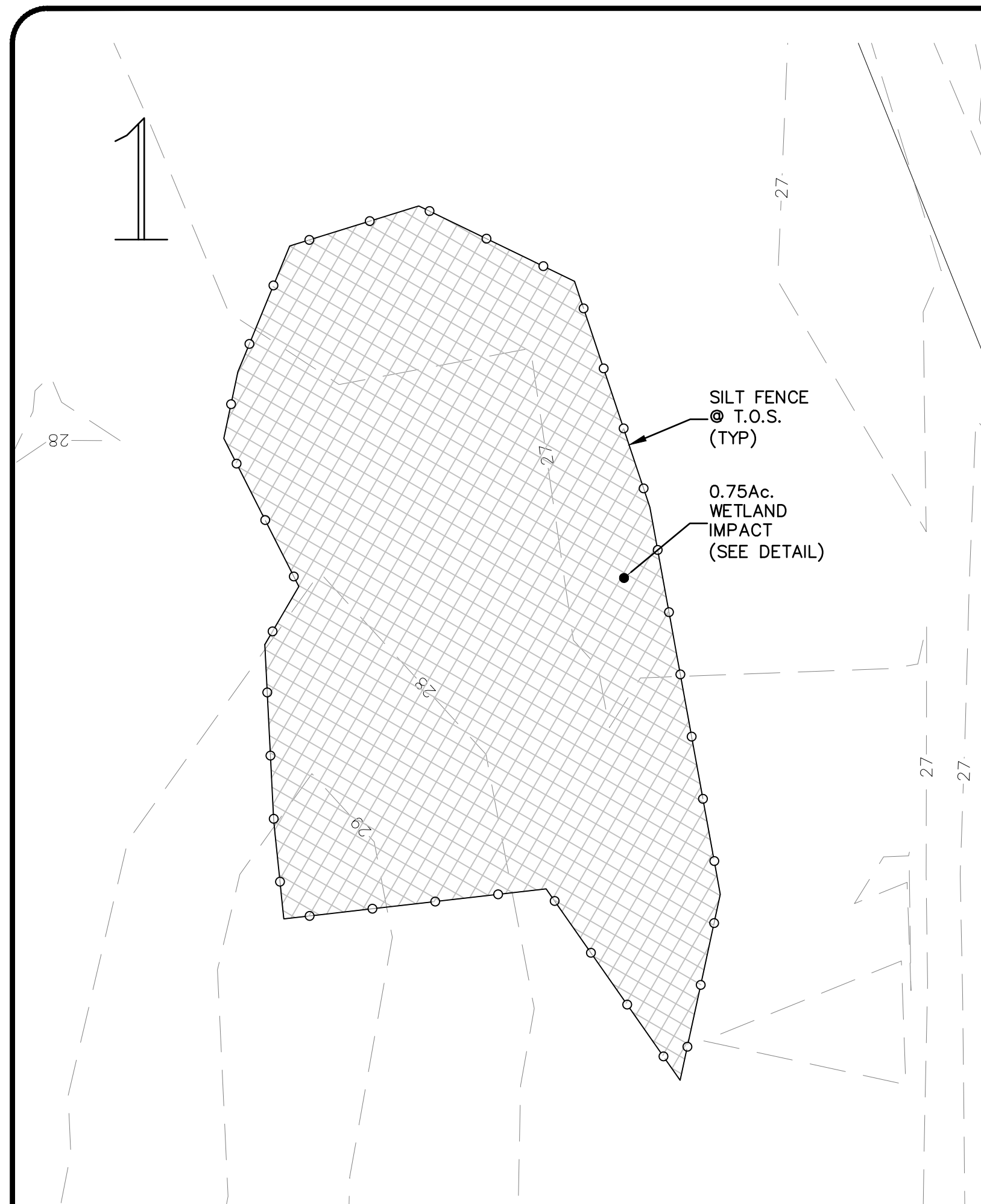
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 CLAY COUNTY, FLORIDA  
 WETLAND FLAG PLAN



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Sheet No. 12 of 130  
**WFP-5**  
 DWG. NO.



GRAPHIC SCALE  
( IN FEET )  
1 inch = 40 ft.

**LEGEND**

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = WETLAND IMPACTS

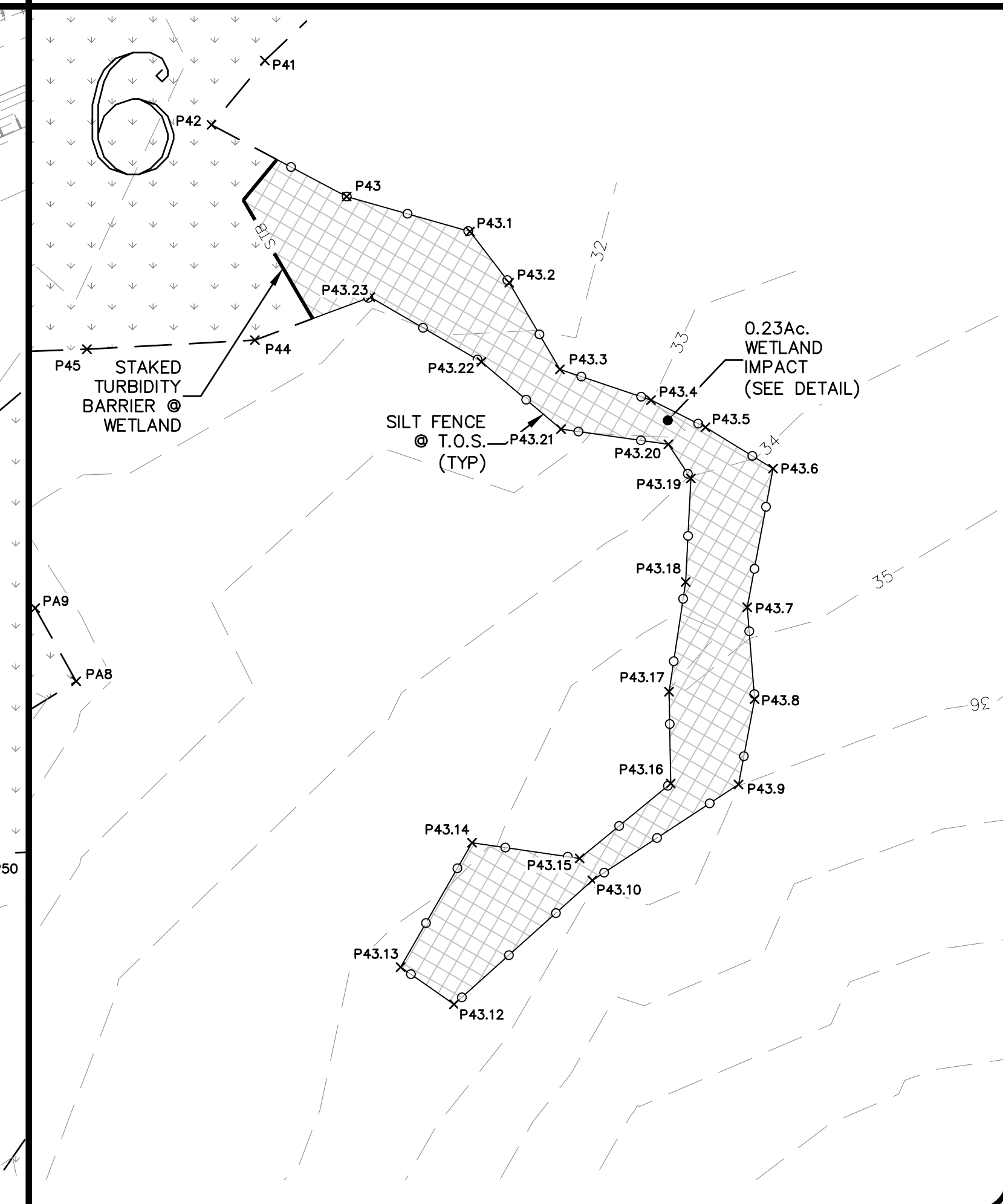
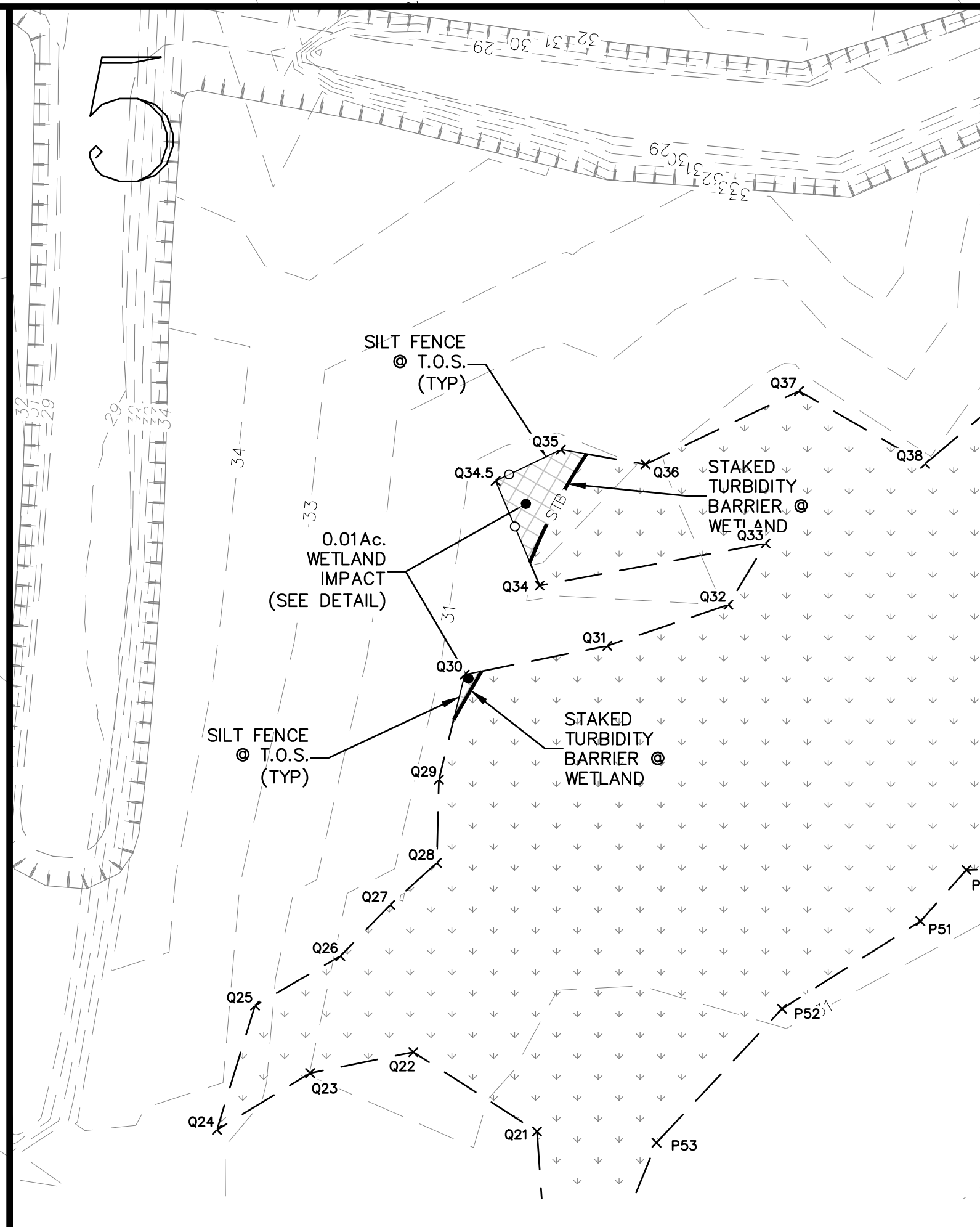
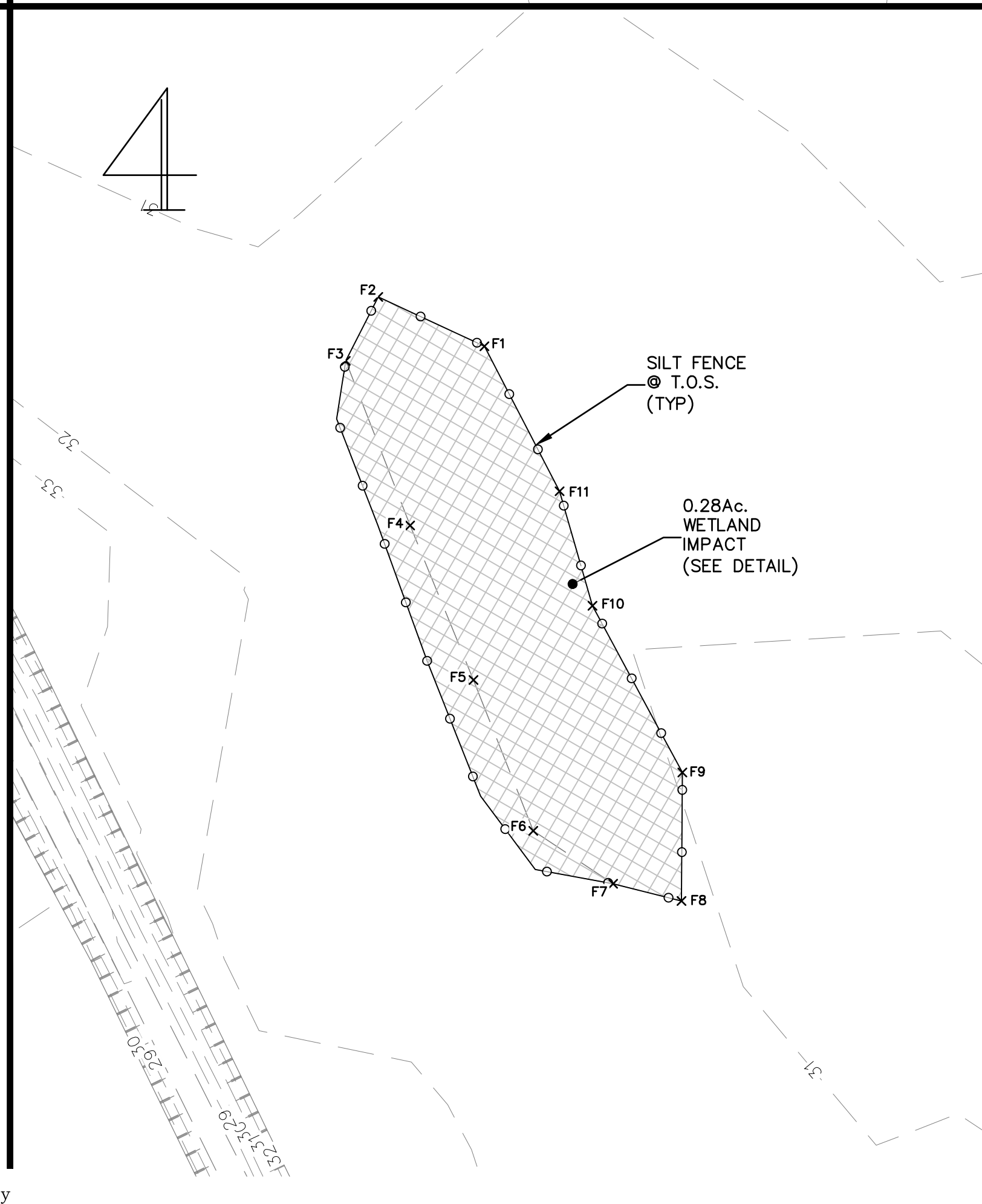
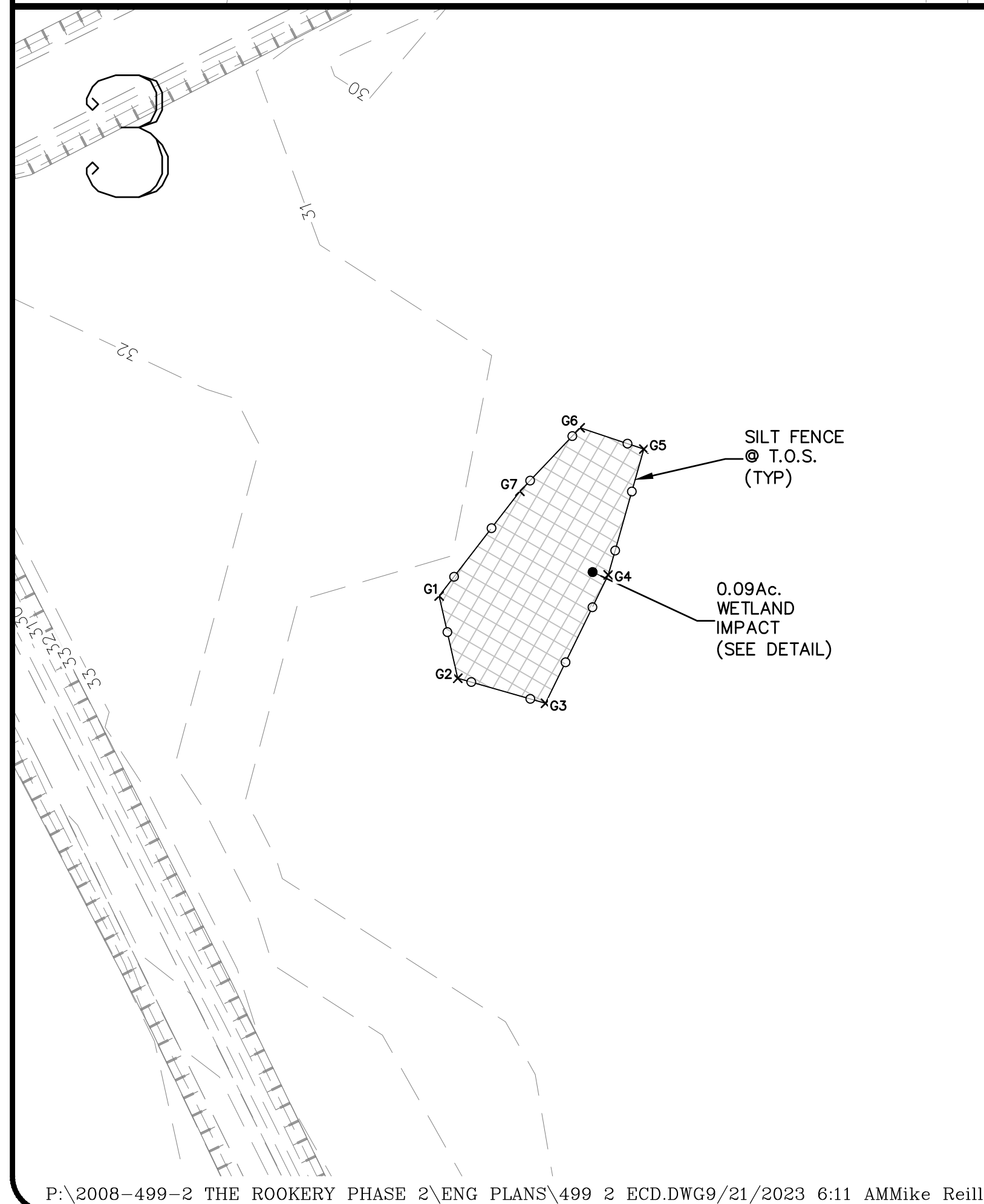
Always call 811 two full business days before you dig

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**DEMOLITION NOTES:**

1. WETLAND IMPACT: ALL FUTURE WETLAND IMPACTS SHOWN SHALL BE IMPACTED WITH PHASE 2 & PHASE 3 CONSTRUCTION PER DETAIL BELOW.
2. LIMITS OF CLEARING: LIMITS OF CLEARING SHALL BE DELINEATED WITH EROSION CONTROL MEASURES PRIOR TO COMMENCEMENT OF CONSTRUCTION/DEMOLITION. STAKED TURBIDITY BARRIER SHALL BE USED ABUTTING WETLAND AREAS. SEE EROSION CONTROL NOTES DWG NO I-1 AND DETAILS DWG NO SPP-1&2.
3. TEMP CONST ACCESS AND SILT FENCE TO WETLAND IMPACT AREAS NOT SHOWN FOR PLAN CLARITY.

**FUTURE AREA WETLAND IMPACT TYPICAL SECTION**  
N.T.S.



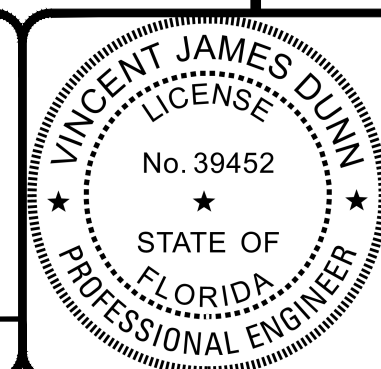
P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2 ECD.DWG9/21/2023 6:11 AMMike Reilly

REVISIONS	
NO.	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2

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 Jacksonville, Florida 32256  
 Phone: (904)363-8916 Fax: (904)363-8917  
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 WETLAND IMPACT PLAN

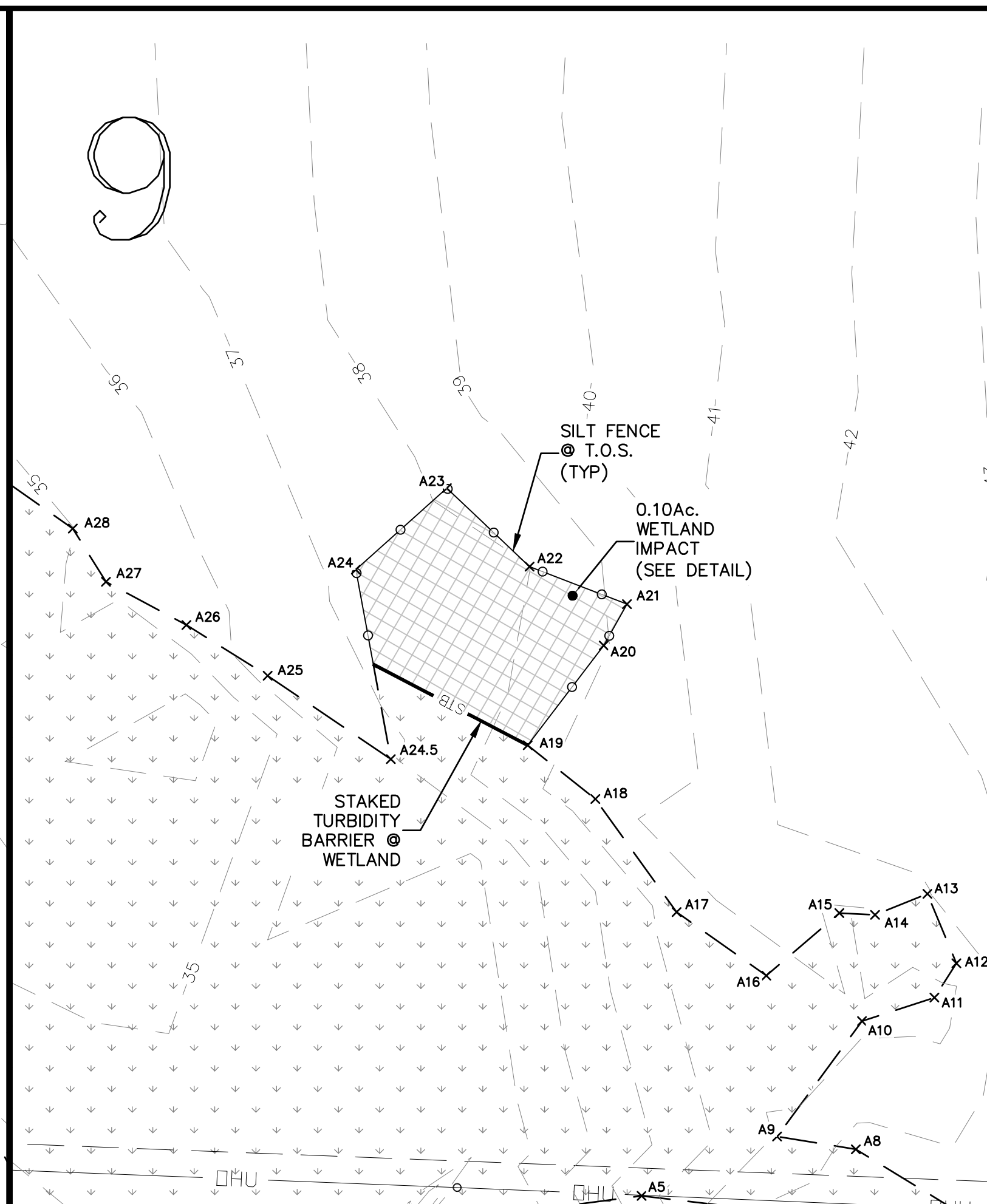
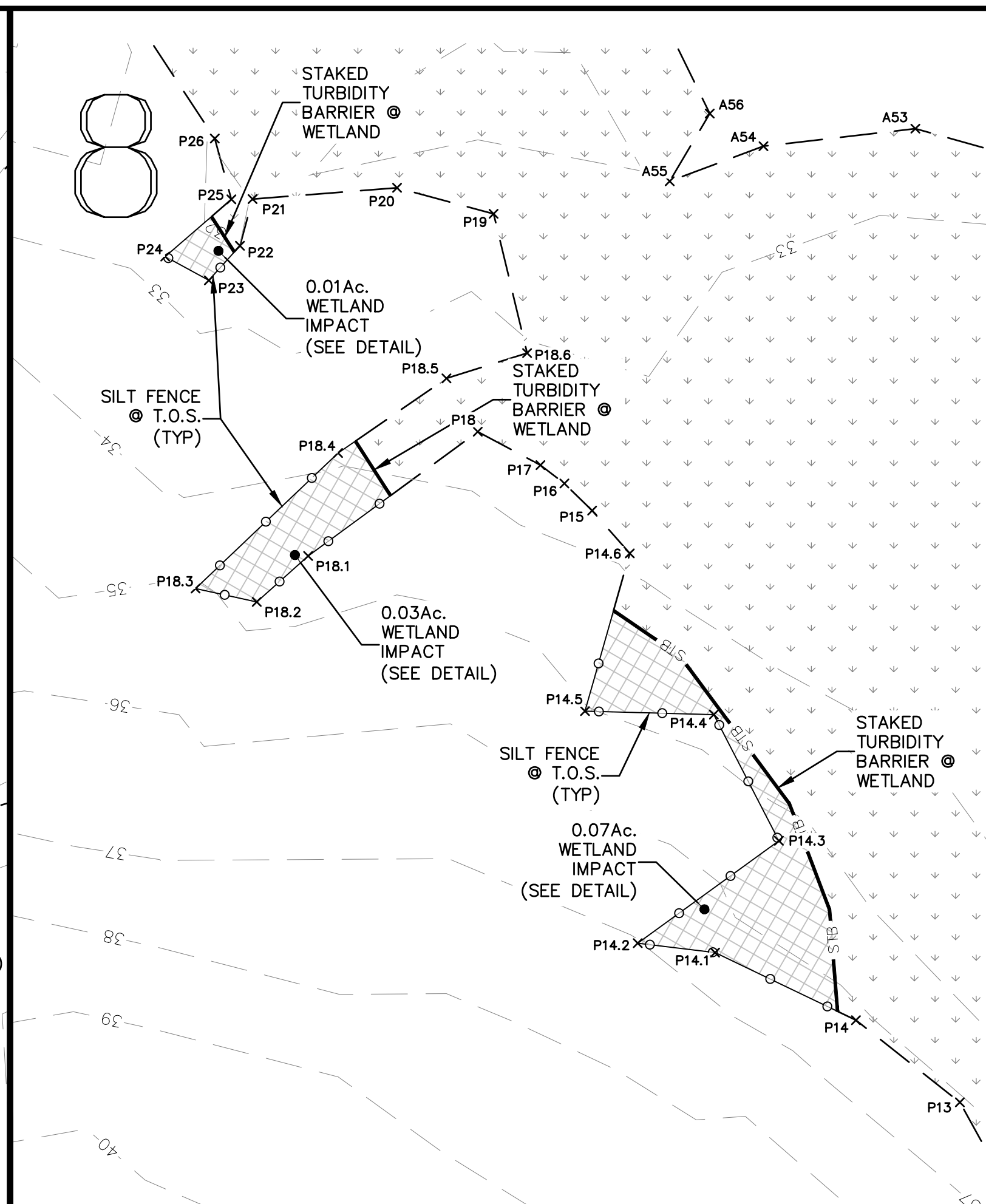
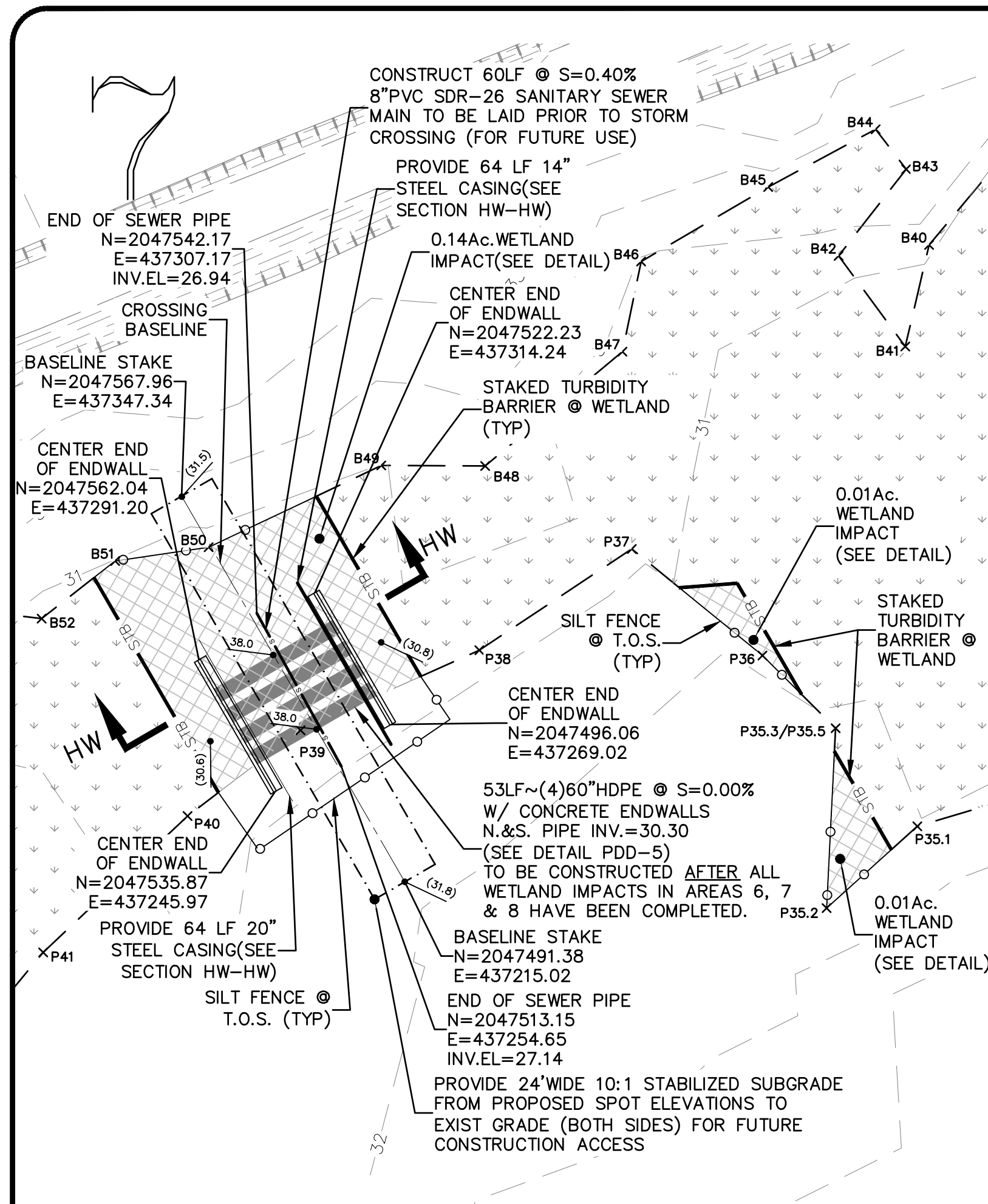


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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 13 of 130  
**WIP-1**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



GRAPHIC SCALE  
( IN FEET )  
1 inch = 40 ft

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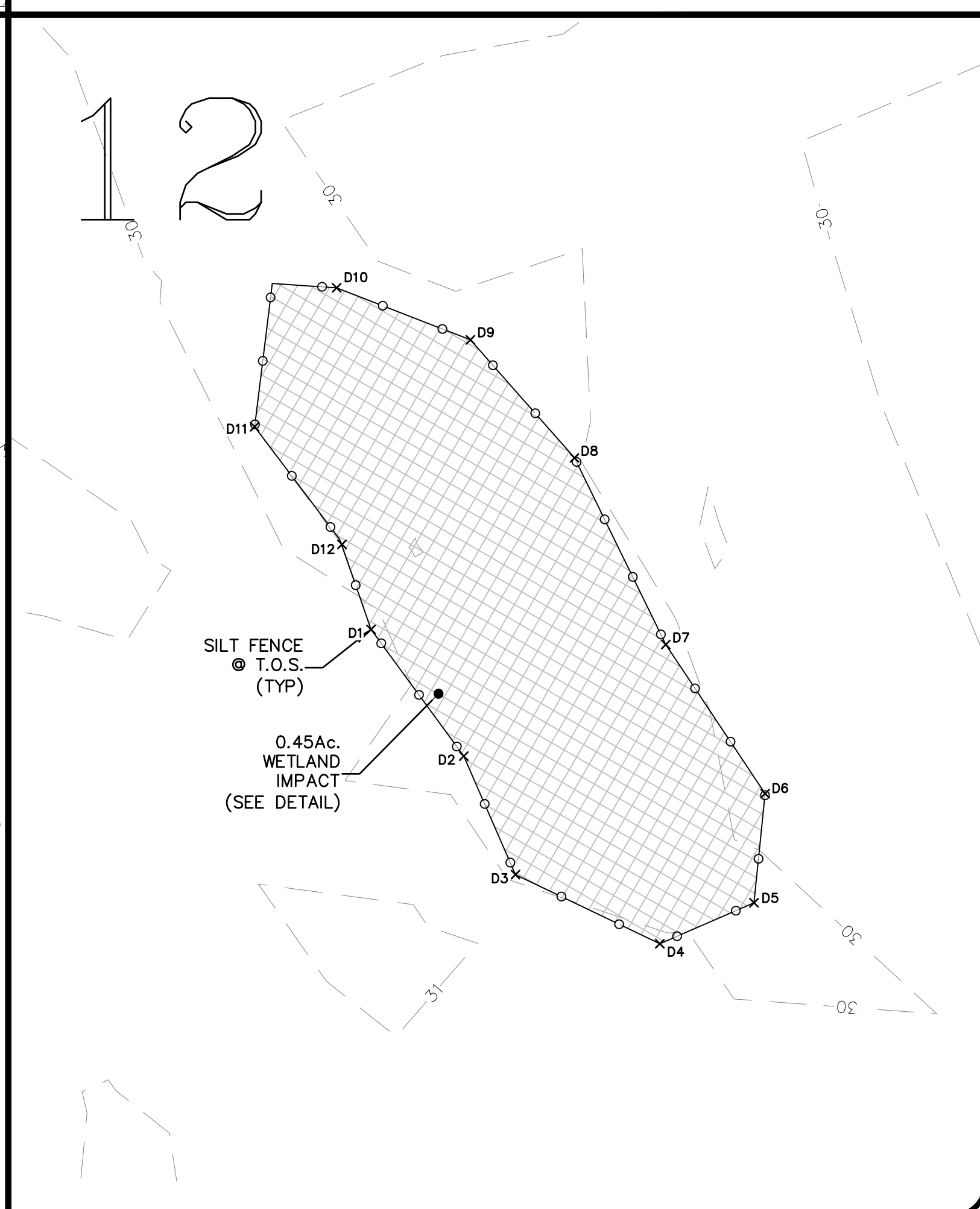
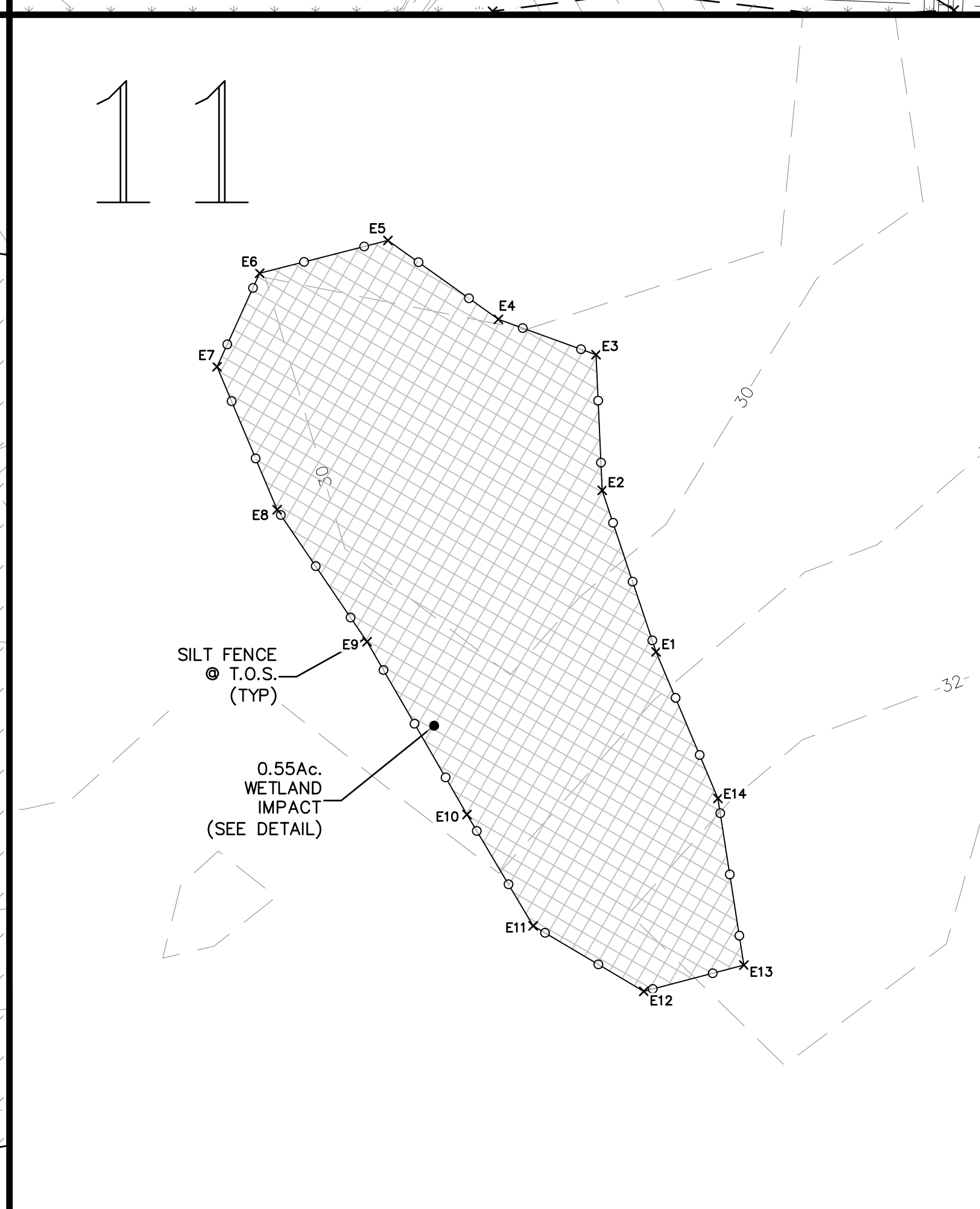
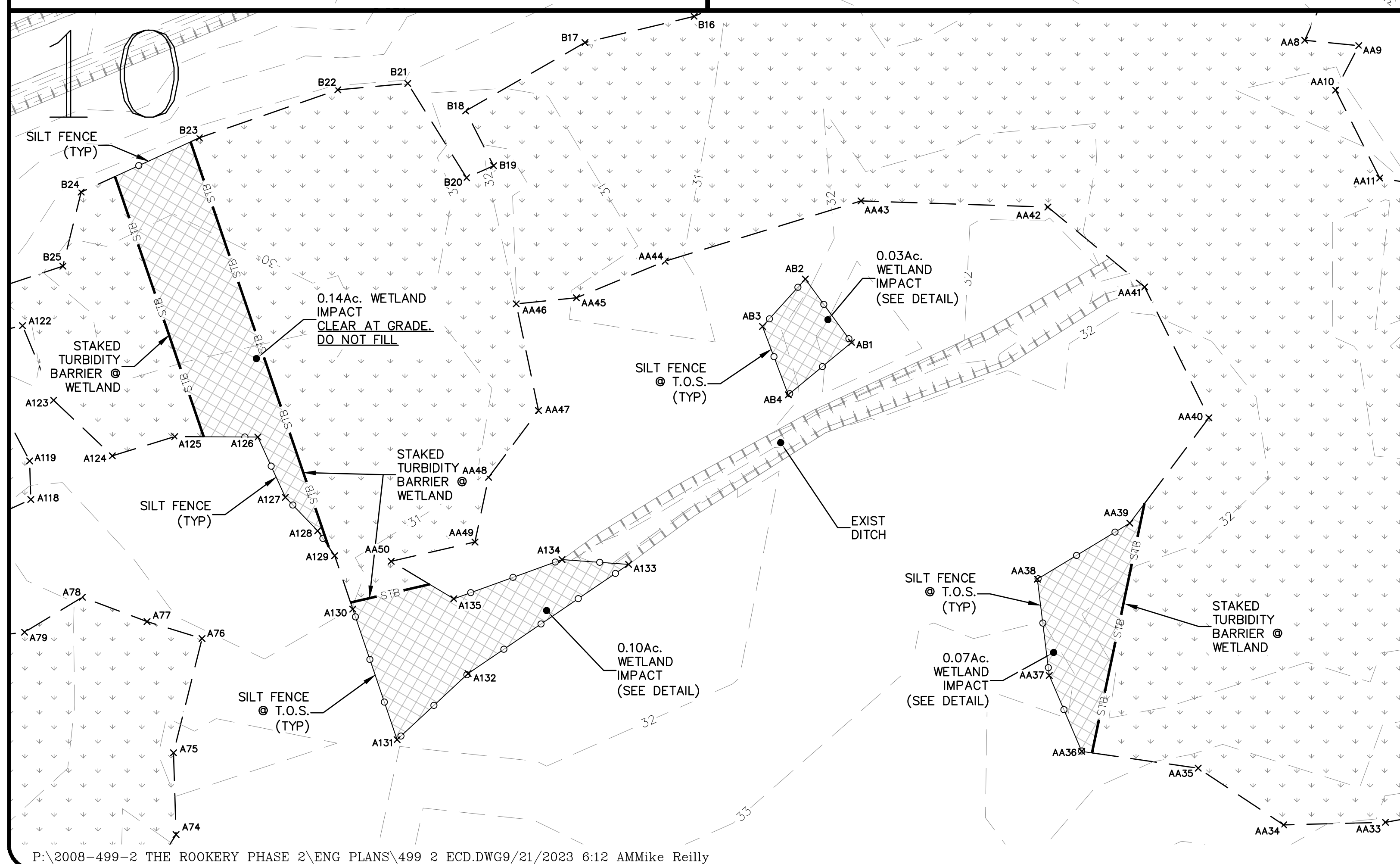
**LEGEND**

- [Symbol] = WETLANDS (FLAGGED)
- [Symbol] = WETLANDS (AERIAL INTERPRETATION)
- [Symbol] = WETLAND IMPACTS

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**FUTURE AREA WETLAND IMPACT TYPICAL SECTION**  
N.T.S.



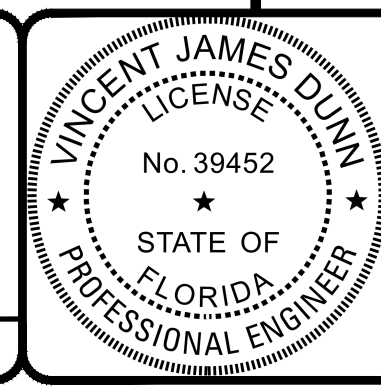
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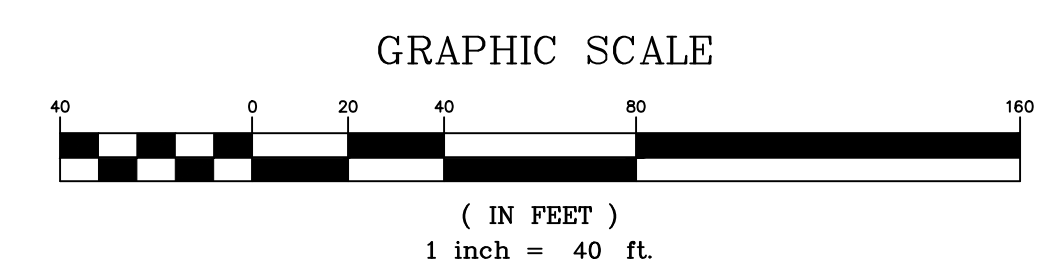
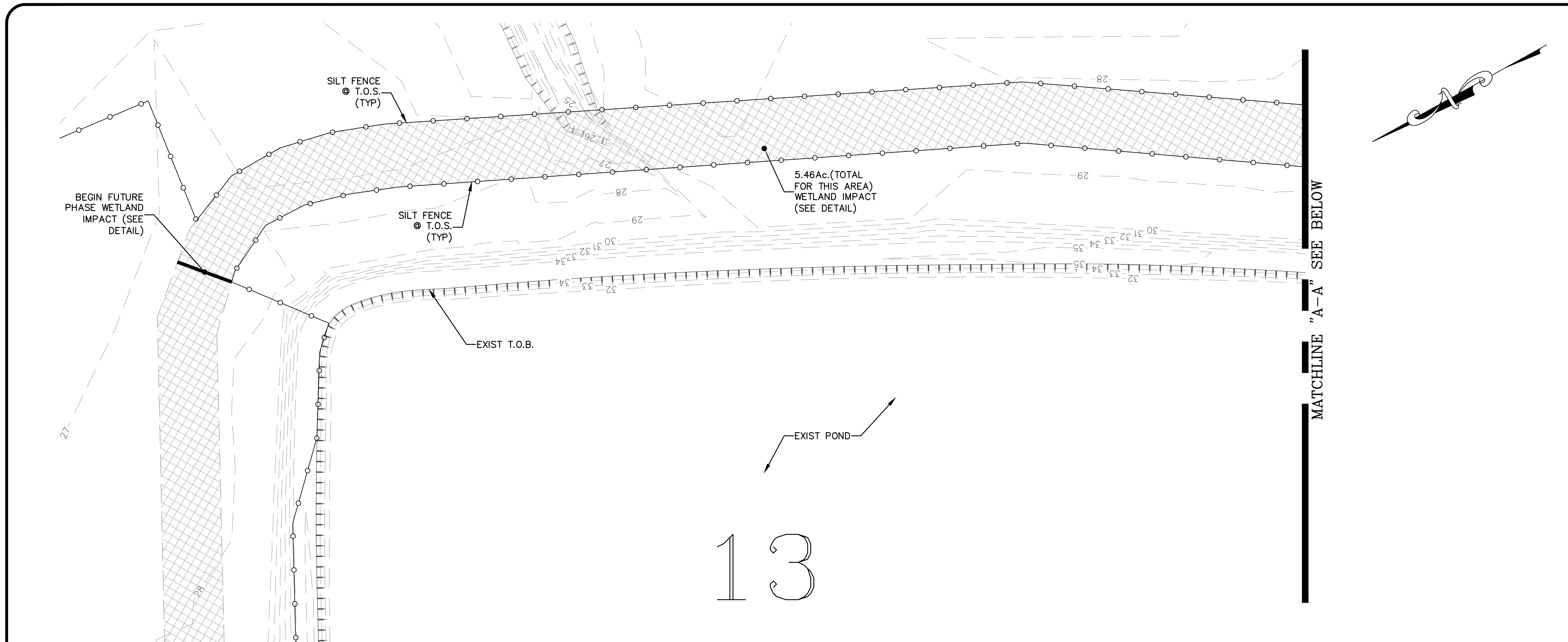
**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
CLAY COUNTY, FLORIDA  
**WETLAND IMPACT PLAN**



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DAVID M. TAYLOR ENGINEER NO. 44184  
GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 14 of 130  
**WIP-2**  
DWG. NO.



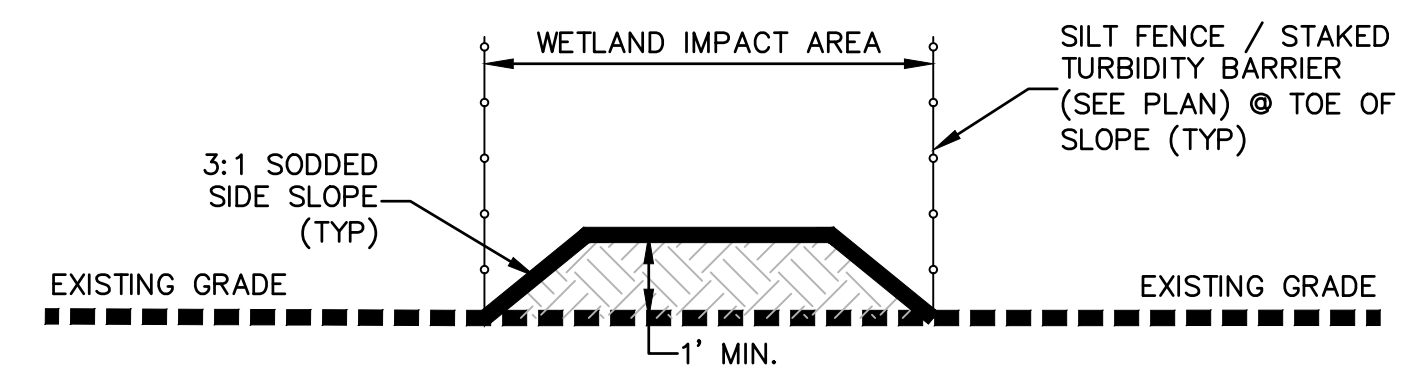
- LEGEND**
- = WETLANDS (FLAGGED)
  - = WETLANDS (AERIAL INTERPRETATION)
  - = WETLAND IMPACTS

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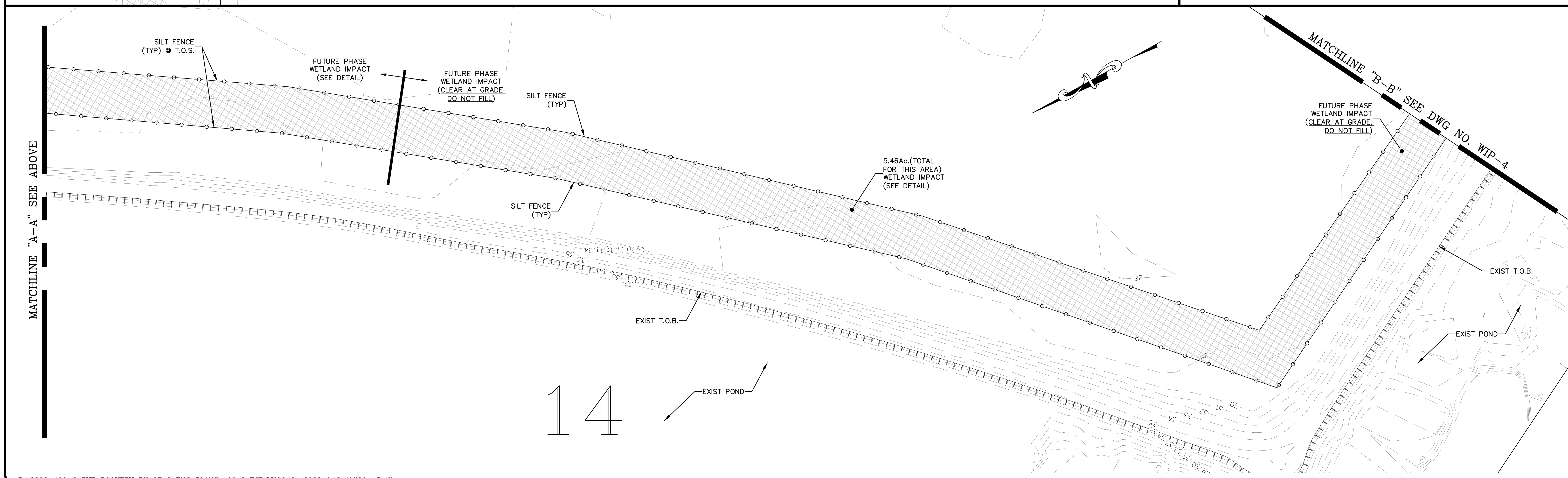
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N.T.S.



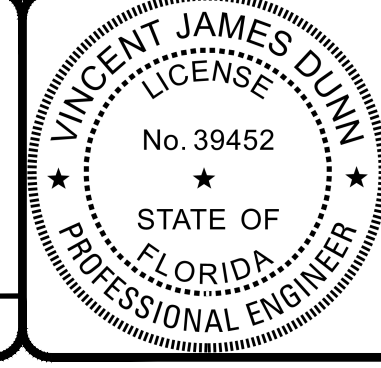
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NO.	DATE

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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
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 CLAY COUNTY, FLORIDA  
**WETLAND IMPACT PLAN**



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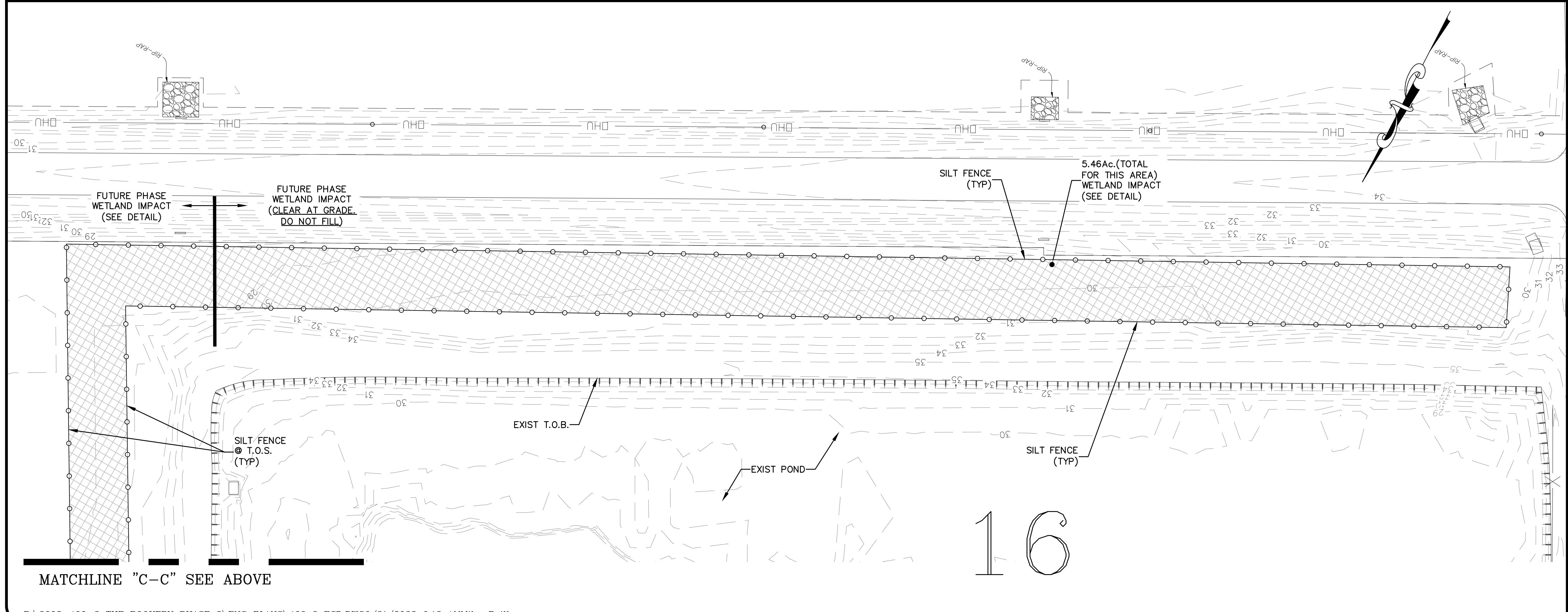
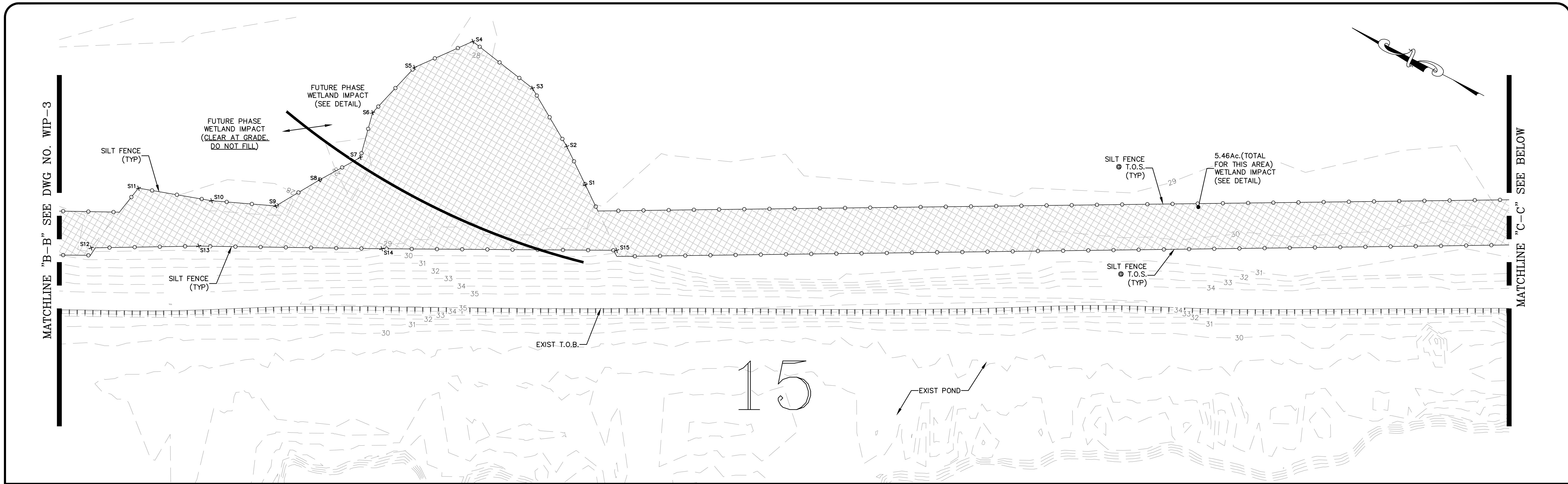
VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 15 of 130

**WIP-3**

DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



GRAPHIC SCALE  
( IN FEET )  
1 inch = 40 ft.

LEGEND

- [Cross-hatched box] = WETLANDS (FLAGGED)
- [Box with + signs] = WETLANDS (AERIAL INTERPRETATION)
- [Diagonal hatched box] = WETLAND IMPACTS

Always call 811 two full business days before you dig

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DEMOLITION NOTES:

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3:1 SODDED SIDE SLOPE (TYP)

1' MIN.

EXISTING GRADE

EXISTING GRADE

WETLAND IMPACT AREA

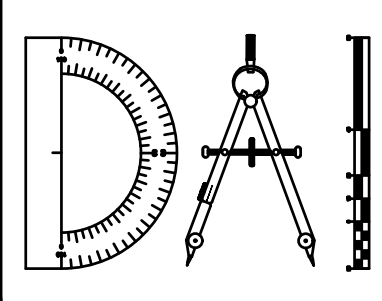
SILT FENCE / STAKED TURBIDITY BARRIER (SEE PLAN) @ TOE OF SLOPE (TYP)

FUTURE AREA WETLAND IMPACT TYPICAL SECTION  
N.T.S.

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2 ECD.DWG9/21/2023 6:13 AMMike Reilly

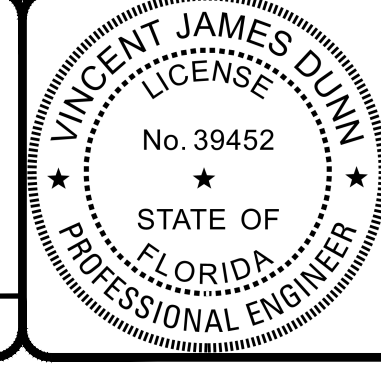
REVISIONS		
NO.	DATE	DESCRIPTION

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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
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 CLAY COUNTY, FLORIDA  
**WETLAND IMPACT PLAN**



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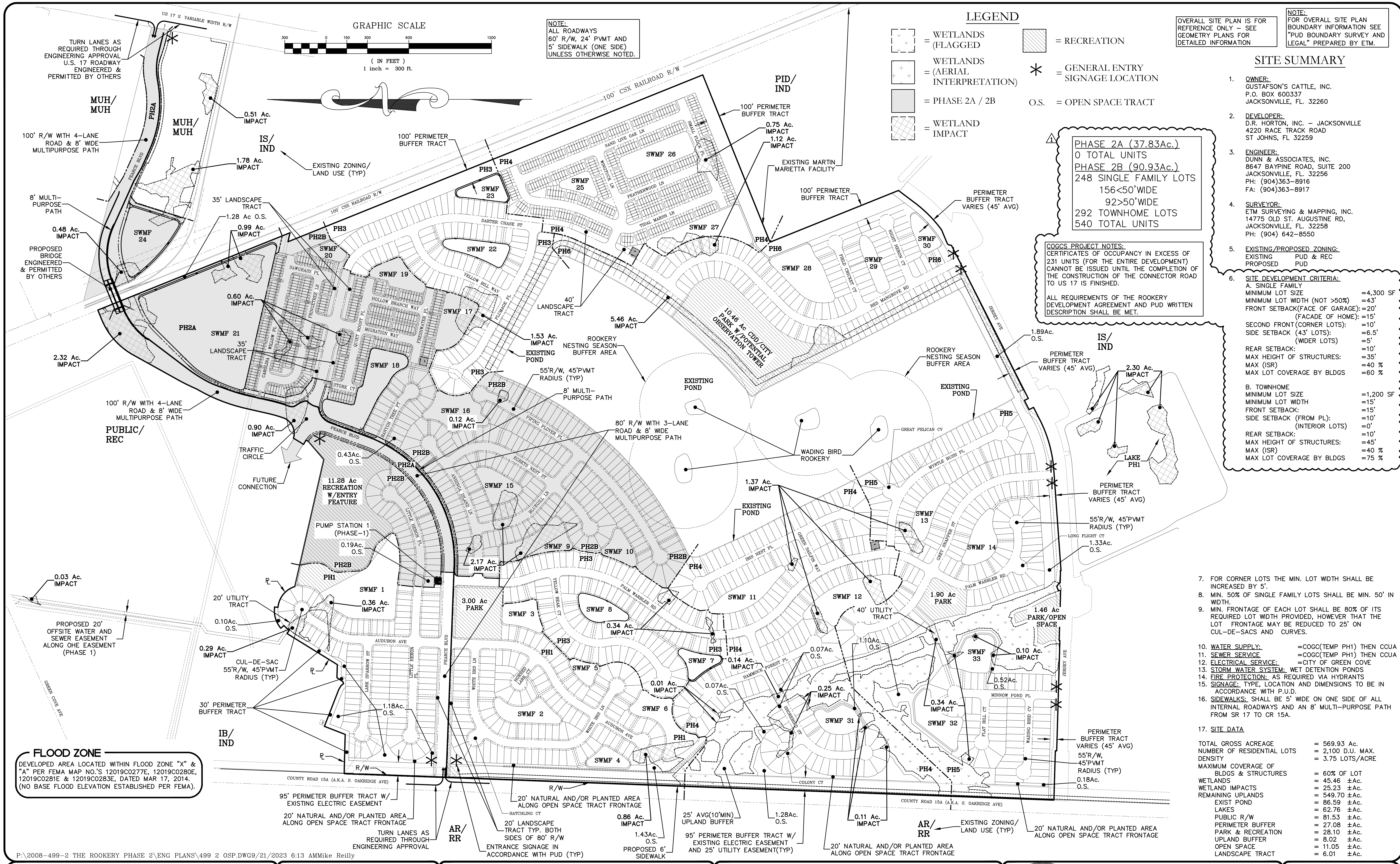
VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEBERG ENGINEER NO. 81412

Sheet No. 16 of 130

**WIP-4**

DWG. NO.





OVERALL SITE PLAN IS FOR REFERENCE ONLY - SEE GEOMETRY PLANS FOR DETAILED INFORMATION

NOTE: FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

**SITE SUMMARY**

- OWNER:**  
GUSTAFSON'S CATTLE, INC.  
P.O. BOX 600337  
JACKSONVILLE, FL. 32260
- DEVELOPER:**  
D.R. HORTON, INC. - JACKSONVILLE  
4220 RACE TRACK ROAD  
ST. JOHNS, FL. 32259
- ENGINEER:**  
DUNN & ASSOCIATES, INC.  
8647 BAYPINE ROAD, SUITE 200  
JACKSONVILLE, FL. 32256  
PH: (904)363-8916  
FA: (904)363-8917
- SURVEYOR:**  
ETM SURVEYING & MAPPING, INC.  
14775 OLD ST. AUGUSTINE RD.  
JACKSONVILLE, FL. 32258  
PH: (904) 642-8550
- EXISTING/PROPOSED ZONING:**  
EXISTING PUD & REC  
PROPOSED PUD
- SITE DEVELOPMENT CRITERIA:**  
A. SINGLE FAMILY  
MINIMUM LOT SIZE = 4,300 SF  
MINIMUM LOT WIDTH (NOT >50%) = 43'  
FRONT SETBACK (FACE OF GARAGE) = 20'  
SIDE SETBACK (FACE OF HOME) = 15'  
REAR SETBACK: (WIDER LOTS) = 5'  
REAR SETBACK: (INTERIOR LOTS) = 10'  
MAX HEIGHT OF STRUCTURES: = 35'  
MAX (ISR) = 40%  
MAX LOT COVERAGE BY BLDGS = 60%  
B. TOWNHOME  
MINIMUM LOT SIZE = 1,200 SF  
MINIMUM LOT WIDTH = 15'  
FRONT SETBACK: = 15'  
SIDE SETBACK (FROM PL) = 10'  
SIDE SETBACK (INTERIOR LOTS) = 0'  
REAR SETBACK: = 10'  
MAX HEIGHT OF STRUCTURES: = 45'  
MAX (ISR) = 40%  
MAX LOT COVERAGE BY BLDGS = 75%

**PHASE 2A (37.83Ac.)**  
0 TOTAL UNITS  
**PHASE 2B (90.93Ac.)**  
248 SINGLE FAMILY LOTS  
156 < 50' WIDE  
92 > 50' WIDE  
292 TOWNHOME LOTS  
540 TOTAL UNITS

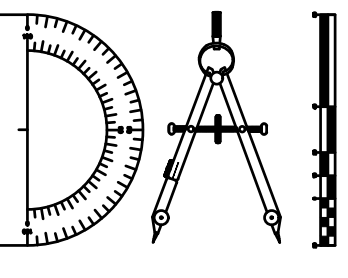
**COGCS PROJECT NOTES:**  
CERTIFICATES OF OCCUPANCY IN EXCESS OF 231 UNITS (FOR THE ENTIRE DEVELOPMENT) CANNOT BE ISSUED UNTIL THE COMPLETION OF THE CONSTRUCTION OF THE CONNECTOR ROAD TO US 17 IS FINISHED.  
ALL REQUIREMENTS OF THE ROOKERY DEVELOPMENT AGREEMENT AND PUD WRITTEN DESCRIPTION SHALL BE MET.

- FOR CORNER LOTS THE MIN. LOT WIDTH SHALL BE INCREASED BY 5'.
- MIN. 50% OF SINGLE FAMILY LOTS SHALL BE MIN. 50' IN WIDTH.
- MIN. FRONTAGE OF EACH LOT SHALL BE 80% OF ITS REQUIRED LOT WIDTH PROVIDED, HOWEVER THAT THE LOT FRONTAGE MAY BE REDUCED TO 25' ON CUL-DE-SACS AND CURVES.
- WATER SUPPLY:** = COGC (TEMP PH1) THEN CCUA
- SEWER SERVICE:** = COGC (TEMP PH1) THEN CCUA
- ELECTRICAL SERVICE:** = CITY OF GREEN COVE
- STORM WATER SYSTEM:** WET DETENTION PONDS
- FIRE PROTECTION:** AS REQUIRED VIA HYDRANTS
- SIGNAGE:** TYPE, LOCATION AND DIMENSIONS TO BE IN ACCORDANCE WITH P.U.D.
- SIDEWALKS:** SHALL BE 5' WIDE ON ONE SIDE OF ALL INTERNAL ROADWAYS AND AN 8' MULTI-PURPOSE PATH FROM SR 17 TO CR 15A.
- SITE DATA**  
TOTAL GROSS ACREAGE = 569.93 Ac.  
NUMBER OF RESIDENTIAL LOTS = 2,100 D.U. MAX.  
DENSITY = 3.75 LOTS/ACRE  
MAXIMUM COVERAGE OF BLDGS & STRUCTURES = 60% OF LOT  
WETLANDS = 45.46 ± Ac.  
WETLAND IMPACTS = 25.23 ± Ac.  
REMAINING UPLANDS = 549.70 ± Ac.  
EXIST POND = 86.59 ± Ac.  
LAKES = 62.76 ± Ac.  
PUBLIC R/W = 81.53 ± Ac.  
PERIMETER BUFFER = 27.08 ± Ac.  
PARK & RECREATION = 28.10 ± Ac.  
UPLAND BUFFER = 8.02 ± Ac.  
OPEN SPACE = 11.05 ± Ac.  
LANDSCAPE TRACT = 6.01 ± Ac.

**FLOOD ZONE**  
DEVELOPED AREA LOCATED WITHIN FLOOD ZONE "X" & "A" PER FEMA MAP NO.'S 12019C0277E, 12019C0280E, 12019C0281E & 12019C0283E, DATED MAR 17, 2014. (NO BASE FLOOD ELEVATION ESTABLISHED PER FEMA).

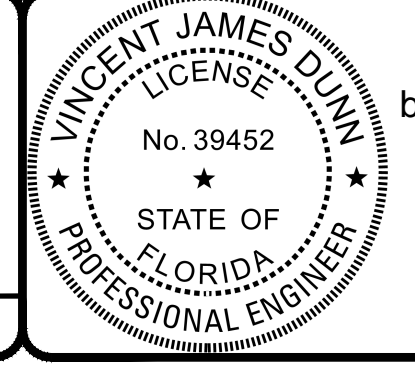
REVISIONS		
NO.	DATE	DESCRIPTION
1	9-5-23	REVISED PER COGCS COMMENTS

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DRAWN BY: MR/NS/SM/SS  
CHECKED BY: VJD  
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
FOR:  
D.R. HORTON INC. - JACKSONVILLE  
CLAY COUNTY, FLORIDA  
OVERALL SITE PLAN



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ENGINEER NO. 39452



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ENGINEER NO. 44184

GLEN R. WIEGER  
ENGINEER NO. 81412

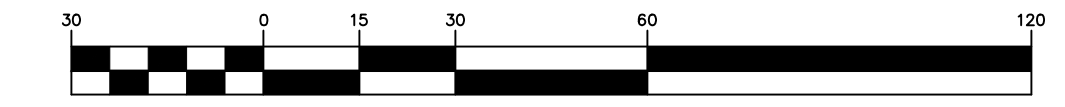
Sheet No. 17 of 130  
**OSP-1**  
DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

**LEGEND**

-  = COMMON AREA
-  = SIDEWALK (SEE NOTE)
- C&G = CURB & GUTTER
- QL = QUEUE LENGTH
- BTSD = BRAKE TO STOP DISTANCE
- CD = CLEARANCE DISTANCE
- TL = TRAVEL LANE
- LTL = LEFT TURN LANE
- RTL = RIGHT TURN LANE

**GRAPHIC SCALE**



( IN FEET )  
1 inch = 30 ft.

**NOTES:**

**SIDEWALK:** COMMON AREA SIDEWALK AND 8' MULTIPURPOSE PATH TO BE BUILT BY DEVELOPER (CONTRACTOR).

**BOUNDARY:** FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

**PAVEMENT MARKING NOTES:**

ALL LANE LINE, EDGE LINE AND SKIP LINE PLACEMENT AND DIMENSIONAL SPECIFICATIONS SHALL ADHERE TO THE LATEST FDOT STANDARD PLANS INDEX 711-001

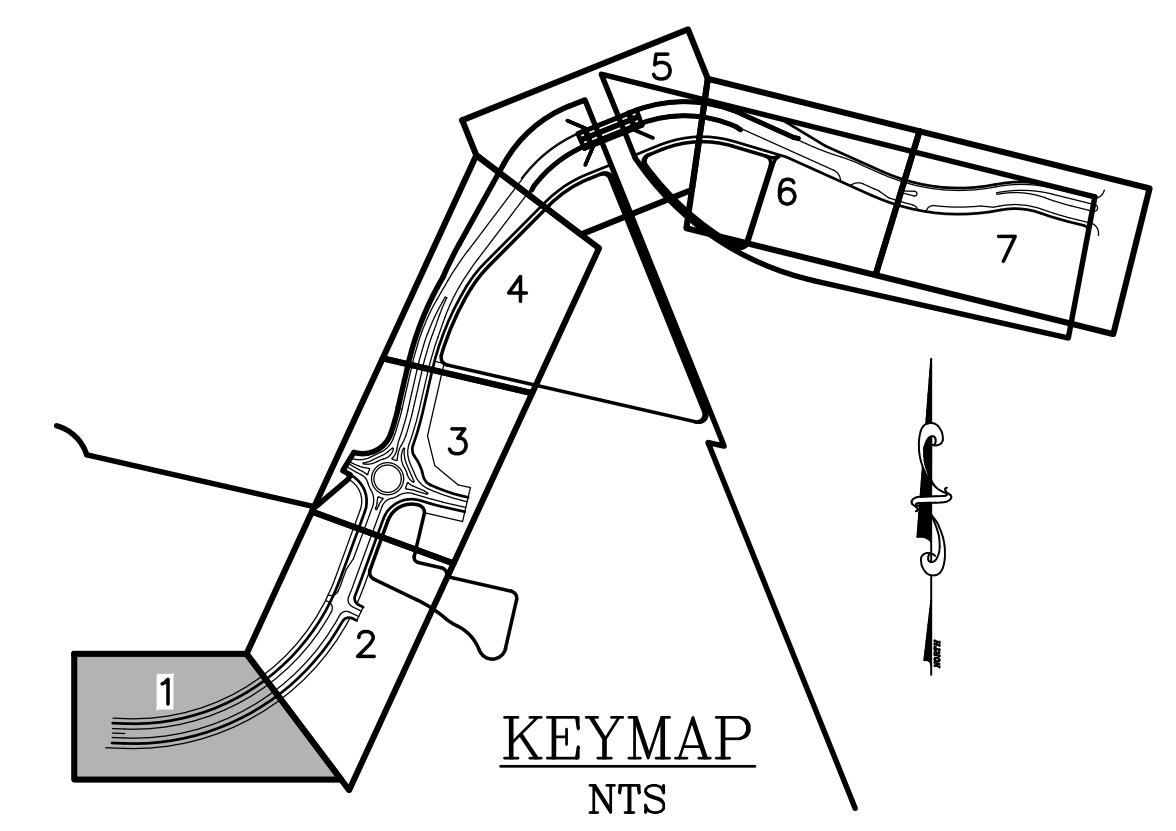
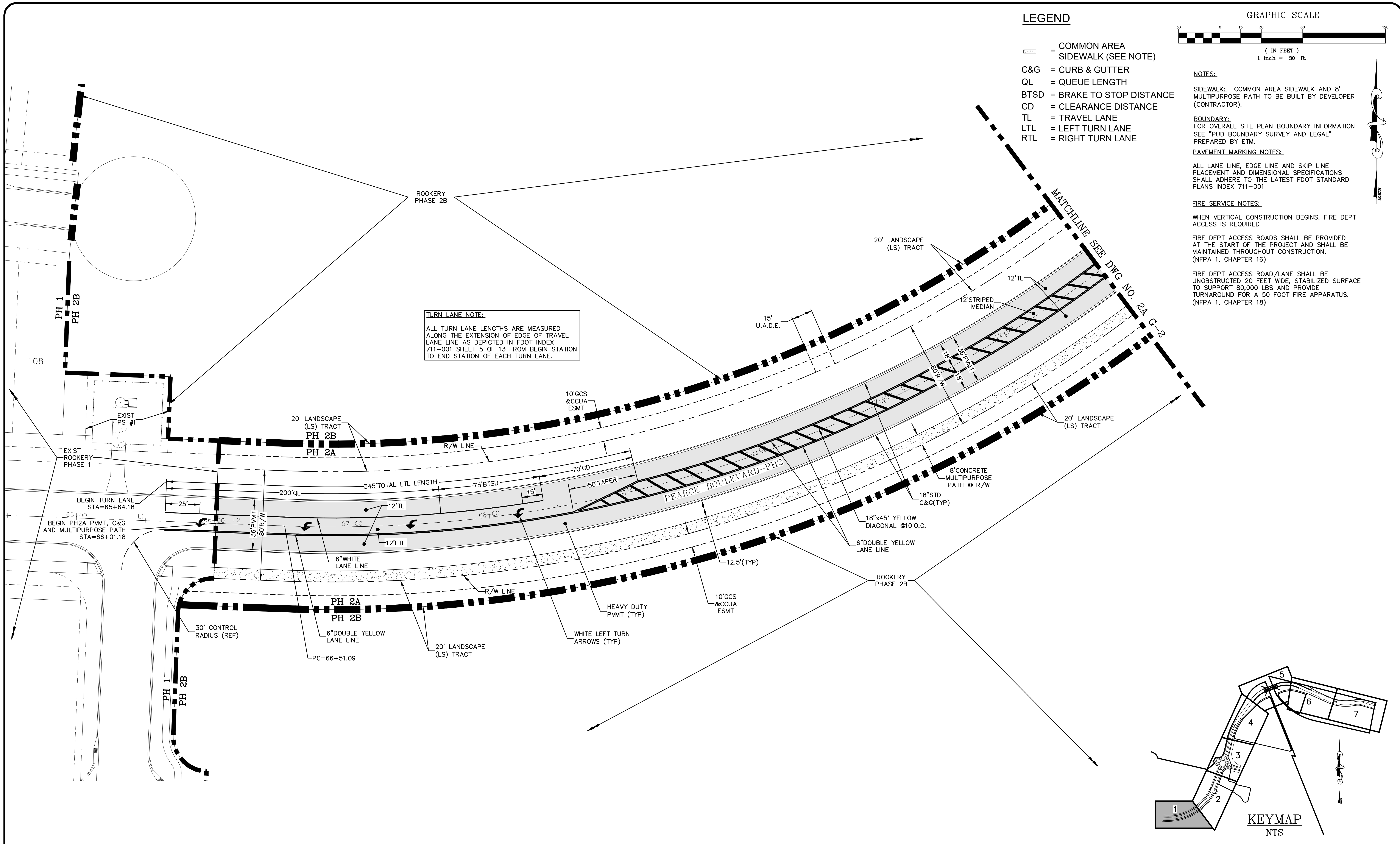
**FIRE SERVICE NOTES:**

WHEN VERTICAL CONSTRUCTION BEGINS, FIRE DEPT ACCESS IS REQUIRED

FIRE DEPT ACCESS ROADS SHALL BE PROVIDED AT THE START OF THE PROJECT AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. (NFPA 1, CHAPTER 16)

FIRE DEPT ACCESS ROAD/LANE SHALL BE UNOBSTRUCTED 20 FEET WIDE, STABILIZED SURFACE TO SUPPORT 80,000 LBS AND PROVIDE TURNAROUND FOR A 50 FOOT FIRE APPARATUS. (NFPA 1, CHAPTER 16)

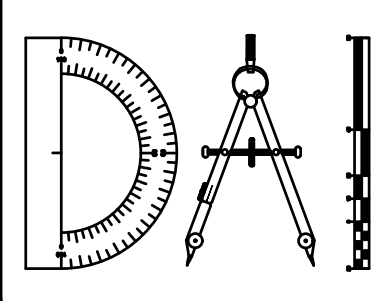
**TURN LANE NOTE:**  
ALL TURN LANE LENGTHS ARE MEASURED ALONG THE EXTENSION OF EDGE OF TRAVEL LANE LINE AS DEPICTED IN FDOT INDEX 711-001 SHEET 5 OF 13 FROM BEGIN STATION TO END STATION OF EACH TURN LANE.



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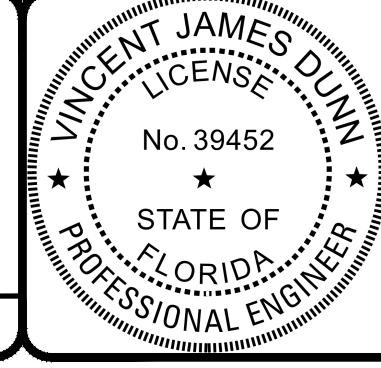
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 CLAY COUNTY, FLORIDA  
 2A GEOMETRY PLAN - PEARCE BLVD



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 ENGINEER NO. 44184

GLEN R. WIEGER  
 ENGINEER NO. 81412

Sheet No. 18 of 130  
**2A G-1**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



( IN FEET )  
1 inch = 30 ft.

**LEGEND**

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- C&G = CURB & GUTTER
- QL = QUEUE LENGTH
- BTSD = BRAKE TO STOP DISTANCE
- CD = CLEARANCE DISTANCE
- TL = TRAVEL LANE
- LTL = LEFT TURN LANE
- RTL = RIGHT TURN LANE

**NOTES:**

**SIDEWALK:** COMMON AREA SIDEWALK AND 8' MULTIPURPOSE PATH TO BE BUILT BY DEVELOPER (CONTRACTOR).

**BOUNDARY:** FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

**PAVEMENT MARKING NOTES:**

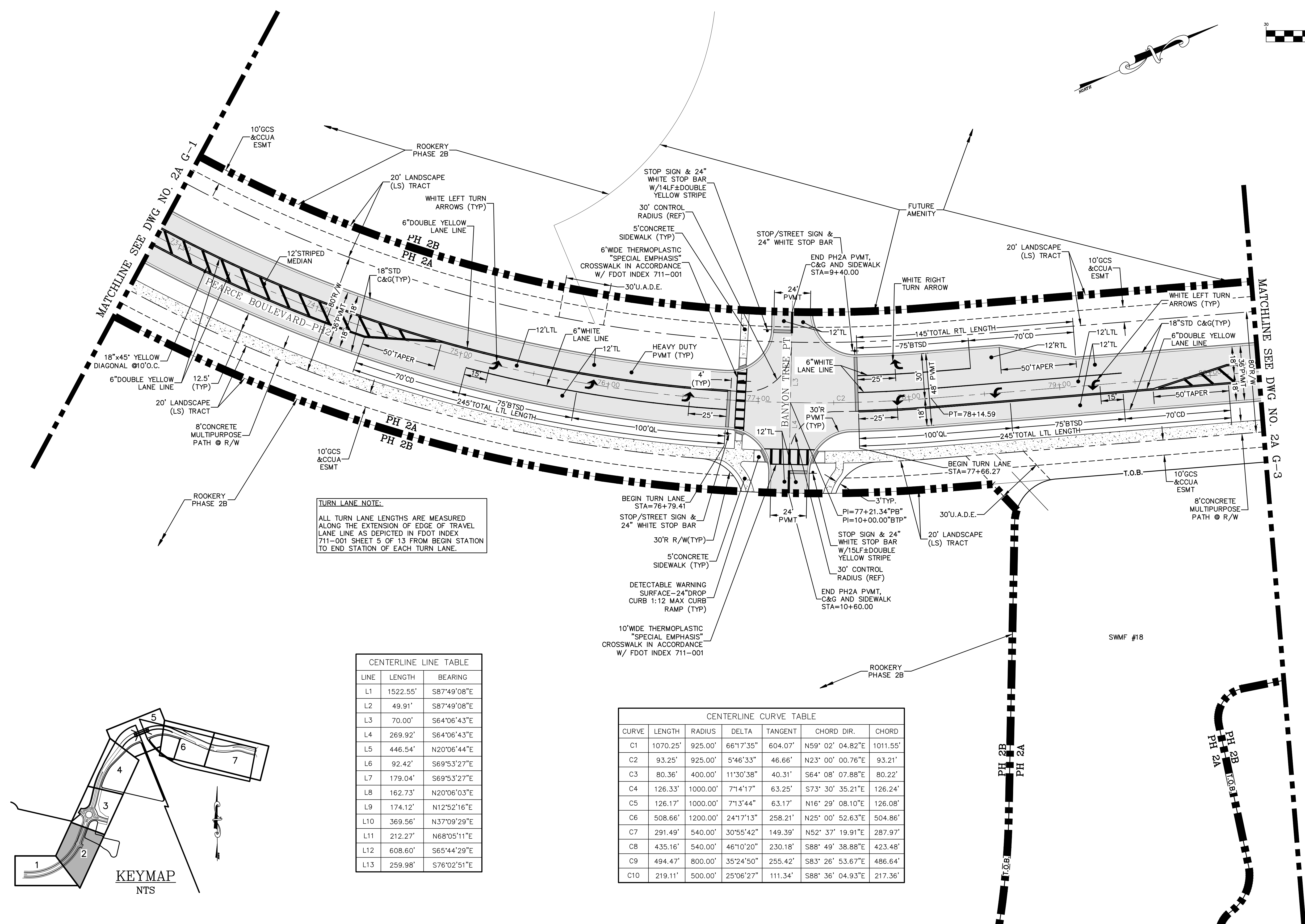
ALL LANE LINE, EDGE LINE AND SKIP LINE PLACEMENT AND DIMENSIONAL SPECIFICATIONS SHALL ADHERE TO THE LATEST FDOT STANDARD PLANS INDEX 711-001

**FIRE SERVICE NOTES:**

WHEN VERTICAL CONSTRUCTION BEGINS, FIRE DEPT ACCESS IS REQUIRED

FIRE DEPT ACCESS ROADS SHALL BE PROVIDED AT THE START OF THE PROJECT AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. (NFPA 1, CHAPTER 16)

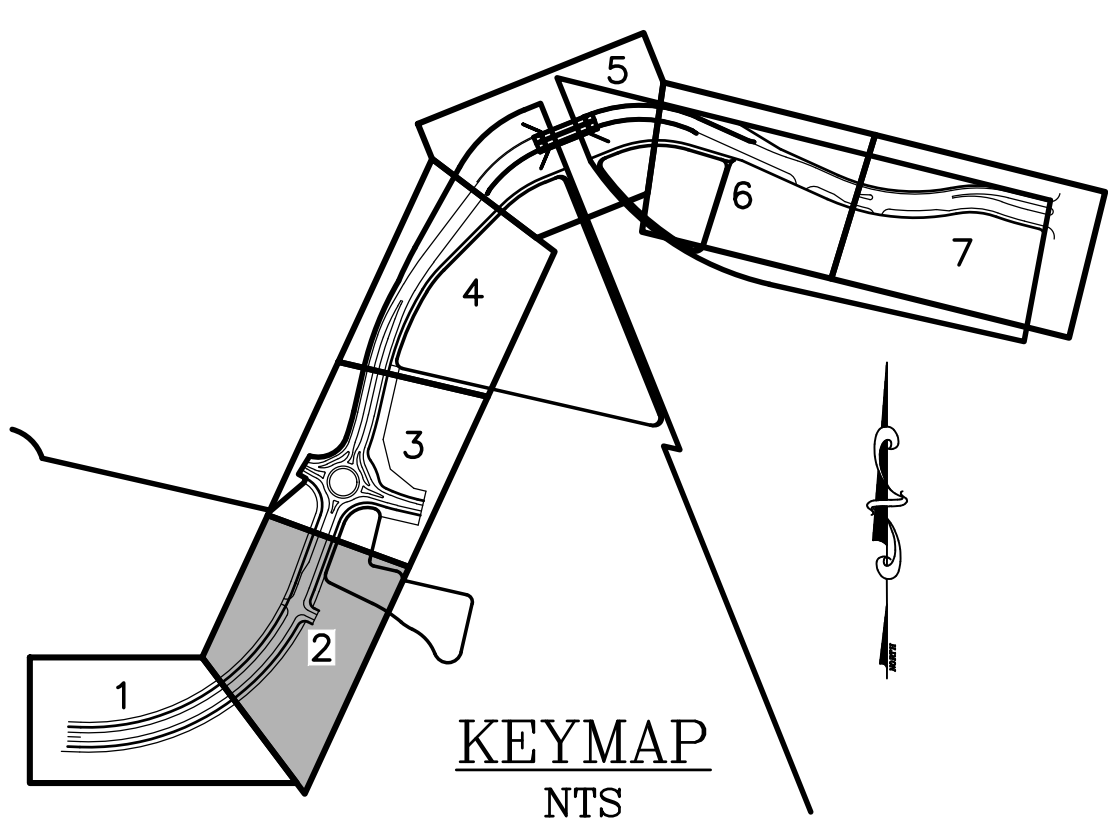
FIRE DEPT ACCESS ROAD/LANE SHALL BE UNOBSTRUCTED 20 FEET WIDE, STABILIZED SURFACE TO SUPPORT 80,000 LBS AND PROVIDE TURNAROUND FOR A 50 FOOT FIRE APPARATUS. (NFPA 1, CHAPTER 18)



**TURN LANE NOTE:**  
ALL TURN LANE LENGTHS ARE MEASURED ALONG THE EXTENSION OF EDGE OF TRAVEL LANE LINE AS DEPICTED IN FDOT INDEX 711-001 SHEET 5 OF 13 FROM BEGIN STATION TO END STATION OF EACH TURN LANE.

LINE	LENGTH	BEARING
L1	1522.55'	S87°49'08"E
L2	49.91'	S87°49'08"E
L3	70.00'	S64°06'43"E
L4	269.92'	S64°06'43"E
L5	446.54'	N20°06'44"E
L6	92.42'	S69°53'27"E
L7	179.04'	S69°53'27"E
L8	162.73'	N20°06'03"E
L9	174.12'	N12°52'16"E
L10	369.56'	N37°09'29"E
L11	212.27'	N68°05'11"E
L12	608.60'	S65°44'29"E
L13	259.98'	S76°02'51"E

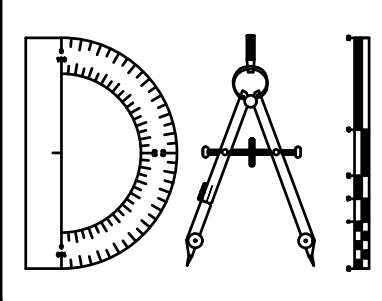
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD DIR.	CHORD
C1	1070.25'	925.00'	66°17'35"	604.07'	N59° 02' 04.82"E	1011.55'
C2	93.25'	925.00'	5°46'33"	46.66'	N23° 00' 00.76"E	93.21'
C3	80.36'	400.00'	11°30'38"	40.31'	S64° 08' 07.88"E	80.22'
C4	126.33'	1000.00'	7°14'17"	63.25'	S73° 30' 35.21"E	126.24'
C5	126.17'	1000.00'	7°13'44"	63.17'	N16° 29' 08.10"E	126.08'
C6	508.66'	1200.00'	24°17'13"	258.21'	N25° 00' 52.63"E	504.86'
C7	291.49'	540.00'	30°55'42"	149.39'	N52° 37' 19.91"E	287.97'
C8	435.16'	540.00'	46°10'20"	230.18'	S88° 49' 38.88"E	423.48'
C9	494.47'	800.00'	35°24'50"	255.42'	S83° 26' 53.67"E	486.64'
C10	219.11'	500.00'	25°06'27"	111.34'	S88° 36' 04.93"E	217.36'



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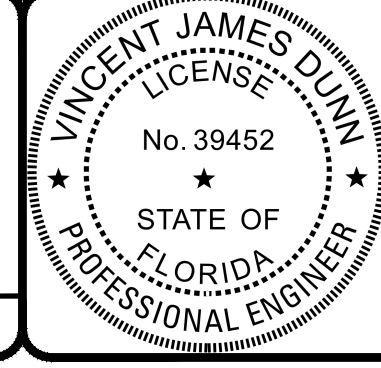
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 30'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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 Phone: (904)363-8916 Fax: (904)363-8917  
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2A GEOMETRY PLAN - PEARCE BLVD



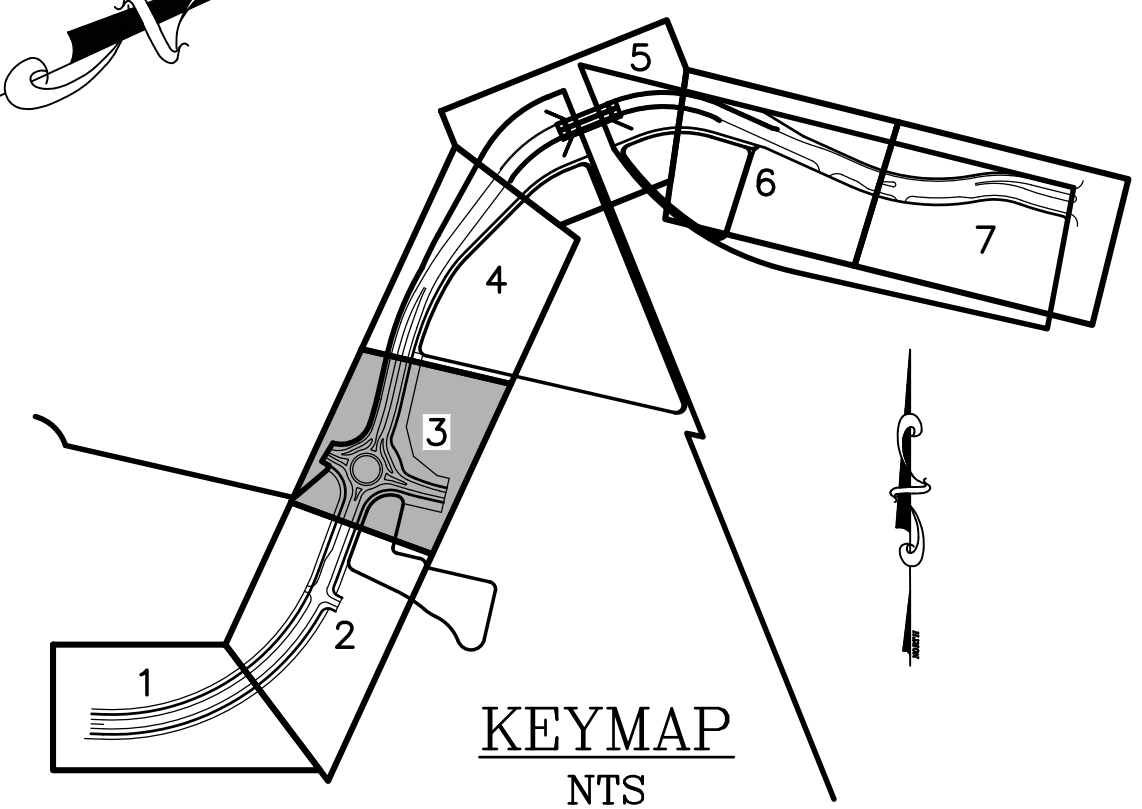
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 VINCENT J. DUNN ENGINEER NO. 99456  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 19 of 130  
**2A G-2**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



( IN FEET )  
1 inch = 30 ft.



LEGEND

- [Symbol] = WETLANDS (FLAGGED)
- [Symbol] = WETLANDS (AERIAL INTERPRETATION)
- [Symbol] = UPLAND BUFFER
- [Symbol] = WETLAND IMPACT
- [Symbol] = COMMON AREA SIDEWALK (SEE NOTE)
- C&G = CURB & GUTTER
- QL = QUEUE LENGTH
- BTSD = BRAKE TO STOP DISTANCE
- CD = CLEARANCE DISTANCE
- TL = TRAVEL LANE
- LTL = LEFT TURN LANE
- RTL = RIGHT TURN LANE

**NOTES:**

SIDEWALK: COMMON AREA SIDEWALK AND 8' MULTIPURPOSE PATH TO BE BUILT BY DEVELOPER (CONTRACTOR).

**BOUNDARY:**  
FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

**PAVEMENT MARKING NOTES:**  
ALL LANE LINE, EDGE LINE, SKIP LINE AND OTHER MARKINGS PLACEMENT AND DIMENSIONAL SPECIFICATIONS SHALL ADHERE TO THE LATEST FDOT STANDARD PLANS INDEX 711-001

**FIRE SERVICE NOTES:**  
WHEN VERTICAL CONSTRUCTION BEGINS, FIRE DEPT ACCESS IS REQUIRED

FIRE DEPT ACCESS ROAD/LANE SHALL BE PROVIDED AT THE START OF THE PROJECT AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. (NFPA 1, CHAPTER 16)

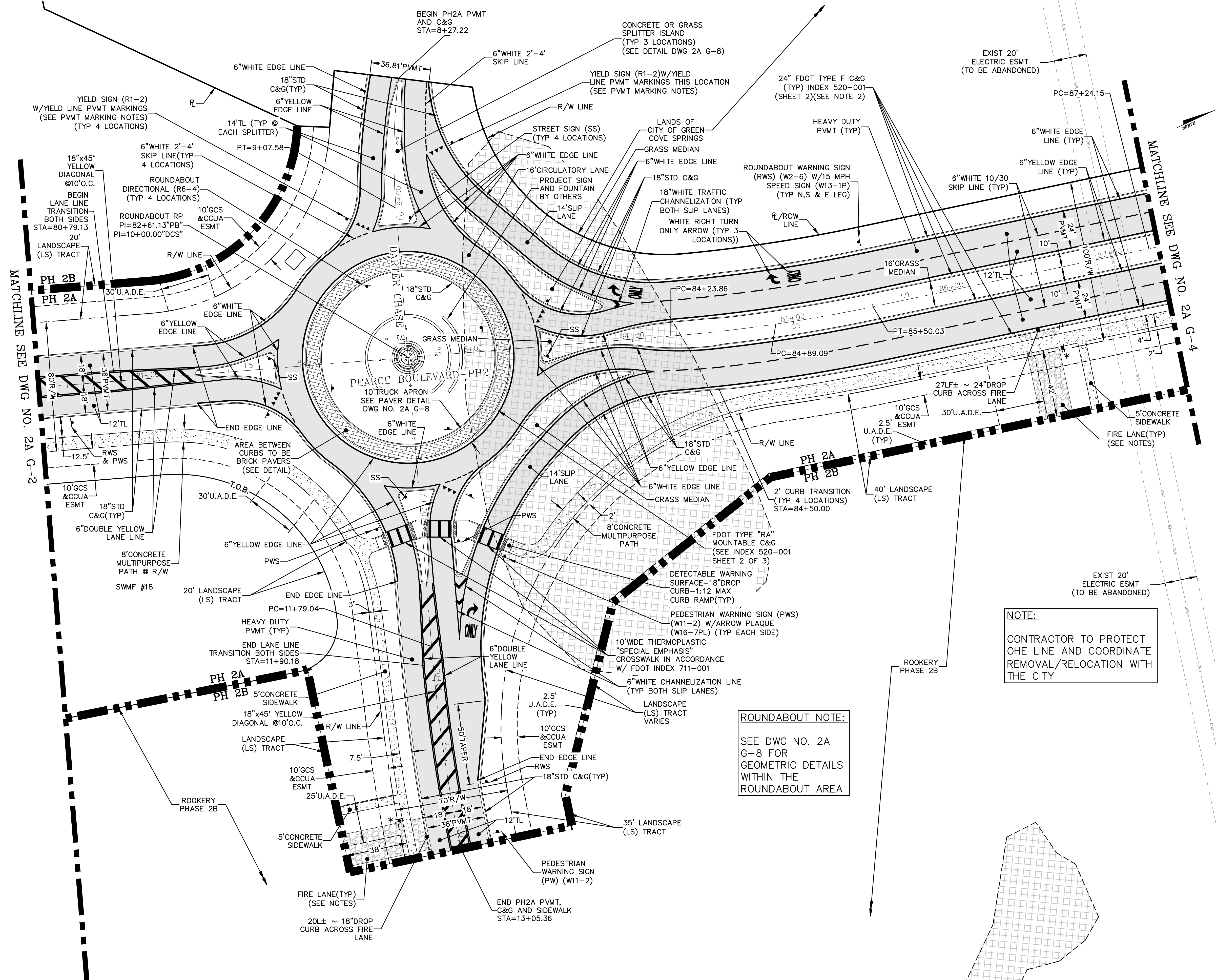
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**FIRE LANE NOTES:**

- \*H = "FIRE LANE NO PARKING" SIGN LOCATION
- FIRE LANE TO BE 20' WIDE @ LENGTH SHOWN.
- SEE DETAILS FOR FIRE LANE SIGN AND STABILIZED FIRE LANE ACCESS SECTION.

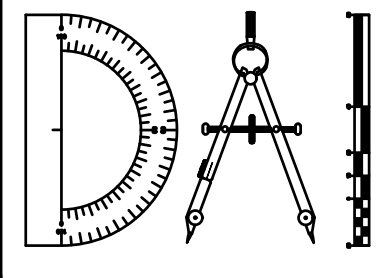
**NOTE:**  
CONTRACTOR TO PROTECT ONE LINE AND COORDINATE REMOVAL/RELOCATION WITH THE CITY

**ROUNDAUTO NOTE:**  
SEE DWG NO. 2A G-8 FOR GEOMETRIC DETAILS WITHIN THE ROUNDAUTO AREA



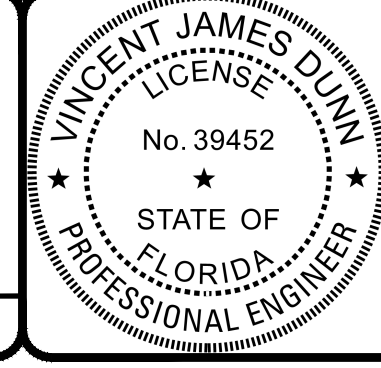
REVISIONS		NO.	DATE	DESCRIPTION	BY:

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 30'  
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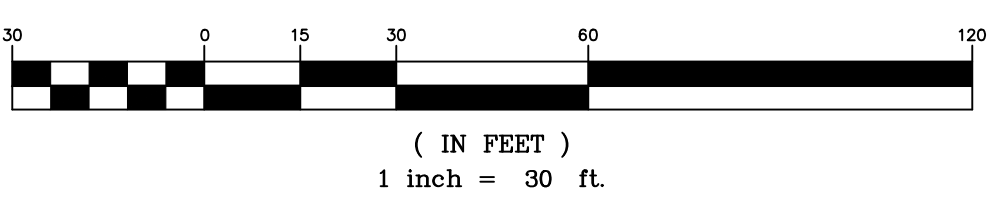
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 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2A GEOMETRY PLAN - PEARCE BLVD



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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

GRAPHIC SCALE



PAVEMENT MARKING NOTES:

ALL LANE LINE, EDGE LINE AND SKIP LINE PLACEMENT AND DIMENSIONAL SPECIFICATIONS SHALL ADHERE TO THE LATEST FDOT STANDARD PLANS INDEX 711-001 EXCEPT AS NOTED BELOW.

PAVEMENT MARKINGS AND LANE WIDTHS FOR THE BRIDGE AND APPROACH RAMPS SHALL BE AS SHOWN IN BRIDGE DESIGN AND CONSTRUCTION PLANS BY "POND & COMPANY" UNDER SEPARATE COVER.

TRANSITIONS BETWEEN FDOT STANDARD SPACING AND BRIDGE DESIGN SPACING SHALL BE AS NOTED IN PLANS.

END GRASS MEDIAN, TYPE F C&G & 24' PVMT  
BEGIN 4'TRAFFIC SEPARATOR & 25.5'PVMT  
STA=90+50.00

END WESTBOUND LANE LOCATION TRANSITION  
STA=90+68.17  
27.50 L

LANDS OF CITY OF GREEN COVE SPRINGS

END 100' R/W WIDTH  
STA=90+92.73

50'LANE WIDTH TRANSITION (25.5' TO 24')  
(SEE PAVEMENT MARKING NOTES)

24" FDOT TYPE F C&G (TYP) INDEX 520-001 (SHEET 2)(SEE NOTE 2)

END PVMT WIDTH TRANSITION  
STA=92+82.81  
26.00 L

6"WHITE EDGE LINE (TYP)(MAINTAIN FDOT STANDARD SPACING FOR OUTSIDE LANE LINE ONLY)

LINE SPACING TO MATCH BRIDGE DESIGN THIS AREA (SEE PAVEMENT MARKING NOTES)

LINE SPACING TO MEET FDOT STANDARDS (SEE PAVEMENT MARKING NOTES)

BEGIN PVMT WIDTH TRANSITION  
PT=92+32.81  
27.50 L

END PVMT WIDTH TRANSITION  
STA=92+82.81  
26.00 L

6"WHITE 10'/30' SKIP LINE (TYP)

LINE SPACING TO MATCH BRIDGE DESIGN THIS AREA (SEE PAVEMENT MARKING NOTES)

BEGIN PVMT WIDTH TRANSITION  
PT=92+32.81  
27.50 R

8'CONCRETE MULTIPURPOSE PATH

6"WHITE 10'/30' SKIP LINE (TYP)

4'WIDE TRAFFIC SEPARATOR TYPE IV OPTION 1 FDOT INDEX 520-020

20' OPEN SPACE TRACT  
PT=11+16.76

6"YELLOW EDGE LINE (TYP)

6"WHITE 10'/30' SKIP LINE (TYP)

4'WIDE TRAFFIC SEPARATOR TYPE IV OPTION 1 FDOT INDEX 520-020

END PVMT WIDTH TRANSITION  
STA=92+82.81  
26.00 R

R/W LINE & CURVE TABLE BASELINE

6"WHITE 10'/30' SKIP LINE (TYP)

4'WIDE TRAFFIC SEPARATOR TYPE IV OPTION 1 FDOT INDEX 520-020

LINE	LENGTH	BEARING
L14	347.69'	N44°48'44"E
L15	102.57'	N68°05'11"E
L16	114.09'	N68°05'11"E
L17	220.43'	S73°24'59"E

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD DIR.	CHORD
C11	116.76'	500.00'	13°22'49"	58.65'	N38° 07' 19.90"E	116.50'
C12	203.10'	500.00'	23°16'27"	102.97'	N56° 26' 57.57"E	201.71'
C13	302.36'	450.00'	38°29'50"	157.13'	N87° 20' 05.94"E	296.70'

SWMF #21

LEGEND

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = UPLAND BUFFER
- = WETLAND IMPACT
- = COMMON AREA SIDEWALK (SEE NOTE)
- C&G = CURB & GUTTER
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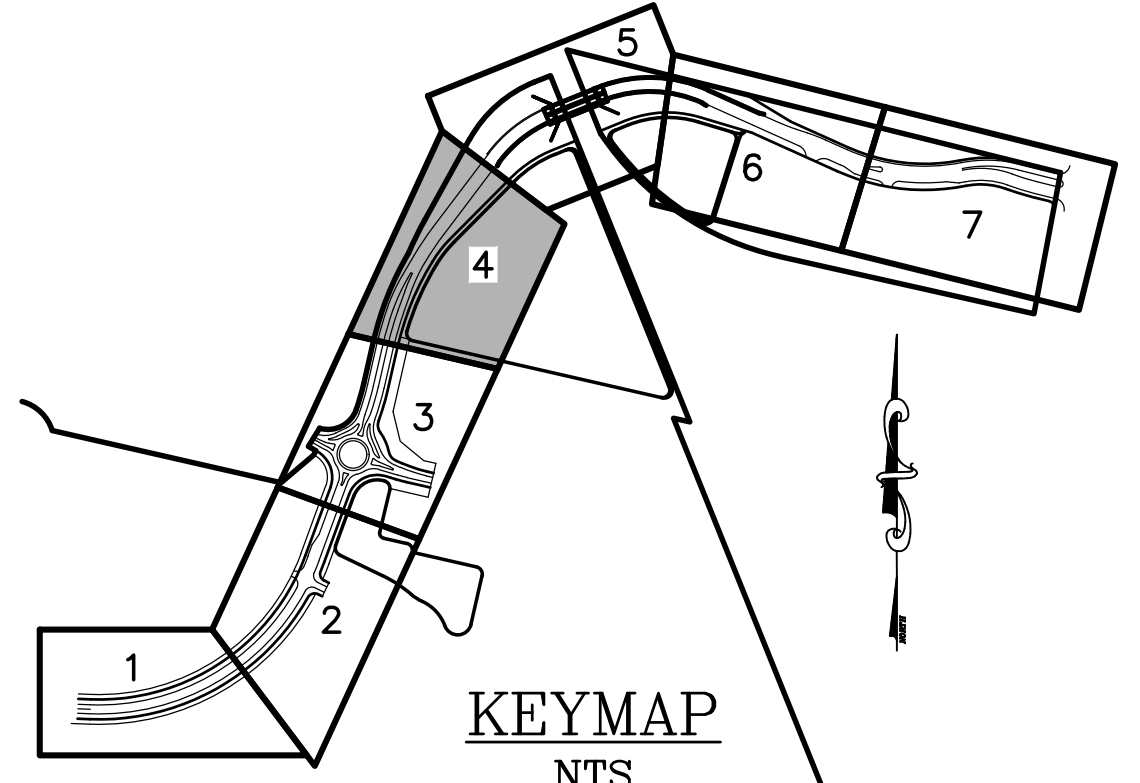
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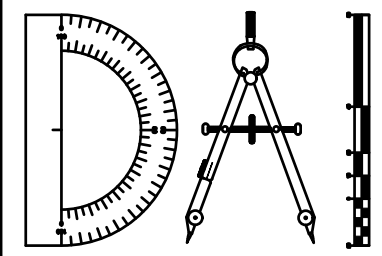


KEYMAP NTS

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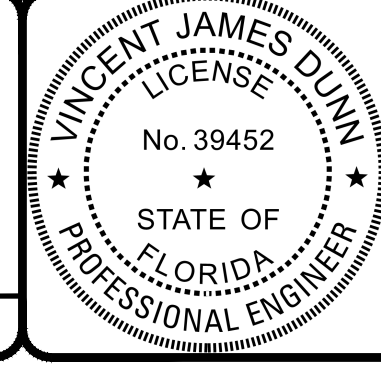
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NO.	DATE	DESCRIPTION

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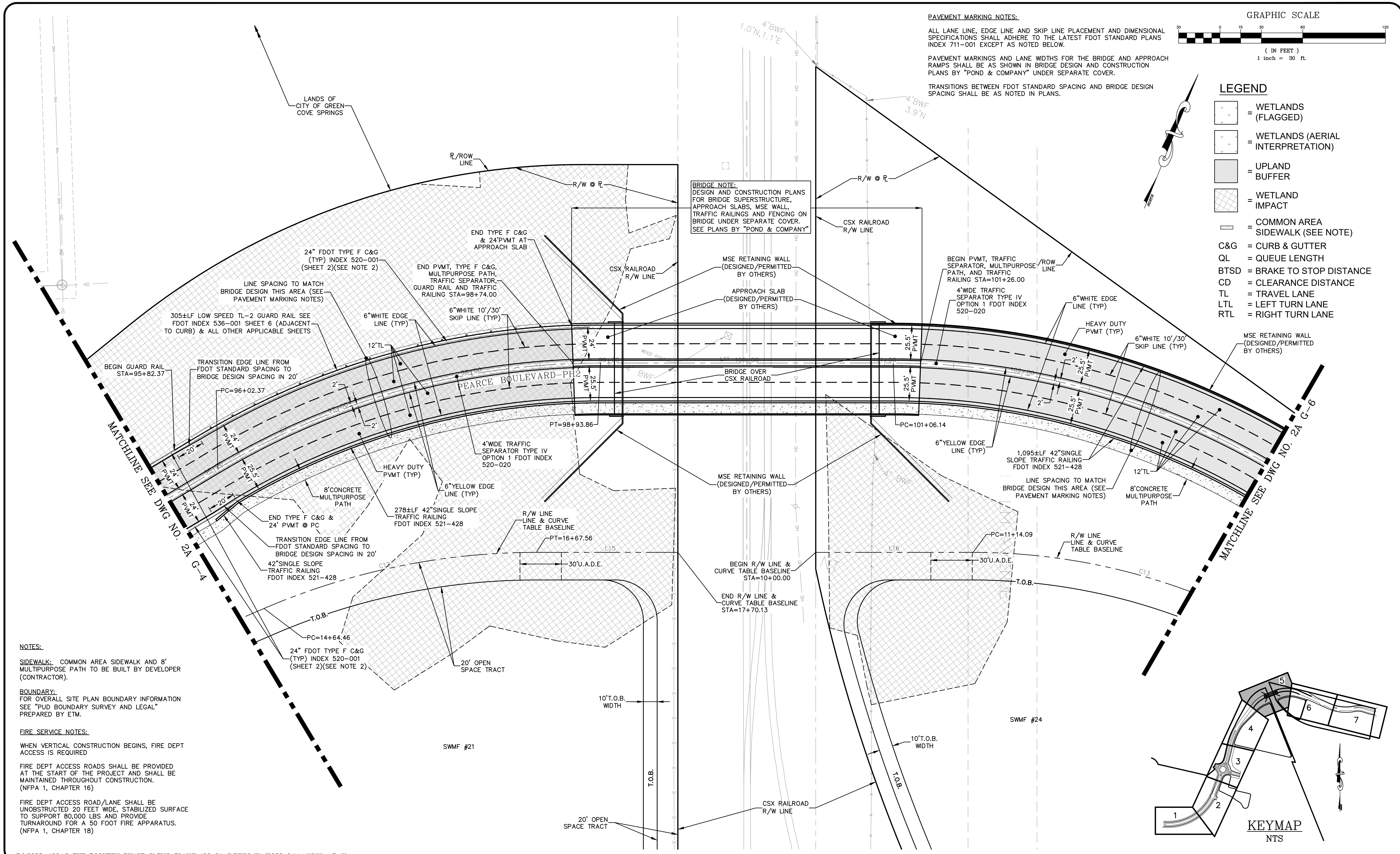
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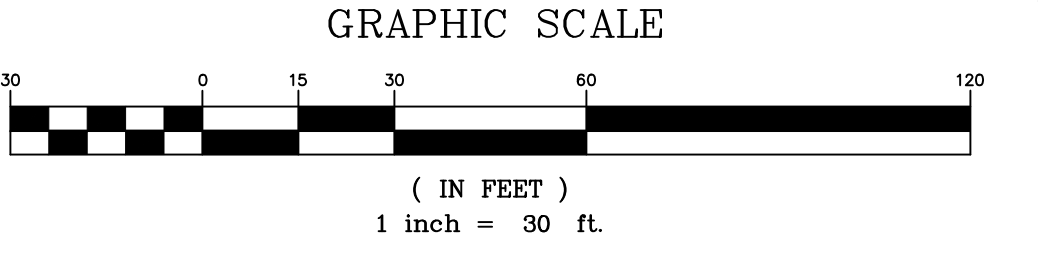
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 ENGINEER NO. 44184  
 GLEN R. WIEGER  
 ENGINEER NO. 81412

Sheet No. 21 of 130  
**2A G-4**  
 DWG. NO.



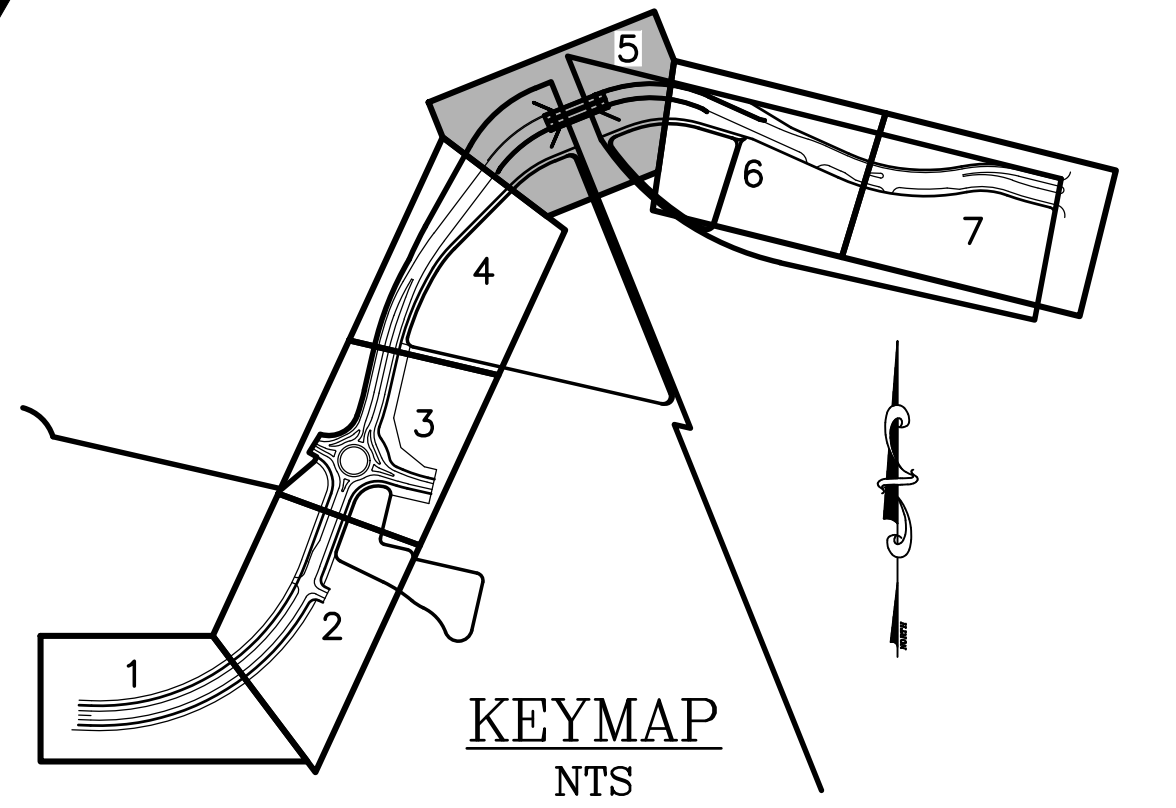
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 PAVEMENT MARKINGS AND LANE WIDTHS FOR THE BRIDGE AND APPROACH RAMPS SHALL BE AS SHOWN IN BRIDGE DESIGN AND CONSTRUCTION PLANS BY "POND & COMPANY" UNDER SEPARATE COVER.  
 TRANSITIONS BETWEEN FDOT STANDARD SPACING AND BRIDGE DESIGN SPACING SHALL BE AS NOTED IN PLANS.



- LEGEND**
- = WETLANDS (FLAGGED)
  - = WETLANDS (AERIAL INTERPRETATION)
  - = UPLAND BUFFER
  - = WETLAND IMPACT
  - = COMMON AREA SIDEWALK (SEE NOTE)
  - C&G = CURB & GUTTER
  - QL = QUEUE LENGTH
  - BTSD = BRAKE TO STOP DISTANCE
  - CD = CLEARANCE DISTANCE
  - TL = TRAVEL LANE
  - LTL = LEFT TURN LANE
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**BRIDGE NOTE:**  
 DESIGN AND CONSTRUCTION PLANS FOR BRIDGE SUPERSTRUCTURE, APPROACH SLABS, MSE WALL, TRAFFIC RAILINGS AND FENCING ON BRIDGE UNDER SEPARATE COVER. SEE PLANS BY "POND & COMPANY"

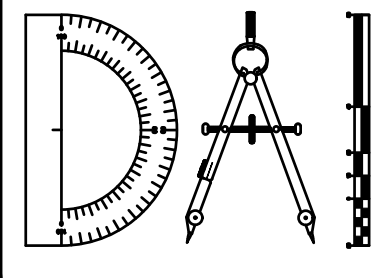
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**BOUNDARY:** FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.  
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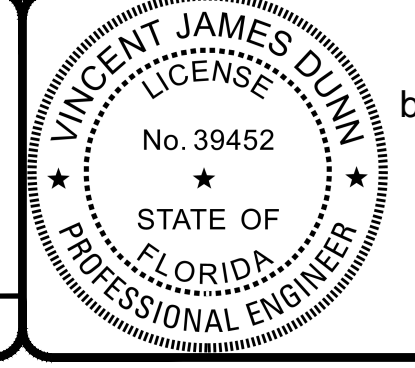
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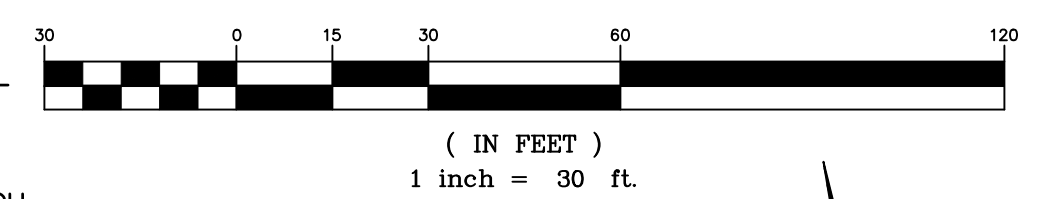
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Sheet No. 22 of 130  
**2A G-5**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

**BRIDGE NOTE:**  
DESIGN AND CONSTRUCTION PLANS FOR BRIDGE SUPERSTRUCTURE, APPROACH SLABS, MSE WALL AND TRAFFIC RAILINGS AND FENCING UNDER SEPARATE COVER. SEE PLANS BY "POND & COMPANY"

GRAPHIC SCALE



**PAVEMENT MARKING NOTES:**

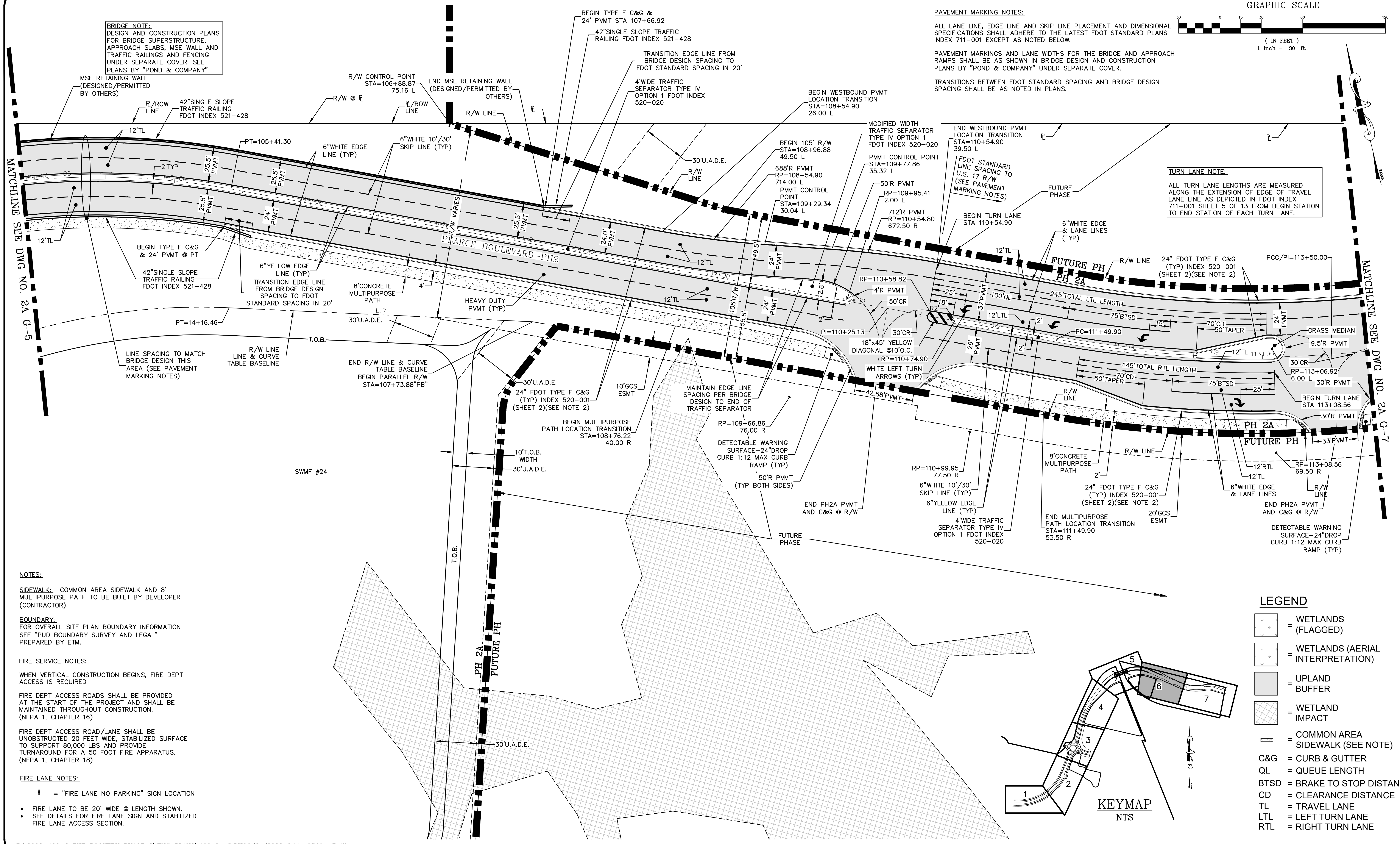
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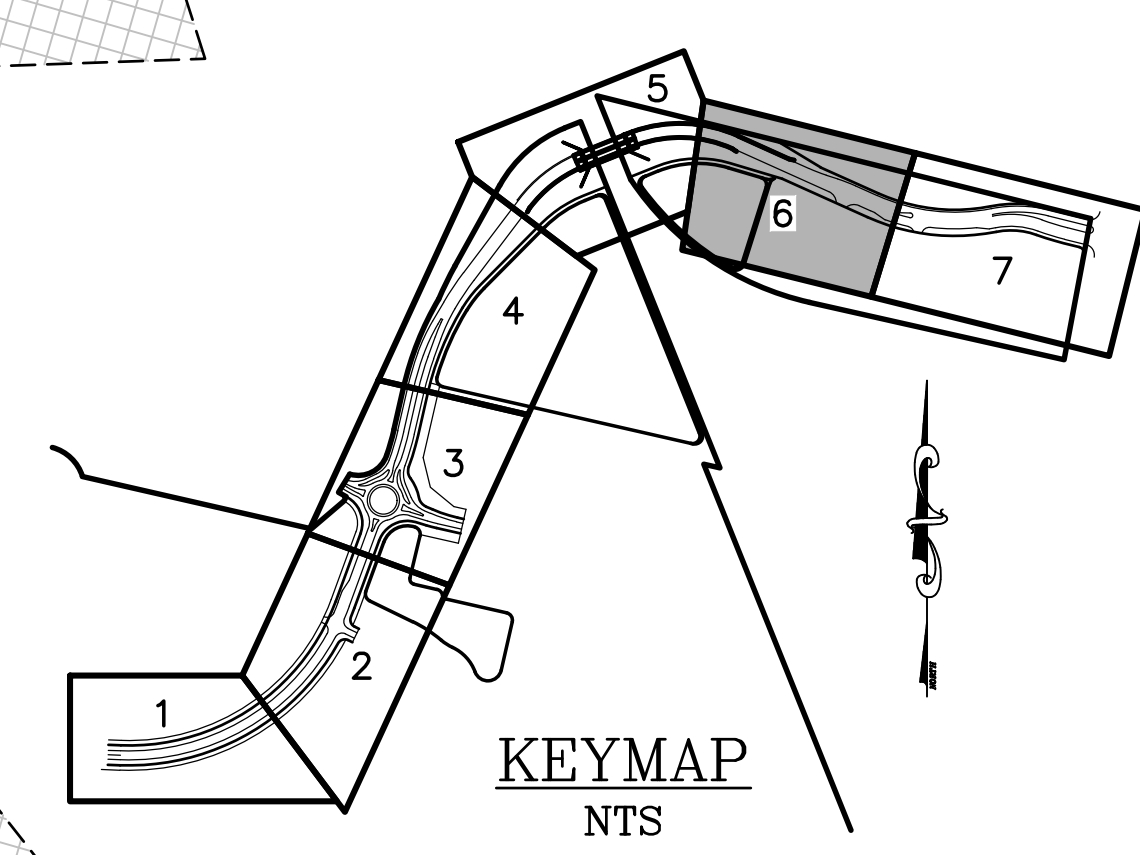
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- = "FIRE LANE NO PARKING" SIGN LOCATION
- FIRE LANE TO BE 20' WIDE @ LENGTH SHOWN.
- SEE DETAILS FOR FIRE LANE SIGN AND STABILIZED FIRE LANE ACCESS SECTION.

**LEGEND**

- = WETLANDS (FLAGGED)
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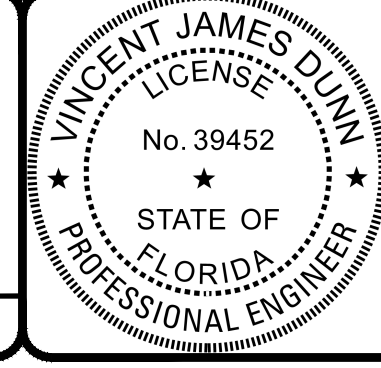
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**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2A GEOMETRY PLAN - PEARCE BLVD

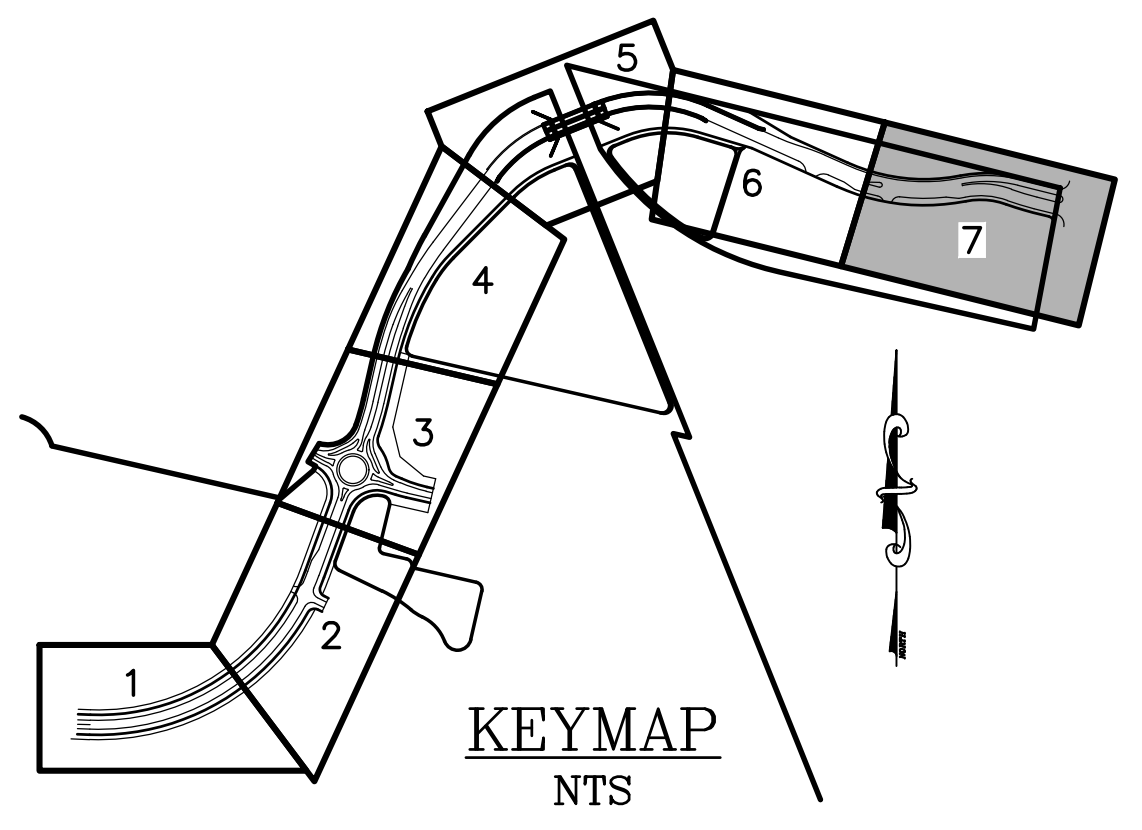


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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEBER ENGINEER NO. 81412

Sheet No. 23 of 130  
**2A G-6**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



**NOTES:**

**SIDEWALK:** COMMON AREA SIDEWALK AND 8' MULTIPURPOSE PATH TO BE BUILT BY DEVELOPER (CONTRACTOR).

**BOUNDARY:** FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

**PAVEMENT MARKING NOTES:**

ALL LANE LINE, EDGE LINE AND SKIP LINE PLACEMENT AND DIMENSIONAL SPECIFICATIONS SHALL ADHERE TO THE LATEST FDOT STANDARD PLANS INDEX 711-001

**FIRE SERVICE NOTES:**

WHEN VERTICAL CONSTRUCTION BEGINS, FIRE DEPT ACCESS IS REQUIRED

FIRE DEPT ACCESS ROADS SHALL BE PROVIDED AT THE START OF THE PROJECT AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. (NFPA 1, CHAPTER 16)

FIRE DEPT ACCESS ROAD/LANE SHALL BE UNOBSTRUCTED 20 FEET WIDE, STABILIZED SURFACE TO SUPPORT 80,000 LBS AND PROVIDE TURNAROUND FOR A 50 FOOT FIRE APPARATUS. (NFPA 1, CHAPTER 18)

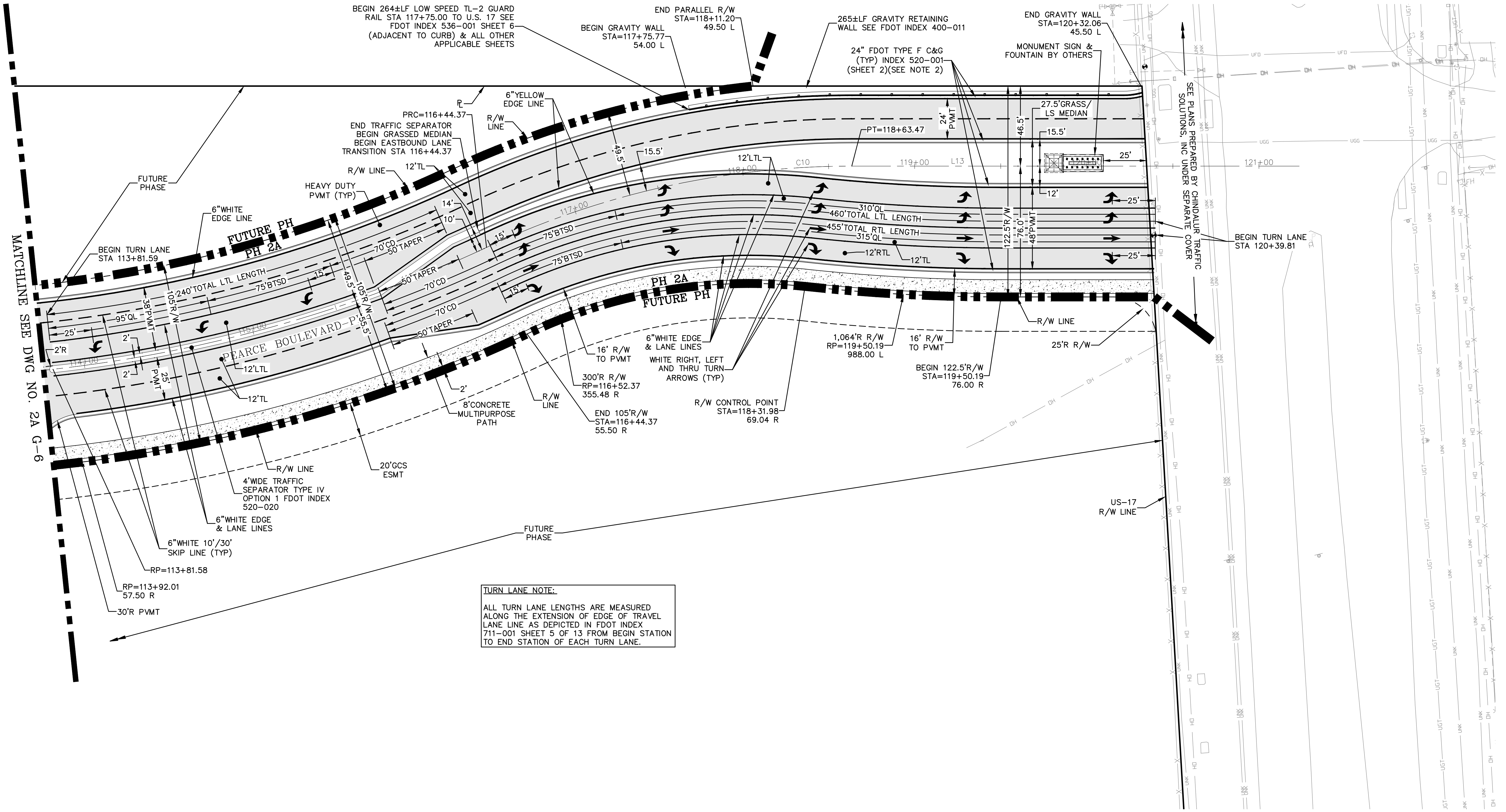
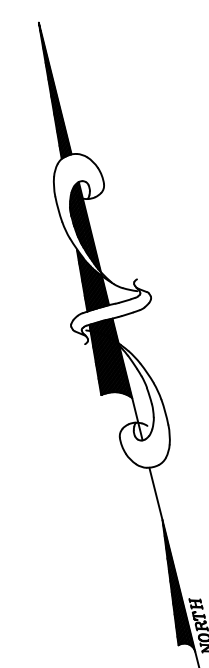
**LEGEND**

- = COMMON AREA
- = SIDEWALK (SEE NOTE)
- = CURB & GUTTER
- = QUEUE LENGTH
- = BRAKE TO STOP DISTANCE
- = CLEARANCE DISTANCE
- = TRAVEL LANE
- = LEFT TURN LANE
- = RIGHT TURN LANE

**GRAPHIC SCALE**



( IN FEET )  
1 inch = 30 ft.

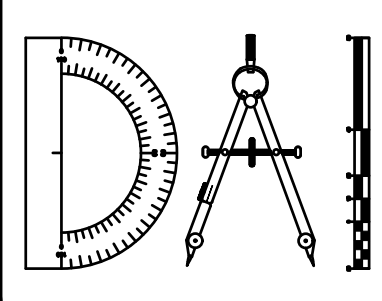


**TURN LANE NOTE:**  
ALL TURN LANE LENGTHS ARE MEASURED ALONG THE EXTENSION OF EDGE OF TRAVEL LANE LINE AS DEPICTED IN FDOT INDEX 711-001 SHEET 5 OF 13 FROM BEGIN STATION TO END STATION OF EACH TURN LANE.

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2A G.DWG/21/2023 6:14 AM Mike Reilly

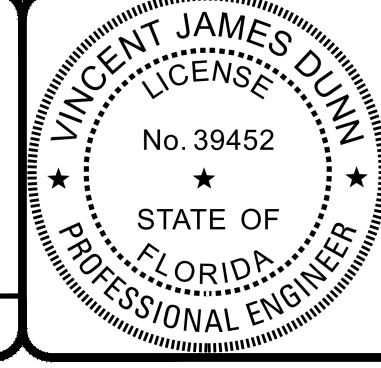
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 30'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



**Dunn & Associates, Inc.**  
 CIVIL ENGINEERS / LAND PLANNERS  
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2A GEOMETRY PLAN - PEARCE BLVD



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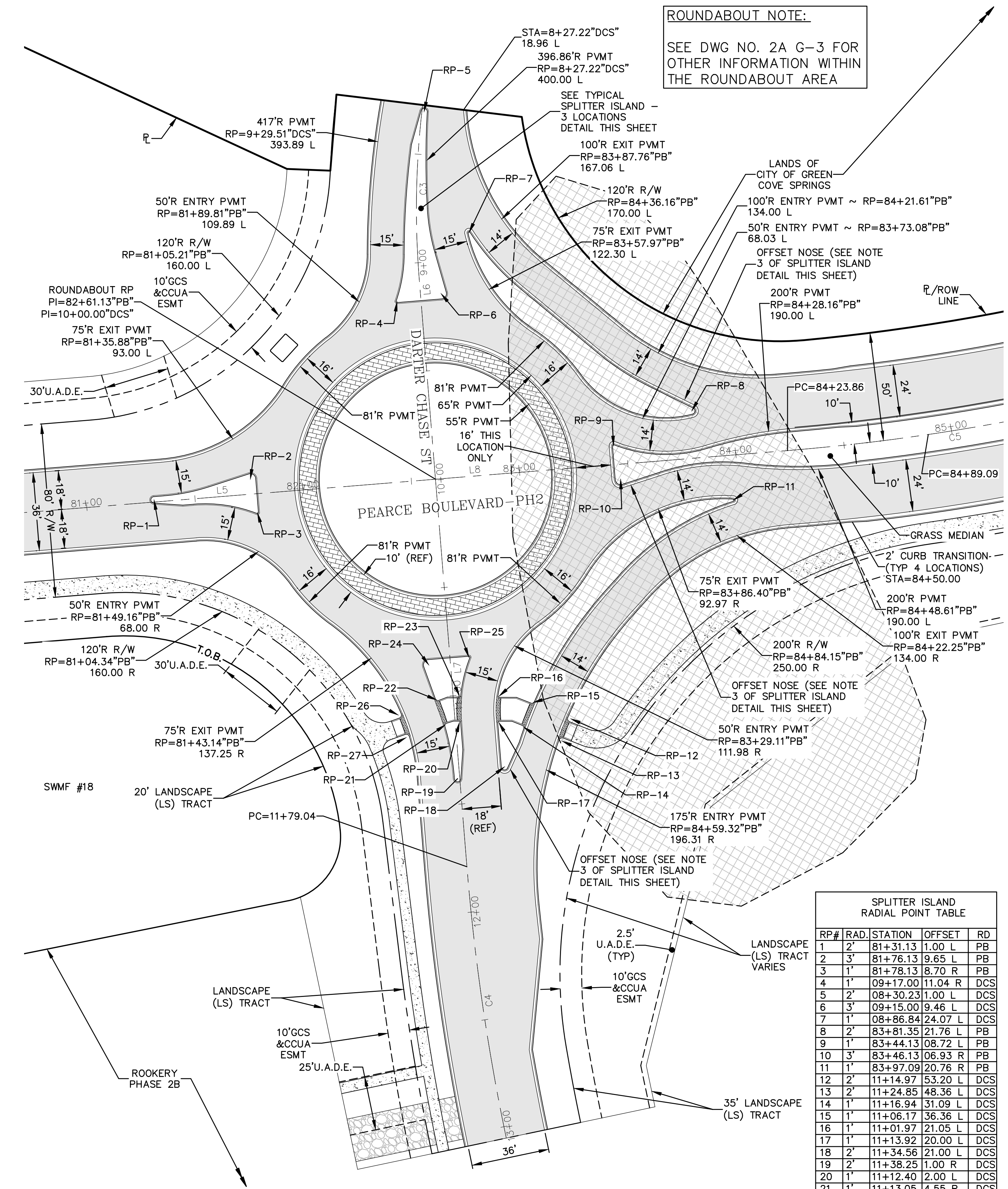
VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 24 of 130  
**2A G-7**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



**ROUNDAABOUT NOTE:**  
SEE DWG NO. 2A G-3 FOR OTHER INFORMATION WITHIN THE ROUNDAABOUT AREA

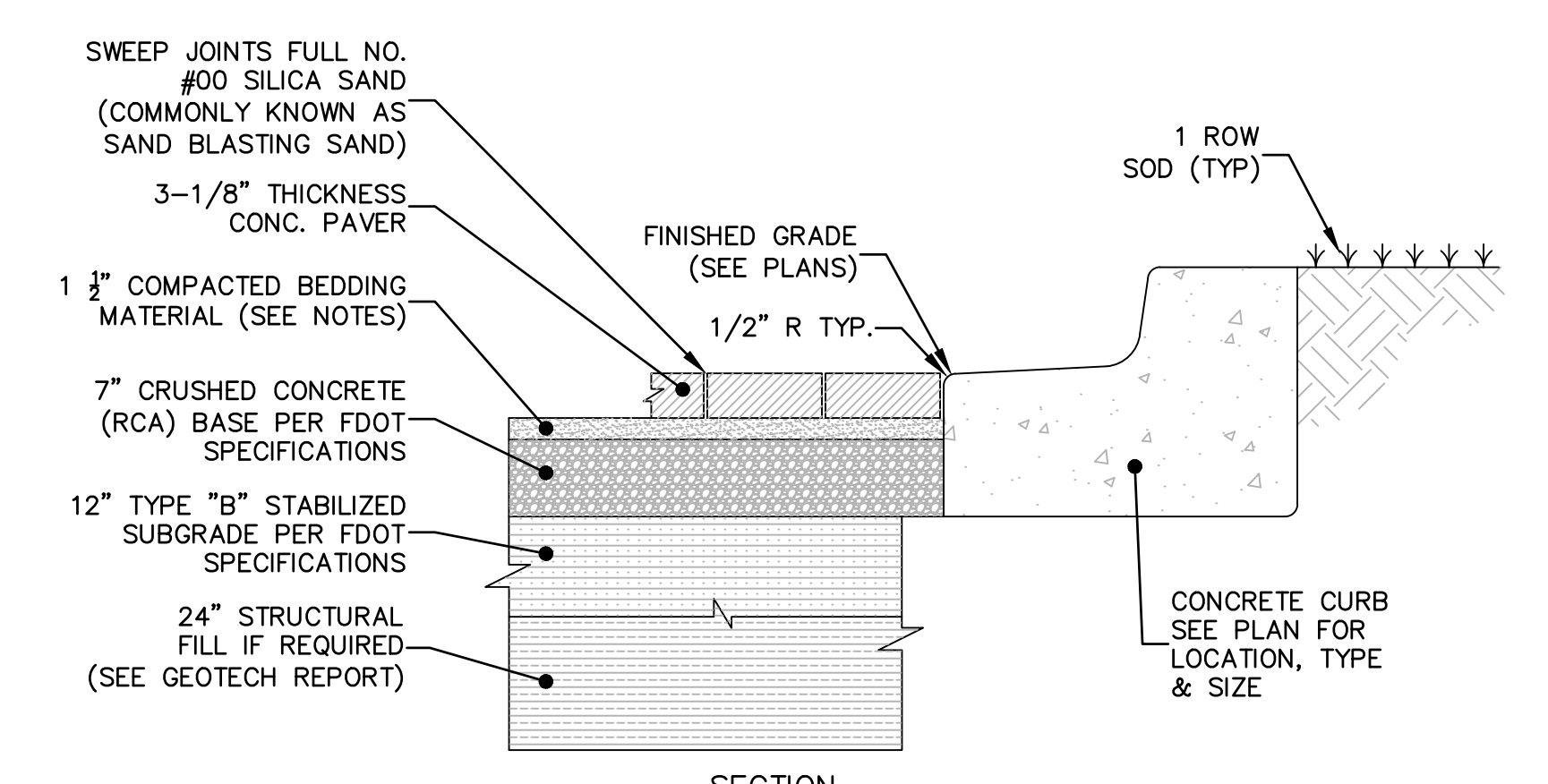
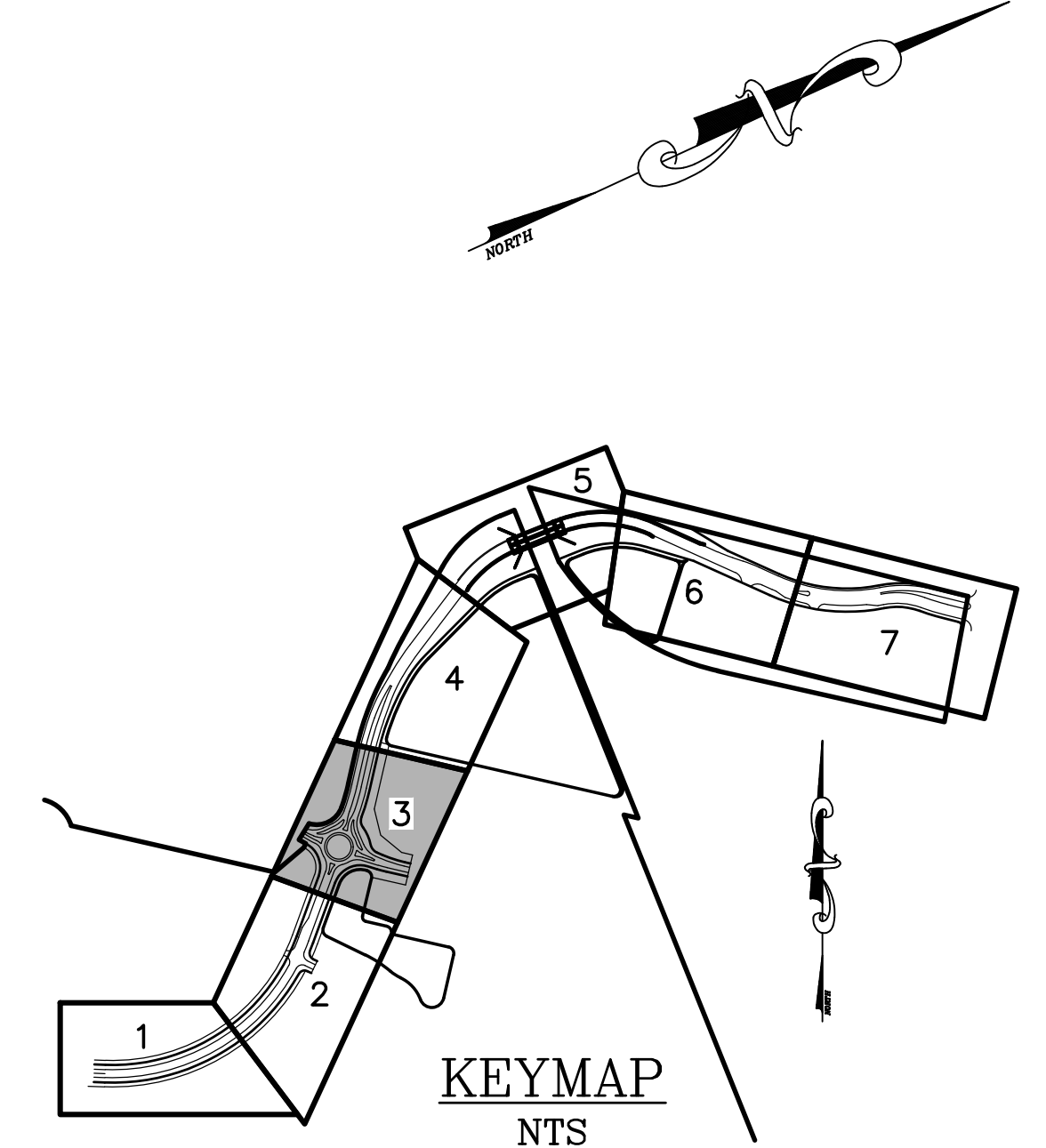
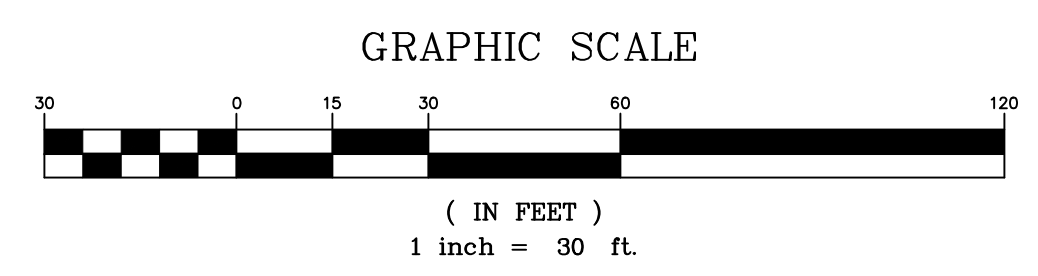


**SPLITTER ISLAND RADIAL POINT TABLE**

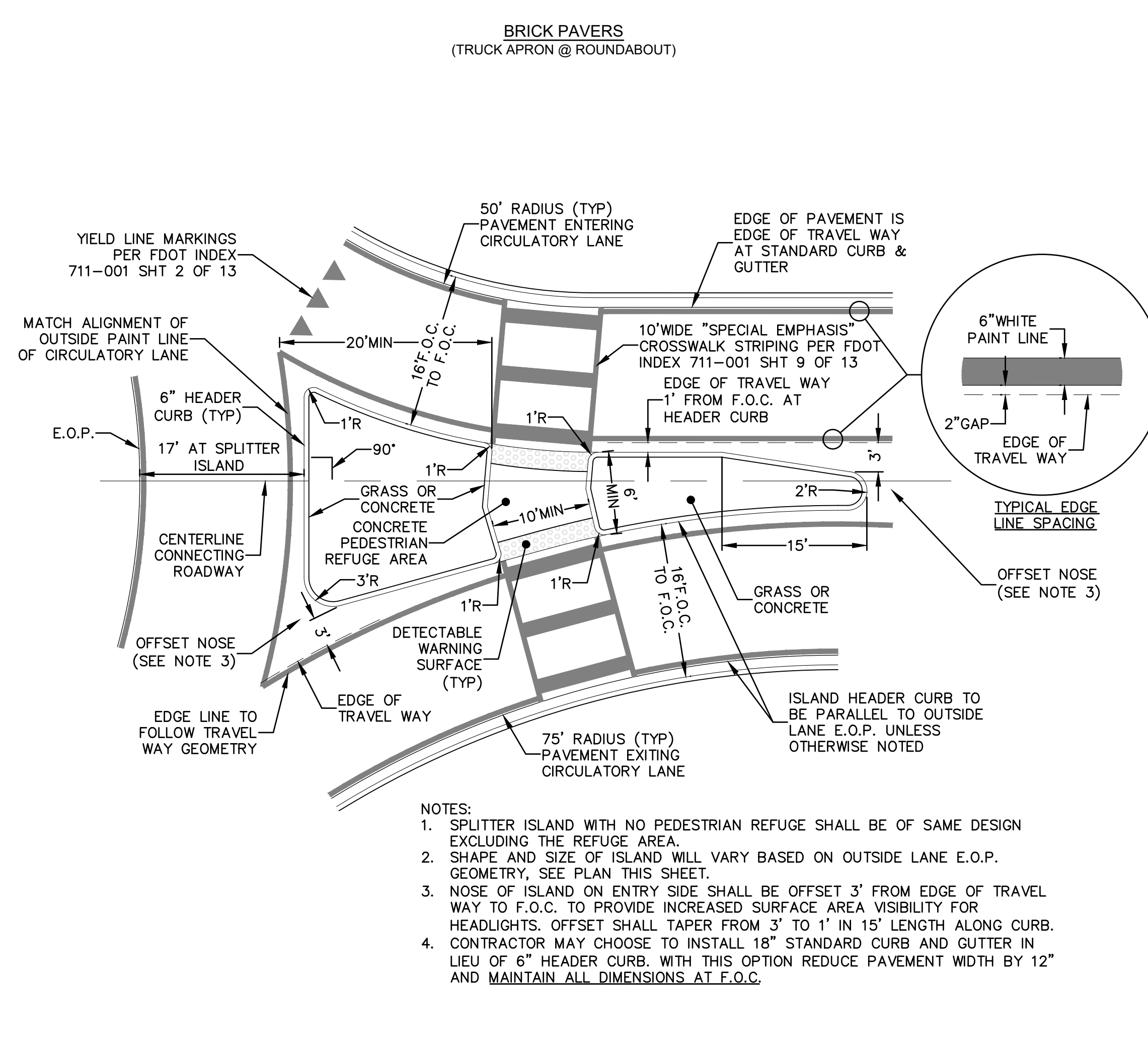
RP#	RAD. STATION	OFFSET	RD
1	2'	81+31.13	1.00 L PB
2	3'	81+76.13	9.65 L PB
3	1'	81+78.13	8.70 R PB
4	1'	09+17.00	11.04 R DCS
5	2'	08+30.23	1.00 L DCS
6	3'	09+15.00	9.46 L DCS
7	1'	08+86.84	24.07 L DCS
8	2'	83+81.35	21.76 L PB
9	1'	83+44.13	08.72 L PB
10	3'	83+46.13	06.93 R PB
11	1'	83+97.09	20.76 R PB
12	2'	11+14.97	53.20 L DCS
13	2'	11+24.85	48.36 L DCS
14	1'	11+16.94	31.09 L DCS
15	1'	11+06.17	36.36 L DCS
16	1'	11+01.97	21.05 L DCS
17	1'	11+13.92	20.00 L DCS
18	2'	11+34.56	21.00 L DCS
19	2'	11+38.25	1.00 R DCS
20	1'	11+12.40	2.00 L DCS
21	1'	11+13.05	4.55 R DCS
22	1'	11+01.38	7.55 R DCS
23	1'	11+00.44	3.01 L DCS
24	3'	10+85.00	9.97 R DCS
25	1'	10+83.00	8.70 L DCS
26	2'	11+06.84	25.89 R DCS
27	2'	11+17.46	23.04 R DCS

**NOTES:**  
• RP=RADIAL POINT  
• RADIUS MEASURED AT FACE OF CURB FOR RP IN TABLE  
• RD=ROADWAY ALIGNMENT USED FOR STATION VALUE

**FIRE SERVICE PAVEMENT WIDTH NOTES:**  
1. 14' PAVEMENT WIDTH PROVIDES 16' FIRE DEPT. ACCESS WIDTH.  
2. 15 PAVEMENT WIDTH PROVIDES 16' FIRE DEPT. ACCESS WIDTH.



**NOTES:**  
1) CONCRETE PAVERS: PAVERS SHALL CONFORM TO ASTM C 936 PAVES STYLE: STANDARD 4\"/>



**NOTES:**  
1. SPLITTER ISLAND WITH NO PEDESTRIAN REFUGE SHALL BE OF SAME DESIGN EXCLUDING THE REFUGE AREA.  
2. SHAPE AND SIZE OF ISLAND WILL VARY BASED ON OUTSIDE LANE E.O.P. GEOMETRY, SEE PLAN THIS SHEET.  
3. NOSE OF ISLAND ON ENTRY SIDE SHALL BE OFFSET 3' FROM EDGE OF TRAVEL WAY TO F.O.C. TO PROVIDE INCREASED SURFACE AREA VISIBILITY FOR HEADLIGHTS. OFFSET SHALL TAPER FROM 3' TO 1' IN 15' LENGTH ALONG CURB. CONTRACTOR MAY CHOOSE TO INSTALL 18\"/>

- LEGEND**
- = WETLANDS (FLAGGED)
  - = WETLANDS (AERIAL INTERPRETATION)
  - = UPLAND BUFFER
  - = WETLAND IMPACT
  - = COMMON AREA SIDEWALK (SEE NOTE)
  - = CURB & GUTTER
  - = QUEUE LENGTH
  - = BRAKE TO STOP DISTANCE
  - = CLEARANCE DISTANCE
  - = TRAVEL LANE
  - = LEFT TURN LANE
  - = RIGHT TURN LANE

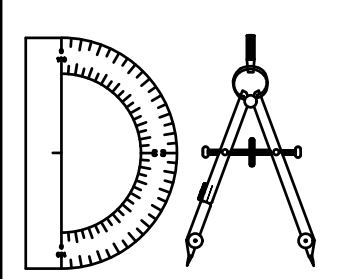
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**BOUNDARY:** FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE \"PUD BOUNDARY SURVEY AND LEGAL\" PREPARED BY ETM.  
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P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2A G.DWG/21/2023 6:14 AM Mike Reilly

**REVISIONS**

NO.	DATE	DESCRIPTION	BY:

DESIGNED BY: DAI  
DRAWN BY: MR/NS/SM/SS  
CHECKED BY: VJD  
SCALE: 1\"/>



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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
FOR:  
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CLAY COUNTY, FLORIDA  
**2A GEOMETRY PLAN - PEARCE BLVD**

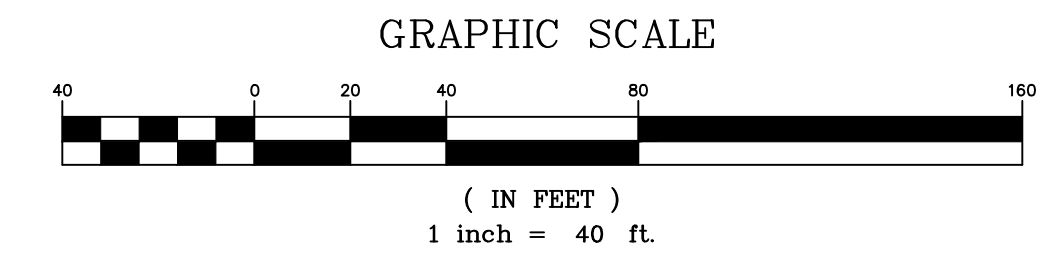
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GLEN R. WIEBER ENGINEER NO. 81412

Sheet No. 25 of 130  
**2A G-8**  
DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

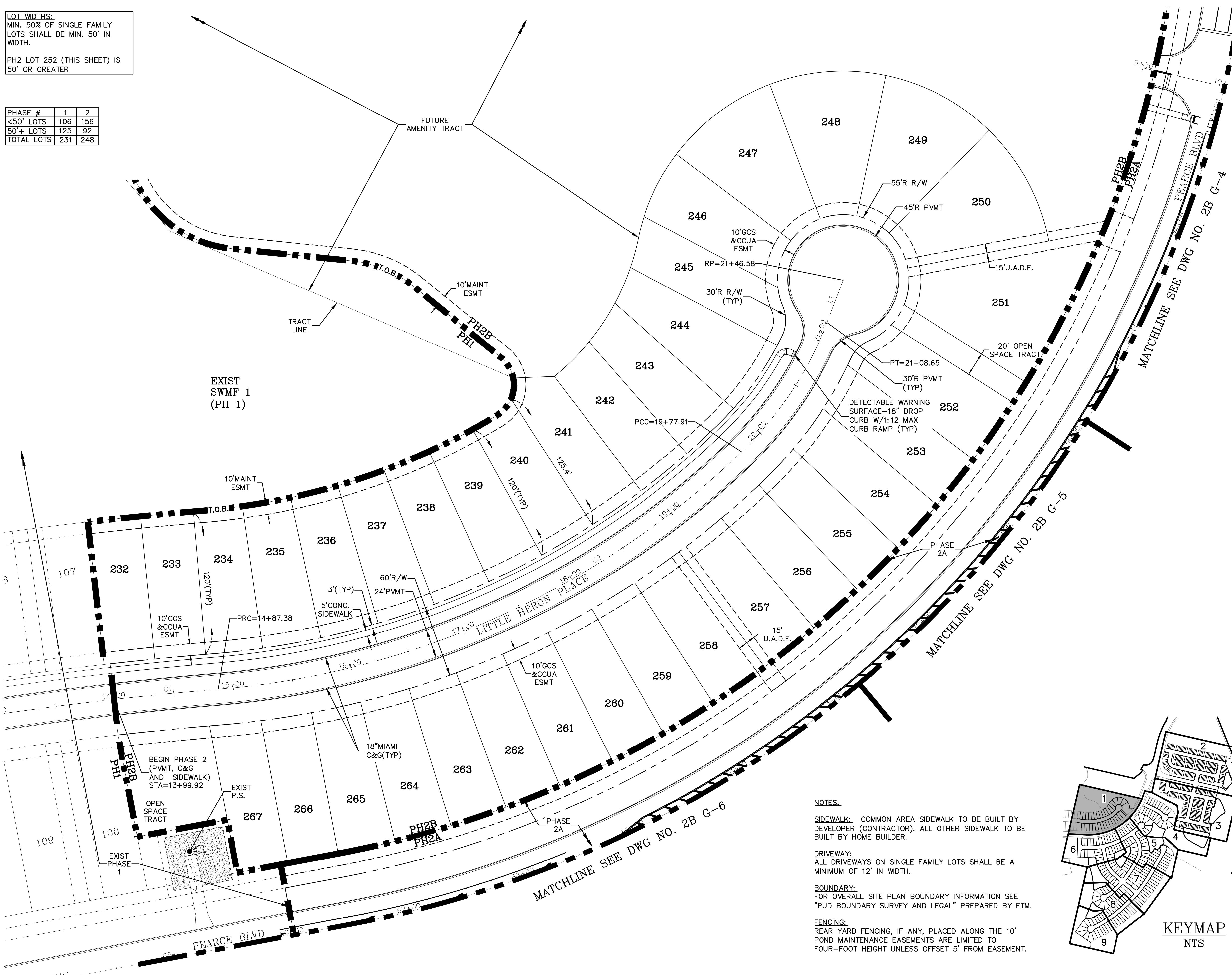
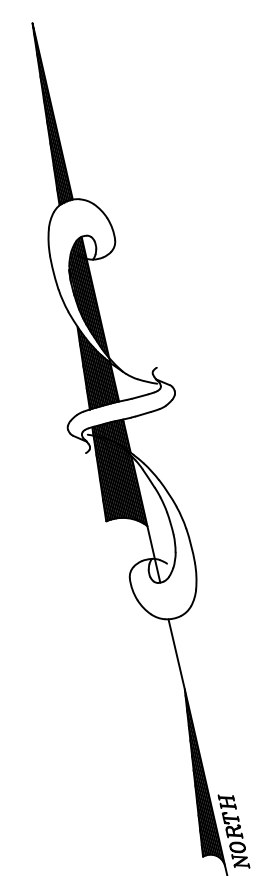
LOT WIDTHS:  
MIN. 50% OF SINGLE FAMILY  
LOTS SHALL BE MIN. 50' IN  
WIDTH.  
PH2 LOT 252 (THIS SHEET) IS  
50' OR GREATER

PHASE #	1	2
<50' LOTS	106	156
50'+ LOTS	125	92
TOTAL LOTS	231	248



LEGEND

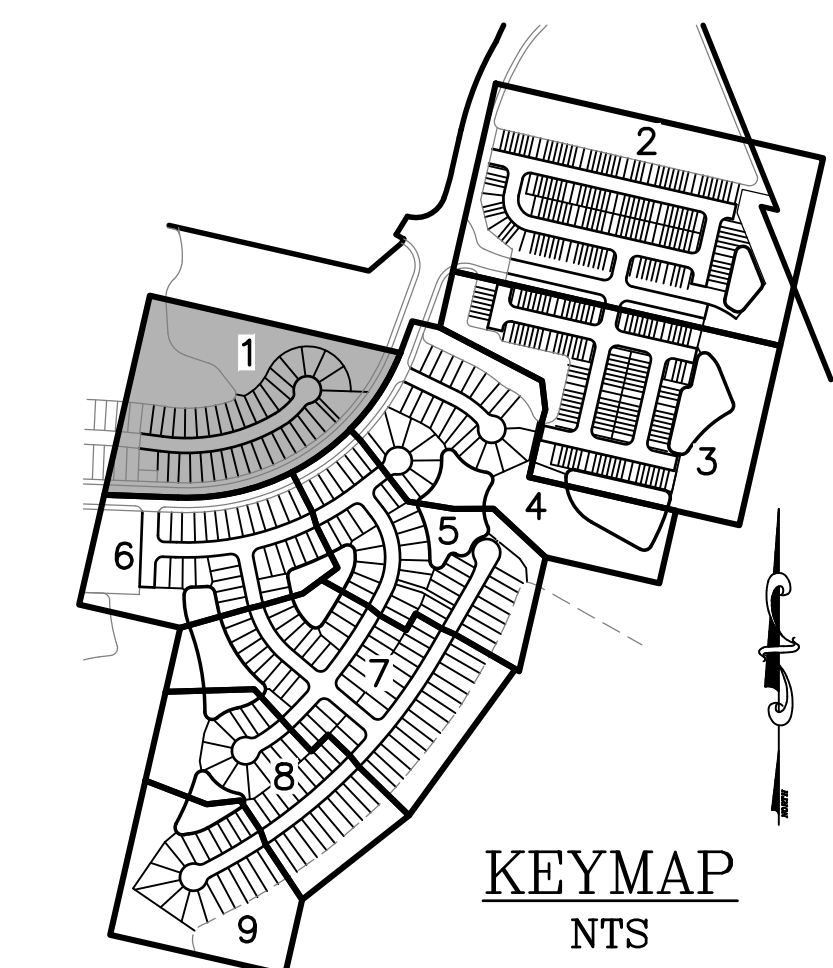
☐ = COMMON AREA  
SIDEWALK (SEE NOTE)



LINE	LENGTH	BEARING
L1	37.93'	N33°51'03"E
L5	194.09'	N52°04'40"E
L6	226.42'	S11°30'06"E
L7	184.58'	S49°53'38"E
L8	300.00'	S49°53'38"E
L9	109.66'	S37°55'20"E
L10	32.76'	S63°05'35"W
L11	45.63'	S13°35'10"W
L12	320.58'	S29°56'46"W
L13	44.35'	S63°22'02"W
L14	209.92'	S64°06'43"E
L15	27.25'	S39°18'04"E
L16	104.29'	N85°52'07"E
L17	263.17'	S77°07'44"E
L18	230.00'	S77°07'44"E
L19	155.00'	S77°07'44"E
L20	440.00'	S12°52'16"W
L21	440.00'	N12°52'16"E
L22	185.00'	N12°52'16"E

LINE	LENGTH	BEARING
L23	185.00'	N12°52'16"E
L24	65.50'	N12°52'16"E
L25	96.97'	N12°52'18"E
L26	440.00'	S77°07'44"E
L27	230.00'	S77°07'44"E
L28	130.00'	S77°07'44"E
L29	426.35'	S77°07'44"E
L30	353.25'	S77°07'44"E
L31	130.00'	S12°52'16"W
L32	396.52'	S77°07'44"E
L33	320.00'	S77°07'44"E
L34	78.00'	N12°52'16"E
L35	230.00'	N12°52'16"E
L36	105.00'	S77°07'44"E
L37	816.52'	S77°07'44"E
L38	80.00'	S77°07'44"E

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD DIR.	CHORD
C1	87.46'	3000.00'	1°40'13"	43.73'	S82° 42' 21.76"E	87.45'
C2	490.53'	715.00'	39°18'30"	255.36'	N78° 28' 29.64"E	480.97'
C3	271.05'	1135.00'	13°40'58"	136.17'	N85° 20' 22.94"E	270.41'
C4	523.37'	1135.00'	26°25'13"	266.42'	N65° 17' 17.09"E	518.75'
C5	268.03'	400.00'	38°23'32"	139.26'	S30° 41' 52.28"E	263.04'
C6	338.37'	300.00'	64°37'29"	189.74'	S05° 36' 34.87"E	320.72'
C7	454.00'	1940.75'	13°24'12"	228.04'	S33° 24' 15.76"W	452.97'
C8	199.29'	1940.75'	5°53'01"	99.73'	S43° 02' 52.21"W	199.21'
C9	179.11'	600.00'	17°06'13"	90.22'	S54° 32' 29.00"W	178.44'
C10	85.66'	300.00'	16°21'35"	43.12'	S21° 45' 57.97"W	85.37'
C11	397.34'	2240.75'	10°09'36"	199.19'	S35° 01' 33.60"W	396.82'
C12	909.71'	2240.75'	23°15'40"	461.21'	S51° 44' 11.61"W	903.47'
C13	173.21'	400.00'	24°48'39"	87.99'	S51° 42' 23.06"E	171.86'
C14	40.05'	300.00'	7°38'55"	20.05'	S73° 18' 15.97"E	40.02'
C15	157.08'	100.00'	90°00'00"	100.00'	S32° 07' 43.63"E	141.42'

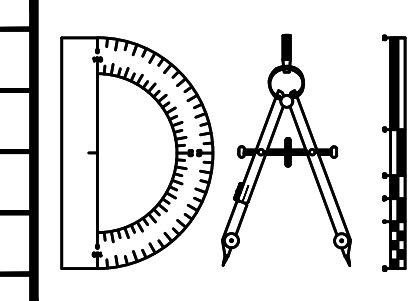


NOTES:  
**SIDEWALK:** COMMON AREA SIDEWALK TO BE BUILT BY DEVELOPER (CONTRACTOR). ALL OTHER SIDEWALK TO BE BUILT BY HOME BUILDER.  
**DRIVEWAY:** ALL DRIVEWAYS ON SINGLE FAMILY LOTS SHALL BE A MINIMUM OF 12' IN WIDTH.  
**BOUNDARY:** FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.  
**FENCING:** REAR YARD FENCING, IF ANY, PLACED ALONG THE 10' POND MAINTENANCE EASEMENTS ARE LIMITED TO FOUR-FOOT HEIGHT UNLESS OFFSET 5' FROM EASEMENT.

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B G.DWG/21/2023 6:15 AM Mike Reilly

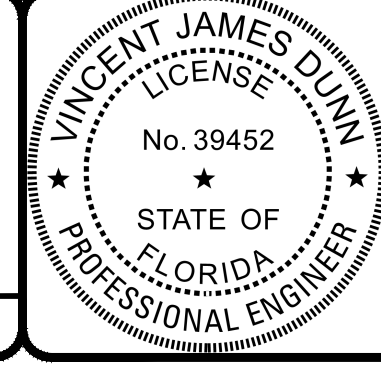
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
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 SCALE: 1" = 40'  
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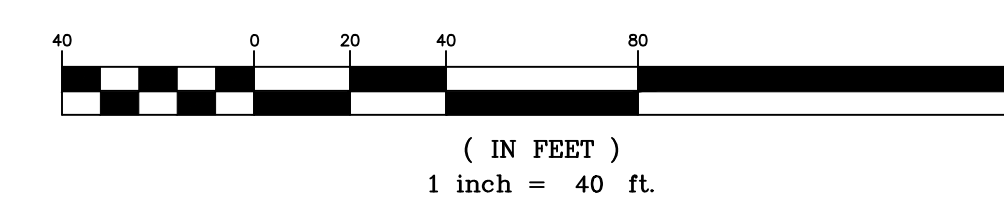
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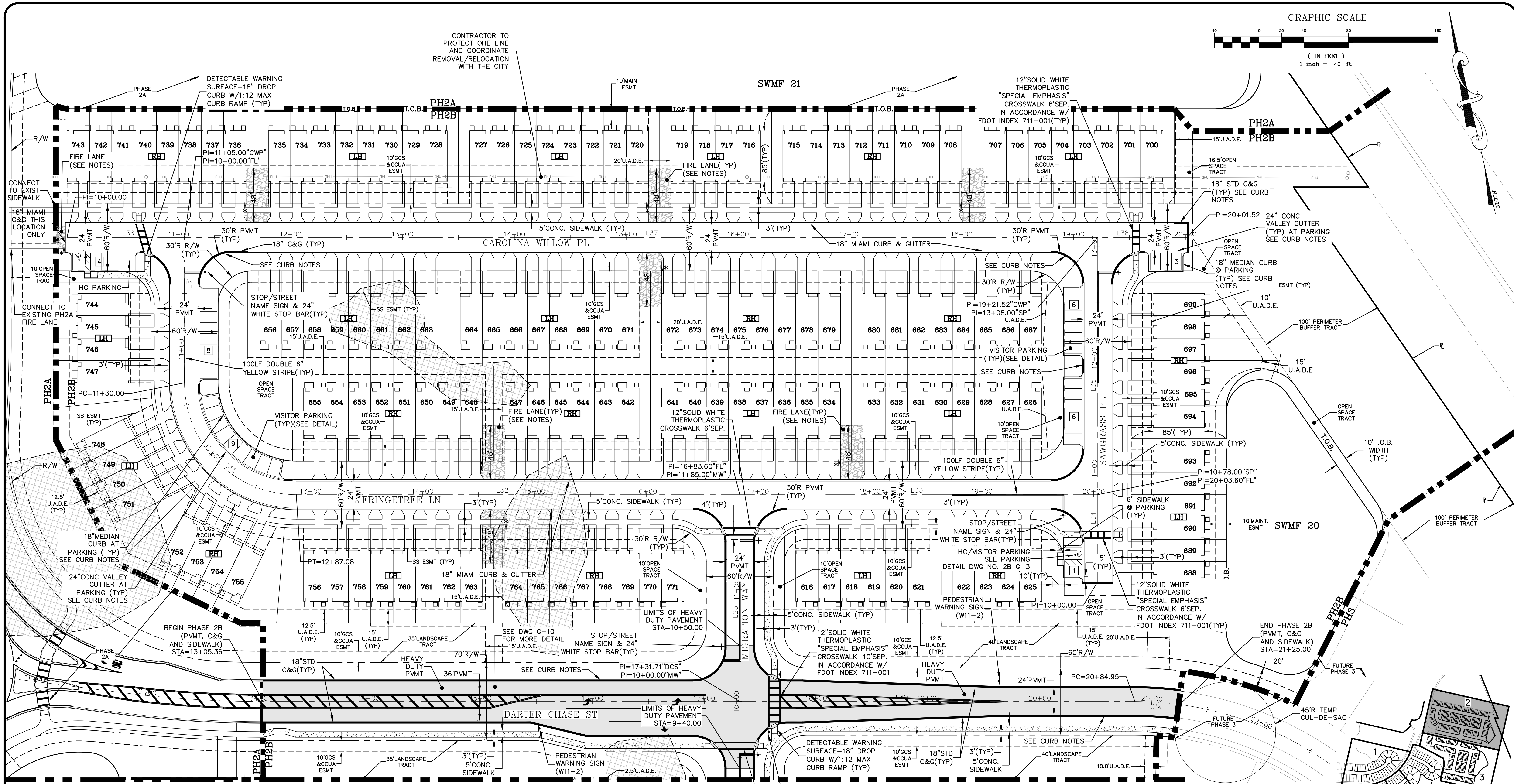
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Sheet No. 26 of 130  
**2B G-1**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



**NOTES:**

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**DRIVEWAY:** ALL DRIVEWAYS ON TOWNHOME LOTS SHALL BE A MINIMUM OF 8' IN WIDTH.

**BOUNDARY:** FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

**FENCING:** REAR YARD FENCING, IF ANY, PLACED ALONG THE 10' POND MAINTENANCE EASEMENTS ARE LIMITED TO FOUR-FOOT HEIGHT UNLESS OFFSET 5' FROM EASEMENT.

**CURB NOTES:**

1. — = 18" STANDARD CURB & GUTTER
2. 18" MEDIAN CURB TO BE USED AROUND PARKING BAYS. SEE VISITOR PARKING DETAIL.
3. 2' CURB TRANSITION REQUIRED BETWEEN CURB TYPES.
4. 18" MIAMI CURB & CUTTER TO BE CONST. UNLESS OTHERWISE NOTED ON PLANS OR OUTLINED IN THESE NOTES.

**VISITOR PARKING NOTES:**

# = # OF VISITOR PARKING STALLS

1. MINIMUM 1 VISITOR PARKING STALL PROVIDED PER 4 TOWNHOME UNITS PER PUD. REQUIRED FOR NORTH POD=39 - PROVIDED=39 HC REQUIRED=2 - PROVIDED=2
2. FOR PARKING BAY GEOMETRY SEE VISITOR PARKING DETAIL DWG NO. 2B G-3.

**SEE DWG NO. 2B G-10 FOR ROADWAY AND TURNLANE PLAN**

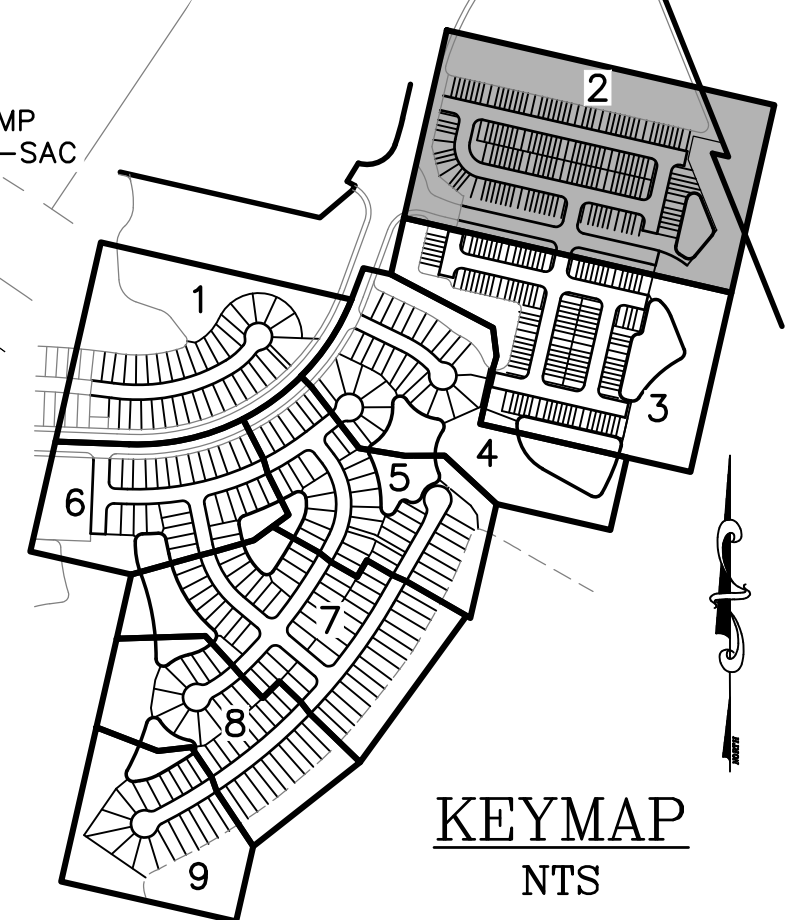
**FIRE LANE NOTES:**

\*# = "FIRE LANE NO PARKING" SIGN LOCATION

1. FIRE LANE TO BE 20' WIDE @ LENGTH SHOWN.
2. SEE DETAILS FOR FIRE LANE SIGN AND STABILIZED FIRE LANE ACCESS SECTION.

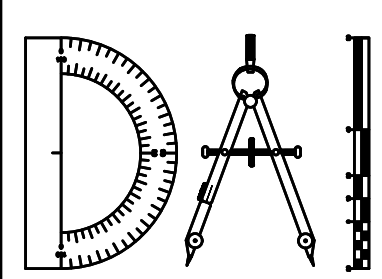
**LEGEND**

- [Hatched Box] = WETLAND IMPACT
- [Dashed Line] = COMMON AREA SIDEWALK (SEE NOTE)
- [Box with 'LH'] = LEFT HAND GARAGE ORIENTATION
- [Box with 'RH'] = RIGHT HAND GARAGE ORIENTATION



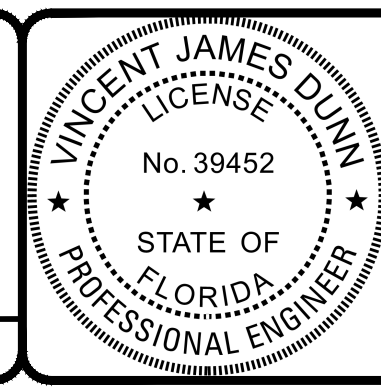
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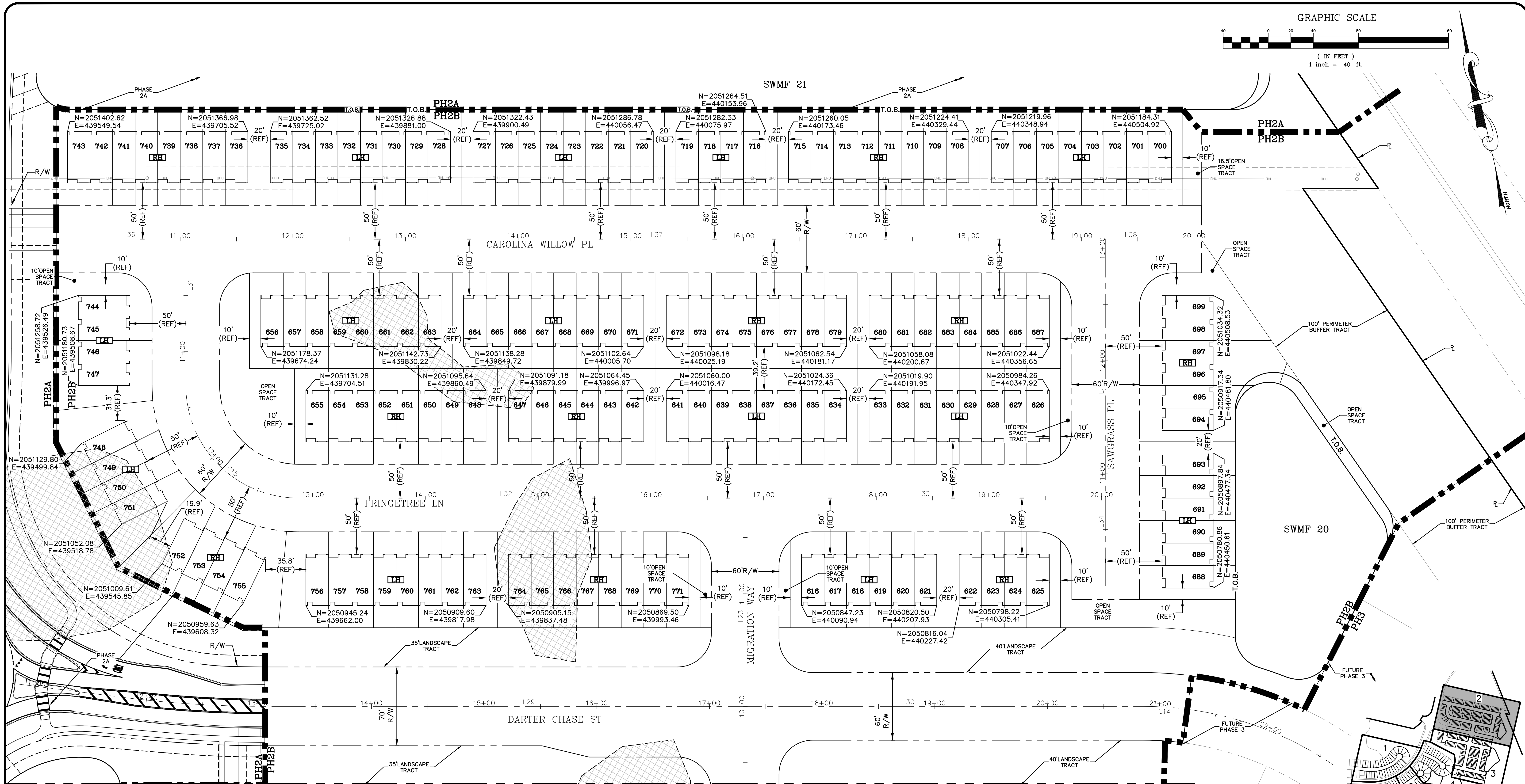
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Sheet No. 27 of 130  
**2B G-2**  
 DWG. NO.

GRAPHIC SCALE



( IN FEET )  
1 inch = 40 ft.



MATCHLINE SEE DWG NO. 2B G-3

LEGEND

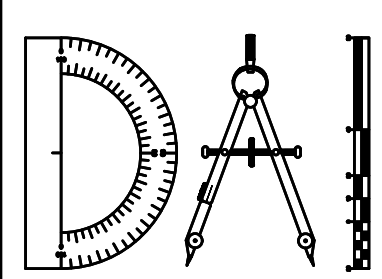
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- = RIGHT HAND GARAGE ORIENTATION



P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B G.DWG/21/2023 6:15 AM Mike Reilly

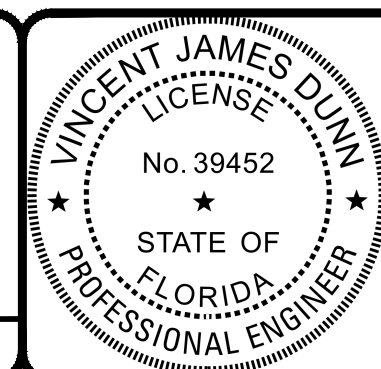
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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 8647 Baypine Road, Suite 200  
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 Phone: (904)363-8916 Fax: (904)363-8917  
 www.dunneng.com

**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 GEOMETRY PLAN - BUILDING TIES



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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 28 of 130  
**2B G-2B**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

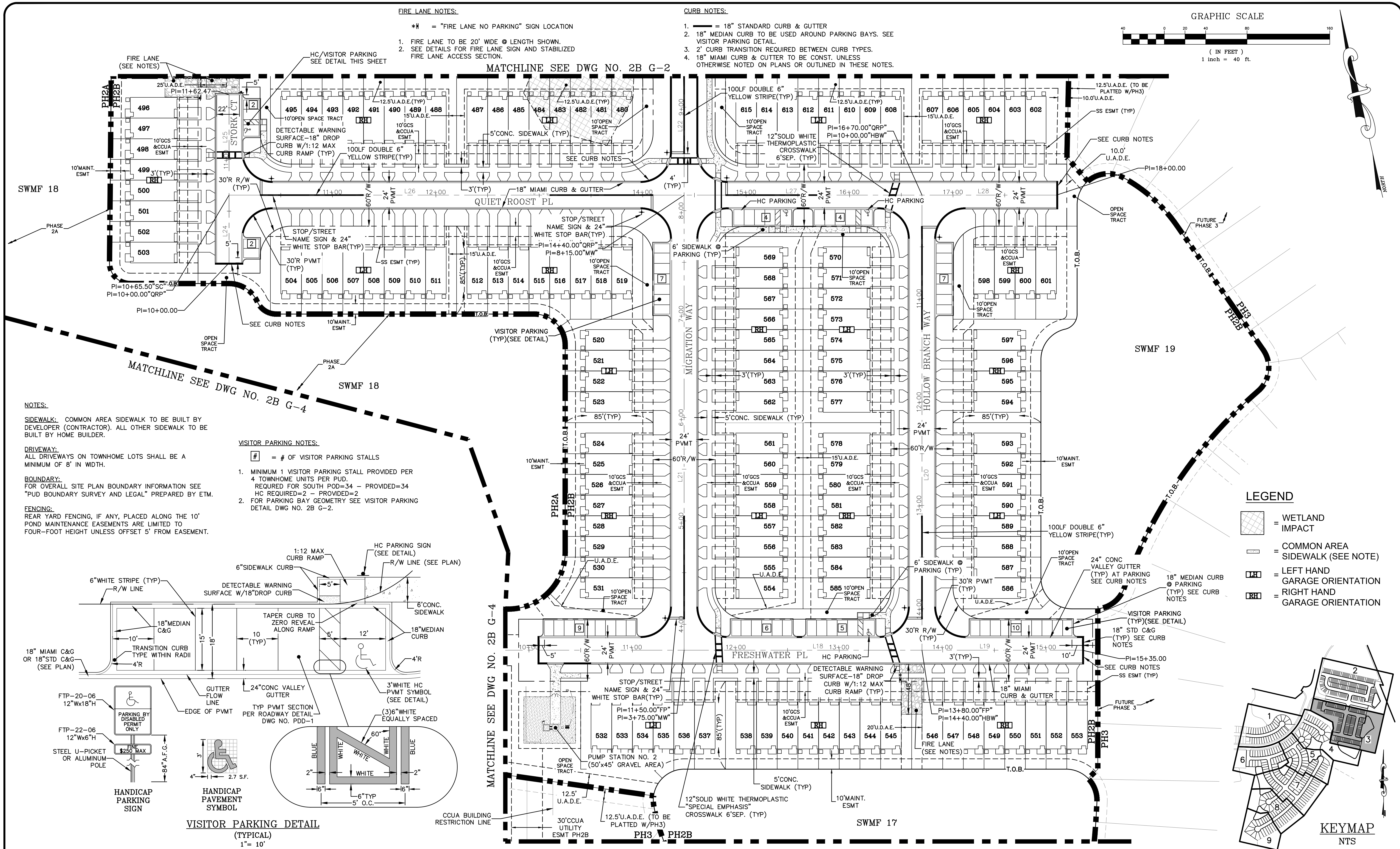
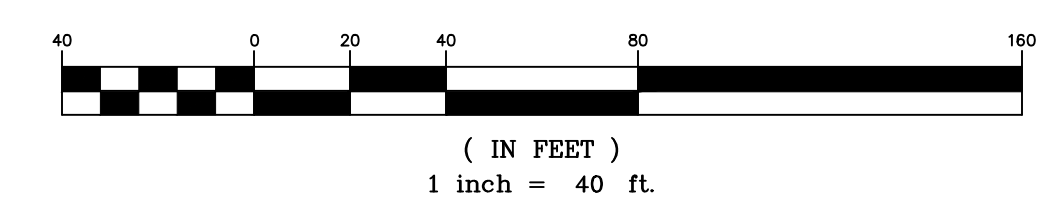
**FIRE LANE NOTES:**

- \*M = "FIRE LANE NO PARKING" SIGN LOCATION
- 1. FIRE LANE TO BE 20' WIDE @ LENGTH SHOWN.
- 2. SEE DETAILS FOR FIRE LANE SIGN AND STABILIZED FIRE LANE ACCESS SECTION.

**CURB NOTES:**

- 1. — = 18" STANDARD CURB & GUTTER
- 2. 18" MEDIAN CURB TO BE USED AROUND PARKING BAYS. SEE VISITOR PARKING DETAIL.
- 3. 2' CURB TRANSITION REQUIRED BETWEEN CURB TYPES.
- 4. 18" MIAMI CURB & CUTTER TO BE CONST. UNLESS OTHERWISE NOTED ON PLANS OR OUTLINED IN THESE NOTES.

**GRAPHIC SCALE**



**NOTES:**

**SIDEWALK:** COMMON AREA SIDEWALK TO BE BUILT BY DEVELOPER (CONTRACTOR). ALL OTHER SIDEWALK TO BE BUILT BY HOME BUILDER.

**DRIVEWAY:** ALL DRIVEWAYS ON TOWNHOME LOTS SHALL BE A MINIMUM OF 8' IN WIDTH.

**BOUNDARY:** FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

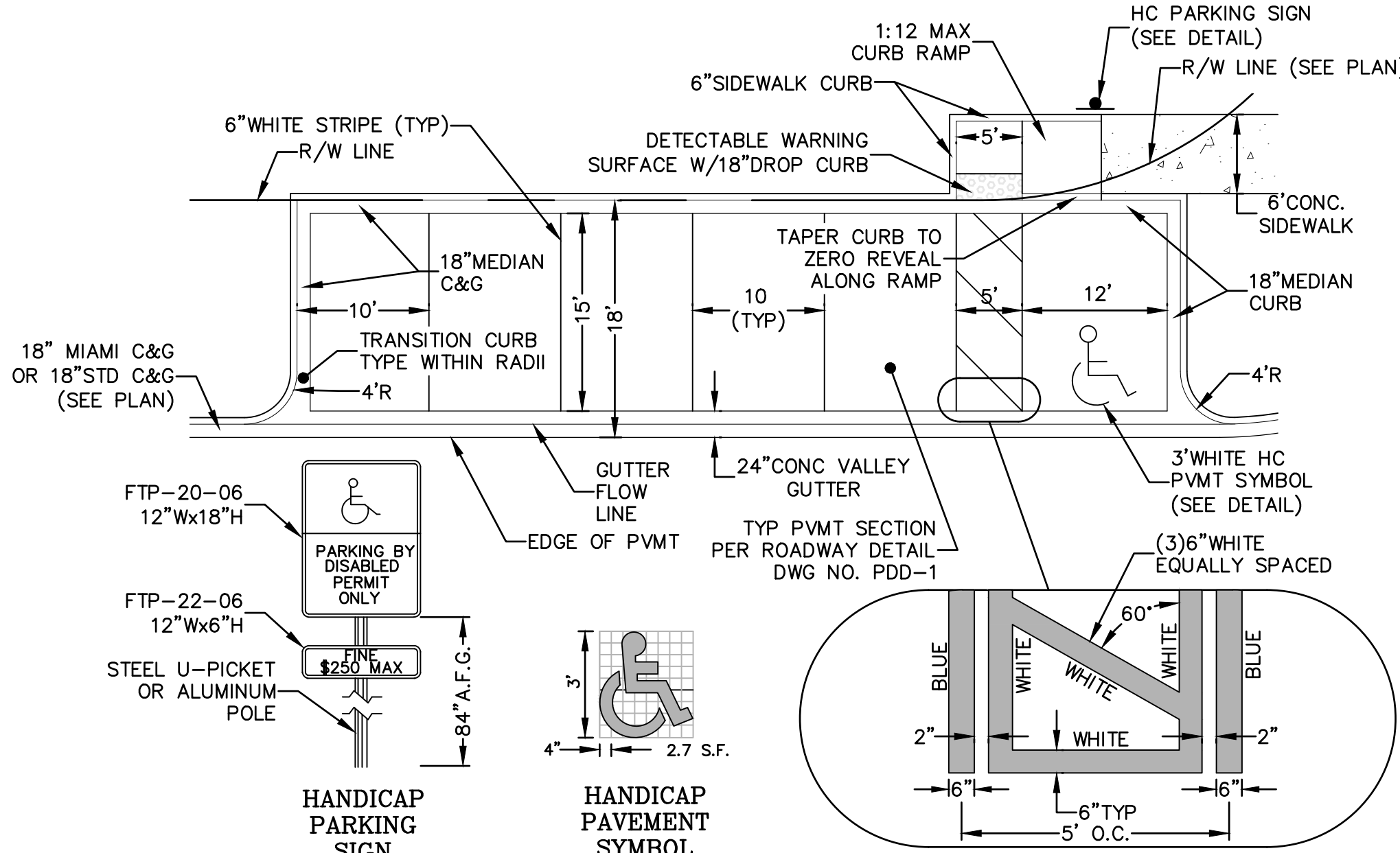
**FENCING:** REAR YARD FENCING, IF ANY, PLACED ALONG THE 10' POND MAINTENANCE EASEMENTS ARE LIMITED TO FOUR-FOOT HEIGHT UNLESS OFFSET 5' FROM EASEMENT.

**VISITOR PARKING NOTES:**

- # = # OF VISITOR PARKING STALLS
- 1. MINIMUM 1 VISITOR PARKING STALL PROVIDED PER 4 TOWNHOME UNITS PER PUD. REQUIRED FOR SOUTH POD=34 - PROVIDED=34 HC REQUIRED=2 - PROVIDED=2
- 2. FOR PARKING BAY GEOMETRY SEE VISITOR PARKING DETAIL DWG NO. 2B G-2.

**LEGEND**

- [Hatched Box] = WETLAND IMPACT
- [Dashed Line] = COMMON AREA SIDEWALK (SEE NOTE)
- [Box with 'LH'] = LEFT HAND GARAGE ORIENTATION
- [Box with 'RH'] = RIGHT HAND GARAGE ORIENTATION



**VISITOR PARKING DETAIL (TYPICAL)**  
1" = 10'

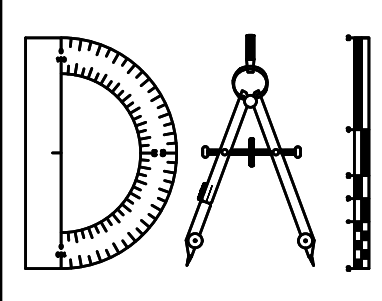


**KEYMAP**  
NTS

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B G.DWG/21/2023 6:15 AM Mike Reilly

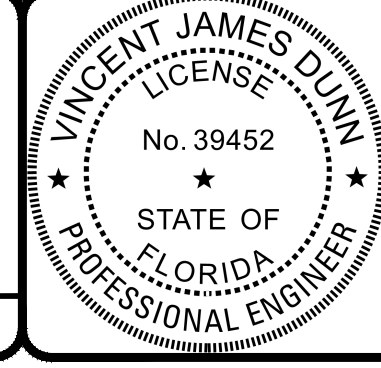
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NO.	DATE	DESCRIPTION

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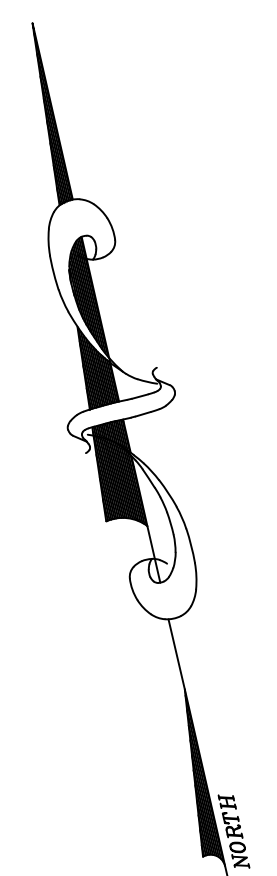
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**2B G-3**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

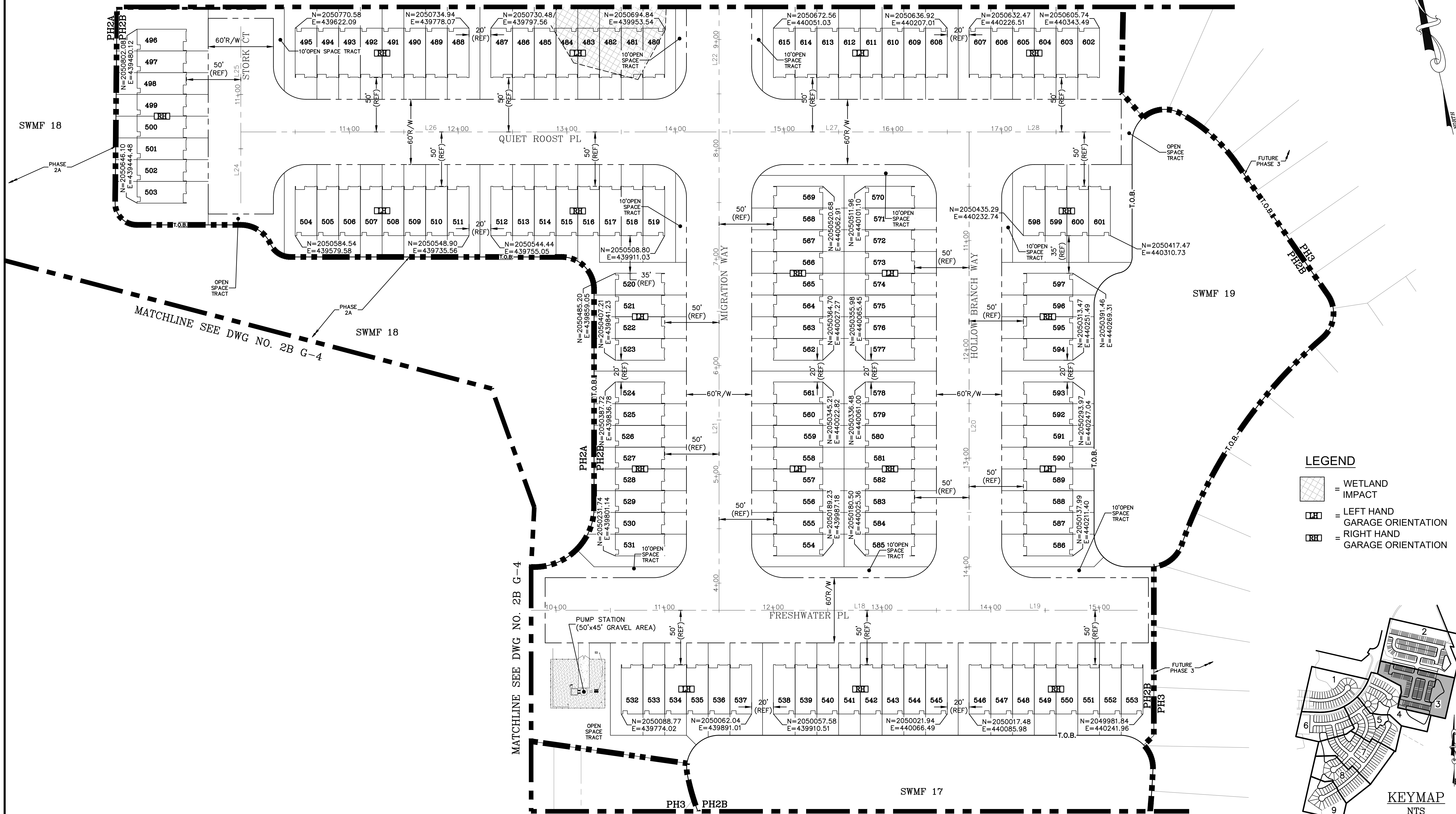
GRAPHIC SCALE



( IN FEET )  
1 inch = 40 ft.

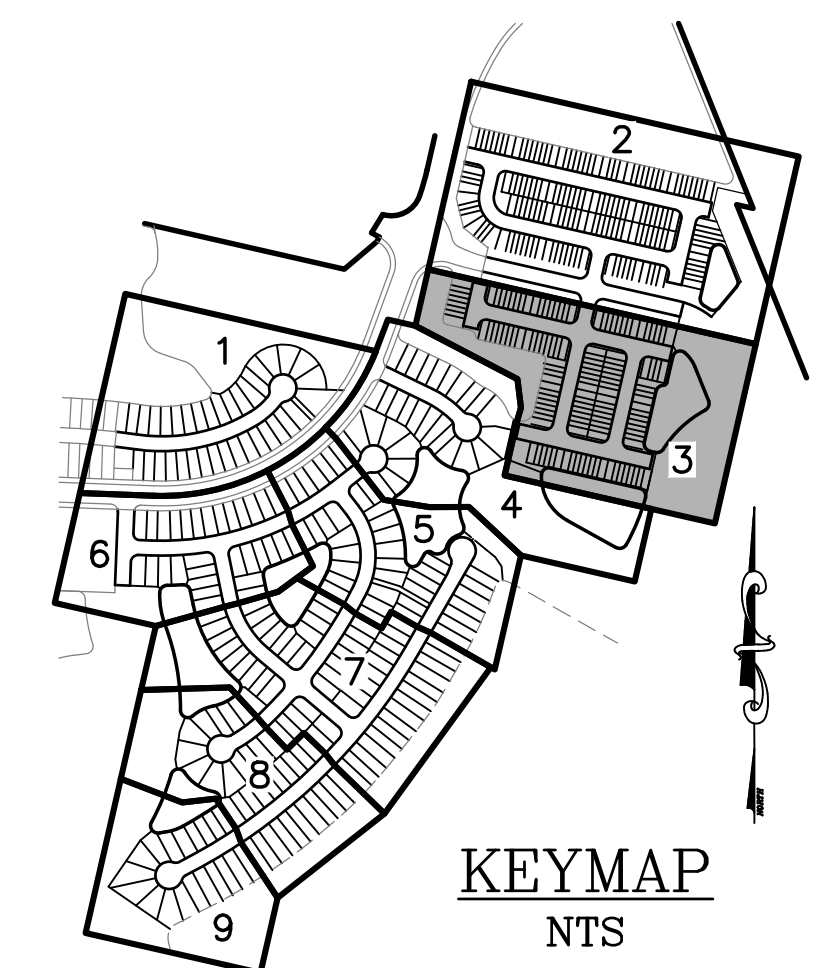


MATCHLINE SEE DWG NO. 2B G-2



**LEGEND**

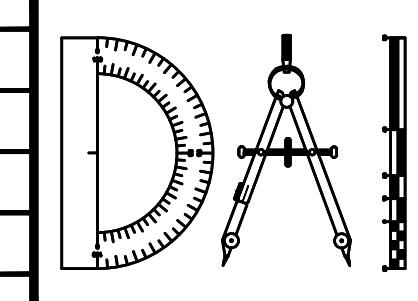
- = WETLAND IMPACT
- = LEFT HAND GARAGE ORIENTATION
- = RIGHT HAND GARAGE ORIENTATION



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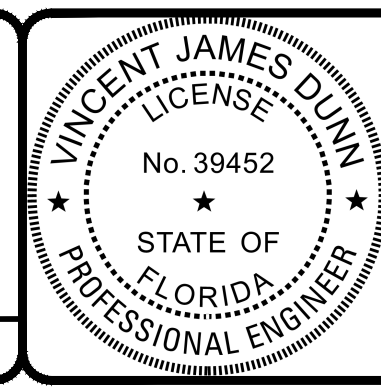
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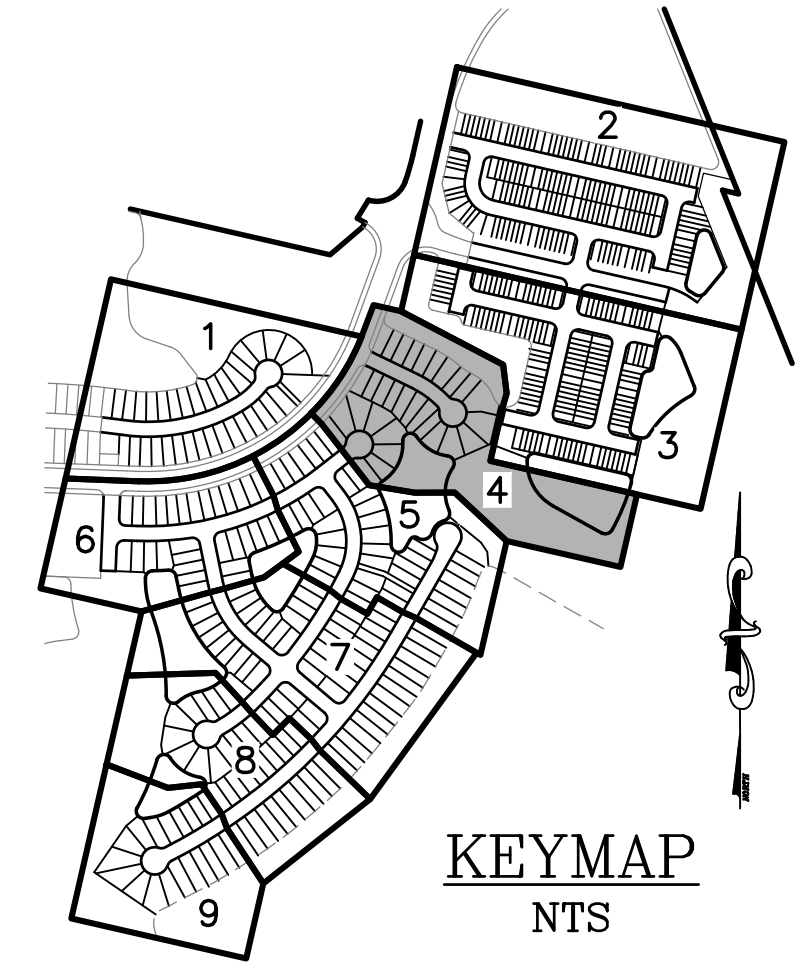
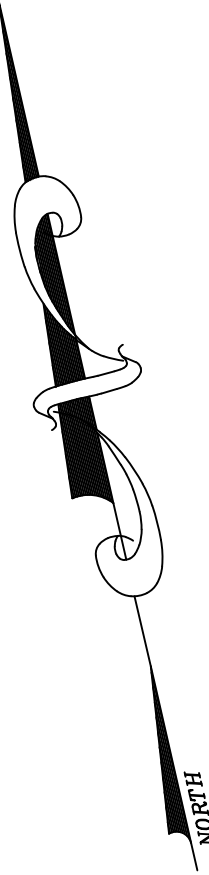
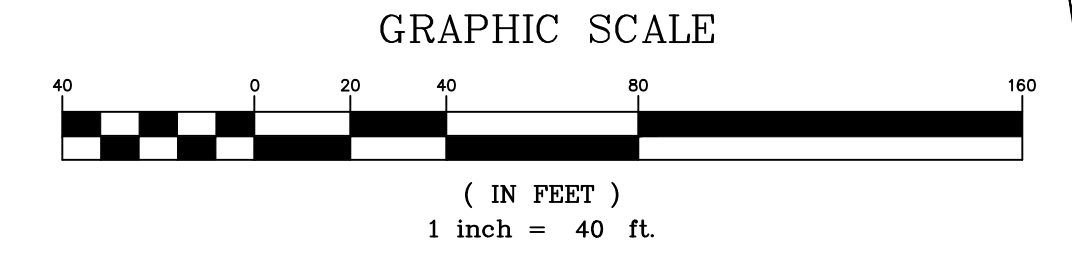
VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 30 of 130  
**2B G-3B**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

LOT WIDTHS:  
MIN. 50% OF SINGLE FAMILY LOTS SHALL BE MIN. 50' IN WIDTH.  
PH2 LOTS 289, 291, 295, 460, 462, 467, 469-471, 473, 475 & 477 (THIS SHEET) ARE 50' OR GREATER

PHASE #	1	2
<50' LOTS	106	156
50'+ LOTS	125	92
TOTAL LOTS	231	248



- LEGEND**
- [Cross-hatched box] = WETLAND IMPACT
  - [Dashed line] = COMMON AREA SIDEWALK (SEE NOTE)

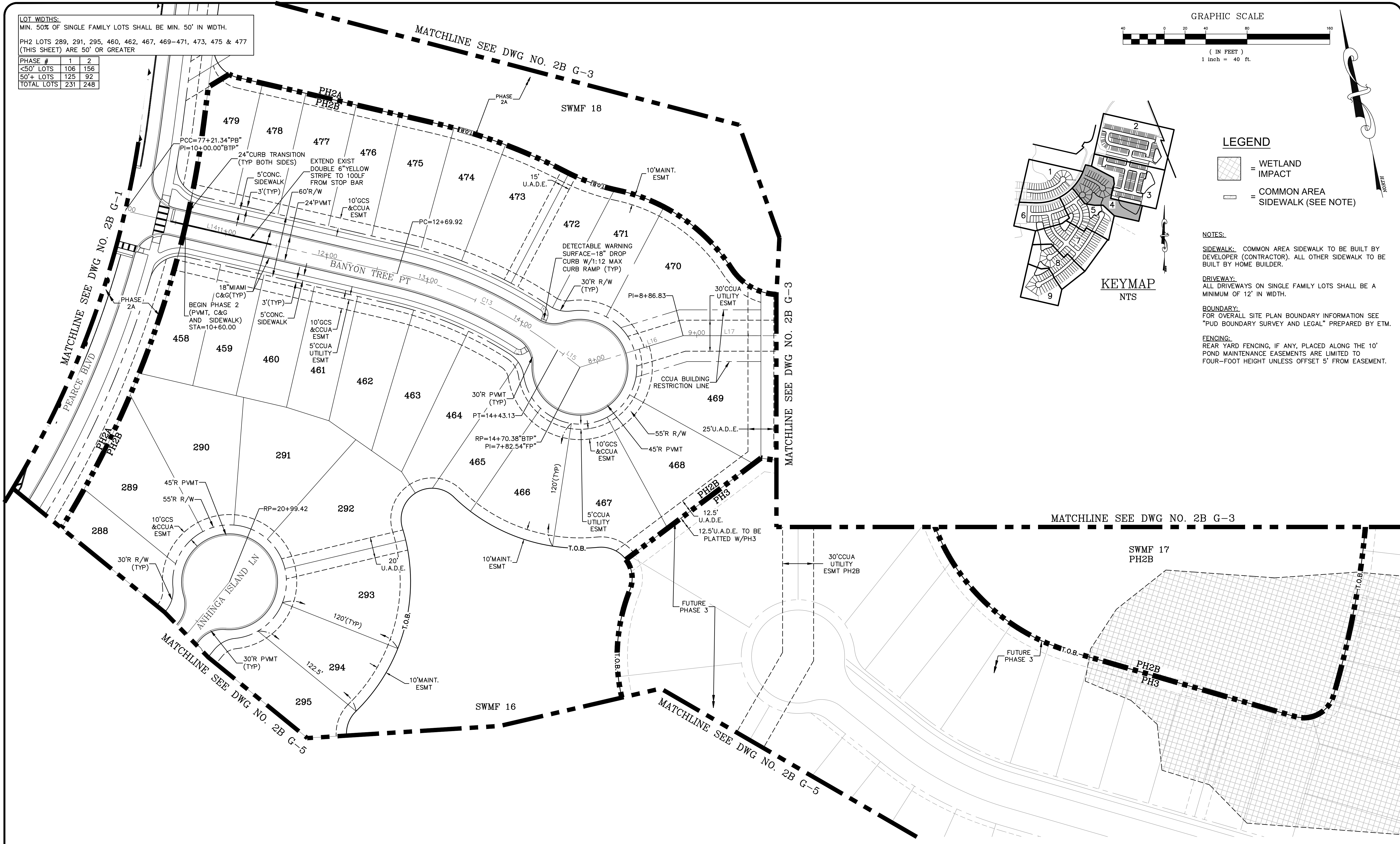
**NOTES:**

**SIDEWALK:** COMMON AREA SIDEWALK TO BE BUILT BY DEVELOPER (CONTRACTOR). ALL OTHER SIDEWALK TO BE BUILT BY HOME BUILDER.

**DRIVEWAY:** ALL DRIVEWAYS ON SINGLE FAMILY LOTS SHALL BE A MINIMUM OF 12' IN WIDTH.

**BOUNDARY:** FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

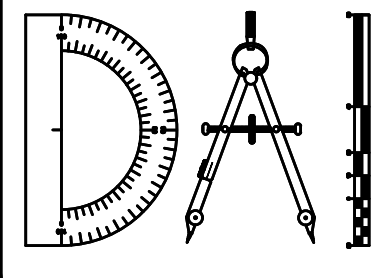
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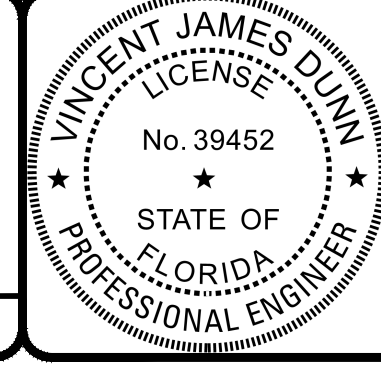
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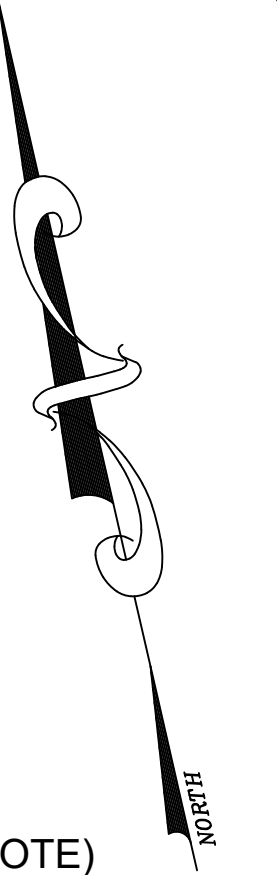
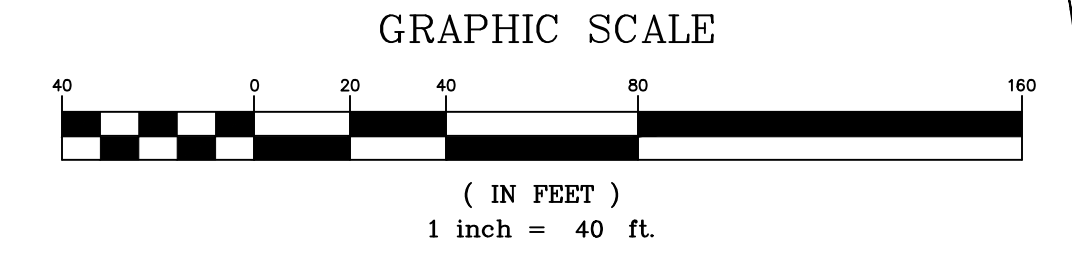
Sheet No. 31 of 130  
**2B G-4**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

LOT WIDTHS:  
MIN. 50% OF SINGLE FAMILY LOTS SHALL BE MIN. 50' IN WIDTH.

PH2 LOTS 281, 284, 297-299, 301, 321, 323-325, 328, 329, 331-333, 352, 353, 356, 357-360 & 364 (THIS SHEET) ARE 50' OR GREATER

PHASE #	1	2
<50' LOTS	106	156
50'+ LOTS	125	92
TOTAL LOTS	231	248



**LEGEND**

= WETLAND IMPACT

= COMMON AREA SIDEWALK (SEE NOTE)

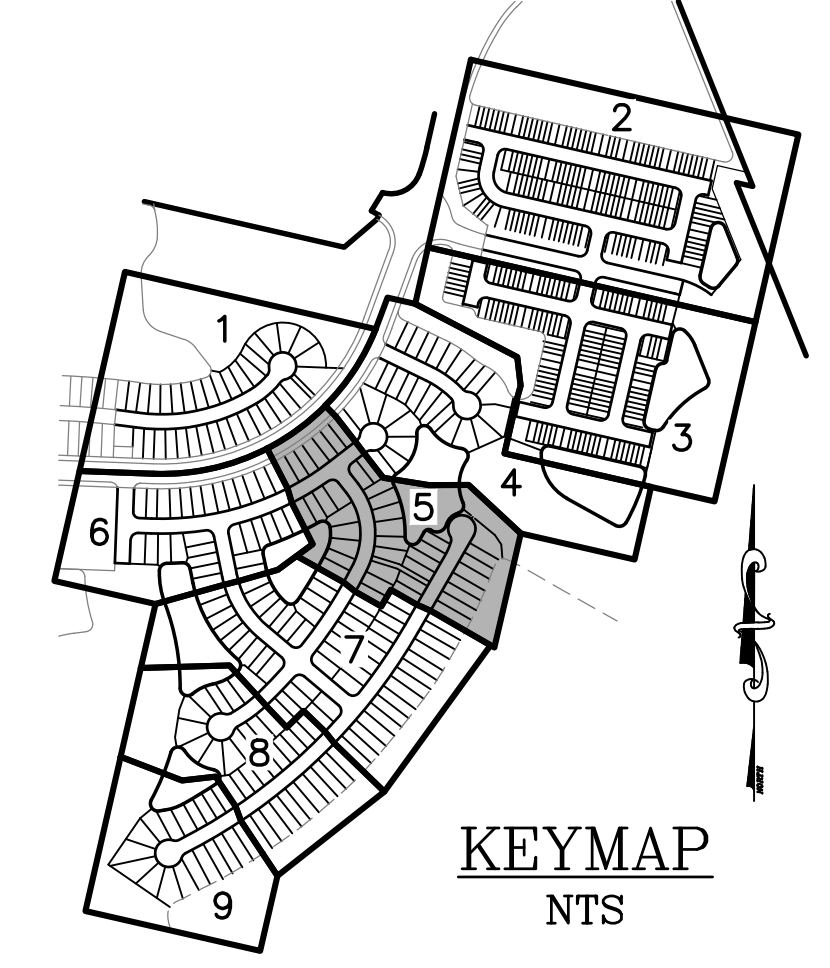
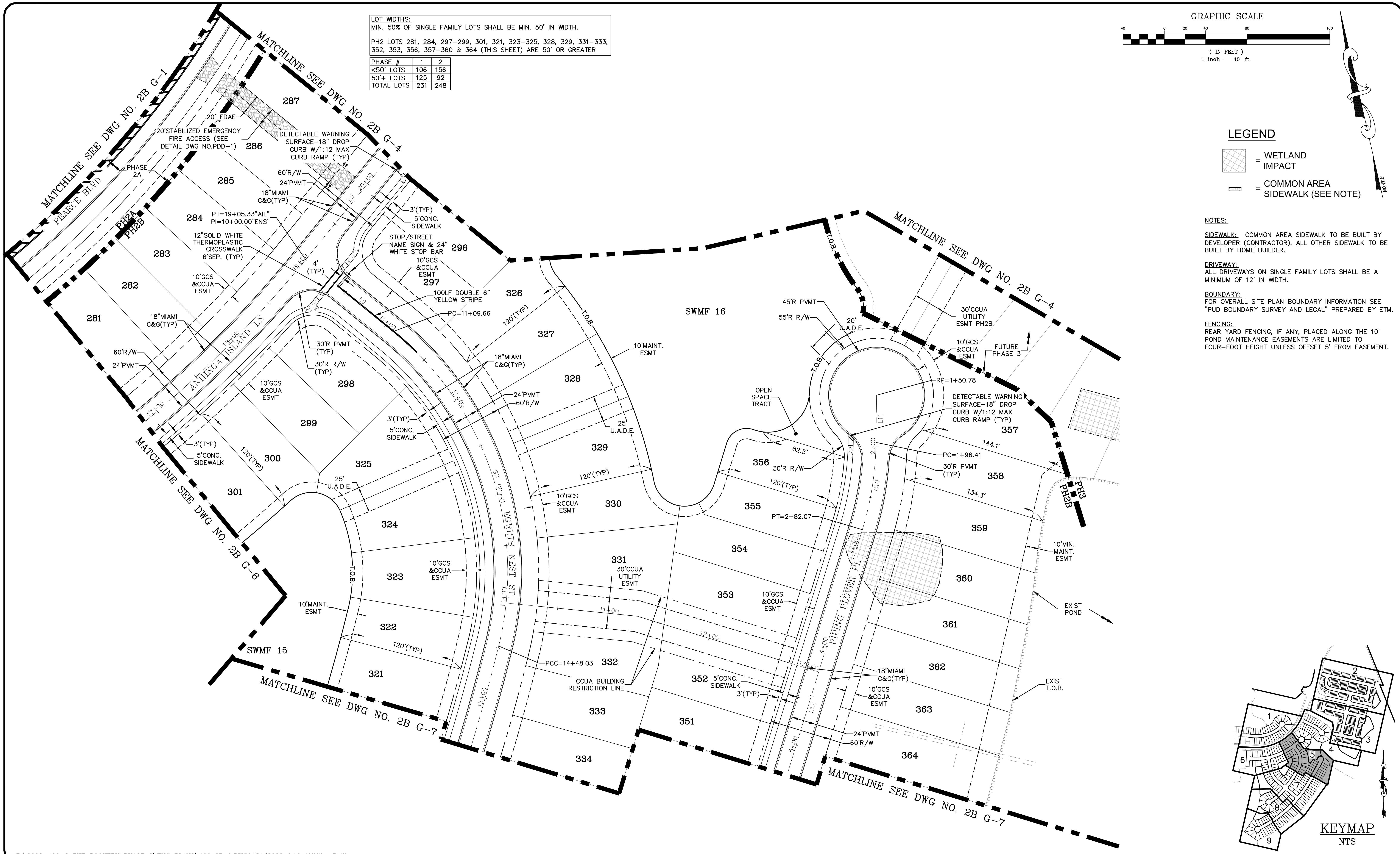
**NOTES:**

**SIDEWALK:** COMMON AREA SIDEWALK TO BE BUILT BY DEVELOPER (CONTRACTOR). ALL OTHER SIDEWALK TO BE BUILT BY HOME BUILDER.

**DRIVEWAY:** ALL DRIVEWAYS ON SINGLE FAMILY LOTS SHALL BE A MINIMUM OF 12' IN WIDTH.

**BOUNDARY:** FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

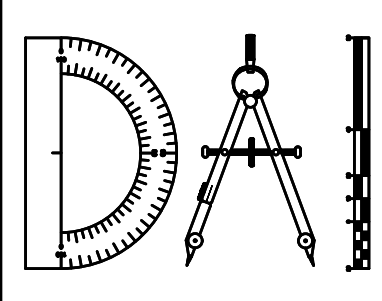
**FENCING:** REAR YARD FENCING, IF ANY, PLACED ALONG THE 10' POND MAINTENANCE EASEMENTS ARE LIMITED TO FOUR-FOOT HEIGHT UNLESS OFFSET 5' FROM EASEMENT.



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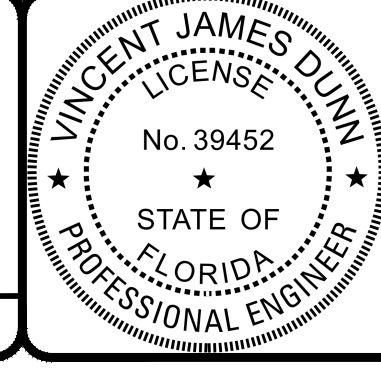
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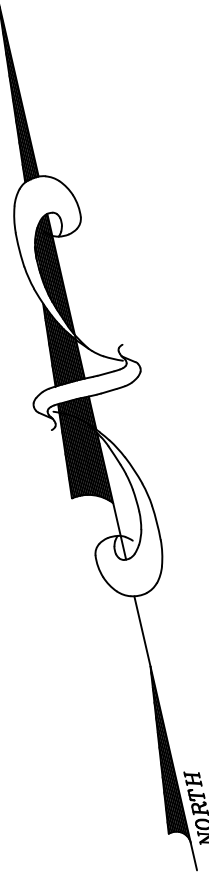
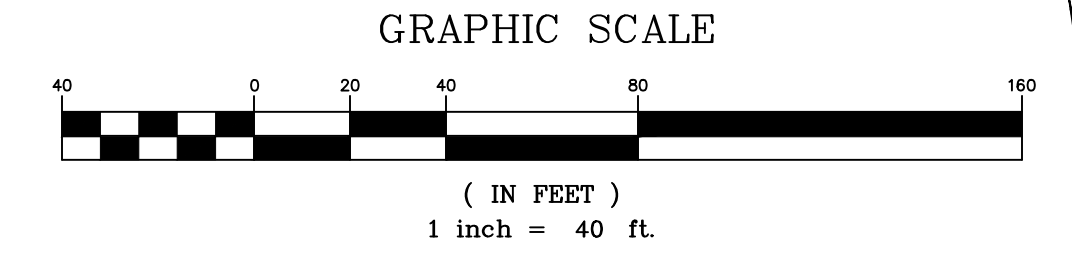
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**2B G-5**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



**LOT WIDTHS:**  
 MIN. 50% OF SINGLE FAMILY LOTS SHALL BE MIN. 50' IN WIDTH.  
 PH2 LOTS 268, 270, 274, 278, 306, 307, 308, 449 & 453-457  
 (THIS SHEET) ARE 50' OR GREATER

PHASE #	1	2
<50' LOTS	106	156
50'+ LOTS	125	92
TOTAL LOTS	231	248



**LEGEND**

- [Hatched Box] = WETLAND IMPACT
- [Dashed Line] = COMMON AREA SIDEWALK (SEE NOTE)

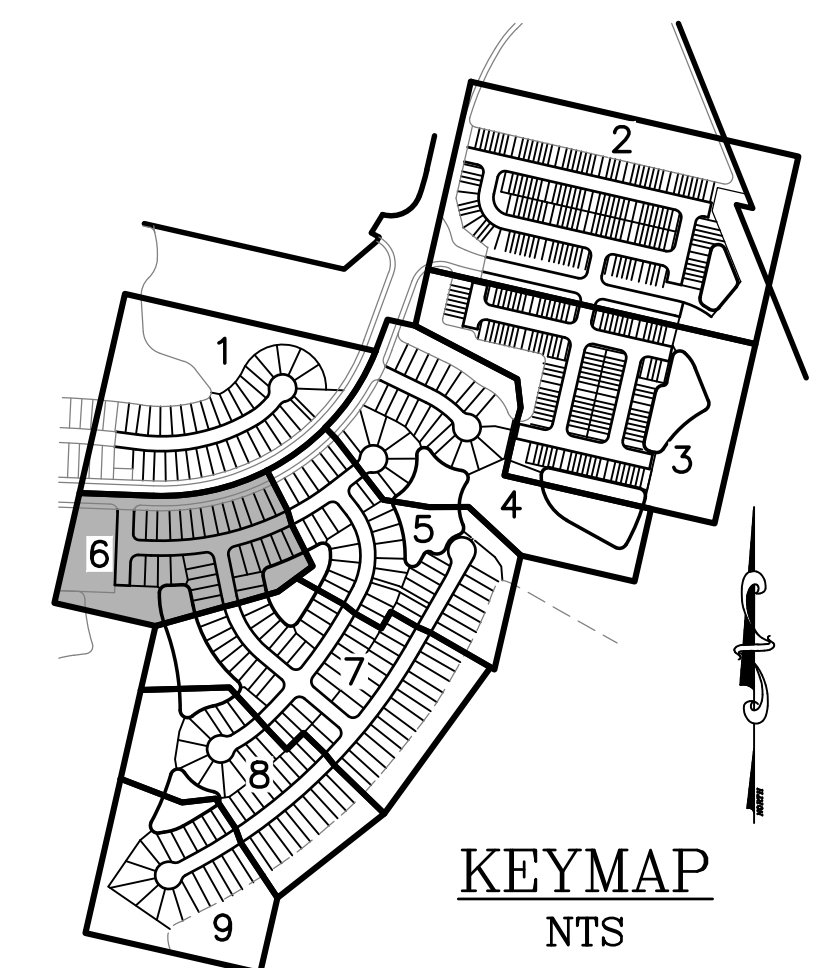
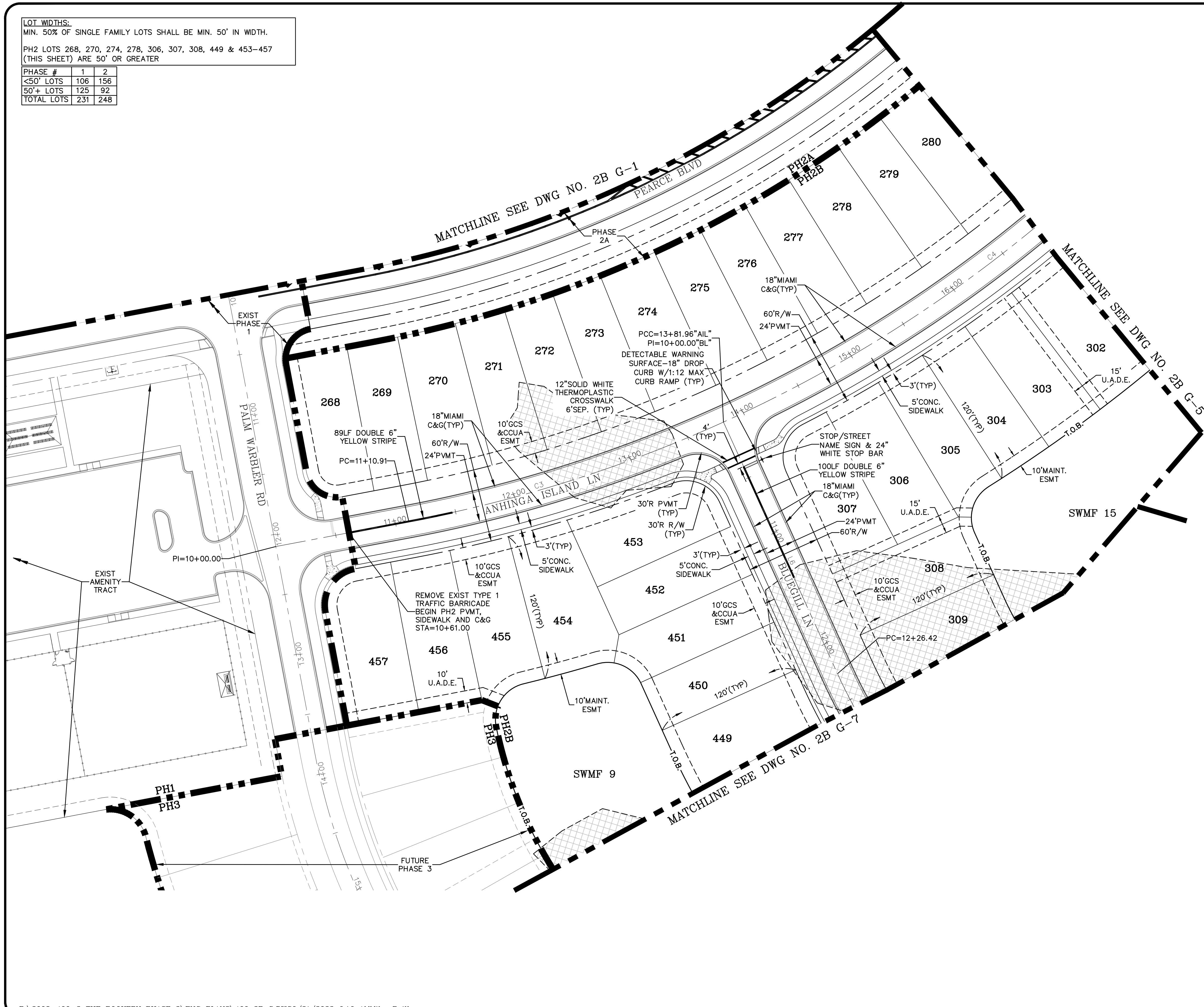
**NOTES:**

**SIDEWALK:** COMMON AREA SIDEWALK TO BE BUILT BY DEVELOPER (CONTRACTOR). ALL OTHER SIDEWALK TO BE BUILT BY HOME BUILDER.

**DRIVEWAY:** ALL DRIVEWAYS ON SINGLE FAMILY LOTS SHALL BE A MINIMUM OF 12' IN WIDTH.

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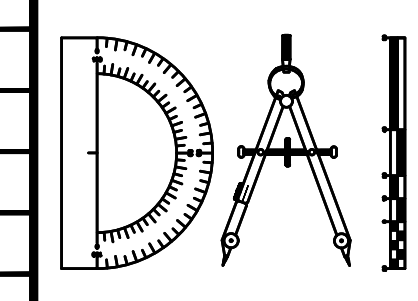
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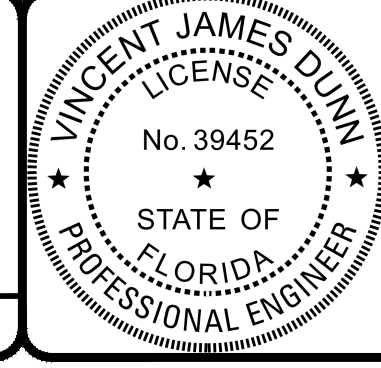
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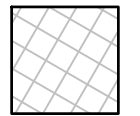

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**2B G-6**  
 DWG. NO.

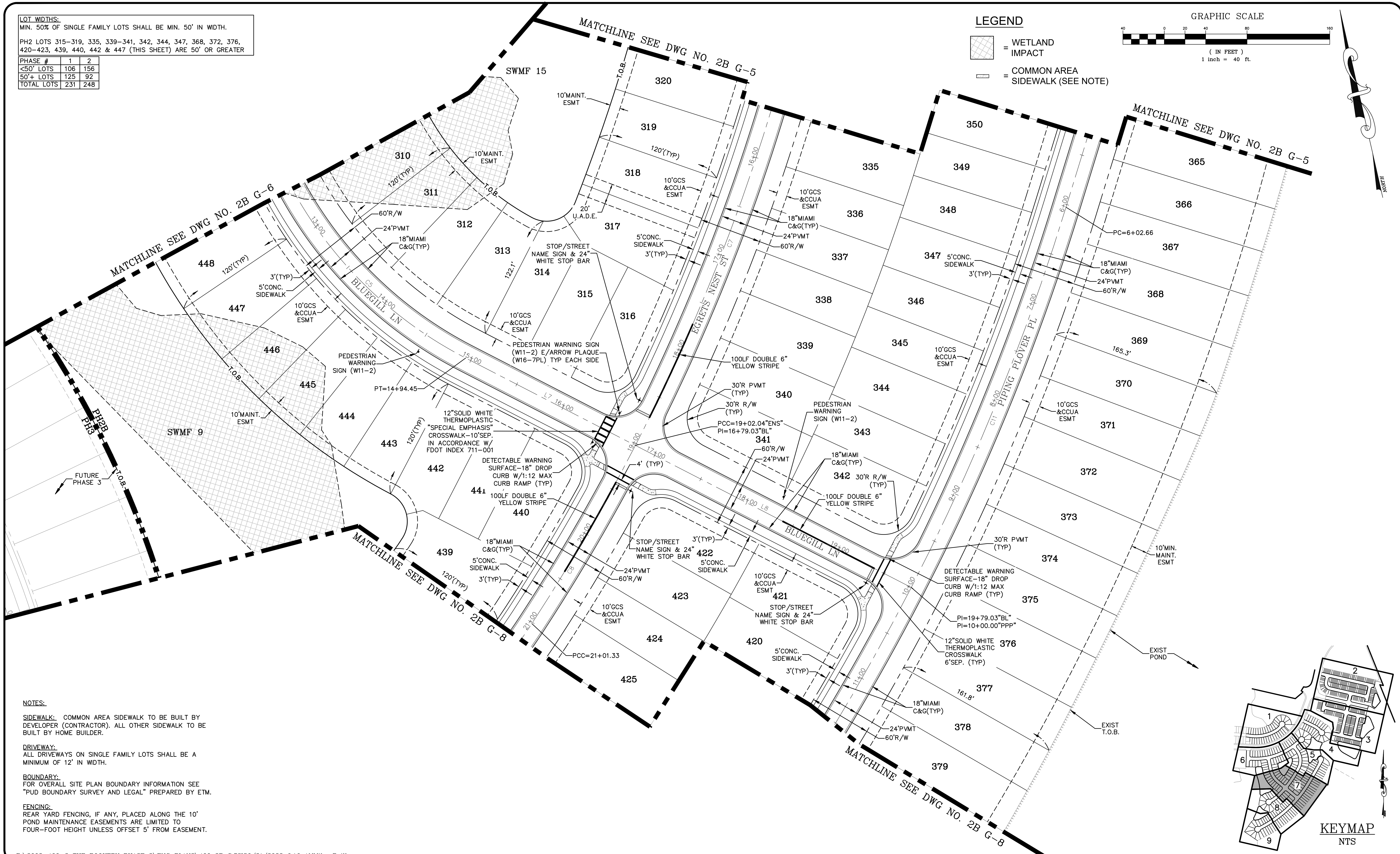
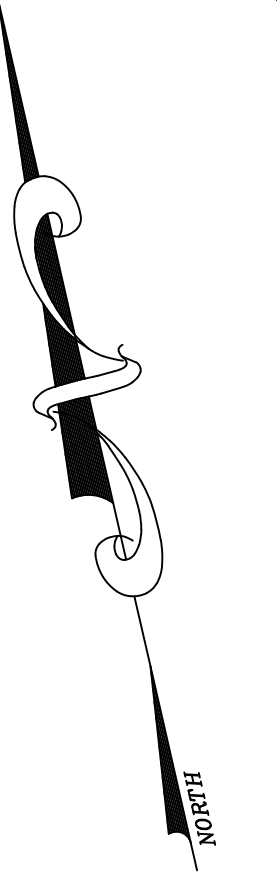
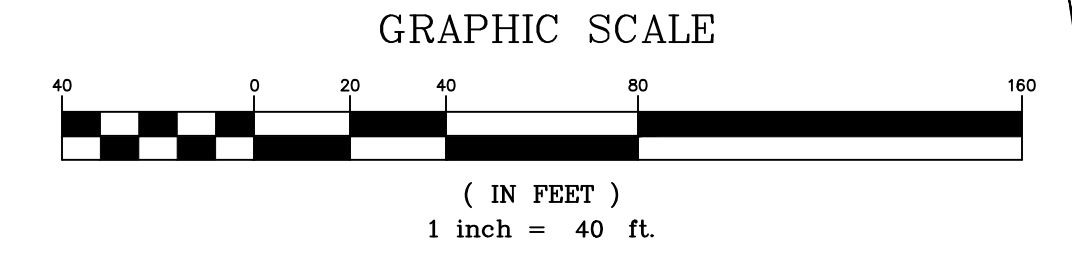
THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

LOT WIDTHS:  
 MIN. 50% OF SINGLE FAMILY LOTS SHALL BE MIN. 50' IN WIDTH.  
 PH2 LOTS 315-319, 335, 339-341, 342, 344, 347, 368, 372, 376,  
 420-423, 439, 440, 442 & 447 (THIS SHEET) ARE 50' OR GREATER

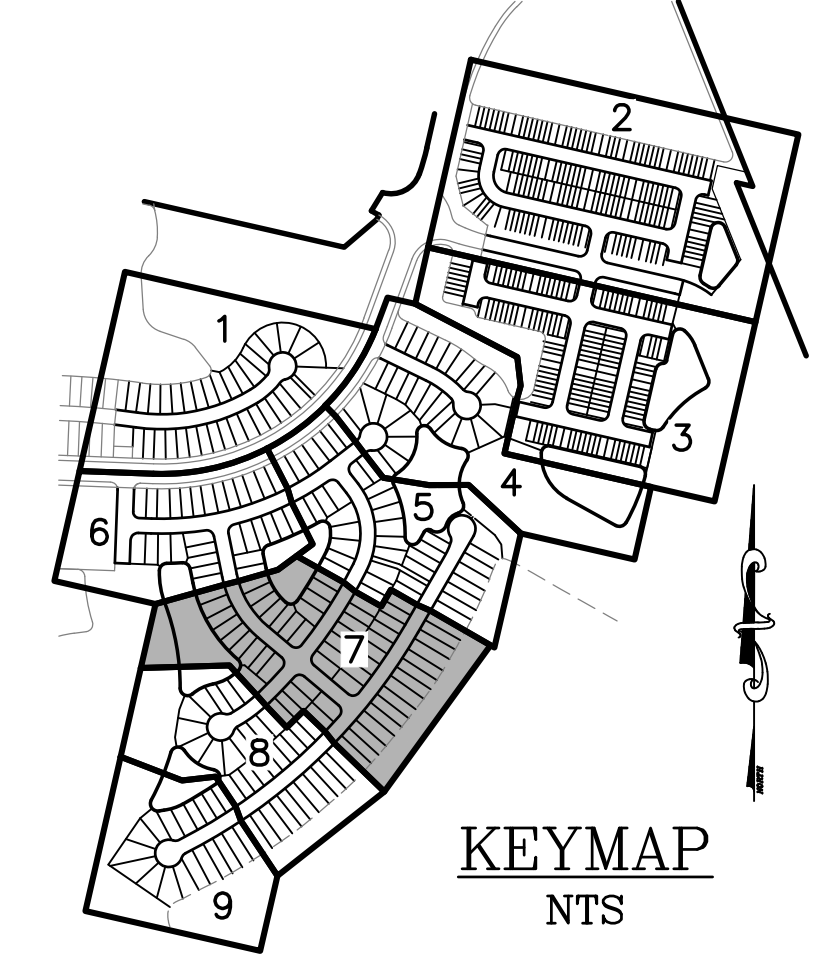
PHASE #	1	2
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50'+ LOTS	125	92
TOTAL LOTS	231	248

LEGEND

-  = WETLAND IMPACT
-  = COMMON AREA SIDEWALK (SEE NOTE)



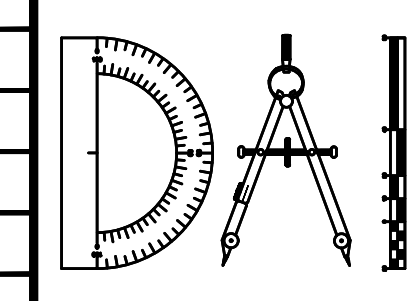
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 BOUNDARY: FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.  
 FENCING: REAR YARD FENCING, IF ANY, PLACED ALONG THE 10' POND MAINTENANCE EASEMENTS ARE LIMITED TO FOUR-FOOT HEIGHT UNLESS OFFSET 5' FROM EASEMENT.



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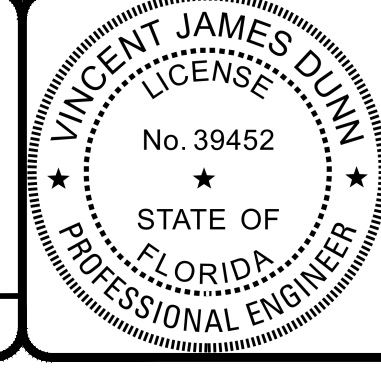
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 GEOMETRY PLAN



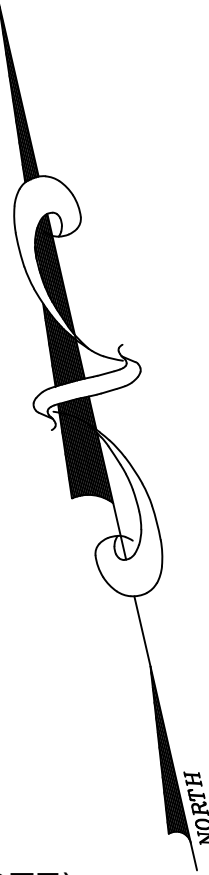
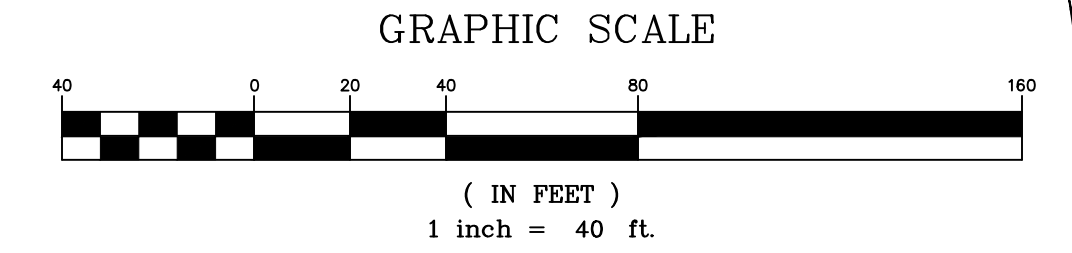
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 VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 34 of 130  
**2B G-7**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

LOT WIDTHS:  
 MIN. 50% OF SINGLE FAMILY LOTS SHALL BE MIN. 50' IN WIDTH.  
 PH2 LOTS 380, 384, 388, 410, 413, 419, 426, 427, 429, 431, 433,  
 435, 437 & 438 (THIS SHEET) ARE 50' OR GREATER

PHASE #	1	2
<50' LOTS	106	156
50'+ LOTS	125	92
TOTAL LOTS	231	248



LEGEND

- = WETLAND IMPACT
- = COMMON AREA SIDEWALK (SEE NOTE)

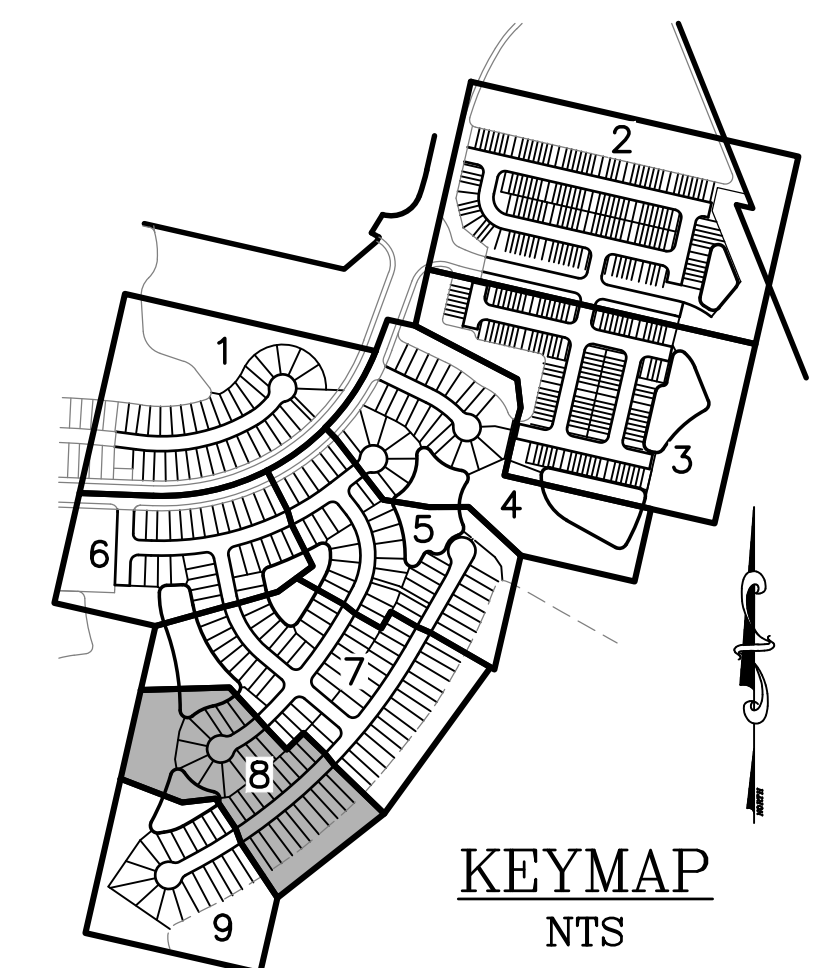
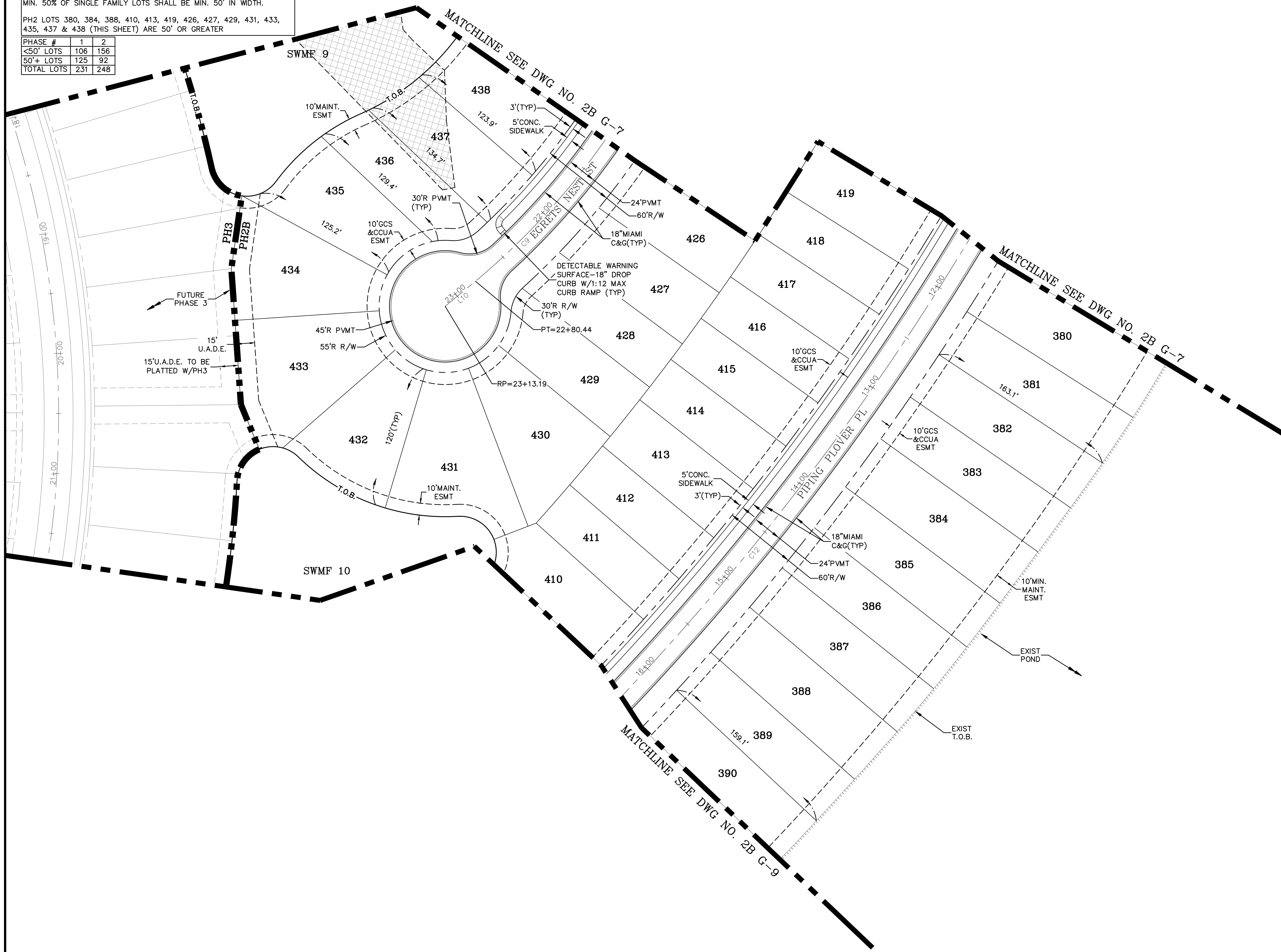
NOTES:

**SIDEWALK:** COMMON AREA SIDEWALK TO BE BUILT BY DEVELOPER (CONTRACTOR). ALL OTHER SIDEWALK TO BE BUILT BY HOME BUILDER.

**DRIVEWAY:** ALL DRIVEWAYS ON SINGLE FAMILY LOTS SHALL BE A MINIMUM OF 12' IN WIDTH.

**BOUNDARY:** FOR OVERALL SITE PLAN BOUNDARY INFORMATION SEE "PUD BOUNDARY SURVEY AND LEGAL" PREPARED BY ETM.

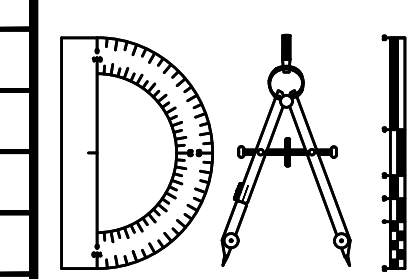
**FENCING:** REAR YARD FENCING, IF ANY, PLACED ALONG THE 10' POND MAINTENANCE EASEMENTS ARE LIMITED TO FOUR-FOOT HEIGHT UNLESS OFFSET 5' FROM EASEMENT.



P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B G.DWG/21/2023 6:16 AMMike Reilly

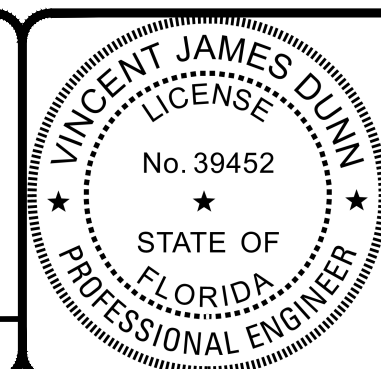
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 GEOMETRY PLAN



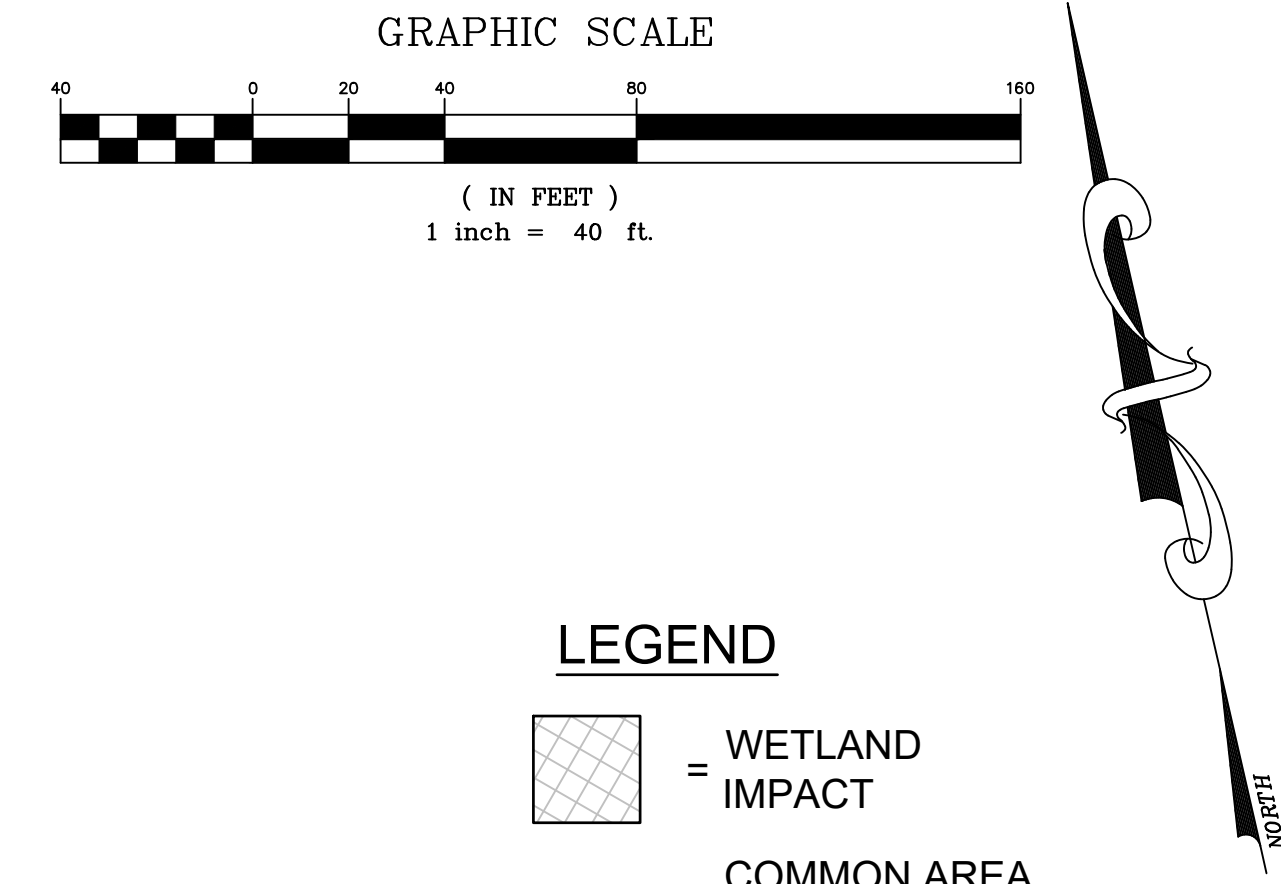
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 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 35 of 130  
**2B G-8**  
 DWG. NO.

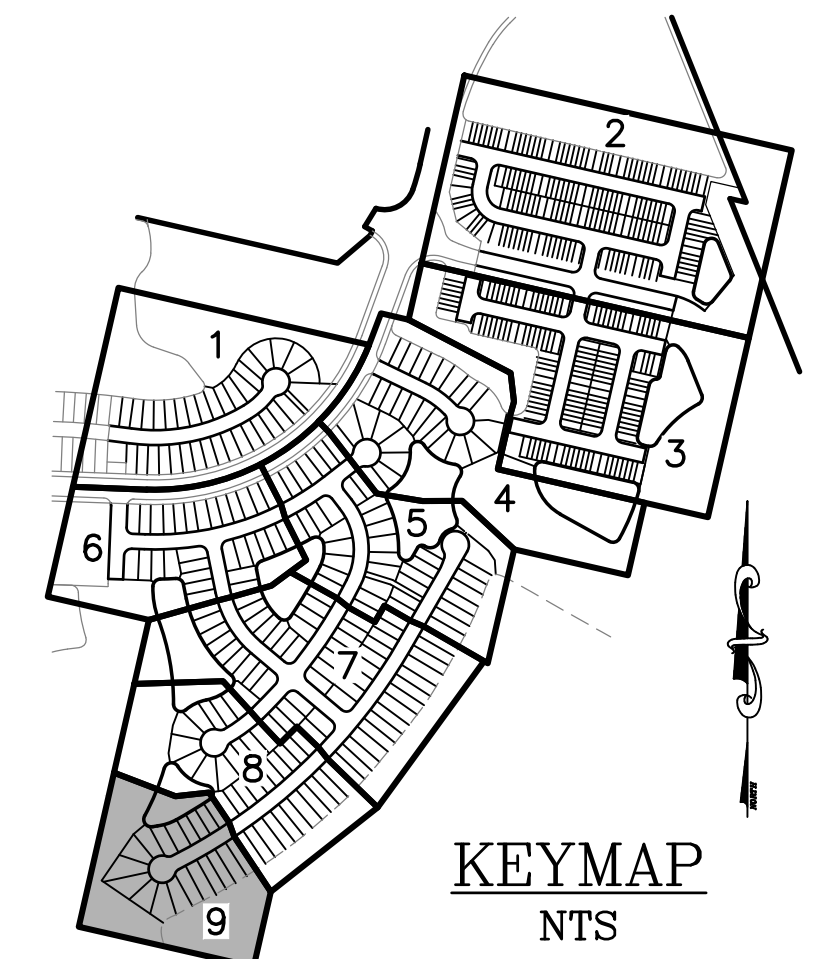
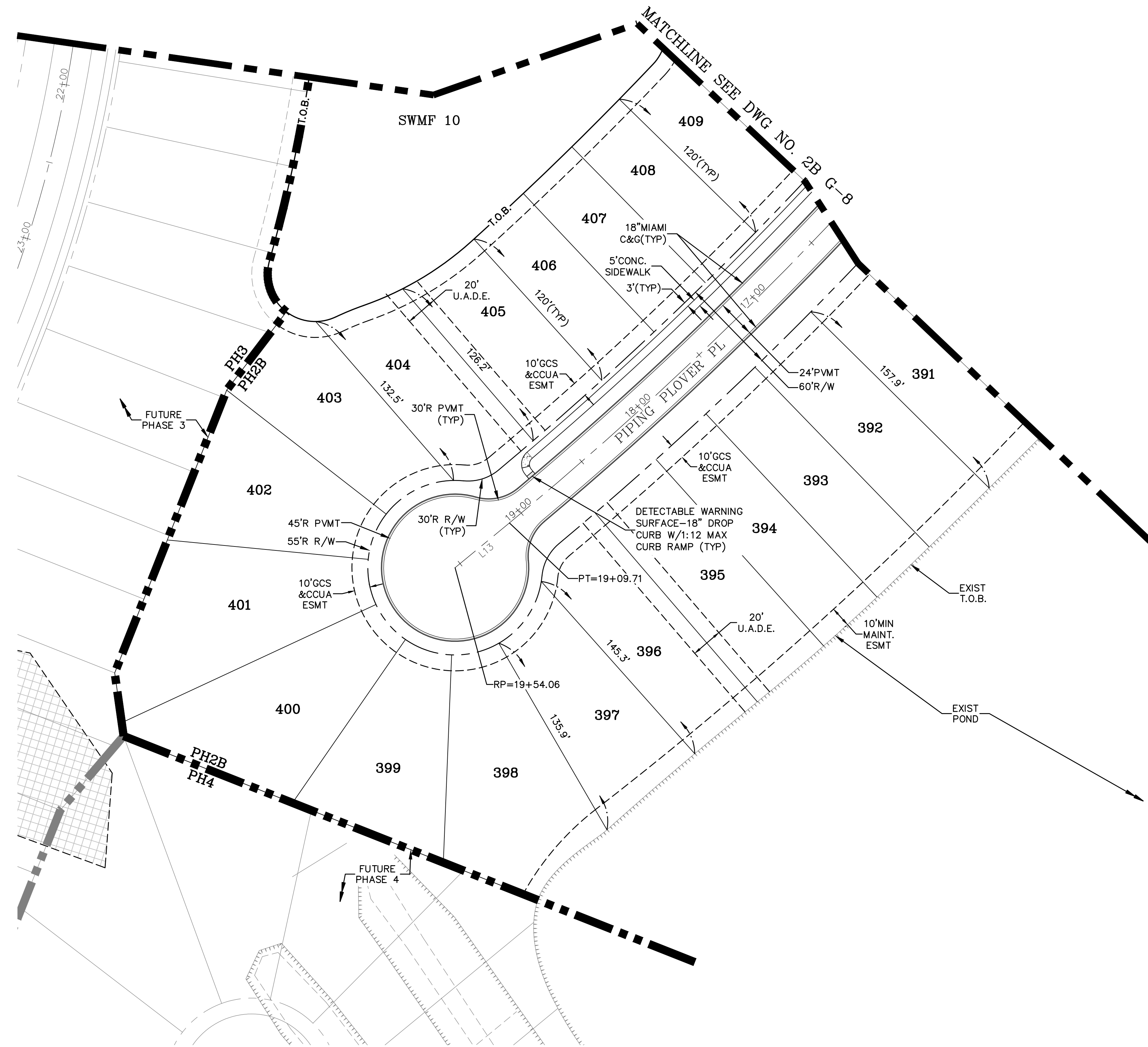
THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

LOT WIDTHS:  
 MIN. 50% OF SINGLE FAMILY LOTS SHALL BE MIN. 50' IN WIDTH.  
 PH2 LOTS 392, 395-397 & 403-405 (THIS SHEET) ARE 50' OR GREATER

PHASE #	1	2
<50' LOTS	106	156
50'+ LOTS	125	92
TOTAL LOTS	231	248



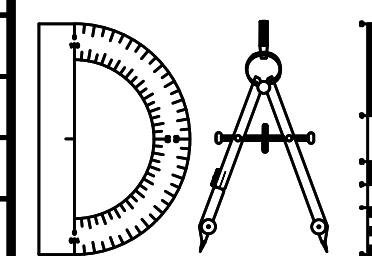
**NOTES:**  
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**FENCING:** REAR YARD FENCING, IF ANY, PLACED ALONG THE 10' POND MAINTENANCE EASEMENTS ARE LIMITED TO FOUR-FOOT HEIGHT UNLESS OFFSET 5' FROM EASEMENT.



P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B G.DWG/21/2023 6:16 AMMike Reilly

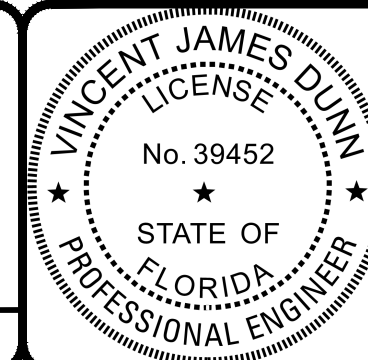
REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
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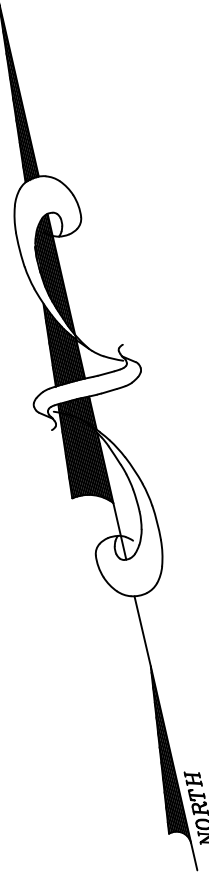
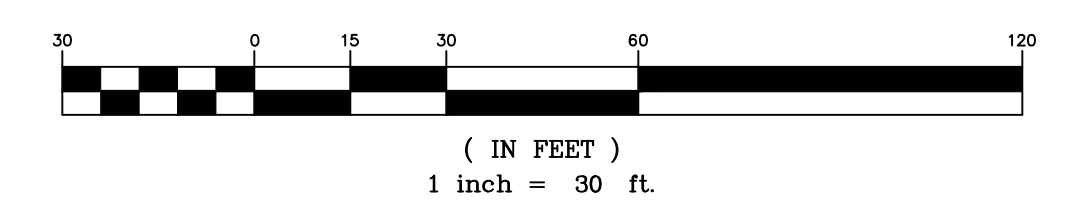
**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 GEOMETRY PLAN



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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. **36** of 130  
**2B G-9**  
 DWG. NO.

GRAPHIC SCALE

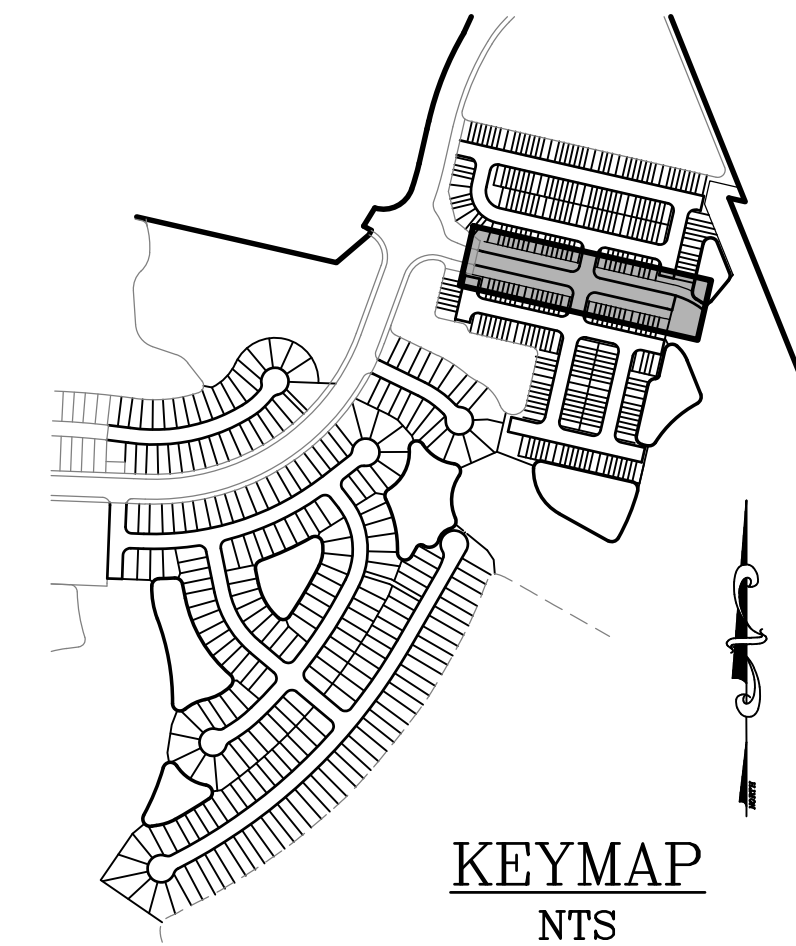


**LEGEND**

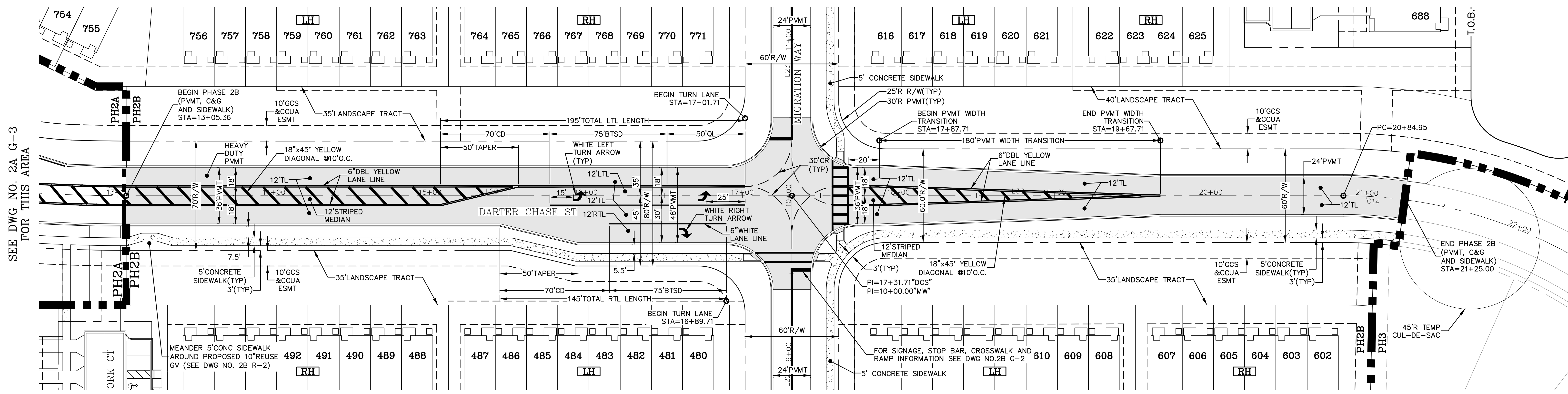
- = COMMON AREA SIDEWALK (SEE NOTE)
- = LEFT HAND GARAGE ORIENTATION
- = RIGHT HAND GARAGE ORIENTATION
- QL = QUEUE LENGTH
- BTSD = BRAKE TO STOP DISTANCE
- CD = CLEARANCE DISTANCE
- TL = TRAVEL LANE
- LTL = LEFT TURN LANE
- RTL = RIGHT TURN LANE

**NOTE:**

SIDEWALK: COMMON AREA SIDEWALK TO BE BUILT BY DEVELOPER (CONTRACTOR). ALL OTHER SIDEWALK TO BE BUILT BY HOME BUILDER.



SEE DWG NO. 2B G-2 FOR THIS AREA



SEE DWG NO. 2A G-3 FOR THIS AREA

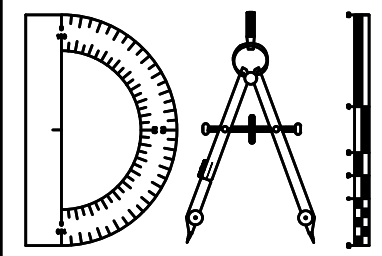
**TURN LANE NOTE:**  
ALL TURN LANE LENGTHS ARE MEASURED ALONG THE EXTENSION OF EDGE OF TRAVEL LANE LINE AS DEPICTED IN FDOT INDEX 711-001 SHEET 5 OF 13 FROM BEGIN STATION TO END STATION OF EACH TURN LANE.

SEE DWG NO. 2B G-3 FOR THIS AREA

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B G.DWG/21/2023 6:16 AM Mike Reilly

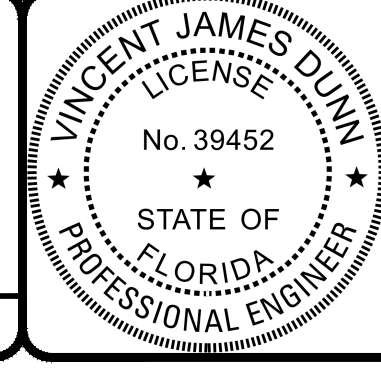
REVISIONS	
NO.	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 30'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



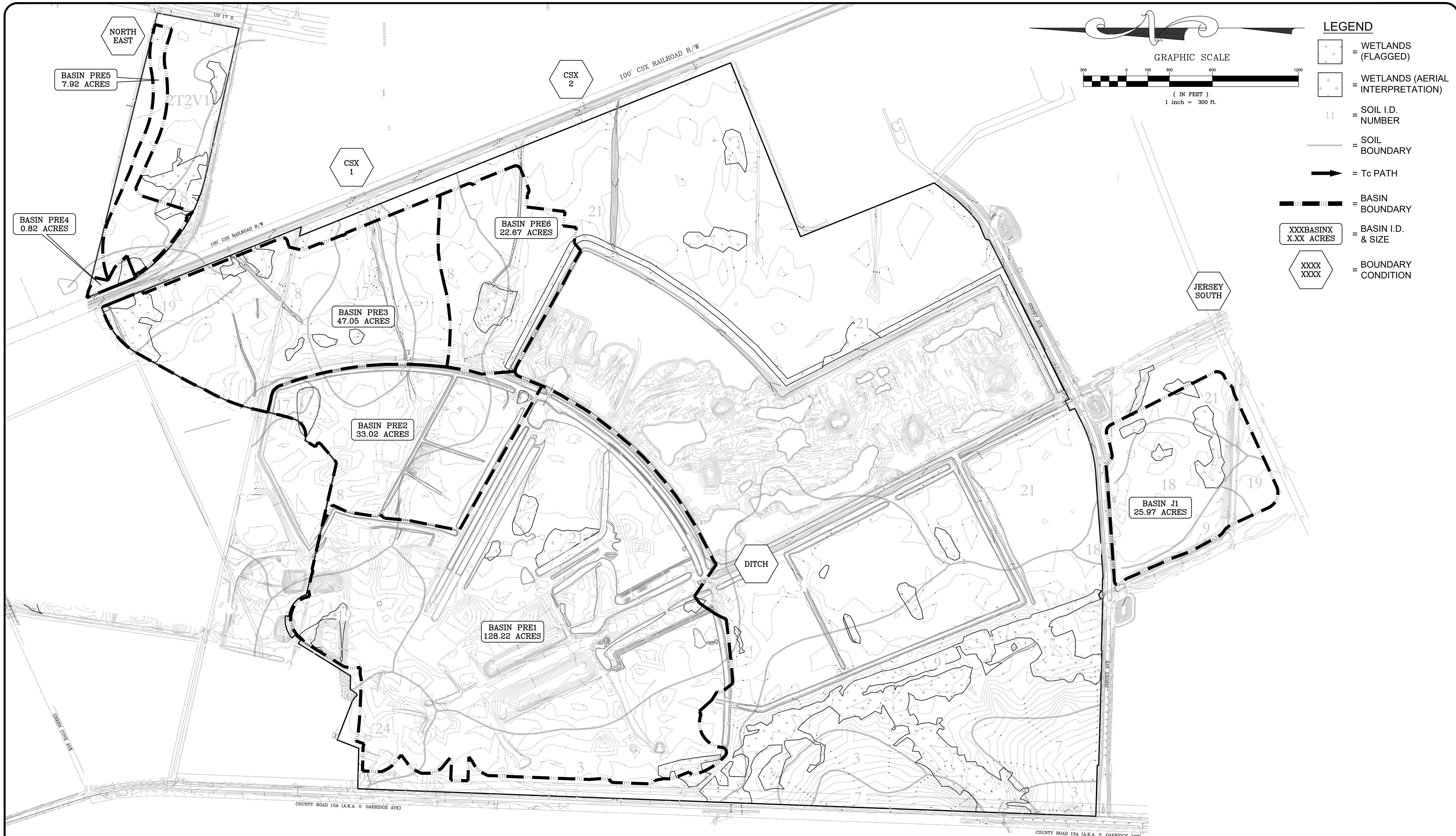
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 GEOMETRY PLAN - ROADWAY & TURNLANE



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 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 37 of 130  
**2B G-10**  
 DWG. NO.



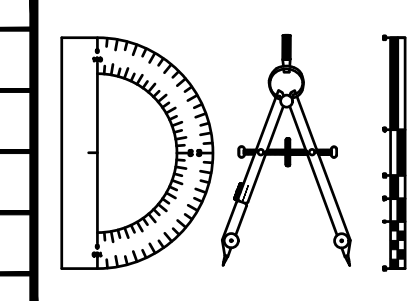
THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

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P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2 PRE-PST.DWG9/21/2023 6:17 AMMike Reilly

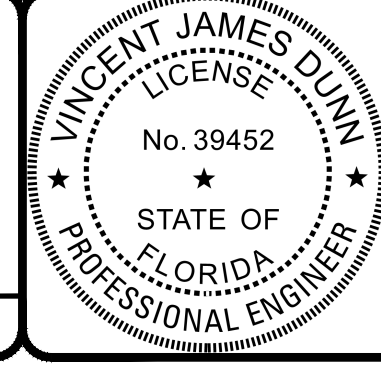
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
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 CHECKED BY: VJD  
 SCALE: 1" = 300'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



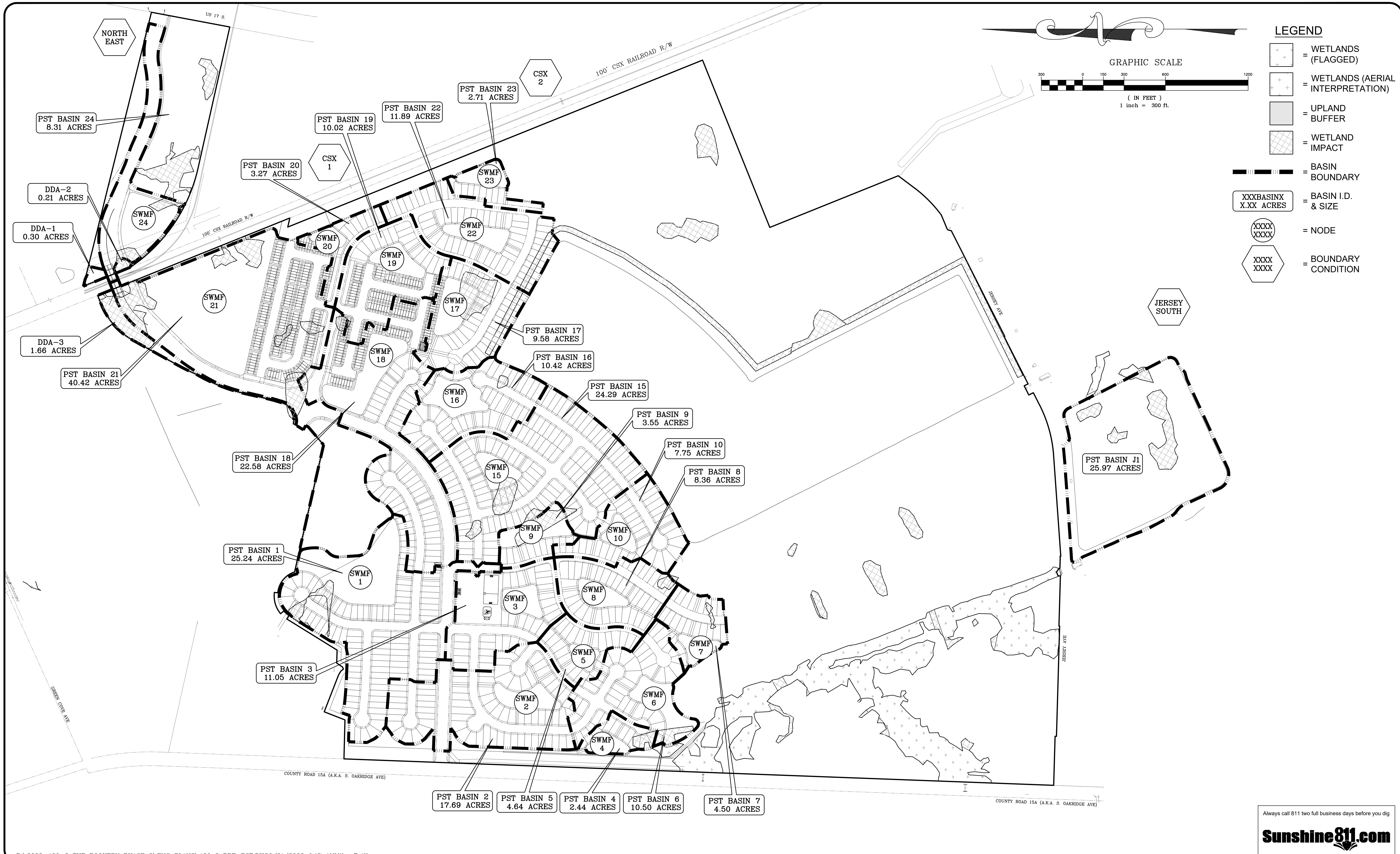
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 PRE DEVELOPMENT PLAN



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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. **38** of 130  
**PRE-1**  
 DWG. NO.

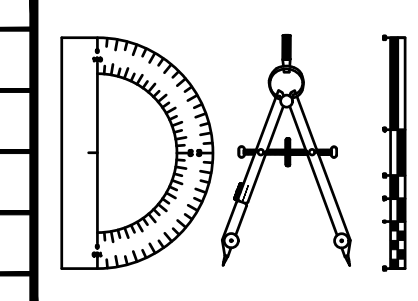


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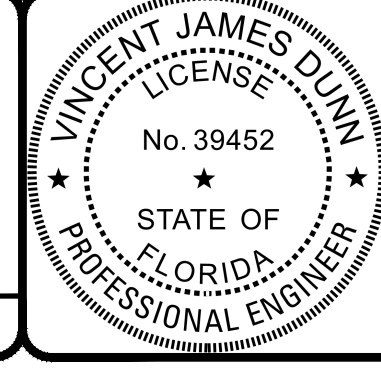
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 300'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 POST DEVELOPMENT PLAN



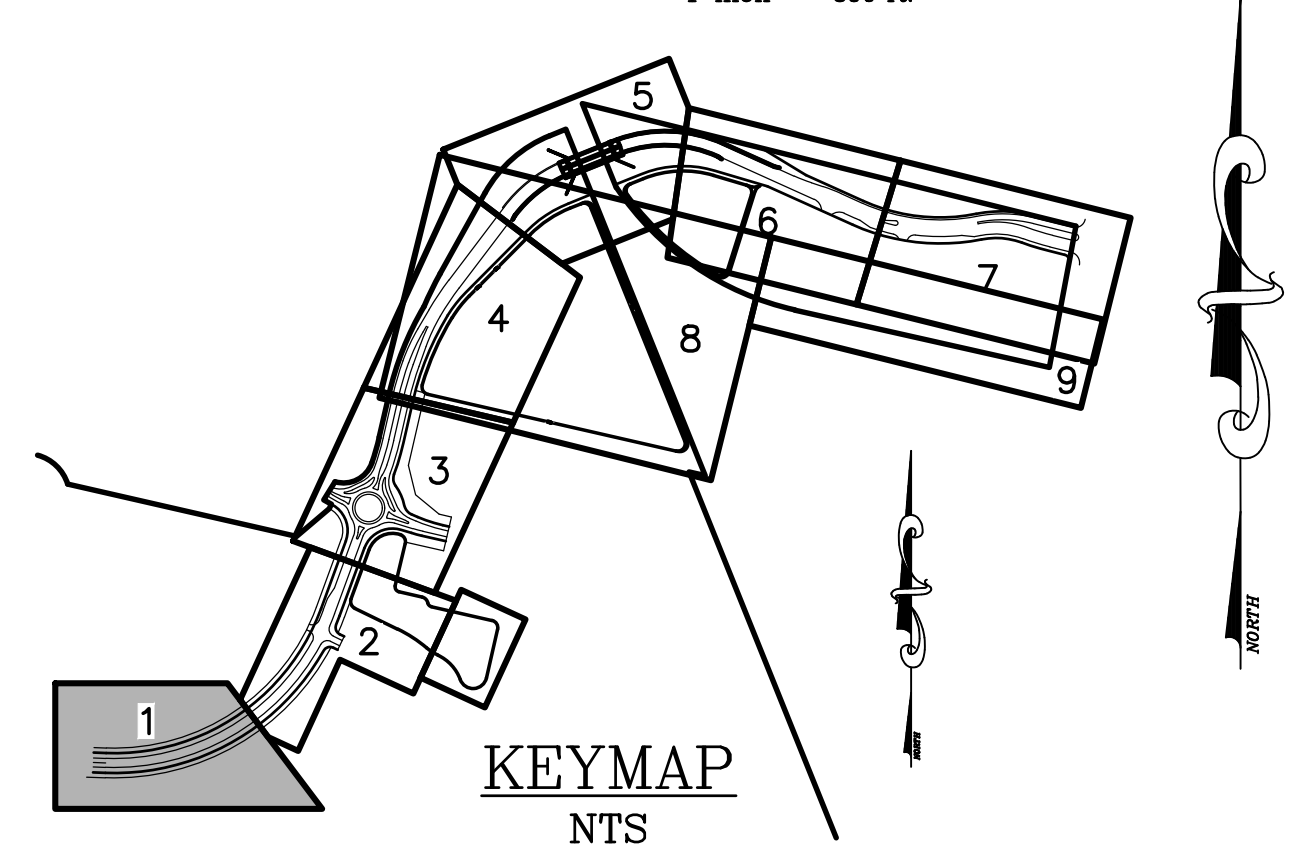
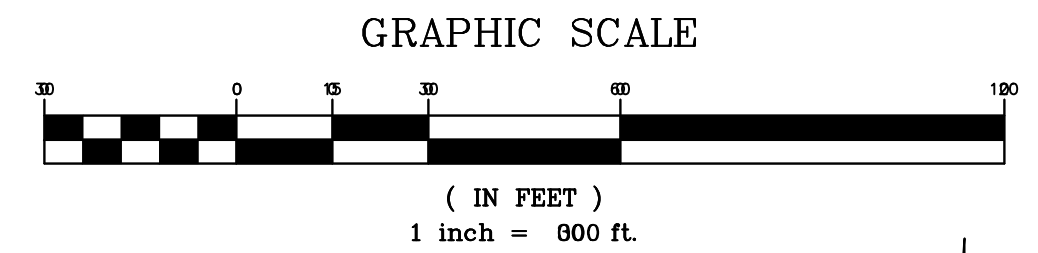
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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 39 of 130  
**PST-1**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

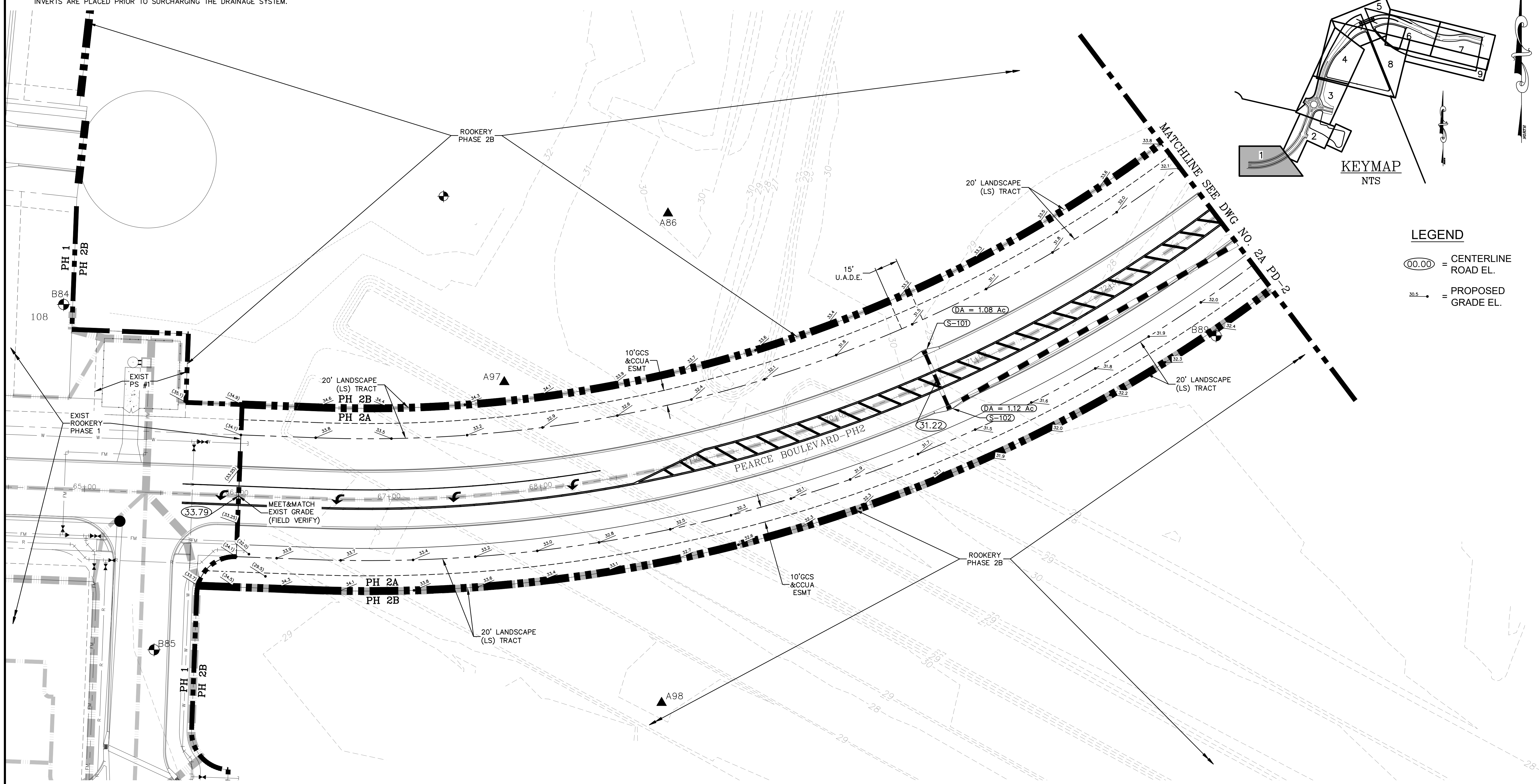
**CONTRACTOR NOTES:**

1. THE CONTRACTOR SHALL PROVIDE A COPY OF THE DEP NPDES PERMIT AND SHALL INSTALL SILT FENCE PRIOR TO ANY CONSTRUCTION ACTIVITIES INCLUDING TREE REMOVAL. UPON COMPLETION OF SILT FENCE INSTALLATION CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD TO SCHEDULE AN EROSION CONTROL INSPECTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.



**LEGEND**

- 00.00 = CENTERLINE ROAD EL.
- 30.5 = PROPOSED GRADE EL.



P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2A PD.DWG9/21/2023 6:18 AMMike Reilly

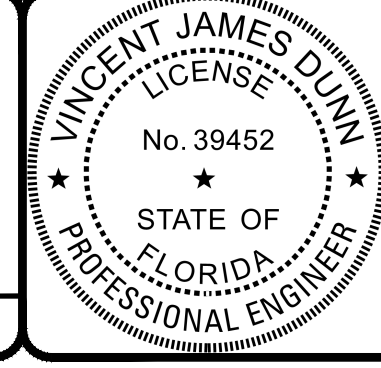
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REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 30'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2

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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
**2A PAVING & DRAINAGE PLAN**

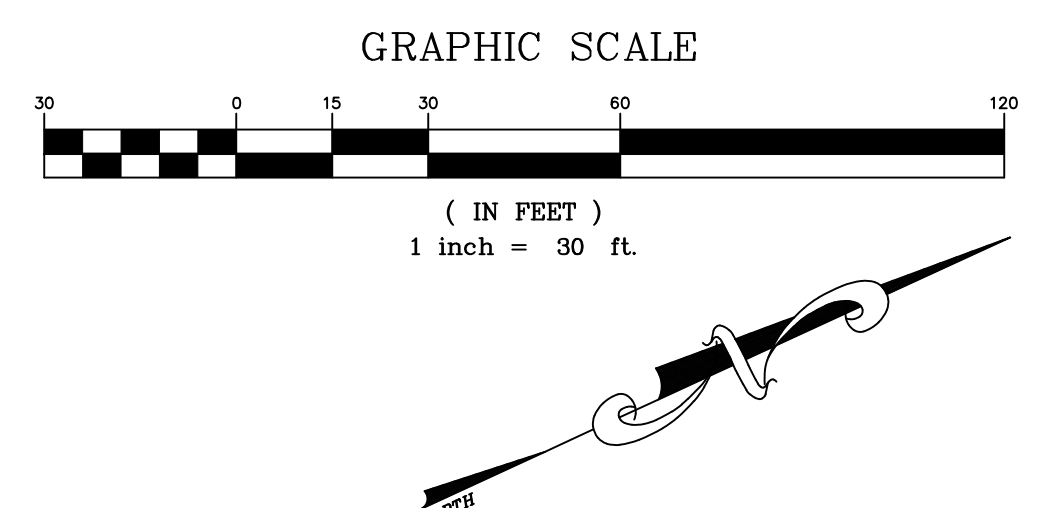


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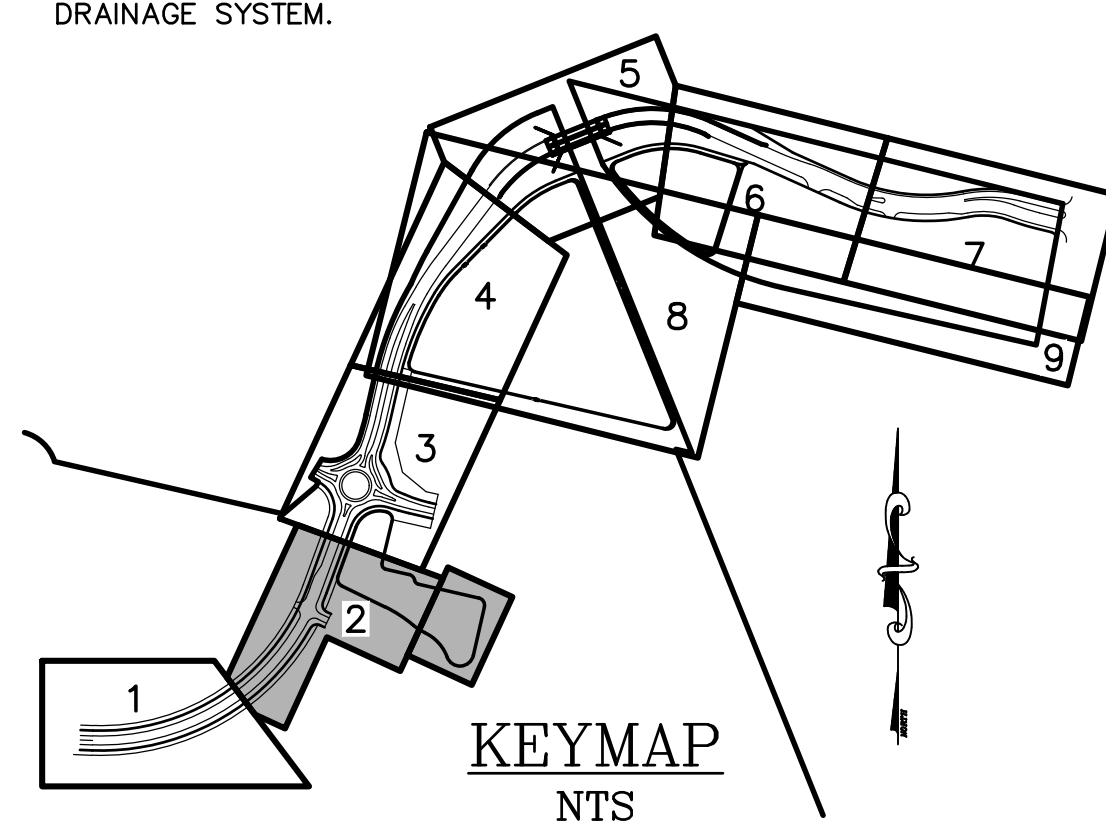
Sheet No. 40 of 130  
**2A PD-1**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)





- CONTRACTOR NOTES:**
1. THE CONTRACTOR SHALL PROVIDE A COPY OF THE DEP NPDES PERMIT AND SHALL INSTALL SILT FENCE PRIOR TO ANY CONSTRUCTION ACTIVITIES INCLUDING TREE REMOVAL. UPON COMPLETION OF SILT FENCE INSTALLATION CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD TO SCHEDULE AN EROSION CONTROL INSPECTION.
  2. THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.

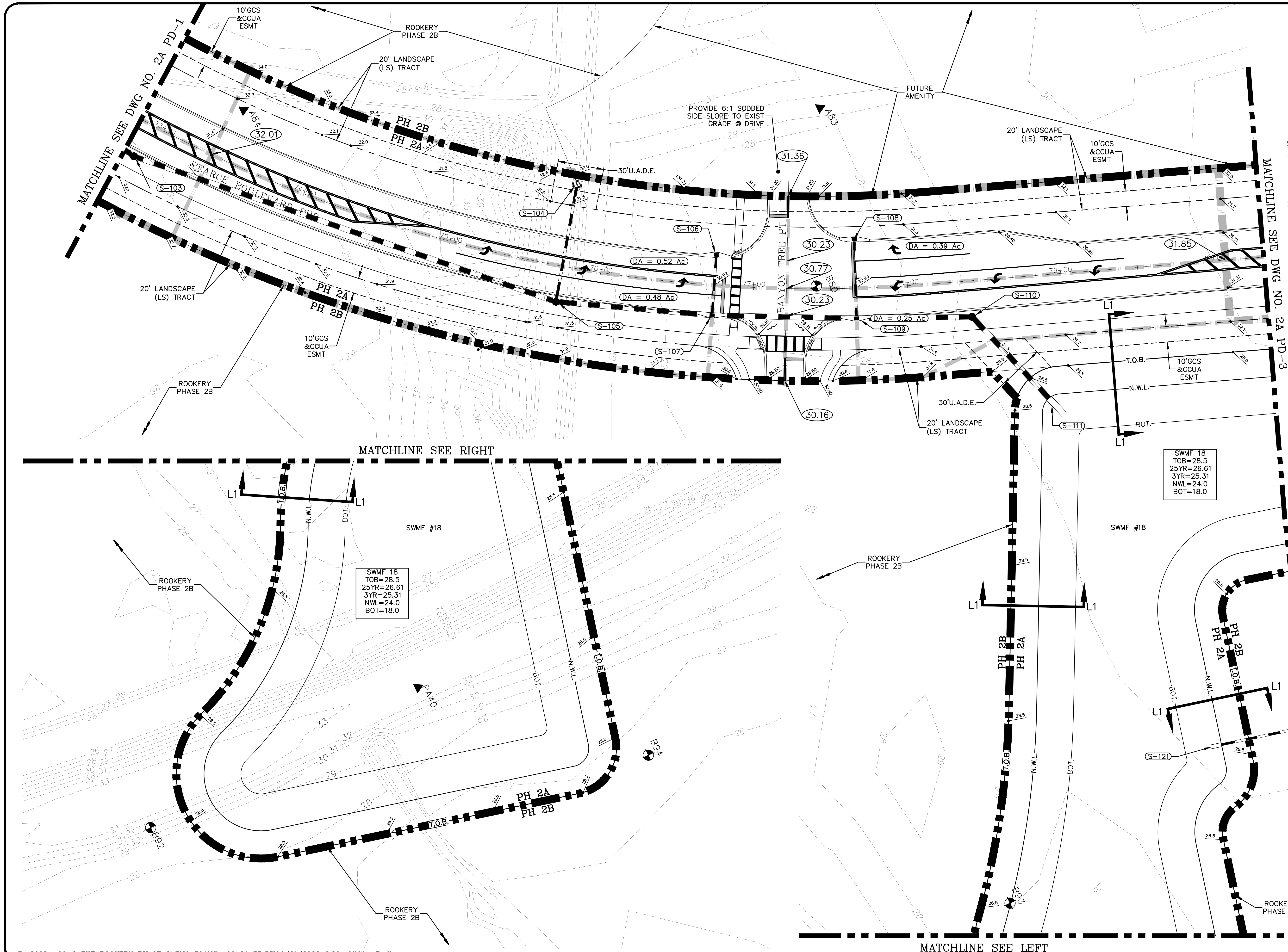


- LEGEND**
- ⊙ = CENTERLINE ROAD EL.
  - = PROPOSED GRADE EL.

SWMF #18  
 TOB=28.5  
 25YR=26.61  
 3YR=25.31  
 NWL=24.0  
 BOT=18.0

SWMF #18  
 TOB=28.5  
 25YR=26.61  
 3YR=25.31  
 NWL=24.0  
 BOT=18.0

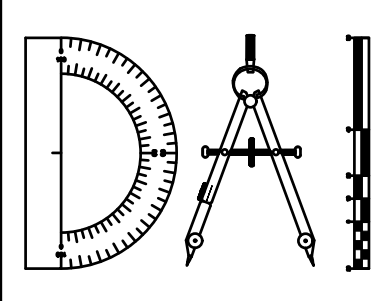
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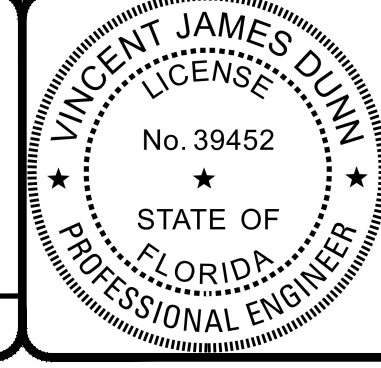
REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
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 CLAY COUNTY, FLORIDA  
**2A PAVING & DRAINAGE PLAN**



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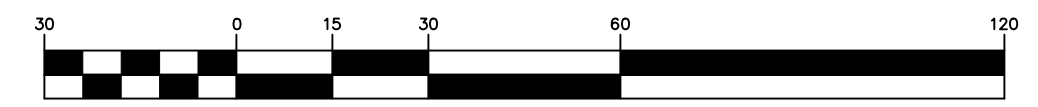
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 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

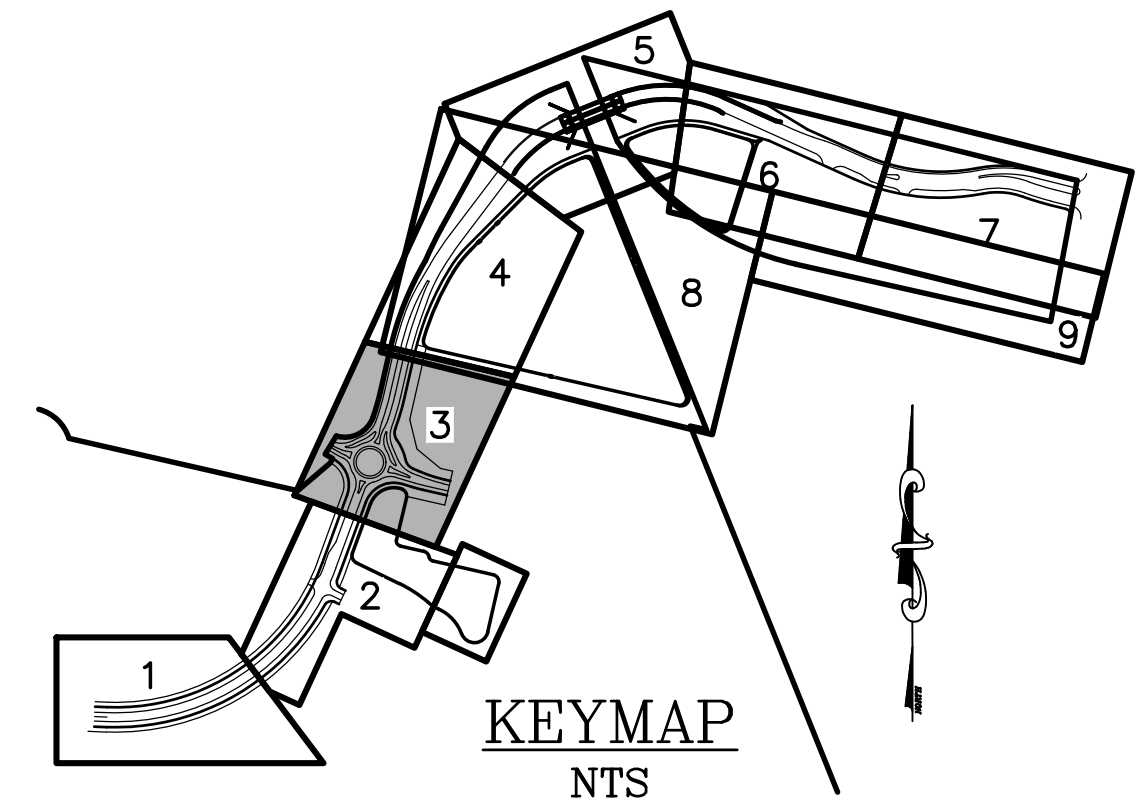
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2. THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.

**GRAPHIC SCALE**

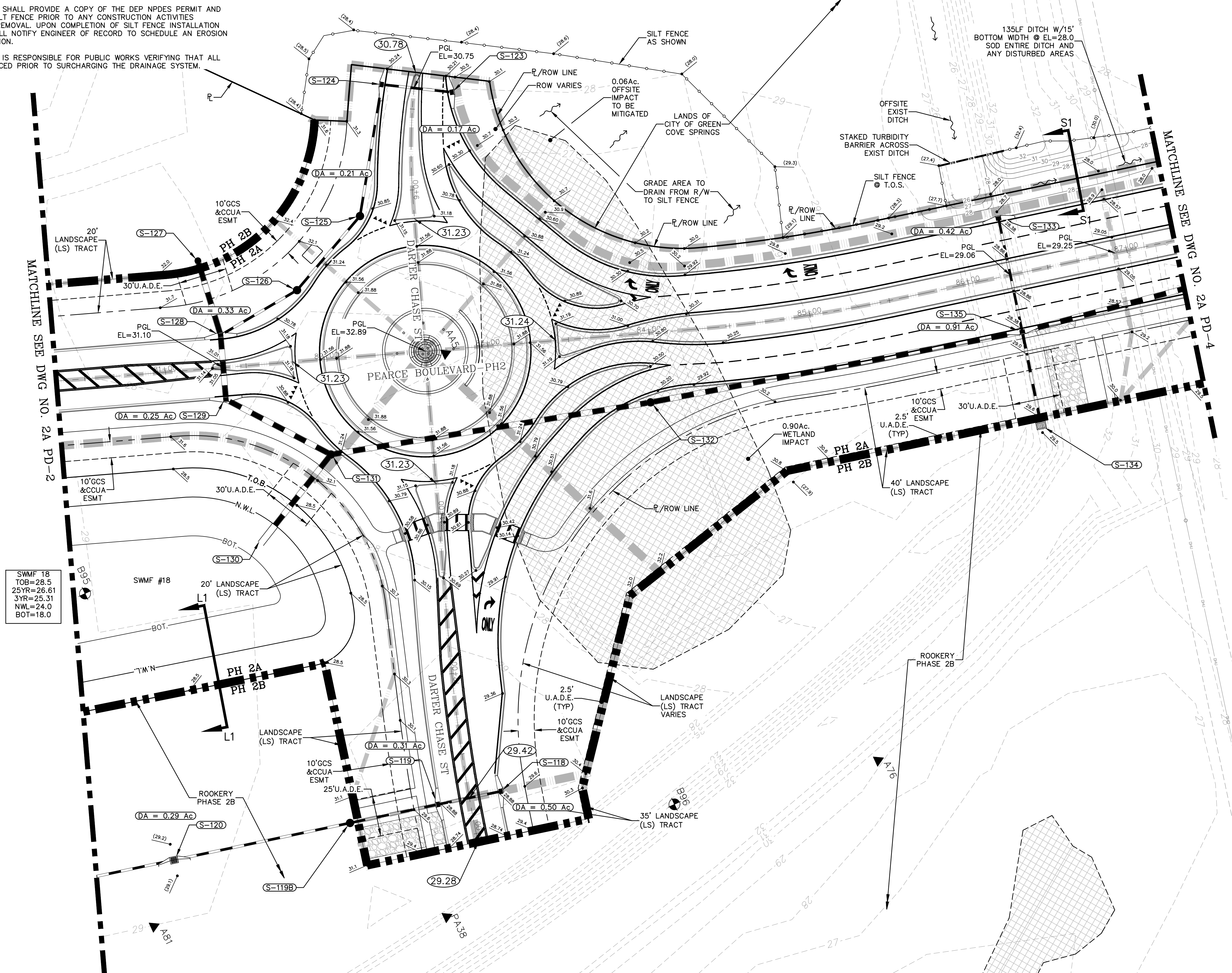


( IN FEET )  
1 inch = 30 ft.



**LEGEND**

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = UPLAND BUFFER
- = WETLAND IMPACT
- = CENTERLINE ROAD EL.
- = PROPOSED GRADE EL.
- = PROPOSED GRADE LINE



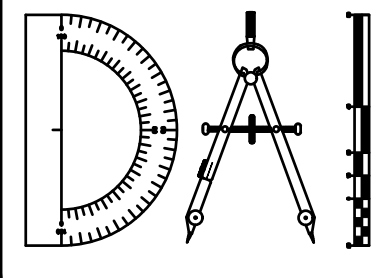
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TOB=28.5  
25YR=26.61  
3YR=25.31  
NWL=24.0  
BOT=18.0

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P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2A PD.DWG/21/2023 6:21 AM Mike Reilly

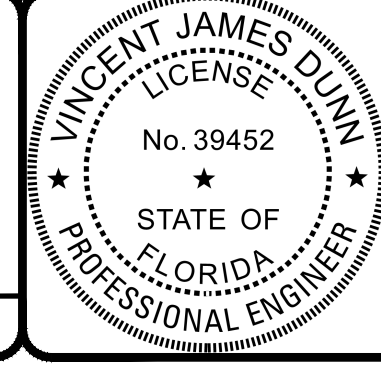
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
DRAWN BY: MR/NS/SM/SS  
CHECKED BY: VJD  
SCALE: 1" = 30'  
DATE: 9/21/2023  
PROJ. NO.: 2008-499-2



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8647 Baypine Road, Suite 200  
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Phone: (904)363-8916 Fax: (904)363-8917  
www.dunneng.com

**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
CLAY COUNTY, FLORIDA  
2A PAVING & DRAINAGE PLAN



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VINCENT J. DUNN ENGINEER NO. 39452  
DAVID M. TAYLOR ENGINEER NO. 44184  
GLEN R. WIEGER ENGINEER NO. 81419

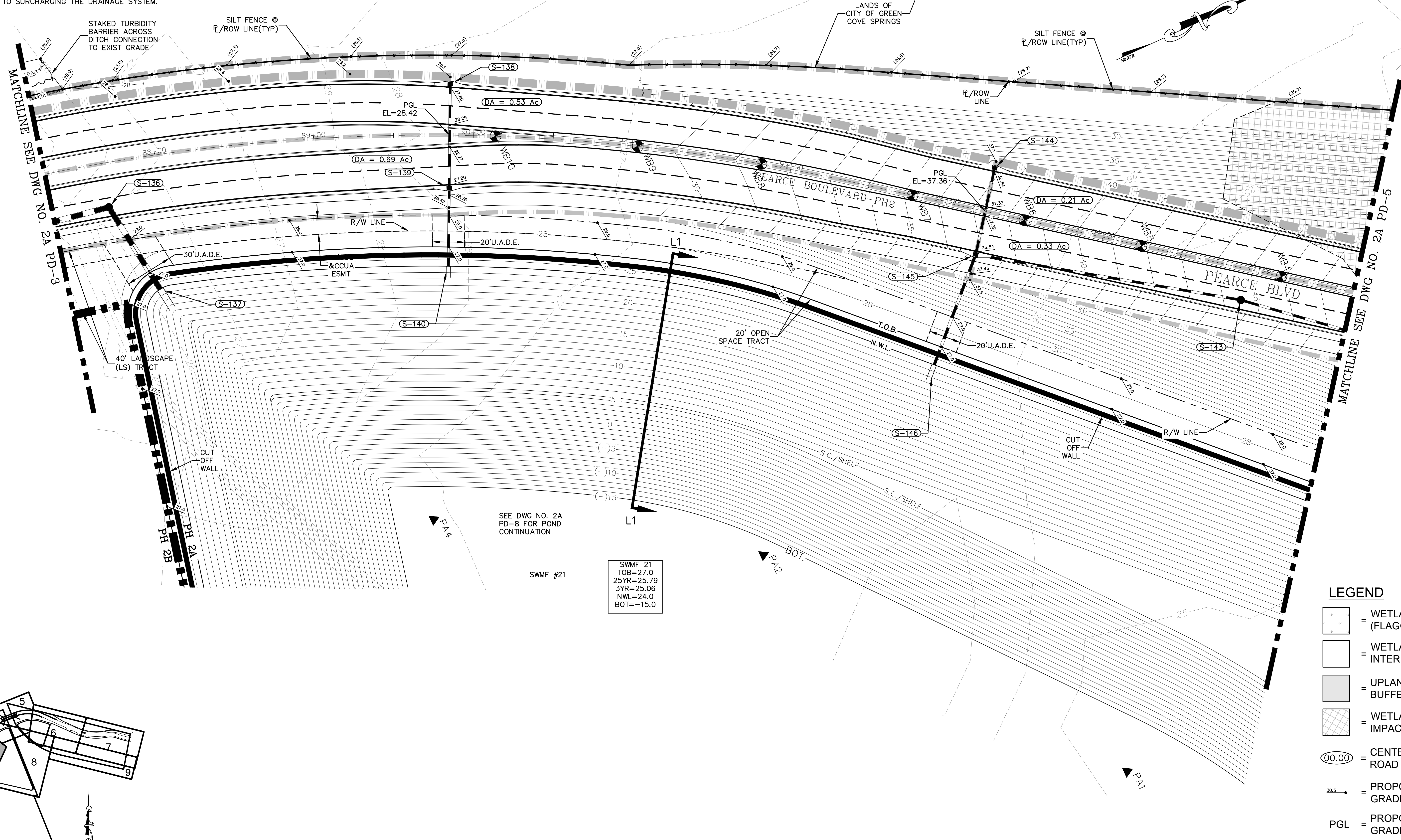
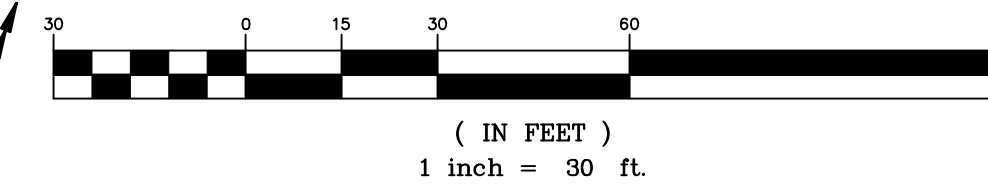
Sheet No. 42 of 130  
**2A PD-3**  
DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

**CONTRACTOR NOTES:**

1. THE CONTRACTOR SHALL PROVIDE A COPY OF THE DEP NPDES PERMIT AND SHALL INSTALL SILT FENCE PRIOR TO ANY CONSTRUCTION ACTIVITIES INCLUDING TREE REMOVAL. UPON COMPLETION OF SILT FENCE INSTALLATION CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD TO SCHEDULE AN EROSION CONTROL INSPECTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.

**GRAPHIC SCALE**



SWMF #21  
 TOB=27.0  
 25YR=25.79  
 3YR=25.06  
 NWL=24.0  
 BOT=-15.0

- LEGEND**
- = WETLANDS (FLAGGED)
  - = WETLANDS (AERIAL INTERPRETATION)
  - = UPLAND BUFFER
  - = WETLAND IMPACT
  - = CENTERLINE ROAD EL.
  - = PROPOSED GRADE EL.
  - = PROPOSED GRADE LINE

Always call 811 two full business days before you dig

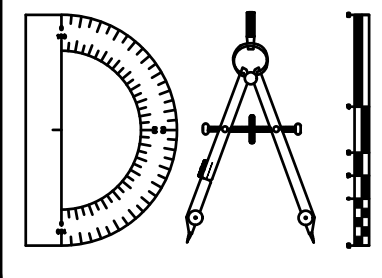
**Sunshine811.com**



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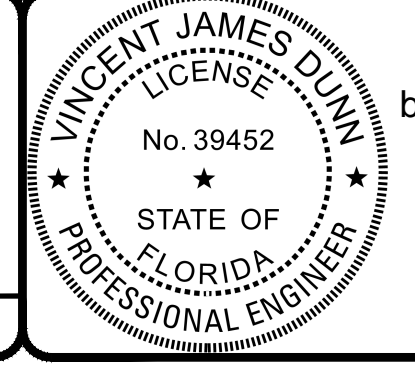
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 30'  
 DATE: 9/21/2023  
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2A PAVING & DRAINAGE PLAN



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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

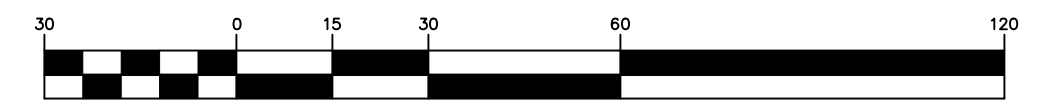
Sheet No. 43 of 130  
**2A PD-4**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

**CONTRACTOR NOTES:**

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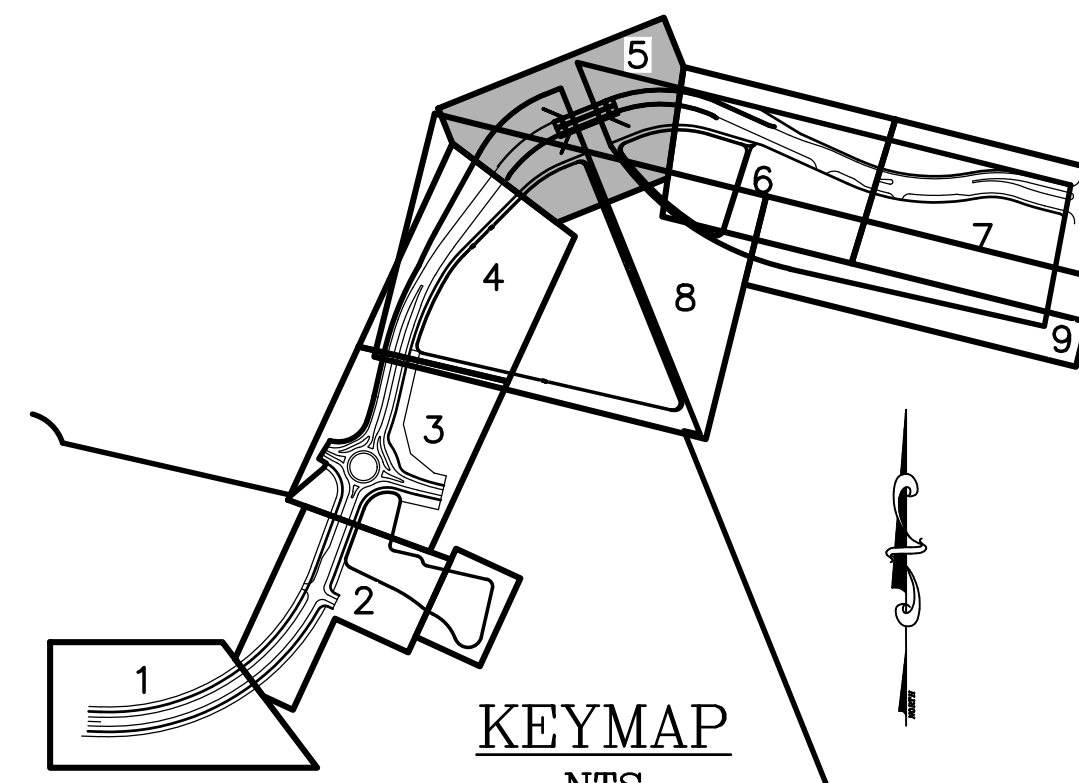
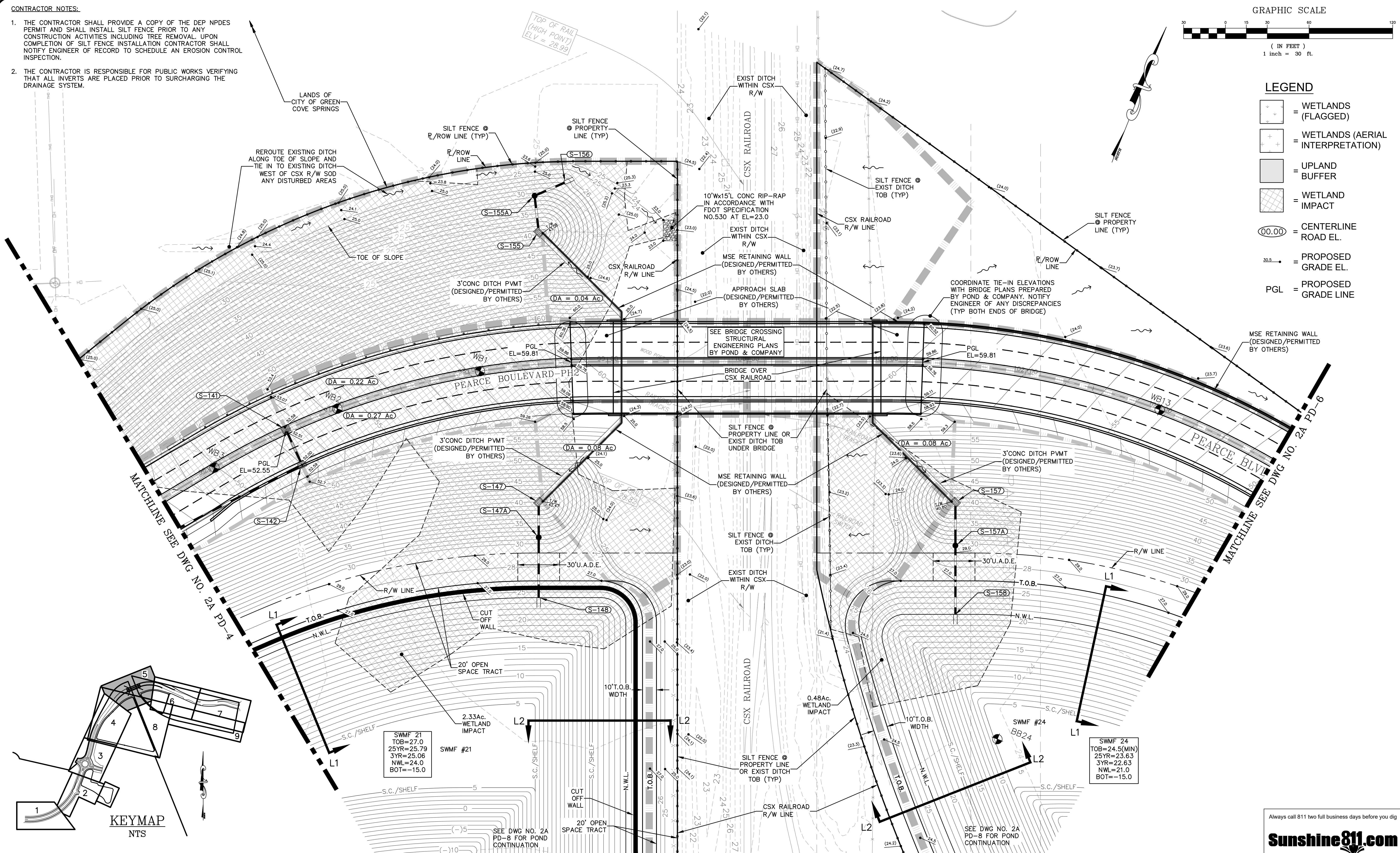
**GRAPHIC SCALE**



( IN FEET )  
1 inch = 30 ft.

**LEGEND**

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = UPLAND BUFFER
- = WETLAND IMPACT
- = CENTERLINE ROAD EL.
- = PROPOSED GRADE EL.
- = PGL = PROPOSED GRADE LINE

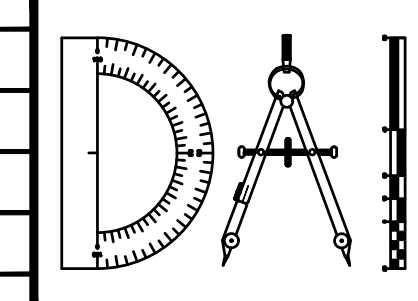


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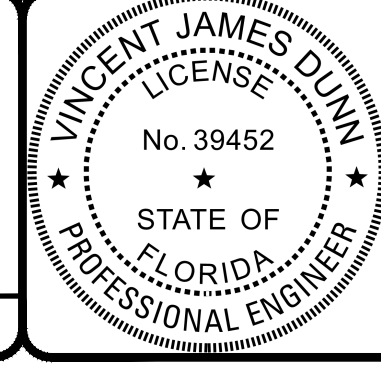
REVISIONS	
NO.	DATE DESCRIPTION

DESIGNED BY: DAI  
DRAWN BY: MR/NS/SM/SS  
CHECKED BY: VJD  
SCALE: 1" = 30'  
DATE: 9/21/2023  
PROJ. NO.: 2008-499-2



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FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
CLAY COUNTY, FLORIDA  
**2A PAVING & DRAINAGE PLAN**



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DAVID M. TAYLOR ENGINEER NO. 44184  
GLEN R. WIEGER ENGINEER NO. 81412

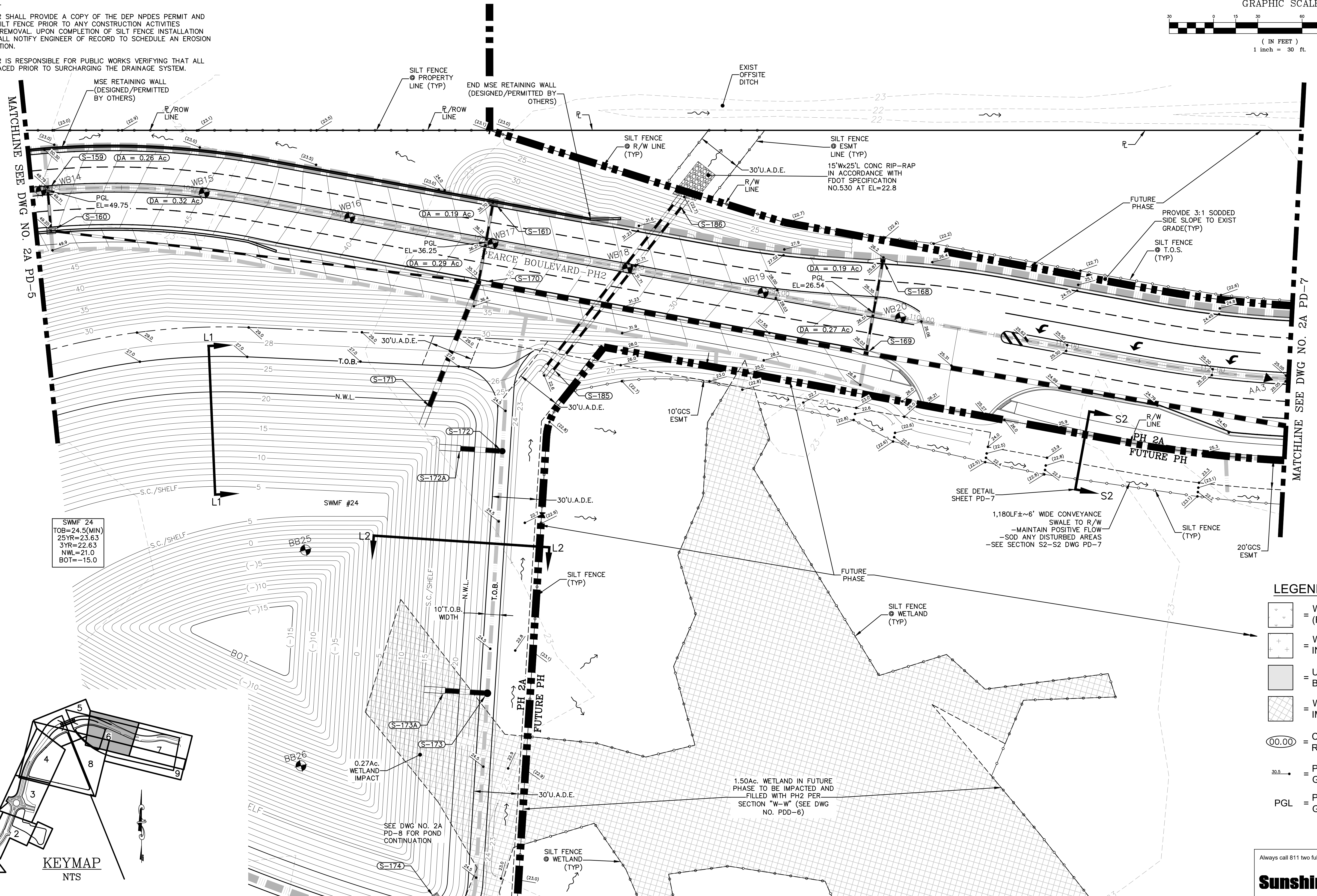
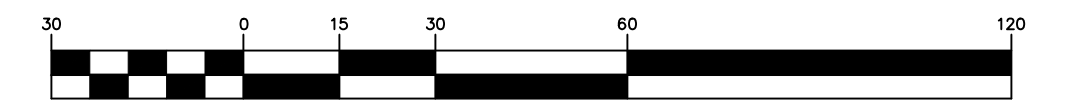
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**2A PD-5**  
DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

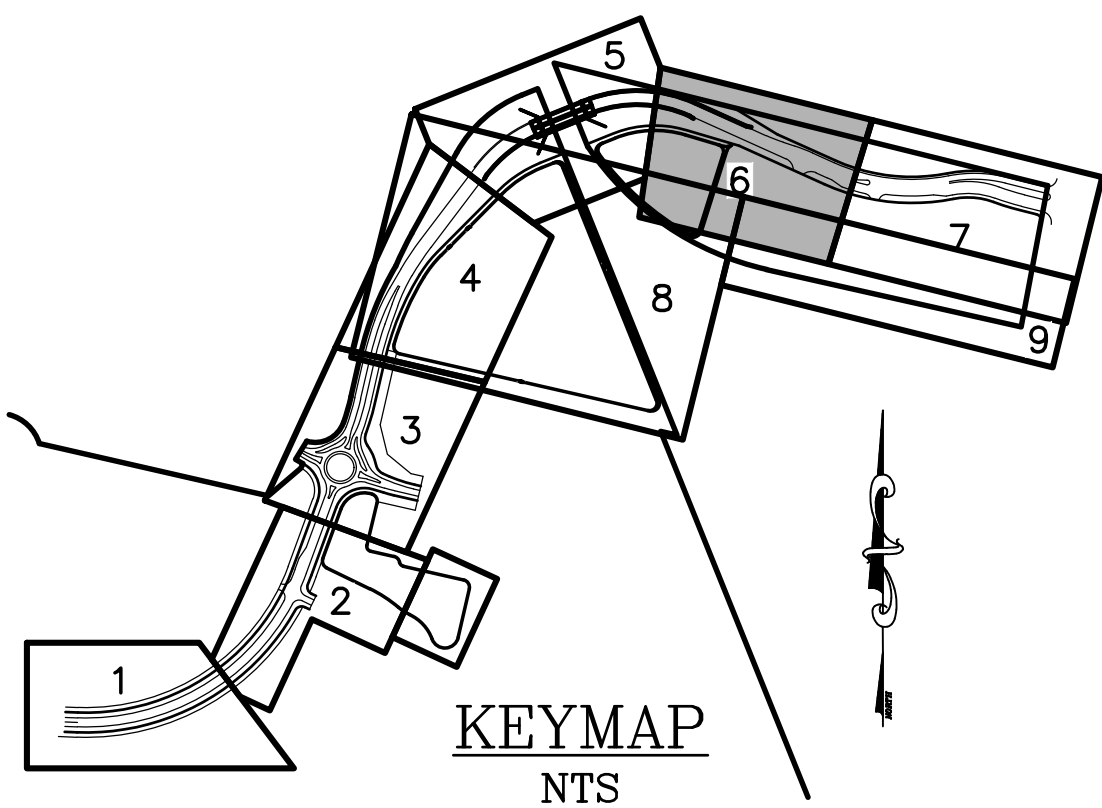
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2. THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.

**GRAPHIC SCALE**



**SWMF #24**  
 TOB=24.5(MIN)  
 25YR=23.63  
 3YR=22.63  
 NWL=21.0  
 BOT=-15.0



**LEGEND**

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = UPLAND BUFFER
- = WETLAND IMPACT
- = CENTERLINE ROAD EL.
- = PROPOSED GRADE EL.
- = PROPOSED GRADE LINE

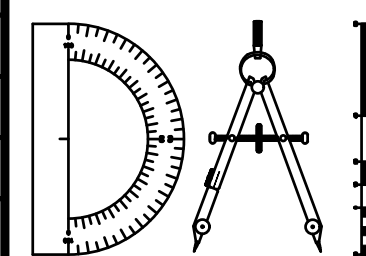
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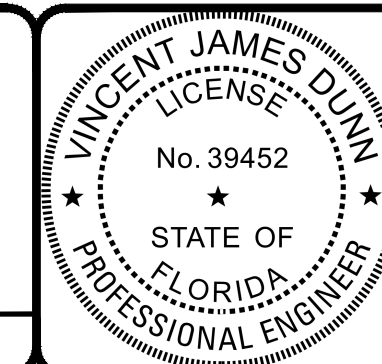
REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 30'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2A PAVING & DRAINAGE PLAN

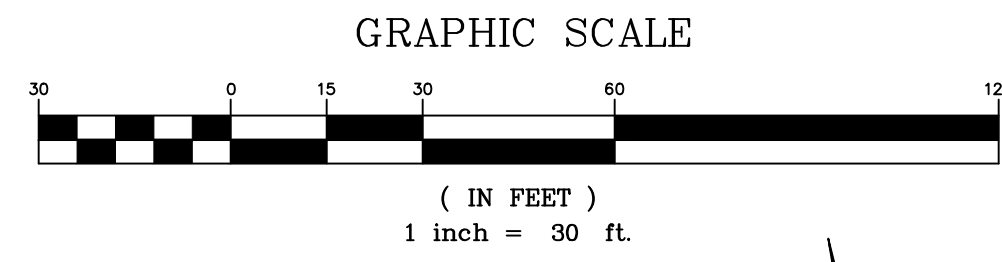
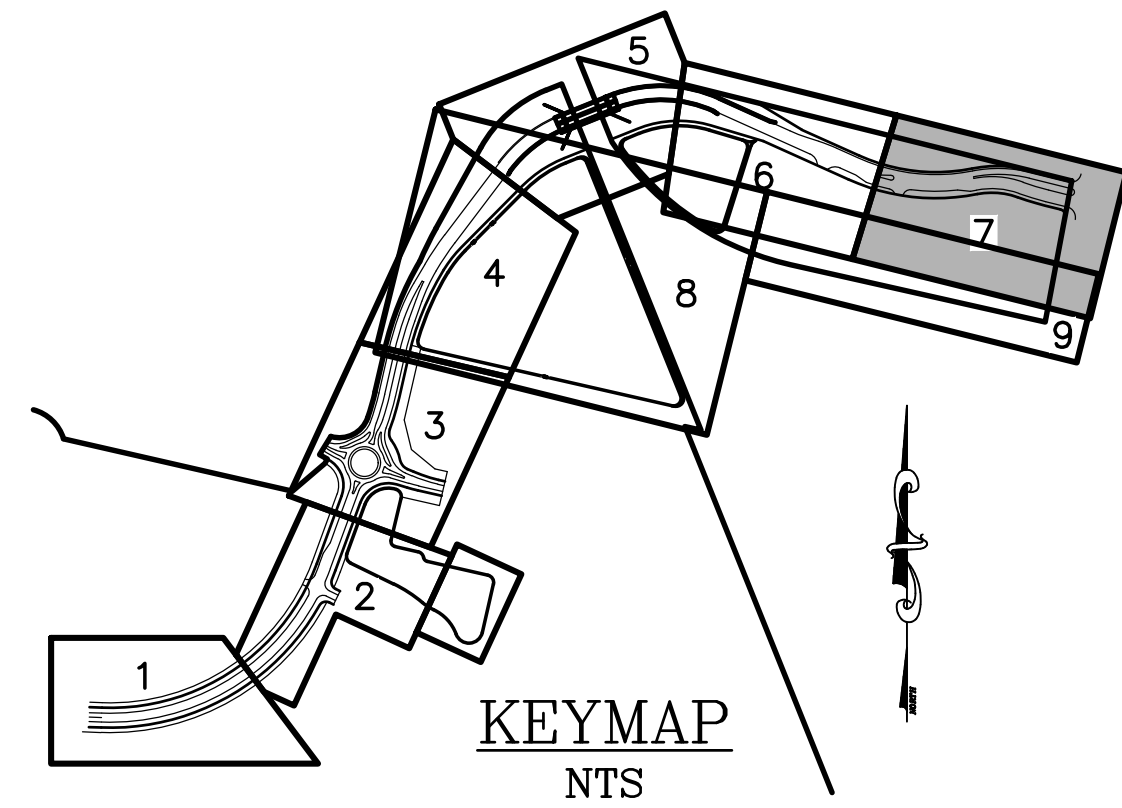


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 VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44164  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 45 of 130  
**2A PD-6**  
 DWG. NO.

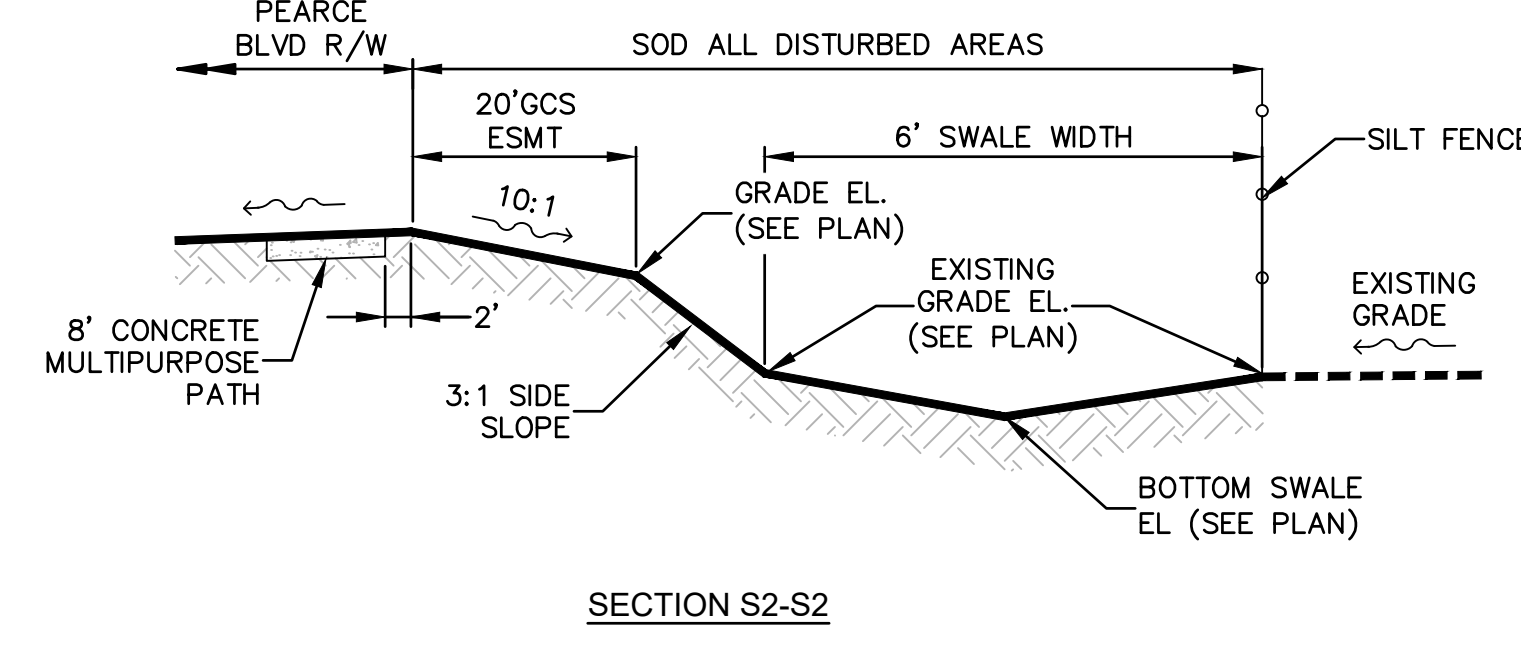
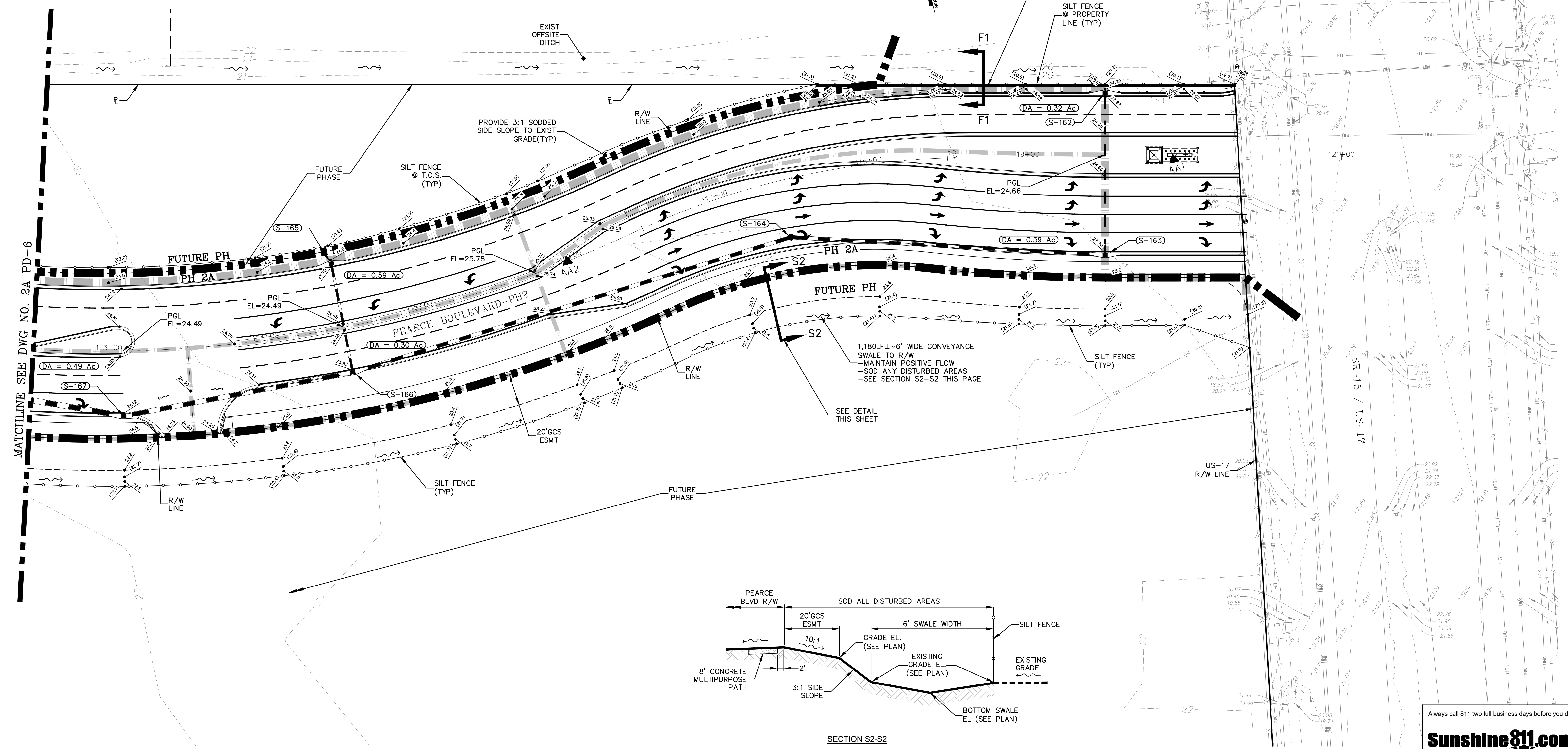
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**LEGEND**

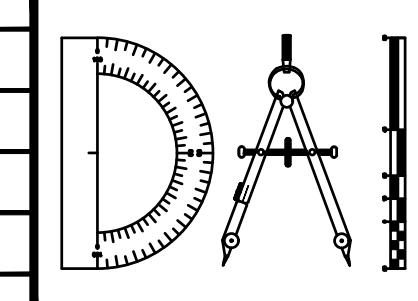
- 00.00 = CENTERLINE ROAD EL.
- 30.5 = PROPOSED GRADE EL.



P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2A PD.DWG9/21/2023 6:23 AM Mike Reilly

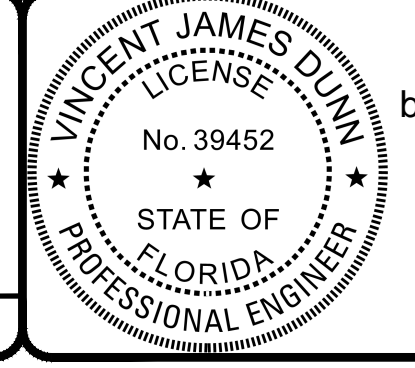
REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 30'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



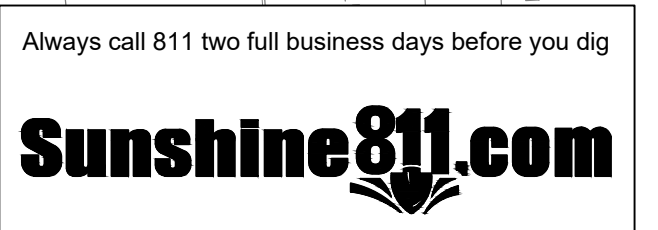
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 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2A PAVING & DRAINAGE PLAN

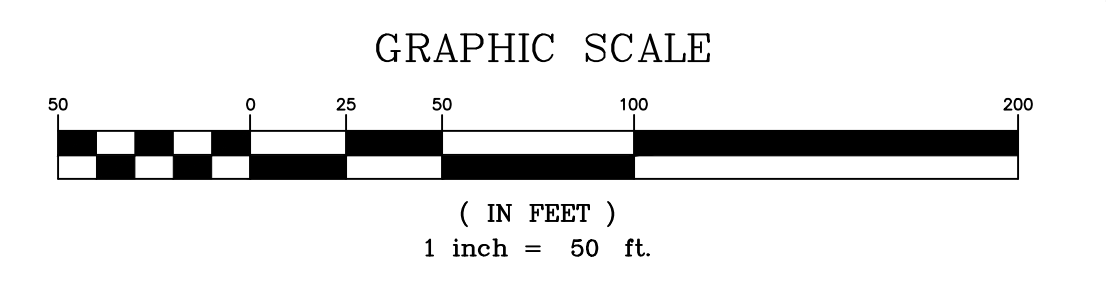
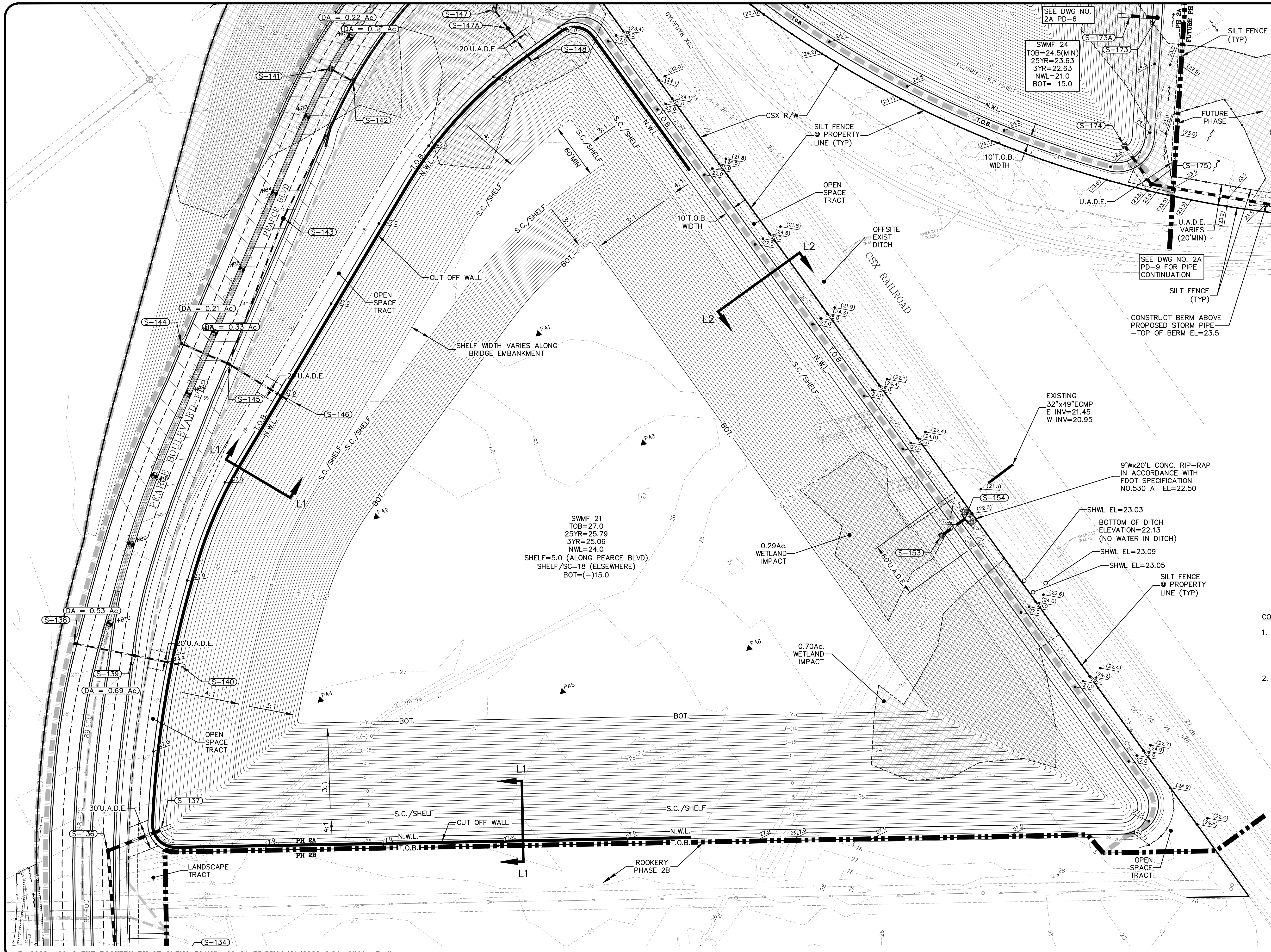


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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

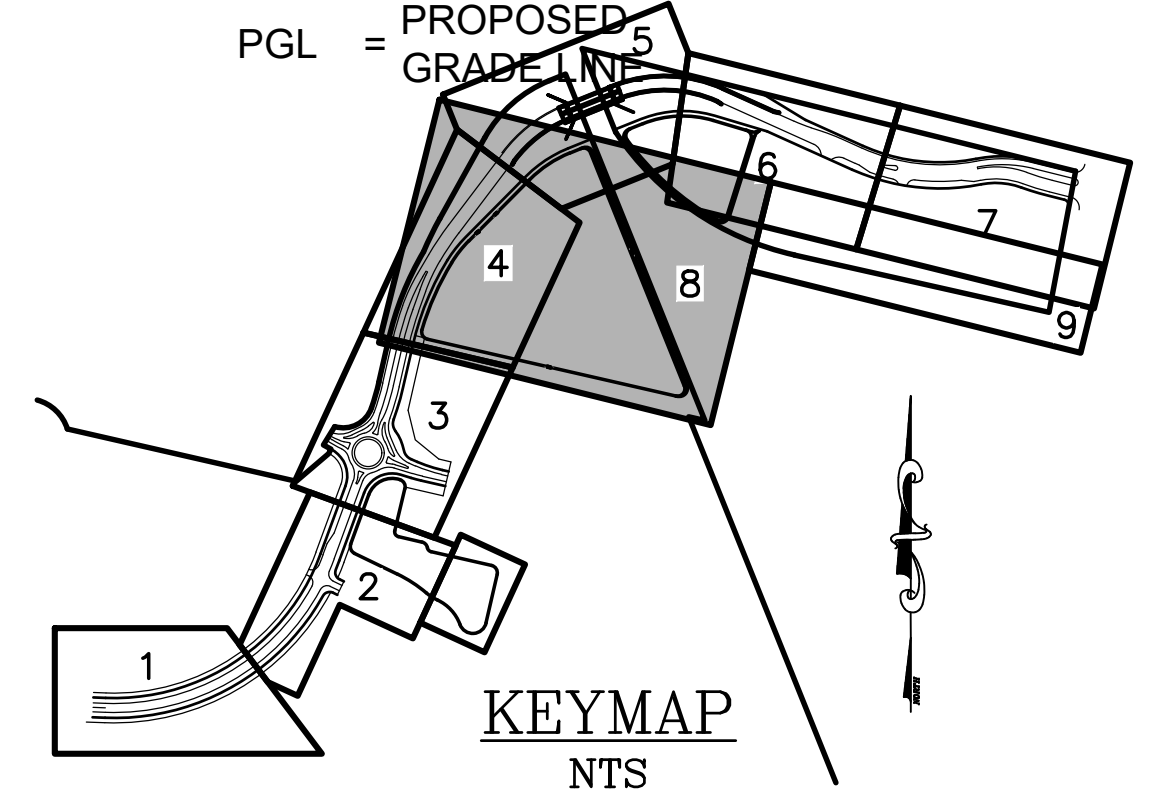
Sheet No. 46 of 130  
**2A PD-7**  
 DWG. NO.



THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



- LEGEND**
- = WETLANDS (FLAGGED)
  - = WETLANDS (AERIAL INTERPRETATION)
  - = UPLAND BUFFER
  - = WETLAND IMPACT
  - = CENTERLINE ROAD EL.
  - = PROPOSED GRADE EL.
  - = PGL = PROPOSED GRADE LINE



- CONTRACTOR NOTES:**
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  - THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.

NOTE PLAN SCALE

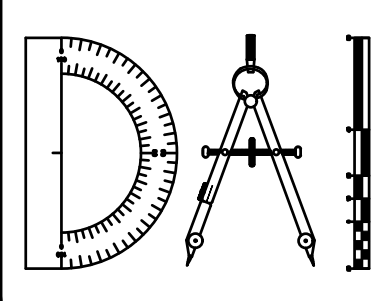
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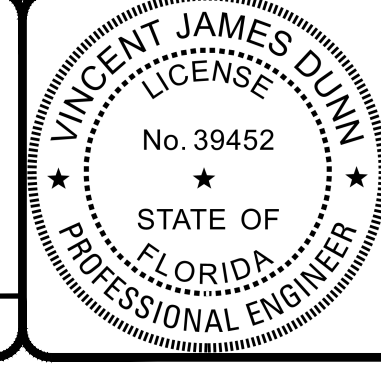
REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 50'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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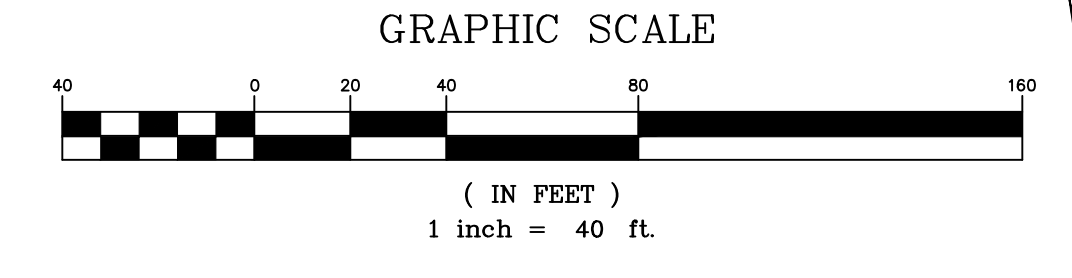
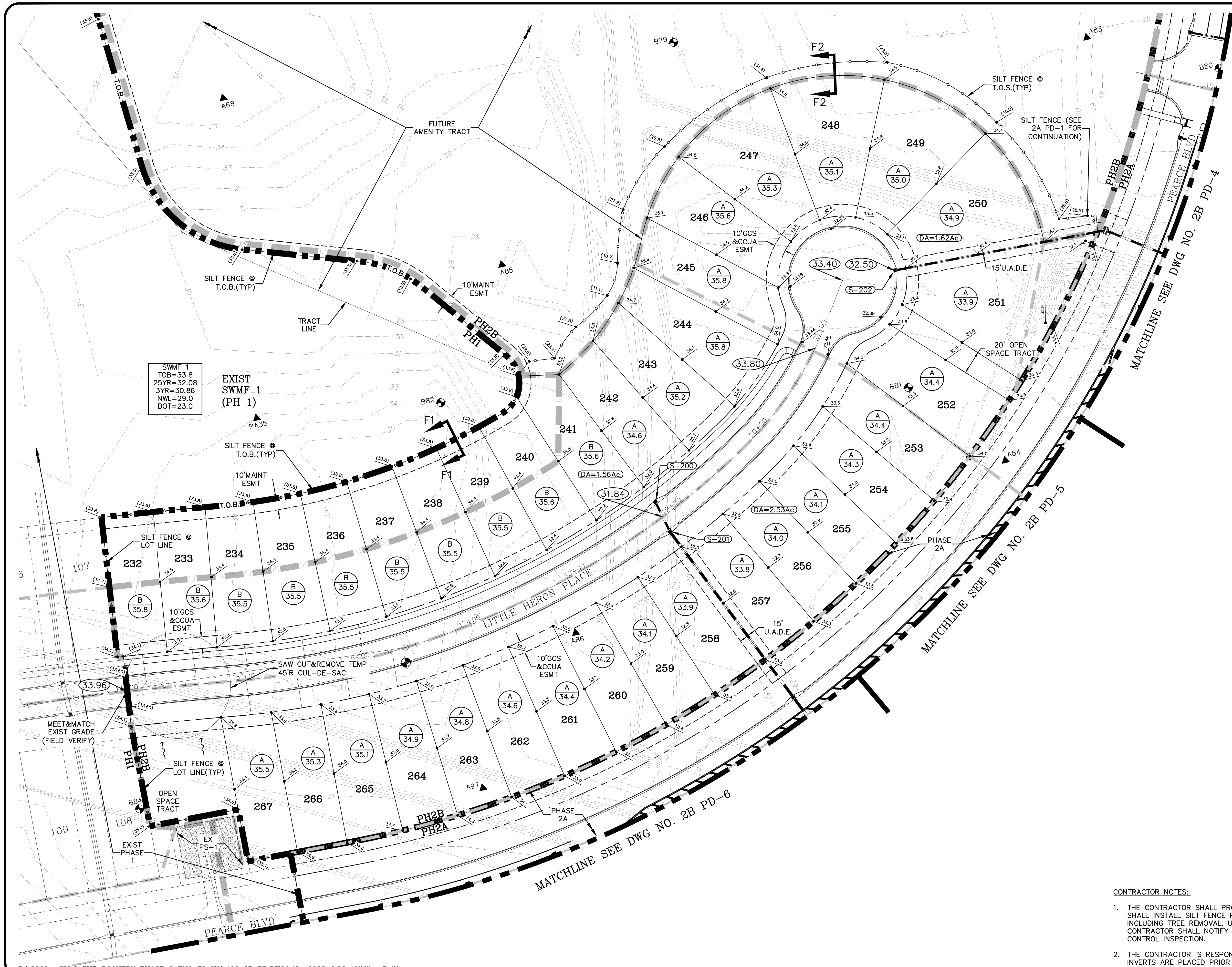
VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 47 of 130  
**2A PD-8**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)







- LEGEND**
- = WETLANDS (FLAGGED)
  - = WETLANDS (AERIAL INTERPRETATION)
  - = UPLAND BUFFER
  - = WETLAND IMPACT
  - = LOT TYPE F.F. EL.
  - = PROPOSED GRADE EL.

SWMF 1  
 TOB=33.8  
 25YR=32.08  
 3YR=30.86  
 NWL=29.0  
 BOT=23.0

EXIST SWMF 1 (PH 1)

MEET & MATCH EXIST GRADE (FIELD VERIFY)

OPEN SPACE TRACT

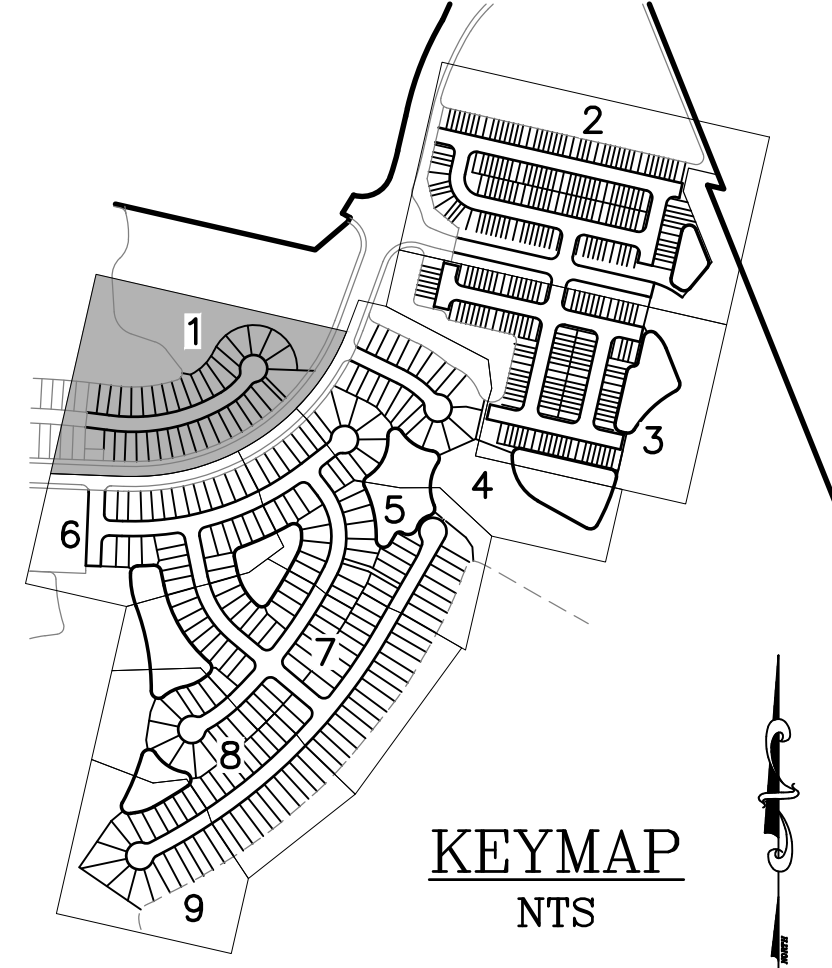
EXIST PHASE 1

EX PS-1

MATCHLINE SEE DWG NO. 2B PD-4

MATCHLINE SEE DWG NO. 2B PD-5

MATCHLINE SEE DWG NO. 2B PD-6



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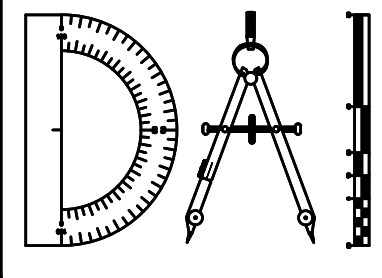
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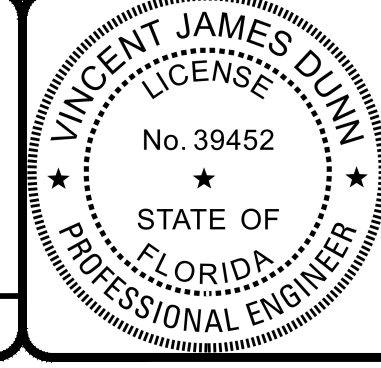
REVISIONS		
NO.	DATE	DESCRIPTION

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 DRAWN BY: MR/NS/SM/SS  
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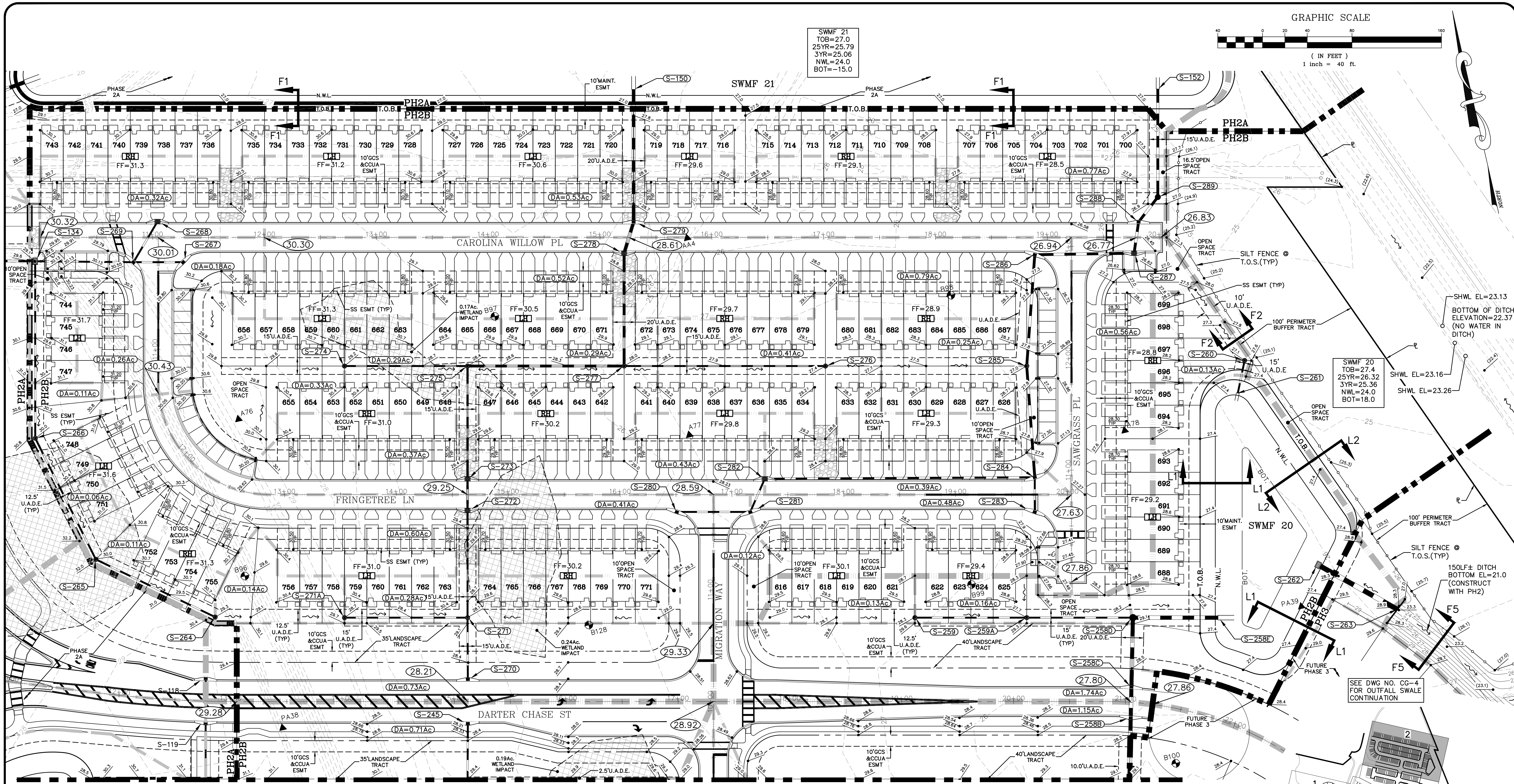
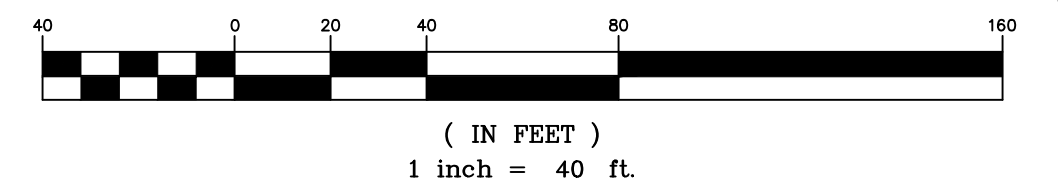


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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 49 of 130

**2B PD-1**  
 DWG. NO.



SWMF 21  
TOB=27.0  
25YR=25.79  
3YR=25.06  
NWL=24.0  
BOT=-15.0

SWMF 20  
TOB=27.4  
25YR=26.32  
3YR=25.36  
NWL=24.0  
BOT=18.0

SEE DWG NO. CG-4  
FOR OUTFALL SWALE  
CONTINUATION

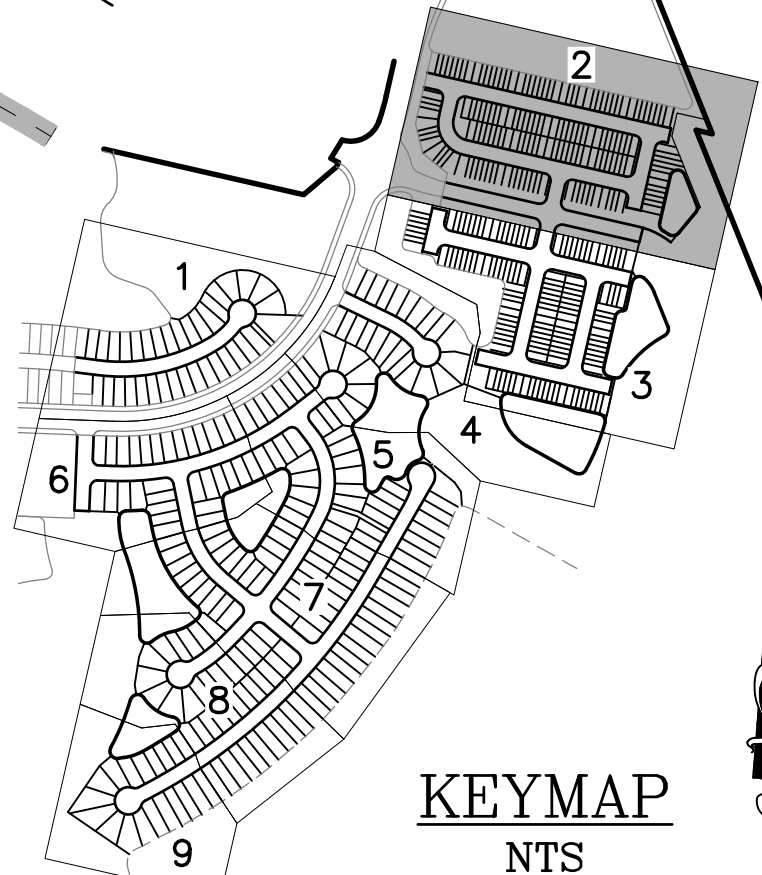
MATCHLINE SEE DWG NO. 2B PD-3

LEGEND

- = WETLANDS (FLAGGED)
- = WETLAND IMPACT
- = WETLANDS (AERIAL INTERPRETATION)
- = LOT TYPE F.F. EL.
- = UPLAND BUFFER
- = PROPOSED GRADE EL.

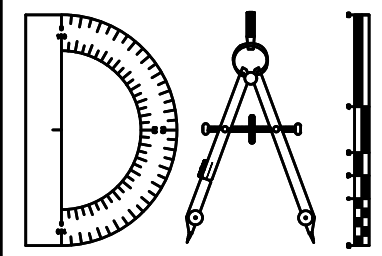
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2. THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.



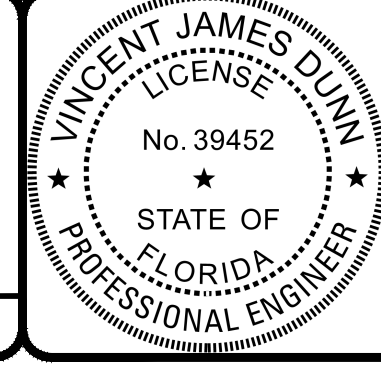
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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 Phone: (904)363-8916 Fax: (904)363-8917  
 www.dunneng.com

**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B PAVING AND DRAINAGE PLAN



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VINCENT J. DUNN  
ENGINEER NO. 99452

DAVID M. TAYLOR  
ENGINEER NO. 44184

GLEN R. WIEGER  
ENGINEER NO. 81419

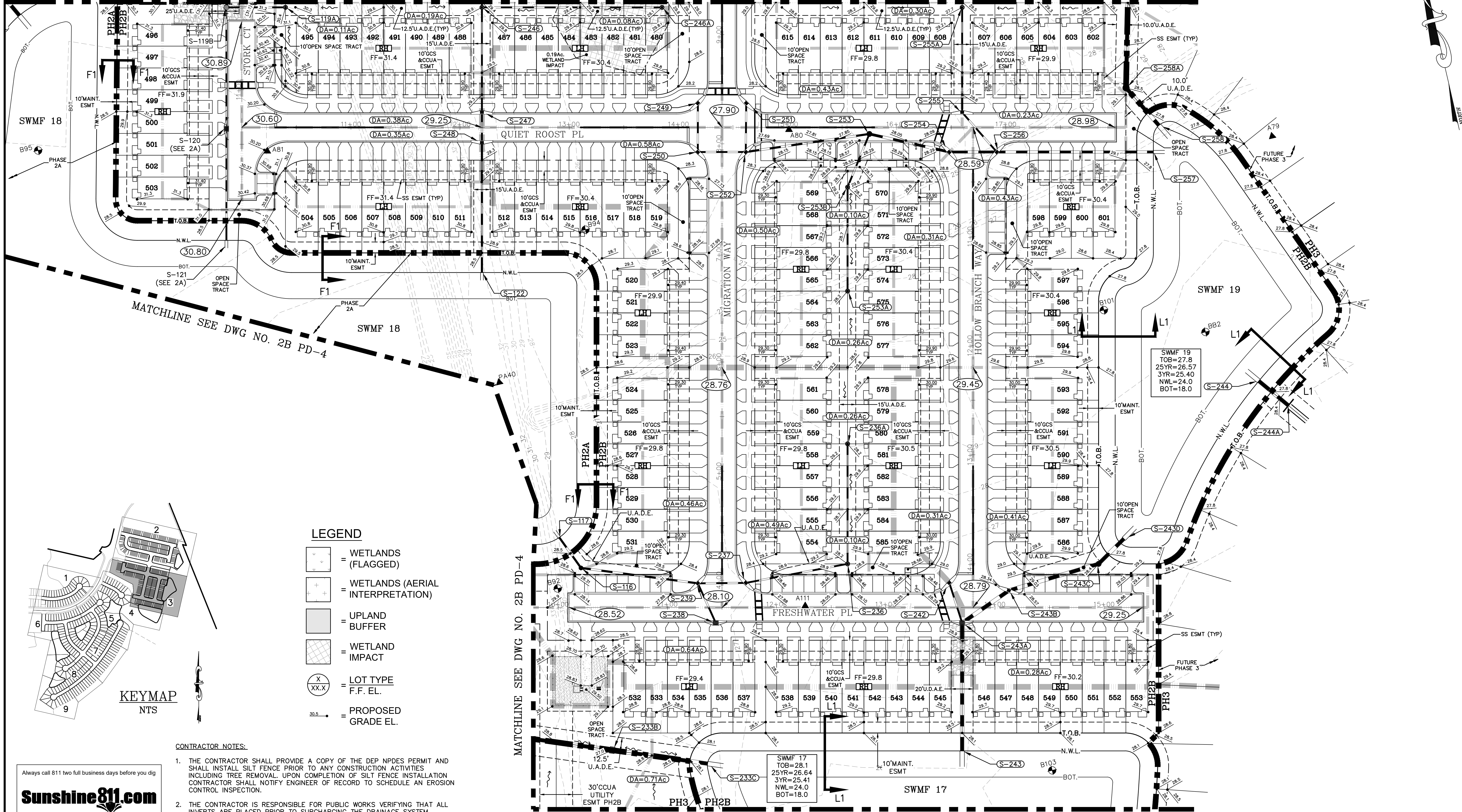
Sheet No. 50 of 130  
**2B PD-2**  
 DWG. NO.

GRAPHIC SCALE



( IN FEET )  
1 inch = 40 ft.

MATCHLINE SEE DWG NO. 2B PD-2



MATCHLINE SEE DWG NO. 2B PD-4

MATCHLINE SEE DWG NO. 2B PD-4

MATCHLINE SEE DWG NO. 2B PD-4

LEGEND

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = UPLAND BUFFER
- = WETLAND IMPACT
- = LOT TYPE F.F. EL.
- = PROPOSED GRADE EL.

CONTRACTOR NOTES:

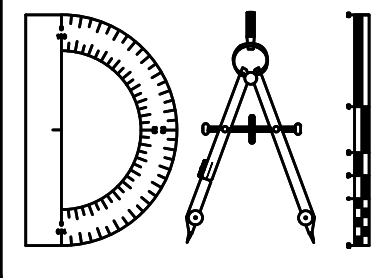
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P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B PD.DWG9/21/2023 6:28 AM Mike Reilly

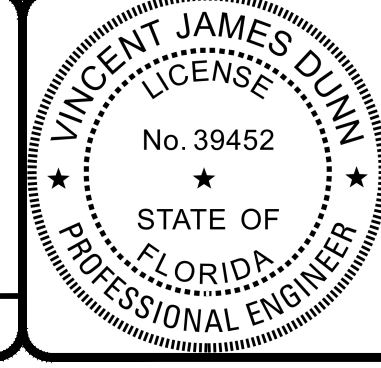
REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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VINCENT J. DUNN  
 ENGINEER NO. 39452

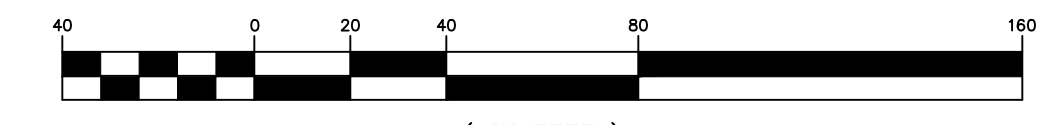
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 ENGINEER NO. 44184

GLEN R. WIEGER  
 ENGINEER NO. 81419

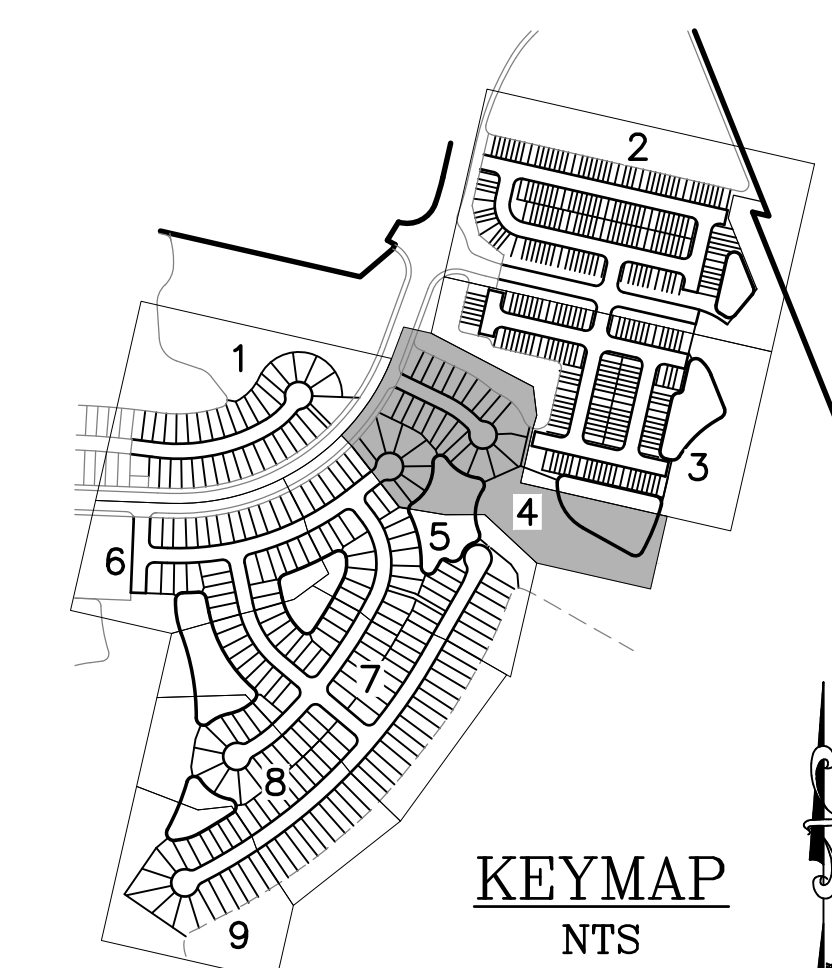
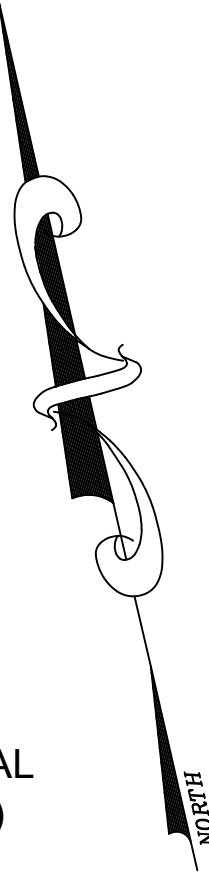
Sheet No. 51 of 130  
**2B PD-3**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

GRAPHIC SCALE

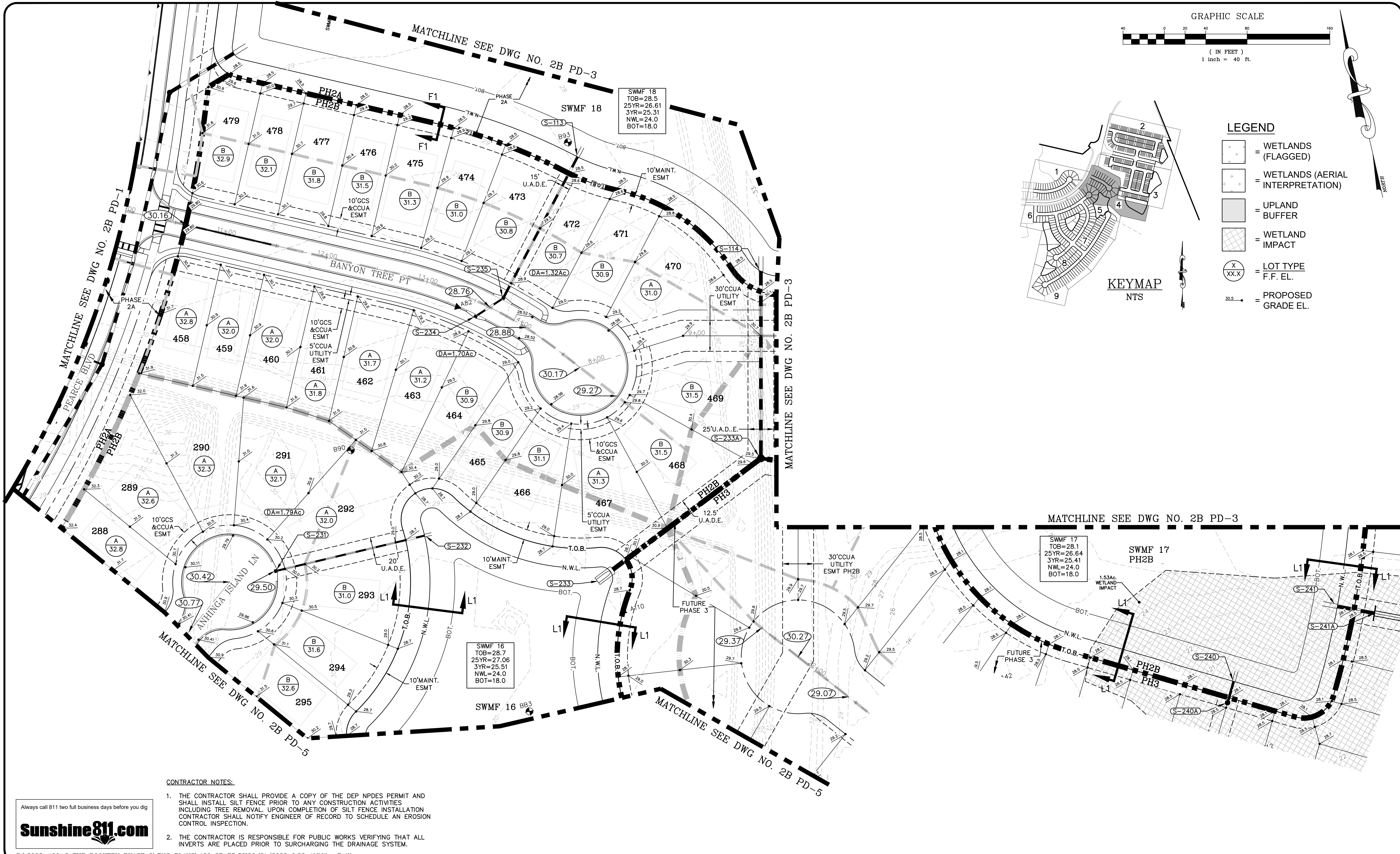


( IN FEET )  
1 inch = 40 ft.



LEGEND

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- = WETLANDS (AERIAL INTERPRETATION)
- = UPLAND BUFFER
- = WETLAND IMPACT
- = LOT TYPE F.F. EL.
- = PROPOSED GRADE EL.



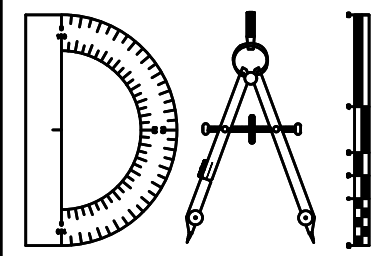
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P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B PD.DWG/21/2023 6:30 AM Mike Reilly

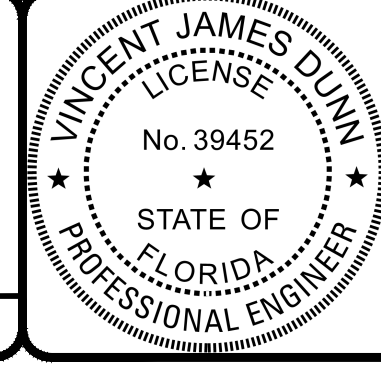
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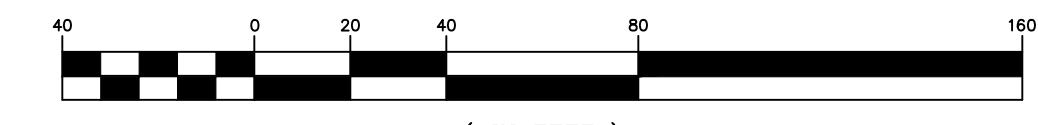
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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 52 of 130  
**2B PD-4**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

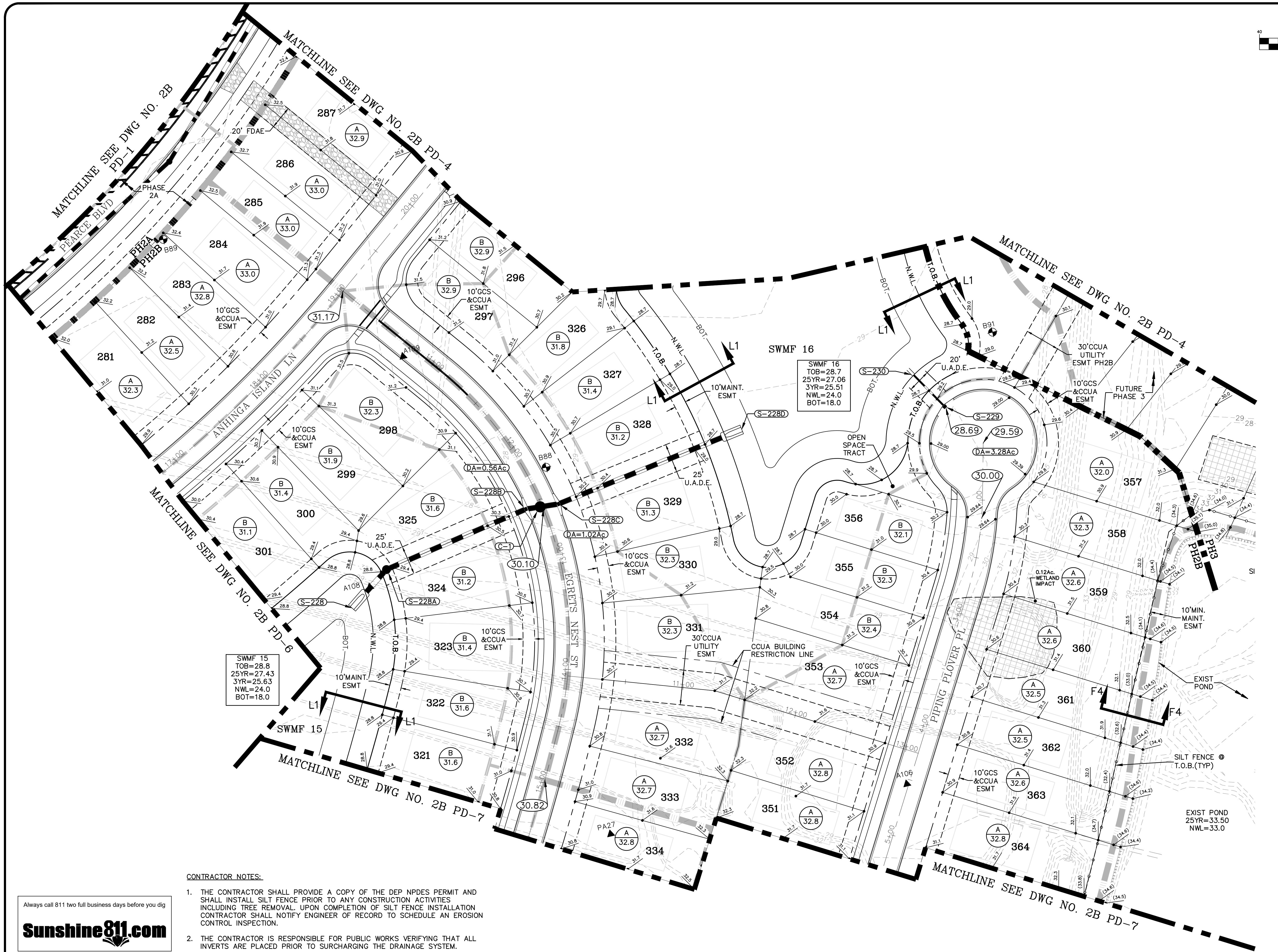
GRAPHIC SCALE



( IN FEET )  
1 inch = 40 ft.

LEGEND

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- = WETLANDS (AERIAL INTERPRETATION)
- = UPLAND BUFFER
- = WETLAND IMPACT
- = LOT TYPE F.F. EL.
- = PROPOSED GRADE EL.



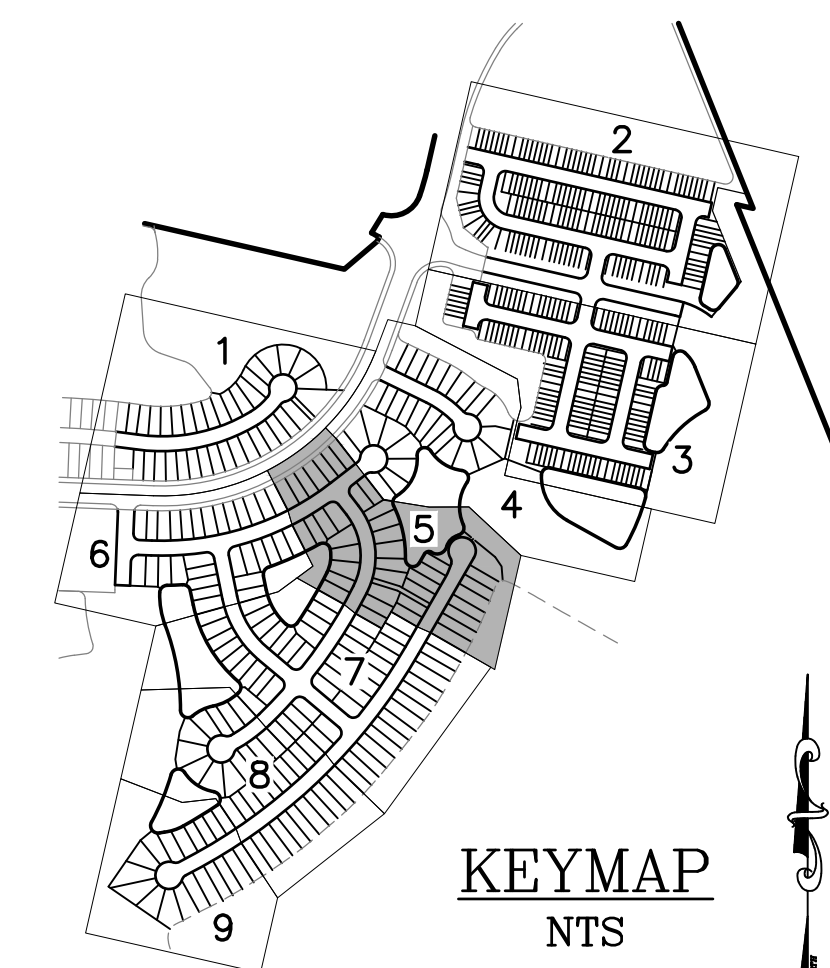
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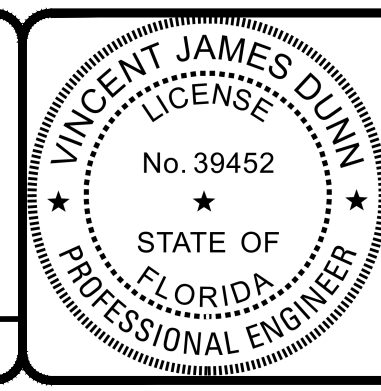


REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
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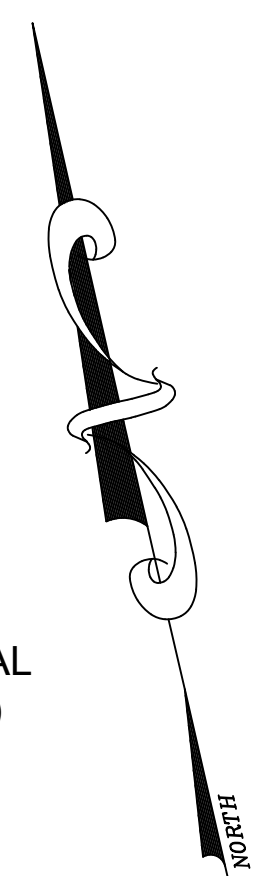
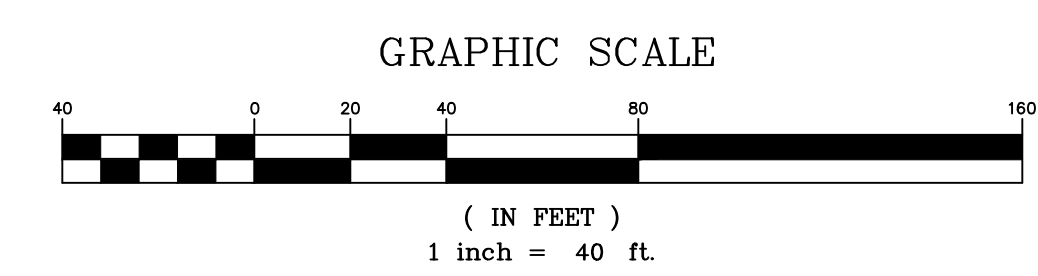


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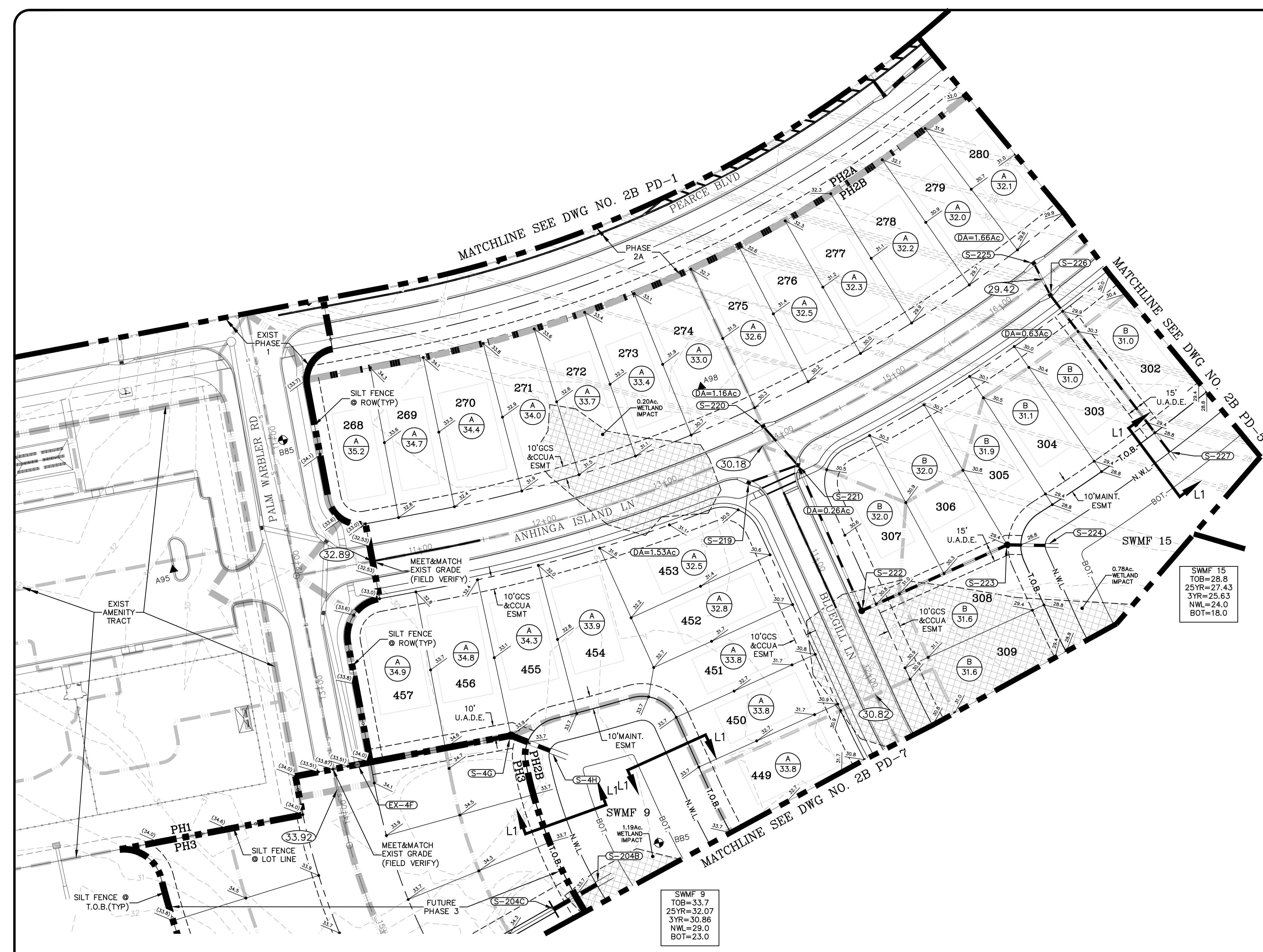
VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. **53** of 130  
**2B PD-5**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



- LEGEND**
- = WETLANDS (FLAGGED)
  - = WETLANDS (AERIAL INTERPRETATION)
  - = UPLAND BUFFER
  - = WETLAND IMPACT
  - = LOT TYPE F.F. EL.
  - = PROPOSED GRADE EL.

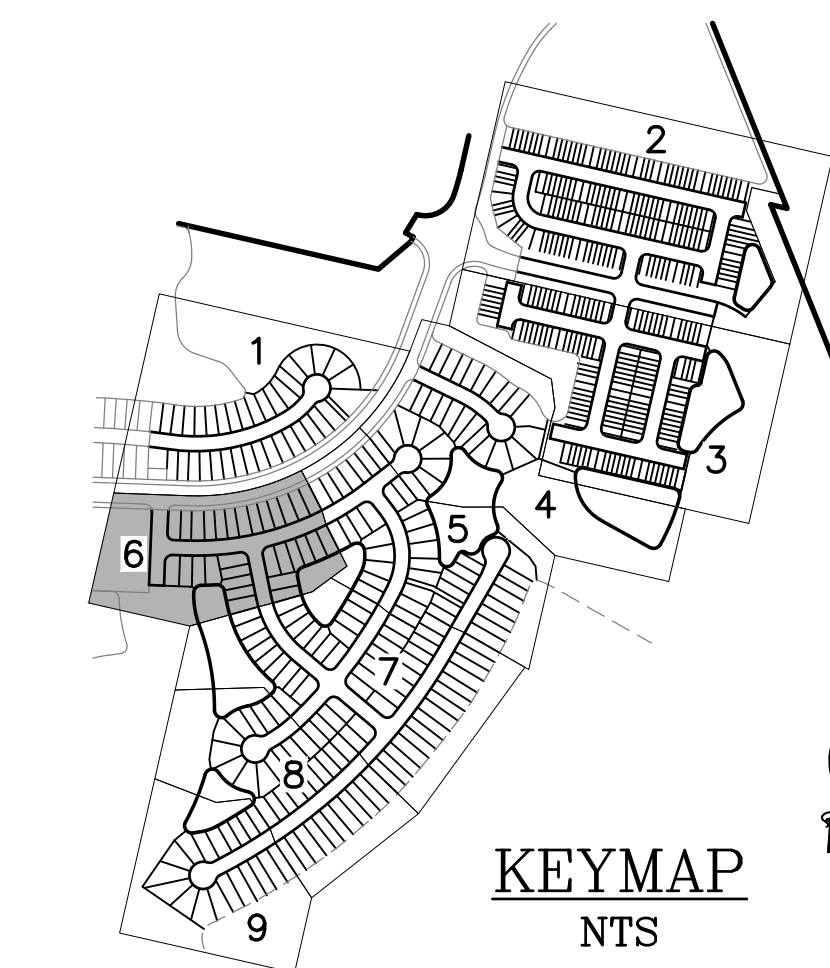


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 25YR=27.43  
 3YR=25.63  
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 BOT=18.0

SWMF 9  
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 25YR=32.07  
 3YR=30.86  
 NWL=29.0  
 BOT=23.0

- CONTRACTOR NOTES:**
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REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2

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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B PAVING AND DRAINAGE PLAN

VINCENT JAMES DUNN  
 LICENSE No. 39452  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER

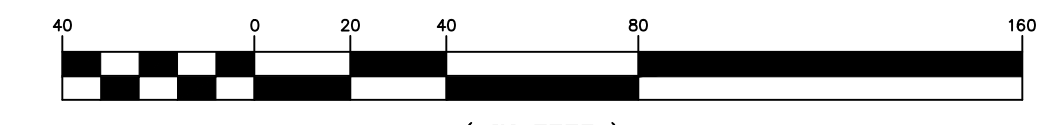
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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 54 of 130  
**2B PD-6**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

GRAPHIC SCALE



( IN FEET )  
1 inch = 40 ft.

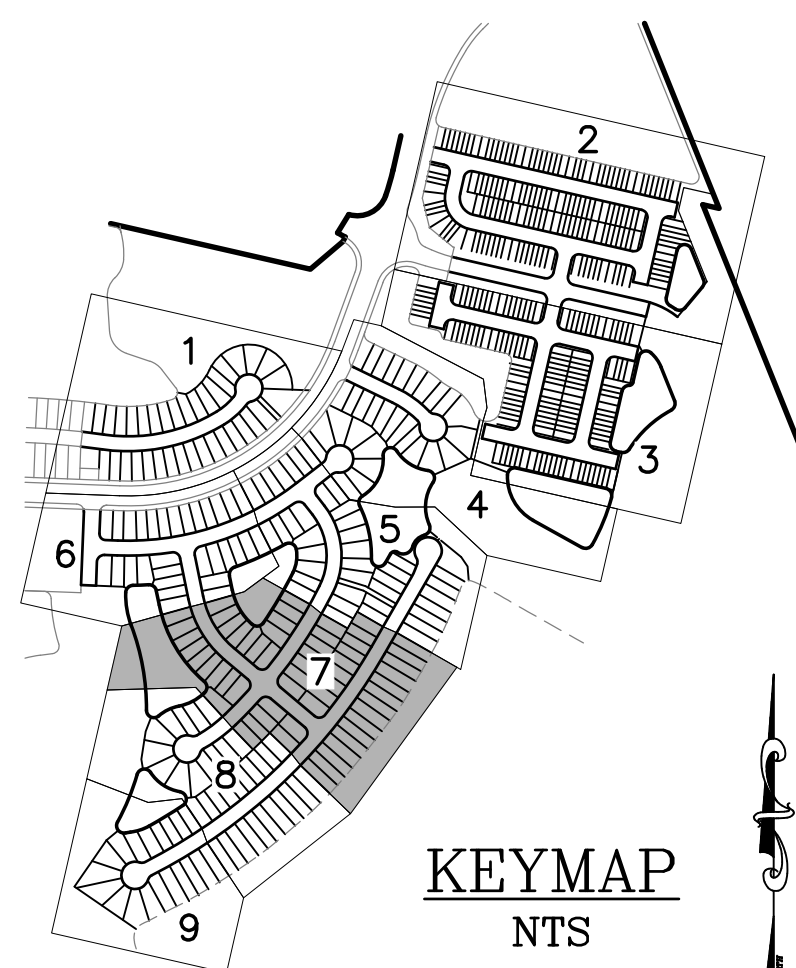
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25YR=27.43  
3YR=25.63  
NWL=24.0  
BOT=18.0

SWMF 9  
TOB=33.7  
25YR=32.07  
3YR=30.86  
NWL=29.0  
BOT=23.0

**LEGEND**

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- = UPLAND BUFFER
- = WETLAND IMPACT
- = LOT TYPE F.F. EL.
- = PROPOSED GRADE EL.

EXIST POND  
25YR=33.50  
NWL=33.0



KEYMAP  
NTS

**CONTRACTOR NOTES:**

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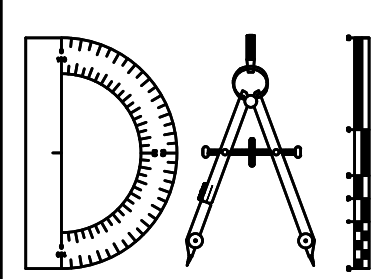
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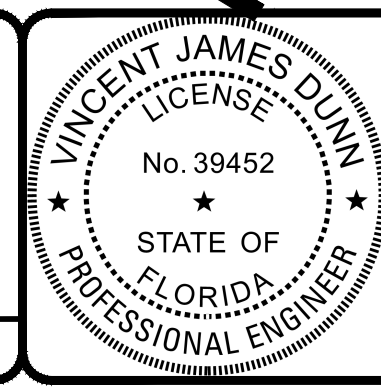
REVISIONS		BY:
NO.	DATE	

DESIGNED BY: DAI  
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DAVID M. TAYLOR  
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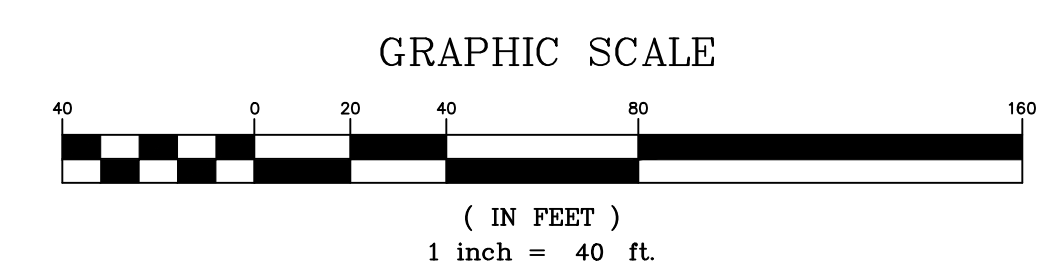
GLEN R. WIEGER  
ENGINEER NO. 81412

Sheet No. 55 of 130

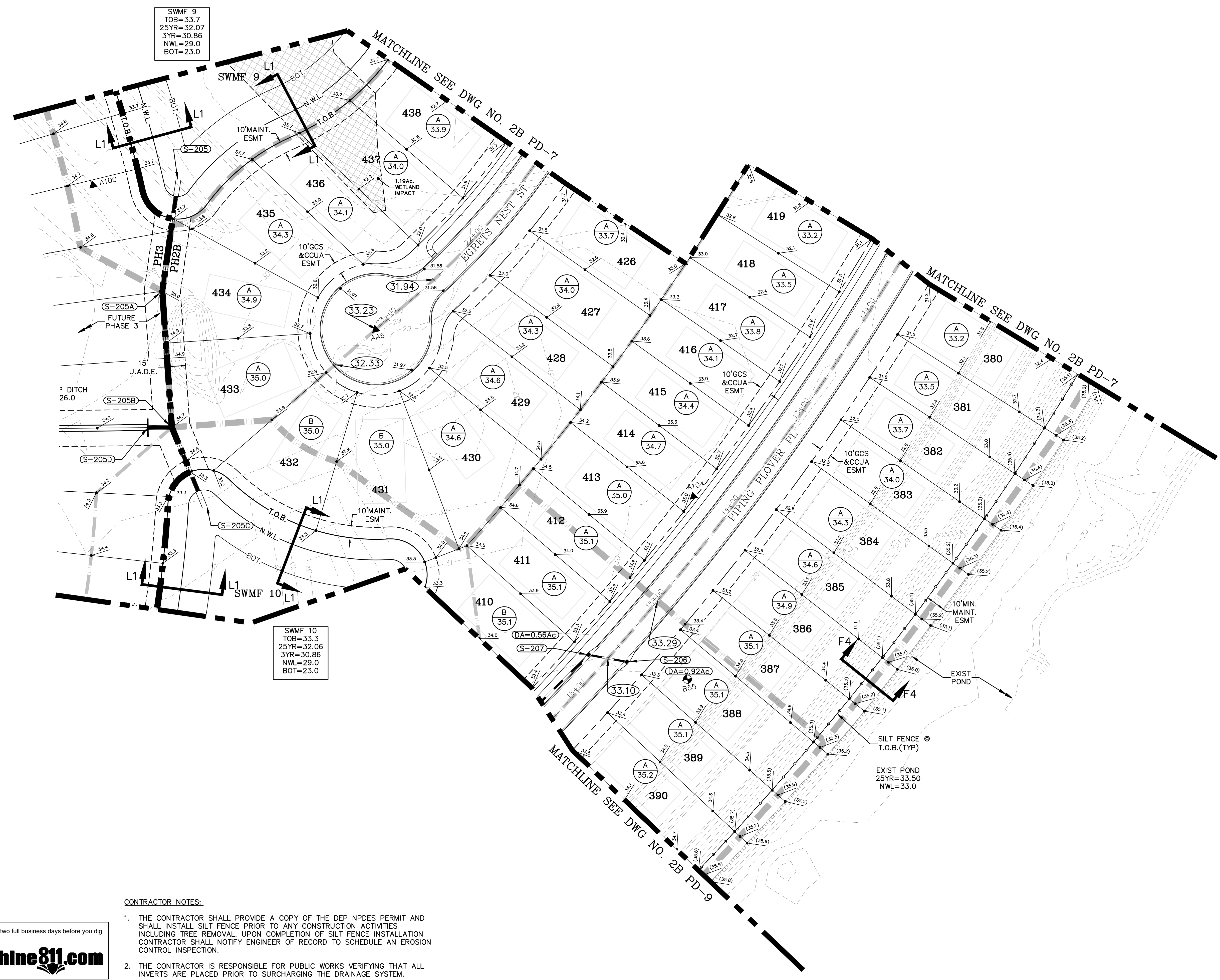
2B PD-7

DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



- LEGEND**
- = WETLANDS (FLAGGED)
  - = WETLANDS (AERIAL INTERPRETATION)
  - = UPLAND BUFFER
  - = WETLAND IMPACT
  - = LOT TYPE F.F. EL.
  - = PROPOSED GRADE EL.



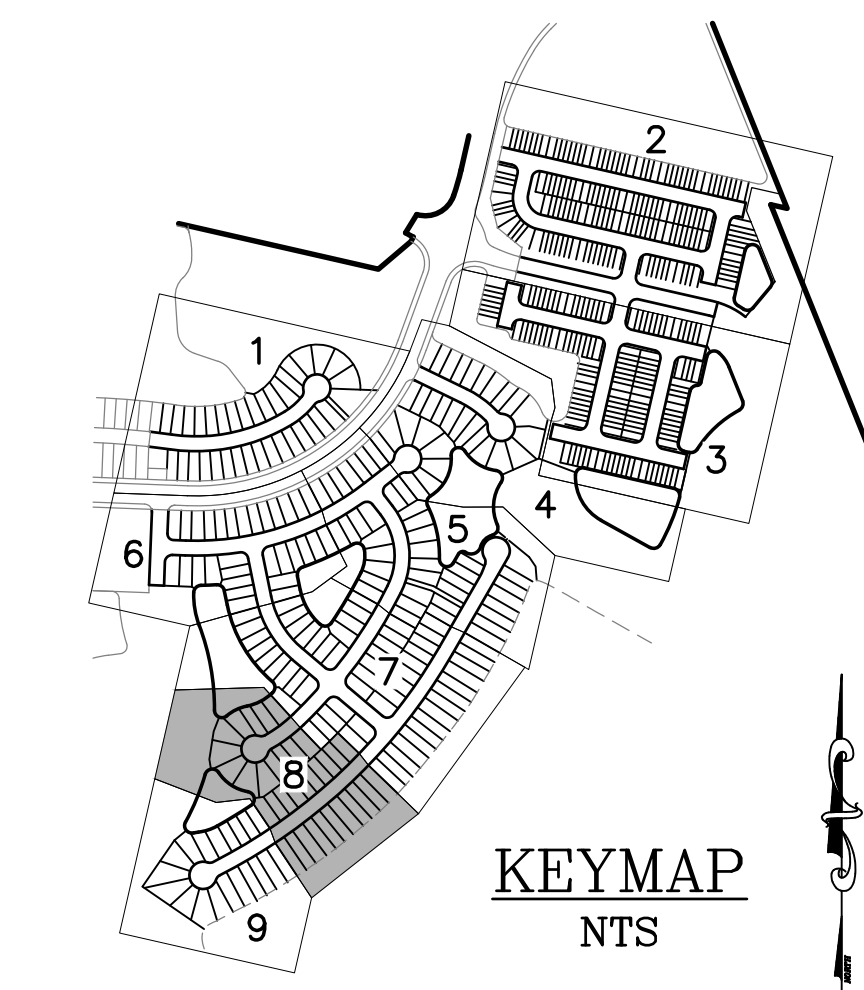
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SWMF 10  
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 3YR=30.86  
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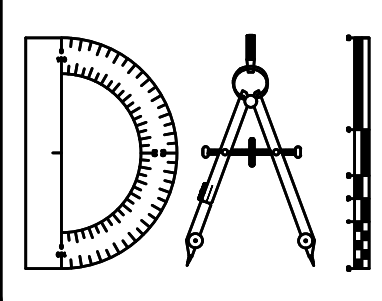
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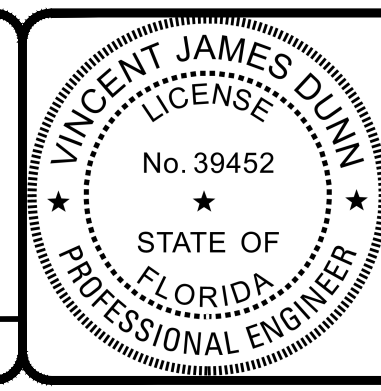
REVISIONS		
NO.	DATE	DESCRIPTION

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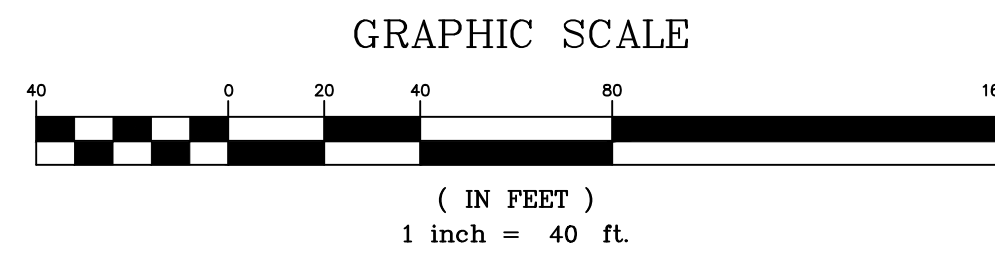
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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 56 of 130  
**2B PD-8**  
 DWG. NO.

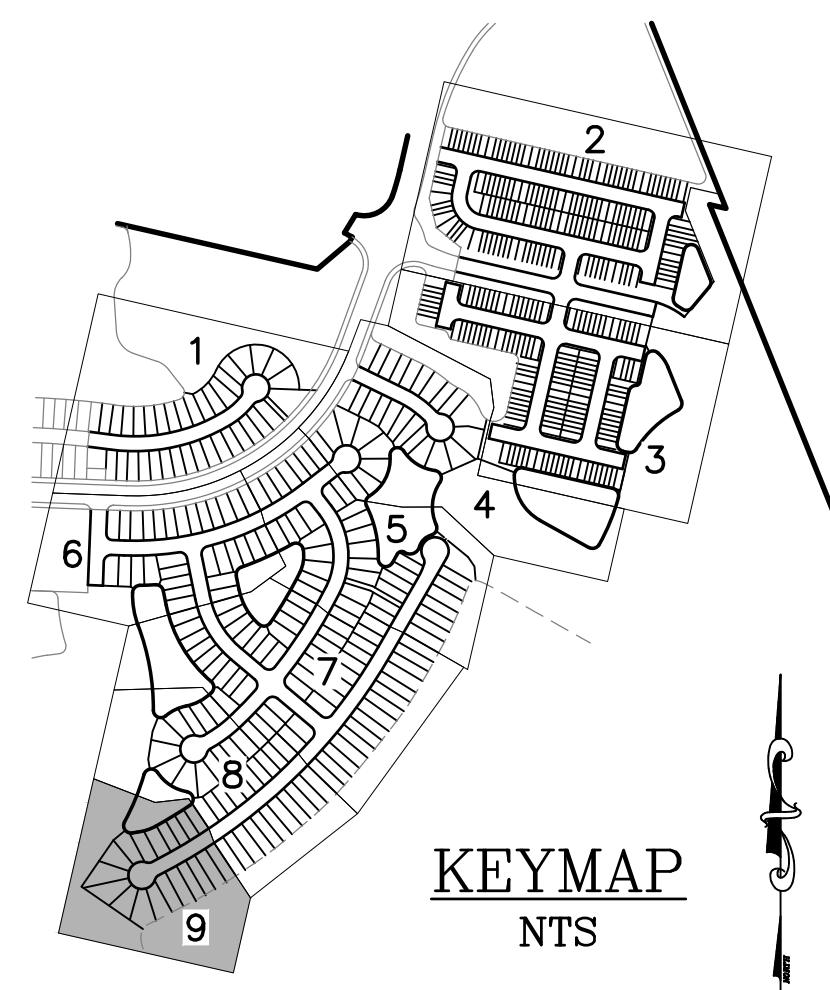
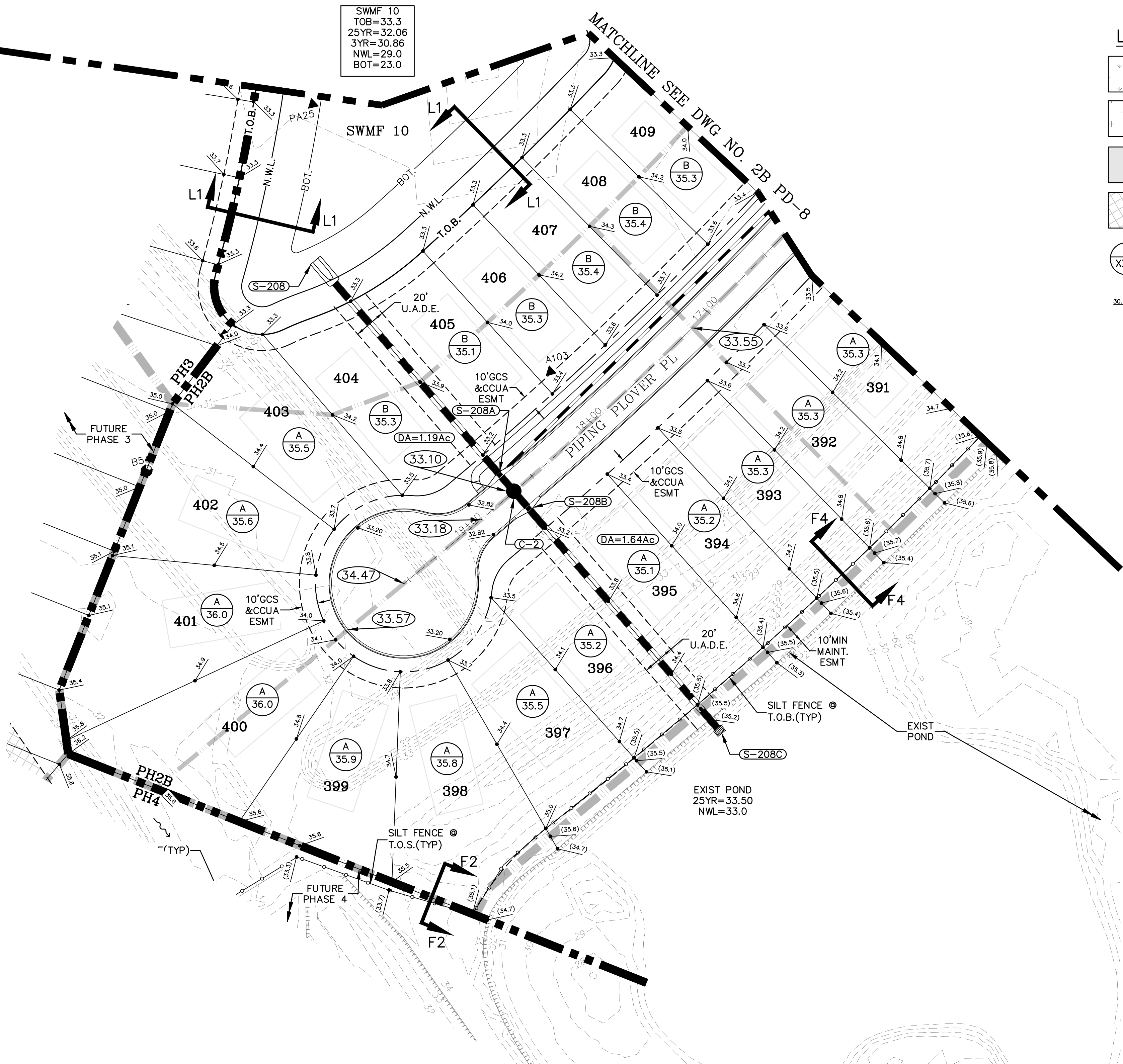
THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)





**LEGEND**

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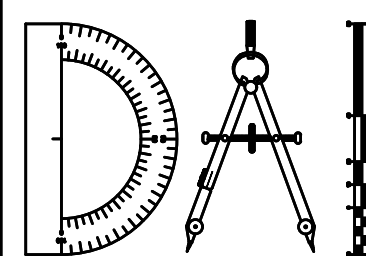
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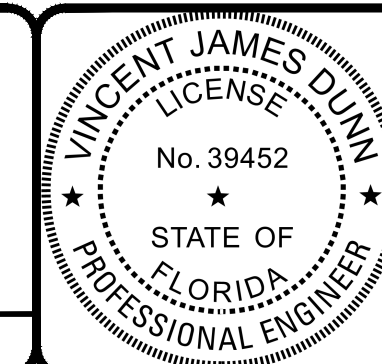
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B PAVING AND DRAINAGE PLAN



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 VINCENT J. DUNN ENGINEER NO. 99452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. 57 of 130  
**2B PD-9**  
 DWG. NO.

DRAINAGE STRUCTURE SCHEDULE table with columns: STR NO., STRUCT. TYPE, TOP EL., INVERT EL. PIPES IN., INVERT EL. PIPES OUT.

DRAINAGE STRUCTURE SCHEDULE table with columns: STR NO., STRUCT. TYPE, TOP EL., INVERT EL. PIPES IN., INVERT EL. PIPES OUT.

DRAINAGE STRUCTURE SCHEDULE table with columns: STR NO., STRUCT. TYPE, TOP EL., INVERT EL. PIPES IN., INVERT EL. PIPES OUT.

Legend for symbols: C.I. = CURB INLET, D.C.I. = DOUBLE CURB INLET, T.C.I. = TRIPLE CURB INLET, MH = MANHOLE, TMP HDWL = TEMPORARY SANDBAG HEADWALL, TYPE"V" = V-GRATE INLET, C-MH = CONFLICT MANHOLE. Includes notes 1, 2, and 3 regarding control structure details and grate specifications.

MITERED END SECTION & HEADWALL SCHEDULE table with columns: STR NO., STRUCT. TYPE, INVERT EL. PIPES IN., INVERT EL. PIPES OUT.

NOTE 4: MITERED END SECTIONS GREATER THAN 36" ARE TO BE POUR-IN-PLACE (INCLUDING ERCP)

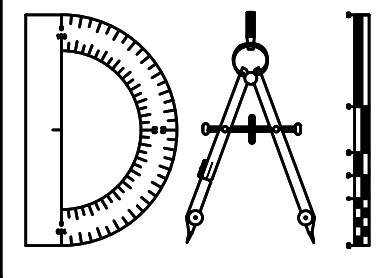
PIPE SCHEDULE table with columns: STRUCT. NO. TO STRUCT. NO., LENGTH FT., SIZE IN., TYPE, UP STREAM EL., DOWN STREAM EL., SLOPE.

PIPE SCHEDULE table with columns: STRUCT. NO. TO STRUCT. NO., LENGTH FT., SIZE IN., TYPE, UP STREAM EL., DOWN STREAM EL., SLOPE.

NOTE: SEE DWG NO. PDD-5 FOR HP ANCHOR DETAIL

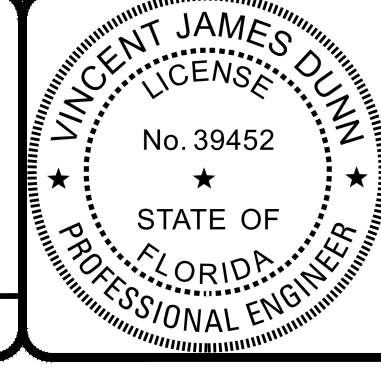
REVISIONS table with columns: NO., DATE, DESCRIPTION, BY.

DESIGNED BY: DAI, DRAWN BY: MR/NS/SM/SS, CHECKED BY: VJD, SCALE: N.T.S., DATE: 9/21/2023, PROJ. NO.: 2008-499-2



Dunn & Associates, Inc. CIVIL ENGINEERS / LAND PLANNERS 8647 Baypine Road, Suite 200 Jacksonville, Florida 32256 Phone: (904)363-8916 Fax: (904)363-8917 www.dunngem.com

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING) FOR: D.R. HORTON INC. - JACKSONVILLE CLAY COUNTY, FLORIDA 2B DRAINAGE STRUCTURE TABLE

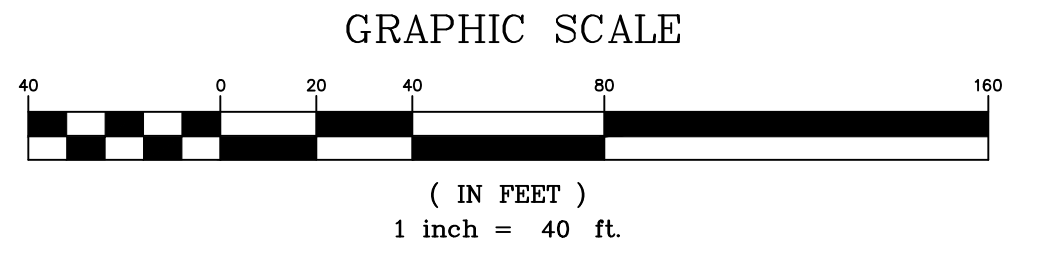
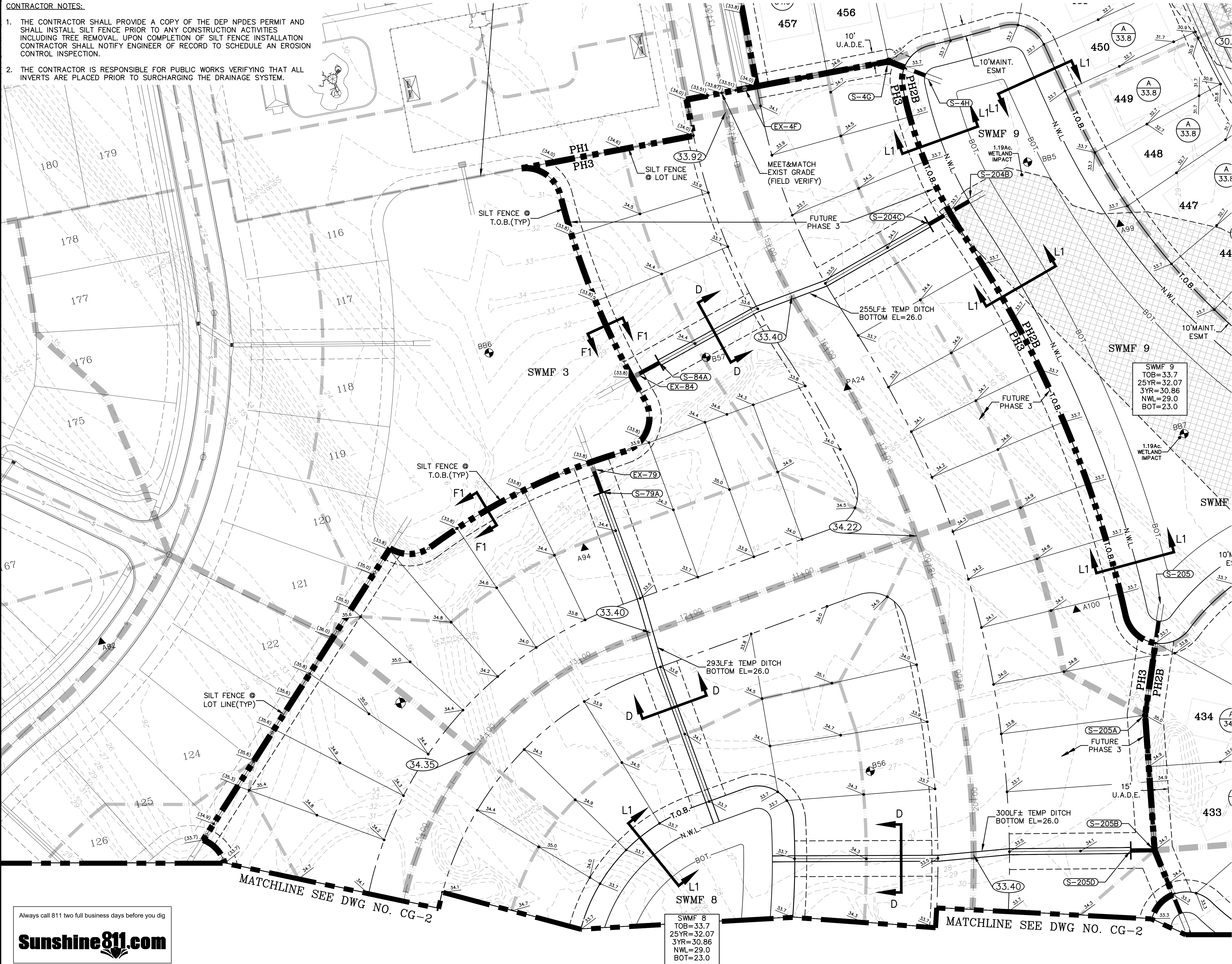


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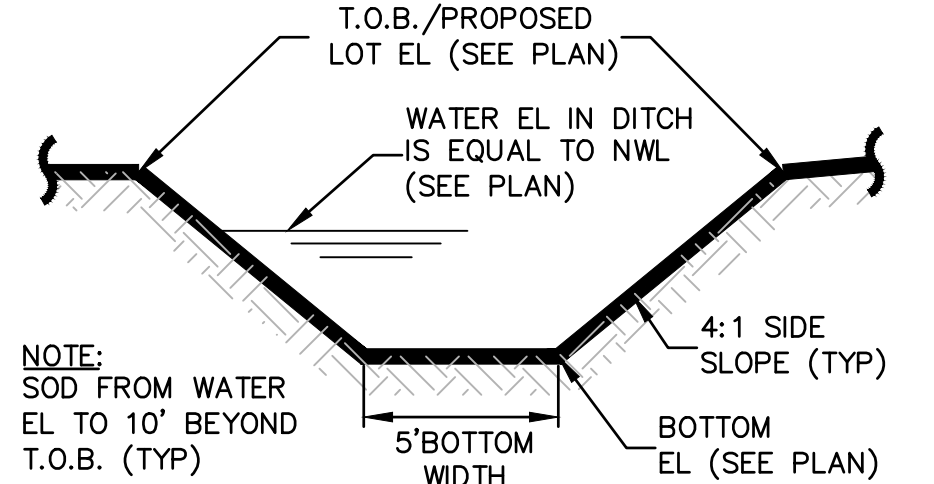
Sheet No. 58 of 130 2B DST DWG. NO.

**CONTRACTOR NOTES:**

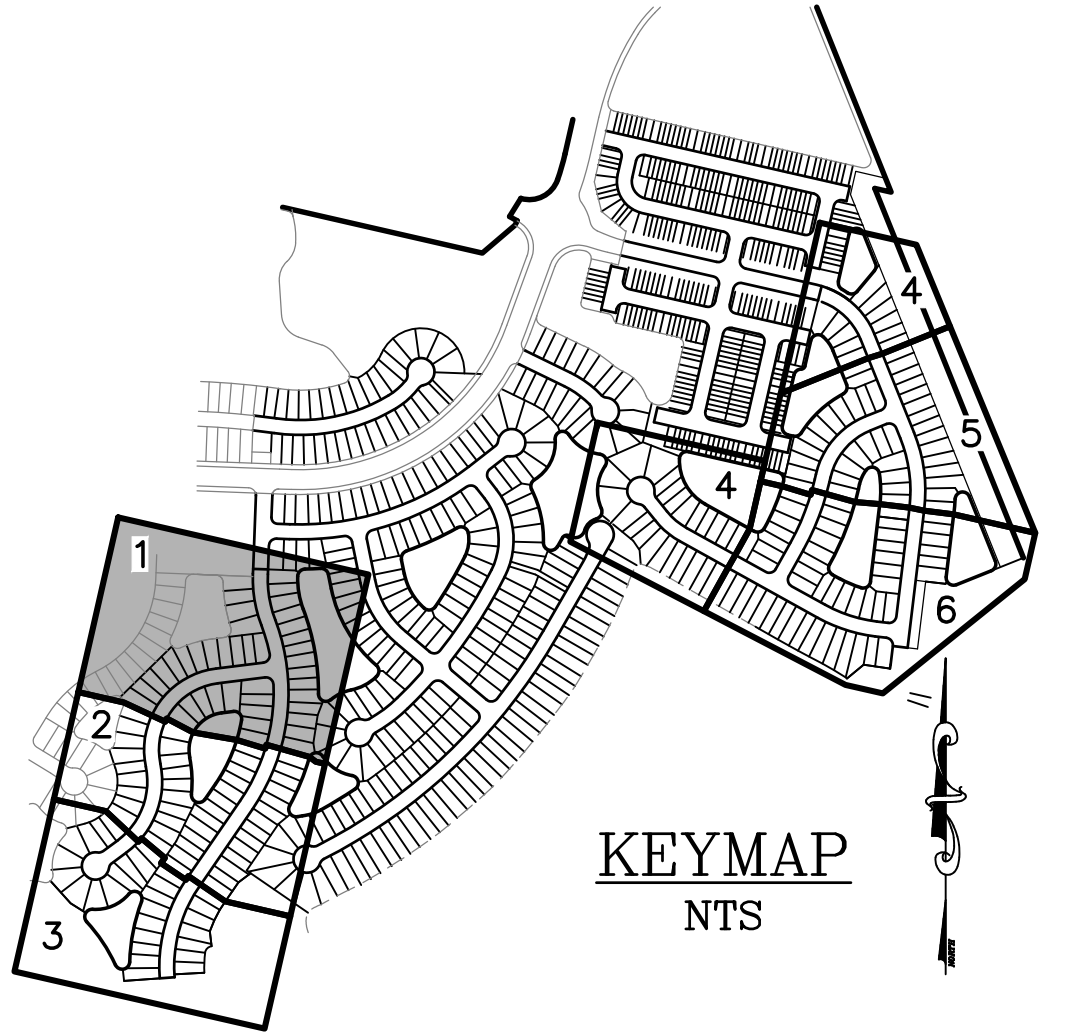
1. THE CONTRACTOR SHALL PROVIDE A COPY OF THE DEP NPDES PERMIT AND SHALL INSTALL SILT FENCE PRIOR TO ANY CONSTRUCTION ACTIVITIES INCLUDING TREE REMOVAL. UPON COMPLETION OF SILT FENCE INSTALLATION CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD TO SCHEDULE AN EROSION CONTROL INSPECTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR PUBLIC WORKS VERIFYING THAT ALL INVERTS ARE PLACED PRIOR TO SURCHARGING THE DRAINAGE SYSTEM.



- LEGEND**
- [Symbol] = WETLANDS (FLAGGED)
  - [Symbol] = WETLANDS (AERIAL INTERPRETATION)
  - [Symbol] = UPLAND BUFFER
  - [Symbol] = WETLAND IMPACT
  - [Symbol] = PROPOSED GRADE EL.



**SECTION D-D  
TEMP. DITCH  
N.T.S.**

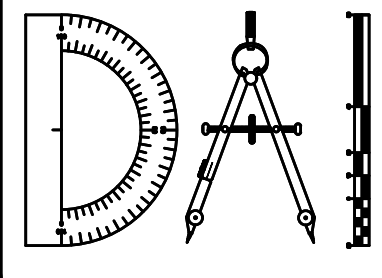


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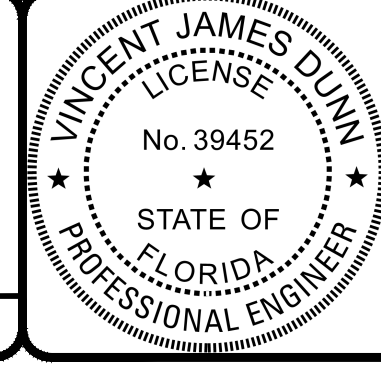
REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 CLEARING AND GRADING PLAN - PH 3

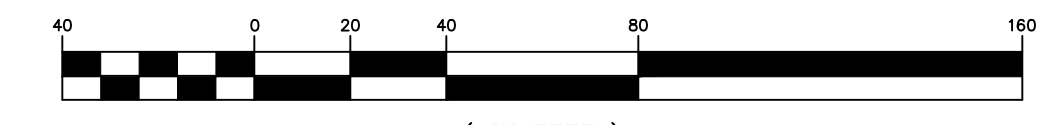


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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

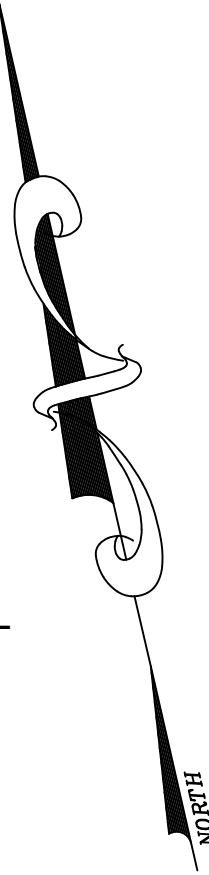
Sheet No. **59** of 130  
**CG-1**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

GRAPHIC SCALE

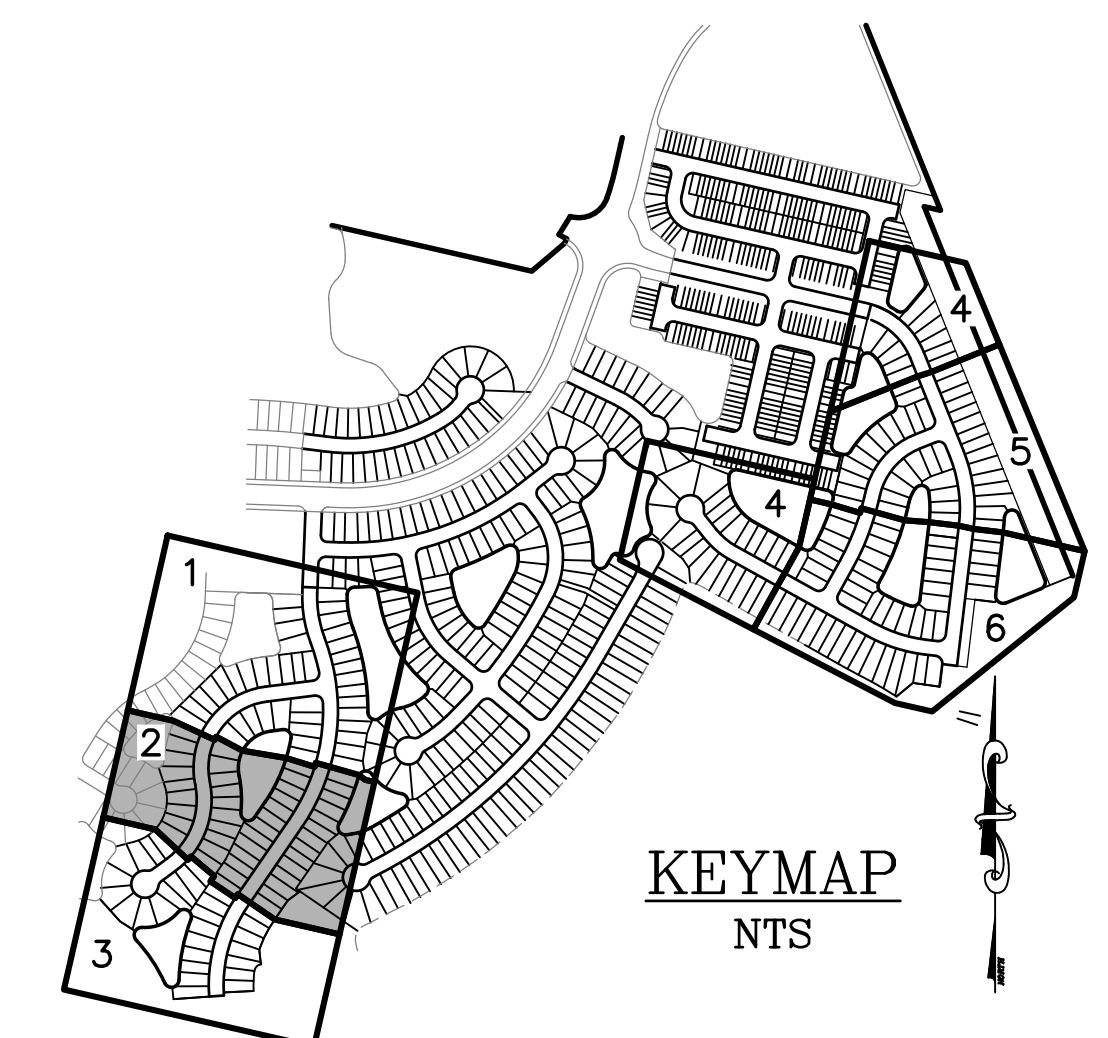
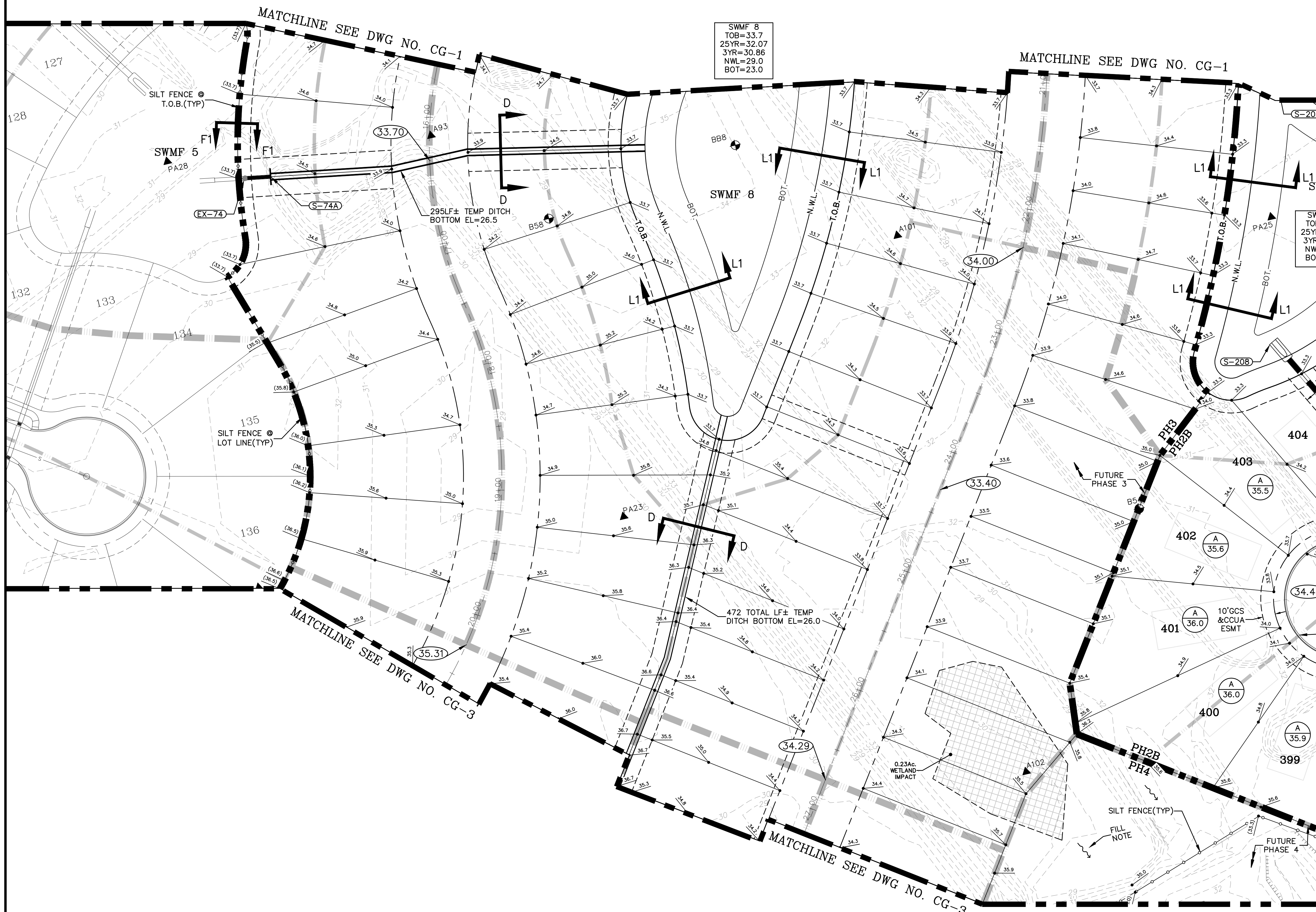


( IN FEET )  
1 inch = 40 ft.



**LEGEND**

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- = WETLANDS (AERIAL INTERPRETATION)
- = UPLAND BUFFER
- = WETLAND IMPACT
- = PROPOSED GRADE EL.



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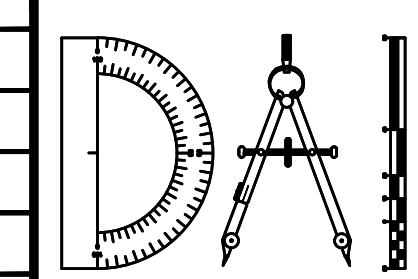
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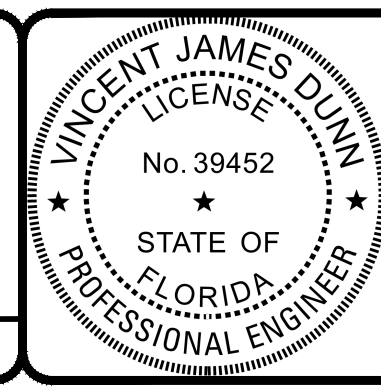
REVISIONS		NO.	DATE	DESCRIPTION	BY:

DESIGNED BY: DAI  
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 CLAY COUNTY, FLORIDA  
 CLEARING AND GRADING PLAN - PH 3

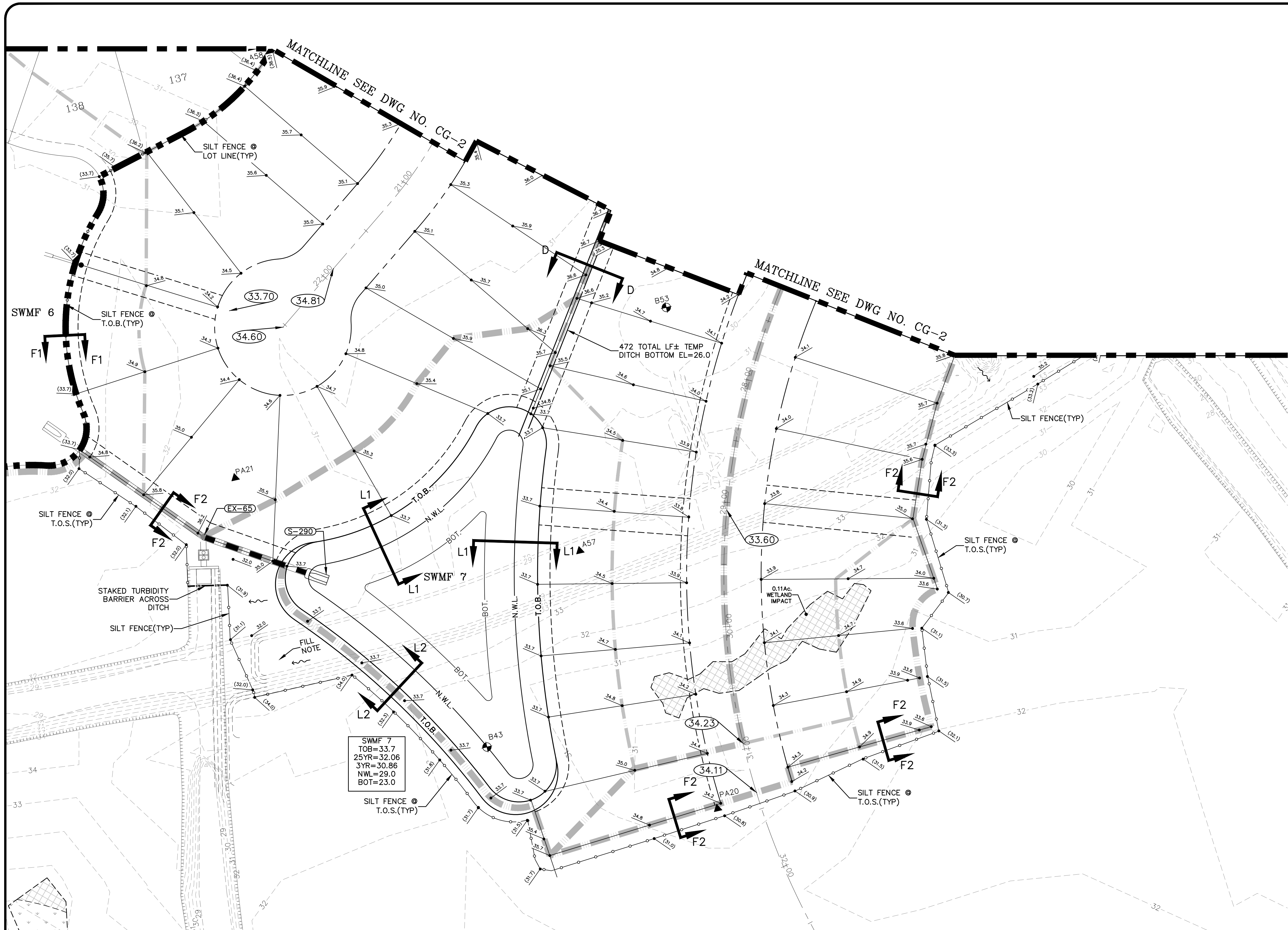


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 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. **60** of 130  
**CG-2**  
 DWG. NO.

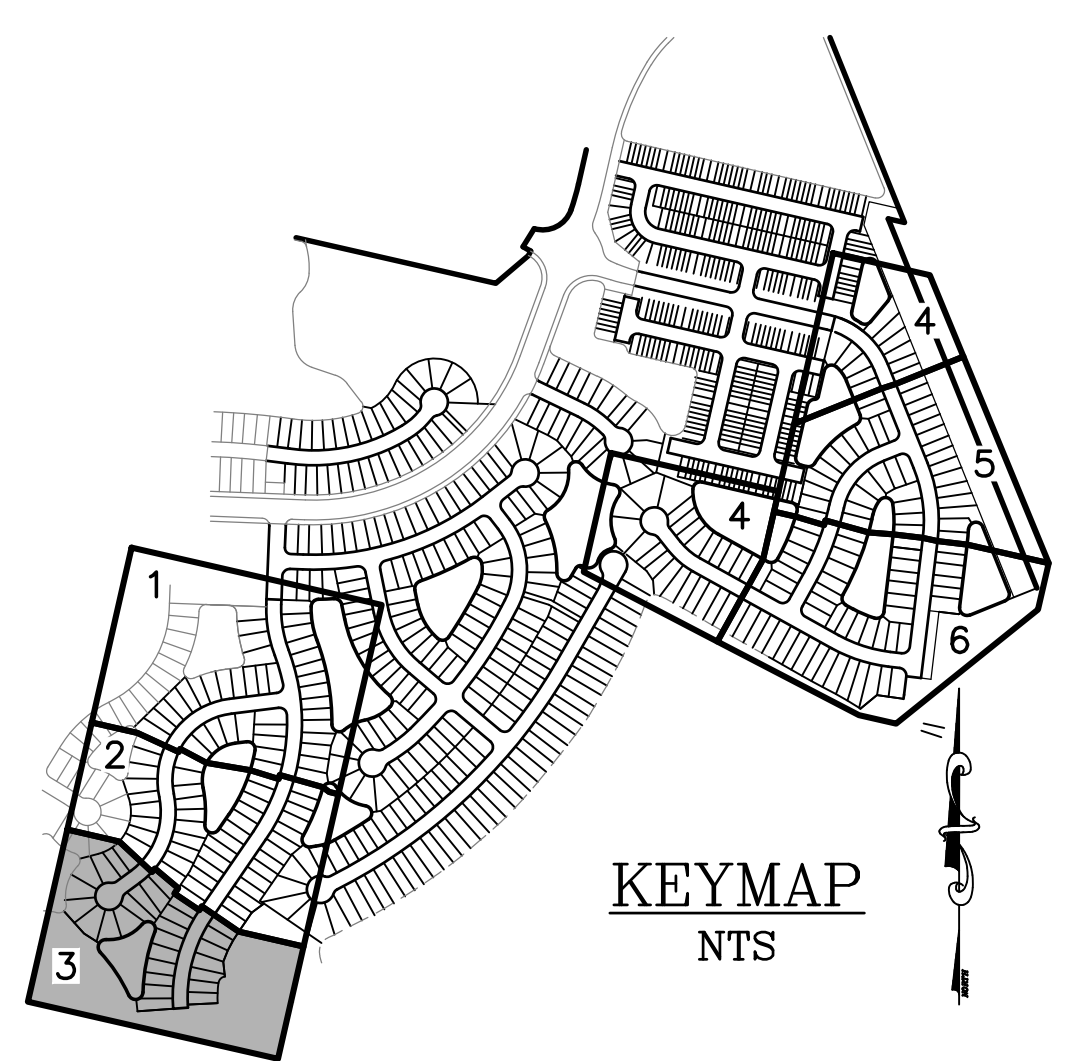
THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



GRAPHIC SCALE  
 ( IN FEET )  
 1 inch = 40 ft.

**LEGEND**

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = UPLAND BUFFER
- = WETLAND IMPACT
- = PROPOSED GRADE EL.



SWMF 7  
 TOB=33.7  
 25YR=32.06  
 3YR=30.86  
 NWL=29.0  
 BOT=23.0

472 TOTAL LF± TEMP  
 DITCH BOTTOM EL=26.0'

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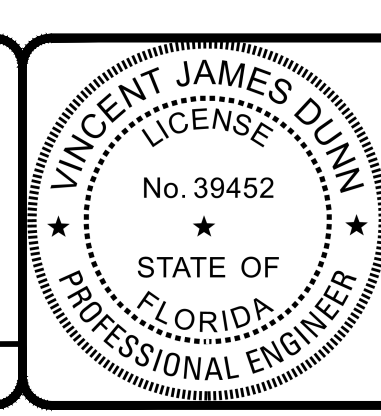
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REVISIONS	
NO.	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: #####  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2

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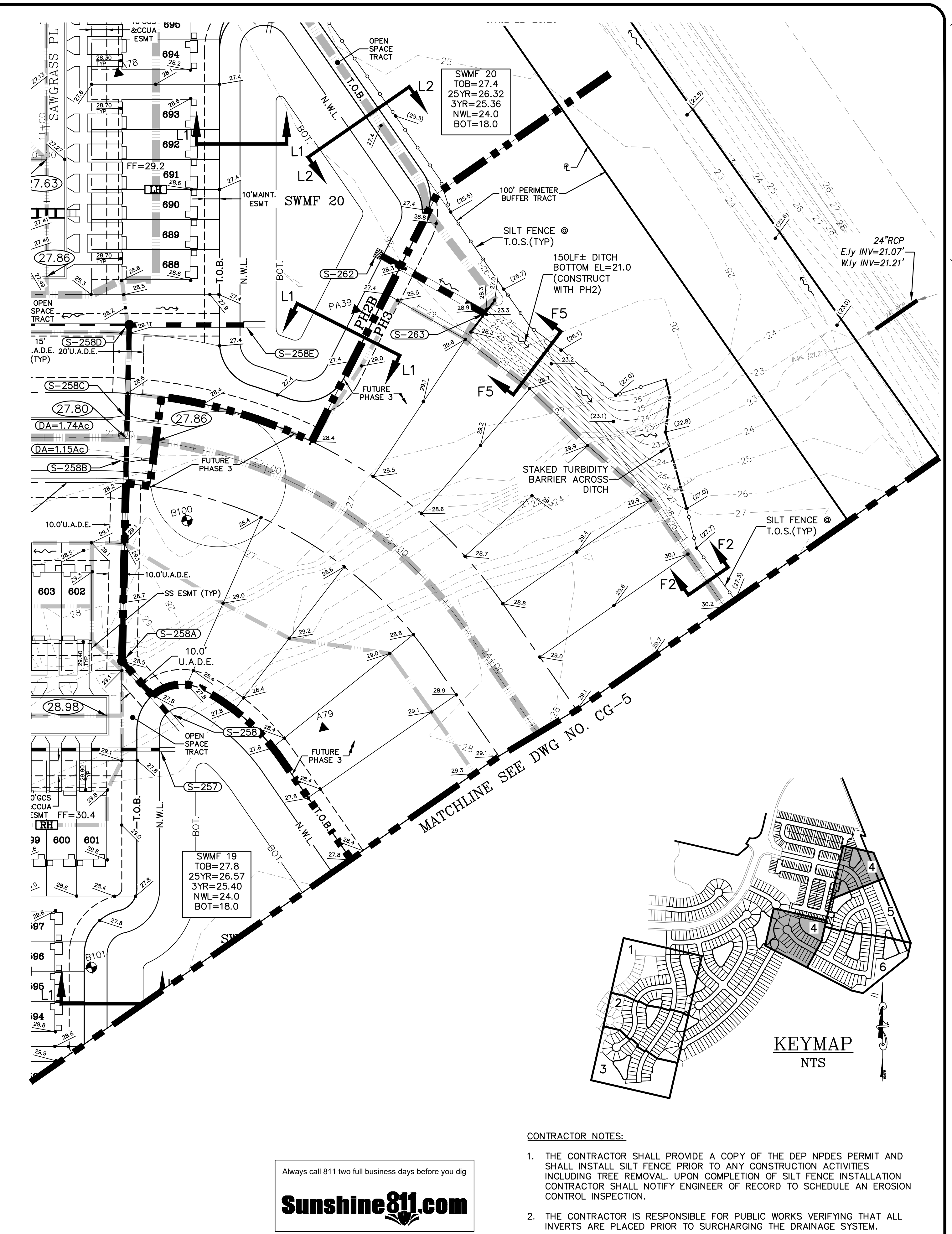
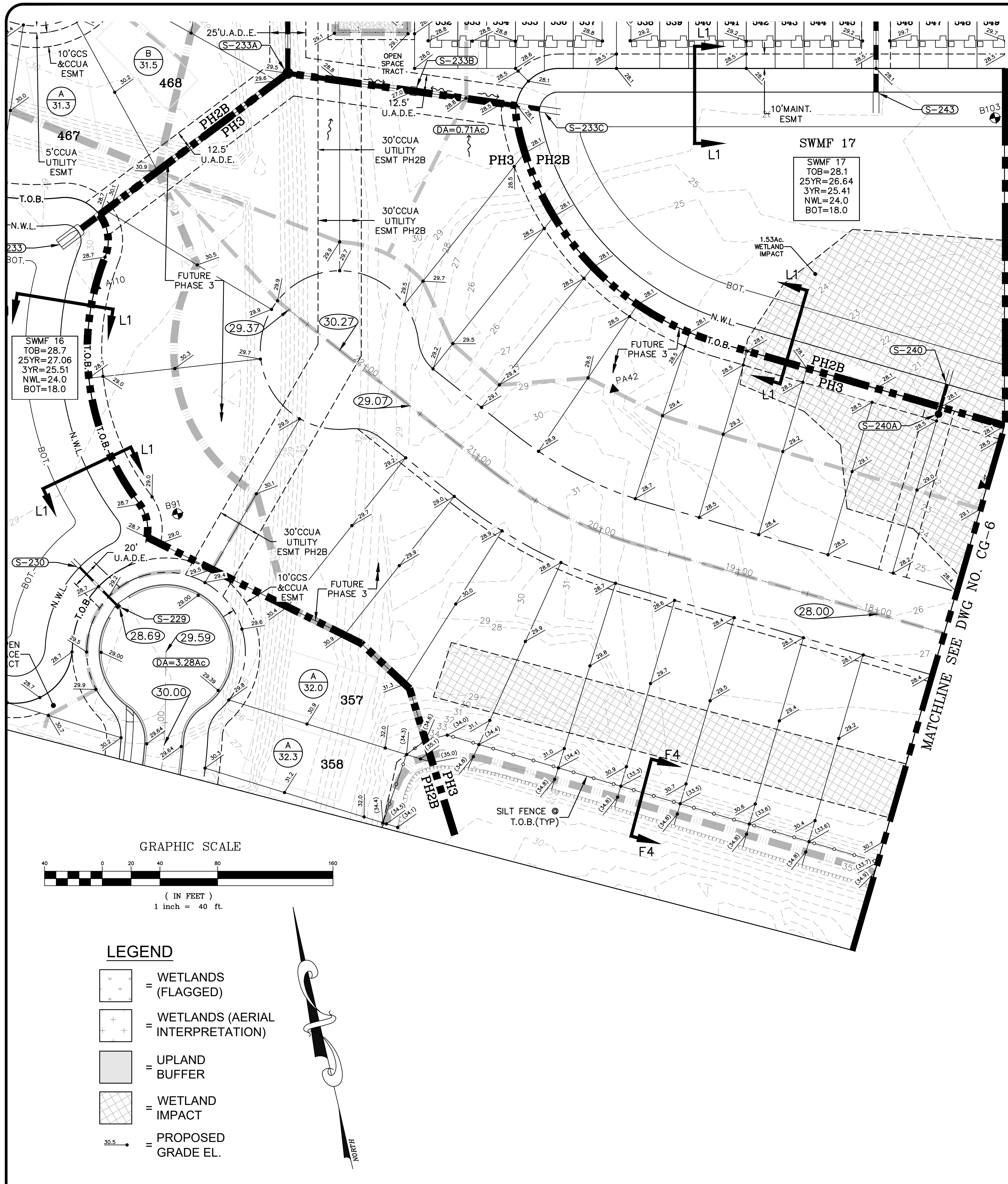
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 CLAY COUNTY, FLORIDA  
 CLEARING AND GRADING PLAN - PH 3



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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 61 of 130  
**CG-3**  
 DWG. NO.



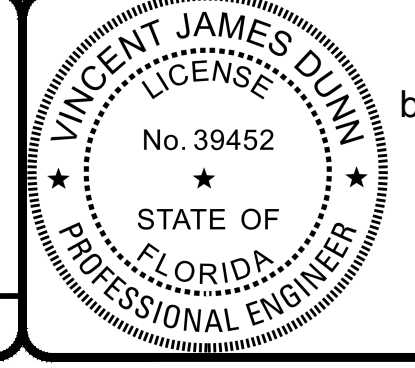
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REVISIONS		
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 CLEARING AND GRADING PLAN - PH 3



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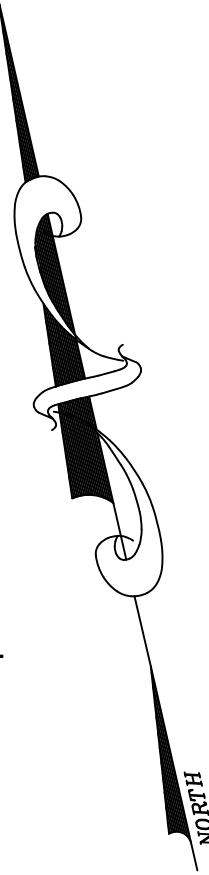
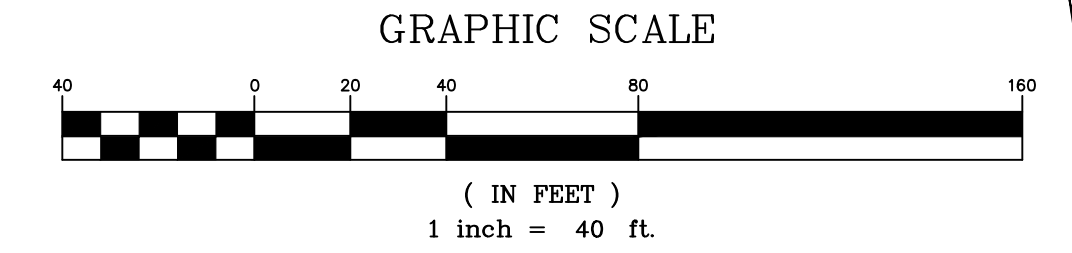
DAVID M. TAYLOR  
 ENGINEER NO. 44184

GLEN R. WIEGER  
 ENGINEER NO. 81419

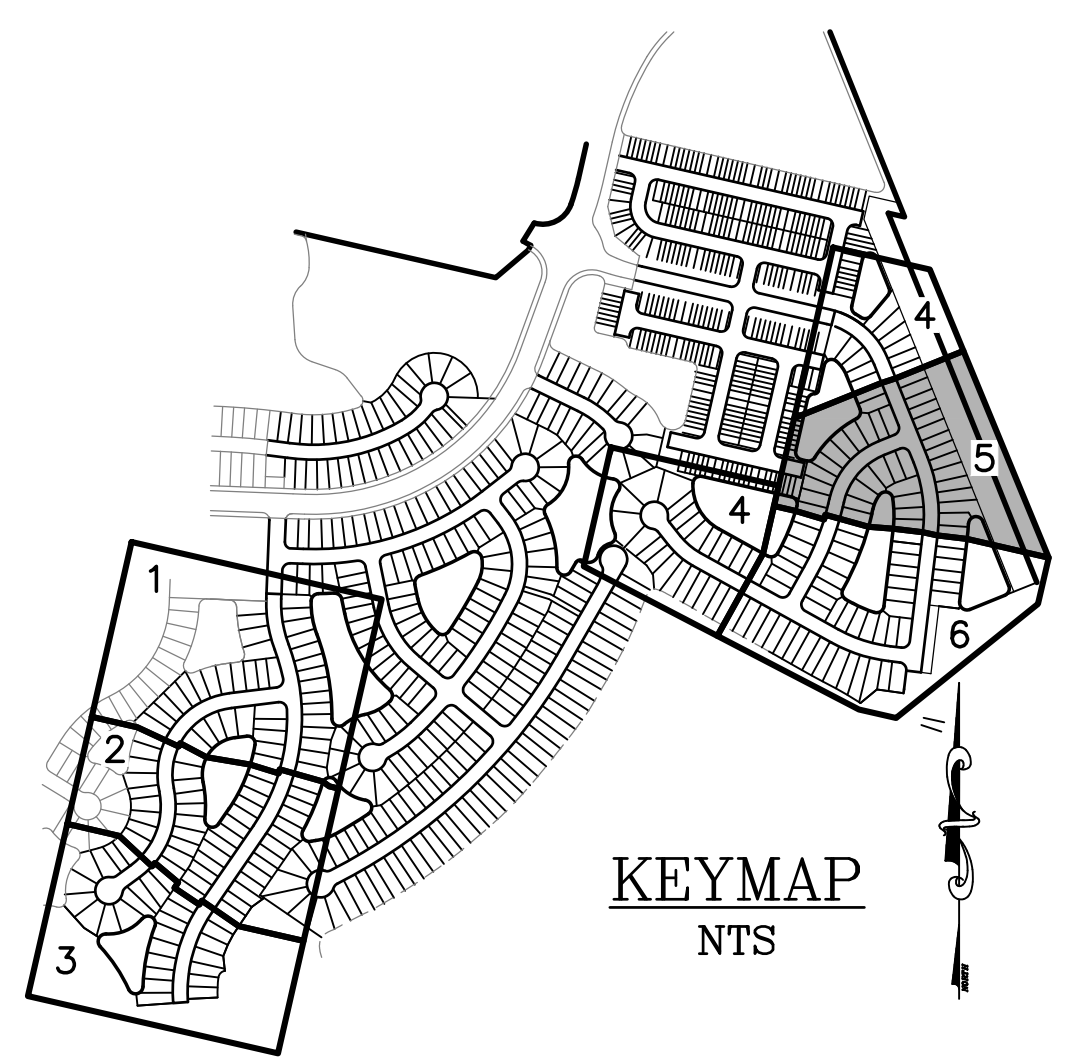
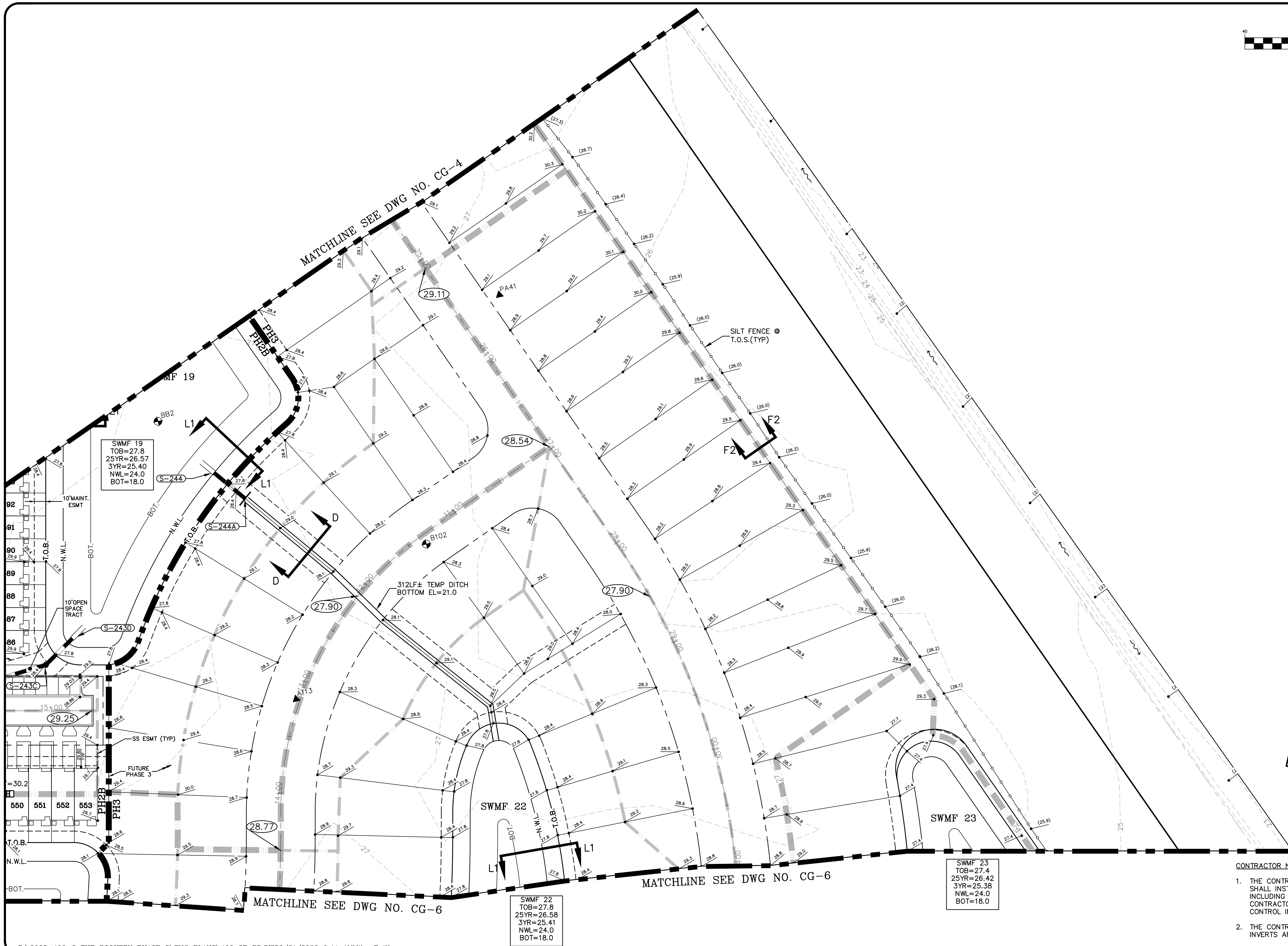
Sheet No. 62 of 130  
**CG-4**  
 DWG. NO.

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THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



- LEGEND**
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  - = WETLANDS (AERIAL INTERPRETATION)
  - = UPLAND BUFFER
  - = WETLAND IMPACT
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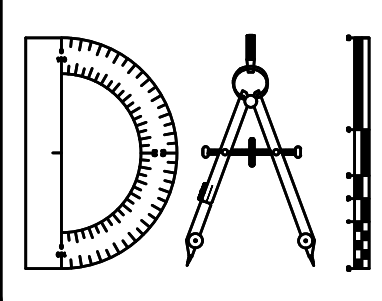
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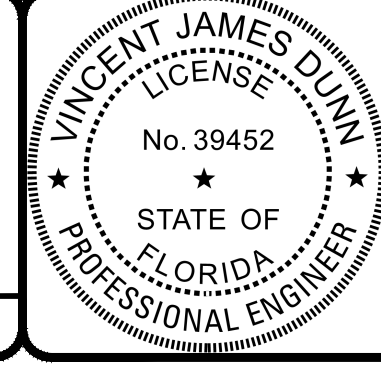
REVISIONS		BY:
NO.	DATE	DESCRIPTION

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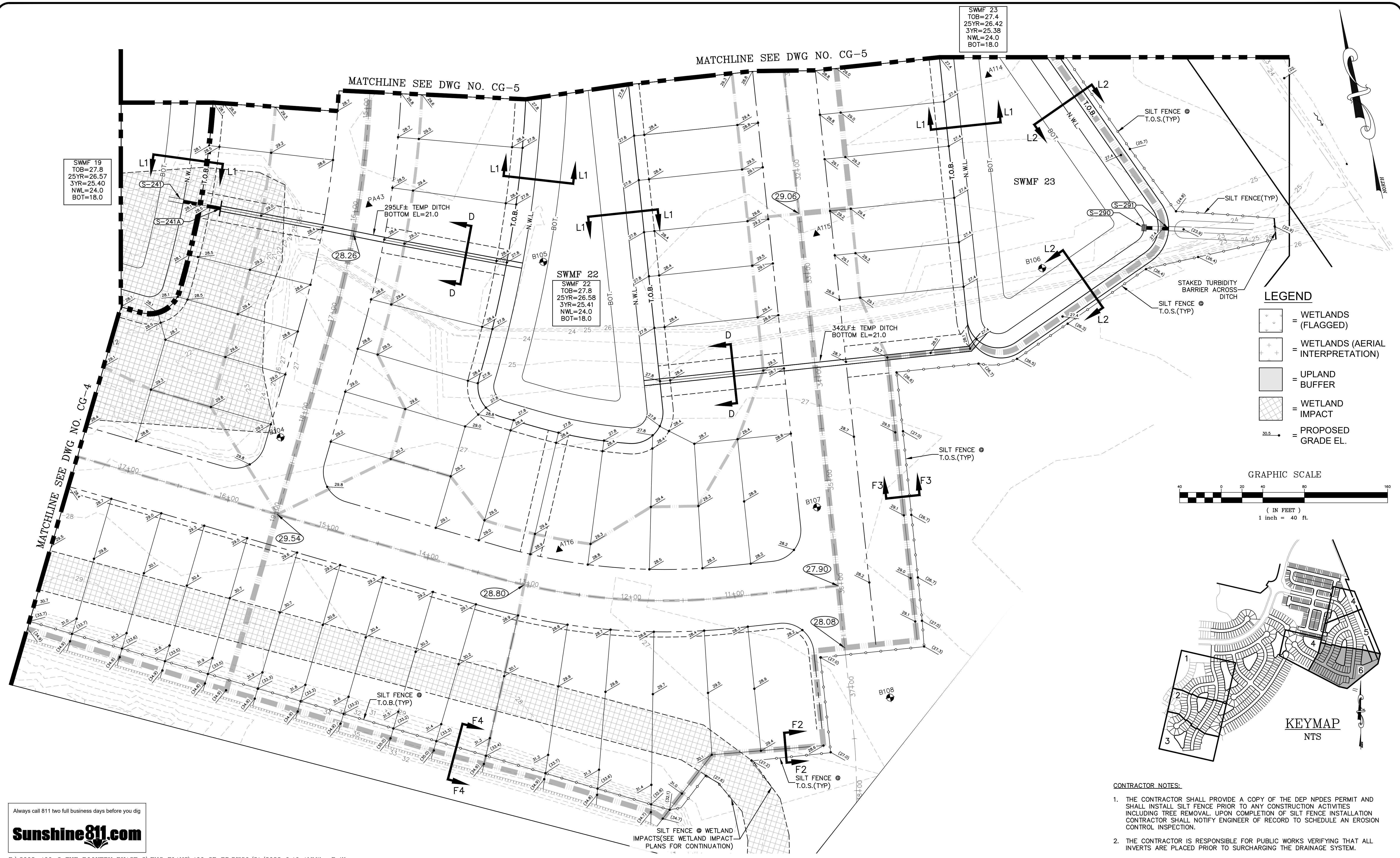
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Sheet No. **63** of 130  
**CG-5**  
 DWG. NO.



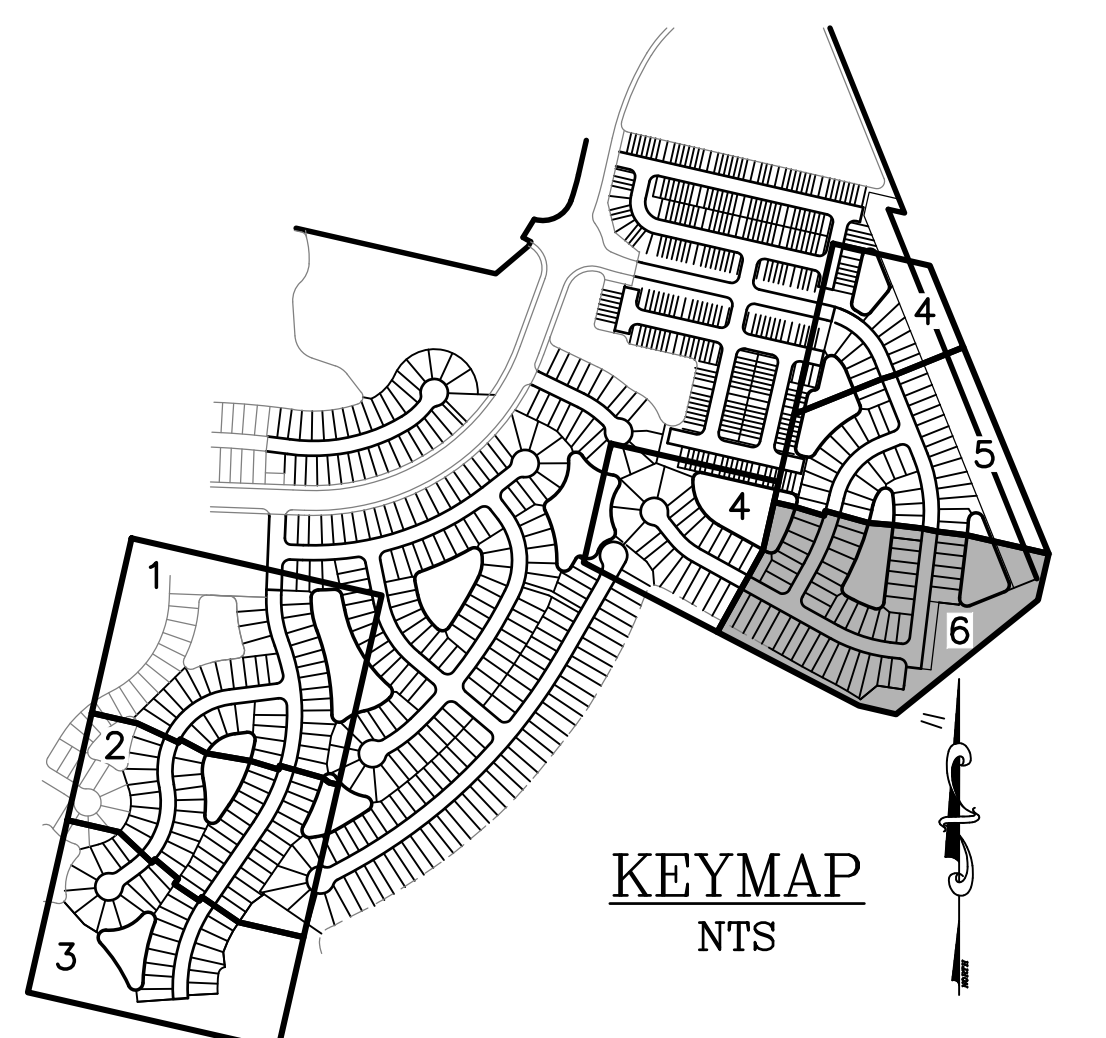
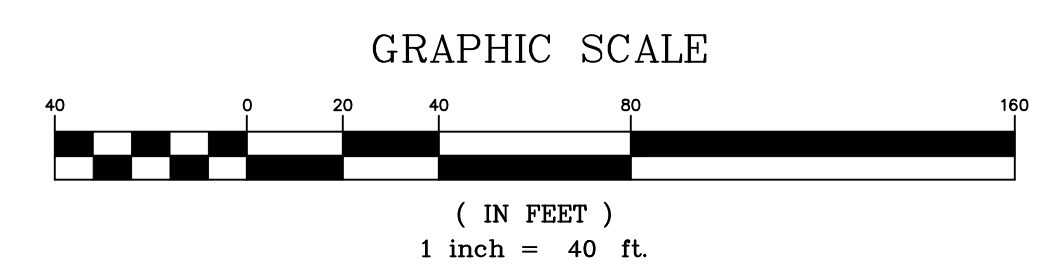
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25YR=26.57  
3YR=25.40  
NWL=24.0  
BOT=18.0

SWMF 22  
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25YR=26.58  
3YR=25.41  
NWL=24.0  
BOT=18.0

SWMF 23  
TOB=27.4  
25YR=26.42  
3YR=25.38  
NWL=24.0  
BOT=18.0

**LEGEND**

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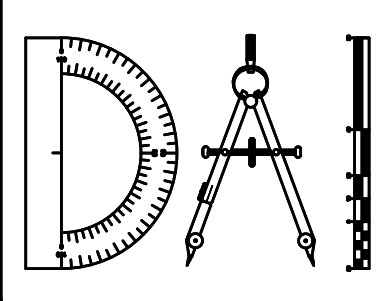
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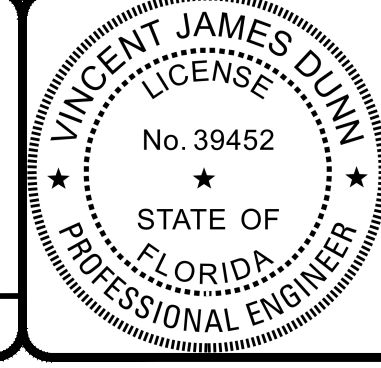
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NO.	DESCRIPTION

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 GLEN R. WIEGER ENGINEER NO. 81419

Sheet No. **64** of 130  
**CG-6**  
 DWG. NO.



GRAPHIC SCALE



( IN FEET )  
1 inch = 300 ft.

LEGEND

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = PHASE 2A / 2B
- = WETLAND IMPACT
- FH = FIRE HYDRANT ASSEMBLY
- WM = WATER MAIN
- GV = GATE VALVE
- RED = REDUCER



\*\* NOTE: A PRESSURE REDUCING VALVE WILL BE NEEDED ON WATER MAIN AT THE PROJECT ENTRANCE/ CONNECTION POINTS

MASTER WATER PLAN DEPICTS OVERALL WATER MAIN LOCATION & SIZE, VALVE & FIRE HYDRANT LOCATIONS & GENERAL INFORMATION. FOR PHASE 1 DETAILED INFORMATION SEE WATER AND REUSE PLANS. FUTURE PHASE DETAILED INFORMATION WILL BE PROVIDED AT THE TIME OF SUBMITTAL.

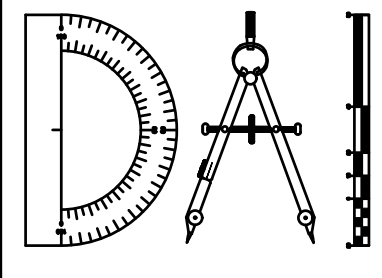
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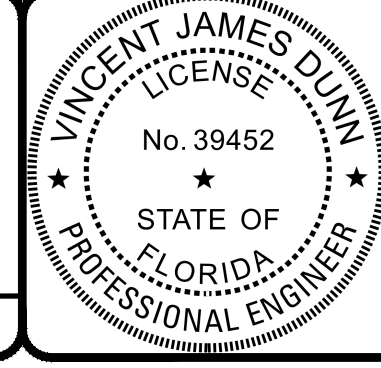
REVISIONS		BY:
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 DRAWN BY: MR/NS/SM/SS  
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 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



**Dunn & Associates, Inc.**  
 CIVIL ENGINEERS / LAND PLANNERS  
 8647 Baypine Road, Suite 200  
 Jacksonville, Florida 32256  
 Phone: (904)363-8916 Fax: (904)363-8917  
 www.dunneng.com

**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 MASTER WATER PLAN



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VINCENT J. DUNN  
 ENGINEER NO. 39452

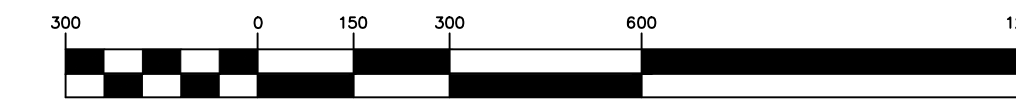
DAVID M. TAYLOR  
 ENGINEER NO. 44184

GLEN R. WIEBER  
 ENGINEER NO. 81412

Sheet No. 65 of 130  
**MWP-1**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

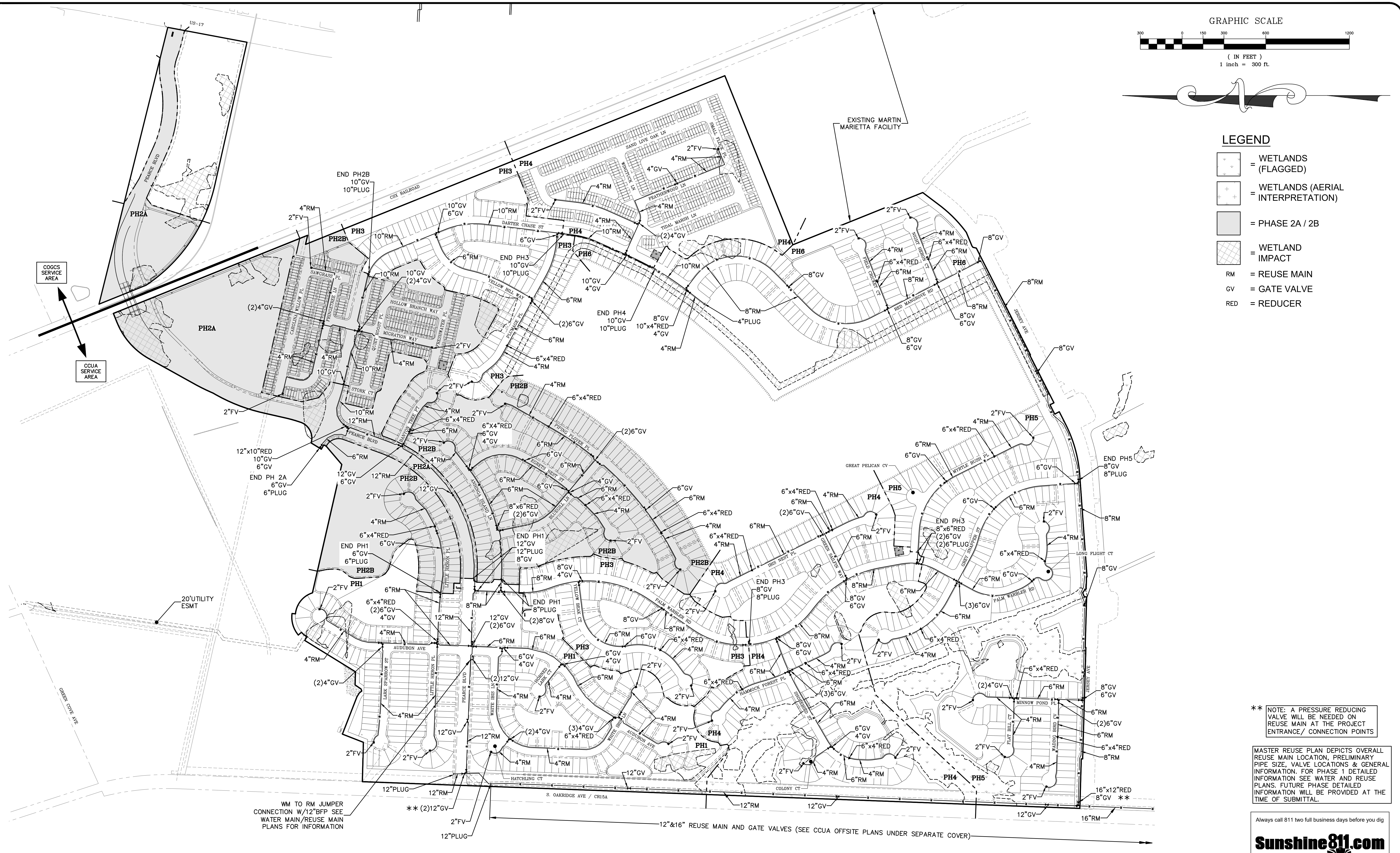
GRAPHIC SCALE



( IN FEET )  
1 inch = 300 ft.

LEGEND

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = PHASE 2A / 2B
- = WETLAND IMPACT
- RM = REUSE MAIN
- GV = GATE VALVE
- RED = REDUCER



\*\* NOTE: A PRESSURE REDUCING VALVE WILL BE NEEDED ON REUSE MAIN AT THE PROJECT ENTRANCE/ CONNECTION POINTS

MASTER REUSE PLAN DEPICTS OVERALL REUSE MAIN LOCATION, PRELIMINARY PIPE SIZE, VALVE LOCATIONS & GENERAL INFORMATION. FOR PHASE 1 DETAILED INFORMATION SEE WATER AND REUSE PLANS. FUTURE PHASE DETAILED INFORMATION WILL BE PROVIDED AT THE TIME OF SUBMITTAL.

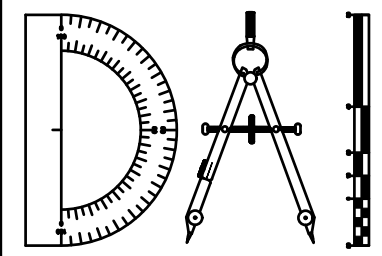
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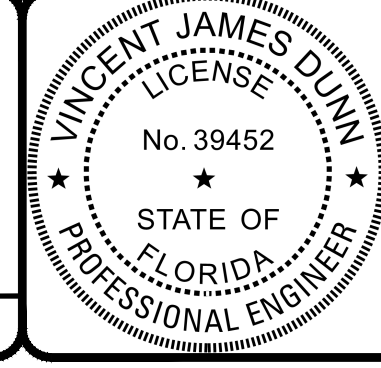
REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 300'  
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 FOR:  
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 CLAY COUNTY, FLORIDA  
**MASTER REUSE PLAN**



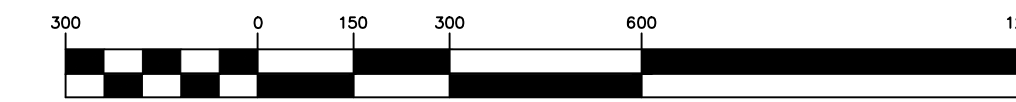
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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEBER ENGINEER NO. 81412

Sheet No. **66** of 130  
**MRP-1**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

GRAPHIC SCALE



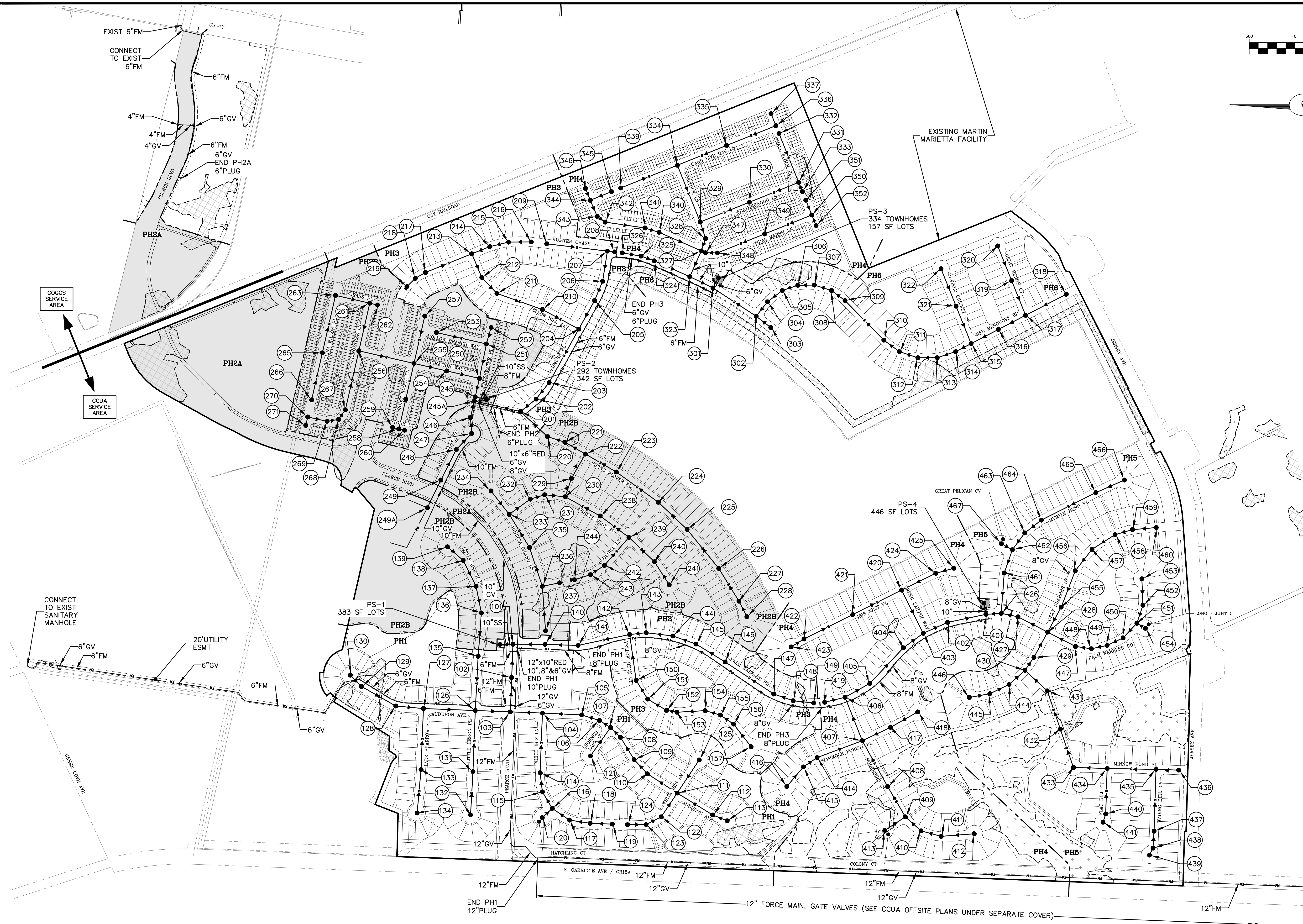
( IN FEET )  
1 inch = 300 ft.

LEGEND

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = PHASE 2A / 2B
- = WETLAND IMPACT
- = MANHOLE
- = DIRECTION OF FLOW
- = FORCE MAIN
- = SANITARY SEWER MAIN

NOTES:

1. TERMINAL MANHOLES WITH MORE THAN 1 SERVICE LATERAL SHALL BE 5' DIAMETER.
2. ALL SANITARY SEWER MAINS ARE 8" UNLESS OTHERWISE NOTED.



MASTER SEWER PLAN DEPICTS GRAVITY SEWER & FORCE MAIN LOCATIONS, SIZES, PUMP STATION LOCATION & GENERAL INFORMATION. FOR PHASE 1 DETAILED INFORMATION SEE SANITARY SEWER PLANS. FUTURE PHASES DETAILED INFORMATION WILL BE PROVIDED AT THE TIME OF SUBMITTAL.

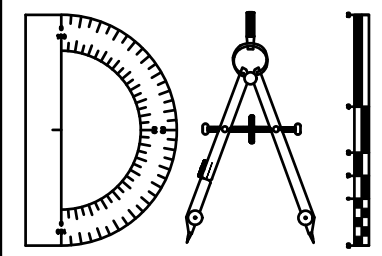
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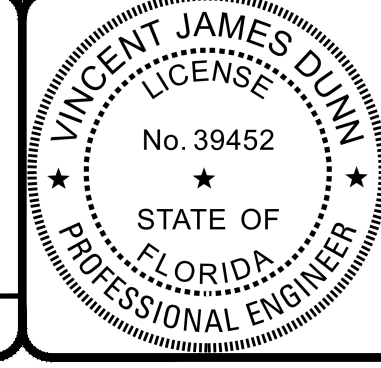
REVISIONS		BY:
NO.	DATE	DESCRIPTION

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 CLAY COUNTY, FLORIDA  
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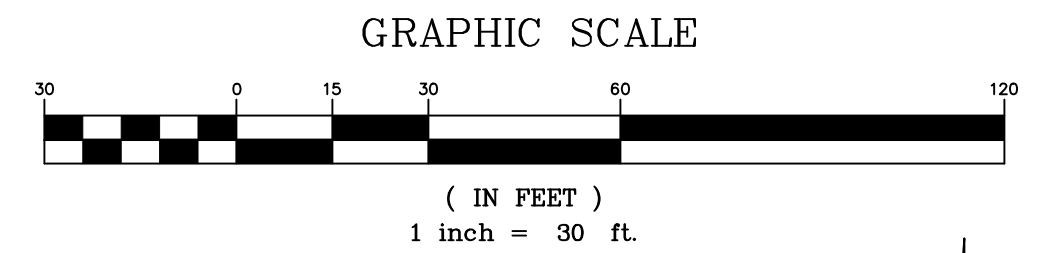
VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 67 of 130  
**MSP-1**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

ALL UTILITIES THIS AREA, WEST OF CSX RAILROAD, ARE IN CLAY COUNTY UTILITY DEPARTMENT (CCUA) SERVICE AREA AND SHALL COMPLY WITH CCUA STANDARDS AND SPECIFICATIONS

NOTE:  
NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. MEANDER SIDEWALKS AS NECESSARY TO AVOID CONFLICTS. FIRE HYDRANTS TO BE LOCATED IN ACCORDANCE W/CCUA. MEANDER SIDEWALKS WITHIN R/W TO AVOID CONFLICTS. SIDEWALK WIDTH AT FIRE HYDRANTS CAN BE REDUCED TO 3' MIN TO AVOID CONFLICTS.



**LEGEND**

SP-1 = SAMPLE POINT

**UTILITY CROSSING LEGEND**

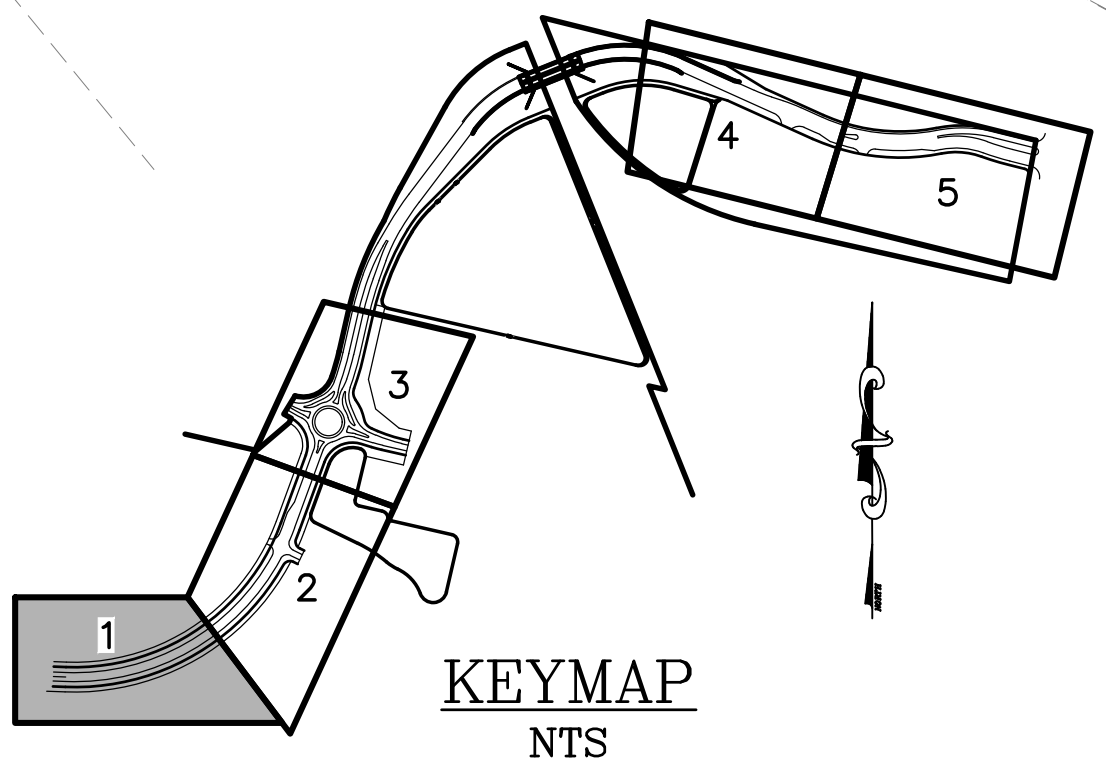
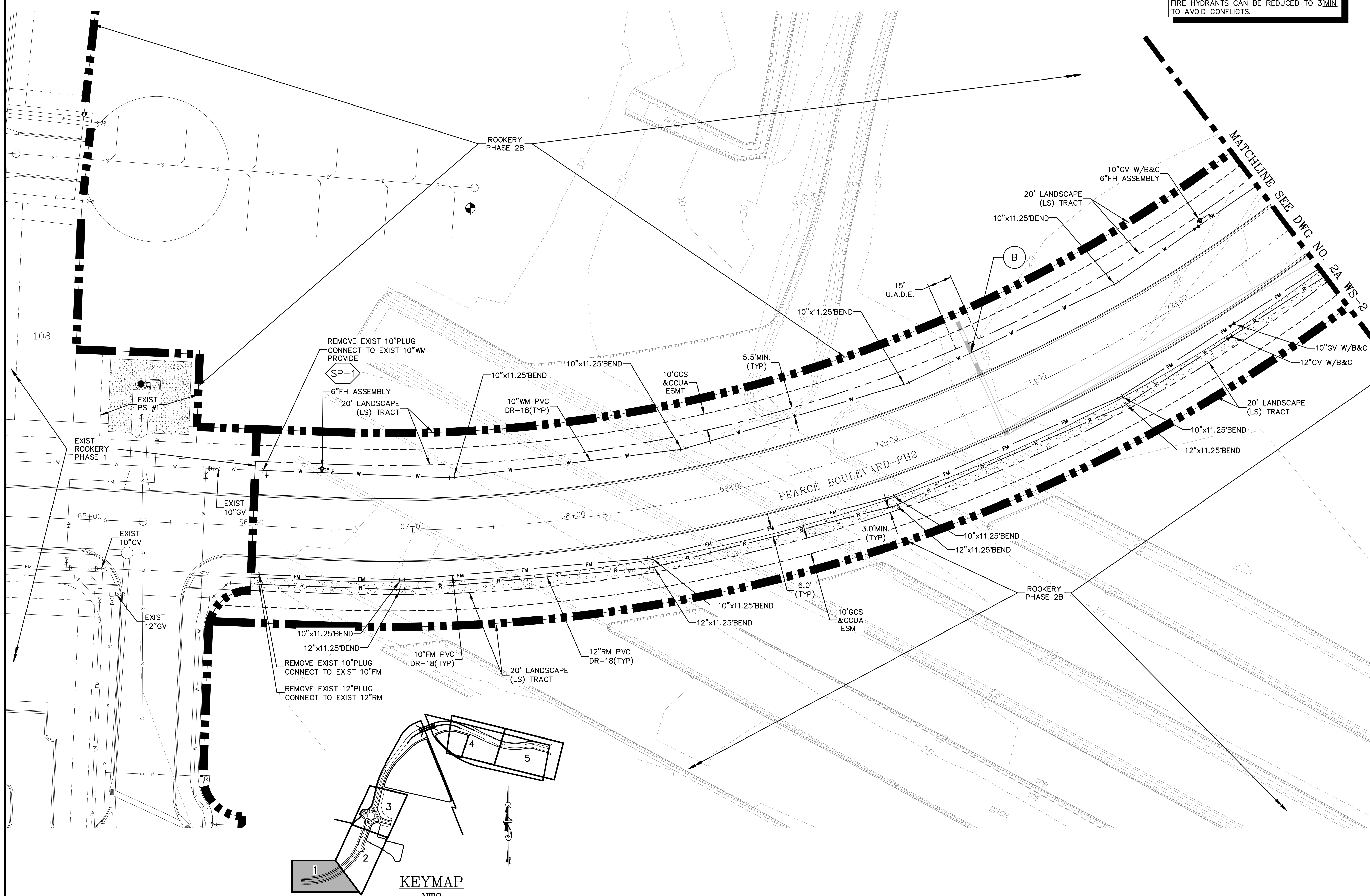
- ① = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
- ② = CONSTRUCT FORCE MAIN BELOW WATER MAIN OR REUSE MAIN - MAINTAIN 12" SEPARATION
- (A) = CONSTRUCT MAIN 6" ABOVE (MIN)/12" ABOVE (PREFERRED) OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
- (B) = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
- (C) = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA NOTES
- \* = CONSTRUCT 6" SEWER SERVICE ABOVE STORM PIPE.
- # = CONSTRUCT 6" SEWER SERVICE BELOW STORM PIPE.

**FORCE MAIN NOTES**

1. FOR FORCE MAINS - FITTINGS SHALL NOT BE LOCATED UNDER THE PAVEMENT.
2. NO VALVES / VALVE BOXES SHALL BE LOCATED IN THE ROADWAY.

**CCUA NOTES:**

1. WATER MAIN, REUSE MAIN AND FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
2. THE MINIMUM COVER OVER TOP OF WATER MAIN SHALL BE 36".
3. THE MINIMUM COVER OVER TOP OF REUSE MAIN SHALL BE 48".
4. FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50' R/W AND 60' R/W DWG. NO. UTC-2.
5. IN LOCATIONS WHERE WATER MAIN (WM) & REUSE MAIN (RM) CROSS, IF RM MUST BE ABOVE WM MAINTAIN 18" MIN VERTICAL SEPARATION.
6. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR STORM PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
7. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR SANITARY PIPES OR STRUCTURES MAINTAIN 6' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
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9. NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. CONSTRUCT SIDEWALK TO AVOID GATE VALVES.
10. POTABLE WATER AND REUSE MAINS TO BE PLACED AS CLOSE AS POSSIBLE TO CENTER OF SIDEWALK.
11. WATER/REUSE METERS MUST BE LOCATED IN THE R/W OR UTILITY EASEMENT OUTSIDE OF THE SIDEWALK & DRIVEWAY.
12. FOR WATER AND REUSE MAINS - A&B CROSSINGS & FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
13. WATER & REUSE MAIN VALVES & VALVE BOXES SHALL NOT BE LOCATED WITHIN THE PAVEMENT.
14. FIRE HYDRANTS ARE TO BE LOCATED AT THE PROPERTY LINE.
15. WATER MAIN SHALL BE 5.5' FROM PROPERTY LINE TO NEAREST POINT OF THE MAIN.
16. MAINTAIN 10' MIN. BETWEEN WATER AND RECLAIMED SERVICES/ METER BOXES.

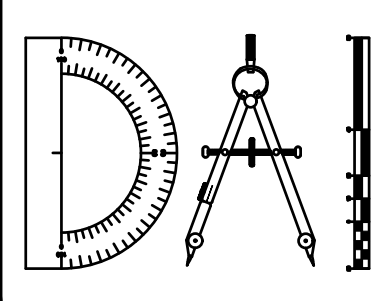


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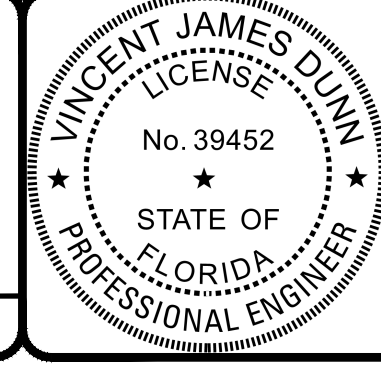
REVISIONS		
NO.	DATE	DESCRIPTION

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 DRAWN BY: MR/NS/SM/SS  
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 CLAY COUNTY, FLORIDA  
 2A WATER, REUSE AND SEWER PLAN



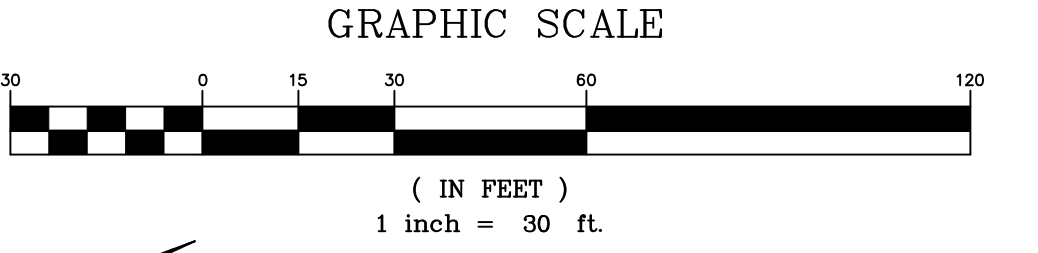
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 GLEN R. WIEBER ENGINEER NO. 81412

Sheet No. **68** of 130  
**2A WS-1**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

ALL UTILITIES THIS AREA, WEST OF CSX RAILROAD, ARE IN CLAY COUNTY UTILITY DEPARTMENT (CCUA) SERVICE AREA AND SHALL COMPLY WITH CCUA STANDARDS AND SPECIFICATIONS

NOTE:  
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**LEGEND**

SP-1 = SAMPLE POINT

**UTILITY CROSSING LEGEND**

- ① = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
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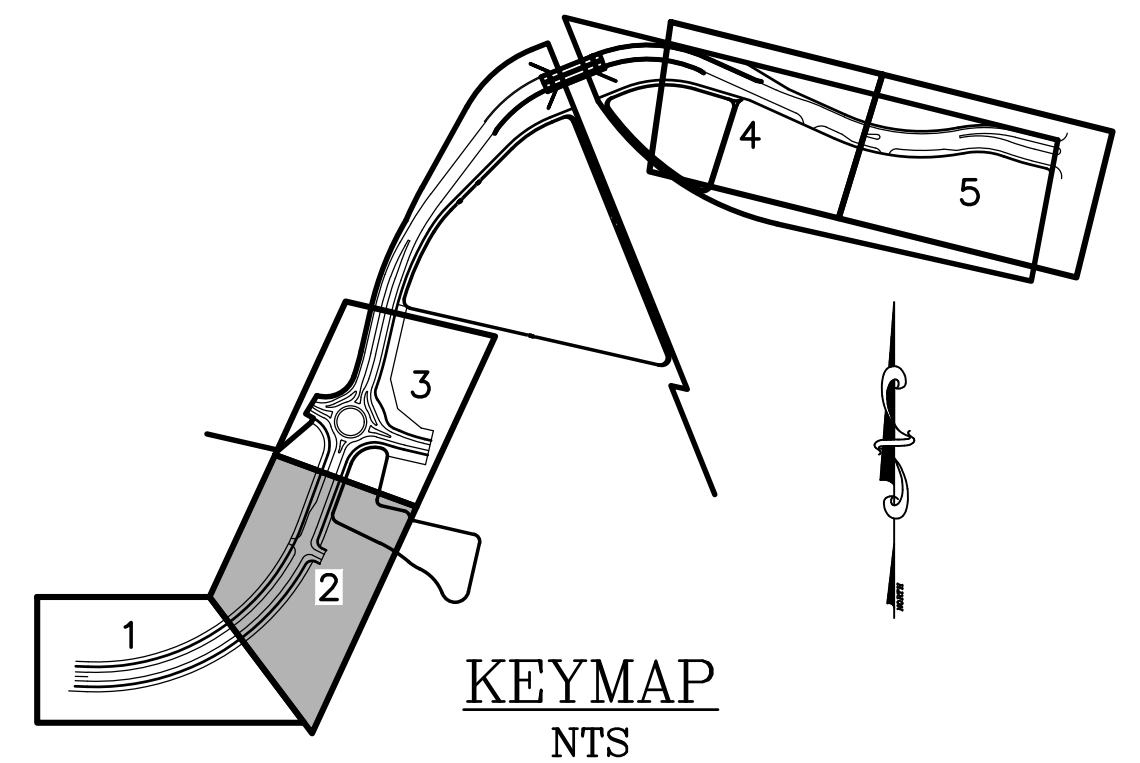
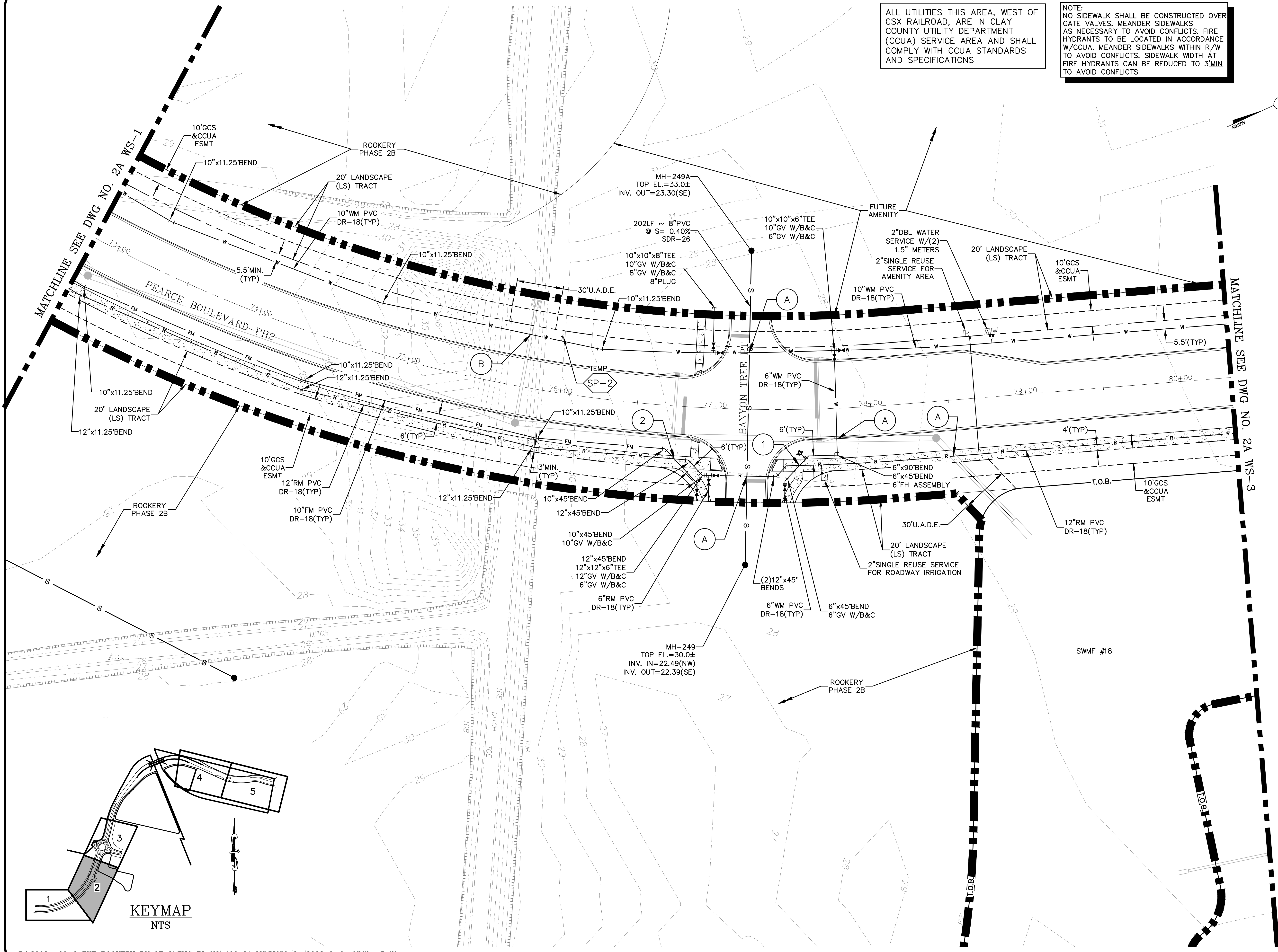
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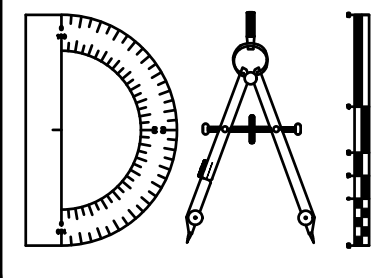
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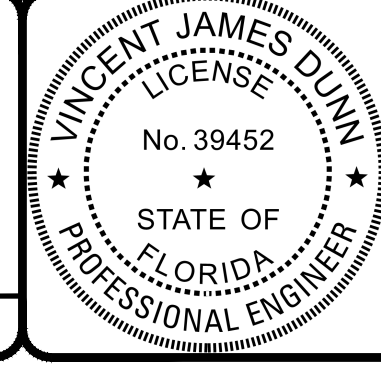
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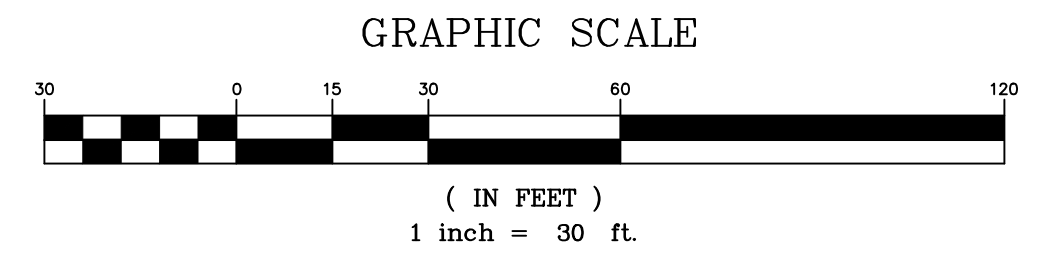
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Sheet No. 69 of 130  
**2A WS-2**  
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THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



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UTILITY CROSSING LEGEND

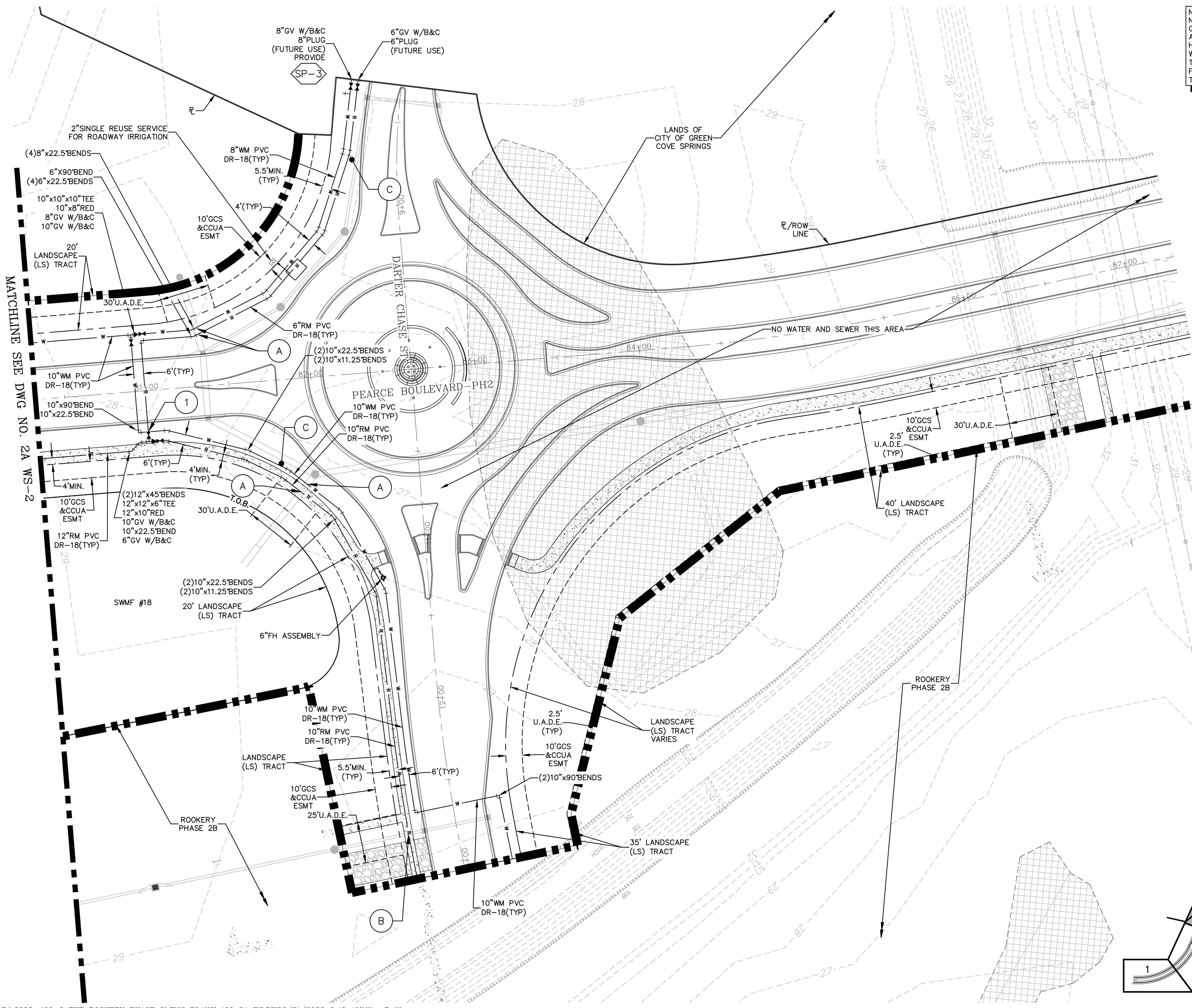
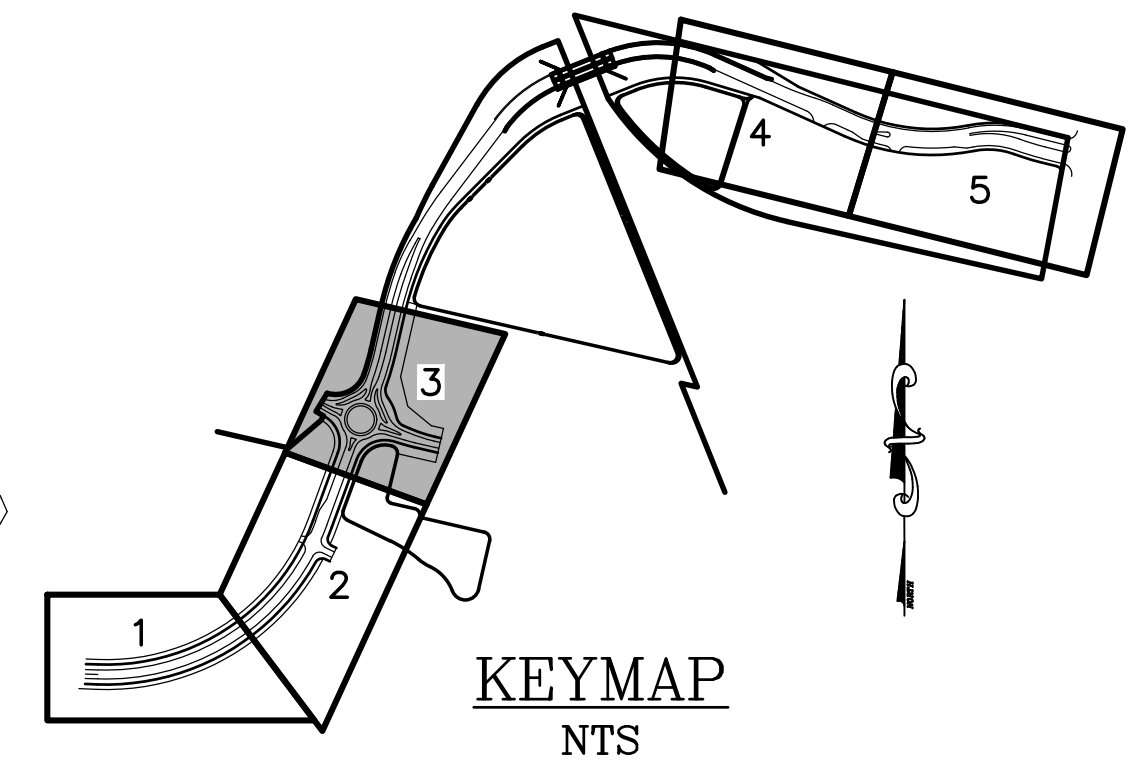
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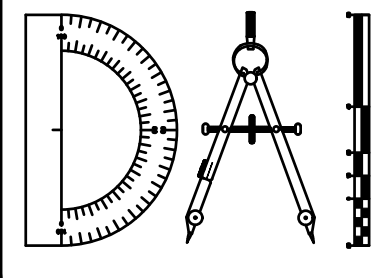
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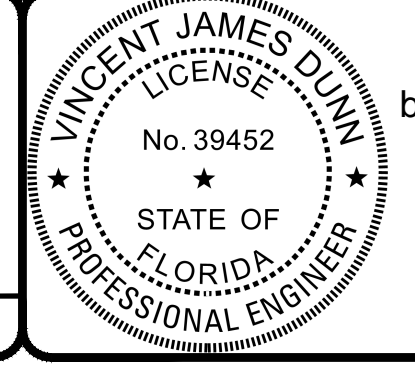
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 Jacksonville, Florida 32256  
 Phone: (904)363-8916 Fax: (904)363-8917  
 www.dunneng.com

**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
**2A WATER, REUSE AND SEWER PLAN**

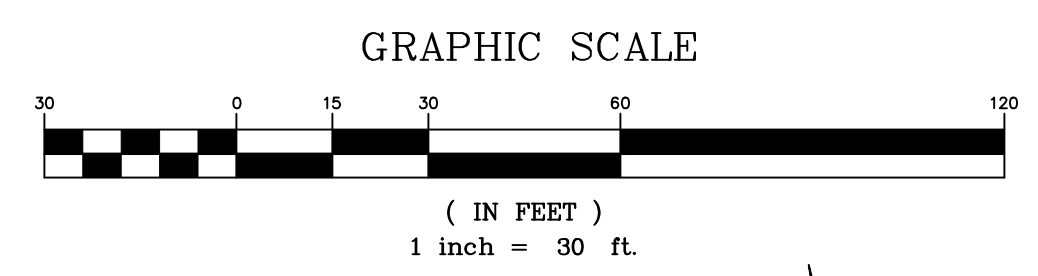


This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 09/21/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

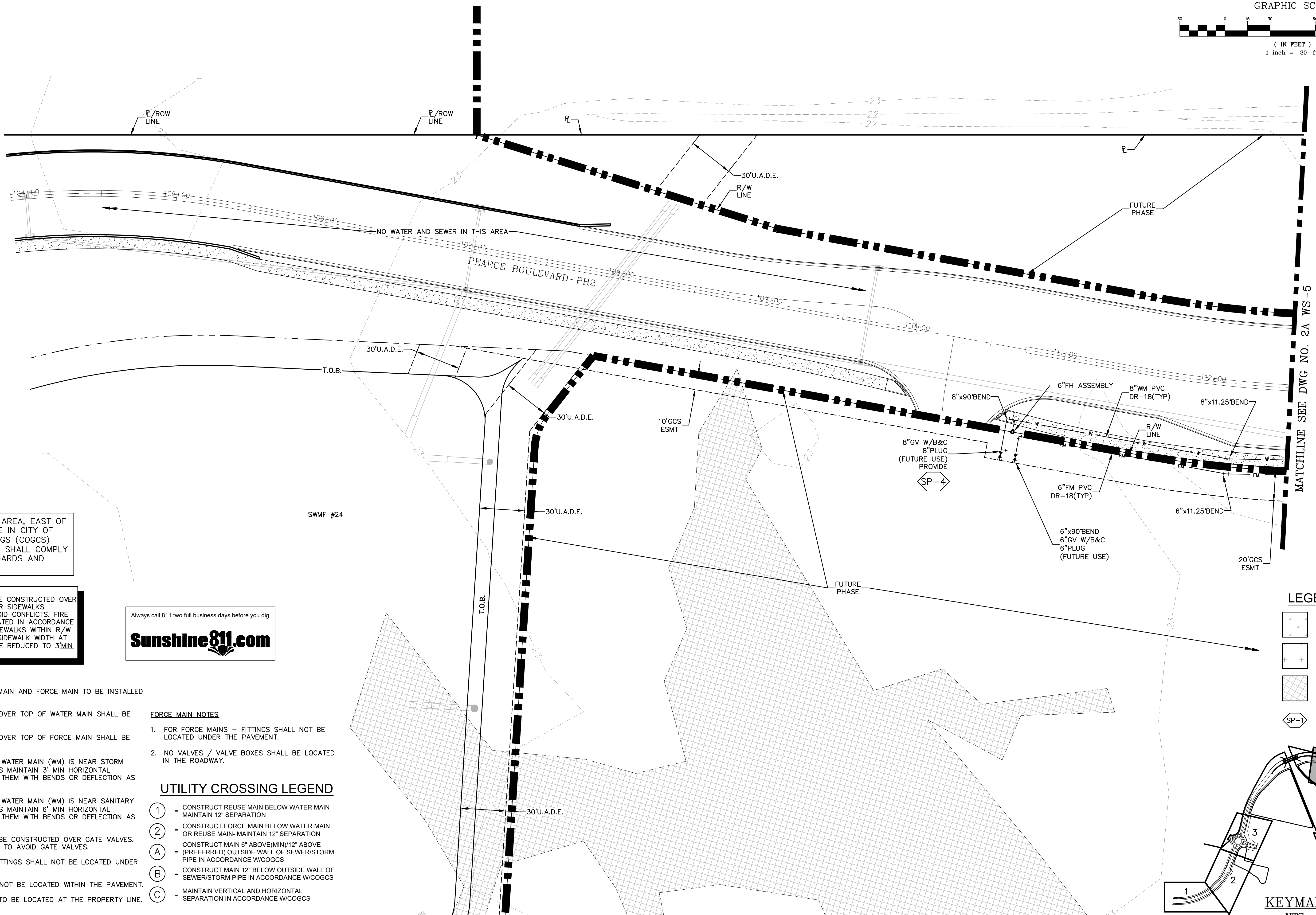
VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEBER ENGINEER NO. 81412

Sheet No. **70** of 130  
**2A WS-3**  
 DWG. NO.





THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



ALL UTILITIES THIS AREA, EAST OF CSX RAILROAD, ARE IN CITY OF GREEN COVE SPRINGS (COGCS) SERVICE AREA AND SHALL COMPLY WITH COGCS STANDARDS AND SPECIFICATIONS

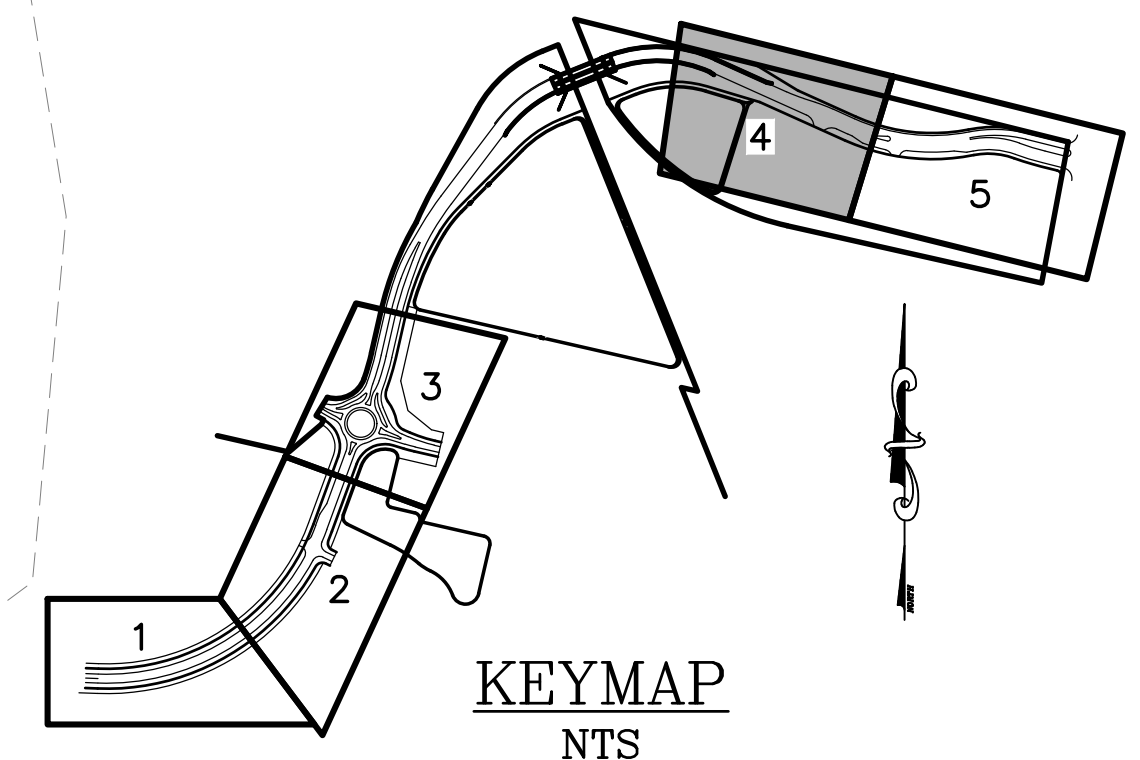
**NOTES:**  
 NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. MEANDER SIDEWALKS AS NECESSARY TO AVOID CONFLICTS. FIRE HYDRANTS TO BE LOCATED IN ACCORDANCE W/CCUA. MEANDER SIDEWALKS WITHIN R/W TO AVOID CONFLICTS. SIDEWALK WIDTH AT FIRE HYDRANTS CAN BE REDUCED TO 3' MIN TO AVOID CONFLICTS.

Always call 811 two full business days before you dig  
**Sunshine811.com**

- NOTES:**
1. WATER MAIN, REUSE MAIN AND FORCE MAIN TO BE INSTALLED WITH TRACER WIRE.
  2. THE MINIMUM COVER OVER TOP OF WATER MAIN SHALL BE 36".
  3. THE MINIMUM COVER OVER TOP OF FORCE MAIN SHALL BE 36".
  4. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR STORM PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
  5. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR SANITARY PIPES OR STRUCTURES MAINTAIN 6' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
  6. NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. CONSTRUCT SIDEWALK TO AVOID GATE VALVES.
  7. A&B CROSSINGS & FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
  8. VALVE BOXES SHALL NOT BE LOCATED WITHIN THE PAVEMENT.
  9. FIRE HYDRANTS ARE TO BE LOCATED AT THE PROPERTY LINE.

- FORCE MAIN NOTES**
1. FOR FORCE MAINS - FITTINGS SHALL NOT BE LOCATED UNDER THE PAVEMENT.
  2. NO VALVES / VALVE BOXES SHALL BE LOCATED IN THE ROADWAY.
- UTILITY CROSSING LEGEND**
- (1) = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
  - (2) = CONSTRUCT FORCE MAIN BELOW WATER MAIN OR REUSE MAIN - MAINTAIN 12" SEPARATION
  - (A) = CONSTRUCT MAIN 6" ABOVE (MIN) 12" ABOVE (PREFERRED) OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/COGCS
  - (B) = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/COGCS
  - (C) = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/COGCS

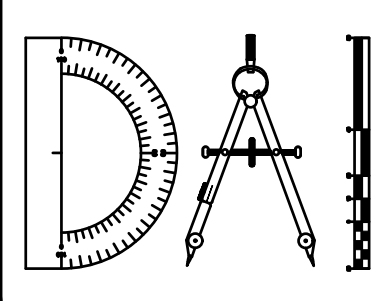
- LEGEND**
- [Cross-hatched] = WETLANDS (FLAGGED)
  - [Dotted] = WETLANDS (AERIAL INTERPRETATION)
  - [Diagonal lines] = WETLAND IMPACT
  - [Hexagon with SP-4] = SAMPLE POINT



P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2A WS.DWG9/21/2023 6:50 AM Mike Reilly

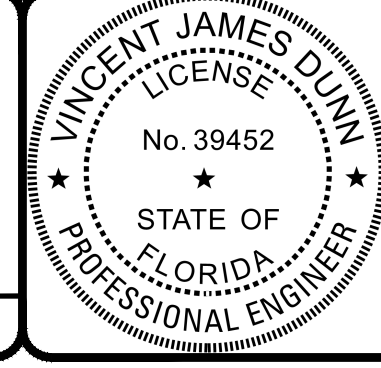
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 30'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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 CLAY COUNTY, FLORIDA  
 2A WATER AND SEWER PLANS

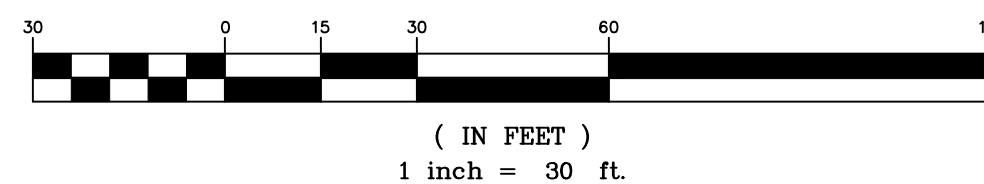


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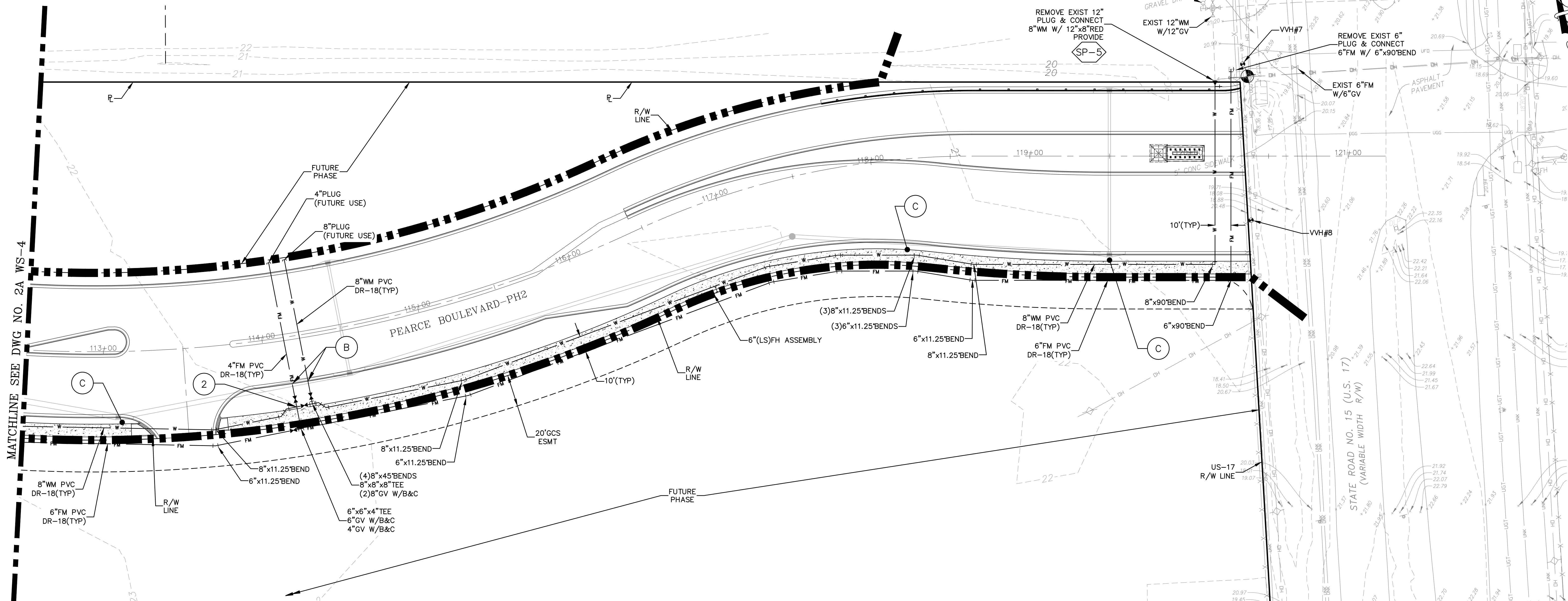
VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 71 of 130  
**2A WS-4**  
 DWG. NO.

GRAPHIC SCALE



MATCHLINE SEE DWG NO. 2A WS-4



**NOTES:**

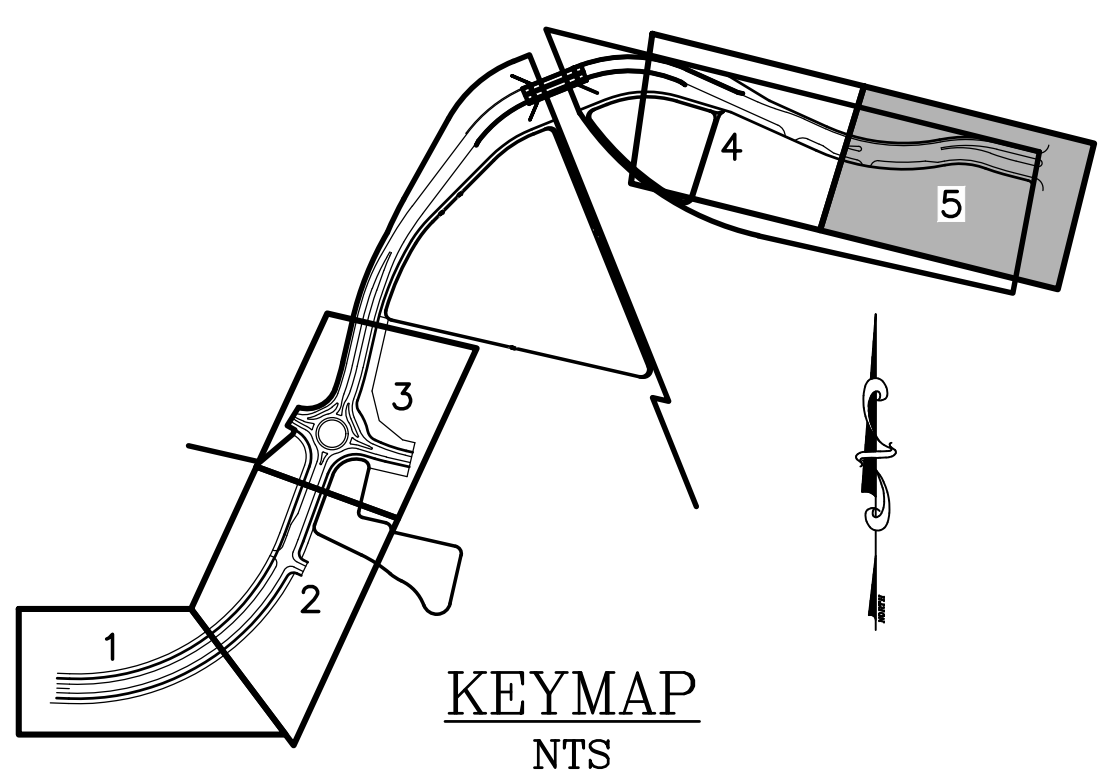
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5. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR SANITARY PIPES OR STRUCTURES MAINTAIN 6' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
6. NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. CONSTRUCT SIDEWALK TO AVOID GATE VALVES.
7. A&B CROSSINGS & FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
8. VALVE BOXES SHALL NOT BE LOCATED WITHIN THE PAVEMENT.
9. FIRE HYDRANTS ARE TO BE LOCATED AT THE PROPERTY LINE.

**LEGEND**

- SP-5 = SAMPLE POINT
- FORCE MAIN NOTES**
1. FOR FORCE MAINS - FITTINGS SHALL NOT BE LOCATED UNDER THE PAVEMENT.
  2. NO VALVES / VALVE BOXES SHALL BE LOCATED IN THE ROADWAY.
- UTILITY CROSSING LEGEND**
- ① = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
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  - (B) = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/COGCS
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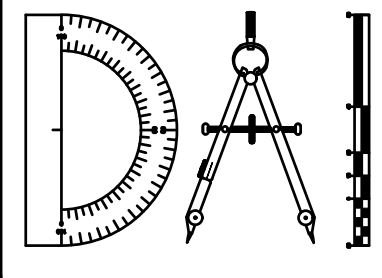
OFFSITE UTILITIES TABLE			
VVH #	TYPE OF UTILITY	TOP OF UTILITY EL.	EX. GROUND EL.
7	2" BLK PE COMM & 0.5" BLK DBC	16.09	20.23
8	2" BLK PE COMM & 0.5" BLK DBC	17.45	20.17

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P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2A WS.DWG9/21/2023 6:50 AM Mike Reilly

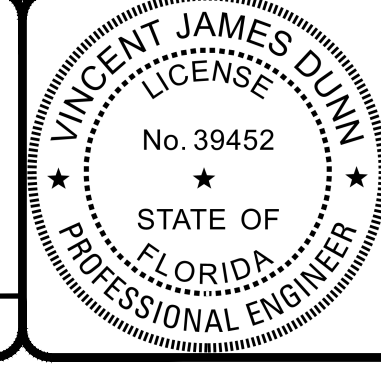
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
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 CLAY COUNTY, FLORIDA  
 2A WATER AND SEWER PLAN



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VINCENT J. DUNN  
 ENGINEER NO. 39452

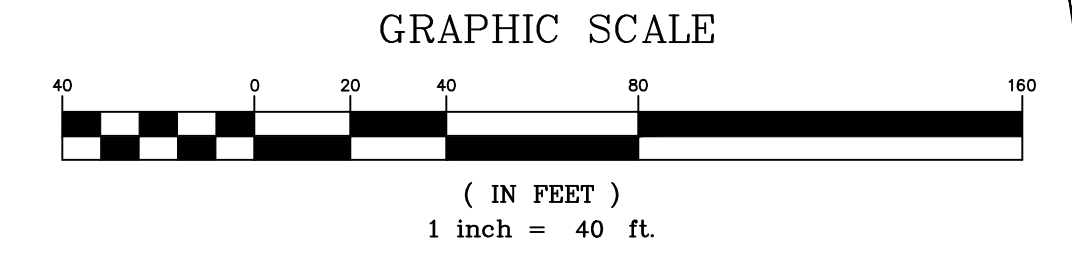
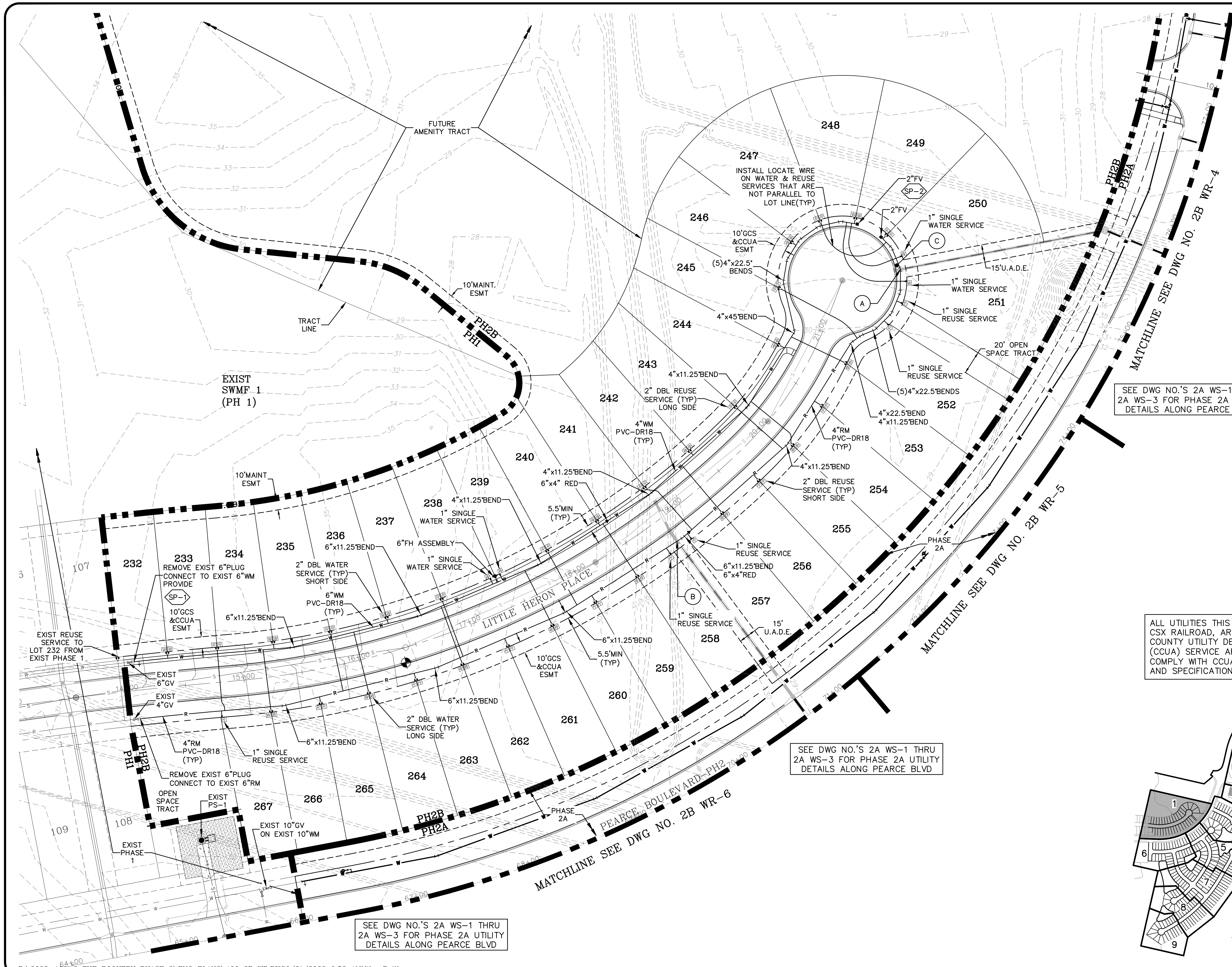
DAVID M. TAYLOR  
 ENGINEER NO. 44184

GLEN R. WIEGER  
 ENGINEER NO. 81412

Sheet No. 72 of 130  
**2A WS-5**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)





**LEGEND**

SP- = SAMPLE POINT

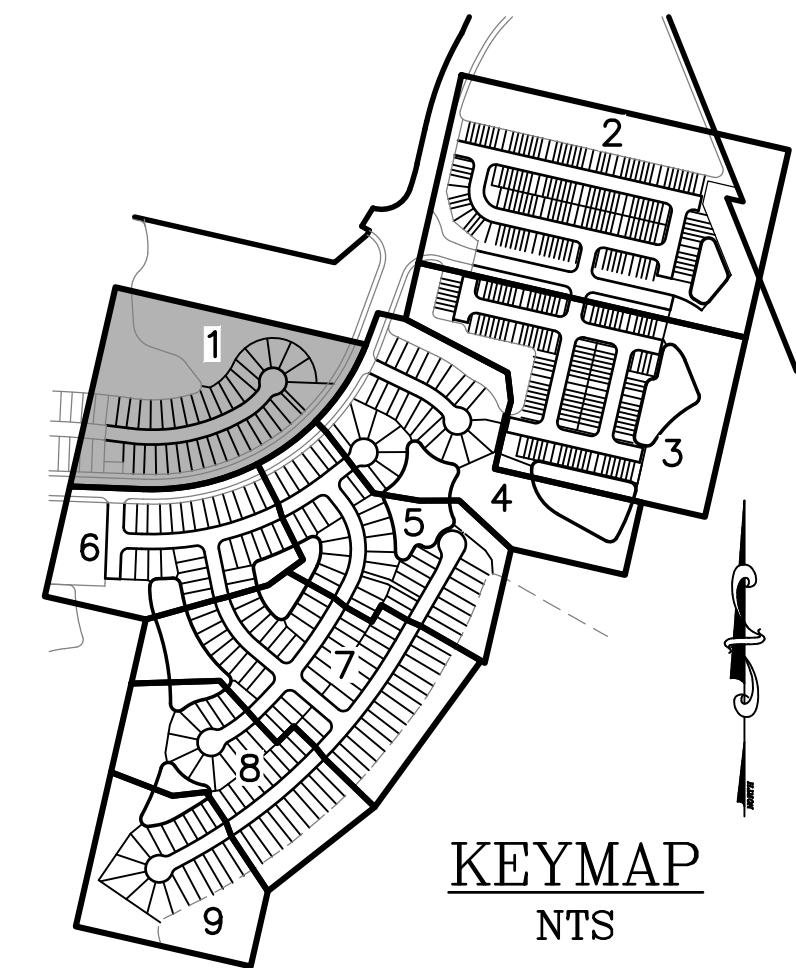
**UTILITY CROSSING LEGEND**

- ① = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
- ② = CONSTRUCT FORCE MAIN BELOW WATER MAIN OR REUSE MAIN - MAINTAIN 12" SEPARATION
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- B = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
- C = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA NOTES

**NOTE:**  
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- CCUA NOTES:**
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  3. THE MINIMUM COVER OVER TOP OF REUSE MAIN SHALL BE 48".
  4. FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50' R/W AND 60' R/W DWG. NO. UTC-2.
  5. IN LOCATIONS WHERE WATER MAIN (WM) & REUSE MAIN (RM) CROSS, IF RM MUST BE ABOVE WM MAINTAIN 18" MIN VERTICAL SEPARATION.
  6. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR STORM PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
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  9. NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. CONSTRUCT SIDEWALK TO AVOID GATE VALVES.
  10. POTABLE WATER AND REUSE MAINS TO BE PLACED AS CLOSE AS POSSIBLE TO CENTER OF SIDEWALK.
  11. WATER/REUSE METERS MUST BE LOCATED IN THE R/W OR UTILITY EASEMENT OUTSIDE OF THE SIDEWALK & DRIVEWAY.
  12. FOR WATER AND REUSE MAINS - A&B CROSSINGS & FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
  13. WATER & REUSE MAIN VALVES & VALVE BOXES SHALL NOT BE LOCATED WITHIN THE PAVEMENT.
  14. FIRE HYDRANTS ARE TO BE LOCATED AT THE PROPERTY LINE.
  15. WATER MAIN SHALL BE 5.5' FROM PROPERTY LINE TO NEAREST POINT OF THE MAIN.
  16. MAINTAIN 10' MIN. BETWEEN WATER AND RECLAIMED SERVICES/ METER BOXES.

ALL UTILITIES THIS AREA, WEST OF CSX RAILROAD, ARE IN CLAY COUNTY UTILITY DEPARTMENT (CCUA) SERVICE AREA AND SHALL COMPLY WITH CCUA STANDARDS AND SPECIFICATIONS



SEE DWG NO.'S 2A WS-1 THRU 2A WS-3 FOR PHASE 2A UTILITY DETAILS ALONG PEARCE BLVD

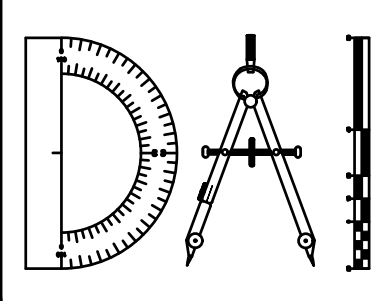
SEE DWG NO.'S 2A WS-1 THRU 2A WS-3 FOR PHASE 2A UTILITY DETAILS ALONG PEARCE BLVD

SEE DWG NO.'S 2A WS-1 THRU 2A WS-3 FOR PHASE 2A UTILITY DETAILS ALONG PEARCE BLVD

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B WR.DWG9/21/2023 6:52 AMMike Reilly

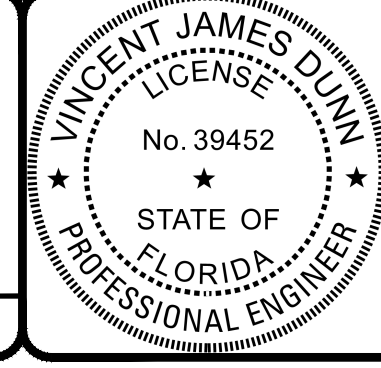
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B WATER AND REUSE PLAN



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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEBER ENGINEER NO. 81412

Sheet No. 73 of 130  
**2B WR-1**  
 DWG. NO.



THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

**UTILITY CROSSING LEGEND**

- ① = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
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- B = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
- C = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA NOTES

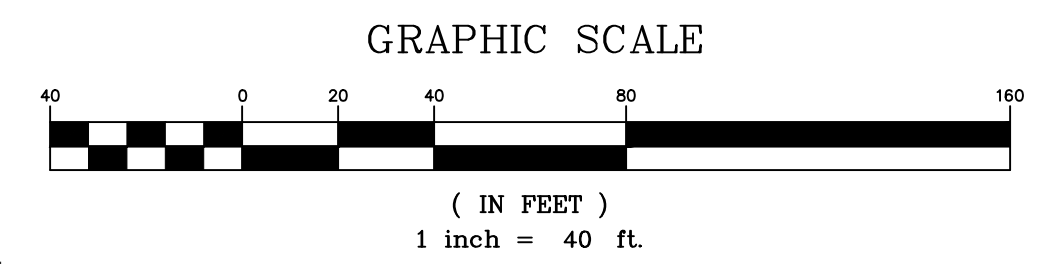
**CCUA NOTES:**

1. WATER MAIN, REUSE MAIN AND FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
2. THE MINIMUM COVER OVER TOP OF WATER MAIN SHALL BE 36".
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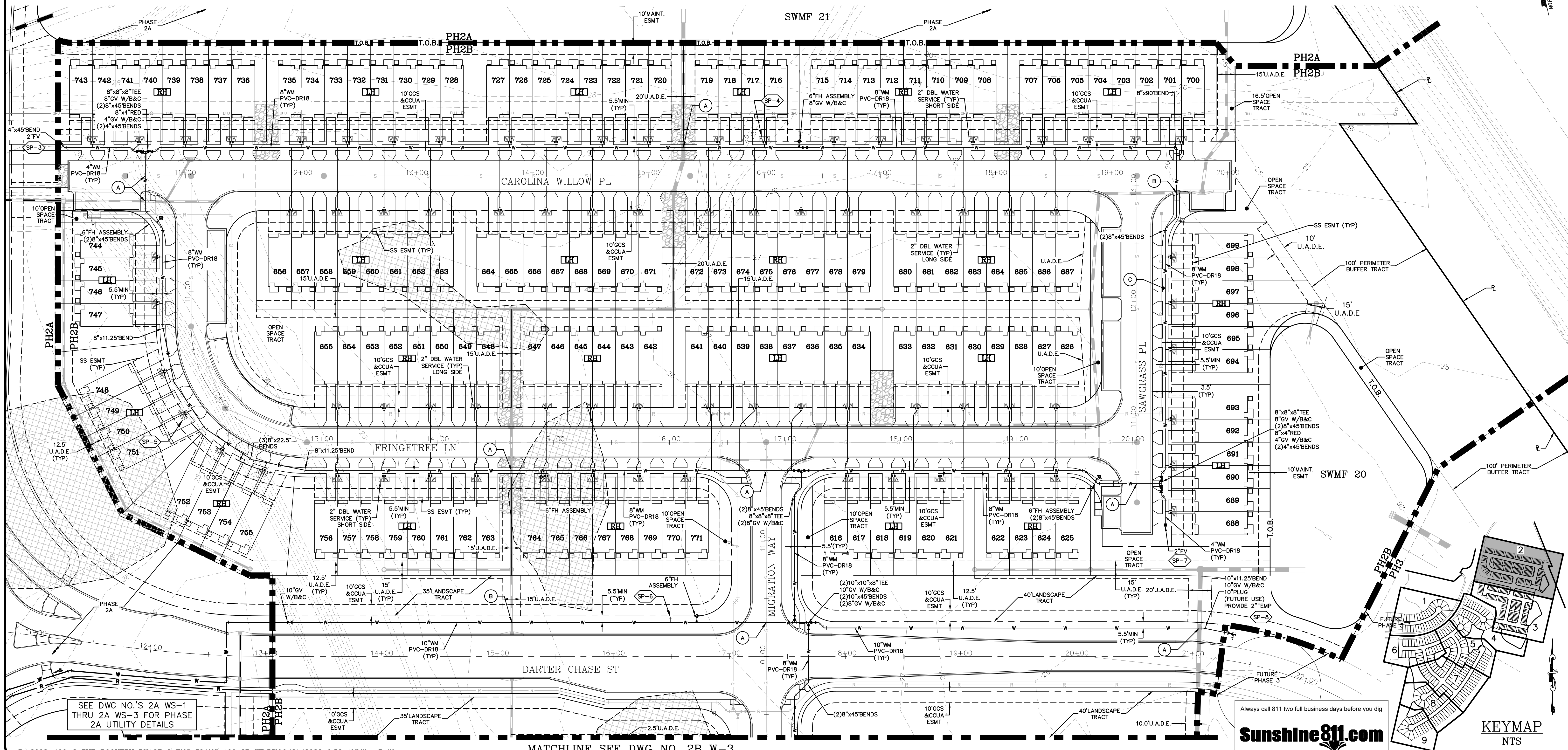
**LEGEND**

- [Symbol] = WETLANDS (FLAGGED)
- [Symbol] = WETLANDS (AERIAL INTERPRETATION)
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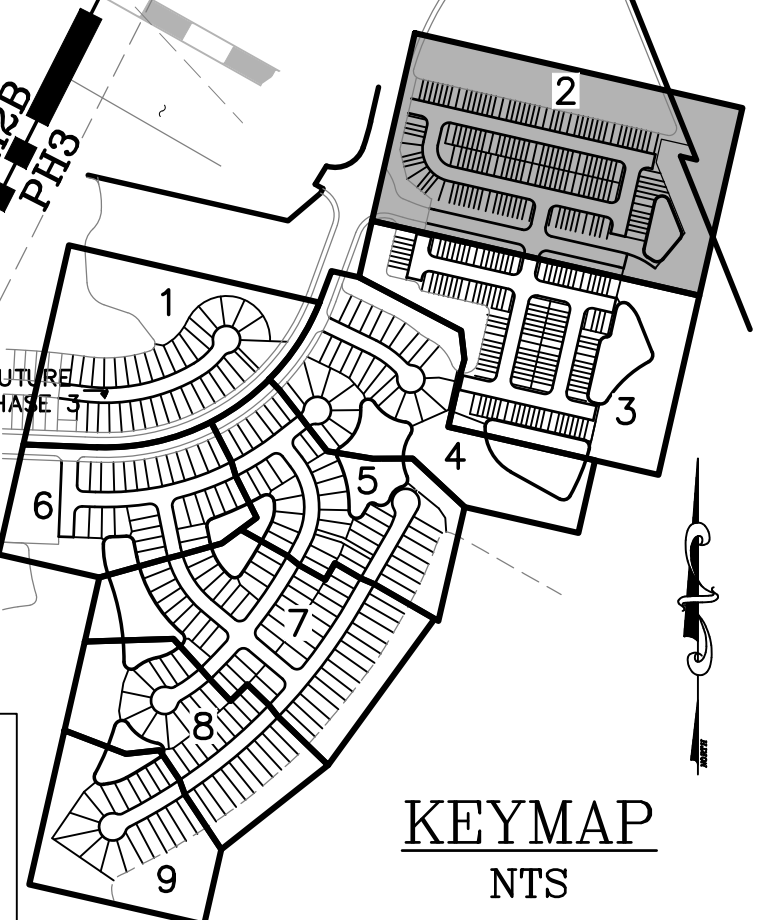


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SEE DWG NO.'S 2A WS-1 THRU 2A WS-3 FOR PHASE 2A UTILITY DETAILS

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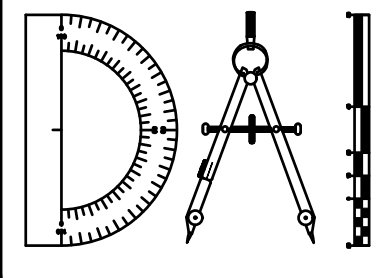


P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B WR.DWG9/21/2023 6:53 AM Mike Reilly

MATCHLINE SEE DWG NO. 2B W-3

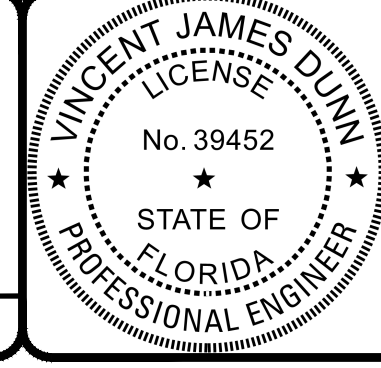
REVISIONS		BY:
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 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B WATER PLAN



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 VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. **74** of 130  
**2B W-2**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

**UTILITY CROSSING LEGEND**

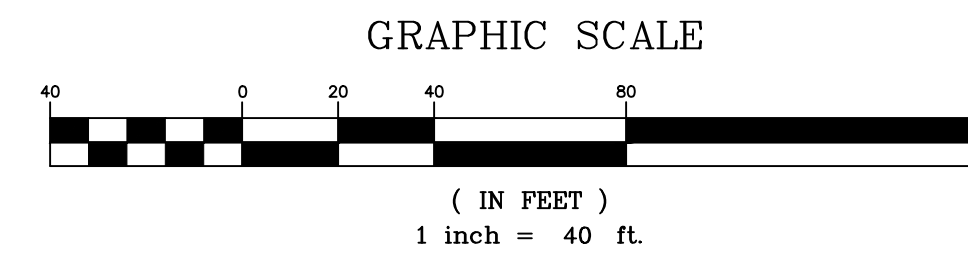
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3. THE MINIMUM COVER OVER TOP OF REUSE MAIN SHALL BE 48".
4. FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50" R/W AND 60" R/W DWG. NO. UTC-2.
5. IN LOCATIONS WHERE WATER MAIN (WM) & REUSE MAIN (RM) CROSS, IF RM MUST BE ABOVE WM MAINTAIN 18" MIN VERTICAL SEPARATION.
6. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR STORM PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
7. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR SANITARY PIPES OR STRUCTURES MAINTAIN 6' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
8. IN LOCATIONS WHERE REUSE MAIN (RM) IS NEAR STORM OR SANITARY PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
9. NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. CONSTRUCT SIDEWALK TO AVOID GATE VALVES.
10. POTABLE WATER AND REUSE MAINS TO BE PLACED AS CLOSE AS POSSIBLE TO CENTER OF SIDEWALK.
11. WATER/REUSE METERS MUST BE LOCATED IN THE R/W OR UTILITY EASEMENT OUTSIDE OF THE SIDEWALK & DRIVEWAY.
12. FOR WATER AND REUSE MAINS - A&B CROSSINGS & FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
13. WATER & REUSE MAIN VALVES & VALVE BOXES SHALL NOT BE LOCATED WITHIN THE PAVEMENT.
14. FIRE HYDRANTS ARE TO BE LOCATED AT THE PROPERTY LINE.
15. WATER MAIN SHALL BE 5.5' FROM PROPERTY LINE TO NEAREST POINT OF THE MAIN.
16. MAINTAIN 10' MIN. BETWEEN WATER AND RECLAIMED SERVICES/ METER BOXES.

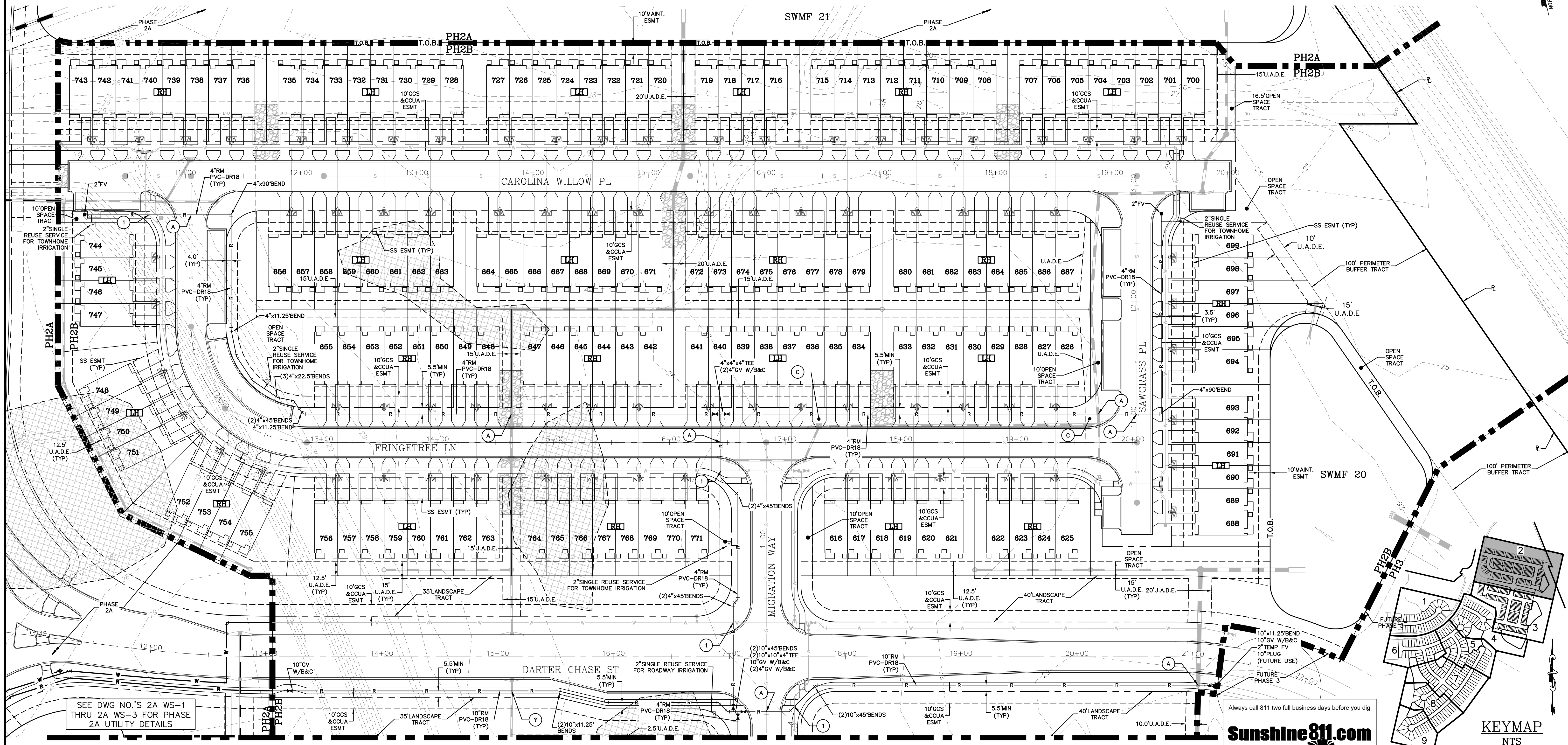
**LEGEND**

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = WETLAND IMPACT
- = SAMPLE POINT



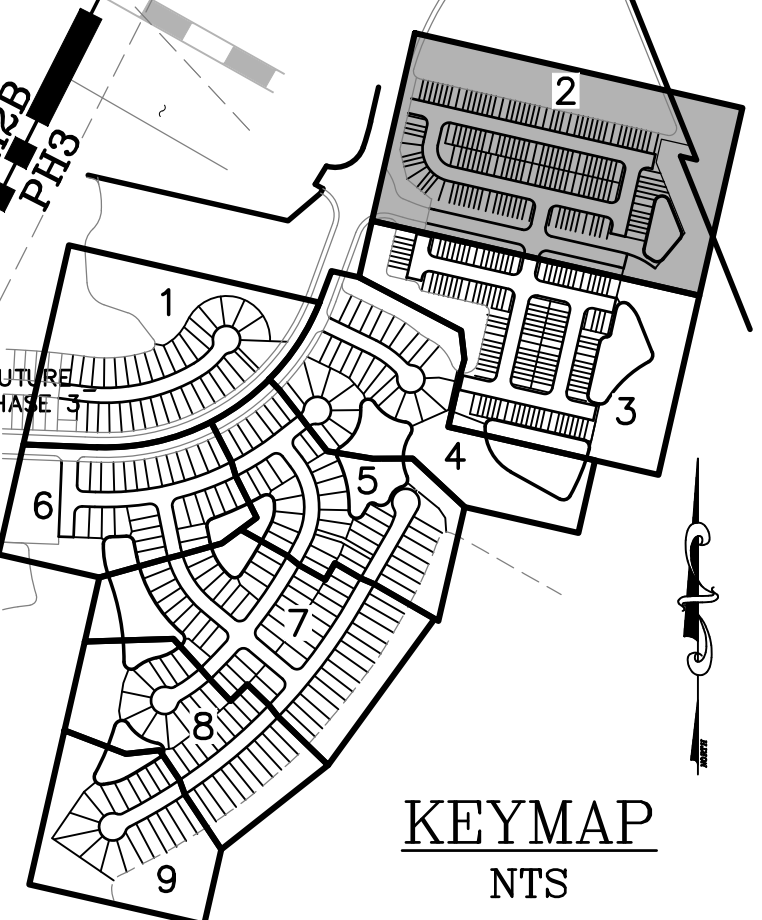
NOTE: NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. MEANDER SIDEWALKS AS NECESSARY TO AVOID CONFLICTS. FIRE HYDRANTS TO BE LOCATED IN ACCORDANCE W/CCUA. MEANDER SIDEWALKS WITHIN R/W TO AVOID CONFLICTS. SIDEWALK WIDTH AT FIRE HYDRANTS CAN BE REDUCED TO 3' MIN. TO AVOID CONFLICTS.

ALL UTILITIES THIS AREA, WEST OF CSX RAILROAD, ARE IN CLAY COUNTY UTILITY DEPARTMENT (CCUA) SERVICE AREA AND SHALL COMPLY WITH CCUA STANDARDS AND SPECIFICATIONS



SEE DWG NO.'S 2A WS-1 THRU 2A WS-3 FOR PHASE 2A UTILITY DETAILS

Always call 811 two full business days before you dig

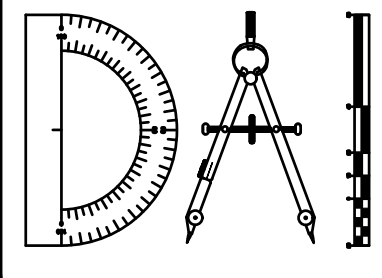


P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B WR.DWG9/21/2023 6:54 AMMike Reilly

MATCHLINE SEE DWG NO. 2B R-3

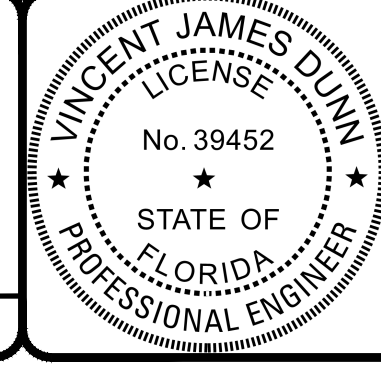
REVISIONS	
NO.	DATE

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
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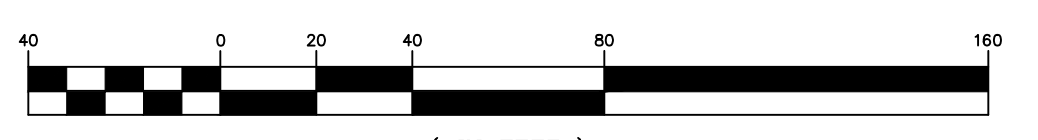
**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B REUSE PLAN



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 VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

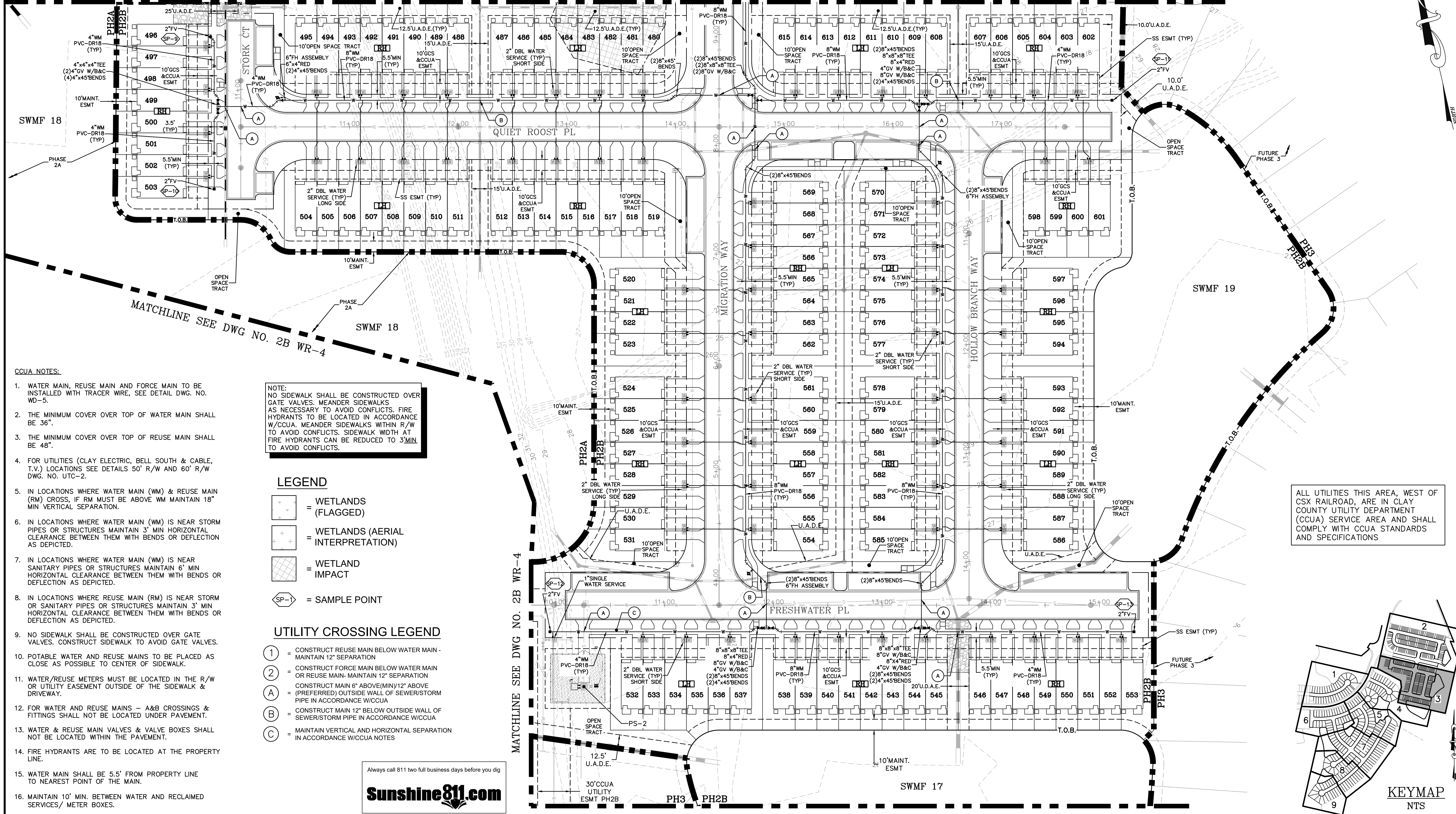
Sheet No. 75 of 130  
**2B R-2**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



( IN FEET )  
1 inch = 40 ft.

MATCHLINE SEE DWG NO. 2B W-2



- CCUA NOTES:**
- WATER MAIN, REUSE MAIN AND FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
  - THE MINIMUM COVER OVER TOP OF WATER MAIN SHALL BE 36".
  - THE MINIMUM COVER OVER TOP OF REUSE MAIN SHALL BE 48".
  - FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50' R/W AND 60' R/W DWG. NO. UTC-2.
  - IN LOCATIONS WHERE WATER MAIN (WM) & REUSE MAIN (RM) CROSS, IF RM MUST BE ABOVE WM MAINTAIN 18" MIN VERTICAL SEPARATION.
  - IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR STORM PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
  - IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR SANITARY PIPES OR STRUCTURES MAINTAIN 6' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
  - IN LOCATIONS WHERE REUSE MAIN (RM) IS NEAR STORM OR SANITARY PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
  - NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. CONSTRUCT SIDEWALK TO AVOID GATE VALVES.
  - POTABLE WATER AND REUSE MAINS TO BE PLACED AS CLOSE AS POSSIBLE TO CENTER OF SIDEWALK.
  - WATER/REUSE METERS MUST BE LOCATED IN THE R/W OR UTILITY EASEMENT OUTSIDE OF THE SIDEWALK & DRIVEWAY.
  - FOR WATER AND REUSE MAINS - A&B CROSSINGS & FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
  - WATER & REUSE MAIN VALVES & VALVE BOXES SHALL NOT BE LOCATED WITHIN THE PAVEMENT.
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  - WATER MAIN SHALL BE 5.5' FROM PROPERTY LINE TO NEAREST POINT OF THE MAIN.
  - MAINTAIN 10' MIN. BETWEEN WATER AND RECLAIMED SERVICES/ METER BOXES.

**NOTE:**  
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**LEGEND**

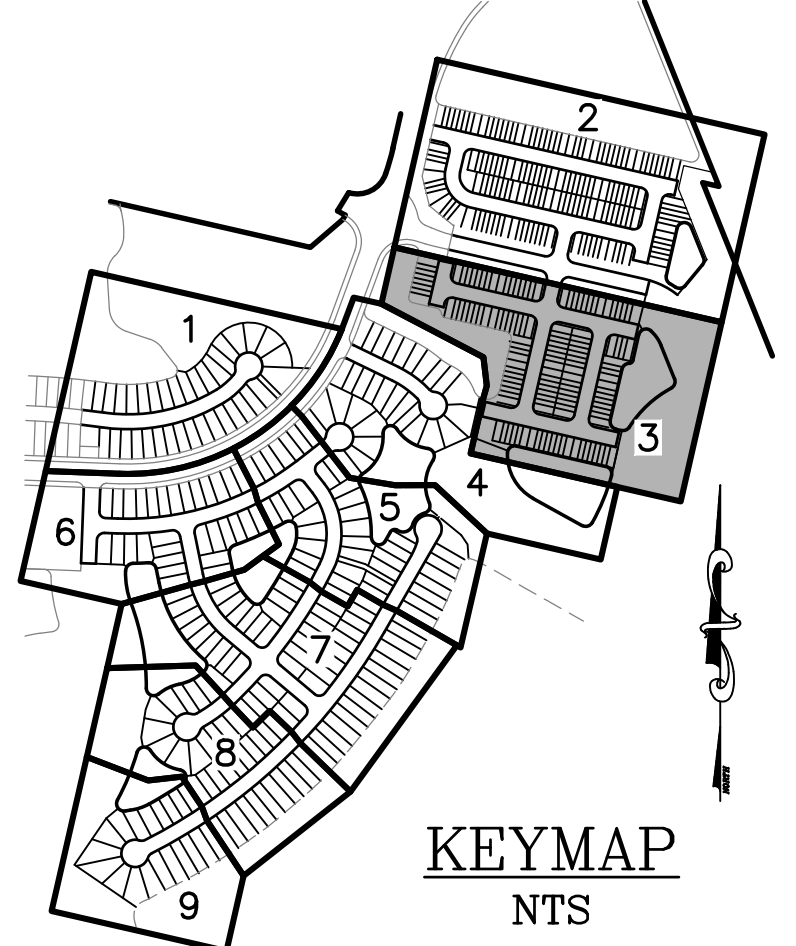
- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = WETLAND IMPACT
- = SAMPLE POINT

**UTILITY CROSSING LEGEND**

- = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
- = CONSTRUCT FORCE MAIN BELOW WATER MAIN OR REUSE MAIN - MAINTAIN 12" SEPARATION
- = CONSTRUCT MAIN 6" ABOVE (MIN)/12" ABOVE (PREFERRED) OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
- = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
- = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA NOTES

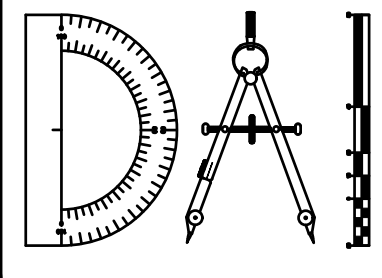
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**Sunshine811.com**

ALL UTILITIES THIS AREA, WEST OF CSX RAILROAD, ARE IN CLAY COUNTY UTILITY DEPARTMENT (CCUA) SERVICE AREA AND SHALL COMPLY WITH CCUA STANDARDS AND SPECIFICATIONS



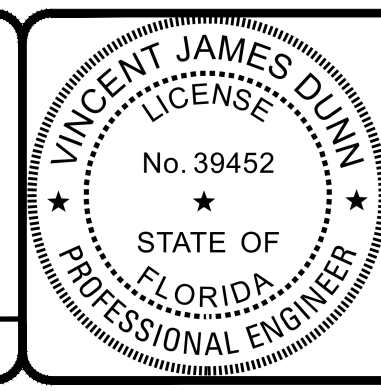
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
DRAWN BY: MR/NS/SM/SS  
CHECKED BY: VJD  
SCALE: 1" = 40'  
DATE: 9/21/2023  
PROJ. NO.: 2008-499-2



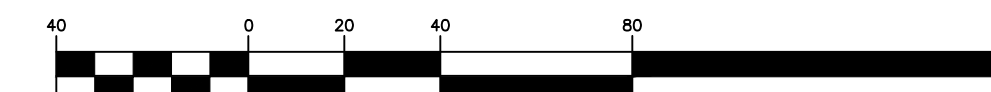
**Dunn & Associates, Inc.**  
CIVIL ENGINEERS / LAND PLANNERS  
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Phone: (904)363-8916 Fax: (904)363-8917  
www.dunneng.com

**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
FOR:  
D.R. HORTON INC. - JACKSONVILLE  
CLAY COUNTY, FLORIDA  
2B WATER PLAN



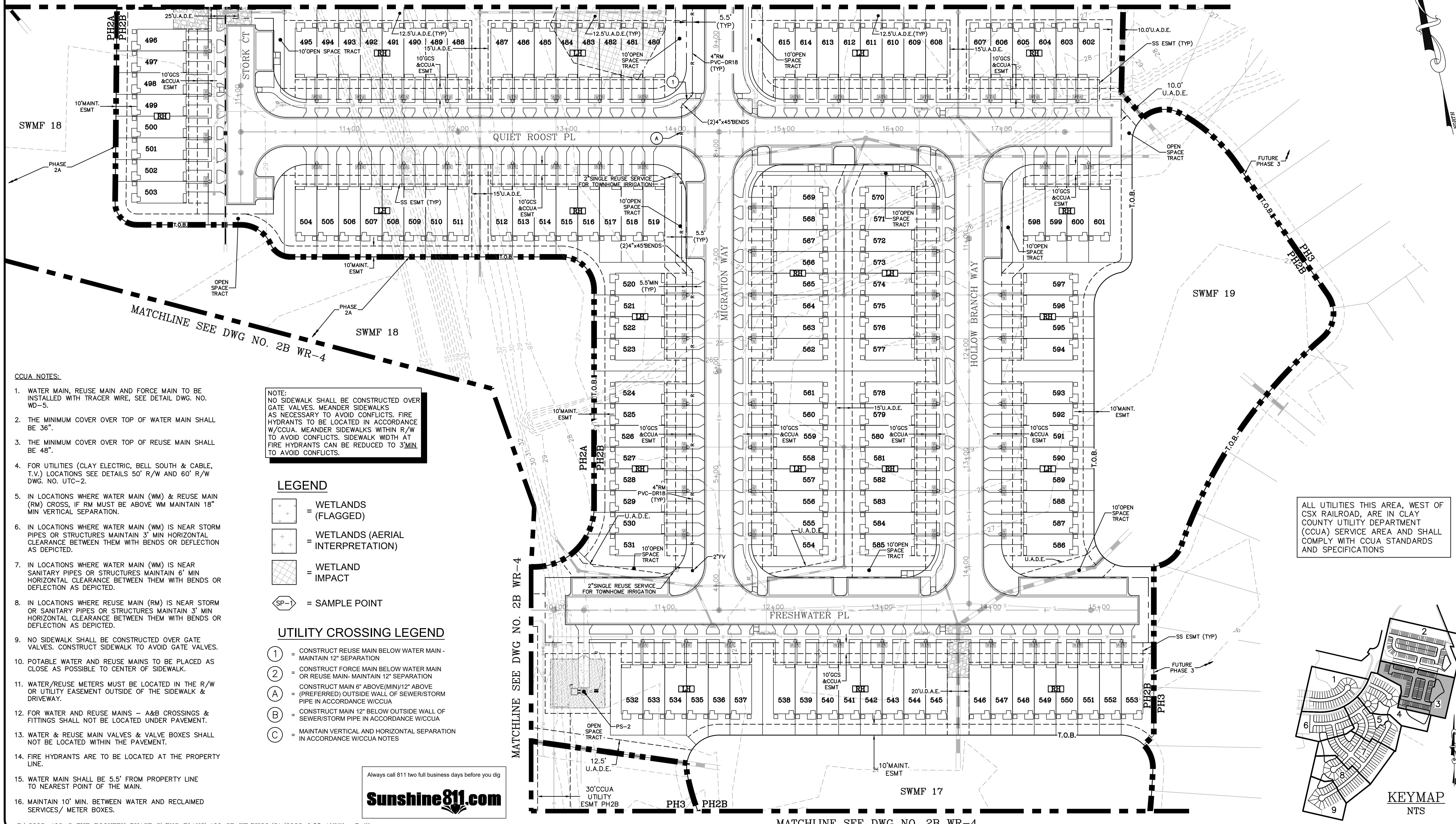
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VINCENT J. DUNN ENGINEER NO. 39452  
DAVID M. TAYLOR ENGINEER NO. 44184  
GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. **76** of 130  
**2B W-3**  
DWG. NO.



( IN FEET )  
1 inch = 40 ft.

MATCHLINE SEE DWG NO. 2B R-2



CCUA NOTES:

1. WATER MAIN, REUSE MAIN AND FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
2. THE MINIMUM COVER OVER TOP OF WATER MAIN SHALL BE 36".
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5. IN LOCATIONS WHERE WATER MAIN (WM) & REUSE MAIN (RM) CROSS, IF RM MUST BE ABOVE WM MAINTAIN 18" MIN VERTICAL SEPARATION.
6. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR STORM PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
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LEGEND

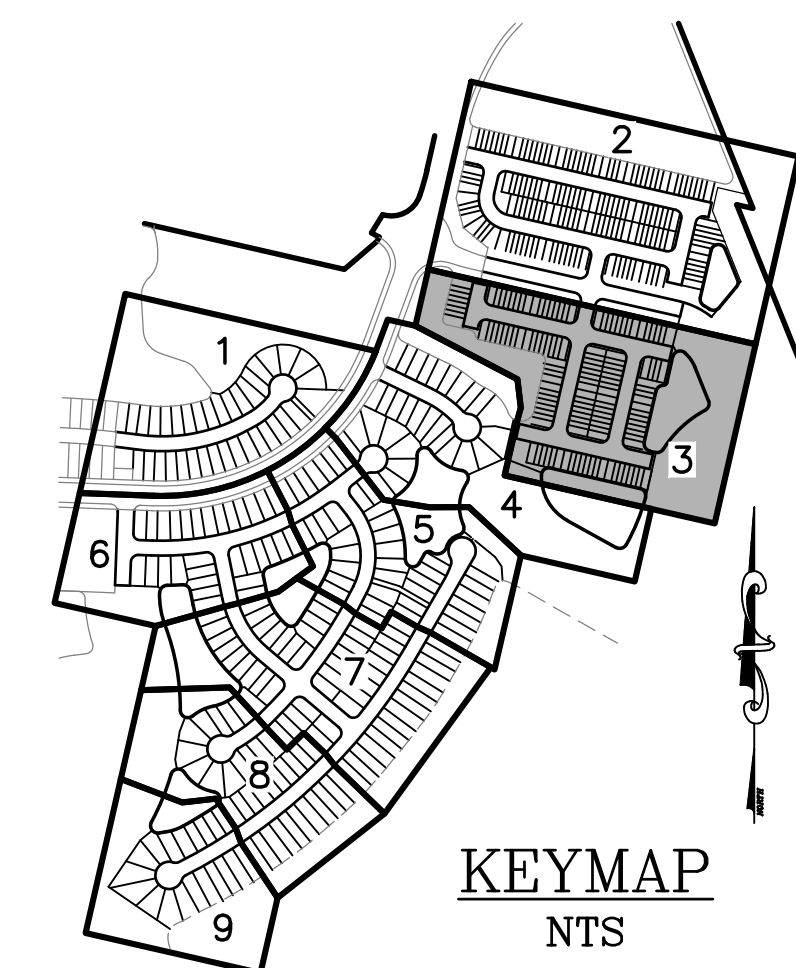
- [Symbol] = WETLANDS (FLAGGED)
- [Symbol] = WETLANDS (AERIAL INTERPRETATION)
- [Symbol] = WETLAND IMPACT
- [Symbol] = SAMPLE POINT

UTILITY CROSSING LEGEND

- (1) = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
- (2) = CONSTRUCT FORCE MAIN BELOW WATER MAIN OR REUSE MAIN - MAINTAIN 12" SEPARATION
- (A) = CONSTRUCT MAIN 6" ABOVE (MIN)/12" ABOVE (PREFERRED) OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
- (B) = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
- (C) = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA NOTES

Always call 811 two full business days before you dig

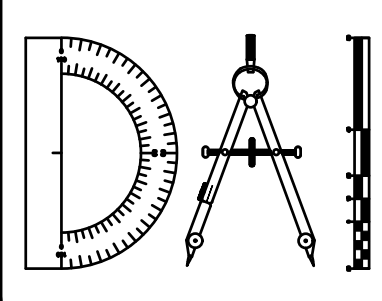
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P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B WR.DWG9/21/2023 6:55 AM Mike Reilly

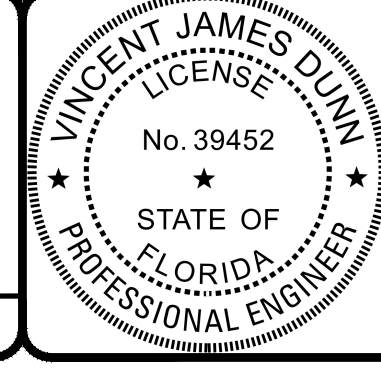
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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 8647 Baypine Road, Suite 200  
 Jacksonville, Florida 32256  
 Phone: (904)363-8916 Fax: (904)363-8917  
 www.dunneng.com

**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B REUSE PLAN



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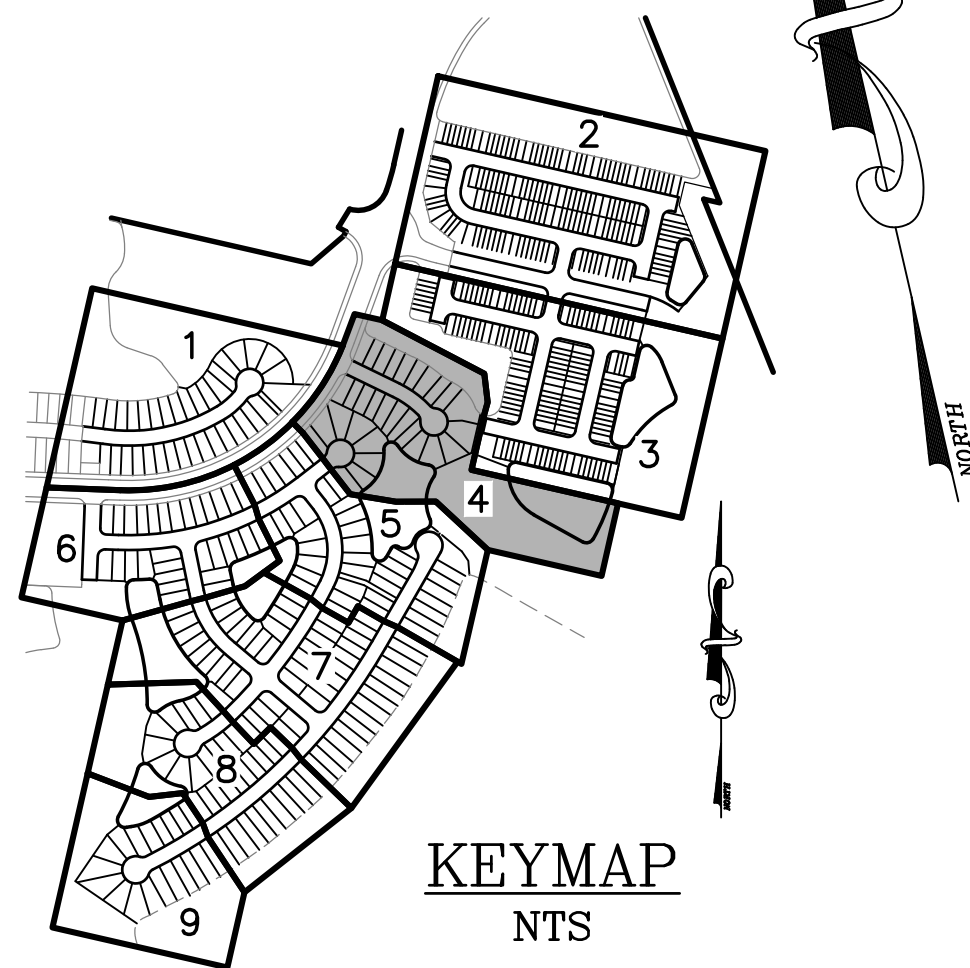
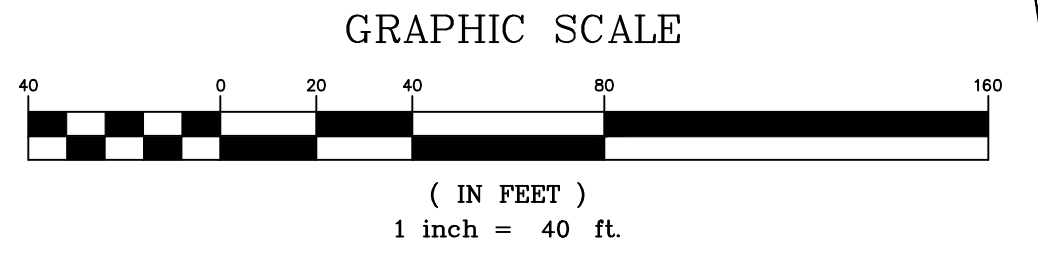
VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 77 of 130  
**2B R-3**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

SEE DWG NO.'S 2A WS-1 THRU 2A WS-3 FOR PHASE 2A UTILITY DETAILS ALONG PEARCE BLVD

NOTE:  
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**LEGEND**

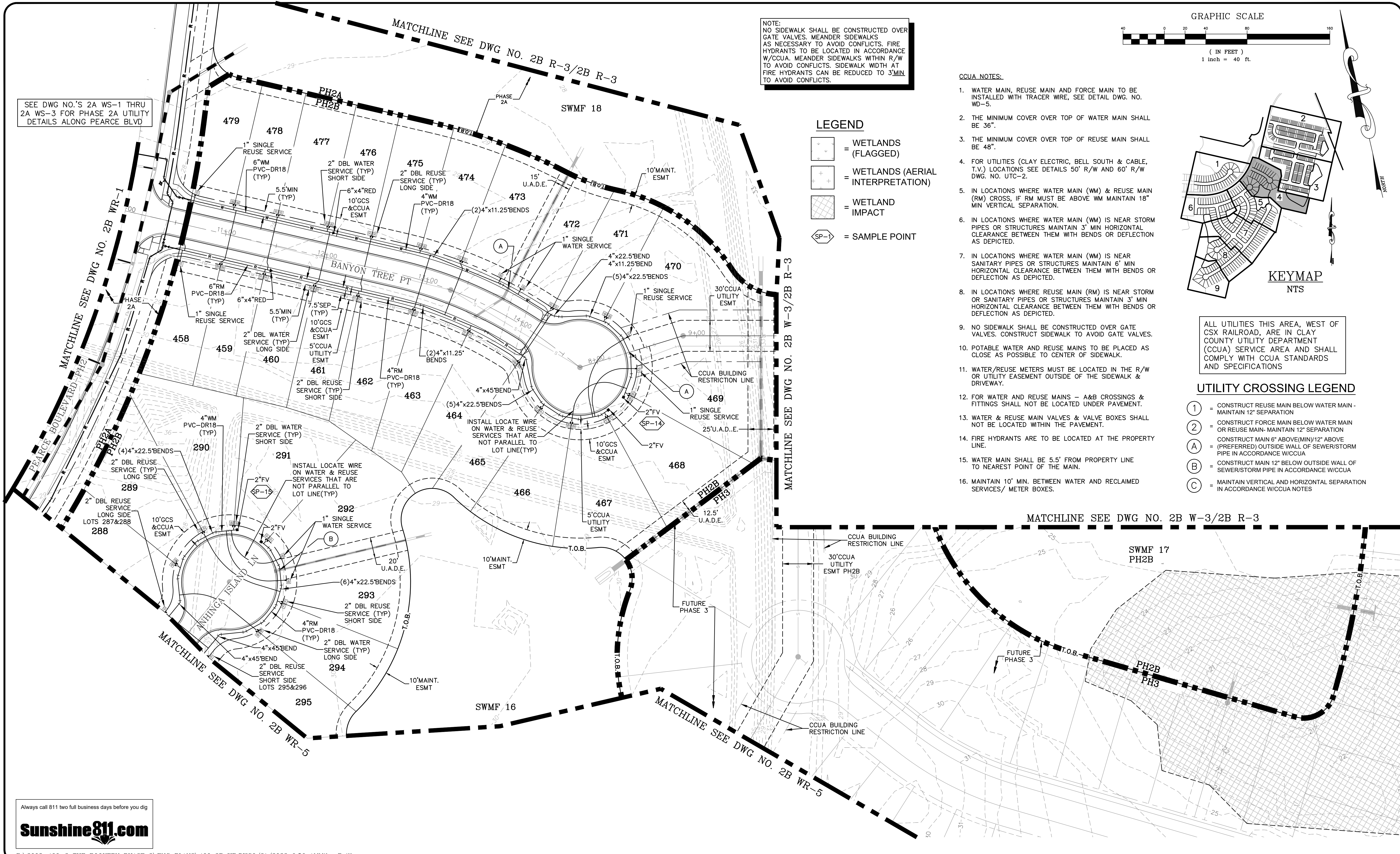
- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = WETLAND IMPACT
- = SAMPLE POINT

**CCUA NOTES:**

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3. THE MINIMUM COVER OVER TOP OF REUSE MAIN SHALL BE 48".
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**UTILITY CROSSING LEGEND**

- ① = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
- ② = CONSTRUCT FORCE MAIN BELOW WATER MAIN OR REUSE MAIN- MAINTAIN 12" SEPARATION
- (A) = CONSTRUCT MAIN 6" ABOVE (MIN) 12" ABOVE (PREFERRED) OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
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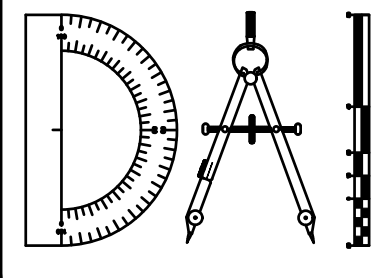
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P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2B WR.DWG9/21/2023 6:56 AMMike Reilly

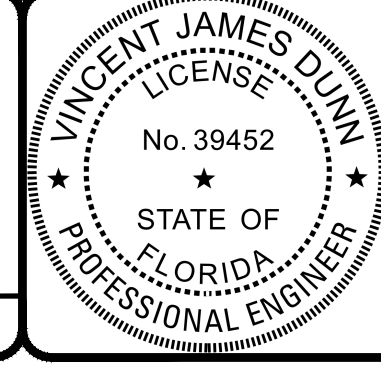
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B WATER AND REUSE PLAN



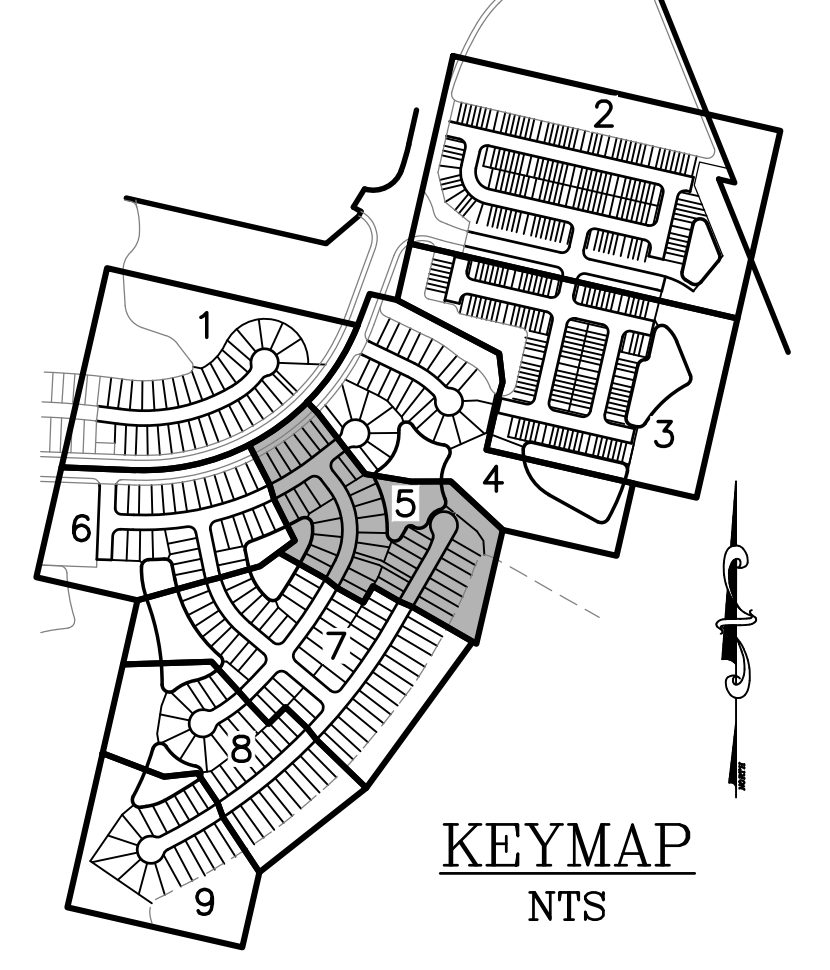
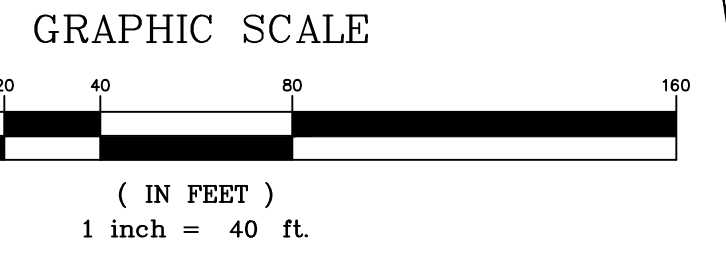
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 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 78 of 130  
**2B WR-4**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

SEE DWG NO.'S 2A WS-1 THRU 2A WS-3 FOR PHASE 2A UTILITY DETAILS ALONG PEARCE BLVD

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**LEGEND**

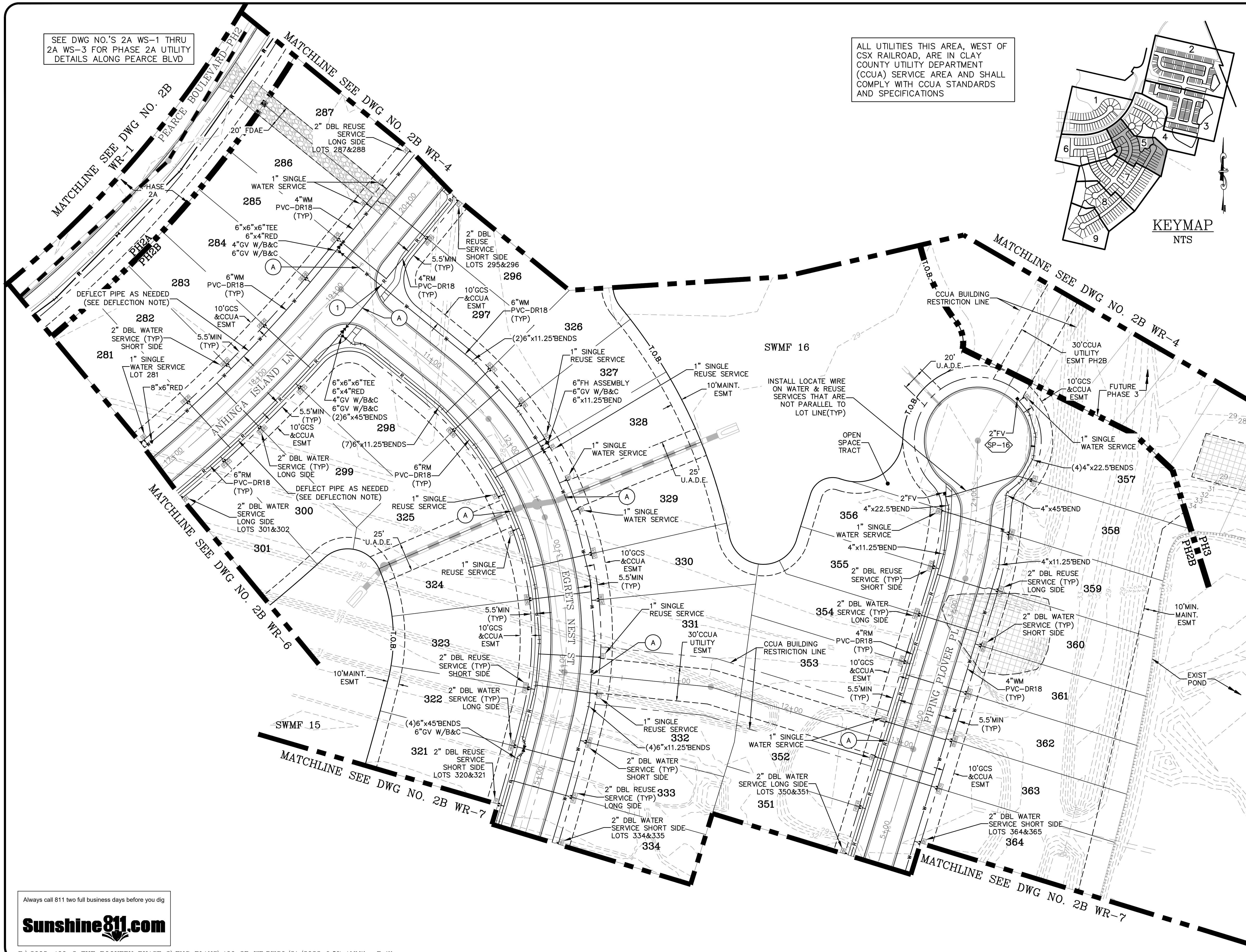
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- = SAMPLE POINT

**UTILITY CROSSING LEGEND**

- ① = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
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- C = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA NOTES

**CCUA NOTES:**

1. WATER MAIN, REUSE MAIN AND FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
2. THE MINIMUM COVER OVER TOP OF WATER MAIN SHALL BE 36".
3. THE MINIMUM COVER OVER TOP OF REUSE MAIN SHALL BE 48".
4. FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50' R/W AND 60' R/W DWG. NO. UTC-2.
5. IN LOCATIONS WHERE WATER MAIN (WM) & REUSE MAIN (RM) CROSS, IF RM MUST BE ABOVE WM MAINTAIN 18" MIN VERTICAL SEPARATION.
6. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR STORM PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
7. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR SANITARY PIPES OR STRUCTURES MAINTAIN 6' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
8. IN LOCATIONS WHERE REUSE MAIN (RM) IS NEAR STORM OR SANITARY PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
9. NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. CONSTRUCT SIDEWALK TO AVOID GATE VALVES.
10. POTABLE WATER AND REUSE MAINS TO BE PLACED AS CLOSE AS POSSIBLE TO CENTER OF SIDEWALK.
11. WATER/REUSE METERS MUST BE LOCATED IN THE R/W OR UTILITY EASEMENT OUTSIDE OF THE SIDEWALK & DRIVEWAY.
12. FOR WATER AND REUSE MAINS - A&B CROSSINGS & FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
13. WATER & REUSE MAIN VALVES & VALVE BOXES SHALL NOT BE LOCATED WITHIN THE PAVEMENT.
14. FIRE HYDRANTS ARE TO BE LOCATED AT THE PROPERTY LINE.
15. WATER MAIN SHALL BE 5.5' FROM PROPERTY LINE TO NEAREST POINT OF THE MAIN.
16. MAINTAIN 10' MIN. BETWEEN WATER AND RECLAIMED SERVICES/ METER BOXES.



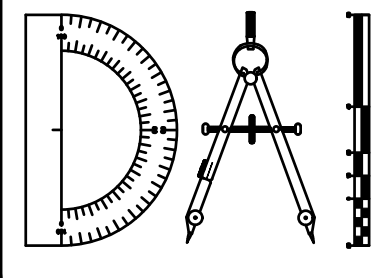
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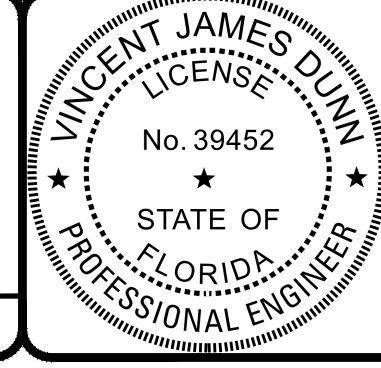
REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
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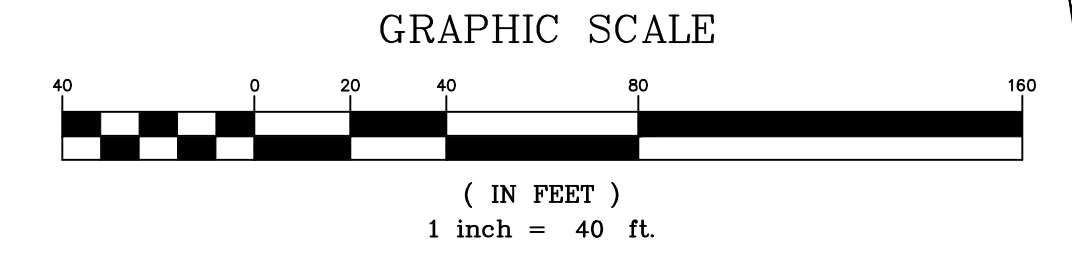
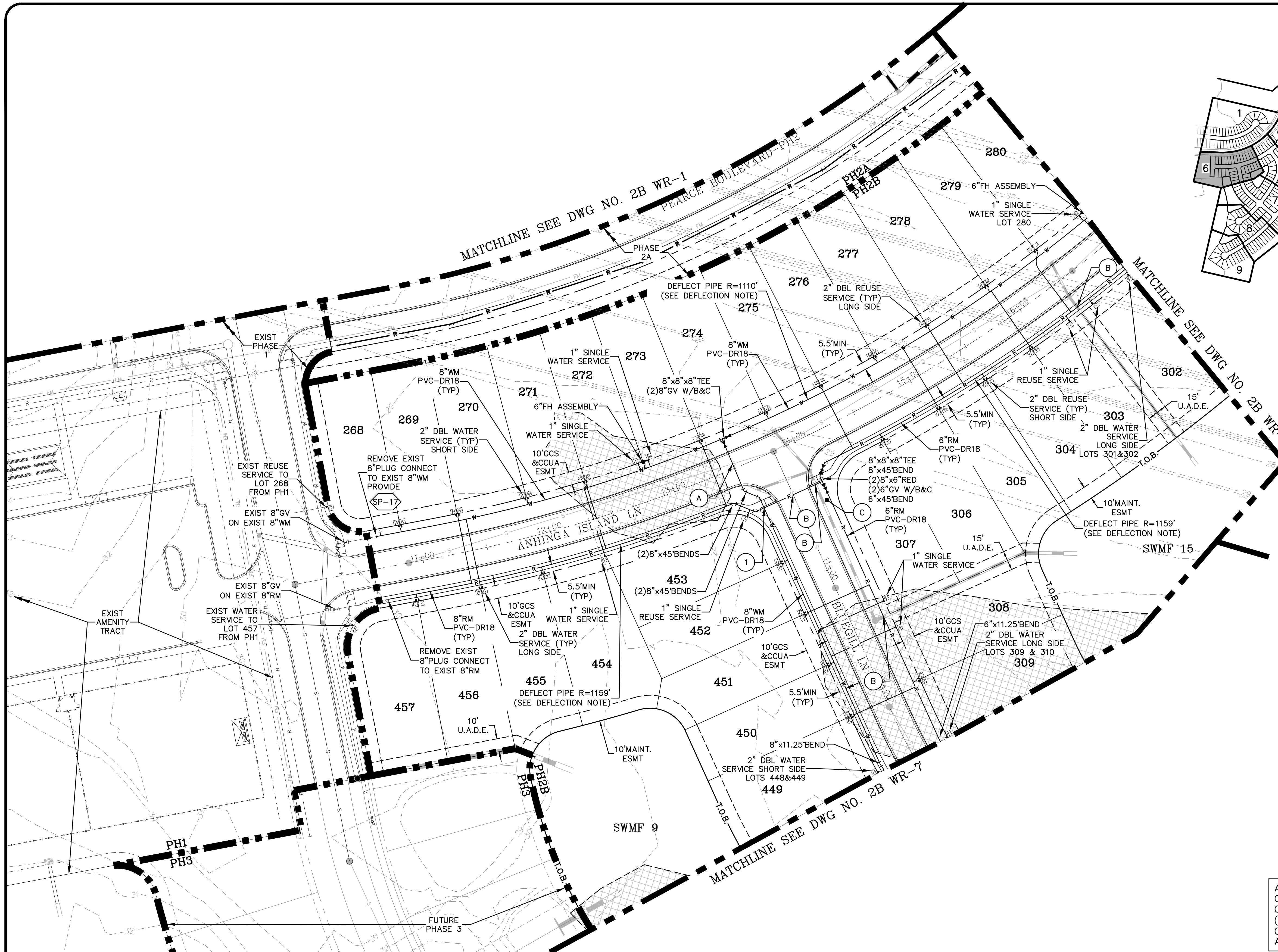
**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B WATER AND REUSE PLAN



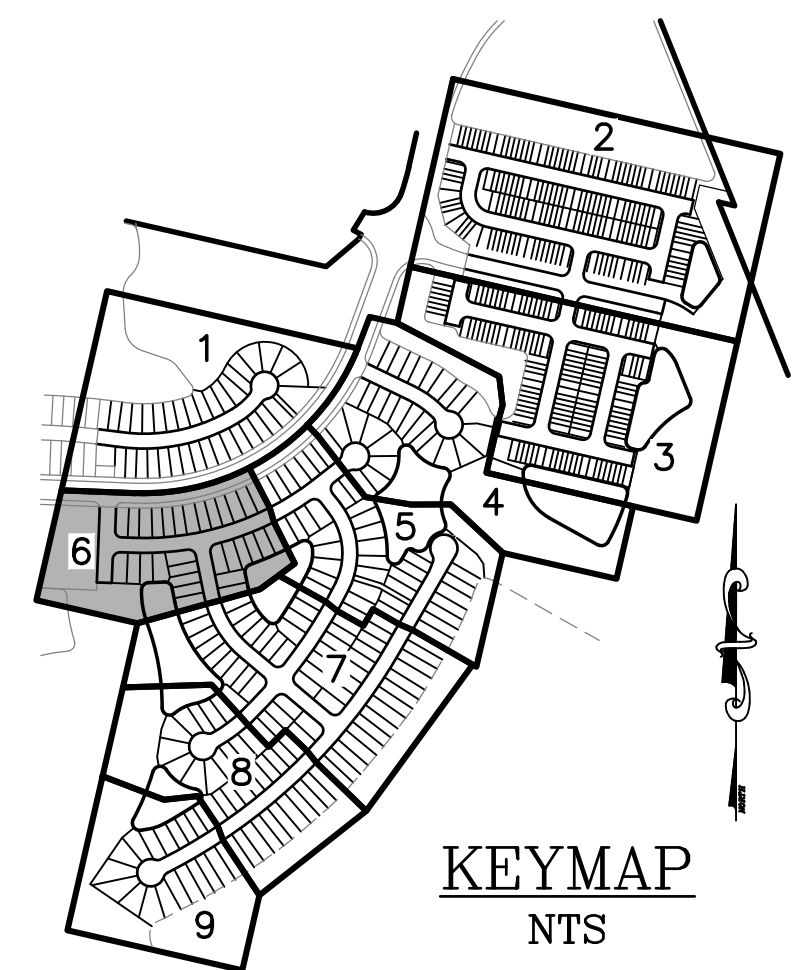
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 VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEBER ENGINEER NO. 81412

Sheet No. 79 of 130  
**2B WR-5**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



NOTE:  
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**LEGEND**

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
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- = SAMPLE POINT

**UTILITY CROSSING LEGEND**

- ① = CONSTRUCT REUSE MAIN BELOW WATER MAIN - MAINTAIN 12" SEPARATION
- ② = CONSTRUCT FORCE MAIN BELOW WATER MAIN OR REUSE MAIN - MAINTAIN 12" SEPARATION
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ALL UTILITIES THIS AREA, WEST OF CSX RAILROAD, ARE IN CLAY COUNTY UTILITY DEPARTMENT (CCUA) SERVICE AREA AND SHALL COMPLY WITH CCUA STANDARDS AND SPECIFICATIONS

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  3. SEE JOINT DEFLECTION LIMITS CHART DWG NO. WD-2.

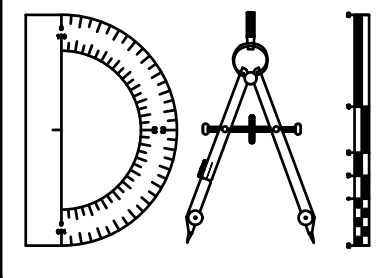
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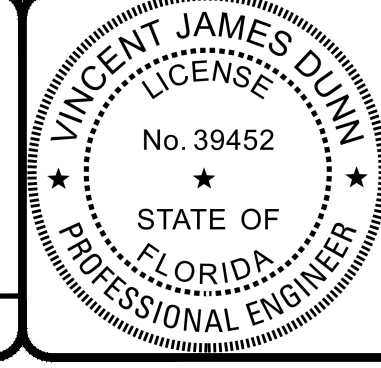
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B WATER AND REUSE PLAN



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VINCENT J. DUNN ENGINEER NO. 99452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. **80** of 130  
**2B WR-6**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



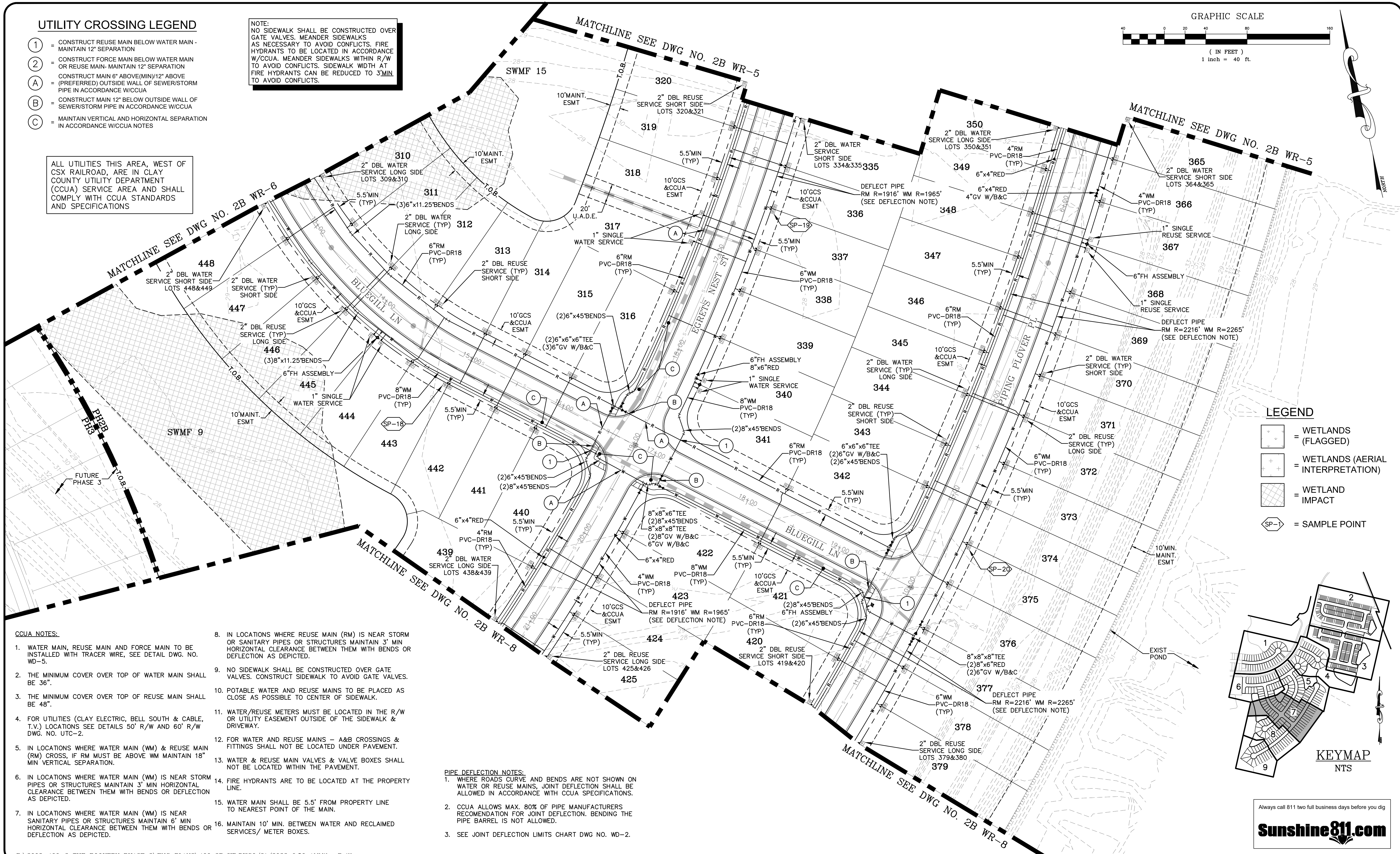
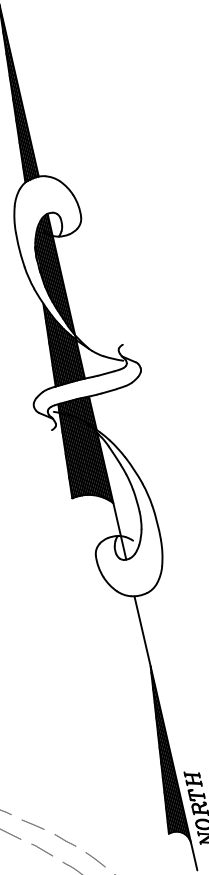
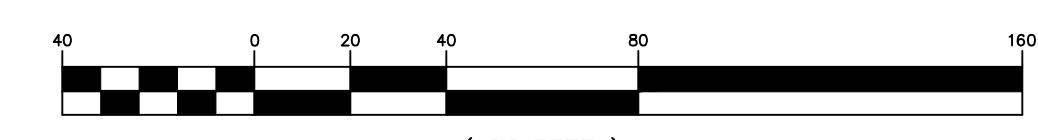
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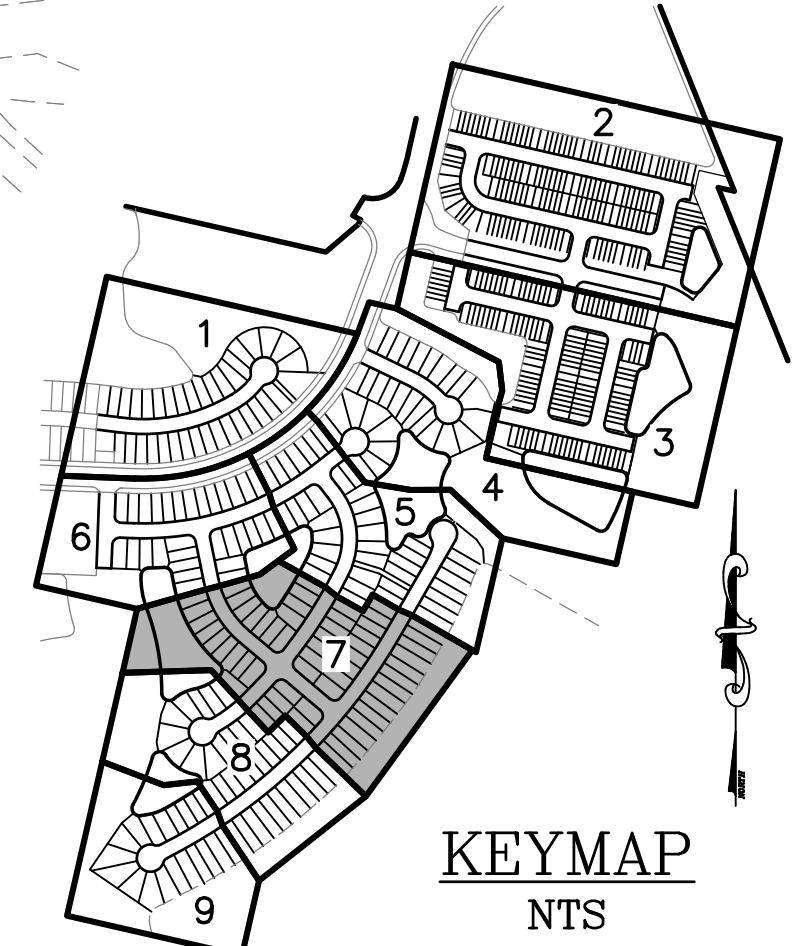
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GRAPHIC SCALE



**LEGEND**

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- = SAMPLE POINT



**CCUA NOTES:**

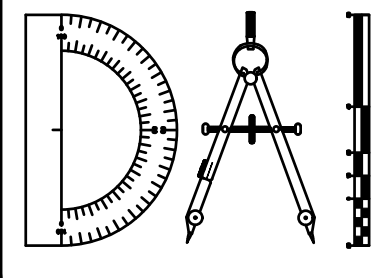
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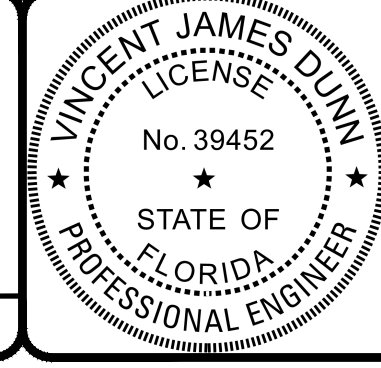
REVISIONS	
NO.	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
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 2B WATER AND REUSE PLAN



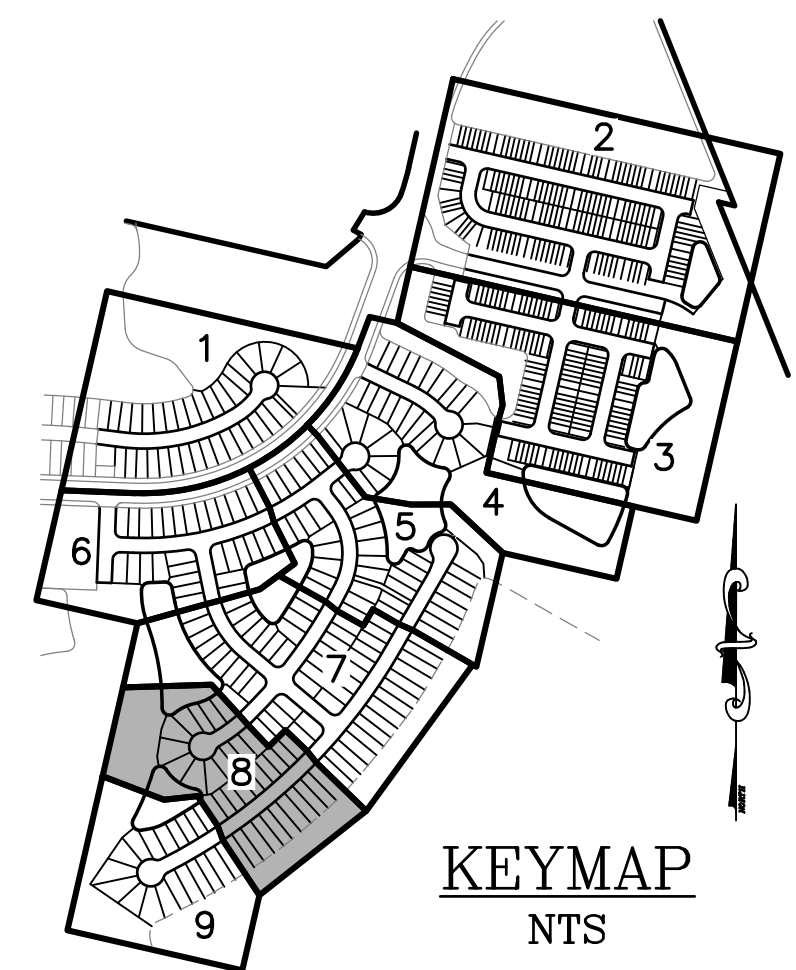
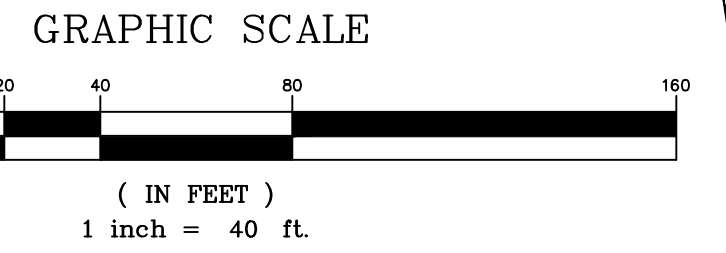
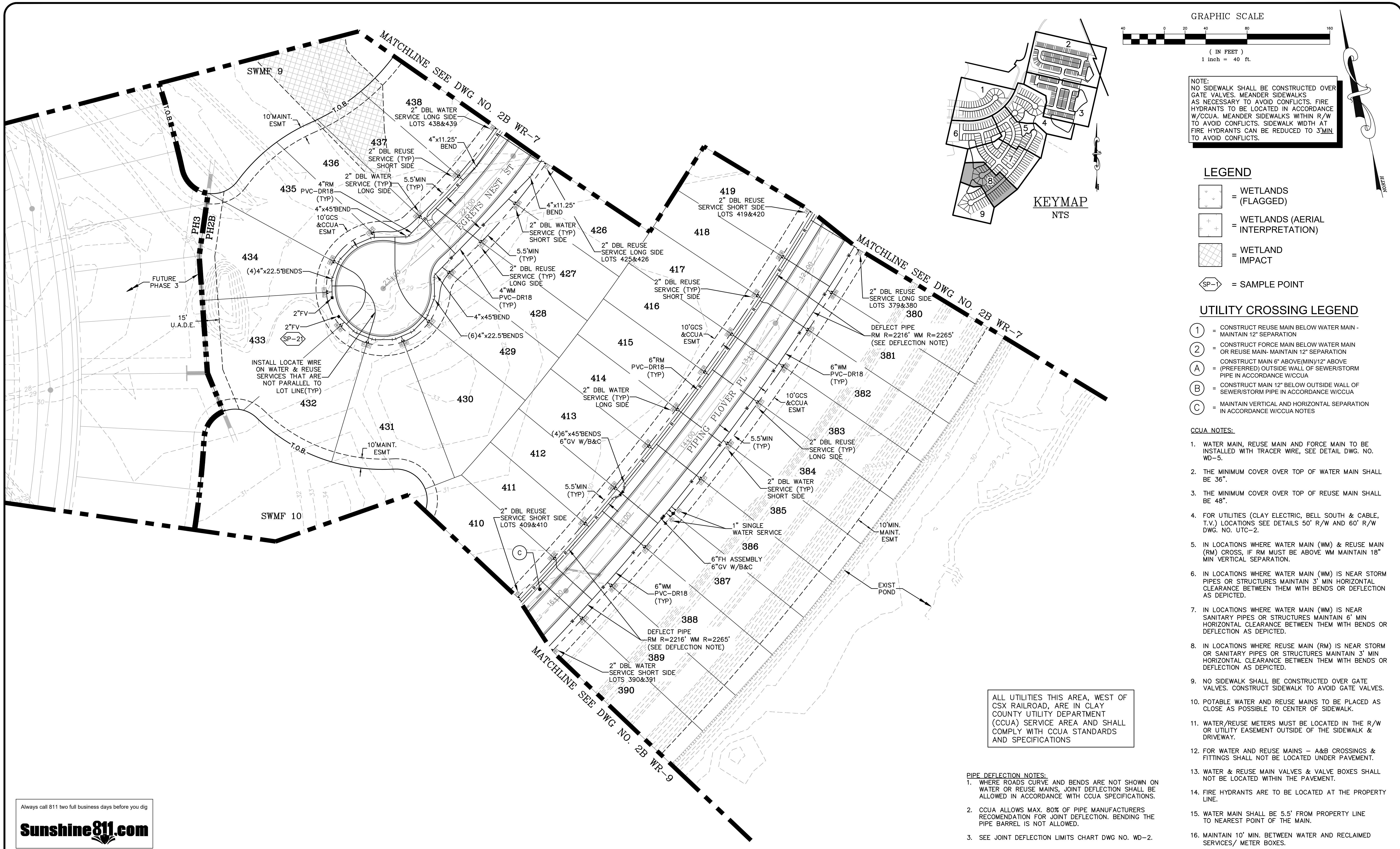
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 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. **81** of 130  
**2B WR-7**  
 DWG. NO.



THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



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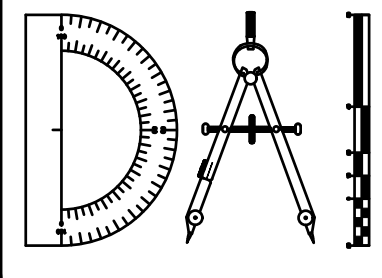
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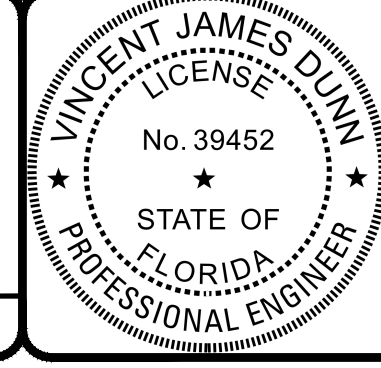
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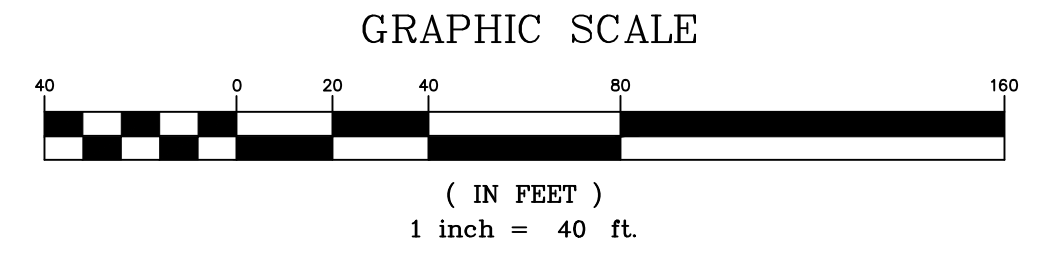
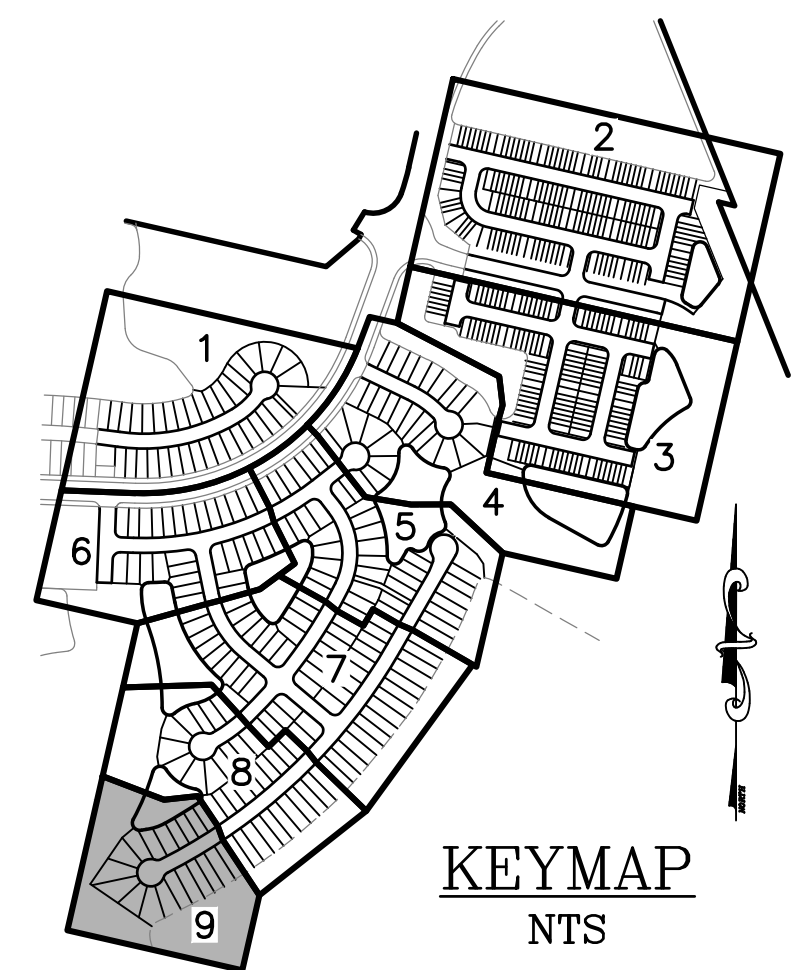
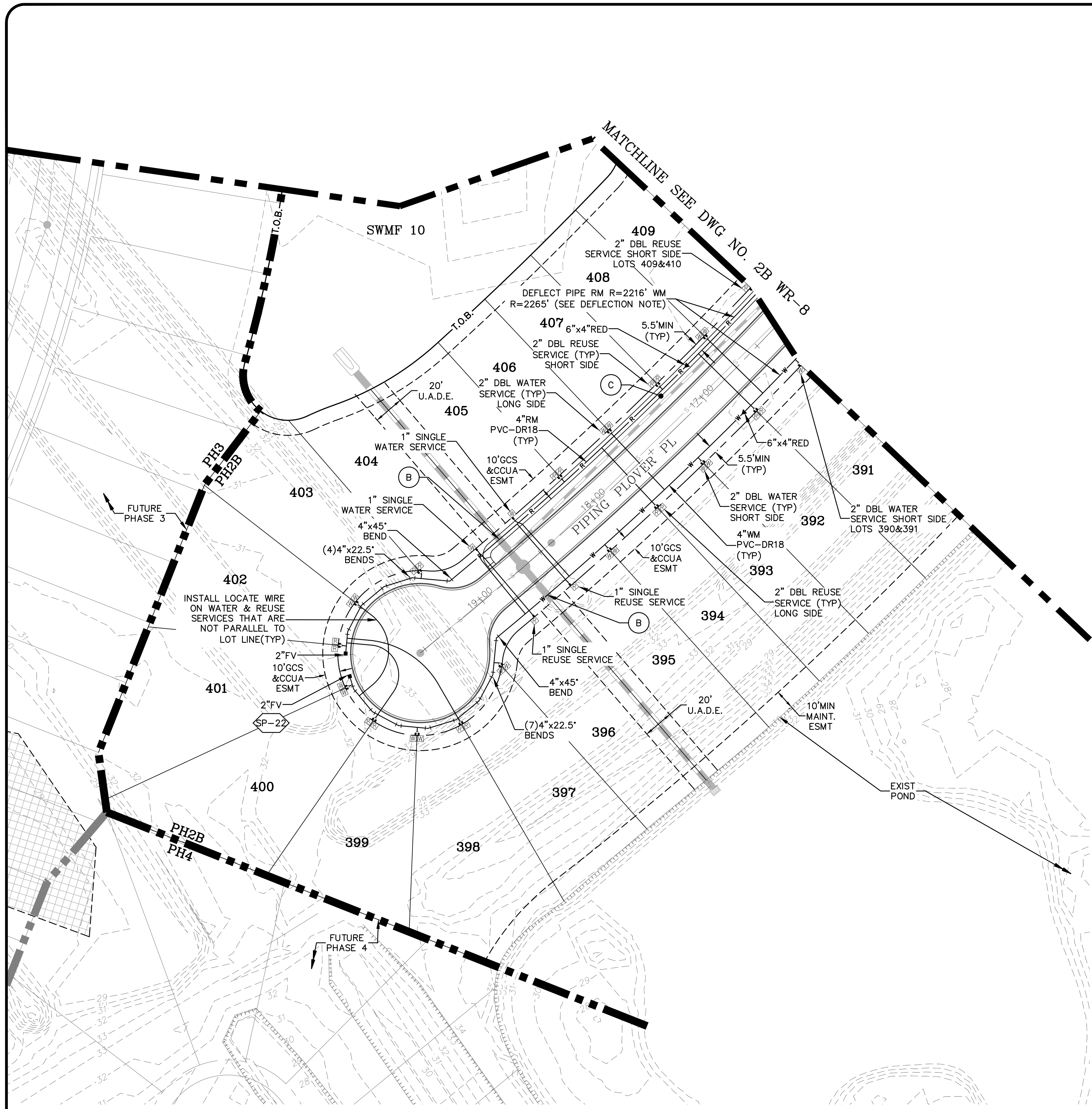
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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEBER ENGINEER NO. 81412

Sheet No. **82** of 130  
**2B WR-8**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



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- Ⓑ = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
- Ⓒ = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA NOTES

**CCUA NOTES:**

1. WATER MAIN, REUSE MAIN AND FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
2. THE MINIMUM COVER OVER TOP OF WATER MAIN SHALL BE 36".
3. THE MINIMUM COVER OVER TOP OF REUSE MAIN SHALL BE 48".
4. FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50' R/W AND 60' R/W DWG. NO. UTC-2.
5. IN LOCATIONS WHERE WATER MAIN (WM) & REUSE MAIN (RM) CROSS, IF RM MUST BE ABOVE WM MAINTAIN 18" MIN VERTICAL SEPARATION.
6. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR STORM PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
7. IN LOCATIONS WHERE WATER MAIN (WM) IS NEAR SANITARY PIPES OR STRUCTURES MAINTAIN 6' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
8. IN LOCATIONS WHERE REUSE MAIN (RM) IS NEAR STORM OR SANITARY PIPES OR STRUCTURES MAINTAIN 3' MIN HORIZONTAL CLEARANCE BETWEEN THEM WITH BENDS OR DEFLECTION AS DEPICTED.
9. NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. CONSTRUCT SIDEWALK TO AVOID GATE VALVES.
10. POTABLE WATER AND REUSE MAINS TO BE PLACED AS CLOSE AS POSSIBLE TO CENTER OF SIDEWALK.
11. WATER/REUSE METERS MUST BE LOCATED IN THE R/W OR UTILITY EASEMENT OUTSIDE OF THE SIDEWALK & DRIVEWAY.
12. FOR WATER AND REUSE MAINS - A&B CROSSINGS & FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
13. WATER & REUSE MAIN VALVES & VALVE BOXES SHALL NOT BE LOCATED WITHIN THE PAVEMENT.
14. FIRE HYDRANTS ARE TO BE LOCATED AT THE PROPERTY LINE.
15. WATER MAIN SHALL BE 5.5' FROM PROPERTY LINE TO NEAREST POINT OF THE MAIN.
16. MAINTAIN 10' MIN. BETWEEN WATER AND RECLAIMED SERVICES/ METER BOXES.

ALL UTILITIES THIS AREA, WEST OF CSX RAILROAD, ARE IN CLAY COUNTY UTILITY DEPARTMENT (CCUA) SERVICE AREA AND SHALL COMPLY WITH CCUA STANDARDS AND SPECIFICATIONS

- PIPE DEFLECTION NOTES:**
1. WHERE ROADS CURVE AND BENDS ARE NOT SHOWN ON WATER OR REUSE MAINS, JOINT DEFLECTION SHALL BE ALLOWED IN ACCORDANCE WITH CCUA SPECIFICATIONS.
  2. CCUA ALLOWS MAX. 80% OF PIPE MANUFACTURERS RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED.
  3. SEE JOINT DEFLECTION LIMITS CHART DWG NO. WD-2.

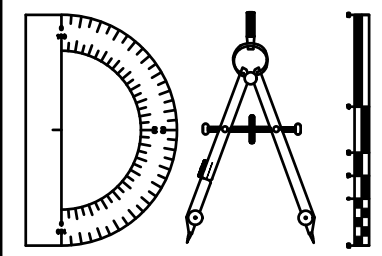
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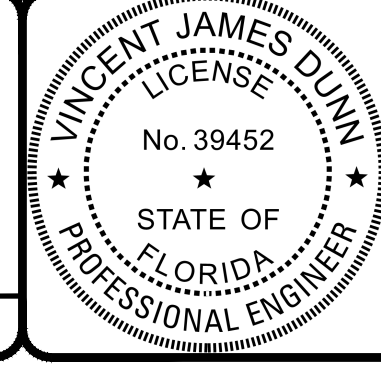
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B WATER AND REUSE PLAN

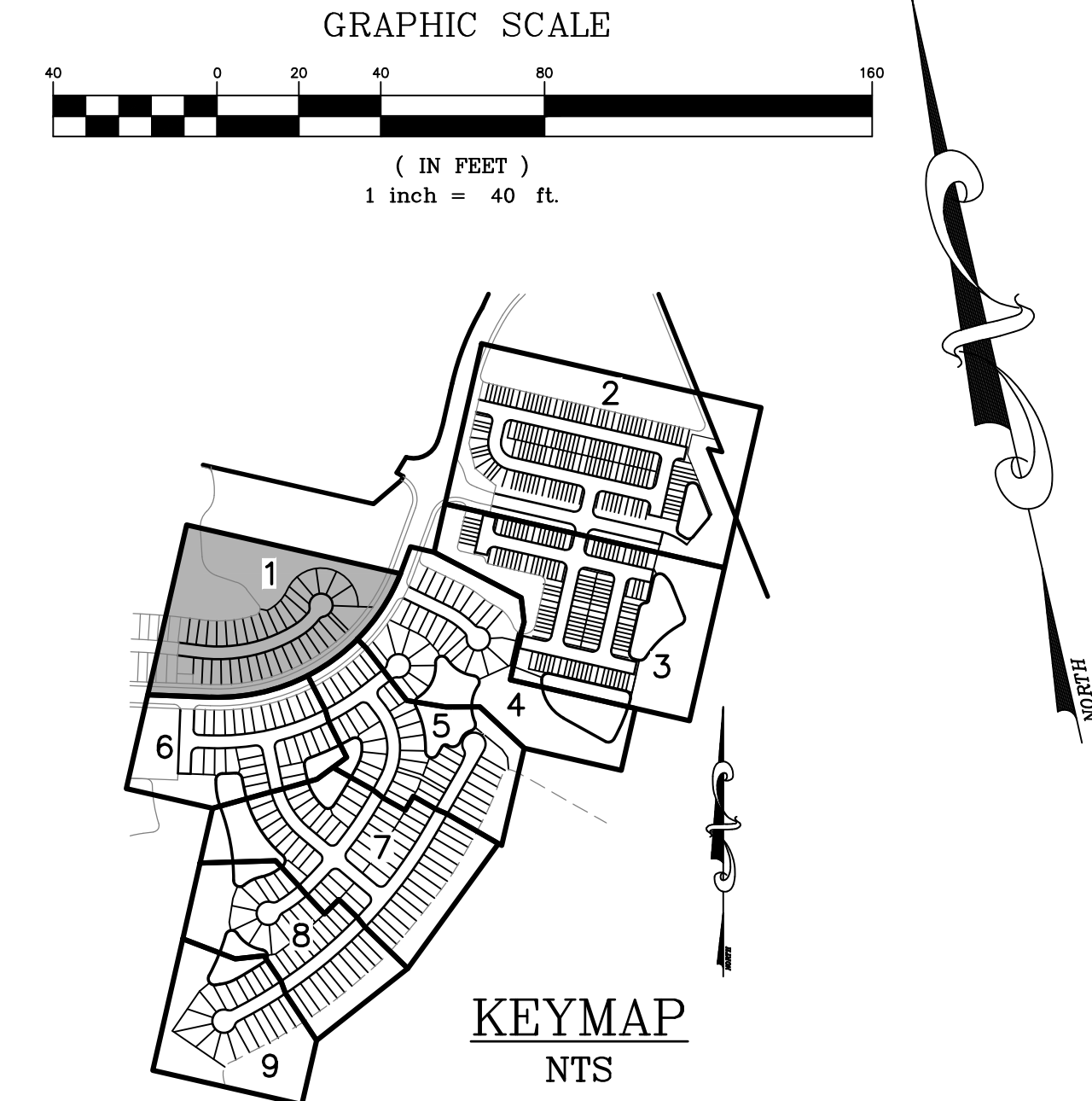
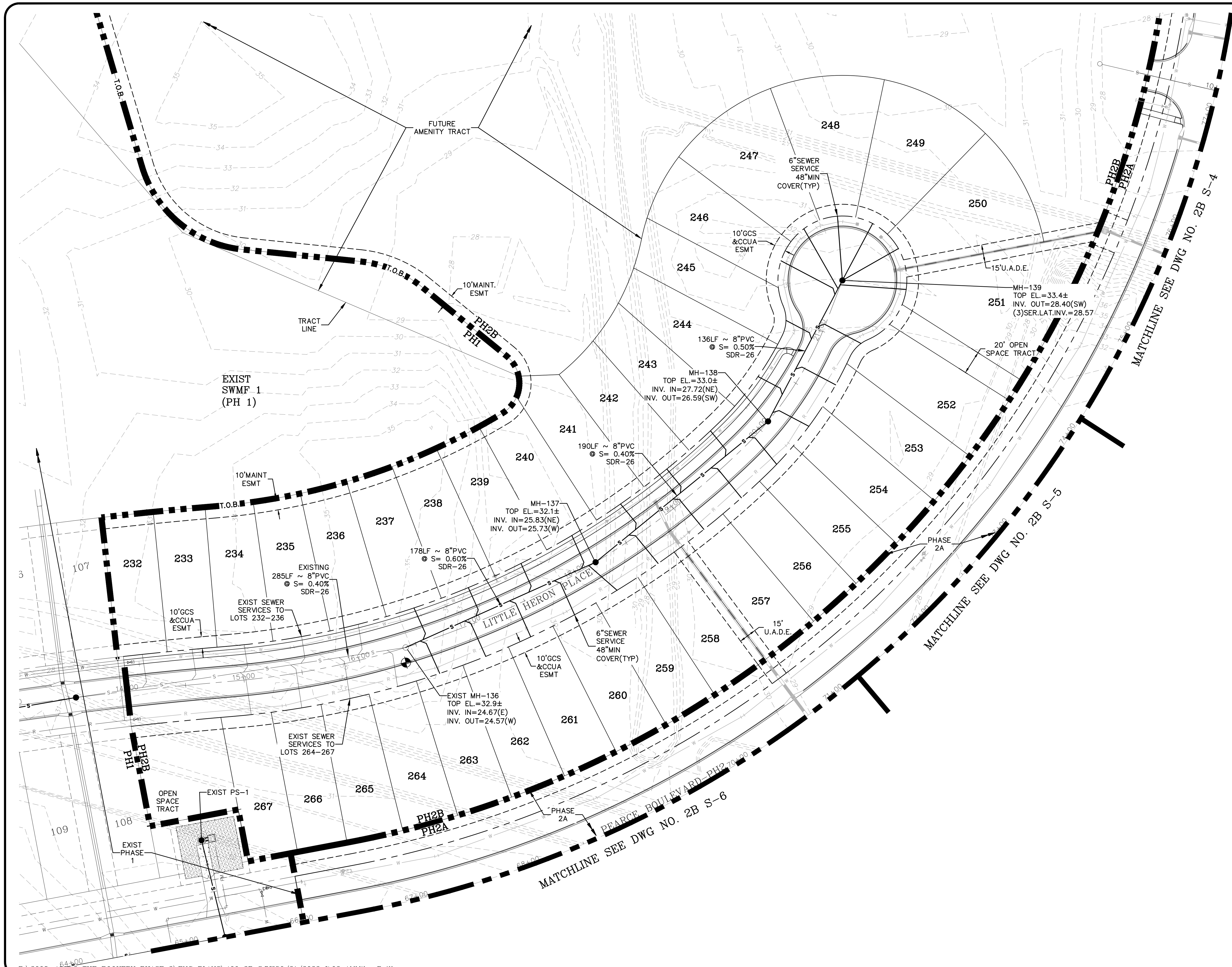


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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEBER ENGINEER NO. 81412

Sheet No. **83** of 130  
**2B WR-9**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



**UTILITY CROSSING LEGEND**

- (A) = CONSTRUCT MAIN 6" ABOVE (MIN)/12" ABOVE (PREFERRED) OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
- (B) = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
- (C) = MAINTAIN VERTICAL AND HORIZONTAL SEPARATION IN ACCORDANCE W/CCUA
- \* = CONSTRUCT 6" SEWER SERVICE ABOVE STORM PIPE.
- # = CONSTRUCT 6" SEWER SERVICE BELOW STORM PIPE.

**NOTES:**

1. FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
2. THE MINIMUM COVER OVER TOP OF FORCE MAIN SHALL BE 60".
3. FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50' R/W AND 60' R/W DWG. NO. UTC-2.
4. NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. MEANDER SIDEWALK TO AVOID GATE VALVES.
5. FORCEMAIN FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
6. NO VALVES/ VALVE BOXES SHALL BE LOCATED IN THE ROADWAY.
7. 10'GCS & CCUA ESMT SHALL BE DUAL ACCESS EASEMENT. CCUA USAGE OF THIS EASEMENT SHALL BE LIMITED TO METERS AND SMALLER APPURTENANCES.

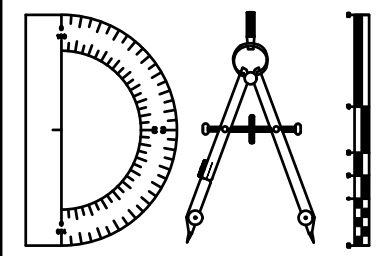
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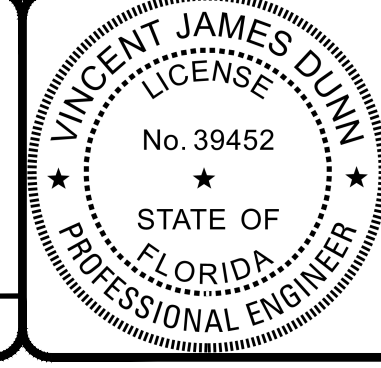
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NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B SEWER PLAN



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 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. **84** of 130  
**2B S-1**  
 DWG. NO.

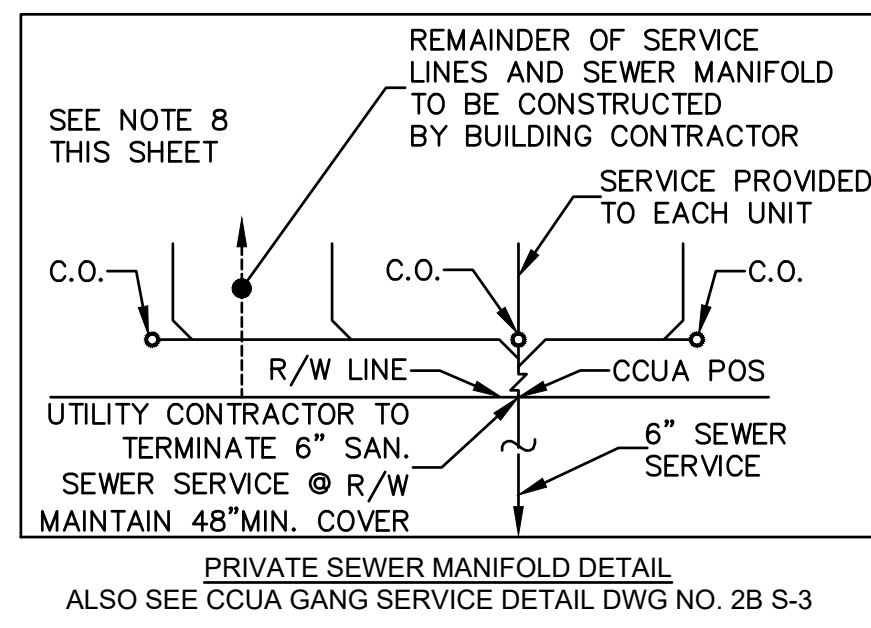
THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

**NOTES:**

1. FORCE MAIN TO BE INSTALLED WITH TRACER WIRE, SEE DETAIL DWG. NO. WD-5.
2. THE MINIMUM COVER OVER TOP OF FORCE MAIN SHALL BE 60".
3. FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50' R/W AND 60' R/W DWG. NO. UTC-2.
4. NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. MEANDER SIDEWALK TO AVOID GATE VALVES.
5. FORCEMAIN FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
6. NO VALVES/ VALVE BOXES SHALL BE LOCATED IN THE ROADWAY.
7. 10"GCS & CCUA ESMT SHALL BE DUAL ACCESS EASEMENT. CCUA USAGE OF THIS EASEMENT SHALL BE LIMITED TO METERS AND SMALLER APPURTENANCES.
8. SS ESMT IS A PRIVATE SANITARY SEWER EASEMENT EXTENDING THE WIDTH OF EACH BUILDING FROM THE RIGHT-OF-WAY TO A LINE 2' FROM THE FACE OF SAID BUILDING FOR SEWER MANIFOLD MAINTENANCE.

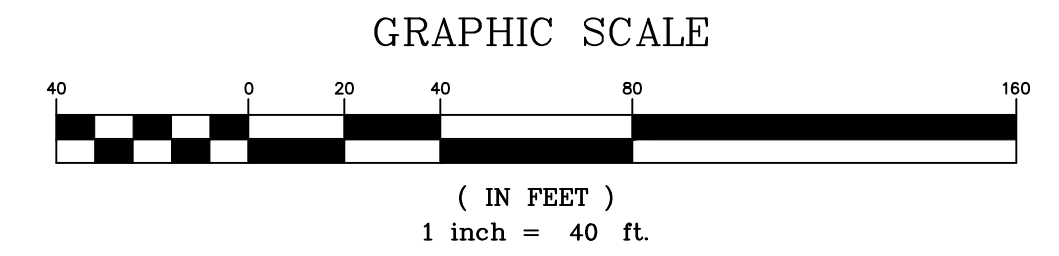
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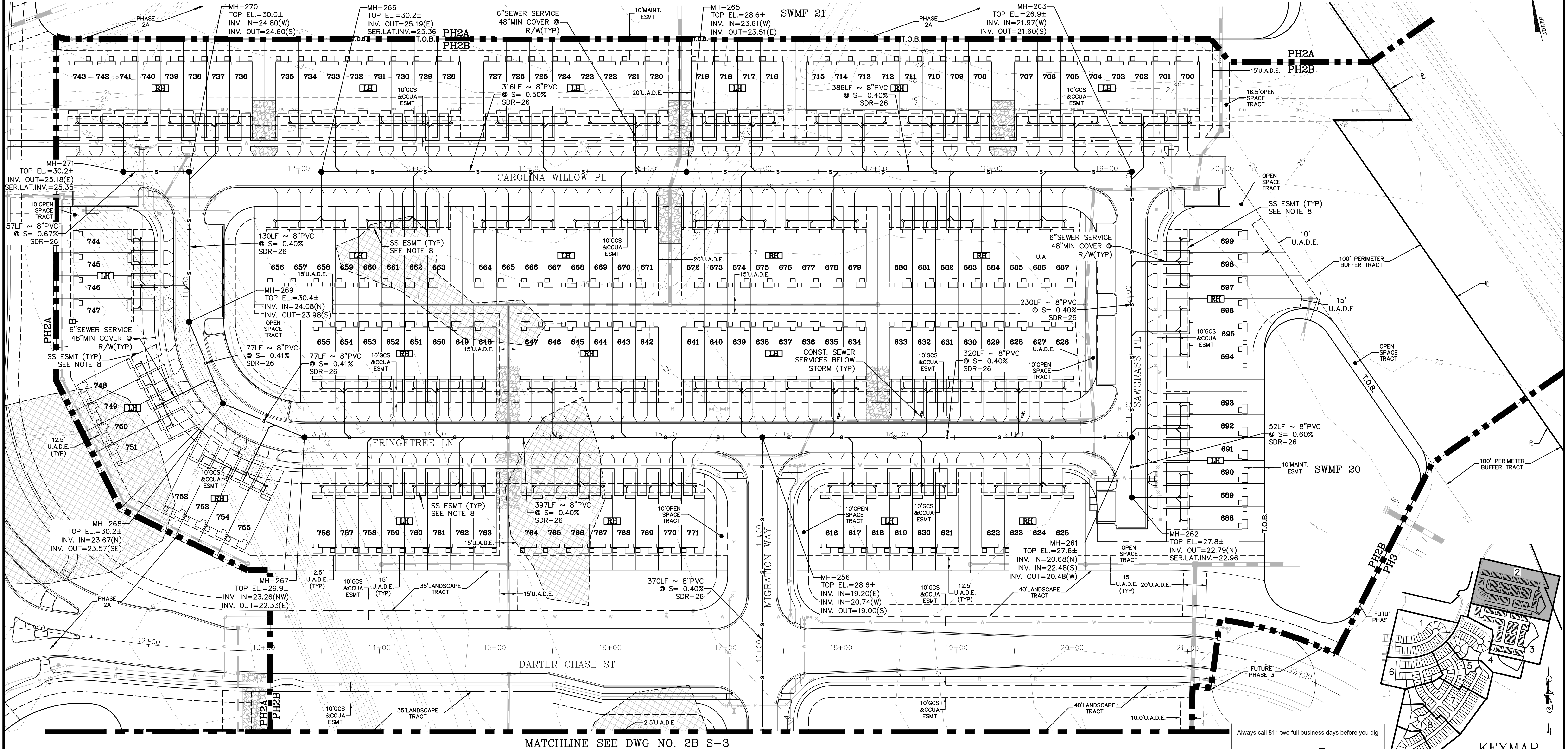


**LEGEND**

- [Symbol] = WETLANDS (FLAGGED)
- [Symbol] = WETLANDS (AERIAL INTERPRETATION)
- [Symbol] = WETLAND IMPACT



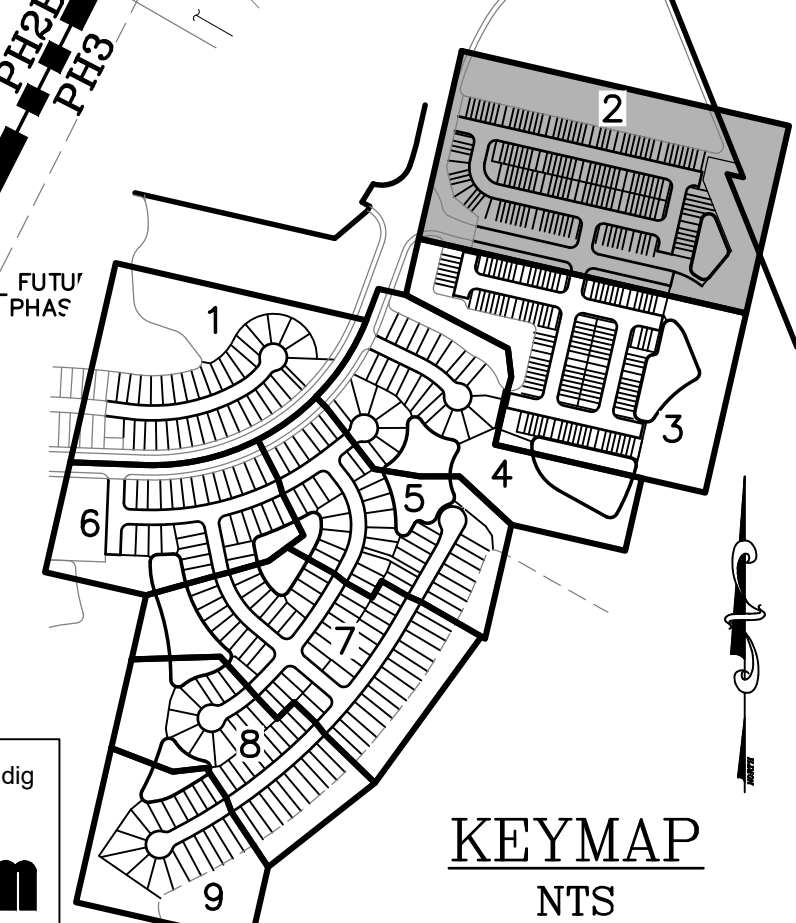
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MATCHLINE SEE DWG NO. 2B S-3

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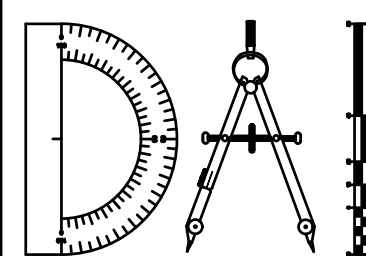
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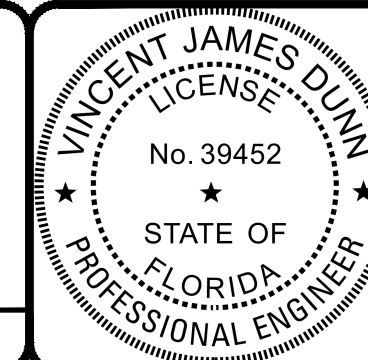
REVISIONS		
NO.	DATE	DESCRIPTION

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 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B SEWER PLAN



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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. **85** of 130  
**2B S-2**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

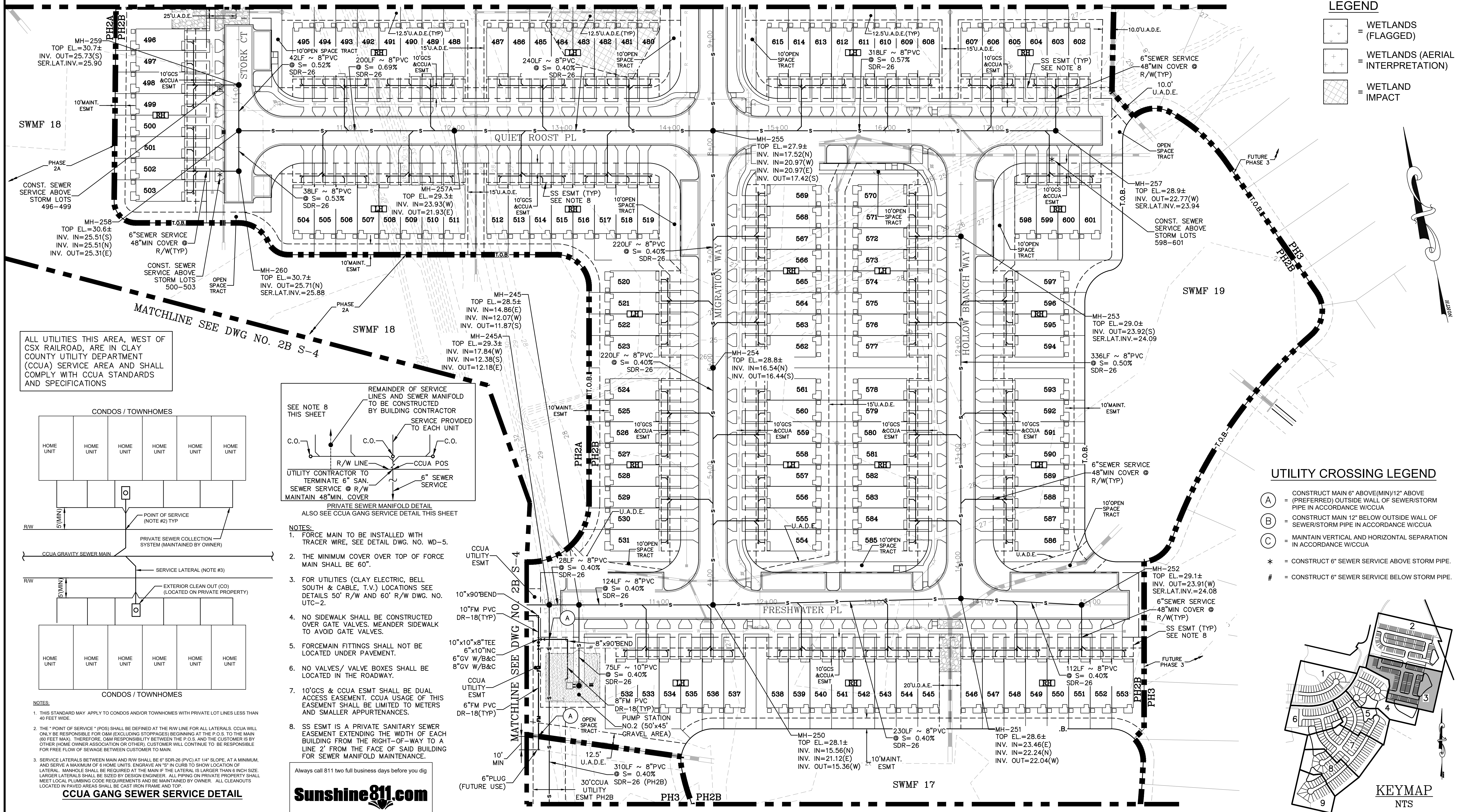


( IN FEET )  
1 inch = 40 ft.

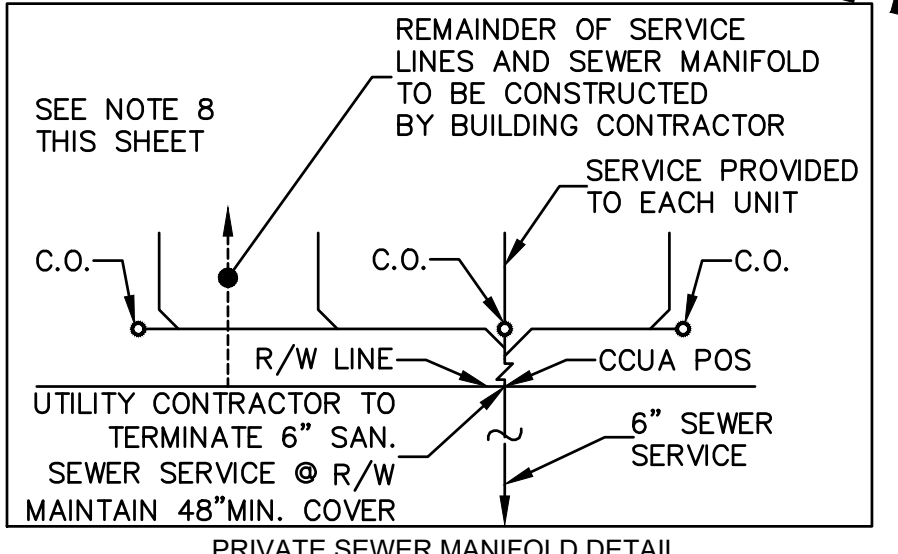
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LEGEND

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- = WETLAND IMPACT



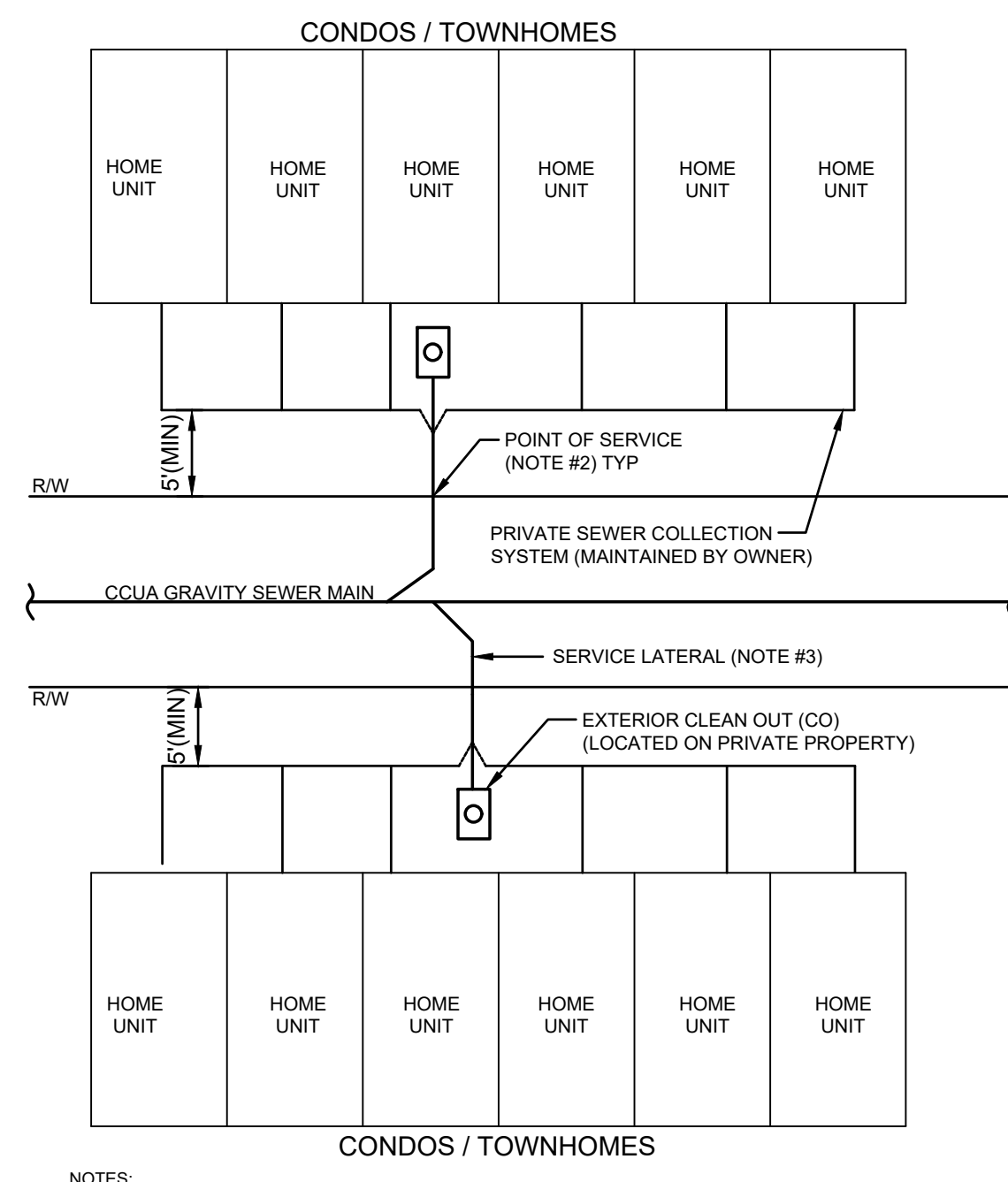
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NOTES:

- THIS STANDARD MAY APPLY TO CONDOS AND/OR TOWNHOMES WITH PRIVATE LOT LINES LESS THAN 40 FEET WIDE.
- THE "POINT OF SERVICE" (POS) SHALL BE DEFINED AT THE R/W LINE FOR ALL LATERALS. CCUA WILL ONLY BE RESPONSIBLE FOR O&M (EXCLUDING STOPPAGES) BEGINNING AT THE P.O.S. TO THE MAIN (60 FEET MAX). THEREFORE, O&M RESPONSIBILITY BETWEEN THE P.O.S. AND THE CUSTOMER IS BY OTHER (HOME OWNER ASSOCIATION OR OTHER). CUSTOMER WILL CONTINUE TO BE RESPONSIBLE FOR FREE FLOW OF SEWAGE BETWEEN CUSTOMER TO MAIN.
- SERVICE LATERALS BETWEEN MAIN AND R/W SHALL BE 6" SDR-26 (PVC) AT 1/4" SLOPE. AT A MINIMUM, AND SERVE A MAXIMUM OF 6 HOME UNITS. ENGRAVE AN "S" IN CURB TO SHOW LOCATION OF LATERAL. MANHOLE SHALL BE REQUIRED AT THE MAIN IF THE LATERAL IS LARGER THAN 6 INCH SIZE. LARGER LATERALS SHALL BE SIZED BY DESIGN ENGINEER. ALL PIPING ON PRIVATE PROPERTY SHALL MEET LOCAL PLUMBING CODE REQUIREMENTS AND BE MAINTAINED BY OWNER. ALL CLEANOUTS LOCATED IN PAVED AREAS SHALL BE CAST IRON FRAME AND TOP.

**CCUA GANG SEWER SERVICE DETAIL**

UTILITY CROSSING LEGEND

- (A) = CONSTRUCT MAIN 6" ABOVE (MIN) 12" ABOVE (PREFERRED) OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
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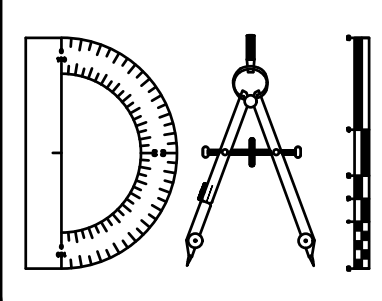


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MATCHLINE SEE DWG NO. 2B S-4

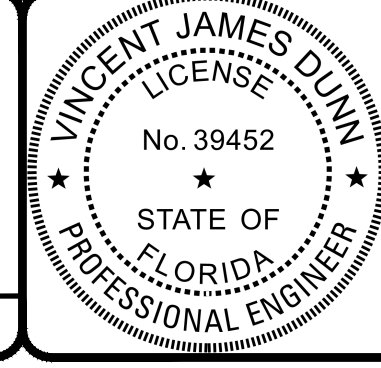
REVISIONS		BY:
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
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**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
**2B SEWER PLAN**



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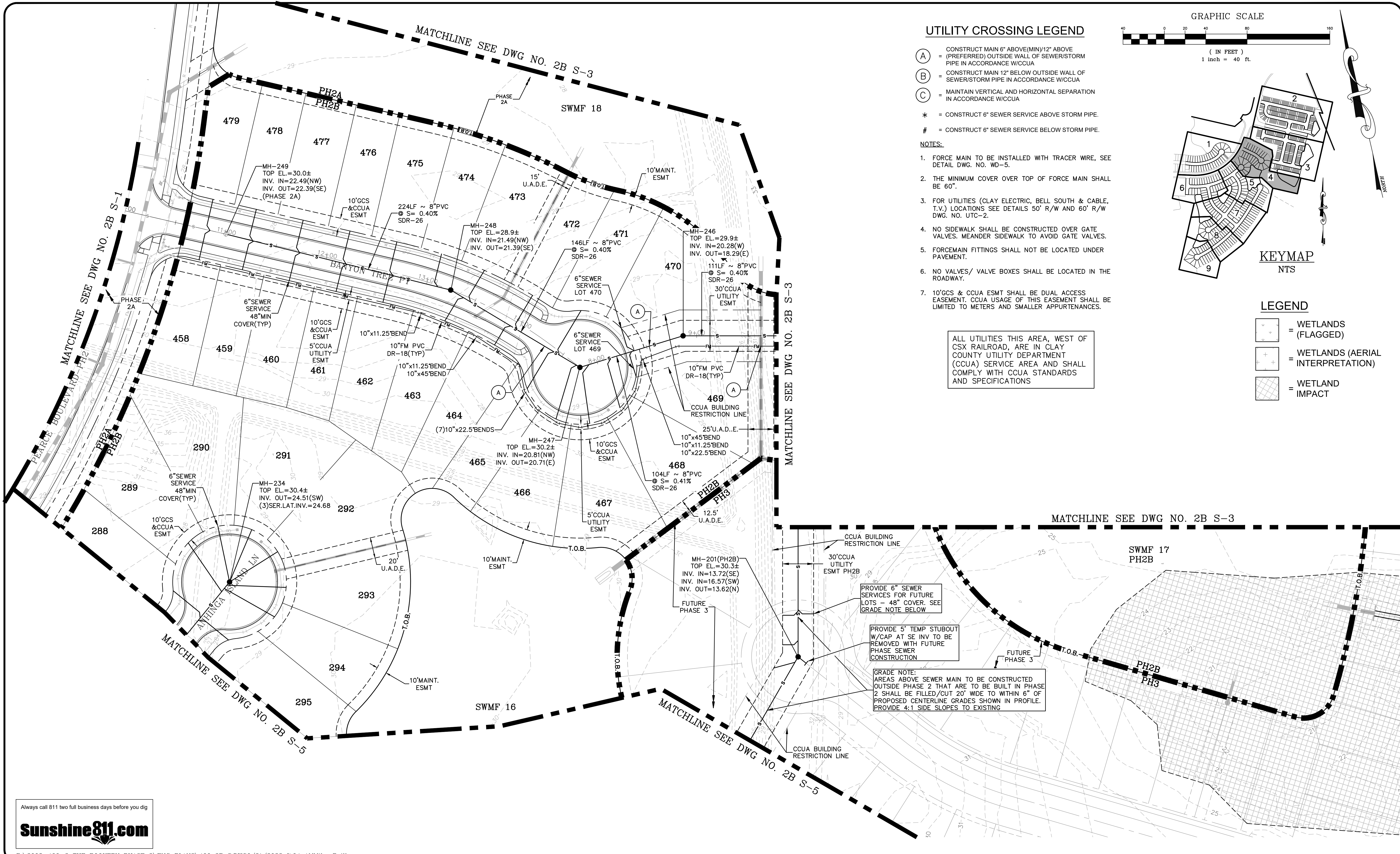
VINCENT J. DUNN  
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GLEN R. WIEGER  
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Sheet No. **86** of 130  
**2B S-3**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

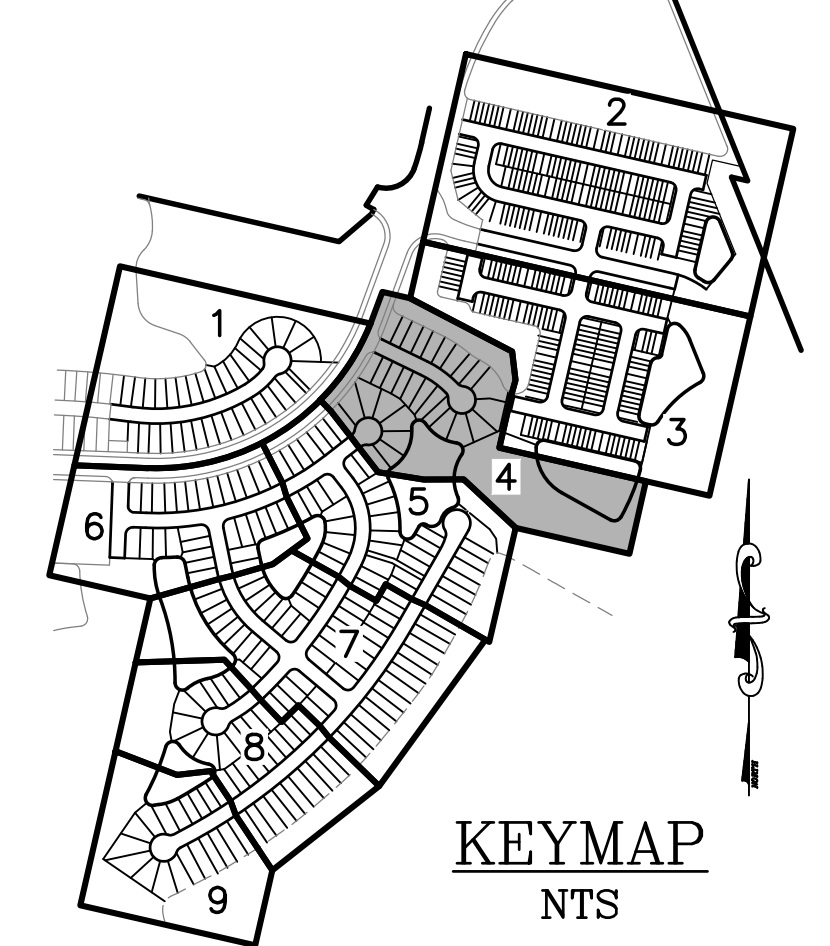
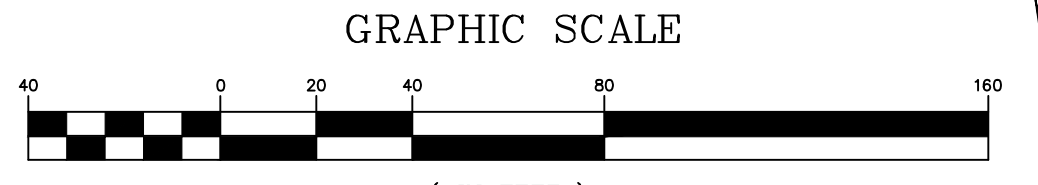


**UTILITY CROSSING LEGEND**

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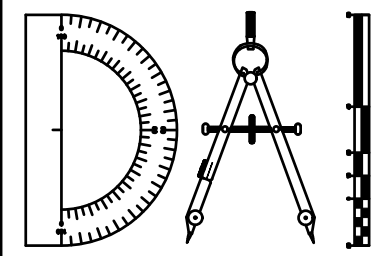
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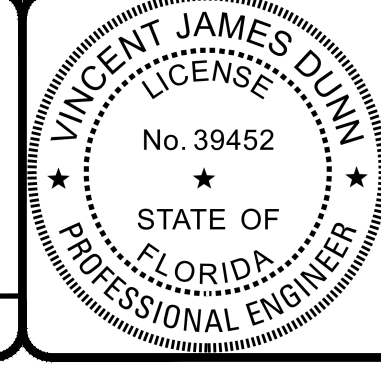
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 2B SEWER PLAN

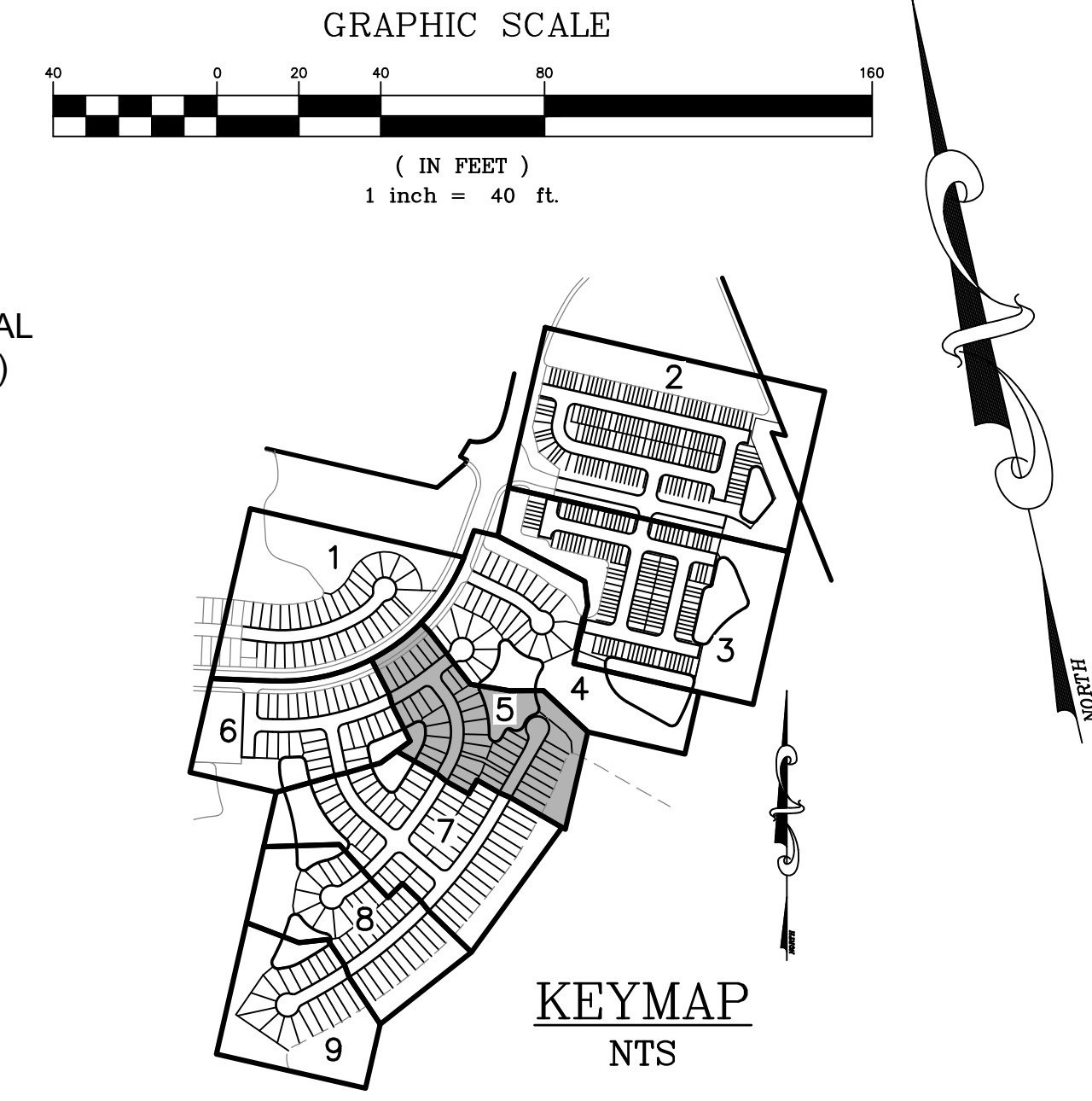
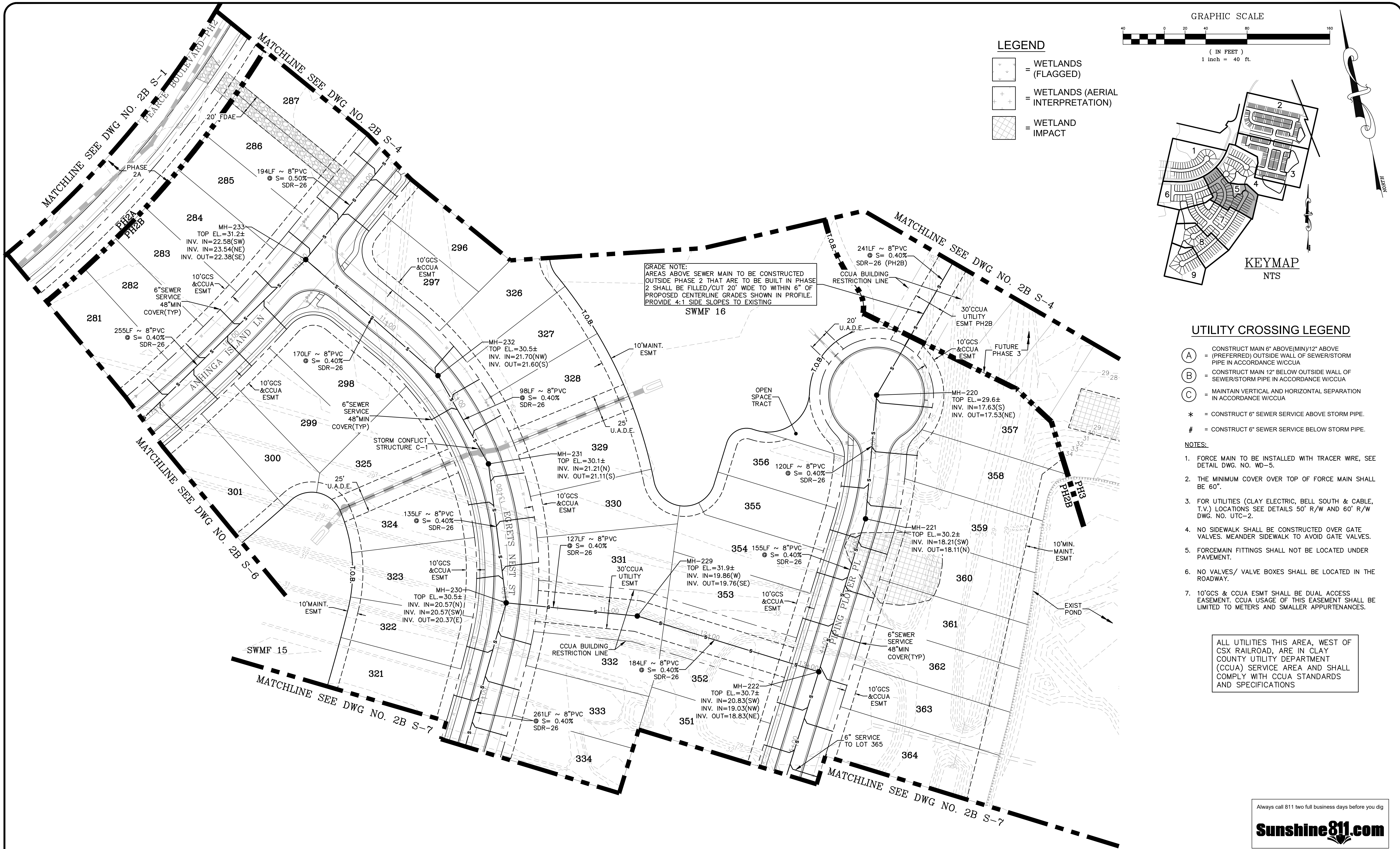


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Sheet No. 87 of 130  
**2B S-4**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



**LEGEND**

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**GRADE NOTE:**  
 AREAS ABOVE SEWER MAIN TO BE CONSTRUCTED OUTSIDE PHASE 2 THAT ARE TO BE BUILT IN PHASE 2 SHALL BE FILLED/CUT 20' WIDE TO WITHIN 6" OF PROPOSED CENTERLINE GRADES SHOWN IN PROFILE. PROVIDE 4:1 SIDE SLOPES TO EXISTING SWMF 16

**UTILITY CROSSING LEGEND**

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  3. FOR UTILITIES (CLAY ELECTRIC, BELL SOUTH & CABLE, T.V.) LOCATIONS SEE DETAILS 50' R/W AND 60' R/W DWG. NO. UTC-2.
  4. NO SIDEWALK SHALL BE CONSTRUCTED OVER GATE VALVES. MEANDER SIDEWALK TO AVOID GATE VALVES.
  5. FORCEMAIN FITTINGS SHALL NOT BE LOCATED UNDER PAVEMENT.
  6. NO VALVES/ VALVE BOXES SHALL BE LOCATED IN THE ROADWAY.
  7. 10'GCS & CCUA ESMT SHALL BE DUAL ACCESS EASEMENT. CCUA USAGE OF THIS EASEMENT SHALL BE LIMITED TO METERS AND SMALLER APPURTENANCES.

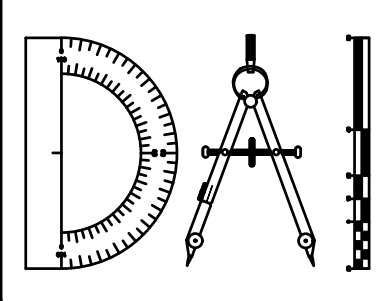
ALL UTILITIES THIS AREA, WEST OF CSX RAILROAD, ARE IN CLAY COUNTY UTILITY DEPARTMENT (CCUA) SERVICE AREA AND SHALL COMPLY WITH CCUA STANDARDS AND SPECIFICATIONS

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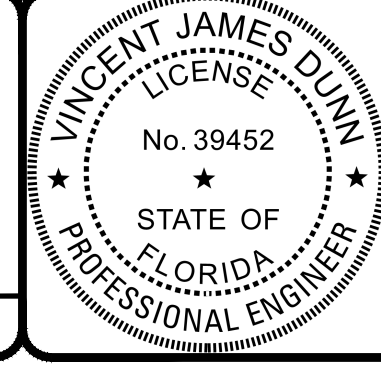
REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: 1" = 40'  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B SEWER PLAN

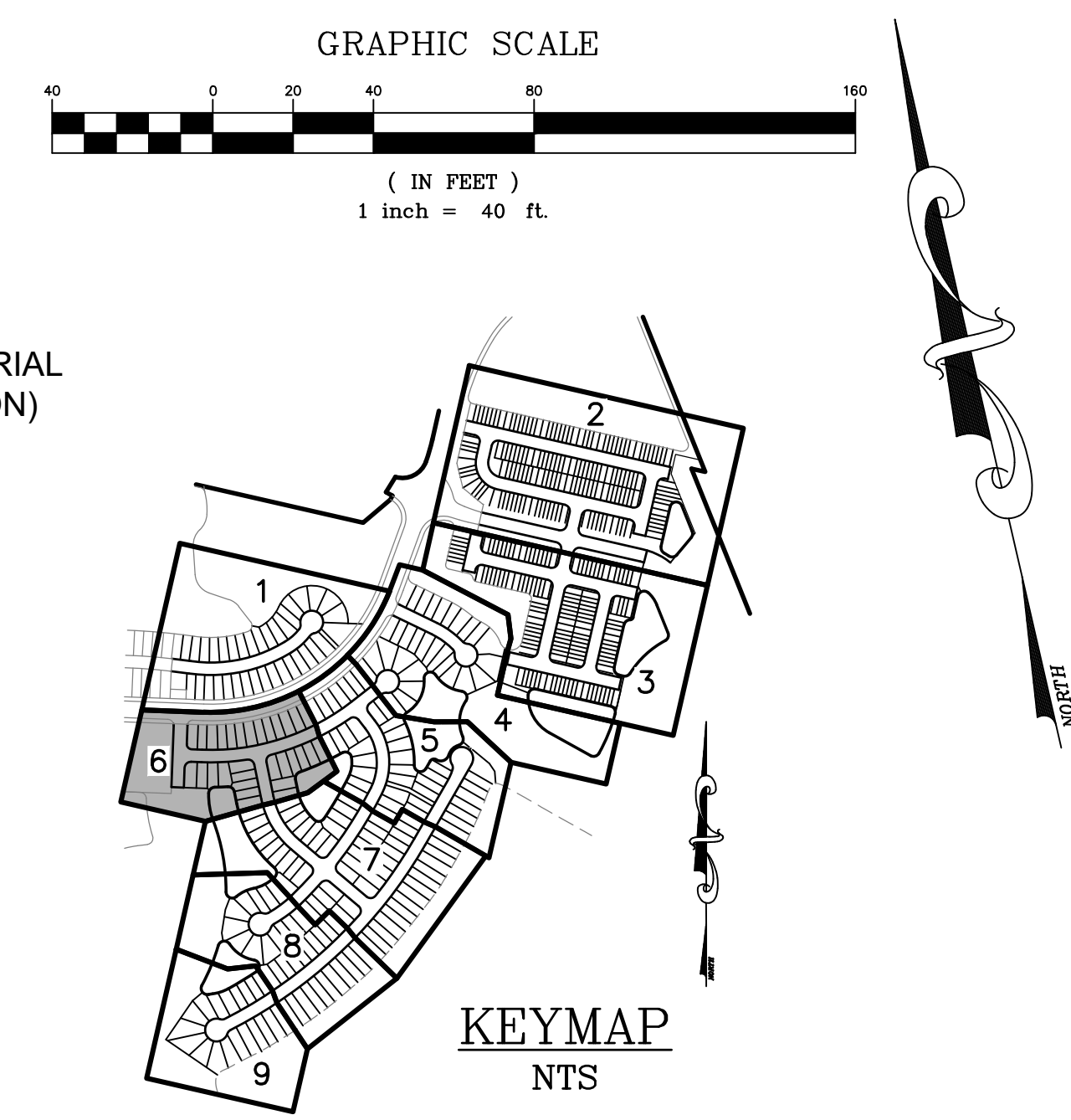
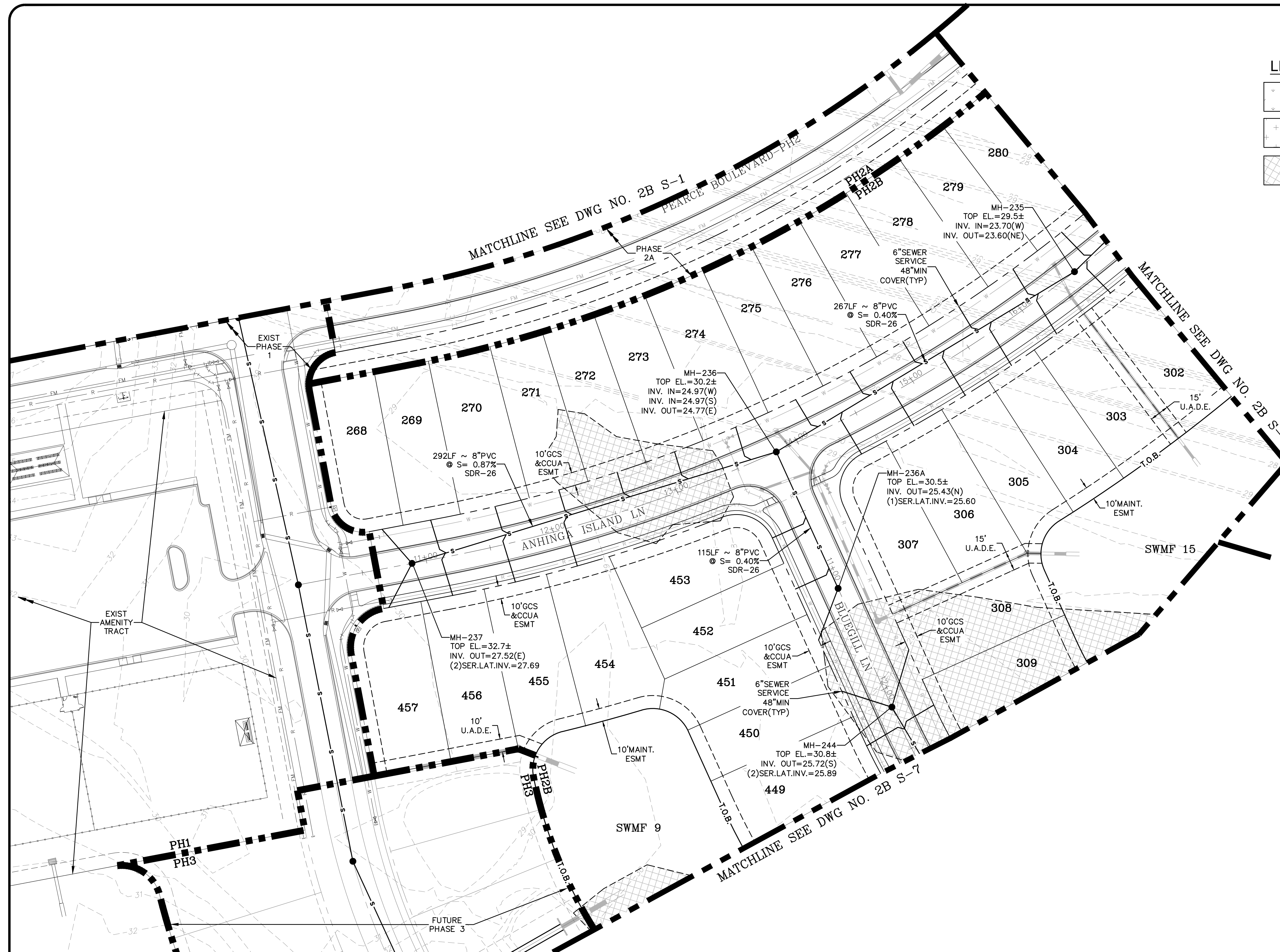


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 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. **88** of 130  
**2B S-5**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)





- LEGEND**
- = WETLANDS (FLAGGED)
  - = WETLANDS (AERIAL INTERPRETATION)
  - = WETLAND IMPACT

- UTILITY CROSSING LEGEND**
- (A) = CONSTRUCT MAIN 6" ABOVE (MIN)/12" ABOVE (PREFERRED) OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
  - (B) = CONSTRUCT MAIN 12" BELOW OUTSIDE WALL OF SEWER/STORM PIPE IN ACCORDANCE W/CCUA
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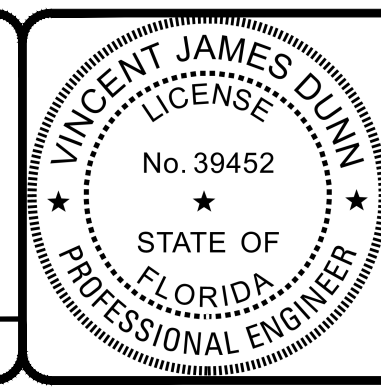
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NO.	DESCRIPTION

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 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 2B SEWER PLAN



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 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 89 of 130  
**2B S-6**  
 DWG. NO.

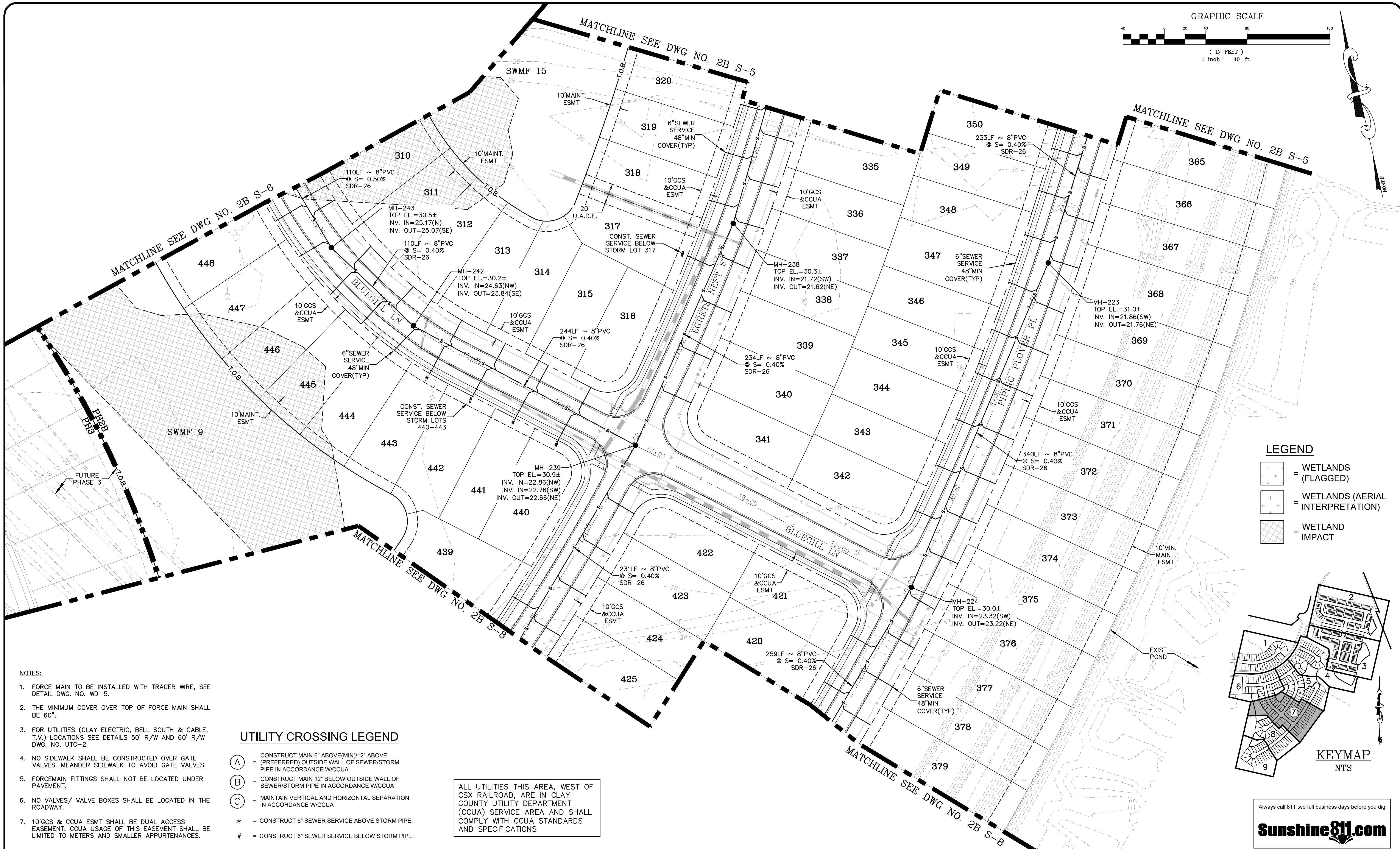
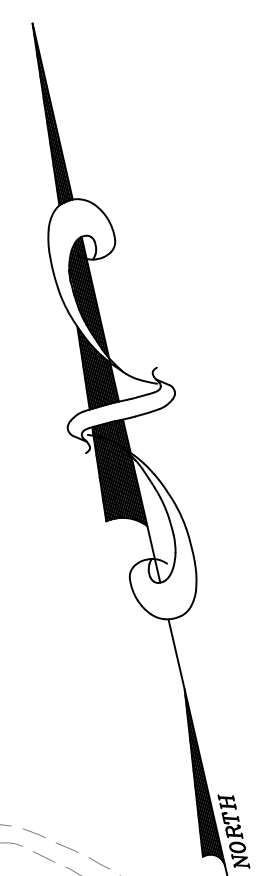
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THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)

GRAPHIC SCALE

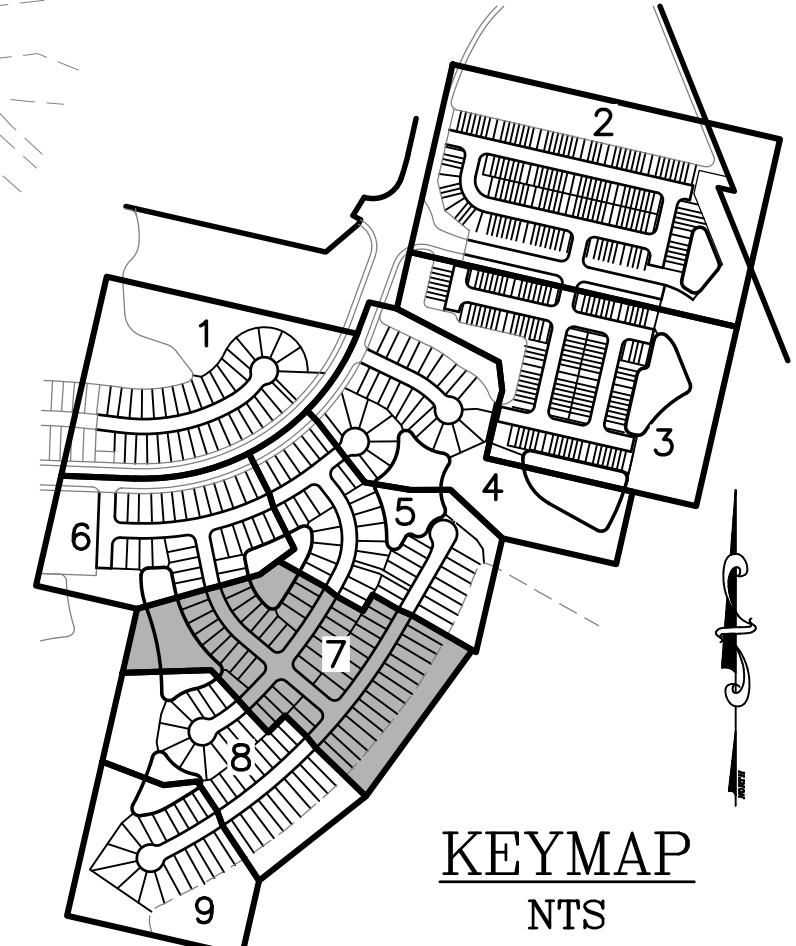


( IN FEET )  
1 inch = 40 ft.



**LEGEND**

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
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KEYMAP  
NTS

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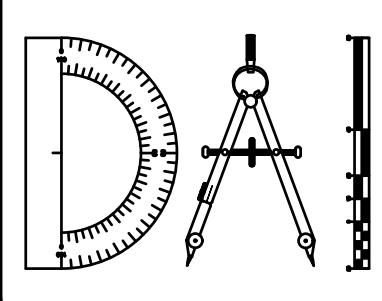
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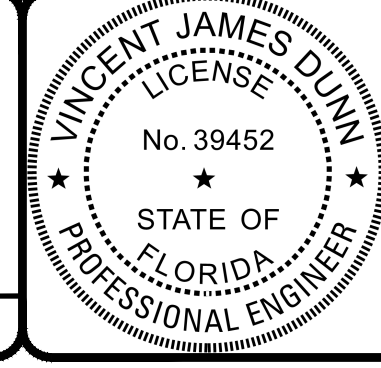
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 CLAY COUNTY, FLORIDA  
 2B SEWER PLAN

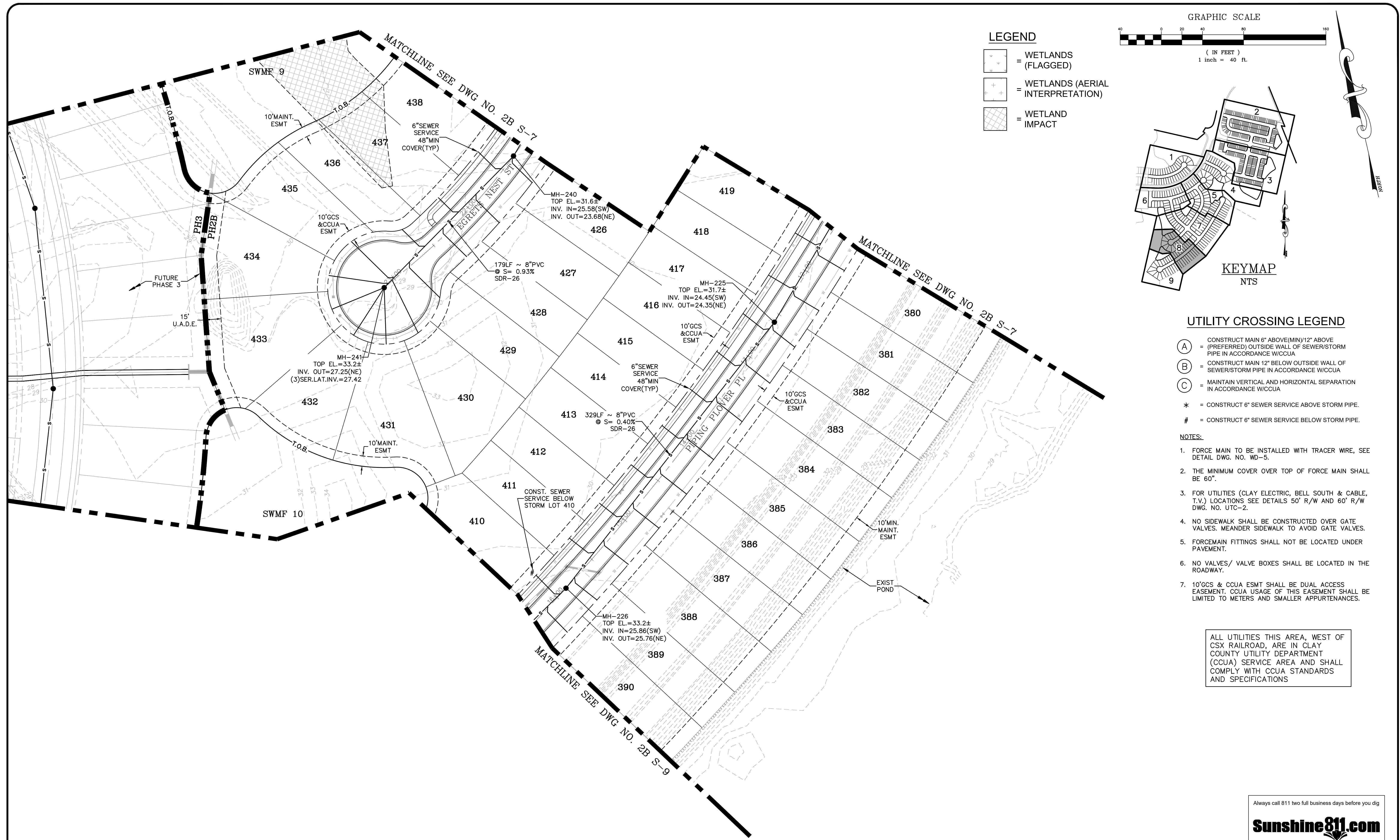


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 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 90 of 130  
**2B S-7**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



**LEGEND**

- = WETLANDS (FLAGGED)
- = WETLANDS (AERIAL INTERPRETATION)
- = WETLAND IMPACT

GRAPHIC SCALE  
( IN FEET )  
1 inch = 40 ft.

**KEYMAP**  
NTS

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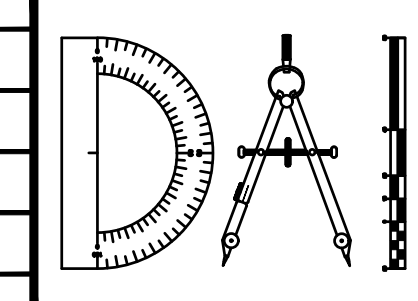
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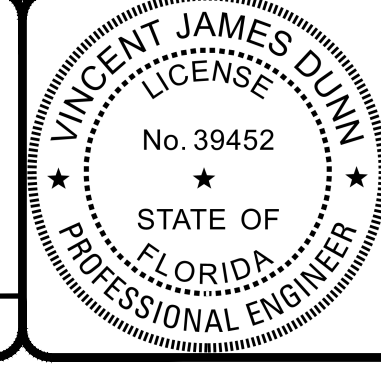
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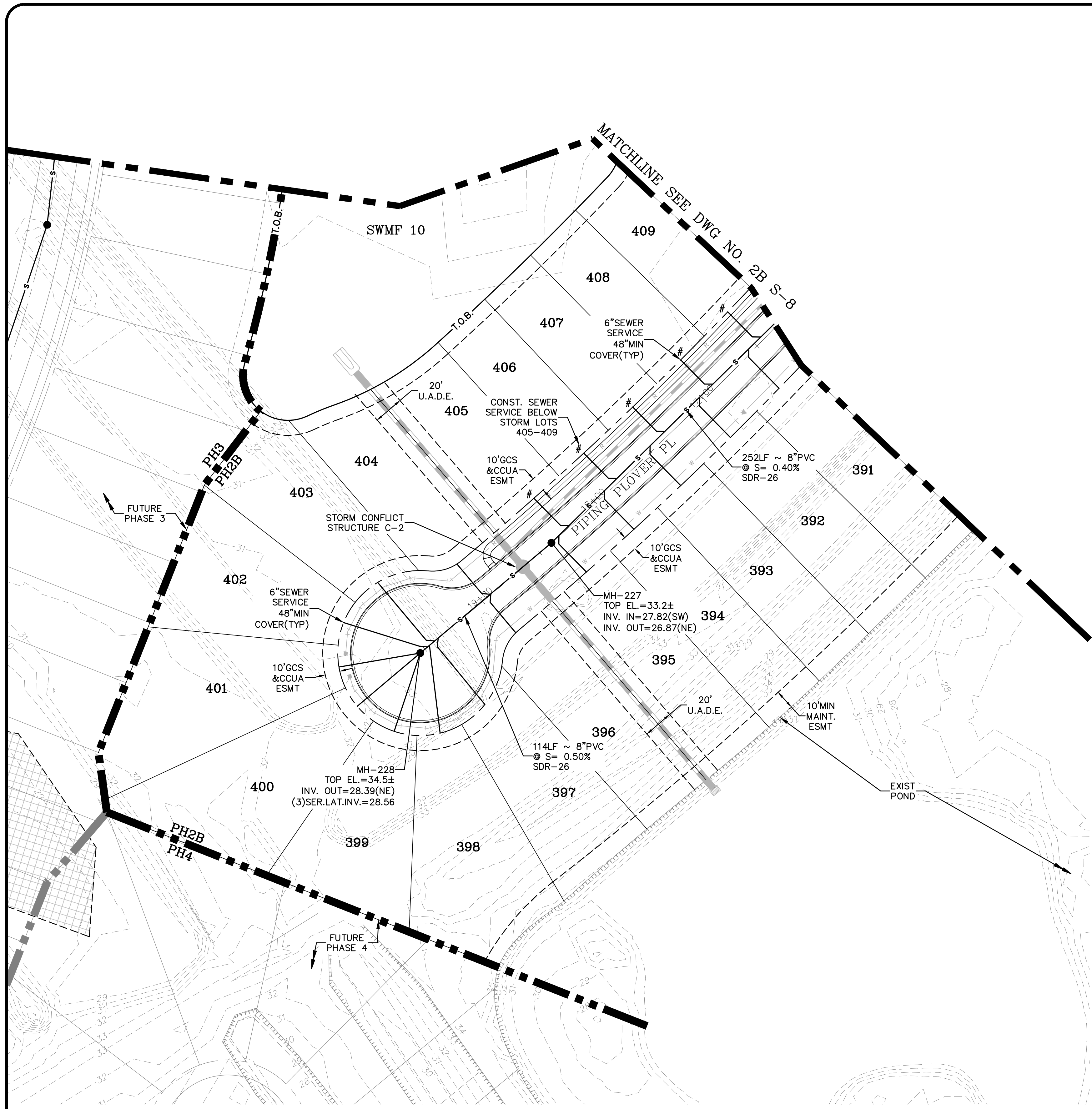
**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
CLAY COUNTY, FLORIDA  
2B SEWER PLAN



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GLEN R. WIEGER ENGINEER NO. 81419

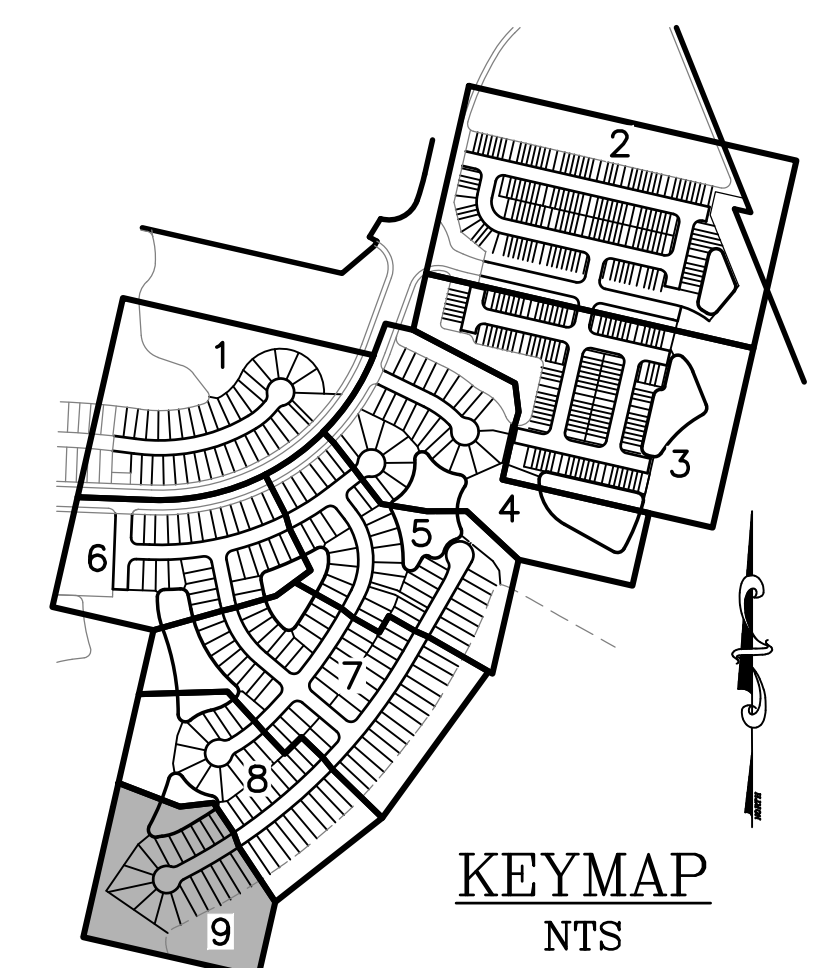
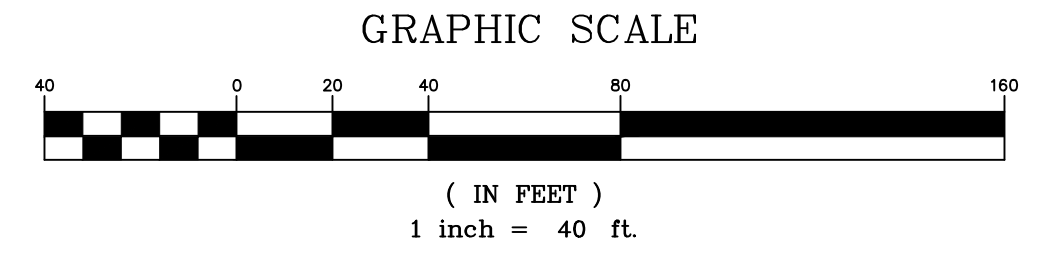
Sheet No. 91 of 130  
**2B S-8**  
DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



**LEGEND**

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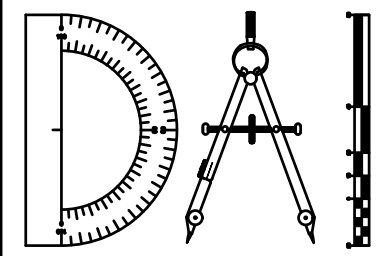
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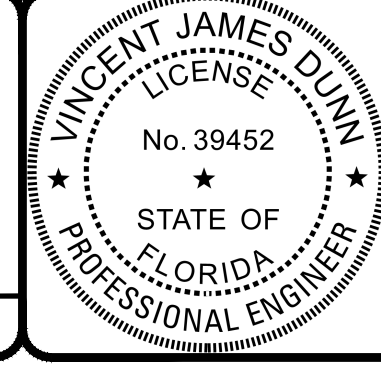
REVISIONS		
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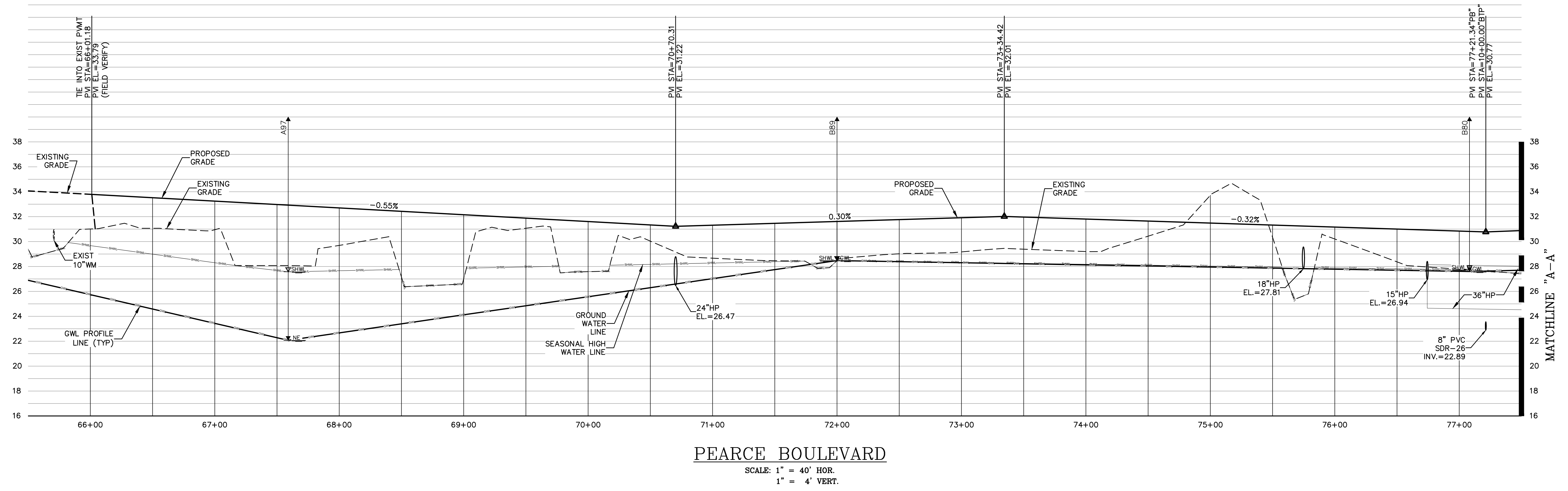
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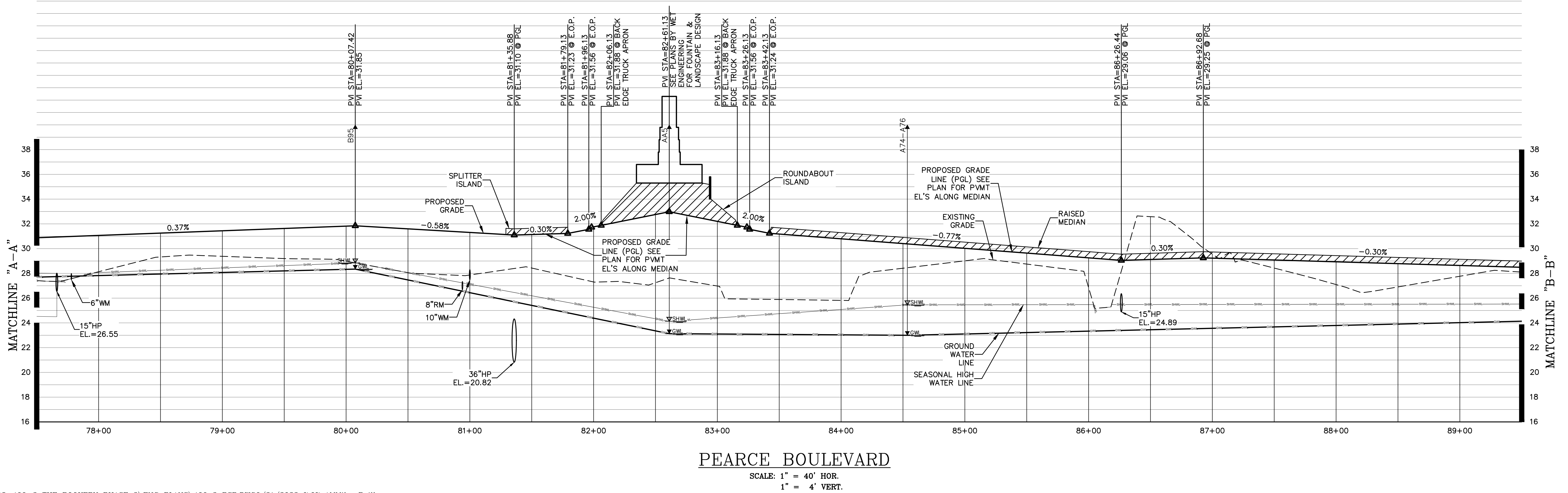
Sheet No. 92 of 130  
**2B S-9**  
 DWG. NO.

THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



**PEARCE BOULEVARD**

SCALE: 1" = 40' HOR.  
1" = 4' VERT.



**PEARCE BOULEVARD**

SCALE: 1" = 40' HOR.  
1" = 4' VERT.

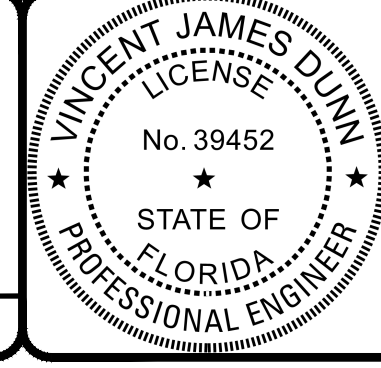
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NO.	DATE	DESCRIPTION

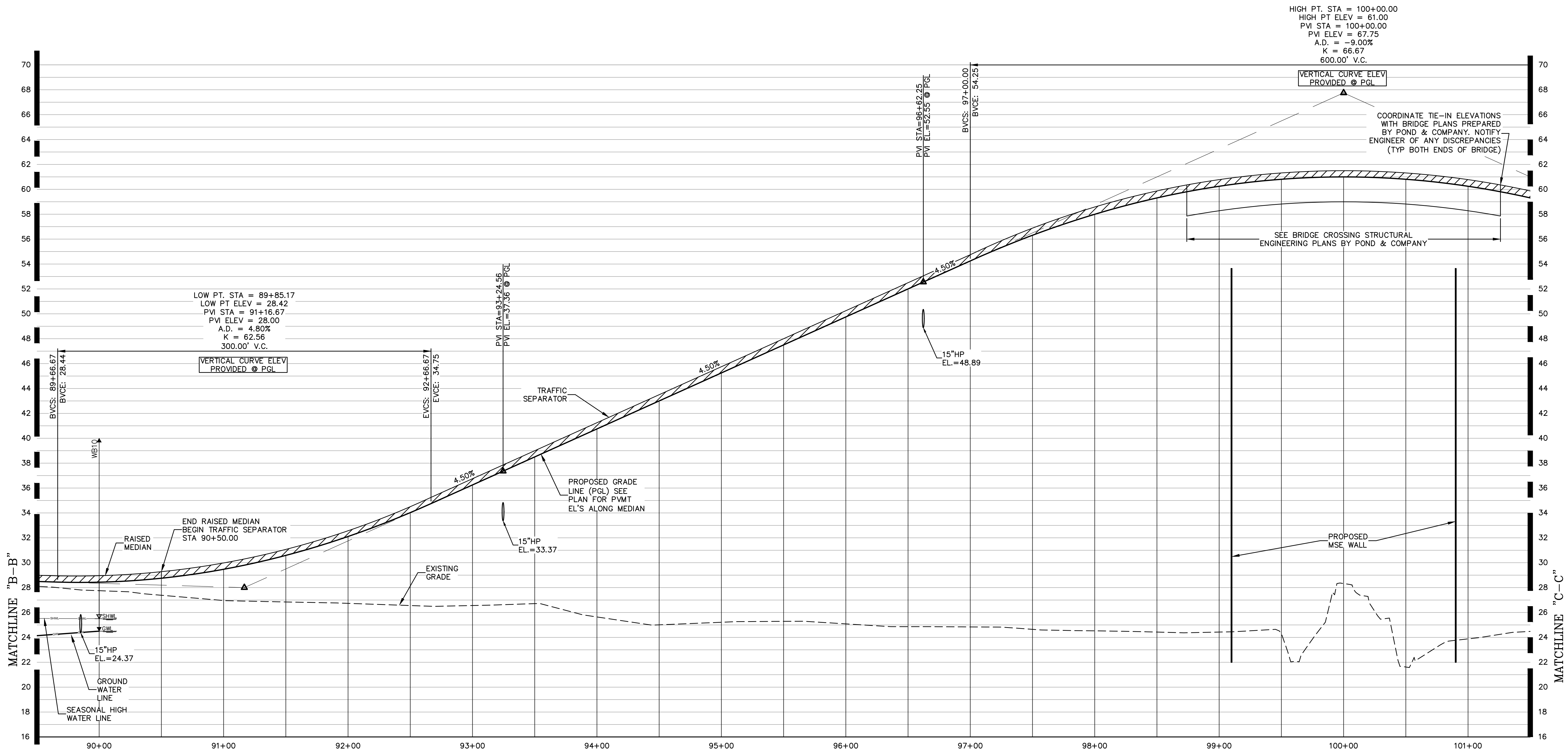
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 ROADWAY AND SEWER PROFILES



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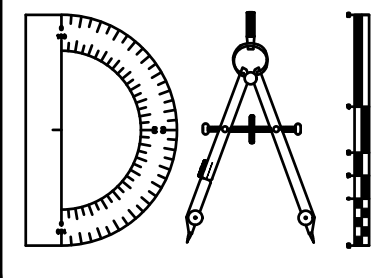
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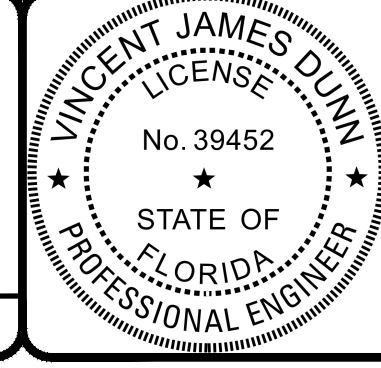
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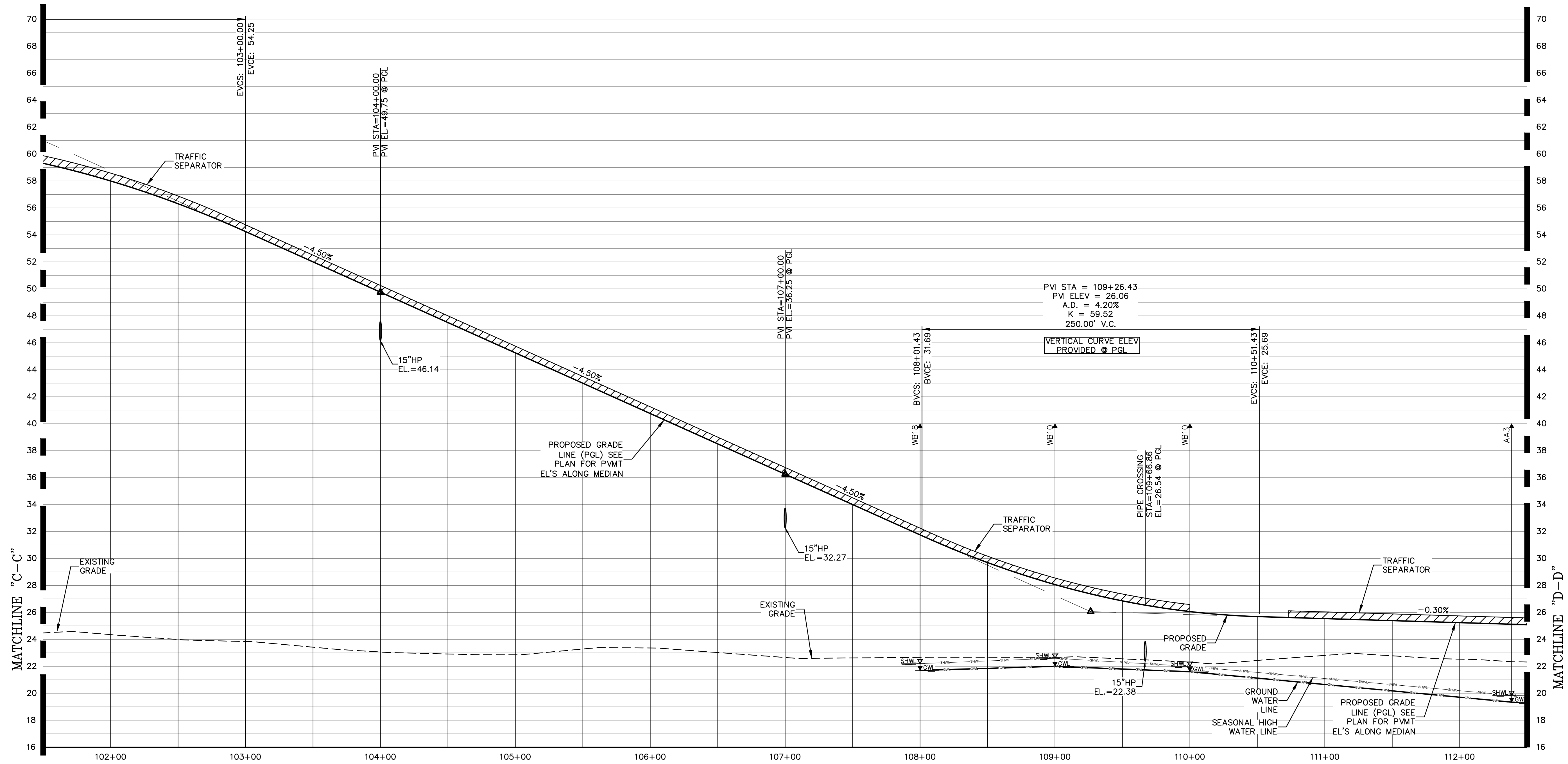
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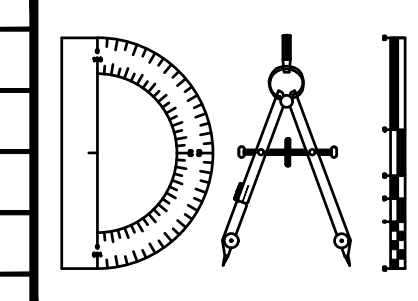
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 DWG. NO.



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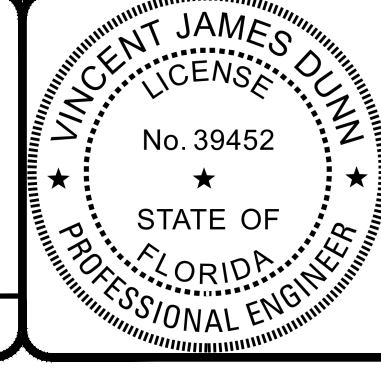
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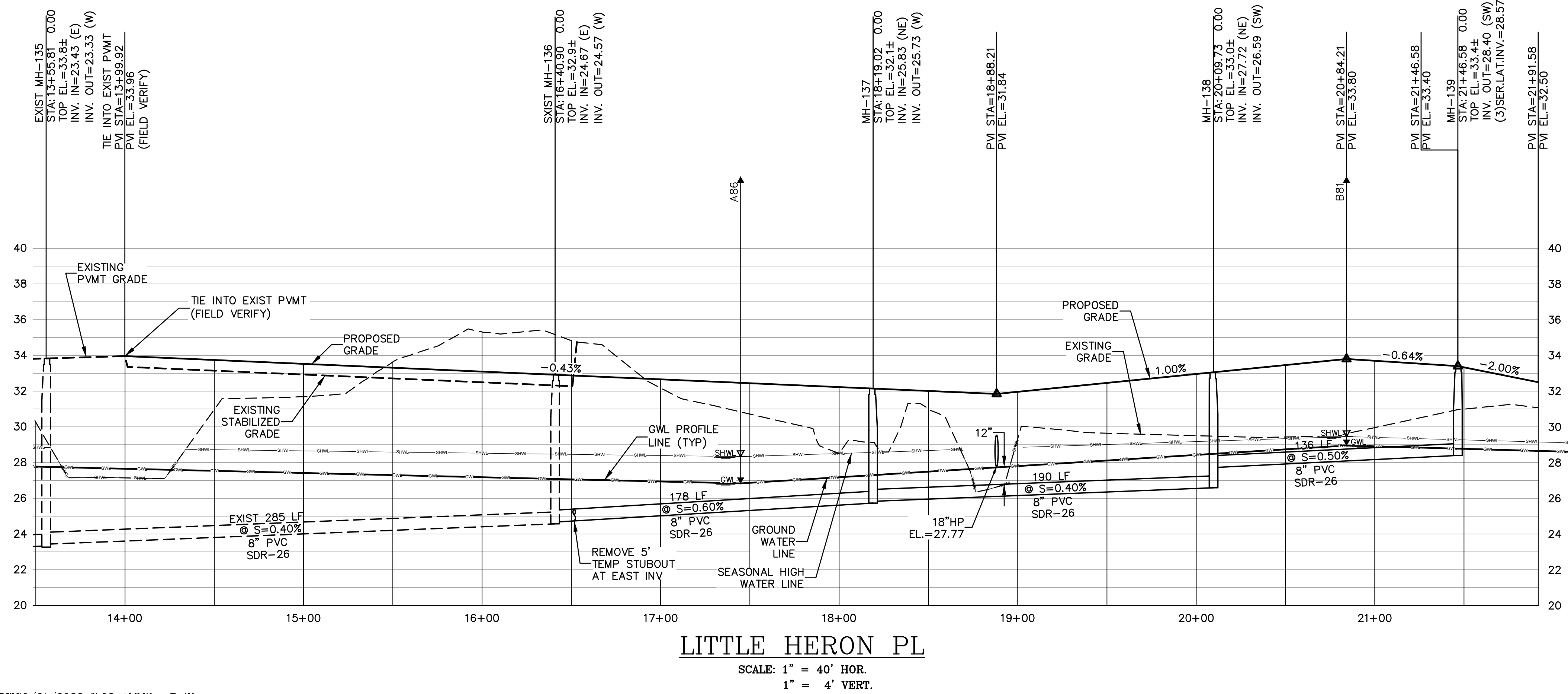
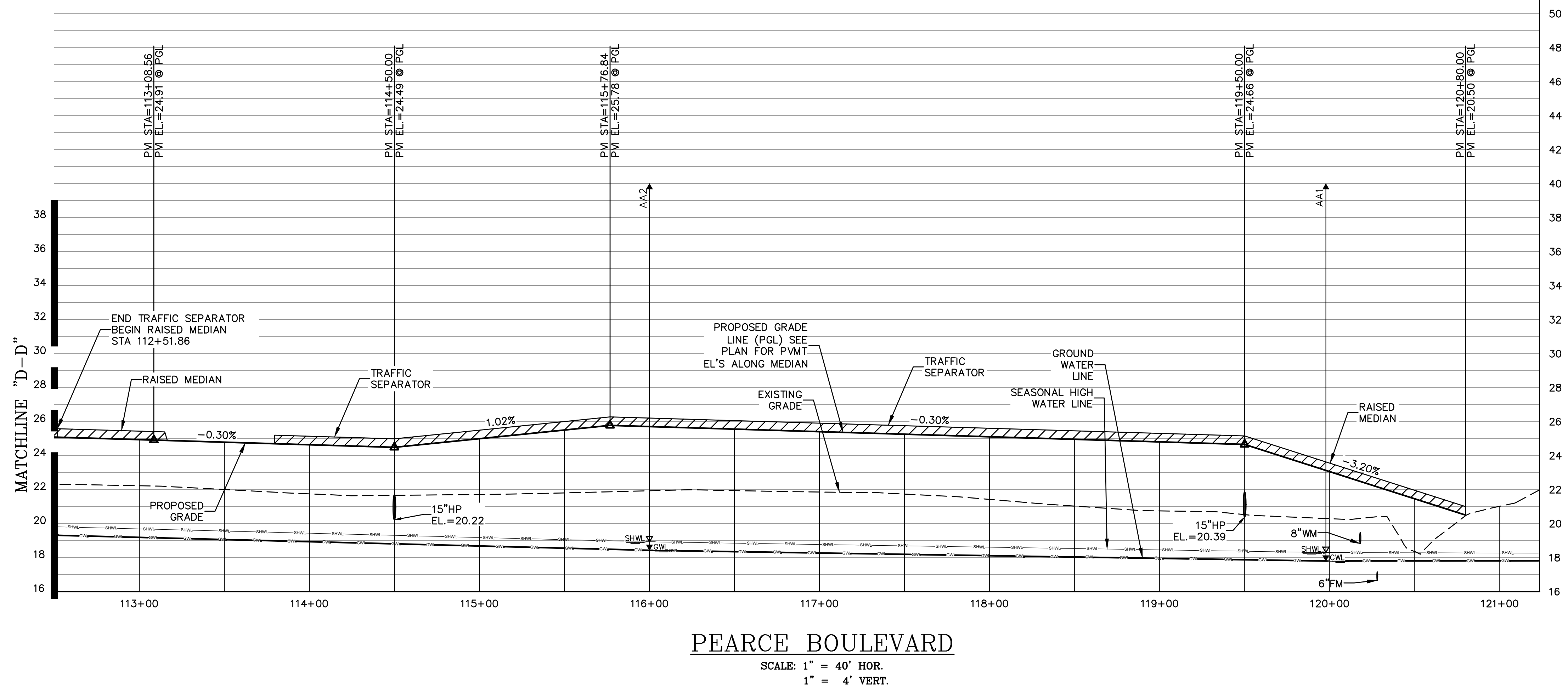
**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 ROADWAY AND SEWER PROFILES



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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

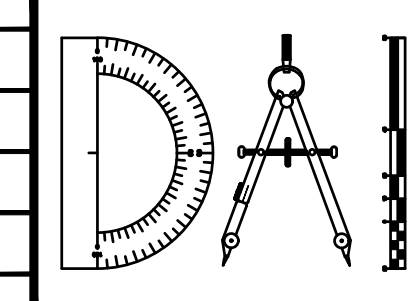
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**RSP-3**  
 DWG. NO.



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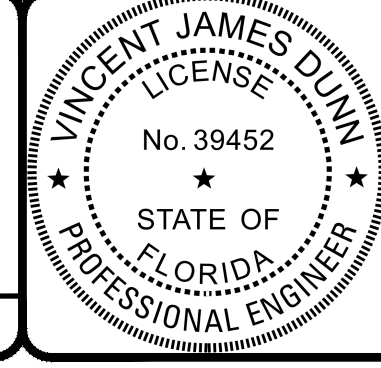
REVISIONS	
NO.	DESCRIPTION

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: AS NOTED  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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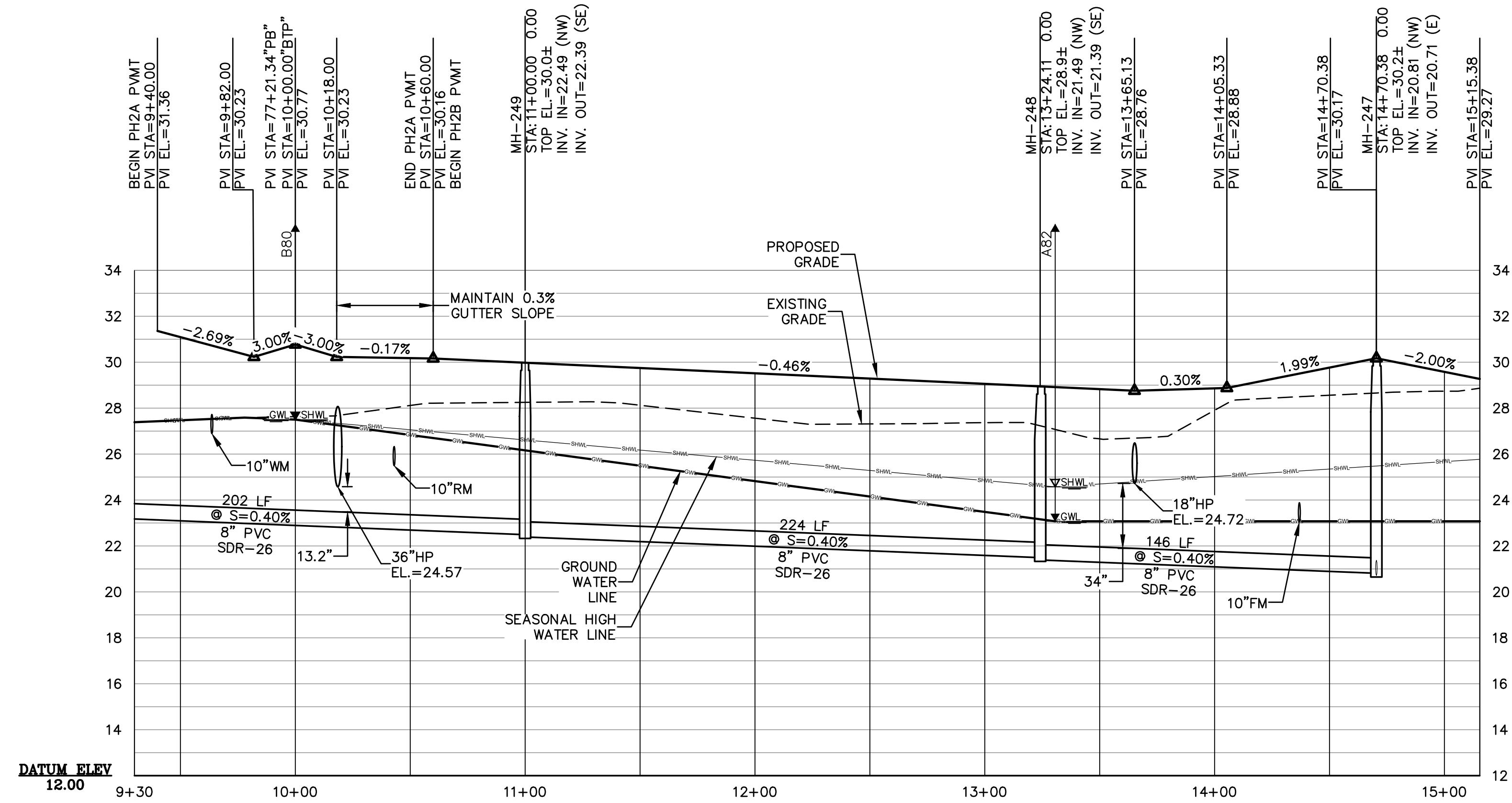
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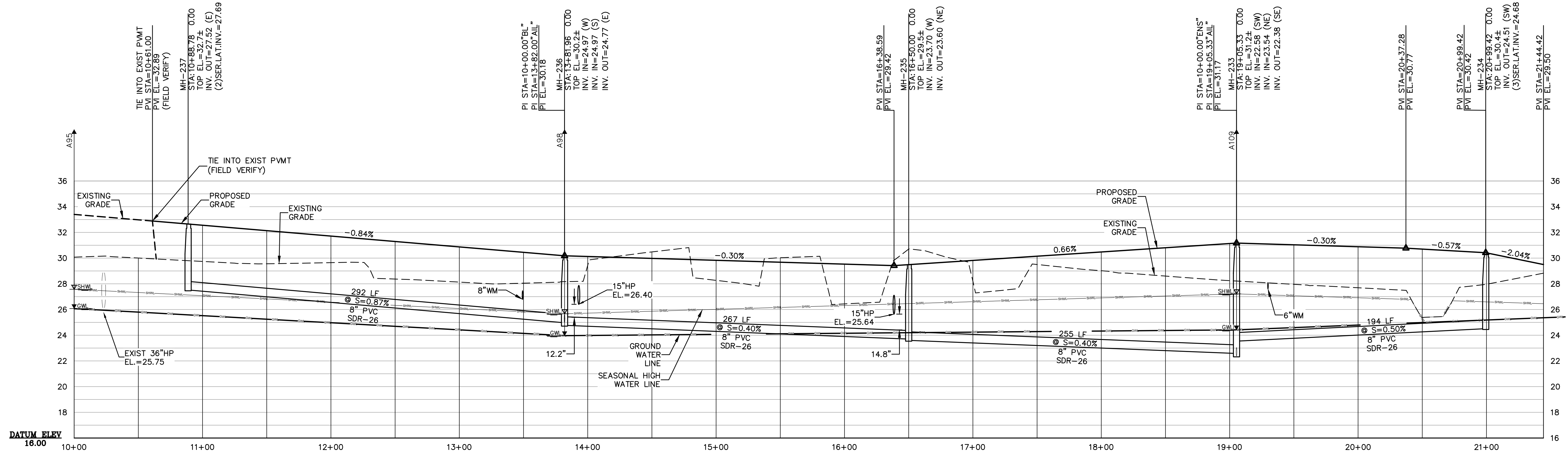
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**RSP-4**  
 DWG. NO.





**BANYON TREE PT**

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1" = 4' VERT.



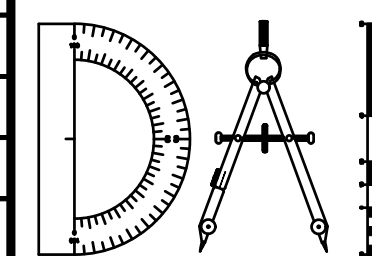
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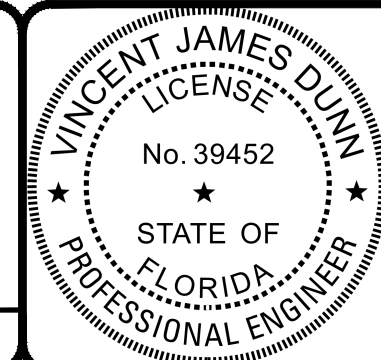
REVISIONS		BY:
NO.	DATE	DESCRIPTION

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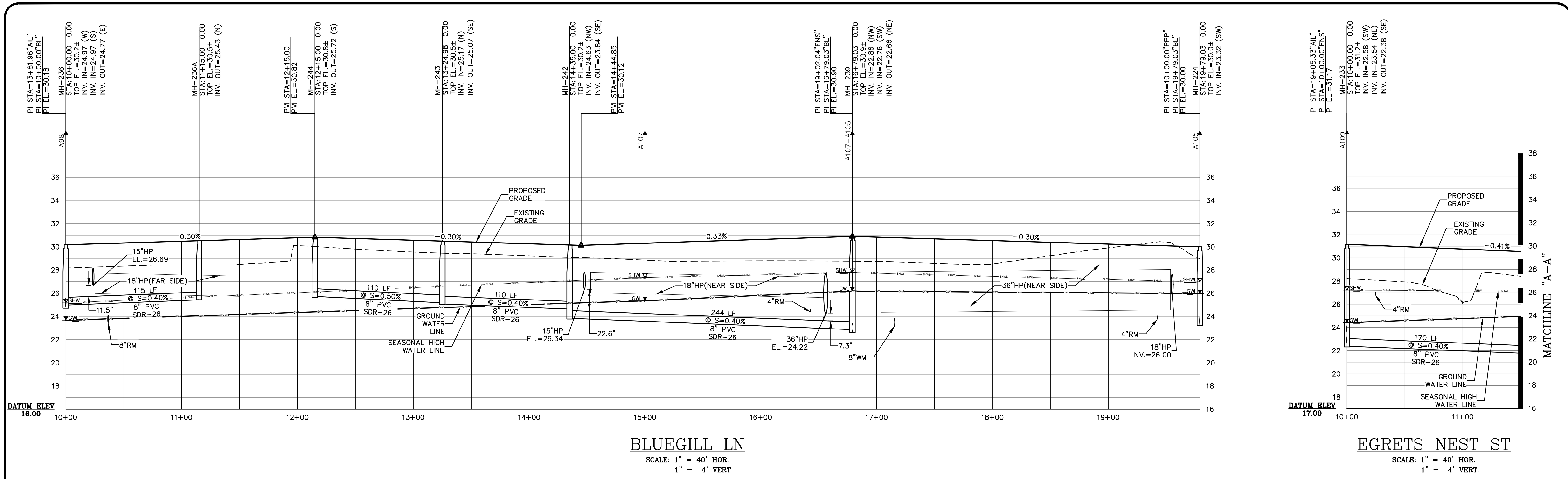
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Sheet No. 97 of 130  
**RSP-5**  
 DWG. NO.

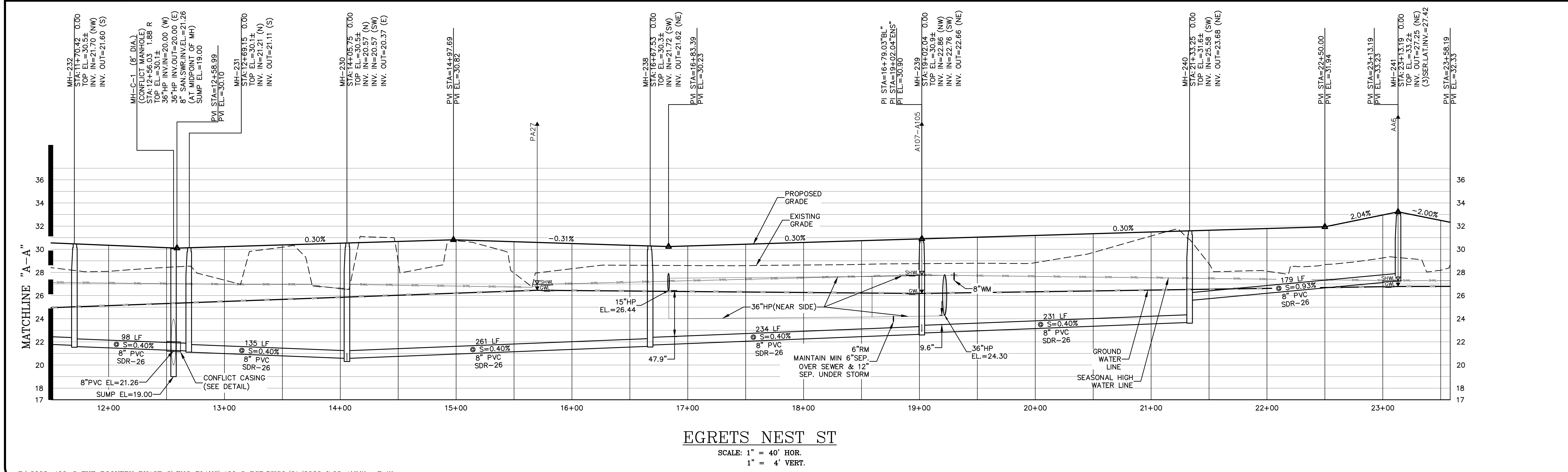


**BLUEGILL LN**

SCALE: 1" = 40' HOR.  
1" = 4' VERT.

**EGRETS NEST ST**

SCALE: 1" = 40' HOR.  
1" = 4' VERT.



**EGRETS NEST ST**

SCALE: 1" = 40' HOR.  
1" = 4' VERT.

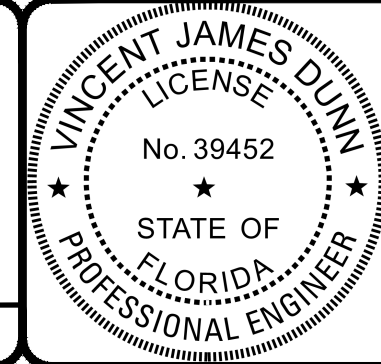
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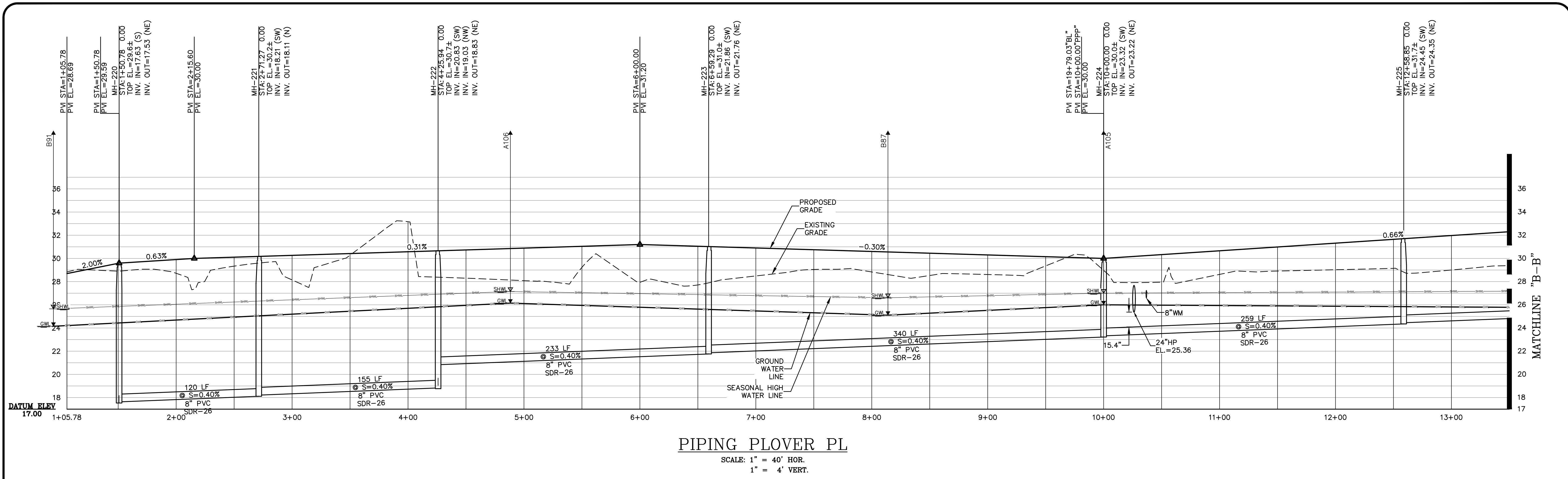
VINCENT J. DUNN  
 ENGINEER NO. 39452

DAVID M. TAYLOR  
 ENGINEER NO. 44184

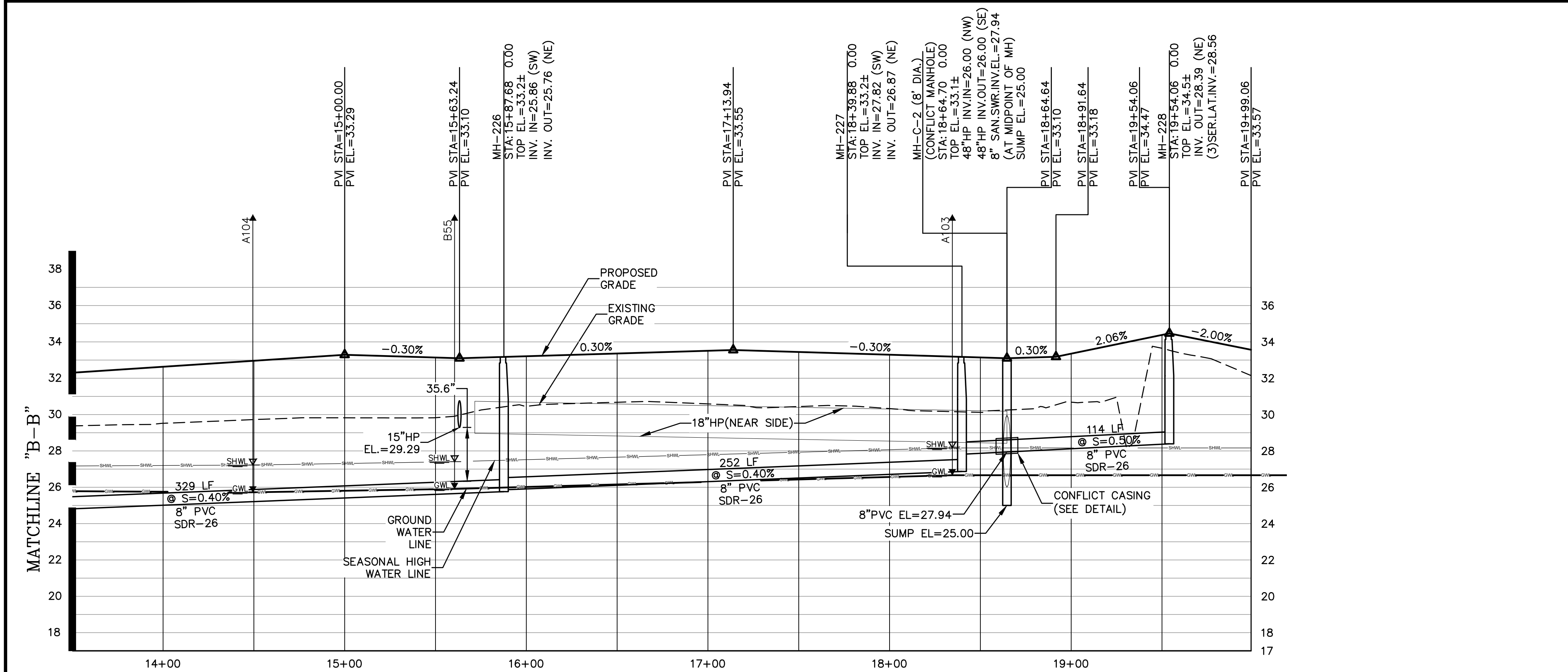
GLEN R. WIEGER  
 ENGINEER NO. 81412

Sheet No. **98** of 130  
**RSP-6**  
 DWG. NO.

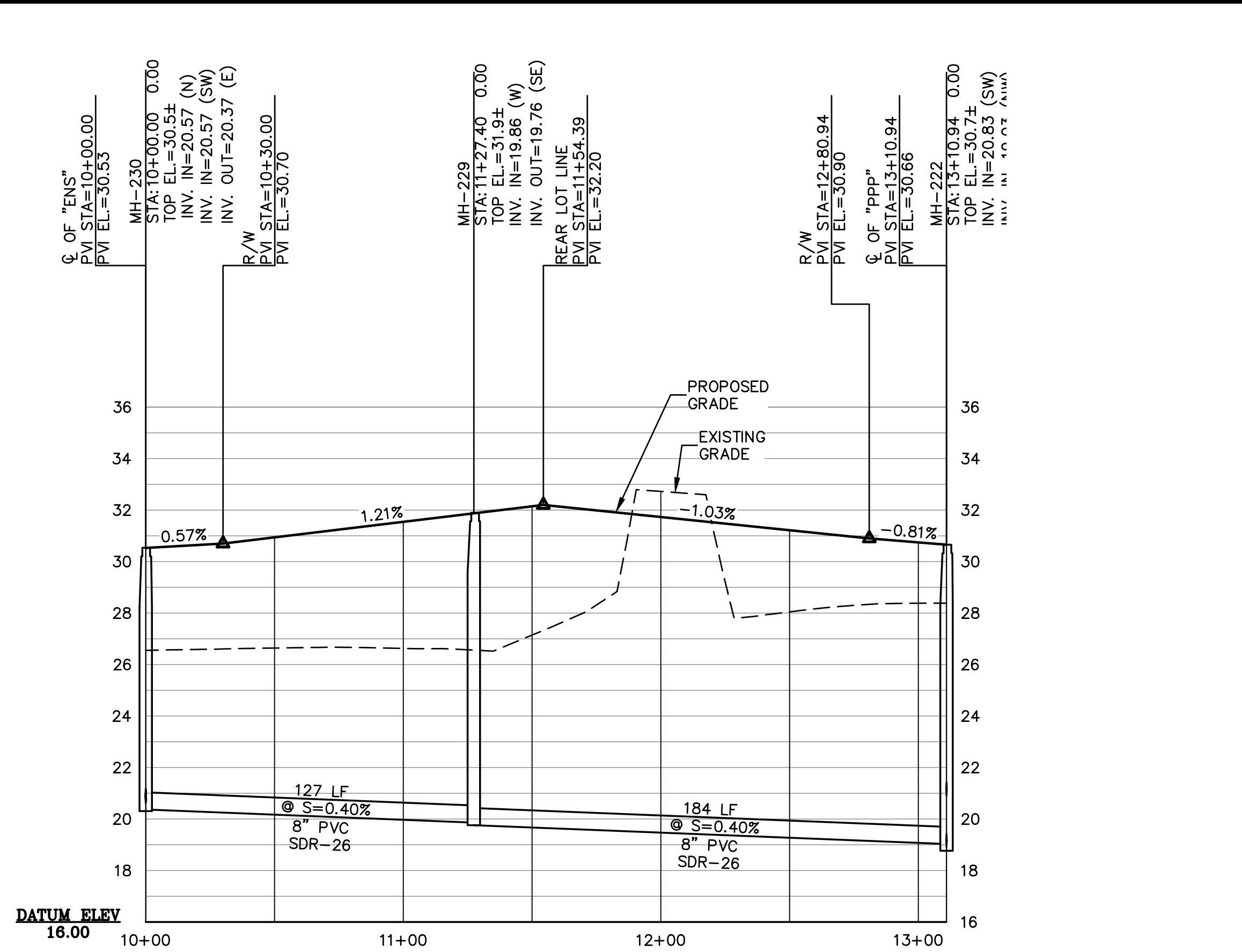
THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)



PIPING PLOVER PL  
 SCALE: 1" = 40' HOR.  
 1" = 4' VERT.



PIPING PLOVER PL  
 SCALE: 1" = 40' HOR.  
 1" = 4' VERT.



MH230 - MH222  
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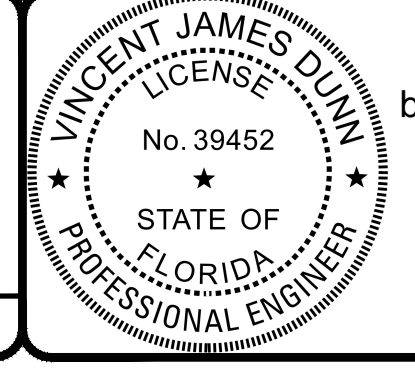
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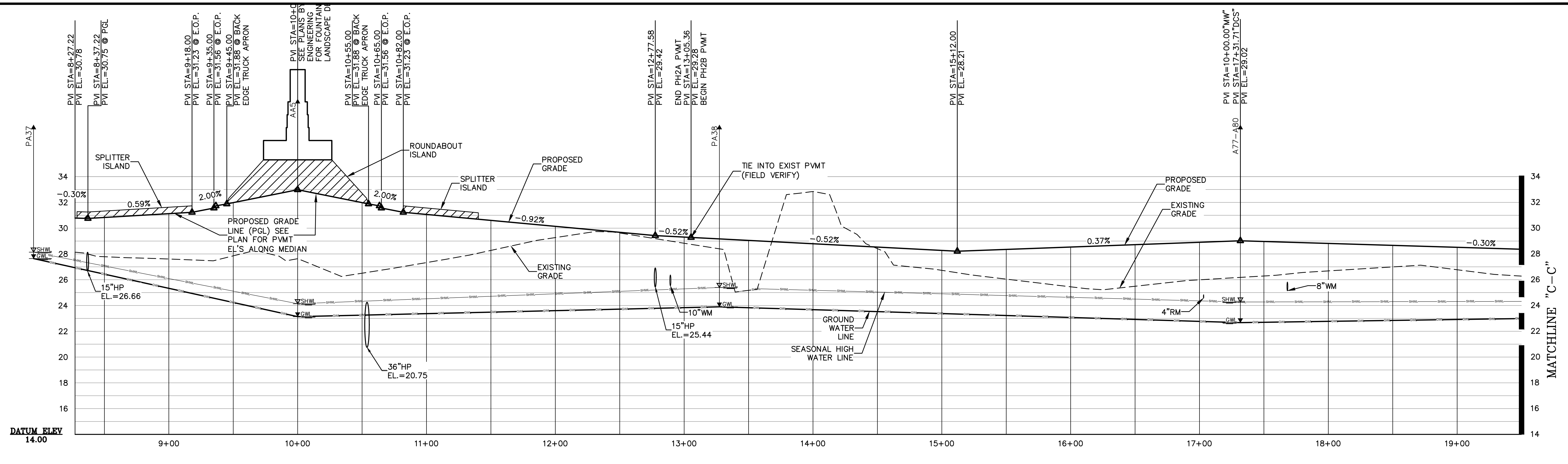
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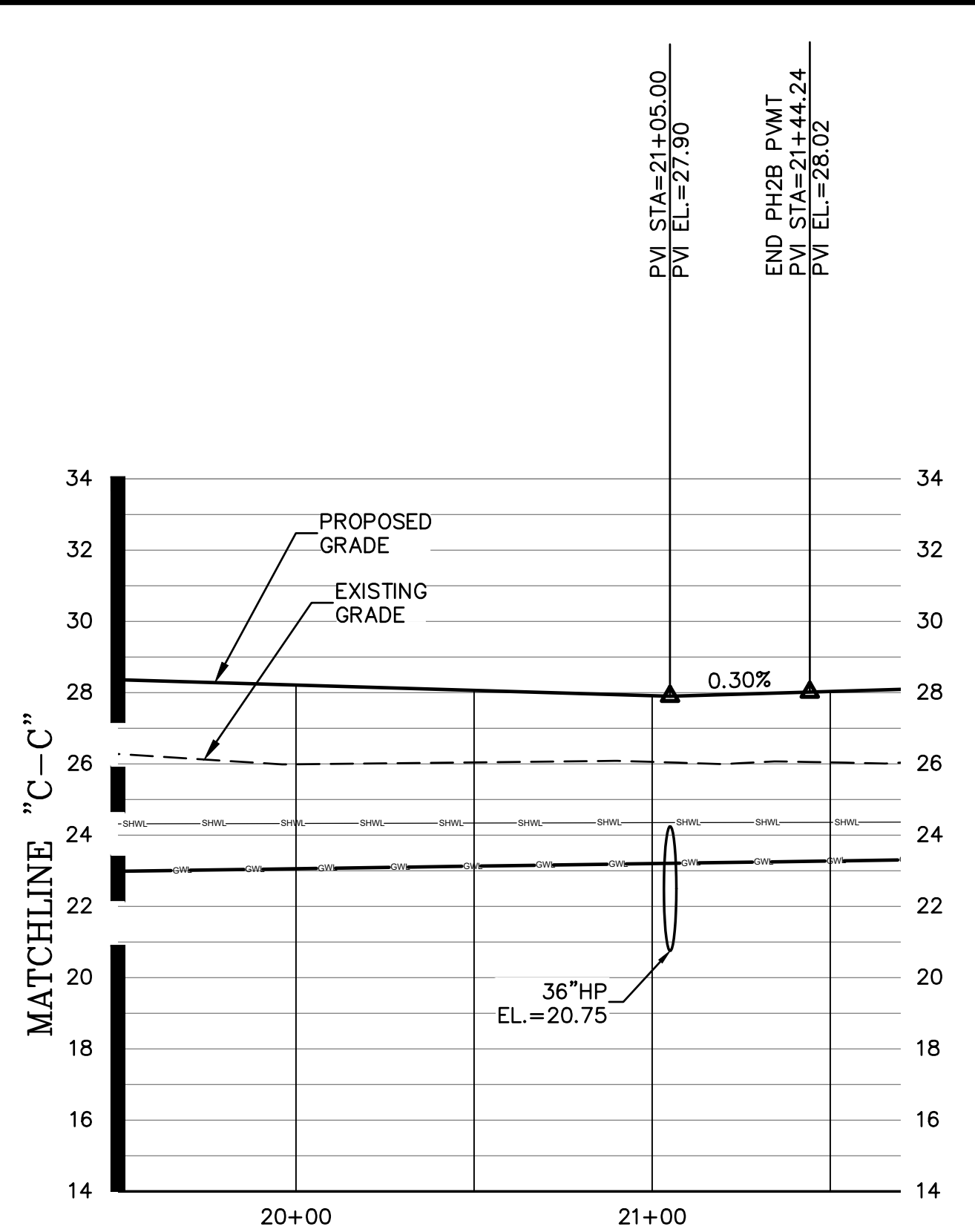


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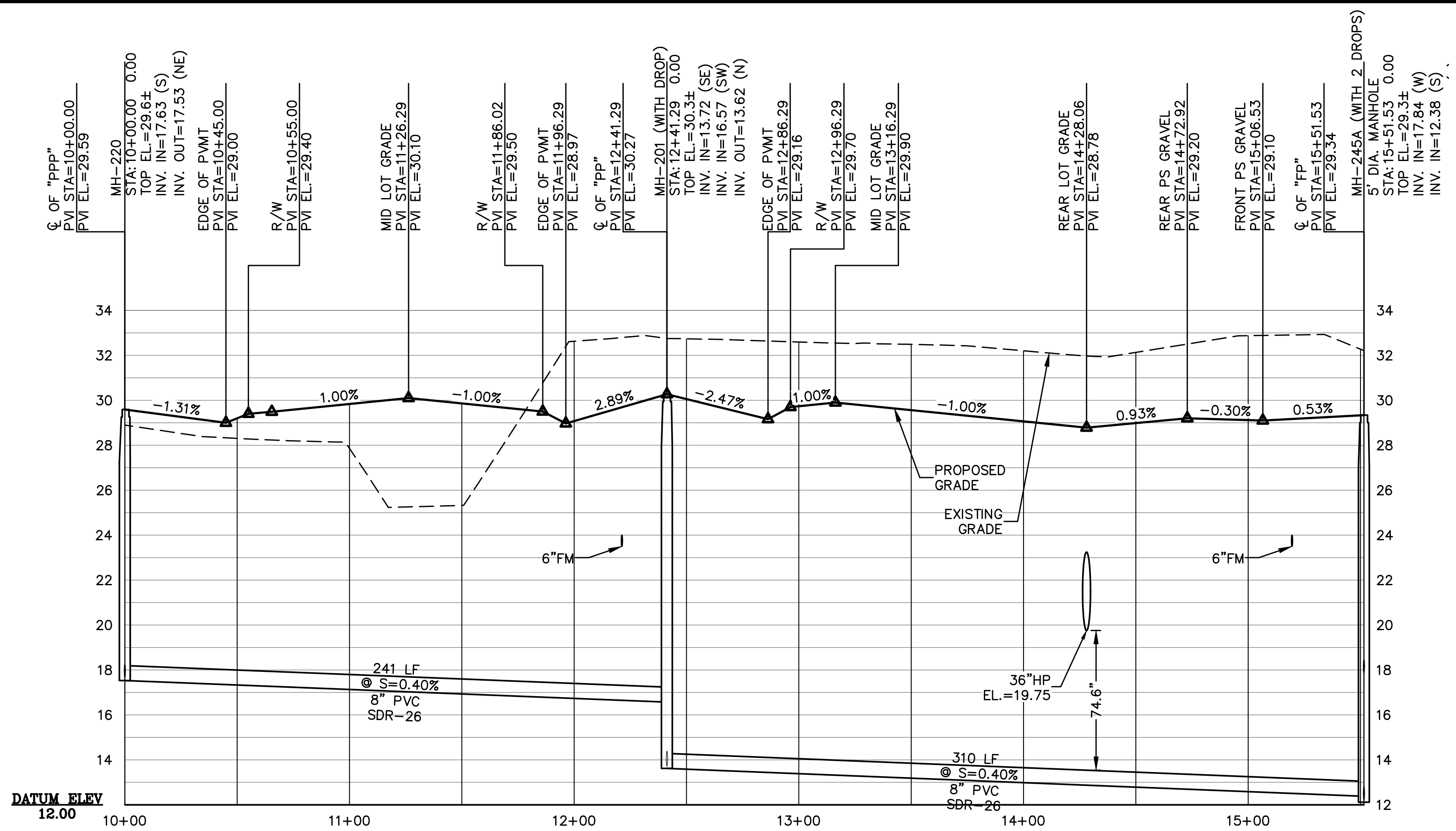
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**DARTER CHASE ST**  
 SCALE: 1" = 40' HOR.  
 1" = 4' VERT.



**DARTER CHASE ST**  
 SCALE: 1" = 40' HOR.  
 1" = 4' VERT.

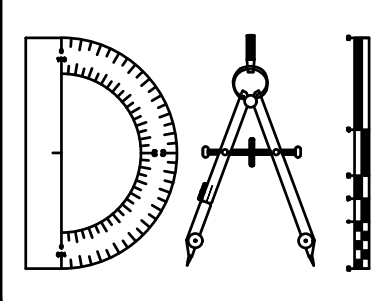


**MH220-MH201-MH245A**  
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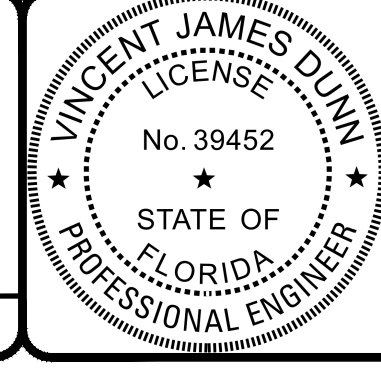
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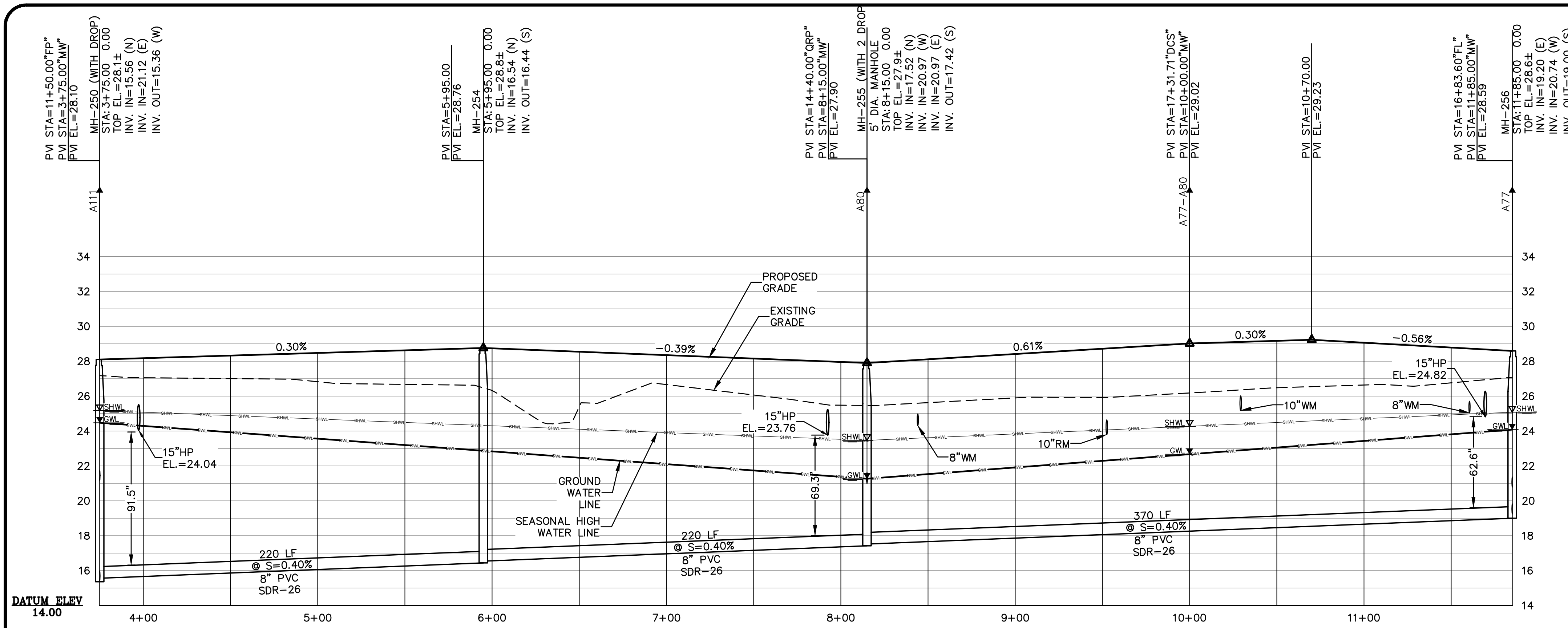
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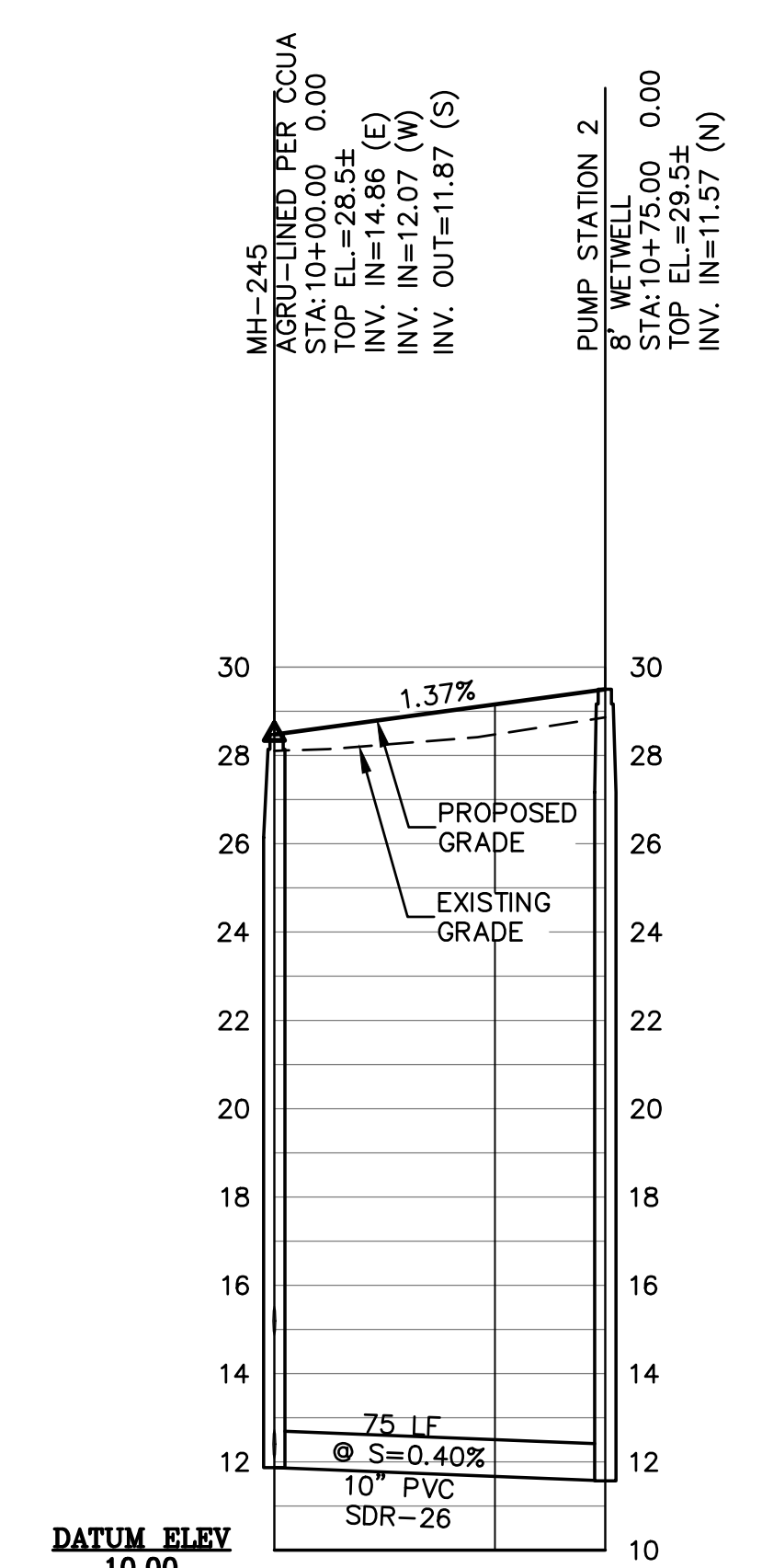


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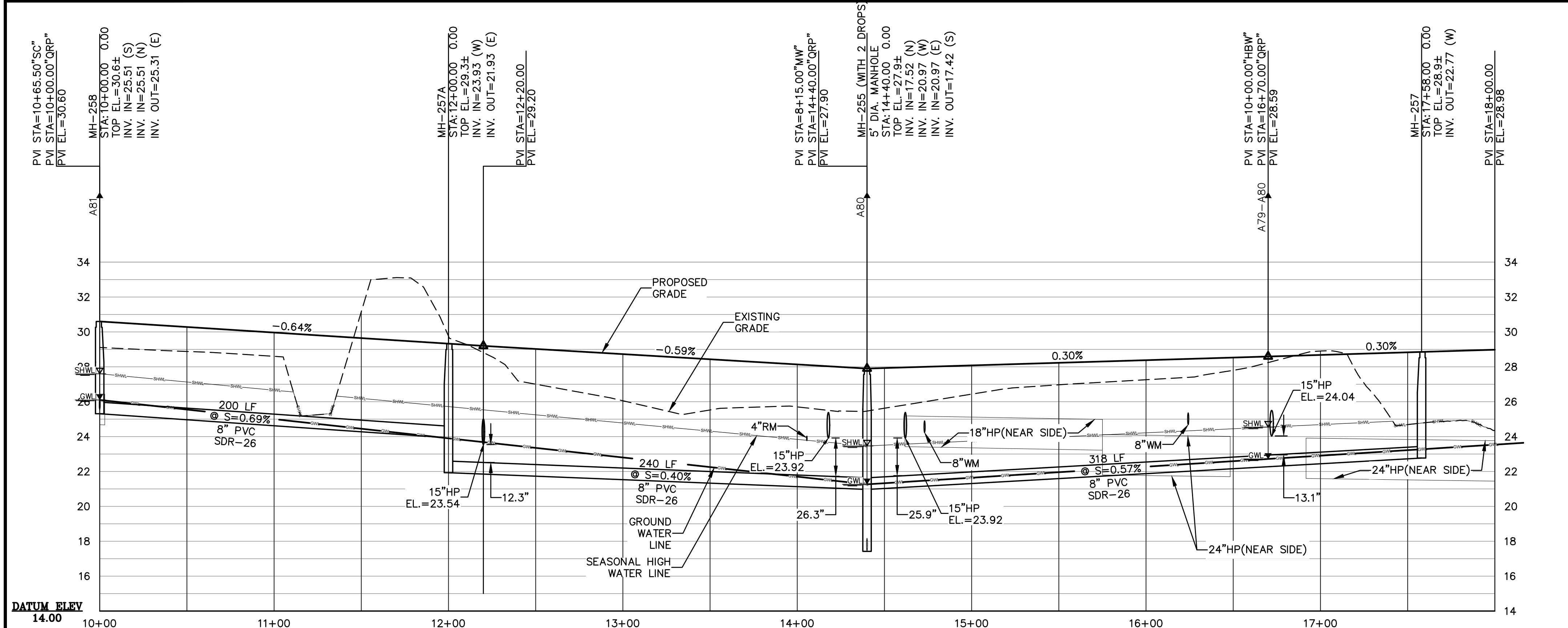
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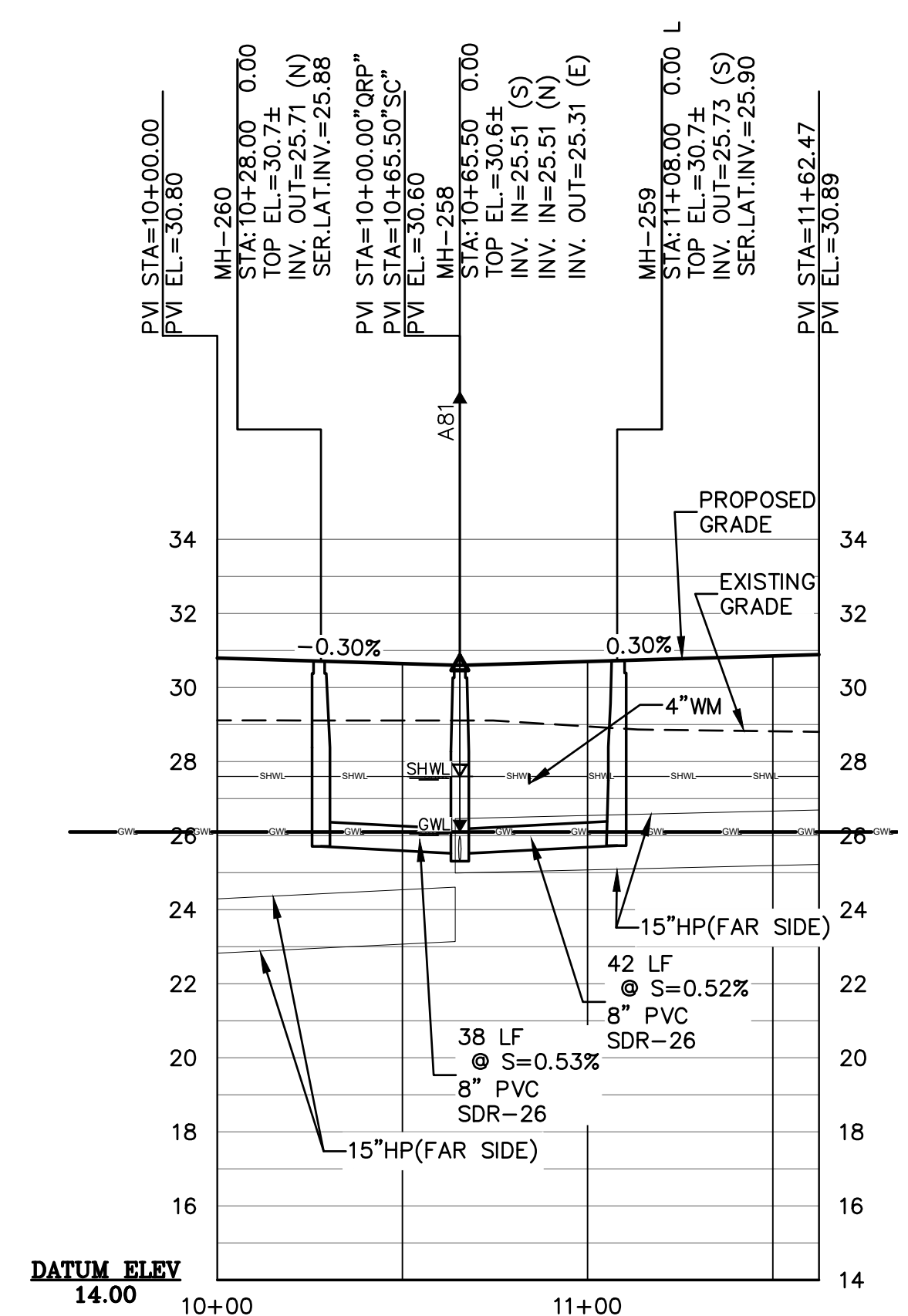
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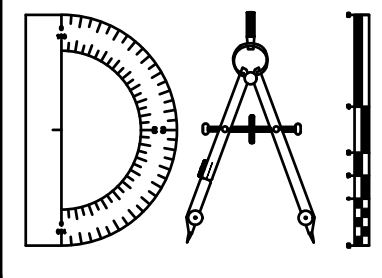


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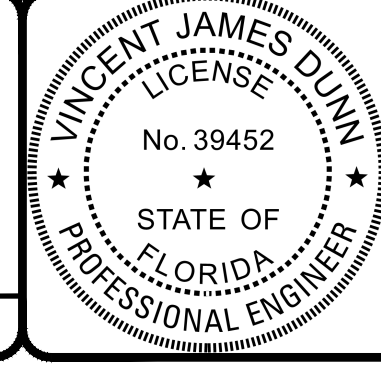
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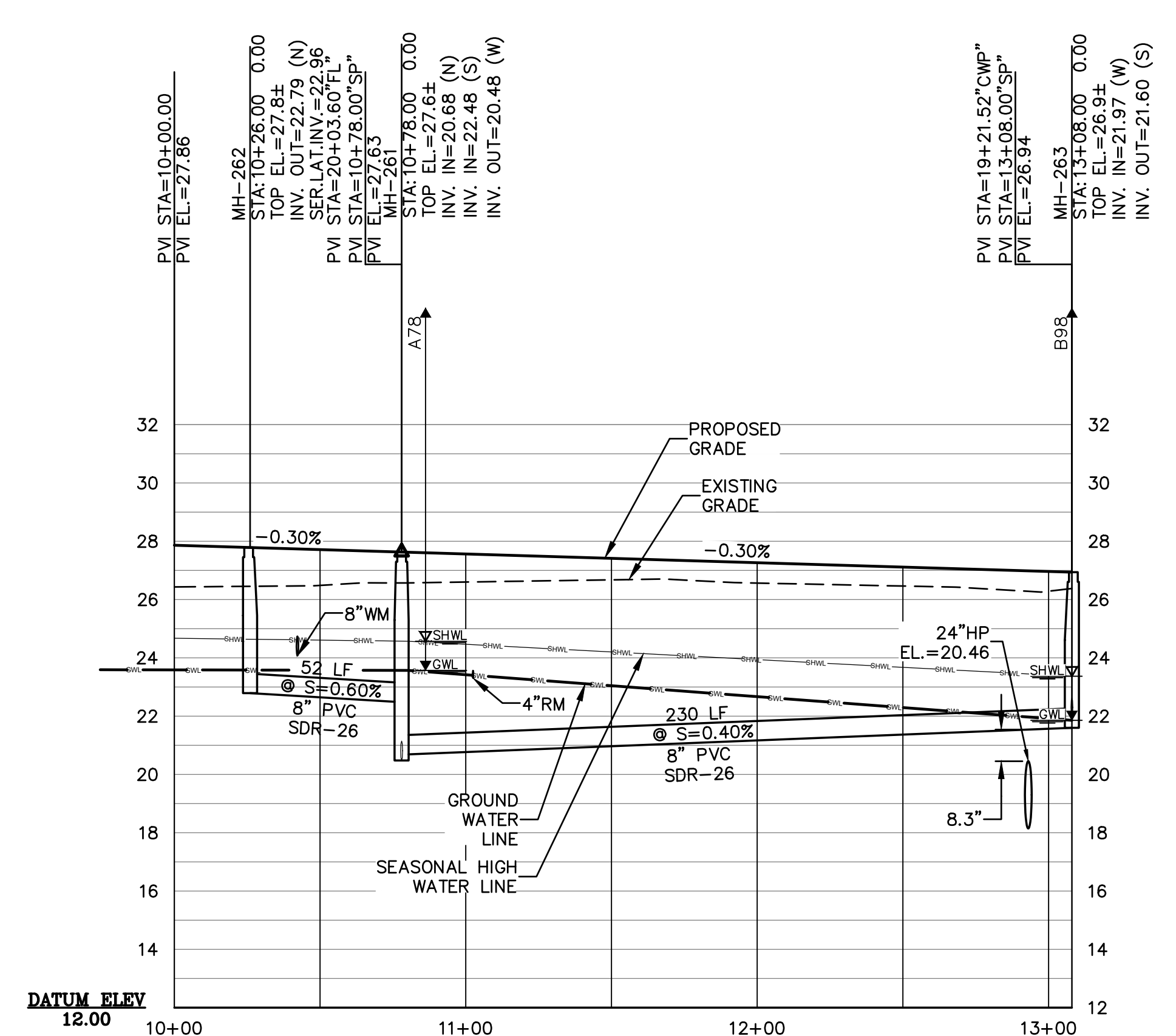
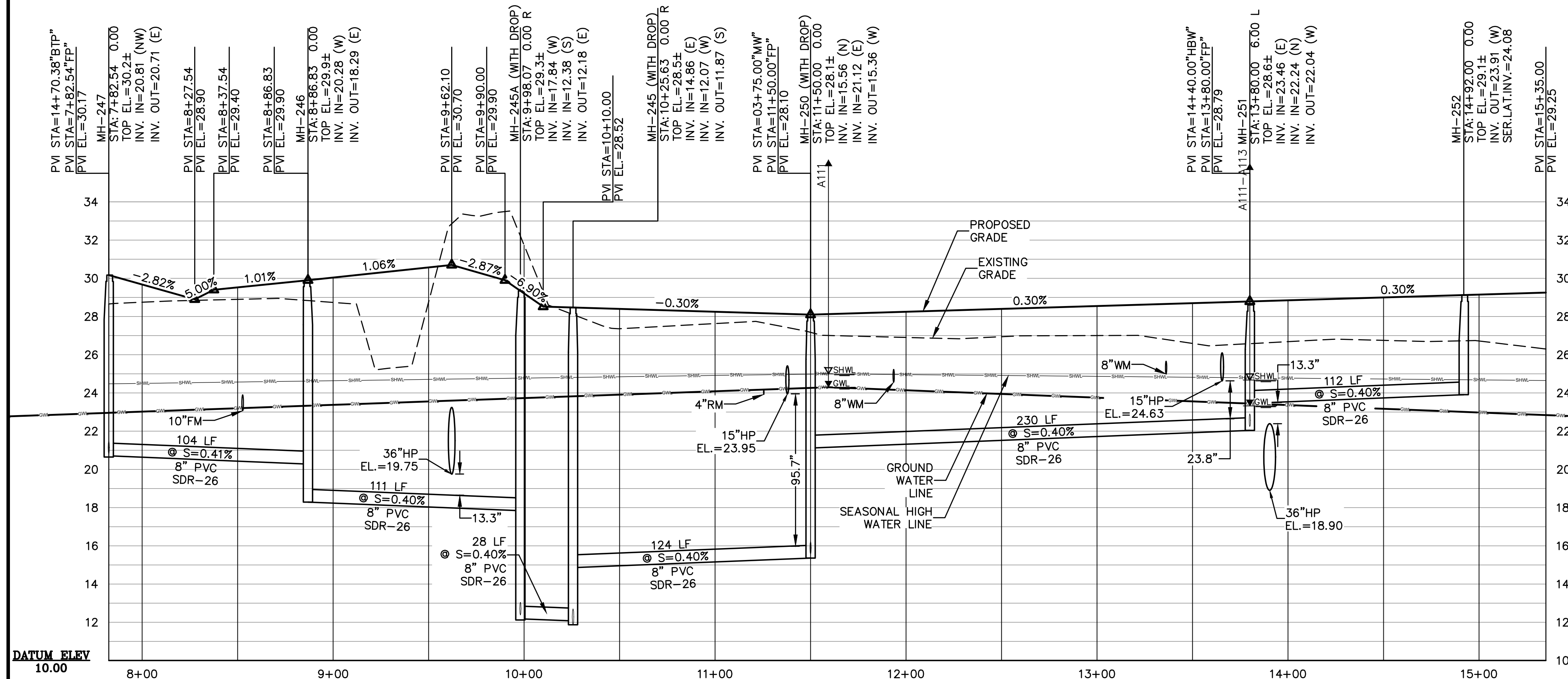
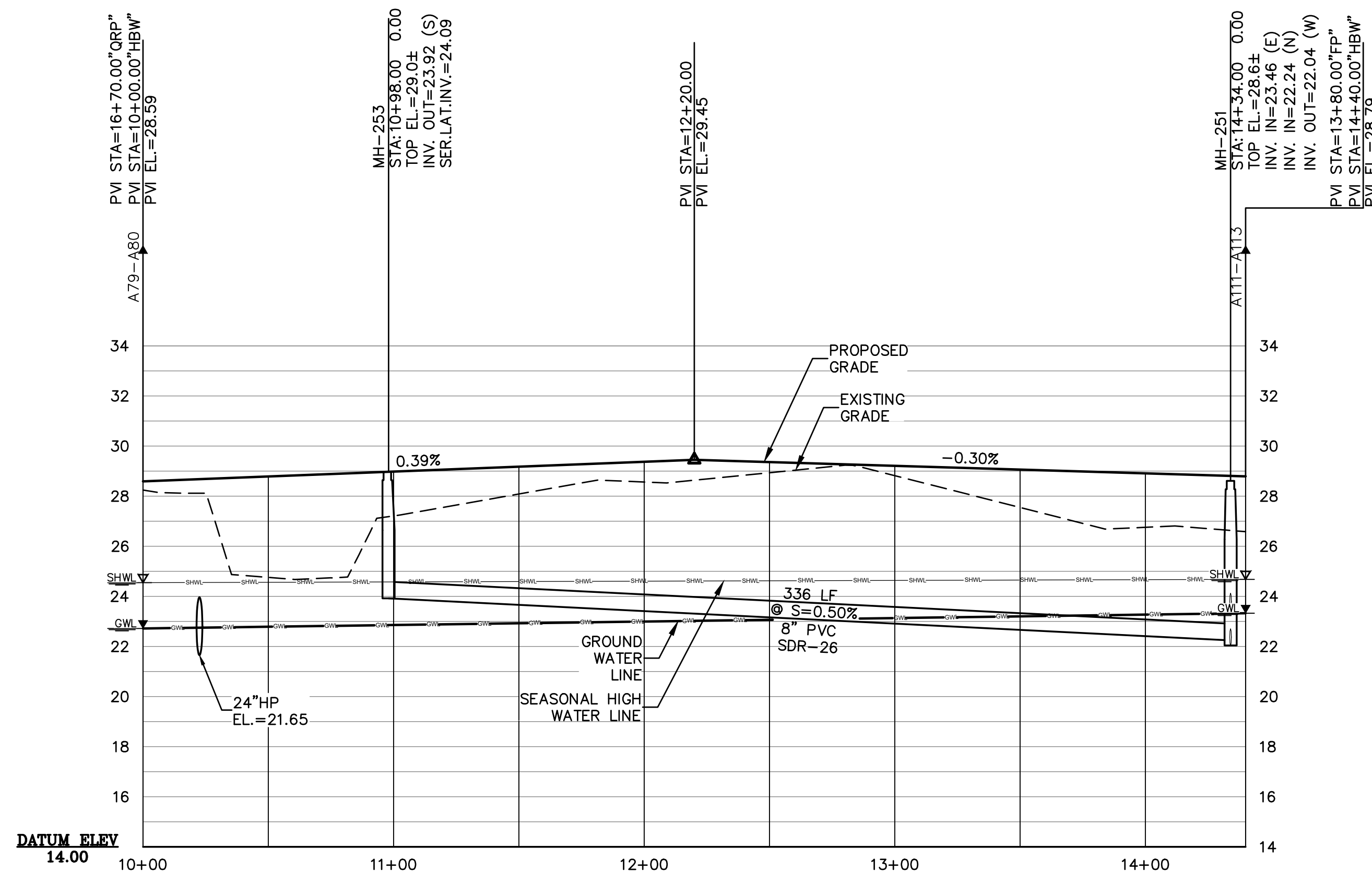


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Sheet No. 101 of 130  
**RSP-9**  
 DWG. NO.

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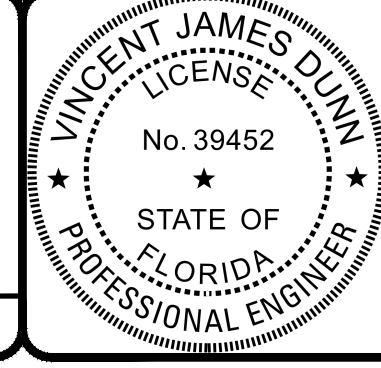
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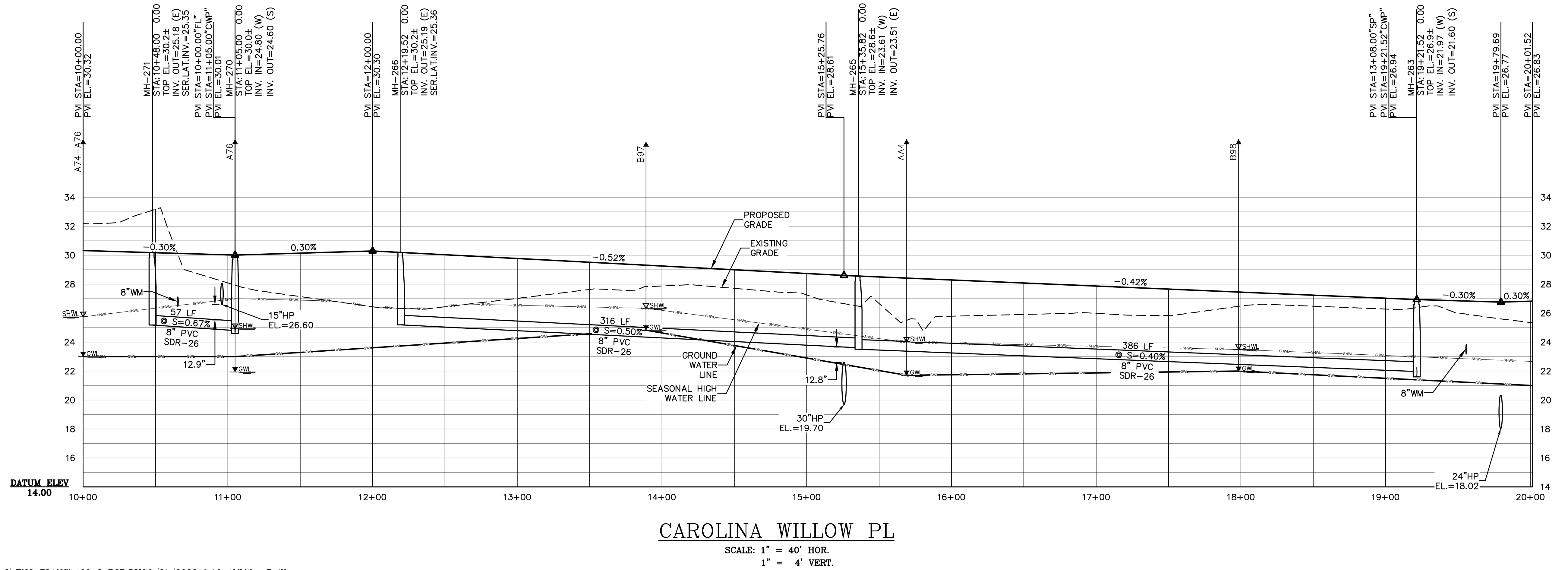
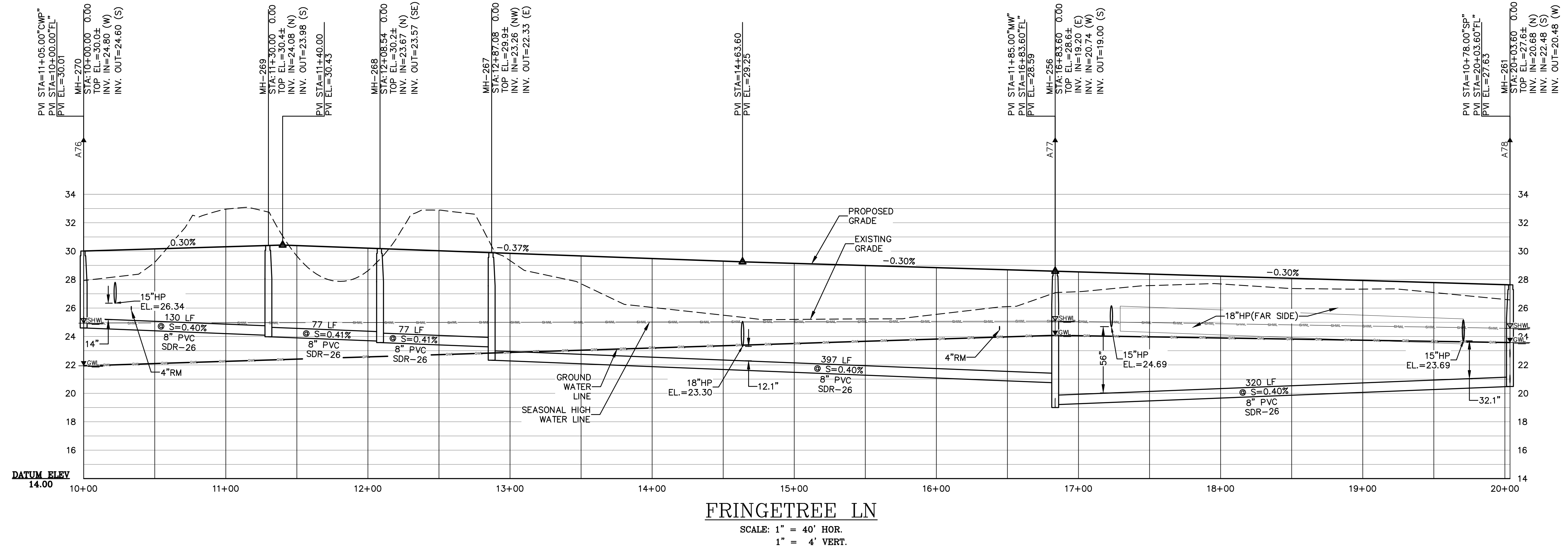
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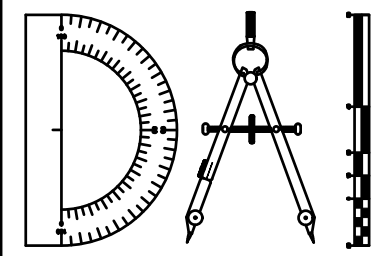
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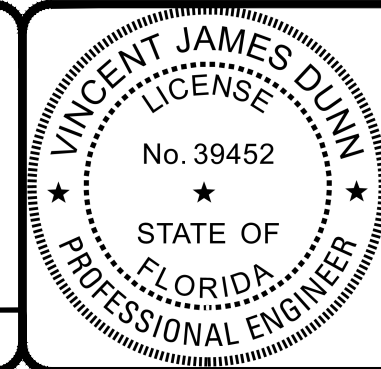
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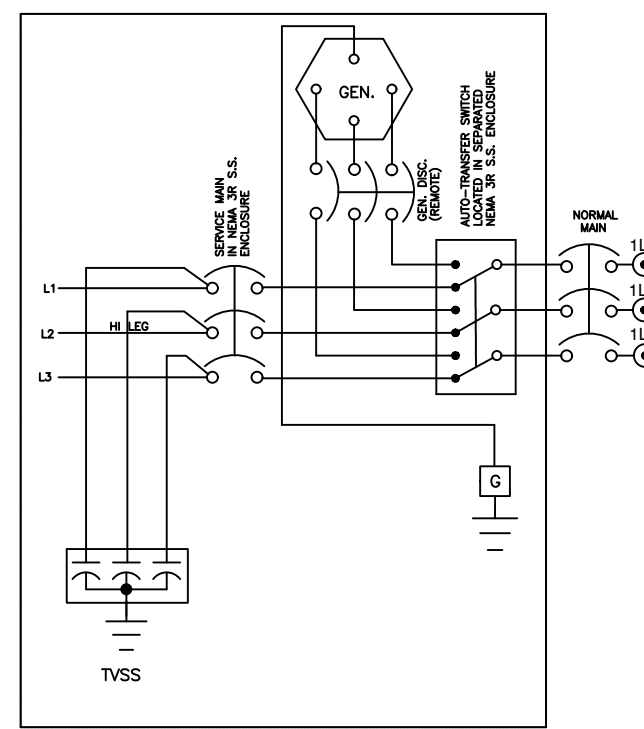


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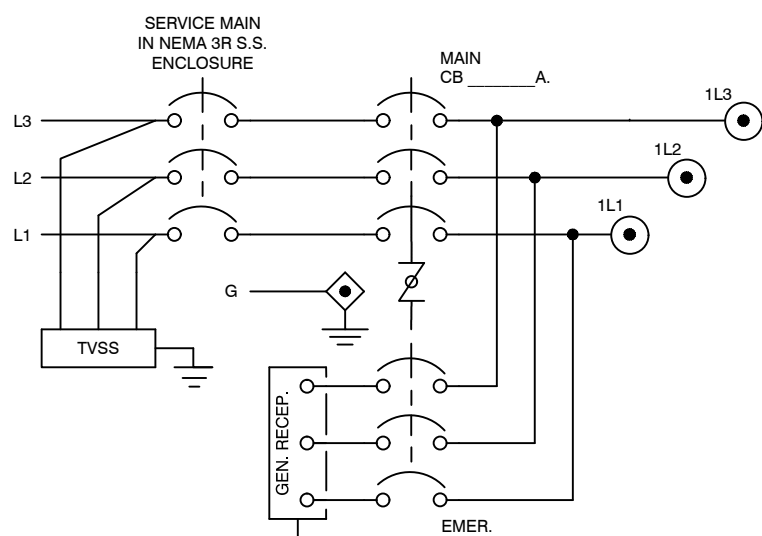
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 DWG. NO.



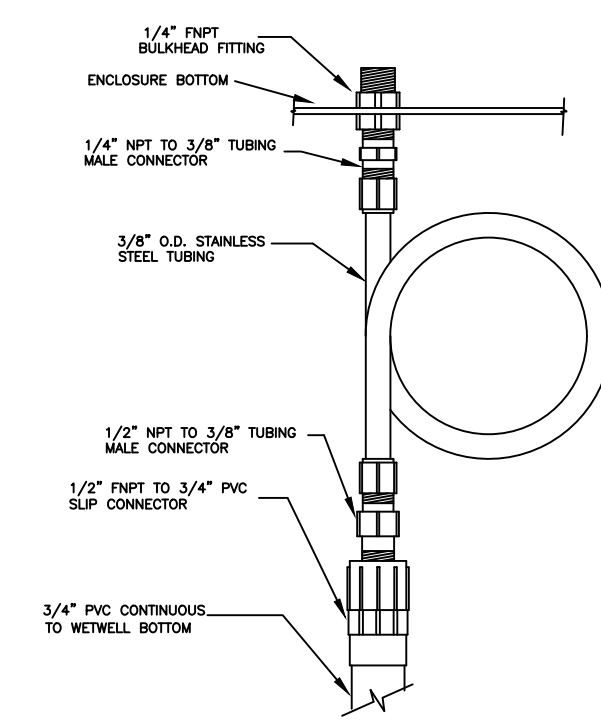




**AUTOMATIC TRANSFER SWITCH  
TYP. GENERATOR SCHEMATIC**

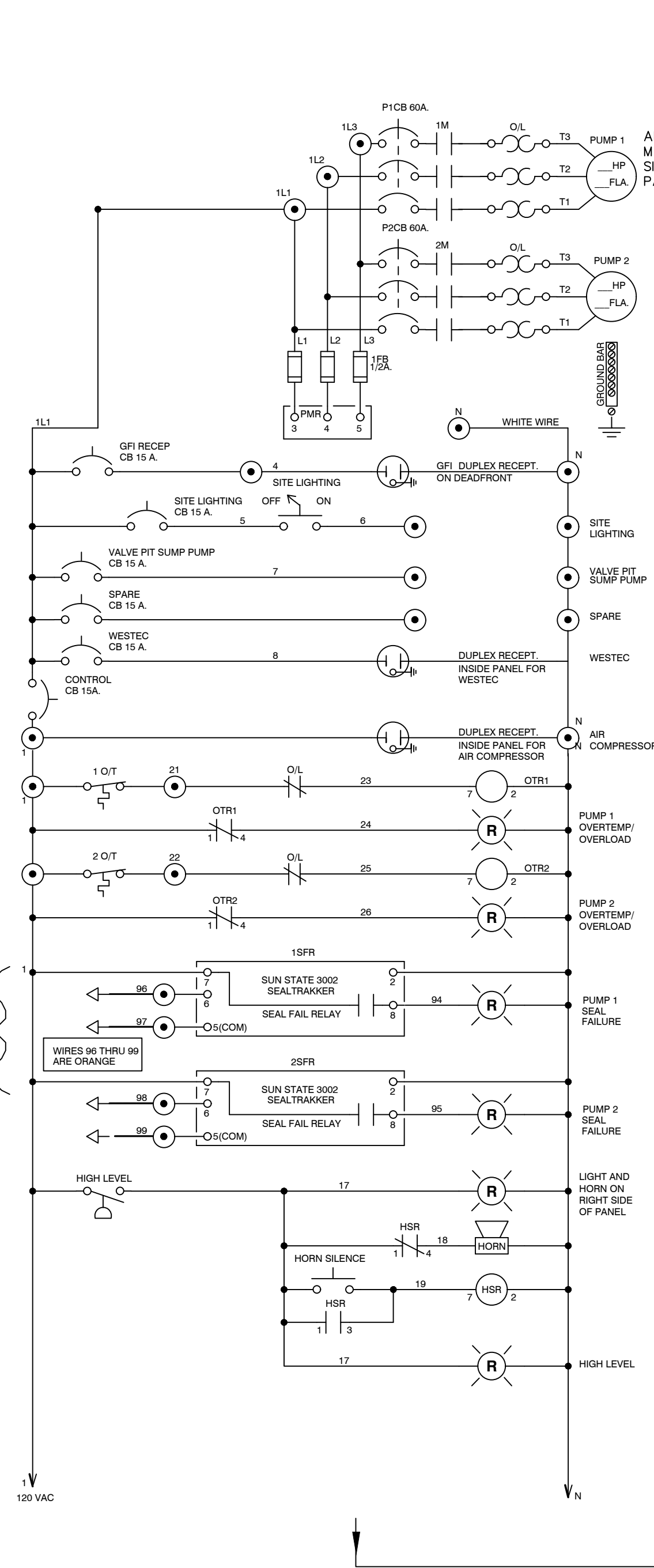


**MANUAL TRANSFER SWITCH  
TYP. GENERATOR RECEPTACLE SCHEMATIC**



**BUBBLER TUBE  
CONNECTION DETAIL**

**\*WESTEC AUTO DIALER SPECIFICATIONS:**  
EACH PUMP STATION SHALL BE EQUIPPED WITH A DSC 1550 MASTER CONTROL PANEL WITH LOCKED METAL ENCLOSURE W/ BOX DIMENSIONS OF 12" x 12" x 4 1/2"; A DSC 1550 ACCESS KEYPAD MOUNTED ON THE PANEL ENCLOSURE W/ DIMENSIONS OF 4 3/4" x 4 3/4" x 1"; A 12 VOLT, 7 AMP BACK-UP BATTERY; A TRANSFORMER (16.5 VAC) OUTSIDE BOX IN ELECTRICAL OUTLET; PHONE CABLE AND RJ31X PHONE JACK FOR DIALER HOOK-UP INSIDE BOX); ELECTRICAL SURGE PROTECTOR (OUTSIDE BOX IN ELECTRICAL OUTLET); PHONE LINE SURGE PROTECTOR (INSIDE BOX); AND ALL MISCELLANEOUS HARDWARE FOR A COMPLETE AND OPERATING SYSTEM.  
ALL COMPONENTS LISTED TO BE ENCLOSED IN THE ALARM PANEL BOX WITH EXCEPTION OF THE TRANSFORMER, THE ELECTRICAL SURGE PROTECTOR AND THE CONTROL PANEL KEYPAD (TO BE MOUNTED DIRECTLY ONTO THE ALARM PANEL).  
CONTRACTOR SHALL CONTACT CLAY COUNTY UTILITY AUTHORITY DAC SUPERVISOR TO COORDINATE PAYMENT FOR THE DSC 1550 MASTER CONTROL PANEL WHICH WILL BE ORDERED BY CLAY COUNTY UTILITY AUTHORITY. THE COST SHALL BE INCLUDED AS CONTRACTORS RESPONSIBILITY.

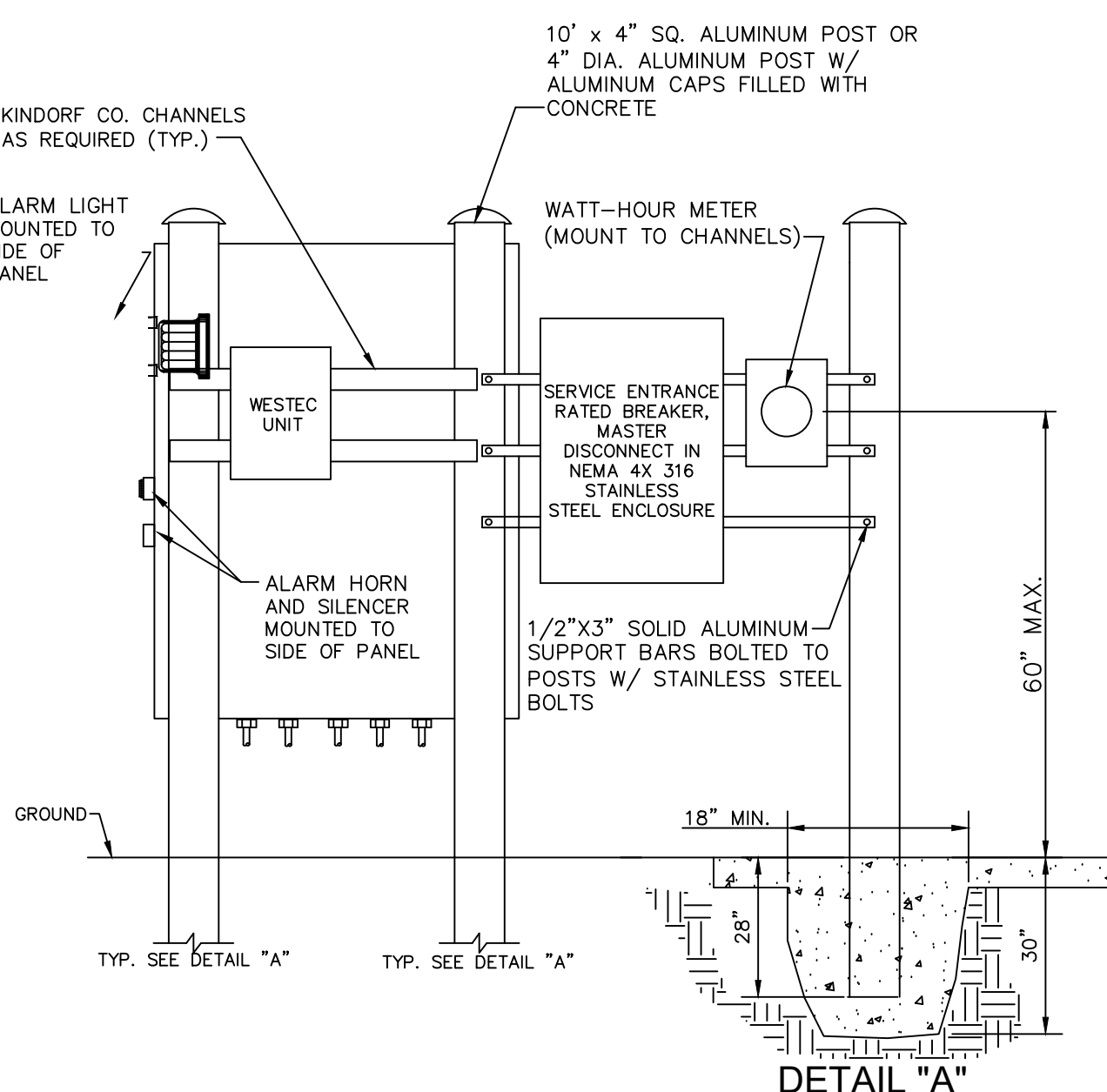


THIS EQUIPMENT NOT REQUIRED FOR FLYGT CO. PUMPS

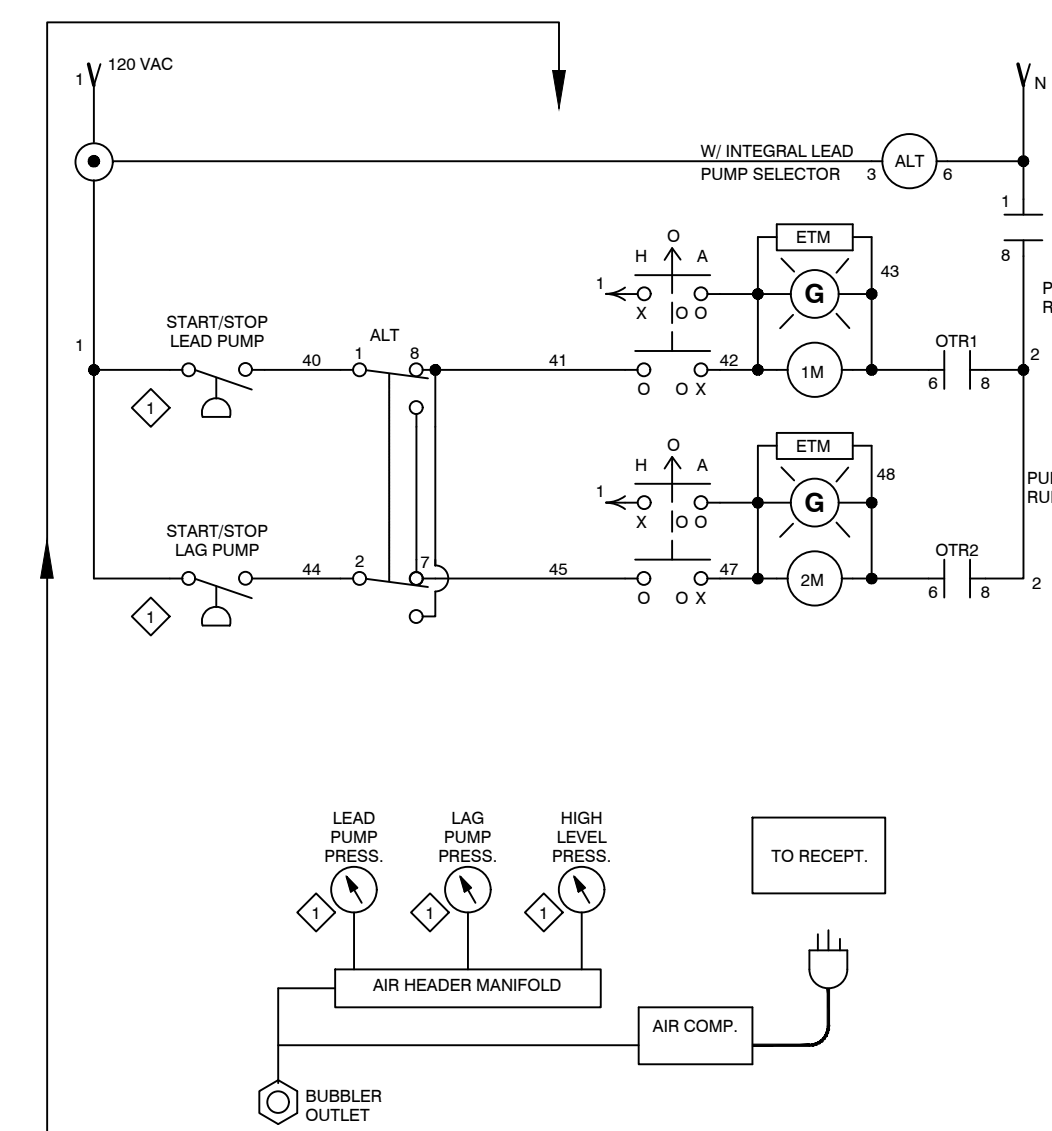
NOTE:  
ENGINEER IS TO VERIFY ELECTRIC SUPPLY OF SUFFICIENT CAPACITY IS AVAILABLE TO PROJECT PRIOR TO DESIGNING PUMP STATION. FILL IN ALL APPLICABLE BLANKS BELOW. CONTRACTOR SHALL PROVIDE COA WITH ALL REQUIRED SHOP DRAWING SUBMITTALS FOR REVIEW AND APPROVAL PRIOR TO ORDERING PUMP STATION MATERIALS.

DESIGN ENGINEER SHALL SELECT THE PROPER AMP RATED GENERATOR RECEPTACLE AND PLACE THE MODEL NUMBER IN GENERATOR RECEPTACLE COLUMN APPLETON #ACR 1034 OR CROUSE-HINDS #AR 1042 = BOTH RATED AT 100 AMPS APPLETON / #AR 20034RS OR CROUSE-HINDS #AR 2042S22 = BOTH RATED AT 200 AMPS.

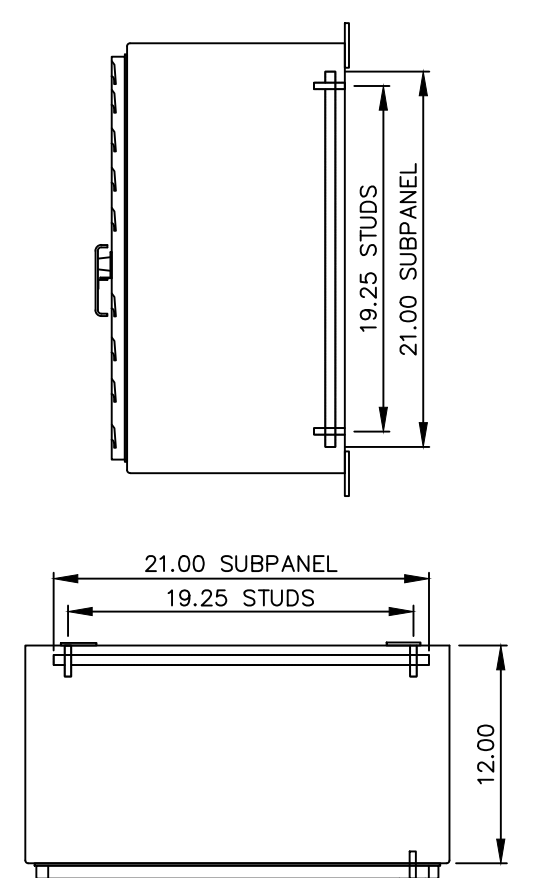
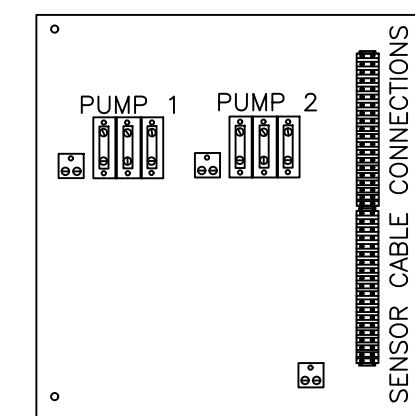
LOCATION	CONTROL PANEL & MISCELLANEOUS ENCLOSURE TYPES	EMERGENCY MAIN	NORMAL/SERVICE MAIN	CIRCUIT BREAKER PUMP NO.1	CIRCUIT BREAKER PUMP NO.2	CIRCUIT BREAKER PANEL	CIRCUIT BREAKER RECEPTACLE	CIRCUIT BREAKER GFI DUP. RECEPTACLE	CIRCUIT BREAKER SITE LIGHTING	CIRCUIT BREAKER VALVE VAULT SUMP PUMP	CIRCUIT BREAKER SPARE	GENERATOR RECEPTACLE	STARTER		PHASE MONITOR RELAY	PUMP MOTOR NO.1	PUMP MOTOR NO.2	ALARM BEACON	AUTO TRANSFER SWITCH	ELECTRIC SERVICE TYPE & SIZE	
													SIZE	TYPE							
PS-2	NEMA 3R TYPE 304 S/S	200 A	200 A	70 A	70 A	25 A	25 A	25 A	25 A	25 A	25 A	CROUSE-HINDS #AR 1042	#4	NEMA	YES	YES	23 HP	23 HP	YES		240V, 3 PHASE 4 WIRE, 60 HZ



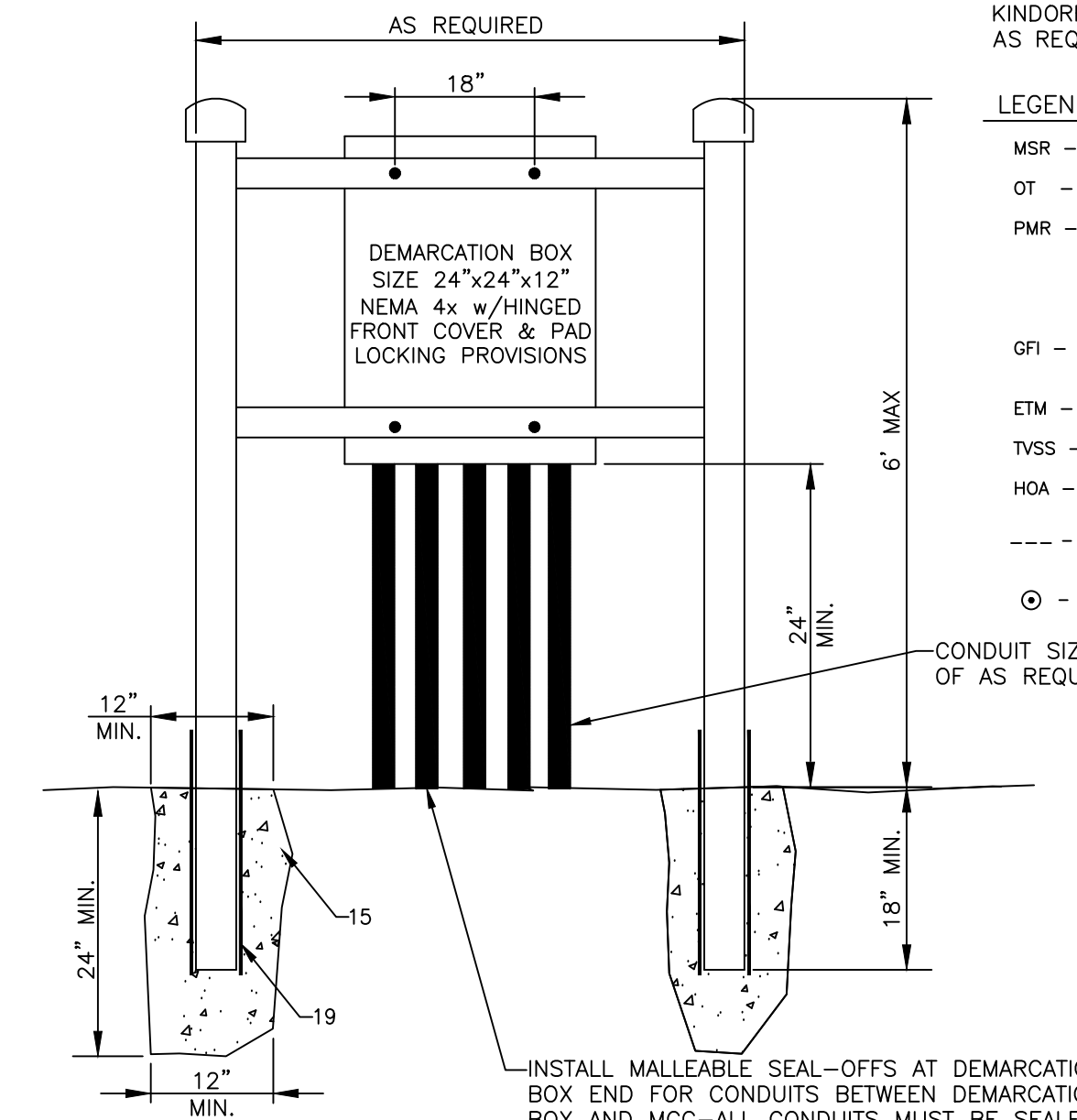
**TYP. CONTROL PANEL REAR VIEW**



**PNEUMATIC DIAGRAM**

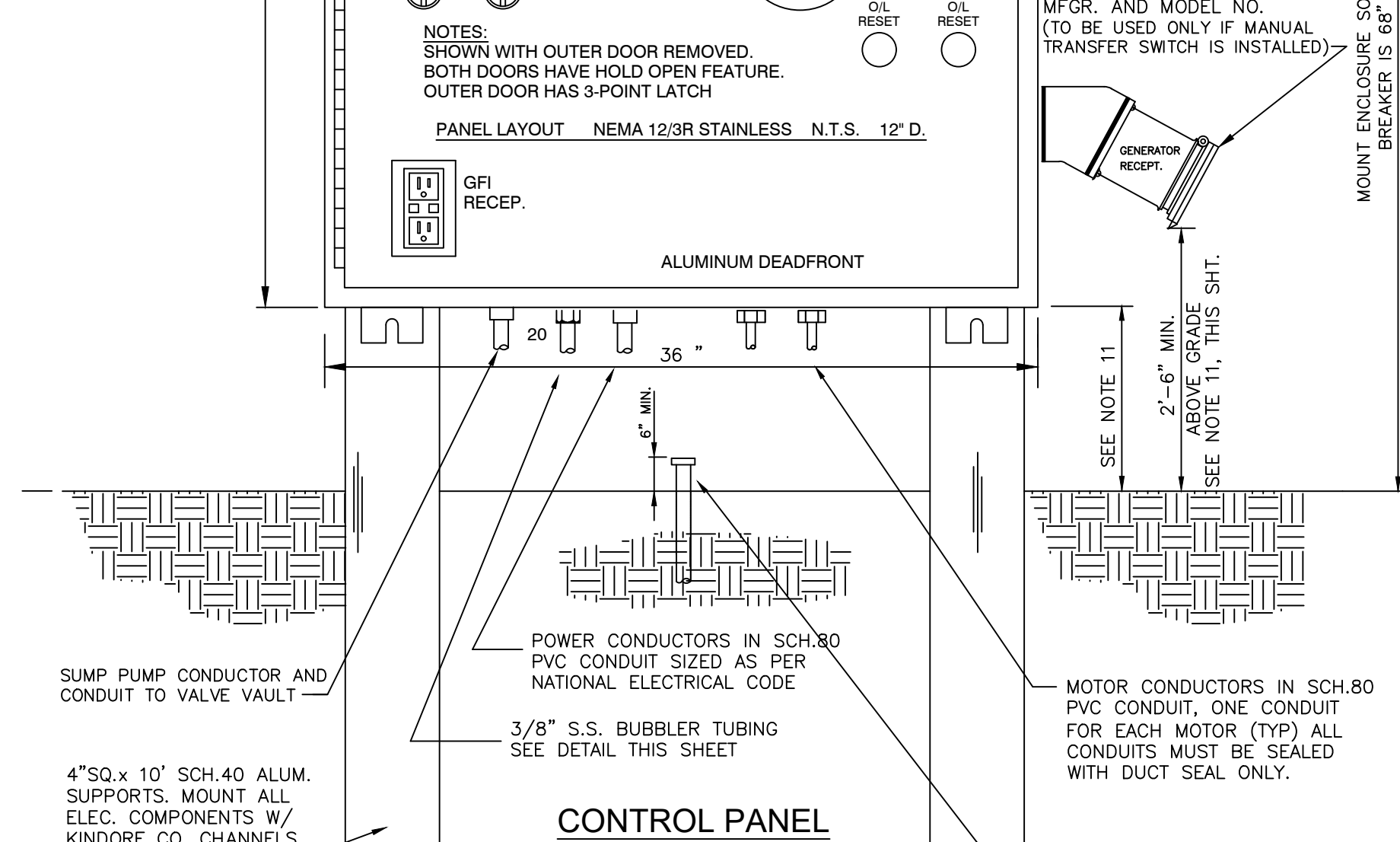


**NEMA 4X 316 STAINLESS STEEL  
24 X 24 DEMARCATION BOX**



**DEMARCATION BOX**

- NAMEPLATE LEGEND**
- 1- PUMP 1 SEAL FAIL
  - 2- PUMP 2 SEAL FAIL
  - 3- PUMP 1 OVERTEMP/ OVERLOAD
  - 4- PUMP 2 OVERTEMP/ OVERLOAD
  - 5- PUMP 1 RUN
  - 6- PUMP 2 RUN
  - 7- HAND OFF AUTO
  - 8- HIGH LEVEL
  - 9- SITE LIGHTING OFF ON
  - 10- HORN SILENCE
  - 11- CONTROL
  - 12- GFI RECEPT
  - 13- SITE LIGHTING
  - 14- WESTEC
  - 15- VALVE PIT SUMP PUMP
  - 16- PUMP 1
  - 17- PUMP 2
  - 18- MAIN
  - 19- EMERGENCY
  - 20- BUBBLER OUTLET
  - 21- LEAD PUMP
  - 22- LAG PUMP
  - 23- HIGH LEVEL

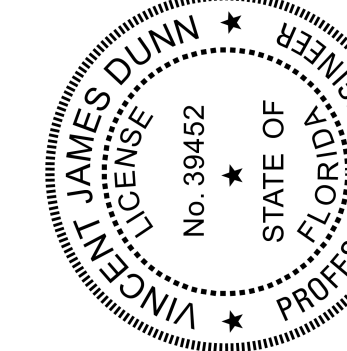


**CONTROL PANEL**

- LEGEND:**
- MSR - MOISTURE SENSING RELAY
  - OT - OVER TEMPERATURE
  - PMR - PHASE MONITOR RELAY 230V-001-230-118 AS MANUFACTURED BY MOTOR PROTECTION CONTROL
  - GFI - GROUND FAULT INTERRUPTER - DUPLEX RECEPT. 15 AMP.
  - ETM - ELAPSE TIME METER
  - TVSS - TRANSIENT VOLTAGE SURGE SUPPRESSOR
  - HOA - HAND-OFF/AUTOMATIC SELECTOR SWITCH
  - FIELD WIRING/DEVICES EXTERNAL TO PANEL
  - ⊙ - TERMINALS ON TERMINAL STRIP

- NOTES:**
1. CONTROL PANEL & MISC ENCLOSURE TYPES: NEMA 12 3R TYPE 304 STAINLESS STEEL.
  2. BACKPANEL: BAKED ON WHITE ENAMEL.
  3. DEADFRONT: FAB FROM 0.125 ALUMINUM
  4. LAST WIRE NUMBER USED 42
  5. MOUNT ENCLOSURE SO THAT HEIGHT OF CIRCUIT BREAKER HANDLE IS 68" MAXIMUM FROM GROUND.
  6. ALL ELECTRICAL ENCLOSURES (CT, REMOTE DISCONNECTS, ETC.) SHALL BE NEMA 4X TYPE 316 STAINLESS STEEL.
  7. THE PANEL AND SERVICE SHALL BE GROUNDED PER NEC ARTICLE 250 AND UTILIZE A MINIMUM OF TWO GROUND ELECTRODES AT LEAST 6 FEET APART. THE GROUNDING CONDUCTOR SHALL BE CONTINUOUS FROM THE METER CAN, THROUGH THE GROUNDING ELECTRODE SYSTEM TO THE FENCE.
  8. ELECTRICAL CONDUITS TO BE SIZED FOR 40% CAPACITY.
  9. ALL CONDUITS SHALL RUN STRAIGHT TO WETWELL. ONE 90° PULLING ELL ALLOWED UNDER THE CONTROL OF PANEL. EACH CONDUIT SHALL ENTER THE BOTTOM OF THE CONTROL PANEL SEPARATELY AS SHOWN ABOVE.
  10. SEAL ALL CONDUITS BETWEEN WETWELL AND THE INSIDE OF CONTROL PANEL TO PREVENT GAS IN THE WETWELL FROM ENTERING THE PANEL WITH DUCT-SEAL ONLY.
  11. ENGINEER SHALL PROVIDE VERIFICATION THAT THE TOP OF WELL, BOTTOM OF CONTROL PANELS, GENERATOR RECEPTACLE AND GENERATOR SLAB ARE ALL ABOVE THE 100 YR. FLOOD ELEVATION.
  12. STARTERS SHALL BE A MINIMUM OF 8" ABOVE BOTTOM OF CONTROL PANEL WITH NO OBSTRUCTION TO WIRING.
  13. GROUNDING BUSS MUST BE EASILY ACCESSIBLE.
  14. PUMP VOLTAGE AND CONTROL PANEL VOLTAGE SHALL MATCH THE SERVICE VOLTAGE.
  15. REDUCED VOLTAGE, NON REVERSING SOLID STATE MOTOR STARTERS (SOFT START) SHALL BE USED ON 208 OR 230V ELECTRIC SERVICE FROM PUMP MOTORS 25 HP AND LARGER.
  16. ALL CIRCUIT BREAKERS AND SWITCHES SHALL BE SQUARE D OR CUTLER HAMMER ONLY. (VERIFY WITH UTILITY AT TIME OF DESIGN).
  17. ALL EXTERIOR FASTENERS, ANCHORS, AND HARDWARE SHALL BE 316 S.S.

This item has been electronically signed and sealed by Vincent J. Dunn, P. E. on 09/21/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



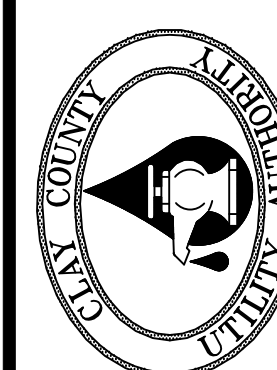
GENERAL UPDATES AND REVISIONS FOR SOFT STARTER USE  
MRS. JAMES DUNN  
FEB. 07  
MRS. JAMES DUNN  
MAY 05  
MRS. JAMES DUNN  
MAY 05  
MRS. JAMES DUNN  
MAY 05  
MRS. JAMES DUNN  
MAY 05  
MRS. JAMES DUNN  
MAY 05

NO	DATE	BY	REVISION DESCRIPTION
11	07	MRS. JAMES DUNN	GENERAL UPDATES AND REVISIONS FOR SOFT STARTER USE
10	05	MRS. JAMES DUNN	ADDED GENERATOR MODEL NUMBER TO VERIFY ELECTRIC SUPPLY NOTE
9	05	MRS. JAMES DUNN	ADDED GENERATOR MODEL NUMBER TO VERIFY ELECTRIC SUPPLY NOTE
8	05	MRS. JAMES DUNN	ADDED GENERATOR MODEL NUMBER TO VERIFY ELECTRIC SUPPLY NOTE
7	05	MRS. JAMES DUNN	ADDED GENERATOR MODEL NUMBER TO VERIFY ELECTRIC SUPPLY NOTE
6	05	MRS. JAMES DUNN	ADDED GENERATOR MODEL NUMBER TO VERIFY ELECTRIC SUPPLY NOTE

DESIGN DATE  
DRAWN DATE  
CHECKED DATE  
APPROVED DATE

**PROJECT:**  
208/230 VOLT FOR LESS THAN 25 HP  
SUBMERSIBLE PUMP STATION  
**ELECTRICAL SCHEMATIC AND DETAILS**

**CLAY COUNTY  
UTILITY AUTHORITY**  
3176 OLD JENNINGS ROAD  
MIDDLEBURG, FLORIDA 32068-3907  
TELEPHONE: (904) 272-5999



ACAD FILE NAME  
PUMPELEC.DWG  
SHEET NO.  
PSD-1

**208 or 230 V**

# OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF SEWAGE COLLECTION SYSTEM

01. INTENTION. It is the declared and acknowledged intention to secure a new sewerage system, complete, in accordance with the plans, specifications, and contract documents. All new work shall be in accordance with Clay County Utility Authority Specifications and Details and with Clay County Utility Authority Government Materials Manual and Clay County Engineering Department Details and Specifications and any other Government Regulatory Agency. All work shall conform to the above, whether or not specifically called out or noted on the plans.

02. GENERAL. All materials shall be of those listed in the CCUA Approved Materials Manual. The installation shall be warranted by the Contractor as to materials, workmanship and accuracy of the As-built drawings for a period of two years from the date of completion of the work or beneficial use of the facilities. Workmanship shall be of good quality; i.e., sewers shall be laid true to line and grade, fittings shall be properly installed and restrained, trenches shall be properly excavated and backfilled, manholes shall be installed at locations and to elevations shown on the plans.

02.1 Contractor LICENSE AND APPROVAL. Utility reserves the right to approve or deny approval of Contractor prior to construction of any on-site or off-site utility facilities. Contractor must hold a State of Florida Underground Utility Contractors license, that named contracting company being the one doing the work on project, and demonstrate acceptable experience in the field of utility construction.

03. SURVEYS. The Utility Contractor shall provide all surveys necessary for the layout and construction of the work of his contract.

04. EARTHWORK. Earthwork shall include all excavation, fill and backfill (hand/machine), compaction and rough grading of materials encountered. No unsuitable materials, clay, muck, or peat (removed from pipe trenches are to be used for backfill. All fill or backfill shall be either sand or sandy clay, free of roots, trash or other debris. All backfill alongside of and to a height twenty-four inches above all pipe shall be free of clay or organic material, compacted in lifts, the first of which will be the spring line of the pipe by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 90% in successive 6" layers, to a depth of 18" maximum. All backfill shall be compacted to 98% in successive 6" layers. Copies of compaction density test reports from a licensed testing agency shall be made available to CCUA if requested.

05. MANHOLES. Manhole bases, sections, and cones shall conform to the requirements of ASTM C478, Specifications for Precast Reinforced Concrete Manhole Sections. Cement shall meet the requirements of ASTM C150, Specifications for Portland Cement. Type I, Concrete shall meet the minimum requirements for Class "A" Concrete Work. Minimum wall thickness shall be 1/2 the inside diameter in inches plus one (1) inch. Bases for manholes shall be cast in place with the bottom manhole section. Joint contact surfaces shall be formed with machined castings; they shall be exactly parallel with a 2 degree slope and nominal 1/16 inch clearance with the tongue equipped with a proper recess for the installation of an O-ring rubber gasket, conforming to ASTM C443. Joints for circular concrete sewer and culvert pipe using Rubber gasket, or RAM-NEK promoted Plastic Joint Sealer with joints Manhole adjustment materials shall be sound, hard, and pre-primed. Precast concrete adjustment rings as manufactured by Taylor Precast Co. (or equal) may be utilized in lieu of brick adjustment. Field mixed mortar for brick shall be composed of portland cement Type I, sand and clean water. Mortar shall be one part cement Type I and two parts sand; line shall not be used. The outside faces of brick masonry shall be plastered with mortar from 1/4" to 3/8" thick. Precast manhole walls shall not be coated unless otherwise noted. Cement grout for manhole bottoms shall be a stiff rich mix of Type I Portland Cement and sharp plaster sand. Calcium chloride may be added (maximum of 2%) to aid in obtaining a faster set. All permanent pump station enclosures, the first upstream manhole from the station shall be lined with a polyethylene liner as manufactured and installed by Taylor Precast Co., or approved equal.

05.1 CAST IRON MANHOLE FRAMES AND COVERS. Cast iron manhole frames and covers shall be as detailed on drawings. Castings shall meet the requirements of ASTM A245, Specifications for Gray Iron Castings, Class No. 30, or Grade 65-45-12. Ductile iron manhole frames shall meet the requirements of ASTM A536, Specification for Ductile Iron Castings. In either case, manhole frame and cover shall be designed to withstand an HS20-44 loading defined in the AASHTO Specifications. Frames and covers shall be machined or ground at touching surfaces so as to seat firmly and prevent cracking.

05.2 FLEXIBLE MANHOLE CONNECTOR. All connections between sewer pipe and pre-cast concrete manholes shall be accomplished by a Flexible Connector, "Xor-N-Seal," as manufactured by National Pollution Control Systems, Inc., or approved equal.

05.3 FLOW CHANNELS. Flow channels in manhole base shall be formed of D.O.T. Class I Type II cement grout with brick and trowel to a smooth surface finish. Grout surface shall be 1" min. thickness over brick or rubble. While the manholes are under construction, cut off pipes at inside face of the manhole and construct the invert to the shape and sizes of pipe indicated.

All inverts shall provide a constant gradient from influent pipe to effluent pipe through manhole. Changes in direction of the sewer and entering branch or branches shall be laid out in smooth curves of the longest possible radius which is tangent to the center lines of adjoining pipelines.

05.4 DROP INLETS. Where shown on the drawings, drop inlets to the manholes shall be constructed as shown on the drawings and specified herein.

06. POLYVINYL CHLORIDE PIPE. Polyvinyl Chloride Sewer Pipe shall conform to the requirements of ASTM D-3034, SDR 26. The PVC compound conforming to ASTM D-1784. Pipe shall be early marked in 5 ft. intervals to indicate the minimum size, vertical dimension size, and joint location. Joints shall be reinforced with rubber gasketed, conforming to ASTM 3212. Pipes and fittings shall be installed in accordance with recommended practice ASTM D-3321. All pipe and sewer fittings shall be SDR-26 heavy wall, installed up to a depth of 13' from finish grade to invert of pipe. Maximum depth of gravity sewer without prior approval shall be 13 feet. Sewer pipe and fittings over 13' in depth shall be DR-18 P.V.C. Design of sewer installation over 13' in depth shall have CCUA's prior approval.

07. PIPE BETWEEN MANHOLES. All piping installed between manholes shall be the same material and class. No dissimilar pipe material will be allowed anywhere within a single run of pipe.

08. SANITARY SERVICE LATERALS. Sanitary service laterals shall be Polyvinyl Chloride Pipe conforming to the requirements of ASTM D-3034, SDR 26 where cover over top of line is 36 inches or greater. Where cover over top of pipe is less than 36 inches, specific construction conditions shall be directed by the Clay County Utility Authority. All sanitary service laterals shall be a minimum of 4'-0" deep at the right-of-way line to top of pipe. Any sanitary service lateral which must be more than 6'-0" deep shall not be installed prior to obtaining permission from the CCUA field inspector or CCUA Engineering Department. All sanitary service laterals shall be 6-inch diameter from the main to the right-of-way line with a minimum slope of 0.6% (0.6 feet per hundred feet). In single family residential developments, services shall reduce to 4" in size at the property line utilizing the proper fittings for the type of pipe specified. All sanitary service laterals over 13' deep shall be constructed of DR-18 PVC pipe, and DR-18 pipe fittings, per CCUA standard sewer system details.

09. FORCE MAINS. Force mains shall be C900 DR-18 PVC and conform to the requirements of ASTM D-1784, D-2241, D-3139 and F-477. Pipe shall be color coded and marked "FORCE MAIN" on at least two sides and at every 12' along the barrel of the pipe. Ductile iron pipe for force main service shall be polylined. Ductile iron pipe is not to be used without prior approval of the Clay County Utility Authority. Fittings shall be C110 gray iron and shall be polylined. Force mains less than 3" shall be SCH30 PVC. All force mains shall be installed with tracer wire per CCUA standard location wire details. All force mains should be installed 5 feet to top of pipe, unless approved by CCUA.

09.1 LIFT STATION VALVES. See CCUA Approved Materials Manual for acceptable plug valves and check valves.

09.2 FORCE MAIN VALVE. Gate valve, resilient seated, same as specified in Water Distribution System Specifications Section 11 at right. Except valve bodies shall be gray iron. Valve box shall have the word "SEWER" cast into the cover.

09.3 FORCE MAIN JOINT RESTRAINT. All fittings shall be properly and adequately restrained against lateral movement at all force main tees, crosses, valves and bends. See CCUA Approved Materials Manual for acceptable restrainers. (SEE RESTRAINED JOINT SCHEDULE)

09.4 FORCE MAIN PIPE FLUSHING. All force main piping shall be flushed with clean water utilizing full pipe diameter. In cases where the water supply is inadequate to flush the full pipe diameter, flushing shall occur to the extent of the water supply that is available.

10. INSTALLATION. All sewer lines, manholes, and appurtenances shall be constructed to the dimensions and elevations indicated on the drawings. Trenches shall be excavated to a width approximately twelve inches greater than the outside diameter of the pipe. Machine excavation shall be to a depth one-fourth pipe diameter above proposed pipe grade, the remaining depth shall be hand excavated and shored to give full support to the lower one-fourth of each pipe. Each section of pipe shall be inspected for defects prior to being lowered into the trench. The inside of each bell and the outside of each spigot shall be thoroughly cleaned of all foreign matter prior to making the joint. All sewer lines shall be constructed with the spigot ends pointing in the direction of the flow. Both the bell and the spigot of each joint shall be lubricated with the lubricant recommended by the pipe Manufacturer. All sewer lines shall be cleaned of foreign matter as construction progresses, and shall be in a clean condition upon completion of construction operations. Pipe materials shall remain the same on runs between manholes and/or other structures.

11. INSPECTIONS. Each section of the completed sewer system shall be inspected for proper alignment. Any section of the sewer system which does not display true, concentric alignment shall be reinstated at an additional expense to the Owner. A written log of inspection shall be kept indicating location of test, potential problems in sewer, pipe and depth of water, service locations, and other irregularities in the pipe lines. An image in DVD format shall be made of the television inspection and submitted to the Engineer and the Clay County Utility Authority. Copies of compaction density test reports from a licensed testing agency shall be made available to CCUA if requested.

11.1 TELEVISION INSPECTIONS Television inspection will be required on all new gravity sewers constructed. This service shall be provided by the Contractor as a part of this Contract. The newly constructed sewers shall be televised in the presence of the Inspector of the Clay County Utility Authority. A full report as to the condition of pipe, type and location of services, length, joint and distance between manholes, etc. shall be furnished to the CCUA inspector prior to the final acceptance of the system. Any pipe found to be cracked, leaking or otherwise defective shall be removed and replaced with new pipe at no additional costs to the Owner. Deflection testing with 5% mandrel also required. Any section not passing the mandrel test shall be corrected. Sewer mains shall be televised after curb and line rock are in place but prior to paving. Curb and line rock shall be installed, finish graded prior to televising the gravity sewer. Limerock paving and paving operations shall not take place until the CCUA inspector has reviewed the television recorded DVD and approves the gravity sewer system. This will be strictly enforced. All gravity sewers must be flushed no sooner than 48 hours prior to any television inspection. Force main lines shall be pressure tested and approved prior to paving, but not later than 24 hours prior to paving. Limerock installation, finish graded and compacted. Sewer services shall be viewed by a camera capable of viewing into service lateral connections. Adequate water will be provided within the upstream manhole to flow through the downstream manhole before the camera. All manhole and service connections, manholes, etc. shall be televised in the presence of the CCUA inspector. Contractor shall provide CCUA with a 45 hr. notice of intent to televise and inspect sewer main. CCUA inspectors will report to job site at the time specified by Contractor at the time of the call-in. CCUA inspectors will call at the job site no more than one hour for the televising to begin before leaving the job site. Contractor shall reschedule televising giving CCUA 48 hrs. notice if the above occurs. Inspections start at manhole invert.

11.2 INFILTRATION TEST After completion, the sewers or sections thereof, shall be tested and tested on the contract price for the sewers, shall furnish, and install and maintain a V-notch sharp crested weir in a wood frame on the main sewers as directed by the Engineer. Maximum allowable infiltration shall be 50 gallons per mile, per inch of dia. of sewer per 24 hour day, at any time.

11.3 EXFILTRATION TEST In areas where ground water is not encountered in sewer construction, or it is desired to run exfiltration tests, the Contractor shall furnish and install all necessary materials, equipments, shall supply water, etc., and shall run exfiltration tests to determine acceptance of the sewer. The maximum allowable exfiltration shall be 50 gallons per mile per inch of diameter of sewer per 24 hour day at any time based on two foot minimum internal head.

11.4 A "dip" is defined as any water holding depth which is equal or greater than the minimum depth as listed below. There shall not be any more than 1 "dip" per 135 linear feet of sewer pipe installed. The defective pipe sections, or those dips/sections over the allowable limit, shall be removed and replaced (at no cost to CCUA). Each run of pipe, between two manholes, shall be evaluated independently for compliance. Any "dip" which is greater than the "maximum" "dip" depth listed below are not acceptable and shall be removed and replace at no cost to CCUA. Regardless of the number of "dips" in the line section, if, in the option of the CCUA inspector, the number and/or location of the "dips" is believed to create an unacceptable operating condition, then the defective pipe section(s) shall be removed and replaced at no cost to CCUA. Any deviation from these "dip" limitation must be approved by the CCUA Service Availability & Manager.

PIPE SIZE	WATER HOLDING DEPTH (INCHES)	
	MINIMUM	MAXIMUM
8-10 INCH	.50	1.00
12-15 INCH	.75	1.50
18-21 INCH	1.00	2.00
24 INCH AND GREATER	1.25	2.50

12. Demarcation box shall be used as an isolation point between the wet well and at the motor control center panel. All wiring between the motor control center and wet well shall be in conduit, install galleys seal off conduits at the demarcation box end. In conduits between the demarcation box and the MCC. All internal hardware including terminal strips, blocks and backplane shall be stainless steel.

12.1 Demarcation box shall be 24" wide, 24" tall and 12" deep nema 4 enclosure manufacturer of 316 stainless steel. Enclosure shall have a hinged cover and removable backplane for terminal blocks. The box shall be mounted so that the cover faces away from the wet well.

12.2 Terminal blocks will need to be mounted for each wire passing through the demarcation box. Terminal strips will be rated at 600 volts, sized according to the load served. Antioxidant compound shall be used on all terminal connections, (ninox or equal). Nameplates as specified on the electrical standards sheet shall be provided at the terminal blocks to identify each circuit.

12.3 All wires including spares shall be identified with heat shrink labels. All control wires shall have spade lugs. Wires shall be 600 volt rating thimn/mwh/twh.

## GENERAL NOTES

1. AS-BUILT DRAWINGS AND ASSOCIATED COSTS. All cost records pertaining to the cost of water, reclaim and sewer facilities donated to the utility shall be provided to the utility by applicant. Prior to acceptance by the Clay County Utility Authority, the utility's system that is completed by a licensed underground utility Contractor, the Utility will require that the applicant's Contractor provide the Utility, at their own expense, all field as-built data which shall be provided in accordance with the Utility's As-built Specifications Standards Manual, which can be obtained from the Utility's website ([www.clayutility.org](http://www.clayutility.org)).

2. CONSTRUCTION WARRANTY AND WARRANTY SECURITY PERIOD. Developer's Contractor shall warranty Utility against defects in material and workmanship for the portion of the onsite system to be owned by the Utility. The contractor shall secure from its Contractor a written and fully assignable warranty that the system installed will be and remain free from all defects, later or otherwise, with respect to workmanship, materials, installation, and accuracy of his as-built drawings in accordance with the Utility approved plans and specifications for a period of two years from the date of the system acceptance by the Utility and immediately assign the same to the right to enforce to Utility on or before the date of the Utility's acceptance of the system for Ownership and maintenance.

3. CLEAN-UP. All surplus materials of construction shall be removed from the site and disposed of by the Contractor as part of his contract with the Owner.

4. RESTORATION. New Sanitary Sewer and Water Main Construction in earthen areas shall be seeded and mulched in accordance with Section 570 of Standard Specifications of the Florida Dept. of Transportation (latest edition). In locations where existing grassed (seeded) areas are disturbed, sod shall be replaced to preconstruction condition and to limits of construction or where directed by the engineer.

5. PERMITS. The Contractor shall be responsible for obtaining and providing records of all permits required for performing work under this contract, except that the FDEP permits, and wetland permits, if required, will be secured by the Owner or Developer.

6. PIPE BEDDING. In the event unsuitable or unstable bedding material is encountered at or below the limits of the excavation required for installation, such material shall be removed and replaced with suitable compacted backfill material specified by the Design Engineer and approved by the CCUA so as to provide a stable trench bedding surface suitable for proper pipe installation.

6.1. PIPE BEDDING (ROCK BEDDING MATERIAL) Rock material used for pipe bedding shall be #57 stone or crushed concrete (crush-crete) in a #57 size. Rock bedding material shall be completely wrapped in a heavy filter fabric material, overlapped a minimum of one foot. Rock bedding shall be installed to the correct grade and compacted to a density which will prevent any settlement, either by mechanical tamping equipment or by compressing the rock using the bottom of the backhoe bucket. The compaction shall be approved by CCUA inspector. The Contractor shall be required to have submitted approved by Design Engineer and CCUA prior to use of such rock bedding material.

7. DEWATERING. The Contractor shall at all times during construction provide ample means and equipment with which to promptly remove and dispose of all water entering the trench and structures excavated and shall keep soil excavations acceptably dry until the piping and /or structures to be built therein are completed. All water pumped or drained from the work area shall be disposed of in a manner as to not damage sewer, water, electrical or any other piping, structures or property. No pipe shall be laid in water and no water shall be allowed to rise above the bottom of any pipe while it is being jointed, except as may be approved in writing by the CCUA.

8. HYDROSTATIC TESTING. After all pressure pipes (water mains, services, and force mains) are laid, the joints completed, and the trench backfilled, the newly laid pipe and appurtenances shall be subjected to a hydrostatic test of 150 p.s.i. for a period of at least two hours. The Engineer and the Clay County Utility Authority must be notified 48 hours before a test is to be performed. Test shall be set forth in AWWA standard C600. Any leaks detected shall be corrected and the section of pipeline retested. The two hour test period shall begin when all joints have been determined to be water tight. Leakage shall be limited to that allowance set forth in Section 4 of AWWA Standard C600-97. Hydrostatic and leakage test and slow-down (zeroing of gage) must occur before sampling for bacteriological test. The maximum allowable pressure loss is 5 p.s.i. regardless of the length of pipe.

9. REPORTS. Reports of hydrostatic and leakage tests and sterilization of the newly completed systems shall be submitted to the Clay County Utility Authority prior to requesting acceptance of the new system.

10. DENSITY TESTING. In-place density tests are required at intervals not to exceed 150' along pipelines for every other lift. A minimum of one test between manholes is required for every lift regardless of the distance between sanitary sewer manholes.

11. CONCRETE. All Portland Cement concrete shall be of Type II Portland Cement, 2,500 p.s.i. minimum, ready mixed. All concrete shall be placed before the initial set has taken place. Slabs or retempered concrete shall not be used.

12. GATE VALVES AND BOXES. Gate valves shall have a 2" operating nut and open lift. Gate valves shall have joints suitable for the type main on which installed. Valves 2" and 3" shall be iron body, bronze fitted. Valves 4" and larger shall be iron body, bronze fitted with resilient seat. The word "WATER" on water boxes and "SEWER" on force main boxes shall be cast in the covers.

13. SEPARATION OF WATER AND SEWER MAINS. Horizontal and vertical separation between potable water system mains and appurtenances and sanitary or storm sewers, wastewater or storm water force mains, and reclaimed water mains shall be in accordance with Rule 62-555.314 F.A.C.

a. New or relocated underground water mains shall be laid to provide a horizontal distance of at least three feet between the outside of the water main and the outside of any existing or proposed storm sewer, storm water force main, reclaimed water main regulated under Part III of Chapter 62-610, F.A.C. or proposed vacuum-type sanitary sewer.

b. New or relocated, underground water mains shall be laid to provide a horizontal distance of at least six feet, and preferably ten feet, between the outside of the water main and the outside of any existing or proposed gravity- or pressure-type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C. The minimum horizontal separation distance between water mains and gravity-type sanitary sewers shall be reduced to three feet where the bottom of the water main is laid at least six inches above the top of the sewer.

c. New or relocated underground water mains conveying any existing or proposed gravity- or vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the water main is at least six inches, and preferably 12 inches, above, or at least 12 inches below, the outside of the other pipeline. However, it is preferable to lay the water main above the top of the sewer.

d. New or relocated underground water mains crossing any existing or proposed pressure-type sanitary sewer, wastewater or storm water force main, or pipeline conveying reclaimed water shall be laid so the outside of the water main is at least 12 inches above and below the outside of the other pipeline. However, it is preferable to lay the water main above the top of the sewer.

e. At the utility crossings described in paragraphs (c) and (d) above, one full length of water main pipe shall be centered above or below the other pipeline so the joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all water main joints are at least three feet from all joints in vacuum-type sanitary sewers, storm sewers, storm water force mains, or pipelines conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C., and at least six feet from all joints in gravity- or pressure-type sanitary sewers, wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

14. NEW CONNECTION TO EXISTING MAIN. New connection to existing main in service shall be accomplished by the "wet tap" method utilizing full circle stainless steel tapping sleeve and mechanical joint tapping valve. Tapping sleeve shall be rated at 200 p.s.i., non-shock working pressure conforming to AWWA Standard C110, latest revision. Stainless steel tapping sleeves shall be from those listed in CCUA approved material manual. Tapping valve shall be mechanical joint on one end and standard flanged joint on other end. Valve shall conform to Section 09.2 of these specifications.

15. JOBSITE SAFETY. While on the job site, the Contractor shall at all times observe all Federal, State and local safety rules, regulations and laws. This includes, but is not limited to, confined spaces and excavation protection systems as per O.S.H.A. standards.

16. CCUA SHOP DRAWING AND SUBMITTAL PROCESS. A signed acknowledgment by the Contractor and the Material Supplier, on the "Shop Drawings and CCUA's Approved Materials List Form," that all materials will be in accordance with CCUA's Specifications, CCUA's Details and CCUA's Approved Materials Manual, is the only submittal CCUA will require for each item of materials with the following exceptions: any alternate materials requested by the Engineer; any materials not listed in the CCUA Materials Manual; and materials associated with pumping stations and plant installations. Those exceptions shall have an individual shop drawing submitted for CCUA's review and approval prior to any installation of said materials. This is CCUA's procedure and it does not preclude the Design Engineer from requiring additional submittals and shop drawings as he deems necessary for the project.

17. PUMP STATIONS (TEMPORARY OR PERMANENT). All pump stations shall be constructed in accordance with CCUA standards, rules and regulations and be approved by CCUA All work and materials shall meet the requirements of CCUA Standard Pump Station Details and Specifications or the plans, details and specifications for that specific pump station. A driveway shall be provided from the street (roadway) to within 2 feet of the pump station wetwell, minimum 10 feet wide x 6 inches thick 3,500 p.s.i. concrete. Submersible pump stations shall be fenced completely about the perimeter of the pump station site (location of the pump station site as indicated on the plans) to make a complete barrier. All other items required to make a complete barrier shall be provided by the Contractor. The entire pump station site within the fenced area shall be covered with #57 stone, 6 inch thick minimum, placed over filter cloth.

18. Information shown on the Drawings as to the location of existing utilities has been prepared from the most reliable data available to the Engineer. The Contractor shall be responsible for requesting underground utility locates and shall assist the utility companies by every means possible to determine exact locations and the locations of recent additions to the systems not shown. Extreme caution shall be exercised to eliminate any possibility of any damage to utilities resulting from Contractor's activities. The locations of all overhead utilities shall also be verified by the Contractor. The Engineer shall be notified of any conflict that may occur. The Contractor shall be responsible for determining which poles will need shoring during excavation and shall provide such shoring and support as required.

19. CCUA details and specifications (latest available copy) shall be included in all plans submitted for work within the CCUA utility system. No person shall modify, change, omit, or replace any portion of those details and specifications without the express written consent of CCUA. In any instance where the Design Engineer has included his written specifications or details in the plans than the more stringent of the two shall govern.

20. All materials to be used for any project within CCUA's utility system shall conform to those materials listed in the CCUA approved material manual in effect at the time final plans for that project are approved by CCUA.

21. Under no circumstance shall any trees be planted within a CCUA utility easement without: a. CCUA approving landscape and irrigation plans. b. CCUA being notified prior to the planting of trees and giving approval. c. CCUA inspecting the installation of root barrier material (required at all trees which are closer than 7.5' to any CCUA utility line) as shown in CCUA approved material manual and CCUA roadway cross section details, whether or not shown on the plans.

22. At all Jack & Bore locations a CCUA inspector shall inspect the casing spacers to verify they are the correct size and have been installed correctly on the pipe prior to the pipe being installed into the pipe casing. The pipe casing shall be clean and free of all dirt, and shall be cleaned with a Vac-Con if necessary. A CCUA inspector shall be present at all time during this work. Contractor shall be responsible to establish the correct elevation of the Jack and Bore carrier pipe and pipe casing. Contractor shall compact the bottom of the excavation to assure the density of area is adequate to prevent any settlement of equipment used to perform the Jack and Bore operation. Contractor shall, at all Jack and Bore pits, provide and utilize the necessary de-watering equipment to keep the excavation dry and free from water in accordance with Paragraph 7 of the General Notes. Contractor shall, at all Jack and Bore excavations, provide a rock bed of #57 stone (a minimum of 8-inches thick) to support the track and rail system of the Jack and Bore equipment. This shall be inspected by a CCUA inspector and approved by the inspector prior to beginning the placement of the pipe casing. Contractor shall replace, at his/her expense, any Jack and Bore installed which CCUA refuses or object for Ownership and which does not meet the requirements of CCUA, due to incorrect grading, damaged or faulty materials, poor workmanship, or anything that CCUA deems as inadequate to perform its intended use.

# OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF WATER DISTRIBUTION SYSTEM

01. INTENTION. It is the declared and acknowledged intention to secure a new water distribution system, complete, in accordance with the plans and specifications, and contract documents. All new work shall be in accordance with Clay County Utility Authority Specifications and Details and Approved Materials Manual and Clay County Engineering Department Details and Specifications and any other Government Regulatory Agency. All work shall conform to the above whether or not specifically called out or noted on the plans.

02. GENERAL. All materials shall be in conformance to National Sanitation Foundation (NSF) 61 and those listed in the CCUA Approved Materials Manual. Materials shall be warranted by the Contractor as to materials, workmanship and accuracy of As-built drawings for a period of two years from the date of completion of the work or beneficial use of the facilities. Workmanship shall be of good quality; i.e., mains shall be laid in a uniform alignment, fittings shall be properly restrained, trenches shall be properly excavated and backfilled, fire hydrants and valve boxes shall be adjusted to finished grade. All water mains shall be installed with tracer wire per CCUA standard location wire details.

02.1 Contractor LICENSE AND APPROVAL. Utility reserves the right to approve or deny approval of Contractor prior to construction of any on-site or off-site utility facilities. Contractor must hold a State of Florida Underground Utility Contractors license, that named contracting company being the one doing the work on project, and demonstrate acceptable experience in the field of utility construction.

03. SURVEYS. The Utility Contractor shall provide all surveys necessary for the layout and construction of the work of his contract.

04. EARTHWORK. Earthwork shall include all excavation, fill and backfill (hand/machine), compaction and rough grading of materials encountered. No unsuitable materials, clay, muck, or peat (removed from pipe trenches are to be used for backfill. All fill or backfill shall be either sand or sandy clay, free of roots, trash or other debris. All backfill alongside of and to a height twenty-four inches above all pipe shall be free of clay or organic material, compacted by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 95% (outside of paving), 98% (under paving) of its optimum moisture content as determined by ASTM D099, latest. Copies of compaction density test reports from a licensed testing agency shall be made available to CCUA if requested.

05. JOINT RESTRAINT. All fittings shall be properly and adequately restrained against lateral movement at all water main tees, crosses, valves, bends and fire hydrants. Restrainers shall be Uni-Flange Series 1300, 1350, 1390 or approved equal as listed in the CCUA Approved Materials Manual and Specifications and Clay County Utility Authority Details and Specifications (SEE RESTRAINED JOINT SCHEDULE). See CCUA Approved Materials Manual for acceptable restrainers.

06. DUCTILE IRON PIPE. Ductile iron pipe shall conform to ANSI Specification A21.50 (AWWA C150) latest, "Thickness Design of Ductile Iron Pipe", Table 50.5, laying condition Type 2, internal operating pressure of 250 p.s.i. for an 8-foot depth of cover, Class 51 minimum and shall be ANSI A21.51 (AWWA C151), latest centrifugally cast pipe. Laying lengths shall be 20 feet or less in length, and shall be clearly marked with pressure rating, thickness, class, height of pipe without lining, length, and Manufacturer. Ductile iron pipe for water service shall be furnished with cement lining per AWWA C110, C115 and C151. This pipe shall have design values of 60,000 p.s.i. minimum tensile strength, and 42,000 p.s.i. minimum yield strength. Ductile iron pipe for service lines shall be used in any easement, right-of-way, between lots, and any instance where a building foundation or other permanent appurtenance is within 10' of the water main or a service line larger than 3".

07. DUCTILE IRON FITTINGS shall be C153 cement lined and suitable for the type and class of pipe to which connected. Gaskets shall be suitable for potable, domestic water service. Minimum working pressure shall be 150 p.s.i.

08. POLYVINYL CHLORIDE PIPE. Polyvinyl chloride pipe for water mains 4 inch through 24 inches in diameter, shall be DR18 (C900) PVC 1120, water supply pipe shall be DR22 (C900) PVC 1120, water supply pipe shall be DR25 (C900) PVC 1120, Pressure Class 185 psi, conforming to ASTM D-1784, D-2241, D-3139 and F-477, latest, or P.V.C. C900, Class 185, DR-25, conforming to ASTM D-1784, Cell Class 12454, ASTM F-477, ASTM D-3139, latest, and shall bear the seal of the National Sanitation Foundation. Pipe shall be color coded and marked "WATER" at every 12' along the barrel of the pipe, with lettering facing up. Couplings shall be rubber gasketed, push-on type conforming to ASTM D-2122. DR-18 shall be used for fire mains.

09. STEEL CASING PIPE. Steel casing pipe shall be of size indicated on the Drawings and shall conform to ASTM A139, with a minimum yield strength of 35,000 p.s.i.

10. POLYVINYL CHLORIDE (PVC 1120, SCHEDULE 80) PIPE shall conform to the requirements of ASTM D 1785. Fittings shall be suitable for type of installation required. All piping smaller than 4" shall be Schedule 80 PVC.

11. GATE VALVES AND BOXES. Gate valves shall be non-rising stem type and shall be suitable for a 200 p.s.i. non-shock working pressure. Gate valves shall be mechanical joint, flanged or screwed. Gate valves shall have a 2" operating nut and open lift. Gate valves shall have joints suitable for the type of main on which installed. Valves 3" and larger shall be iron body, bronze fitted with resilient seat. Boxes shall be of cast iron construction, 7/32" minimum wall thickness and shall be nontacky tar enamel coated. The word "WATER" shall be cast in the cover. Other gate valves smaller than 3" shall be heavy-duty bronze ball valves. See CCUA Approved Materials Manual for acceptable valves.

12. WATER METER BOXES. Developer shall be responsible for installation of meter boxes on all water services as part of the water main installation. All curb stops shall be adjusted to the proper elevation and shall be accessible for the installation of the water meter. The Contractor shall be required to open all boxes for the Authority's inspector at the final inspection. A treated 6"-6" fence post marker shall be painted blue for identification. Meter boxes shall not be placed in any sidewalk or driveway without the approval of CCUA.

## SPECIAL NOTES

1. The installation of all pipe regardless of the type or size shall be installed in accordance with the Manufacturer's specifications or recommended criteria for the pipe being installed. No pipe shall be installed with the joints over-assembled or over-homed. The reference mark (home-line) shall not be installed into the bell beyond the Manufacturer's recommendation. The Contractor shall be responsible to mark any pipe cut with length in a reference mark (home-line) placed at the correct location on the pipe according to the type and size pipe being installed. CCUA will not permit any pipe joint to be left in place if the joint is over-homed. It shall be the Contractor's responsibility to obtain information pertaining to installation of pipe to be installed from the Supplying Manufacturer and to install the pipe accordingly.

2. Deflection of all pipe regardless of the type or size shall be installed in accordance with the Manufacturer's specifications or recommended criteria for the pipe being installed. Any pipe which has been installed and does not meet the above listed criteria shall be removed and replaced with new pipe. All costs of removal and installation of said pipe shall be at the Contractor's expense, with no cost to the Owner, and shall meet all CCUA requirements.

3. Any utility pipe regardless of the type or size which has been abandoned, or taken out of service or out of use for any reason, shall either be removed from the ground for its entire length and disposed of in a legal manner, or shall be grout filled in place for its entire length. A CCUA inspector shall be present and witness the grout filling of the pipe from start to finish of the process. If the abandoned pipe is being removed, a CCUA inspector shall be present or be able to view the open ditch where pipe was removed from prior to backfilling that ditch.

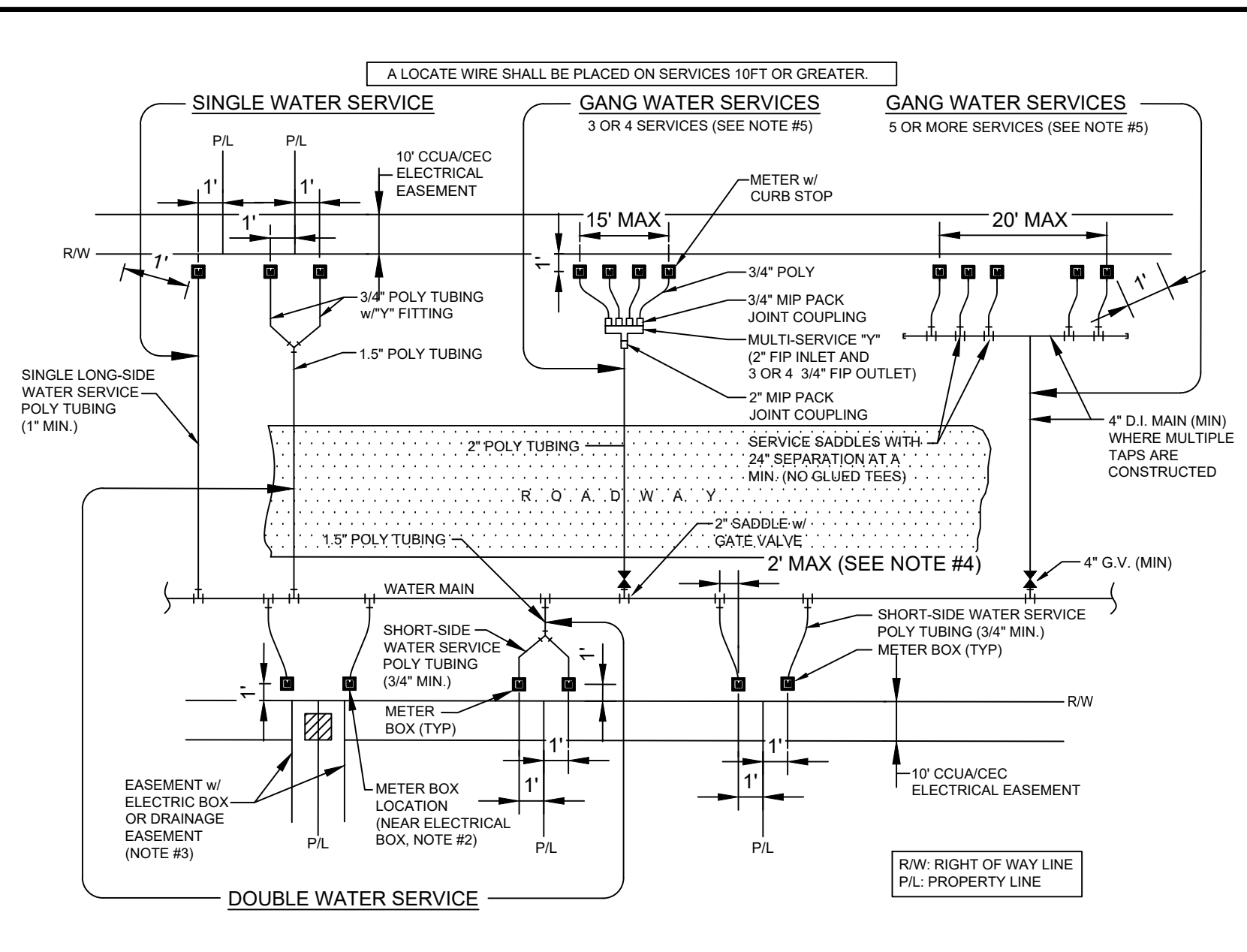
4. Disinfection Notes: a. Only CCUA staff is authorized to change or adjust existing CCUA valves. b. The General Superintendent of the Distribution and Collection System must be informed of any changes to existing CCUA valves. c. The scheduling of the disinfection process for new developments installing water mains must be coordinated with CCUA at least seven (7) days in advance. d. CCUA inspectors must be present to observe and monitor the disinfection process.

5. CLOSE OUT/COMPLETION. Minimum items required for Close Out / Completion for submittal to the Clay County Utility Authority will include:

- Construction Warranty from Developer in the form of a Bond, Letter of Credit or Cashier's Check for a two-year period.
- Warranty Certificate for a two-year warranty from the Contractor to the Developer and assignment of same to the Clay County Utility Authority (CCUA).
- Developer's Affidavit certifying there is no outstanding debt against utility assets to be deemed to CCUA.
- Value of Acceptance Report showing value of assets to be deemed to the CCUA.
- Bill of Sale to CCUA.
- Bacteriological Test(s).
- Pressure Test.
- Television Reports and Recorded DVDs.
- Density Reports.
- Locate Wire test.
- Final As-Built Drawings and disks.

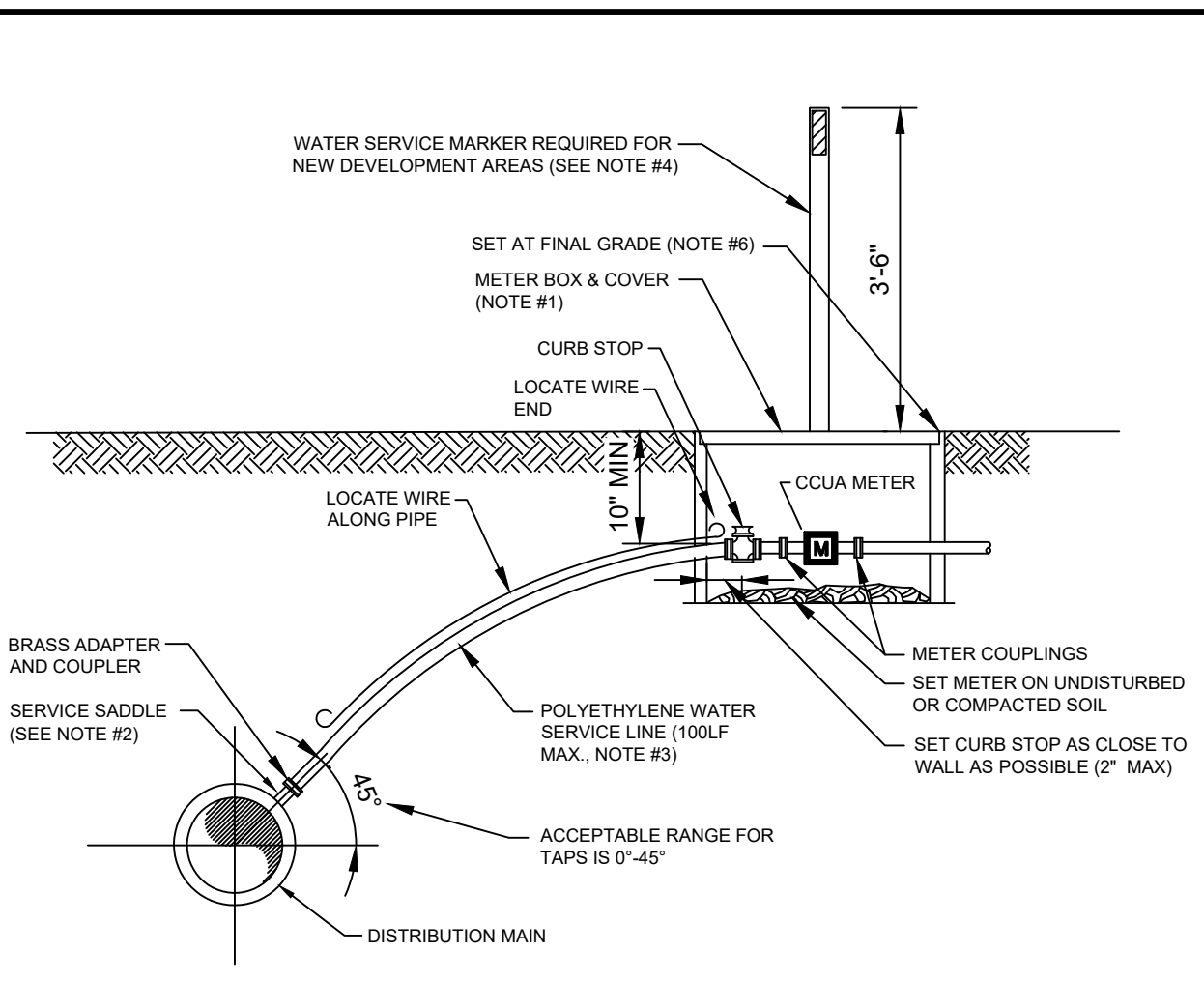
13. CURB STOPS. Curb stops shall be cast bronze, inverted key stop, roadway, with check, lock wing type, for locking in the closed position. See CCUA Approved Materials Manual for acceptable curb stops.

14. FIRE HYDRANTS. Fire hydrants shall be traffic type, 150 pound working pressure, AWWA Standard C502, latest revisions, with two 2 1/2" nozzles, one 4 1/2" nozzle and one 5 1/4" main valve. Fire hydrant shall be compression type with breakable coupling and bolts. Pipe connection shall be mechanical joint. Fire hydrants shall be painted silver, BLP Mobile Paints, Liquid Aluminum



- NOTES**
- THE SKETCHES ABOVE INDICATE TYPICAL WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL BE LOCATED 1' 0" OFF OF THE RW LINE.
  - UNLESS SPECIFIED OTHERWISE BY THE APPLICABLE COUNTY (CLAY OR BRADFORD), THE METER BOX SHALL BE LOCATED 1' 0" OFF OF THE RW LINE AND 1' 0" FOOT INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX) INSIDE PROPERTY LINES (IN LIEU OF 1' 0" FEET). UNLESS APPROVED OTHERWISE BY CCUA, THE WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN SIDEWALKS OR DRIVEWAYS). IF AN UNAPPROVED METER BOX IS IDENTIFIED BY CCUA, THEN THE CONTRACTOR OR CUSTOMER SHALL BE RESPONSIBLE FOR THE COST OF RELOCATING ANY METER BOX WHICH IS LOCATED IN THE SIDEWALK OR DRIVEWAY OR THE COST TO PROVIDE THE CORRECT METER BOX. CCUA SHALL APPROVE ALL DEVIATIONS TO THE ABOVE PRIOR TO CONSTRUCTION.
  - IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.
  - FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN) BETWEEN THE SERVICE'S SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 3/4" SERVICES, THE 1 1/2" POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH. IF LOCATE WIRE IS REQUIRED, THE WIRE SHALL RUN FROM THE METER BOX TO THE MAIN (WITH NO CONNECTION TO MAIN WIRE WITH THE LAST 24 INCHES STRIPPED OF INSULATION/BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY CCUA. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.
  - GANG WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTILE IRON PIPE (D.I.P.) WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. LOCATE WIRE SHALL EXTEND FROM ONE METER BOX TO CURB STOP AT WATER MAIN. FOR 5 OR MORE SERVICES IN ONE AREA, A WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS (TAPS STAGGERED AND AT 2 FEET ON CENTER-MIN). FOR WATER SUPPLY HEADERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED, THE HEADER PIPE SHALL BE 4" AT A MINIMUM. EXAMPLE: CONSTRUCT A 4" MAIN D.I.P. CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS, UTILIZING 4" G.V., 4" PIPE, 4"x1" SADDLES AND 1" CURB STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.
  - RECLAIMED WATER METER BOXES OR SERVICES SHALL BE CONSTRUCTED SIMILAR TO THE ABOVE AND SHALL BE LOCATED AT A MIN. OF 10' FROM THE POTABLE WATER SERVICE AND/OR BOX, AND NOT ALLOWED IN CONCRETE OR ASPHALT UNLESS APPROVED OTHERWISE BY CCUA.

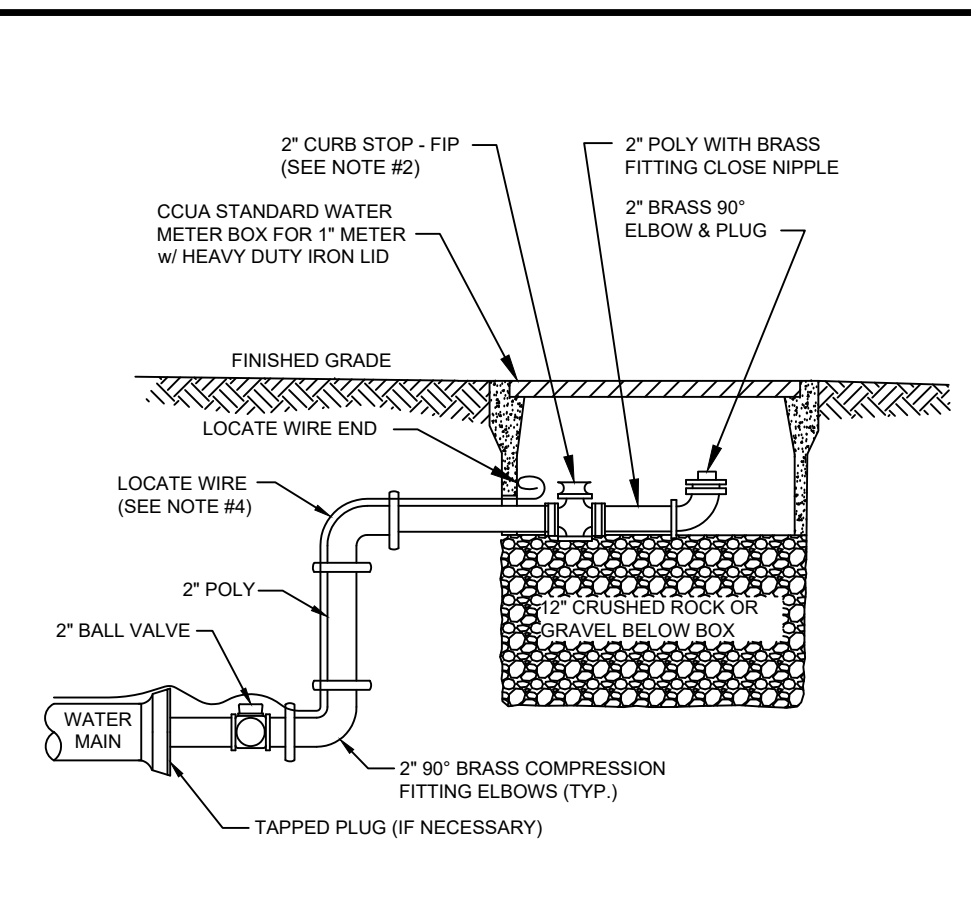
**WATER SERVICE INSTALLATIONS  
2" AND SMALLER METER**



- NOTES**
- SEE CCUA APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.
  - SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.
  - NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CCUA. CONSTRUCT POLY LINE WITH 36" (MIN.) COVER UNDER ROADWAYS. THE POLY WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (3/4" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS OTHERWISE APPROVED BY CCUA.
  - INSTALL PVC PLUG IN ALL CURB STOPS IF WATER SERVICE IS "NOT IN USE" (I.E. IF NO METER IS INSTALLED). IN ADDITION, INSTALL A 6" P.P.T. FENCE POST (TOP PAINTED BLUE) 12" OFF SIDE OF METER BOX. THE REMOVAL OR TRANSFER OF A WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE METER OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.
  - METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (I.E., NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).
  - LOCATE WIRING REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH / OFFSET GREATER THAN 2.0'.

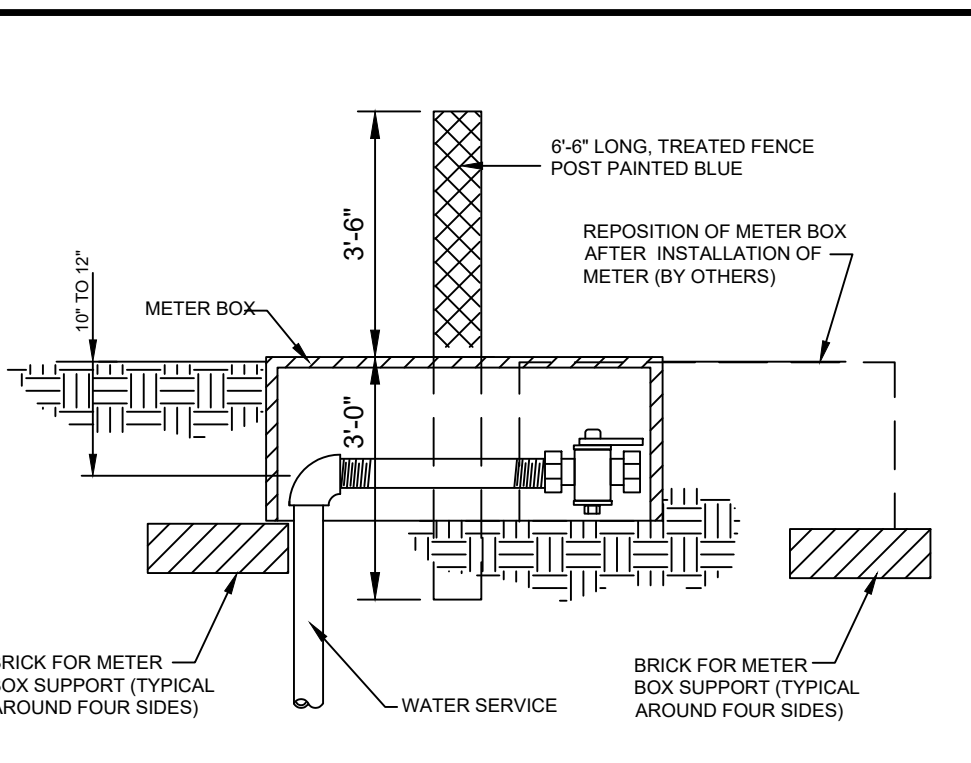
**WATER SERVICE DETAIL- 2" AND SMALLER METER**

**POLYETHYLENE WATER SERVICE DETAILS  
(NTS)**



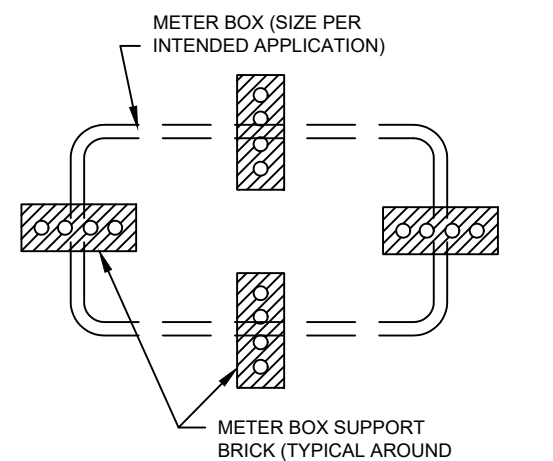
- NOTES**
- PIPE SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
  - THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
  - LOCATE WIRE FOR 10' OR GREATER IN LENGTH.
  - CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
  - PLACE 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

**FLUSHING VALVE BELOW GRADE**

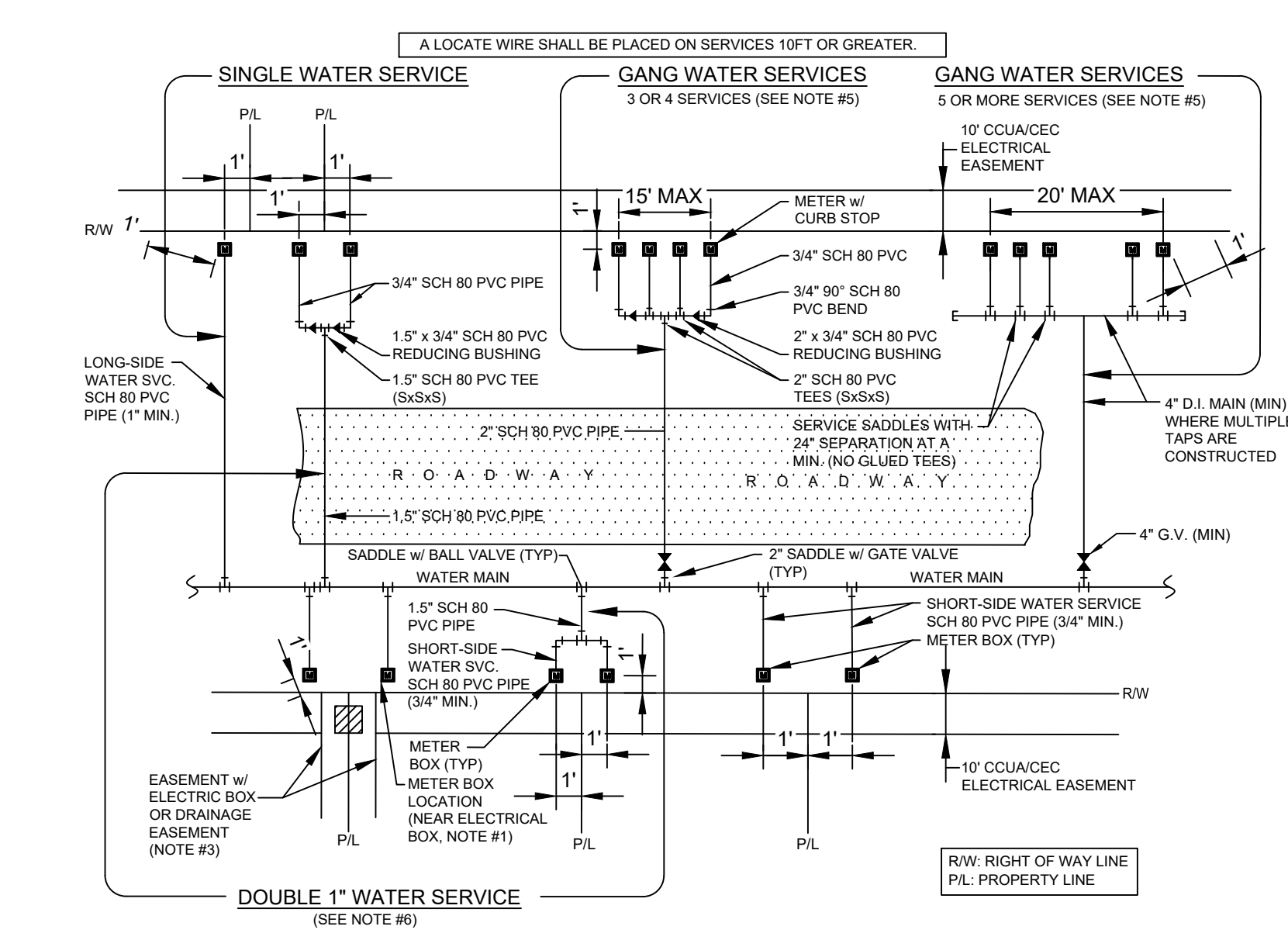


- NOTES**
- ALL SERVICES ARE TO BE CLEARLY MARKED BY A TREATED 6" LONG MARKER (FENCE) POST PAINTED BLUE.
  - ALL SERVICES ARE TO BE EXTENDED ABOVE GRADE UNTIL COMPLETION OF ALL GRADING ACTIVITIES. ONCE FINAL ROAD GRADING IS COMPLETE, LOWER SERVICES BY CUTTING OFF RISER 10" TO 12" BELOW FINAL GRADE AND INSTALL 90" BEND, NIPPLE AND LOCATE WIRE BALL VALVE AT THAT ELEVATION.
  - SET METER BOX OVER ENTIRE HORIZONTAL SECTION OF SERVICE LINE FROM LAST 90" BEND TO THE END OF THE CURB STOP.
  - BOX TO BE REPOSITIONED WHEN THE METER IS INSTALLED.
  - MARKER POST TO BE INSTALLED ADJACENT TO AND LOCATED AT THE MID SECTION OF THE METER BOX.

**WATER SERVICE MARKER POST**

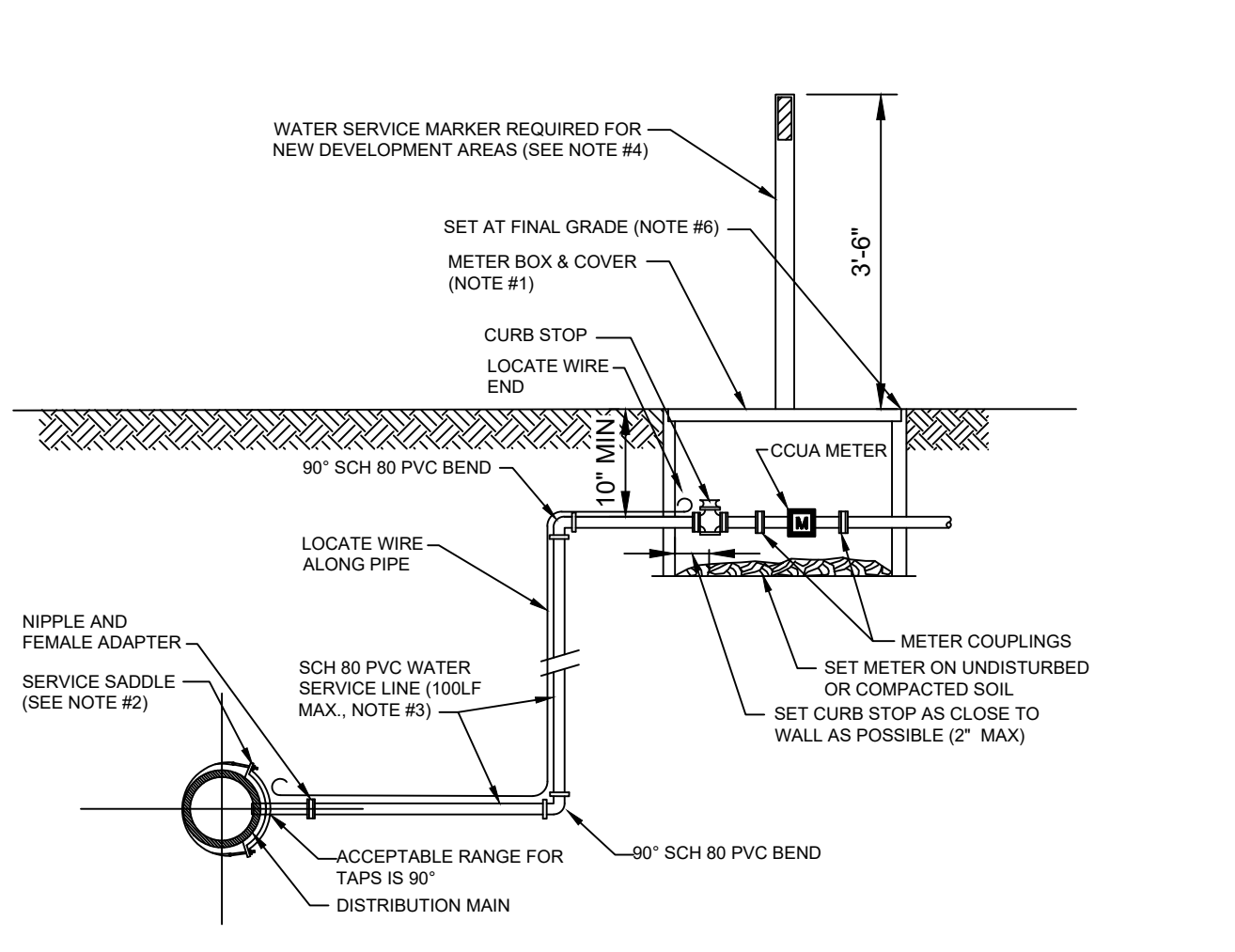


**METER BOX SUPPORT DETAIL**



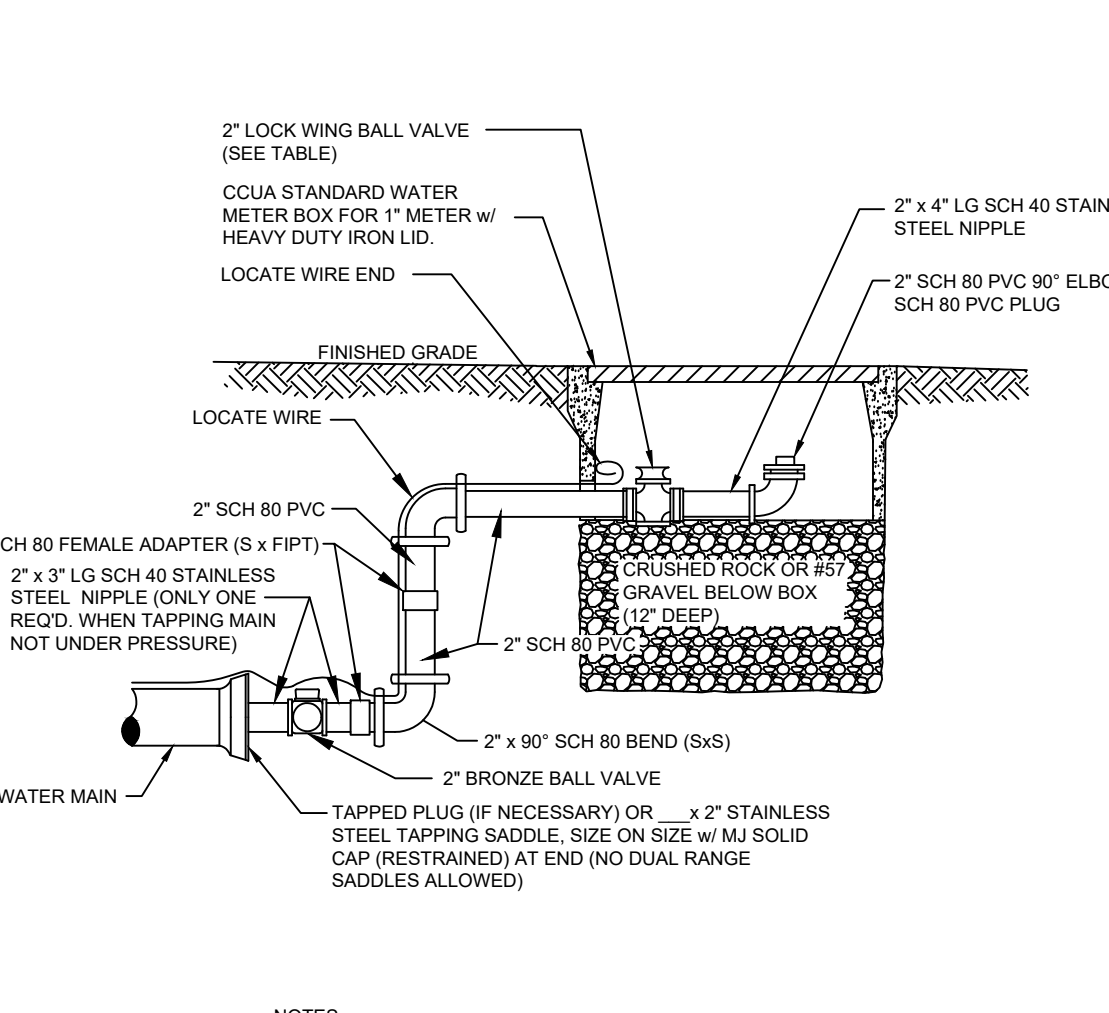
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  - DOUBLE 1" WATER SERVICES IS ALLOWED FOR SHORT SIDE OR LONG SIDE SERVICES AND WHERE SHOWN ON THE DRAWINGS.
  - RECLAIMED WATER METER BOXES OR SERVICES SHALL BE CONSTRUCTED SIMILAR TO THE ABOVE AND SHALL BE LOCATED AT A MIN. OF 10' FROM THE POTABLE WATER SERVICE AND/OR BOX, AND NOT ALLOWED IN CONCRETE OR ASPHALT UNLESS APPROVED OTHERWISE BY CCUA.

**SCH 80 PVC WATER SERVICE INSTALLATIONS  
2" AND SMALLER METER**



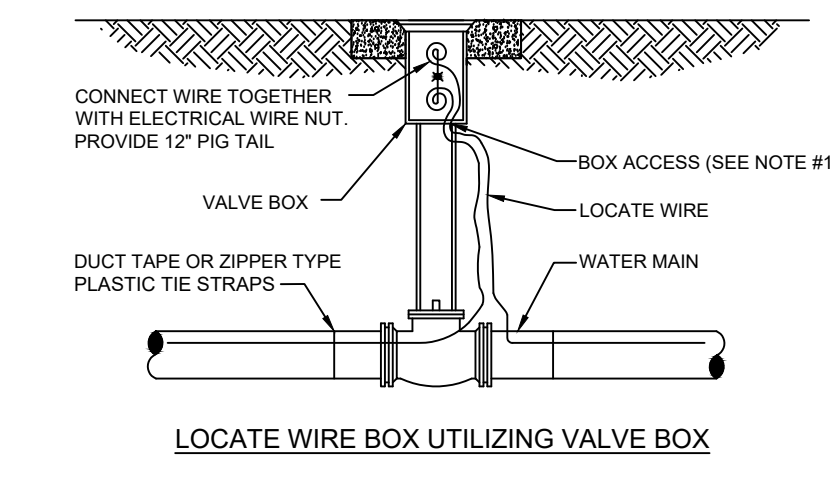
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- SEE CCUA APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.
  - SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.
  - NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CCUA. CONSTRUCT SCH 80 PVC LINE WITH 36" (MIN.) COVER UNDER ROADWAYS. THE SCH 80 PVC WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (3/4" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS OTHERWISE APPROVED BY CCUA.
  - INSTALL PVC PLUG IN ALL CURB STOPS IF WATER SERVICE IS "NOT IN USE" (I.E. IF NO METER IS INSTALLED). IN ADDITION, INSTALL A 6" P.P.T. FENCE POST (TOP PAINTED BLUE) 12" OFF SIDE OF METER BOX. THE REMOVAL OR TRANSFER OF A WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE METER OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.
  - METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (I.E., NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).
  - LOCATE WIRING REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH / OFFSET GREATER THAN 2.0'.

**SCH 80 PVC WATER SERVICE DETAIL  
2" AND SMALLER METER**

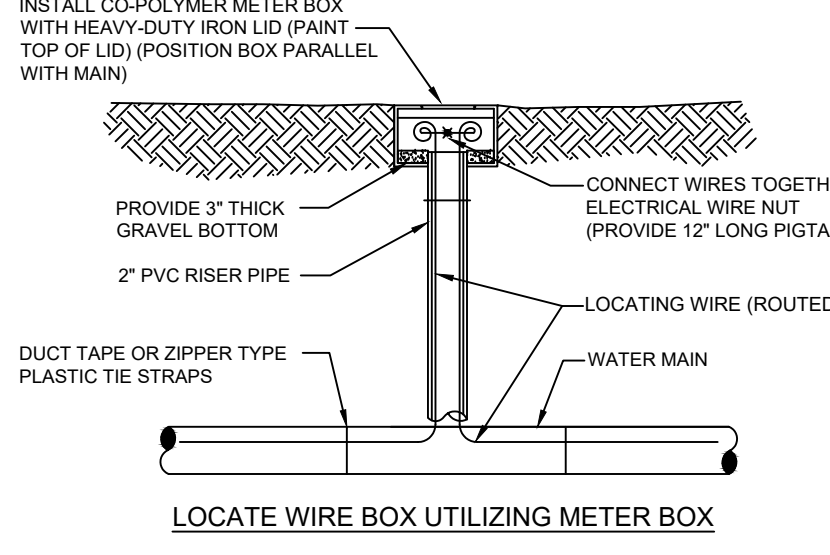


- NOTES**
- PIPE SHALL BE SCH 80 PVC. FITTINGS SHALL BE SCH 80 PVC.
  - THE 2" BALL VALVE SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
  - LOCATE WIRE FOR 10' OR GREATER IN LENGTH.
  - CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
  - PLACE 2 FEET PAST LAST WATER MAIN SERVICE CONNECTION.

**2" STANDARD SCH 80 PVC FLUSHING  
HYDRANT ON DEAD-END LINE**



**LOCATE WIRE BOX UTILIZING VALVE BOX**

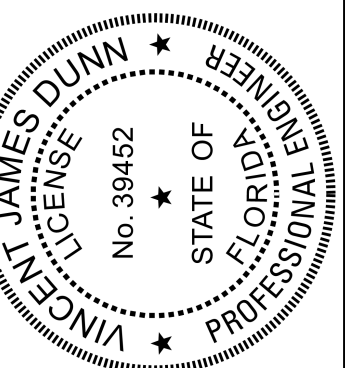


**LOCATE WIRE BOX UTILIZING METER BOX**

- NOTES**
- LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "Y" CUT IN THE 6" PVC RISER PIPE.

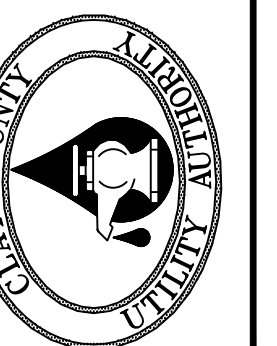
**LOCATE WIRE BOX**

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 09/21/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



STANDARD SCH80 AND  
POLYETHYLENE  
WATER SERVICE DETAILS

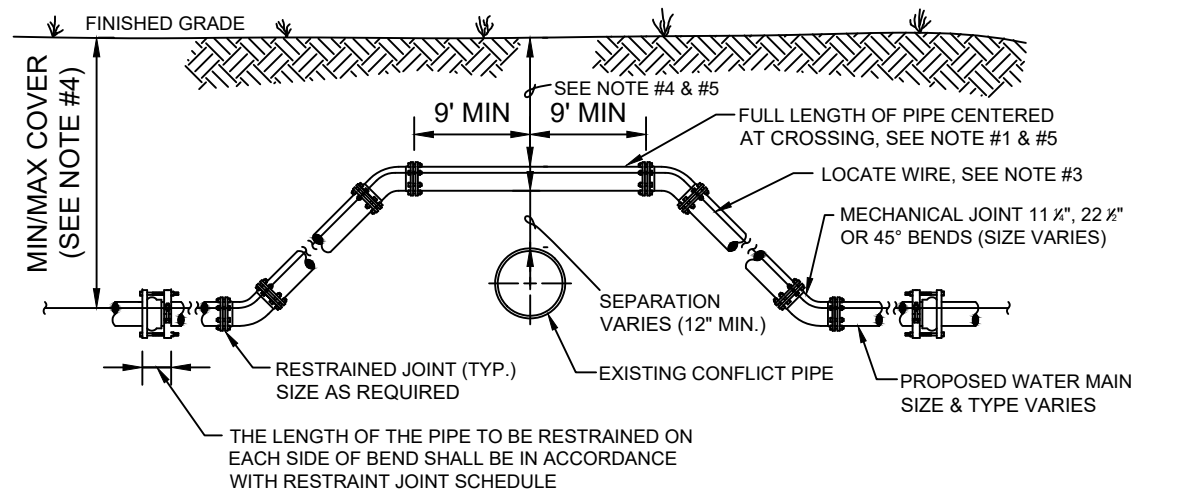
CLAY COUNTY  
UTILITY AUTHORITY  
3176 OLD JENNINGS ROAD  
MIDDLEBURG, FLORIDA 32068-3907  
TELEPHONE: (904) 272-5999



ACAD FILE NAME  
SHEET NO.  
WD-1

REVISION DESCRIPTION	BY	DATE	NO.
REVISED VARIOUS DETAILS REVISED METER DETAIL NEW DETAIL SHEET DESIGN	RND	JUNE 17 MARCH 19 JUNE 15	1
			2
			3
			4
			5

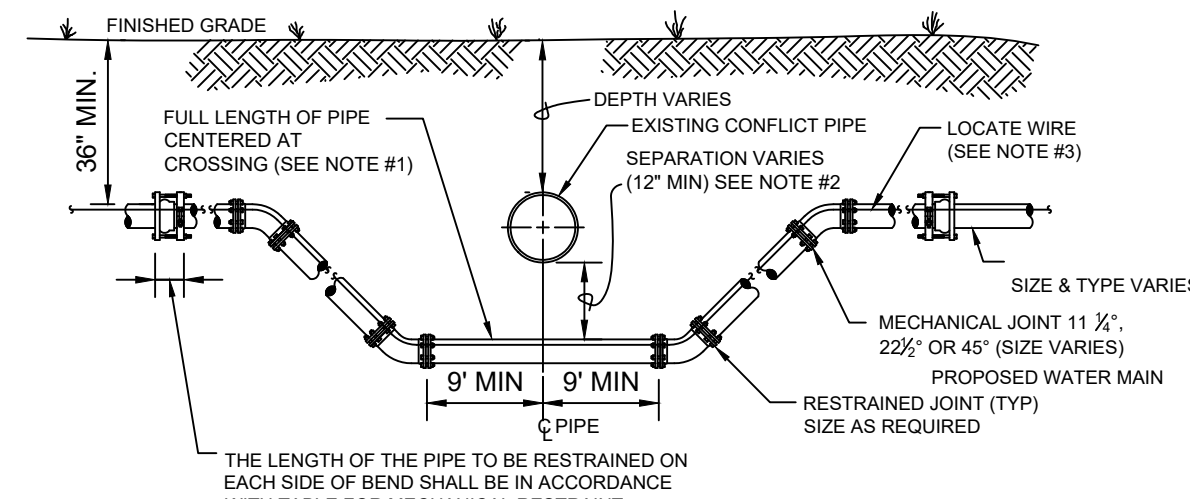
FOR PIPE RESTRAINT JOINT SCHEDULES, SEE STANDARD WATER MISCELLANEOUS DETAILS SHEET



CASE "A" CROSSING

- NOTES**
1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
  2. ALL BENDS TO BE RESTRAINED IN BOTH DIRECTIONS PER CCUA REQUIREMENTS, TO WITHSTAND 150 P.S.I. PRESSURE TEST.
  3. LOCATING WIRE REQUIRED.
  4. THE COVER OVER ALL PIPING SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY CCUA.
  5. IF UTILITY CONFLICT IS LOCATED IN A NON-TRAFFIC AREA (NO TRAFFIC LOADS) AND IF THE NEW PIPE SHALL BE DUCTILE IRON PIPE, THEN THE MINIMUM COVER MAY BE REDUCED TO 24 INCHES (ONLY IN THE AREA OF THE CONFLICT).

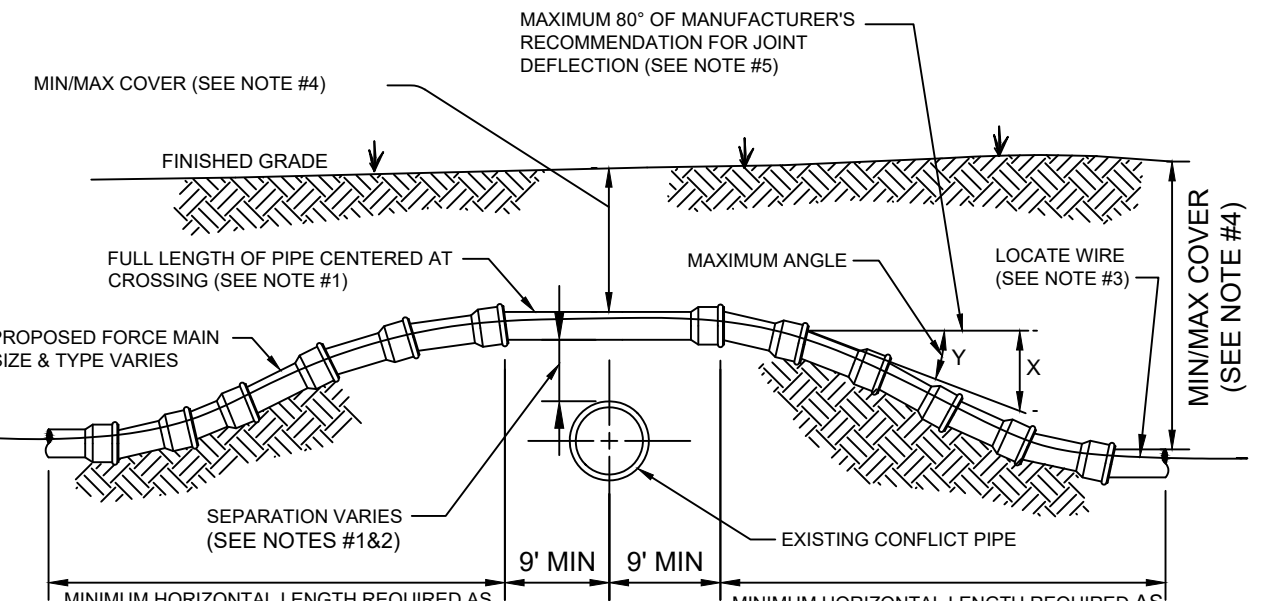
**ADJUSTMENT OVER EXISTING UTILITIES MECHANICAL RESTRAINTS (NTS)**



CASE "B" CROSSING

- NOTES**
1. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D 1557.
  2. LOCATING WIRE REQUIRED.
  3. ALL BENDS TO BE RESTRAINED IN BOTH DIRECTIONS PER CCUA REQUIREMENTS, TO WITHSTAND 150 P.S.I. PRESSURE TEST.
  4. THE COVER FOR ALL PIPING SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY CCUA.

**ADJUSTMENT UNDER EXISTING UTILITIES MECHANICAL RESTRAINTS (NTS)**



CASE "A" CROSSING

- NOTES**
1. A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.
  2. ALL BENDS TO BE RESTRAINED IN BOTH DIRECTIONS PER CCUA REQUIREMENTS TO WITHSTAND 150 P.S.I. PRESSURE TEST.
  3. LOCATING WIRE REQUIRED.
  4. THE COVER OVER ALL PIPING SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84" UNLESS OTHERWISE APPROVED BY CCUA. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.
  5. CCUA ONLY ALLOWS 80% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED. UNLESS OTHERWISE APPROVED BY CCUA. THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTION. ALL OFFSETS ARE BASED ON MINIMUM 20L.P. PIPE LENGTH.

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

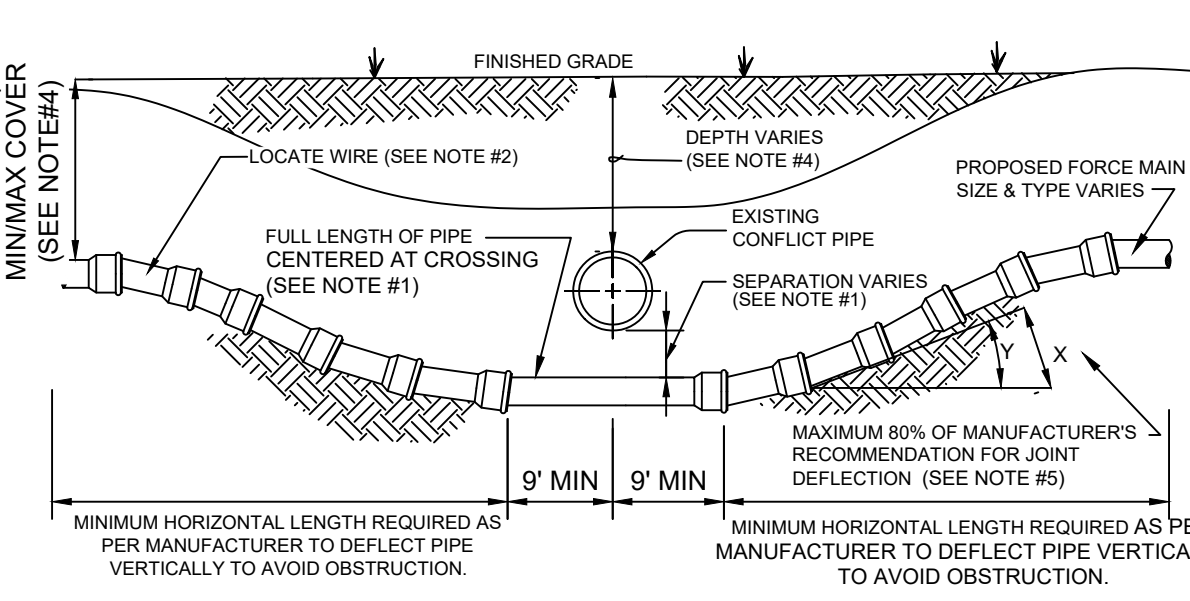
PVC PIPE				DUCTILE IRON PIPE (Mechanical Joint)				
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS	PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS	
2	30	7"	158 FT	2	4	27	6.5"	177 FT
4	10	2.4"	480 FT	6	10	2.4"	480 FT	200 FT
6	10	2.4"	480 FT	8	10	2.4"	480 FT	273 FT
8	10	2.4"	480 FT	10	10	2.4"	480 FT	400 FT
10	10	2.4"	480 FT	12	8.5	2"	564 FT	477 FT
12	8.5	2"	564 FT	14-24	5	1.2"	960 FT	600 FT
14-24	5	1.2"	960 FT	30-48	3.25	0.8"	1477 FT	687 FT
30-48	3.25	0.8"	1477 FT	42-48	6.7	1.6"	716 FT	716 FT

**ADJUSTMENT OVER EXISTING UTILITIES PIPE JOINT DEFLECTION**

**WATER MAIN AND NON-WATER MAIN SEPARATION REQUIREMENTS - NOTES**

1. SEPARATION OF WATER AND SEWER MAINS. HORIZONTAL AND VERTICAL SEPARATION BETWEEN POTABLE WATER SYSTEM MAINS AND OR APURTAINANCES AND SANITARY OR STORM SEWERS, WASTEWATER OR STORM WATER FORCE MAINS, AND RECLAIMED WATER MAINS SHALL BE IN ACCORDANCE WITH RULE 62-555.314 F.A.C.
2. NEW OR RELOCATED UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORM WATER FORCE MAIN, RECLAIMED WATER MAIN REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. OR PROPOSED VACUUM-TYPE SANITARY SEWER.
3. NEW OR RELOCATED UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF AN EXISTING OR PROPOSED STORM SEWER, STORM WATER FORCE MAIN, OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
4. NEW OR RELOCATED UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE, OR AT LEAST 12 INCHES BELOW, THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE. (SEE CROSSING "A" AS SHOWN ON DETAIL SHEET WAT-02).
5. NEW OR RELOCATED UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
6. AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (4) AND (5) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORM WATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
7. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SO THAT THE HYDRANTS ARE AT LEAST THREE (3) FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER; AT LEAST THREE (3) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST SIX (6) FEET, AND PREFERABLY TEN (10) FEET, FROM ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER OR WASTEWATER FORCE MAIN.
8. WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN THE OTHER PIPELINE, THE CONTRACTOR SHALL CONSULT THE DESIGN ENGINEER TO OBTAIN APPROVAL OF ANY ALTERNATIVE CONSTRUCTION METHODS PRIOR TO CONSTRUCTION.

**NOTES ON UTILITY SEPARATION REQUIREMENTS**



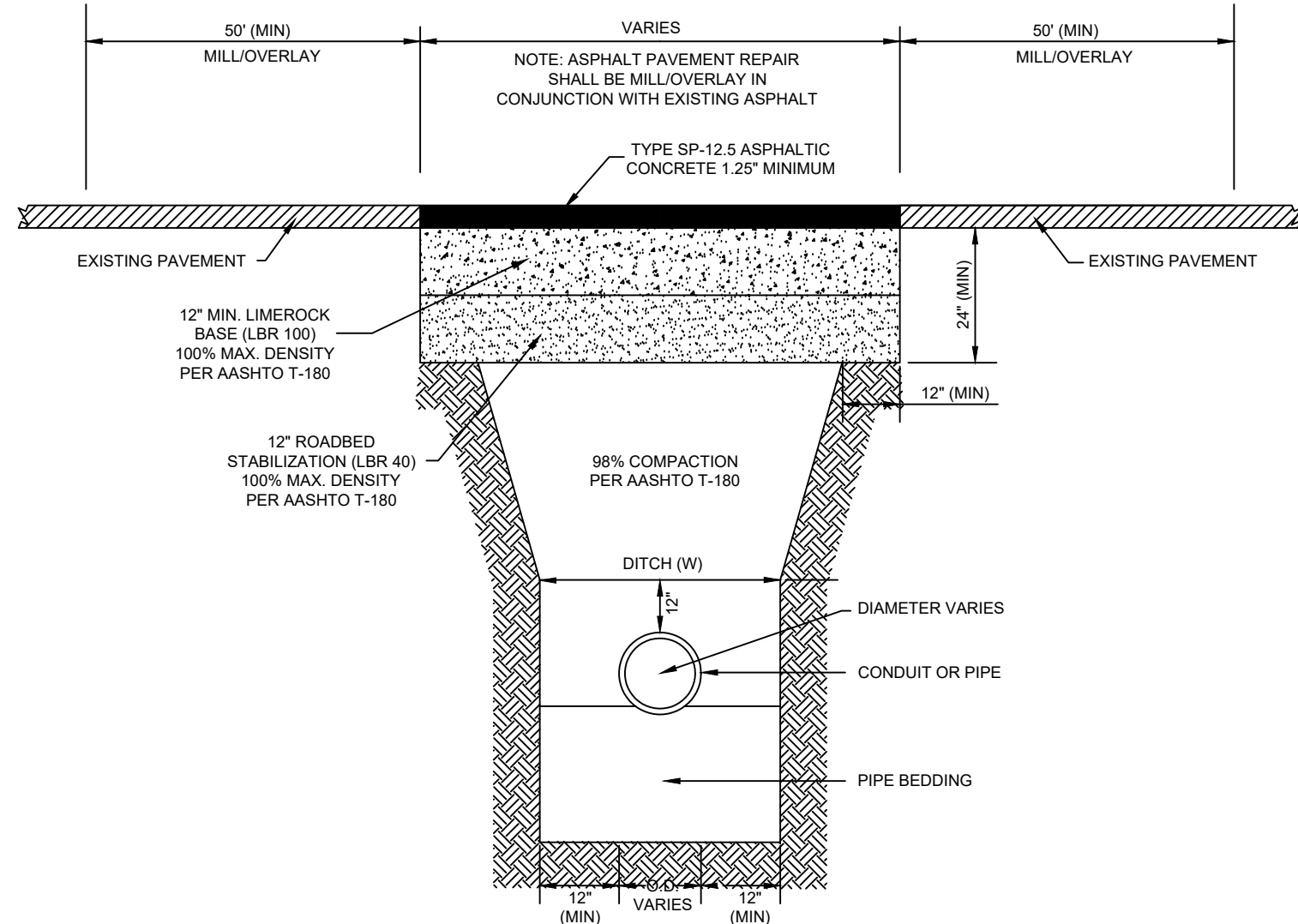
CASE "B" CROSSING

- NOTES**
1. IF EXISTING CONFLICT PIPE IS A WATER MAIN, 12 INCHES OF SEPARATION IS REQUIRED. A FULL LENGTH OF PIPE SHALL BE CENTERED UNDER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSING.
  2. LOCATING WIRE REQUIRED.
  3. THE COVER OVER ALL PIPING SHALL BE MINIMUM OF 36" (PAVED AND UNPAVED) AND MAXIMUM OF 84" UNLESS OTHERWISE APPROVED BY CCUA. THE SOILS BETWEEN THE NEW MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.
  4. CCUA ONLY ALLOWS 80% OF THE PIPE MANUFACTURER'S RECOMMENDATION FOR JOINT DEFLECTION. BENDING THE PIPE BARREL IS NOT ALLOWED. UNLESS OTHERWISE APPROVED BY CCUA. THE MAXIMUM ARE LISTED IN TABLE BELOW. ONLY MANUAL FORCE CAN BE UTILIZED TO OBTAIN THESE JOINT DEFLECTION. ALL OFFSETS ARE BASED ON MINIMUM 20L.P. PIPE LENGTH.

MAXIMUM ALLOWED OFFSET FOR PIPE BY JOINT DEFLECTION

PVC PIPE				DUCTILE IRON PIPE (Mechanical Joint)				
PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS	PIPE SIZE (IN.)	(X) MAX. OFFSET (IN.)	(Y) ANGLE AT ONE BELL	RESULTING RADIUS OF CURVE WITH 20FT. LENGTHS	
2	30	7"	158 FT	2	4	27	6.5"	177 FT
4	10	2.4"	480 FT	6	24	5.7"	200 FT	
6	10	2.4"	480 FT	8-12	17.5	4.2"	273 FT	
8	10	2.4"	480 FT	14-16	12	2.9"	400 FT	
10	10	2.4"	480 FT	18-20	10	2.4"	477 FT	
12	8.5	2"	564 FT	24-30	8	1.9"	600 FT	
14-24	5	1.2"	960 FT	36	7	1.7"	687 FT	
30-48	3.25	0.8"	1477 FT	42-48	6.7	1.6"	716 FT	

**ADJUSTMENT UNDER EXISTING UTILITIES PIPE JOINT DEFLECTION**



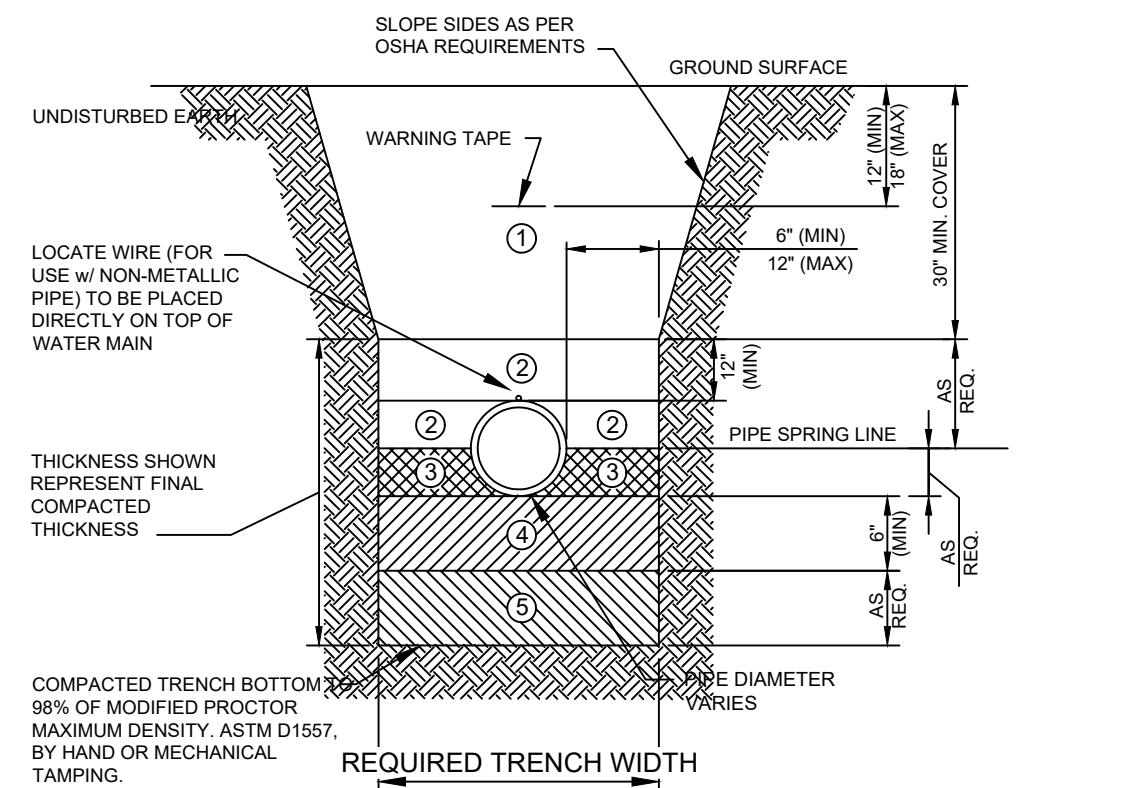
**REVISED CLAY COUNTY CASE 2 ASPHALT PAVEMENT REPAIR DETAIL (NTS)**

**LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314**

Other Pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossings (Full Joint Centered)
Storm Sewer, Stormwater Force Main, Reclaimed Water (2)	3 ft. minimum	Water Main 12 inches is the minimum, except for storm sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 3 ft. minimum
Vacuum Sanitary Sewer	10 ft. preferred 3 ft. minimum	Water Main 12 inches preferred 6 inches minimum	Alternate 3 ft. minimum
Gravity or Pressure Sanitary Sewer, Sanitary Sewer Force Main, Reclaimed Water (4)	10 ft. preferred 6 ft. minimum (3)	Water Main 12 inches is the minimum, except for gravity sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 6 ft. minimum
On-Site Sewage Treatment & Disposal System	10 ft. minimum	---	---

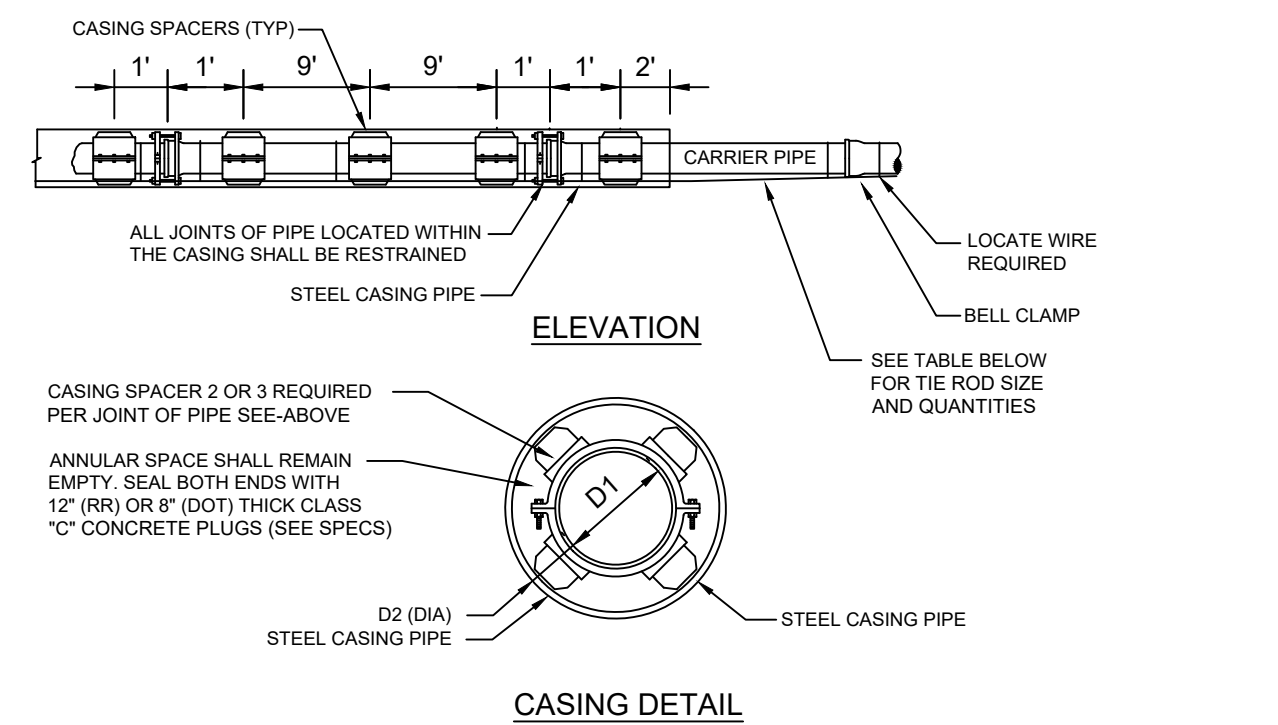
- (1) Water main should cross above other pipe. When water main must be below other pipe, the minimum separation is 12 inches.
- (2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C.
- (3) 3 ft. for gravity sanitary sewer where the bottom of the water main is laid at least 6 inches above the top of the gravity sanitary sewer.
- (4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.
- (5) All bells must be offset.

*Disclaimer - This document is provided for your convenience only. Please refer to F.A.C. Rule 62-555.314 for additional construction requirements.*



1. FINAL BACKFILL - CLEAN, WELL GRADED MATERIAL IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. INITIAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES. LOOSE MEASUREMENT, AND SHALL BE COMPACTED TO AT LEAST 95% (UNPAVED) AND 98% (PAVED) MODIFIED PROCTOR MAXIMUM DRY DENSITY, ASTM D-1557.
2. INITIAL BACKFILL - CLEAN, WELL GRADED MATERIAL IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. HAUNCHING SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES. LOOSE MEASUREMENT, AND SHALL BE COMPACTED TO AT LEAST 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY, ASTM D-1557. BY HAND TAMPING OR MECHANICAL TAMPING. PROPERLY SHAPED BELL HOLES SHALL BE EXCAVATED IN THE COMPACTED BEDDING TO PERMIT ASSEMBLY OF THE PIPE. SEE SPECIFICATIONS FOR UNSUITABLE MATERIALS EXCAVATION IF REQUIRED. TRENCH BOTTOM IS AT BOTTOM OF PIPE IF UNSUITABLE MATERIAL IS NOT ENCOUNTERED.
3. HAUNCHING - CLEAN, WELL GRADED MATERIAL IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. HAUNCHING SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES. LOOSE MEASUREMENT, AND SHALL BE COMPACTED TO AT LEAST 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY, ASTM D-1557. BY HAND TAMPING OR MECHANICAL TAMPING. PROPERLY SHAPED BELL HOLES SHALL BE EXCAVATED IN THE COMPACTED BEDDING TO PERMIT ASSEMBLY OF THE PIPE. SEE SPECIFICATIONS FOR UNSUITABLE MATERIALS EXCAVATION IF REQUIRED. TRENCH BOTTOM IS AT BOTTOM OF PIPE IF UNSUITABLE MATERIAL IS NOT ENCOUNTERED.
4. BEDDING - CLEAN, WELL GRADED MATERIAL IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT SPECIFICATIONS. BEDDING SHALL BE INSTALLED IN COMPLETELY DEWATERED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES. LOOSE MEASUREMENT, AND SHALL BE COMPACTED TO AT LEAST 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY, ASTM D-1557. BY HAND TAMPING OR MECHANICAL TAMPING. PROPERLY SHAPED BELL HOLES SHALL BE EXCAVATED IN THE COMPACTED BEDDING TO PERMIT ASSEMBLY OF THE PIPE. SEE SPECIFICATIONS FOR UNSUITABLE MATERIALS EXCAVATION IF REQUIRED. TRENCH BOTTOM IS AT BOTTOM OF PIPE IF UNSUITABLE MATERIAL IS NOT ENCOUNTERED.
5. REFILL - REQUIRED WHERE TRENCH HAS BEEN OVER-EXCAVATED. REFILL SHALL BE INSTALLED IN COMPLETELY DEWATERED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES AND SHALL BE COMPACTED TO 98% OF ASTM D-1557 MAX DRY DENSITY, BY HAND OR MECHANICAL TAMPING.

**TYPICAL PIPE TRENCH DETAIL (NTS)**



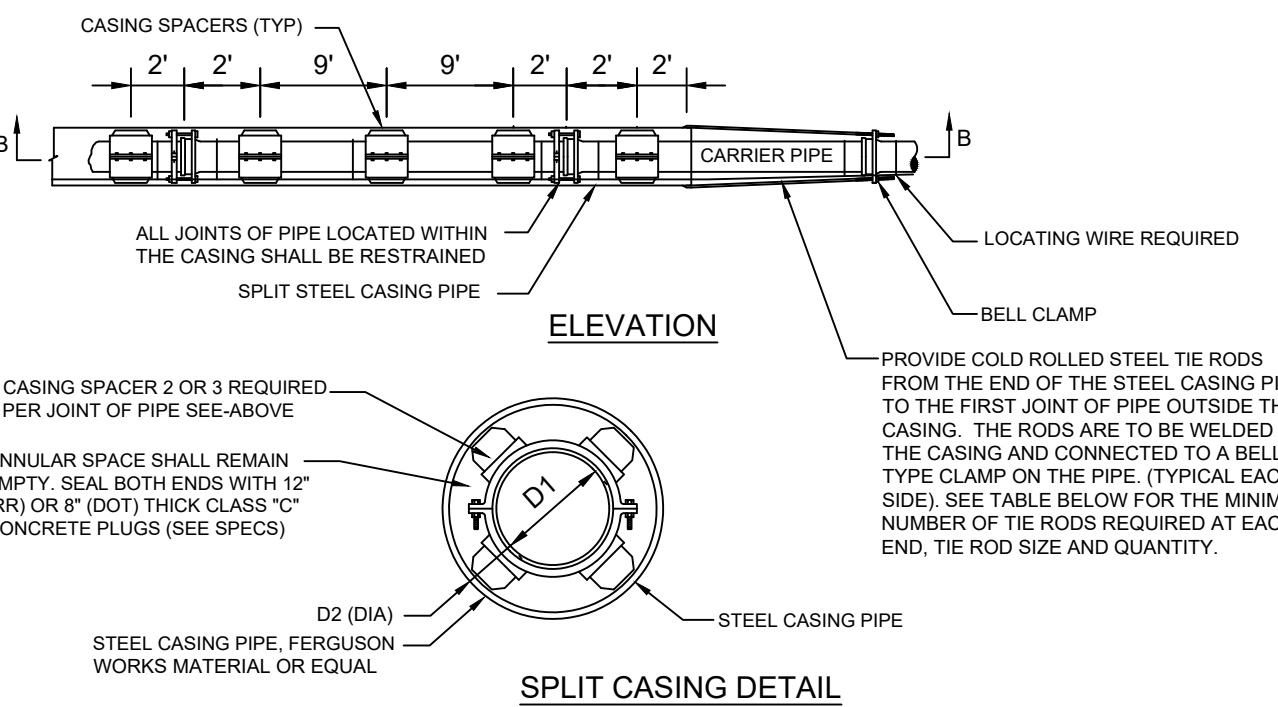
CASING DETAIL

**CASING SIZE SCHEDULE**

CARRIER PIPE NO. DIA. (D1)	CARRIER TYPE AND CASING PIPE SIZES (MIN) IN INCHES												
	4	6	8	10	12	14	16	18	20	24	30	36	
CASING PIPE NOM. DIA. (D2)	14	16	20	24	30	30	30	36	42	48	54	60	
WALL THICKNESS RAILROAD (CSK)	0.25	0.281	0.375	0.375	0.375	0.469	0.469	0.469	0.562	0.625	0.688	0.781	
WALL THICKNESS DOT	0.25	0.25	0.25	0.25	0.312	0.312	0.312	0.375	0.50	0.50	0.50	0.50	
NUMBER OF THE RODS (EACH END)	2	2	2	4	4	4	6	6	8	8	12	14	14
THE ROD SIZE (DIA.)	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1 1/4"	1 1/4"

- NOTES**
1. MIN. COVER TO TOP OF CASING: a) FDOT-3.0' RAILROAD-5.5' TO BASE OF RAIL, 4.5' FOR SECONDARY OR INDUSTRIAL TRACKS.
  2. ALL JOINTS WITHIN CARRIER PIPE SHALL BE MECHANICAL RESTRAINED JOINTS.
  3. FOR STREET USES WHICH ARE NOT DOT OR RAILROAD, USE DOT CASING THICKNESS UNLESS OTHERWISE INDICATED BY ENGINEER.
  4. CASING PIPE SHALL BE FURNISHED IN NOMINAL 8 FOOT LENGTHS (MIN.) UNLESS OTHERWISE INDICATED ON THE DRAWING OR APPROVED BY CCUA.
  5. PIPE TO BE USED AS A CASING SHALL CONFORM TO EITHER ASTM STANDARD A139 FOR "ELECTRIC FUSION (ARC) WELDED STEEL PIPE" WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI OR "API SPECIFICATION API-5LX, GRADE X-42 WELDED STEEL PIPE".

**TYPICAL CASING DETAIL - WATER (NTS)**

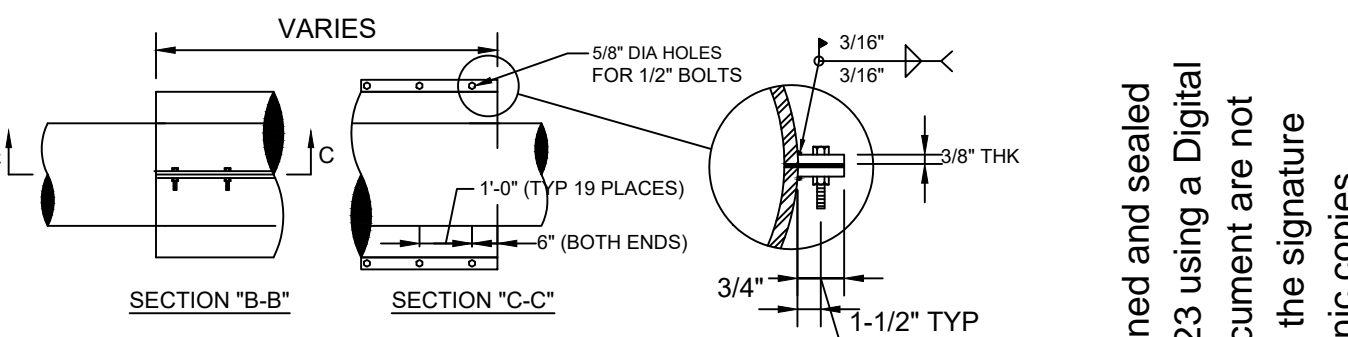


SPLIT CASING DETAIL

**CASING SIZE SCHEDULE**

CARRIER PIPE NO. DIA. (D1)	CARRIER TYPE AND CASING PIPE SIZES (MIN) IN INCHES													
	4	6	8	10	12	14	16	18	20	24	30	36	42	48
CASING PIPE NOM. DIA. (D2)	14	16	20	24	30	30	30	36	42	48	54	60	66	72
WALL THICKNESS RAILROAD (CSK)	0.25	0.281	0.375	0.375	0.375	0.469	0.469	0.469	0.562	0.625	0.688	0.781	0.844	0.938
WALL THICKNESS DOT	0.25	0.25	0.25	0.25	0.312	0.312	0.312	0.375	0.50	0.50	0.50	0.50	0.50	0.50
NUMBER OF THE RODS (EACH END)	2	2	2	4	4	4	6	6	8	8	12	14	14	16
THE ROD SIZE (DIA.)	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1 1/4"	1 1/4"

- NOTES**
1. NOT ALLOWED UNDER RAILROADS.
  2. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE CARRIER PIPE BELL OR COUPLING.
  3. ALL JOINTS WITHIN CARRIER PIPE SHALL BE MECHANICAL RESTRAINED JOINTS.
  4. FOR STREET USES WHICH ARE NOT DOT OR RAILROAD, USE DOT CASING THICKNESS UNLESS OTHERWISE INDICATED BY ENGINEER.
  5. CASING PIPE SHALL BE FURNISHED IN NOMINAL 8 FOOT LENGTHS (MIN.) UNLESS OTHERWISE INDICATED ON THE DRAWING OR APPROVED BY CCUA.
  6. PIPE TO BE USED AS A CASING SHALL CONFORM TO EITHER ASTM STANDARD A139 FOR "ELECTRIC FUSION (ARC) WELDED STEEL PIPE" WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI OR "API SPECIFICATION API-5LX, GRADE X-42 WELDED STEEL PIPE".



- MATERIAL:**
- |          |   |
|----------|---|
| PIPE     | - ATSM A53, GRADE B, ERW, STD WALL, CARBON STEEL      |
| PLATE    | - STN A36, GRADE B, CARBON STEEL (THICKNESS AS NOTED) |
| WELDS    | - ALL WELDS SHALL BE PERFORMED BY A CERTIFIED WELDER  |
| INTERIOR | - BARE  |
| EXTERIOR | - BARE  |

**TYPICAL SPLIT CASING DETAIL - WATER (NTS)**

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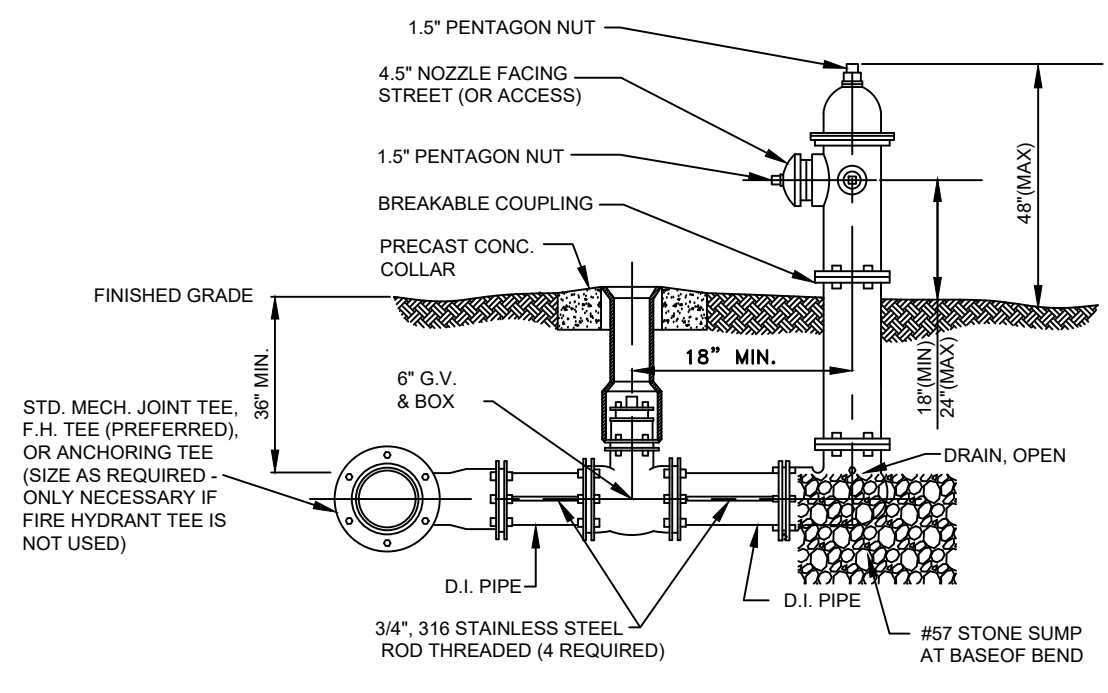


**STANDARD WATER CASING, CROSSING TYPE AND PIPE RESTRAINT DETAILS**

**CLAY COUNTY UTILITY AUTHORITY**  
 3176 OLD JENNINGS ROAD  
 MIDDLEBURG, FLORIDA 32068-3907  
 TELEPHONE: (904) 272-5999

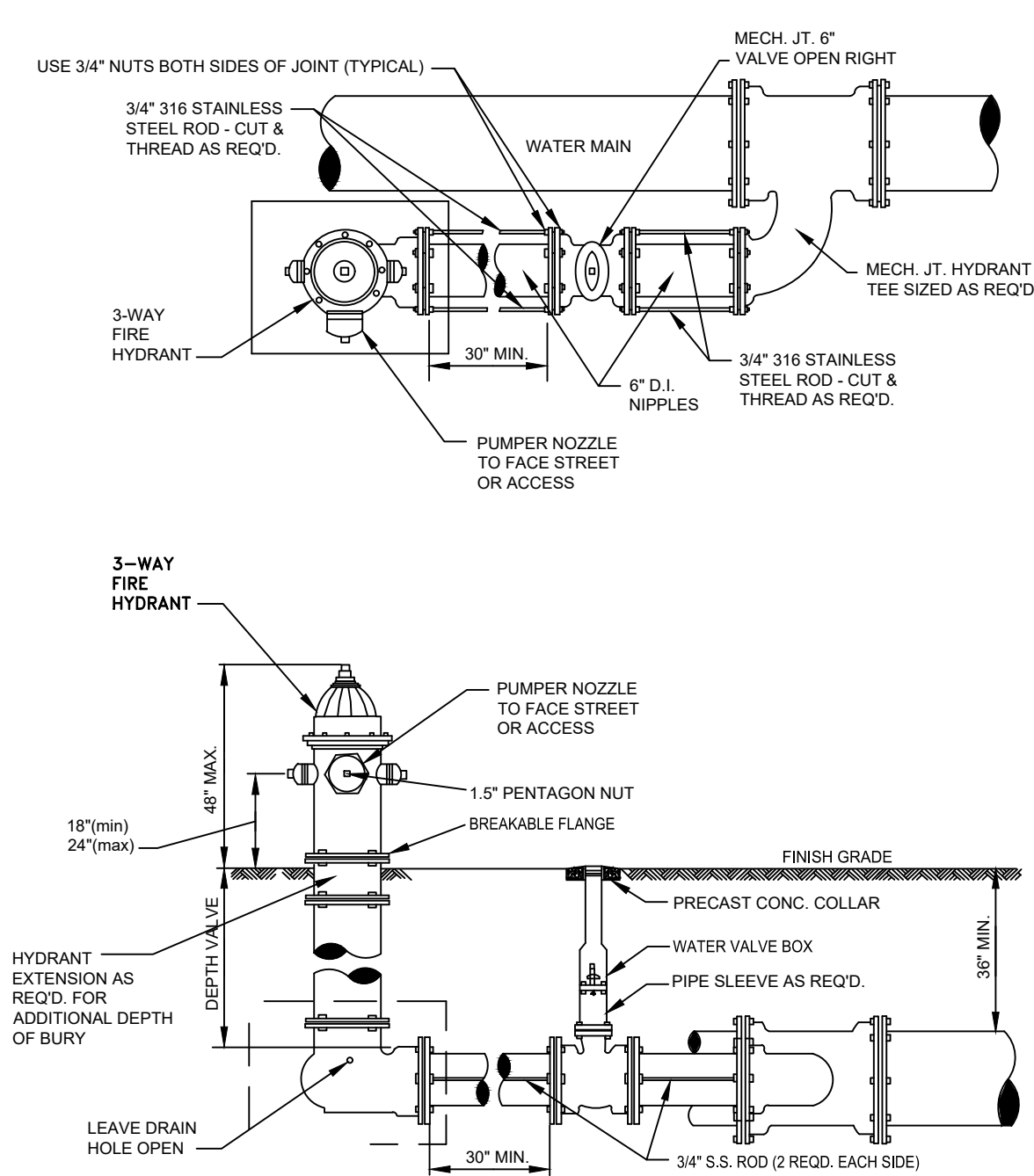
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**WD-2**





**FIRE HYDRANT (STANDARD)**

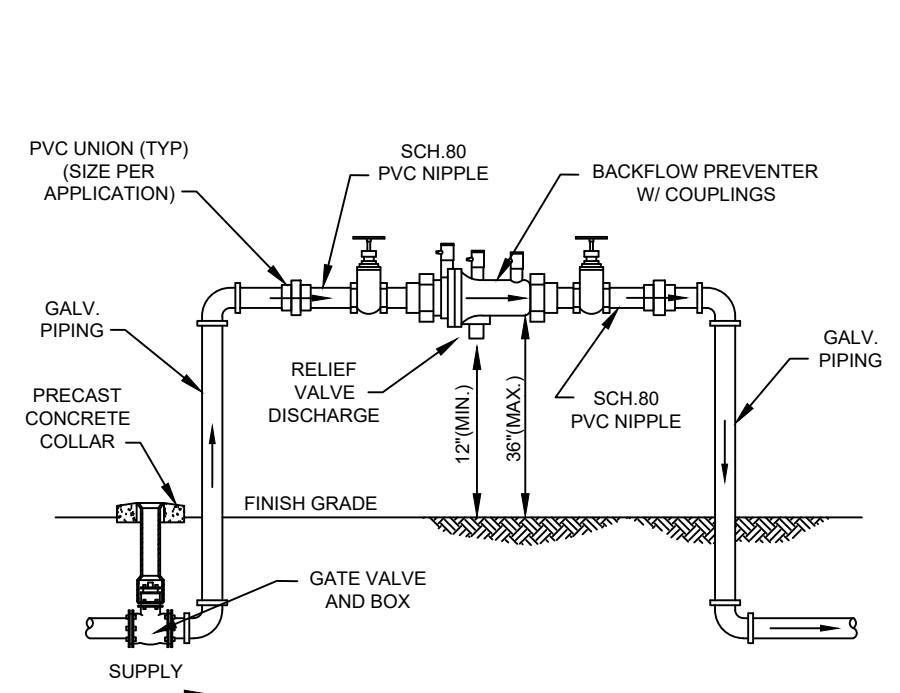
SEE CCUA APPROVED MATERIALS MANUAL



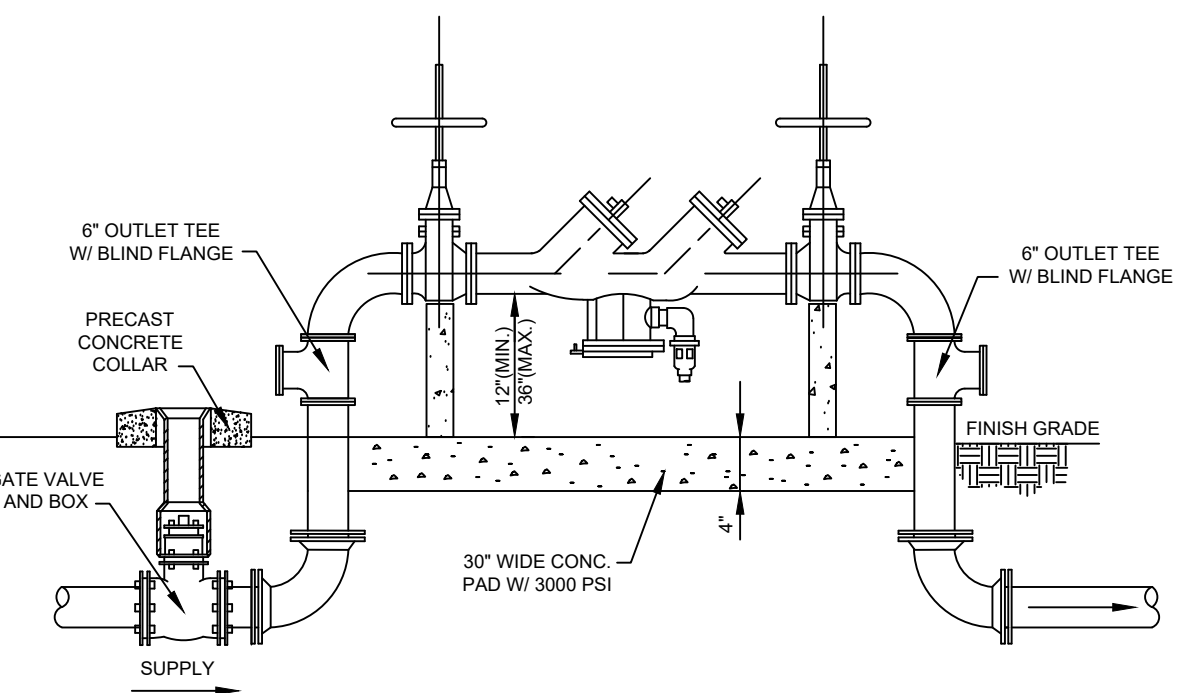
**FIRE HYDRANT - LIMITED SPACE**

HYDRANT INSTALLATION FOR LIMITED SPACE WITH MECH. JOINT HYDRANT TEE  
 FIRE HYDRANT CANNOT BE LOCATED LESS THAN 5'-0" FROM BACK OF CURB AND NO MORE THAN 20'-0" BACK OF CURB.

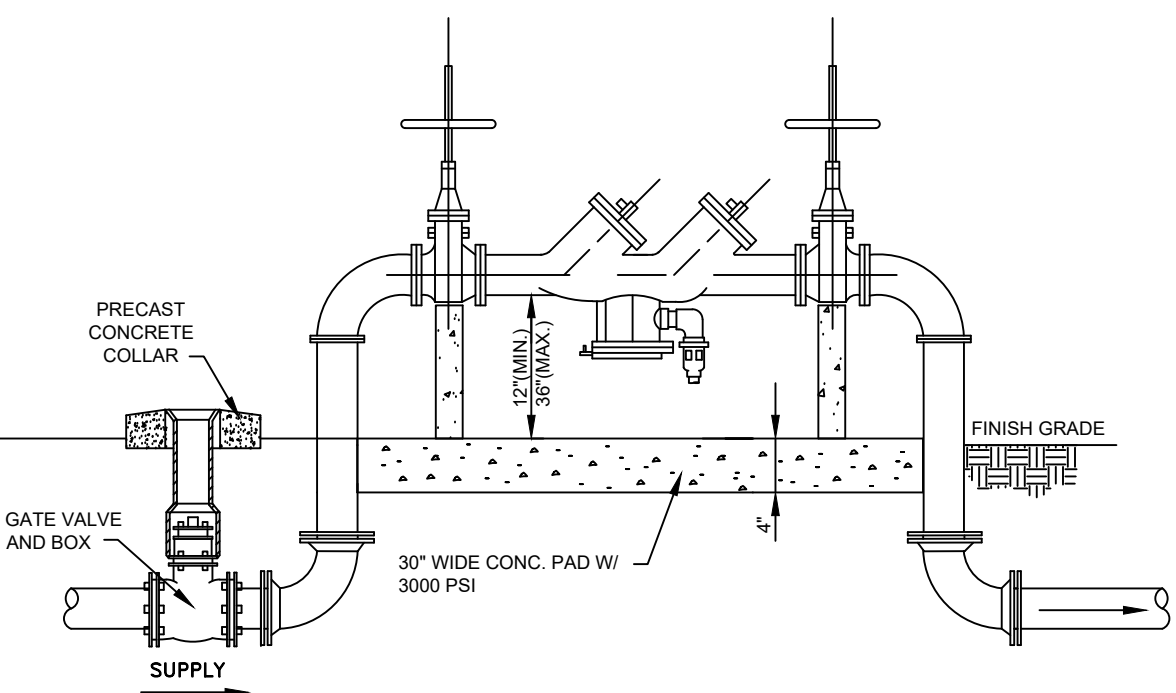
NOTES:  
 THERE SHALL BE CLEARANCES OF SEVEN AND ONE-HALF FEET (7'-6") IN FRONT OF AND TO THE SIDES OF THE FIRE HYDRANT, WITH A FOUR FEET (4') CLEARANCE TO THE REAR OF THE HYDRANT. *EXCEPTION: THESE DIMENSIONS MAY BE REDUCED BY THE APPROVAL OF THE FIRE OFFICIAL.*  
 THERE SHALL BE NO OBSTRUCTIONS PLACED IN FRONT OF ANY FIRE HYDRANT ASSEMBLY THAT WOULD PROHIBIT ACCESS.



**REDUCED PRESSURE BACKFLOW PREVENTER 2" DIAMETER AND SMALLER (NTS)**

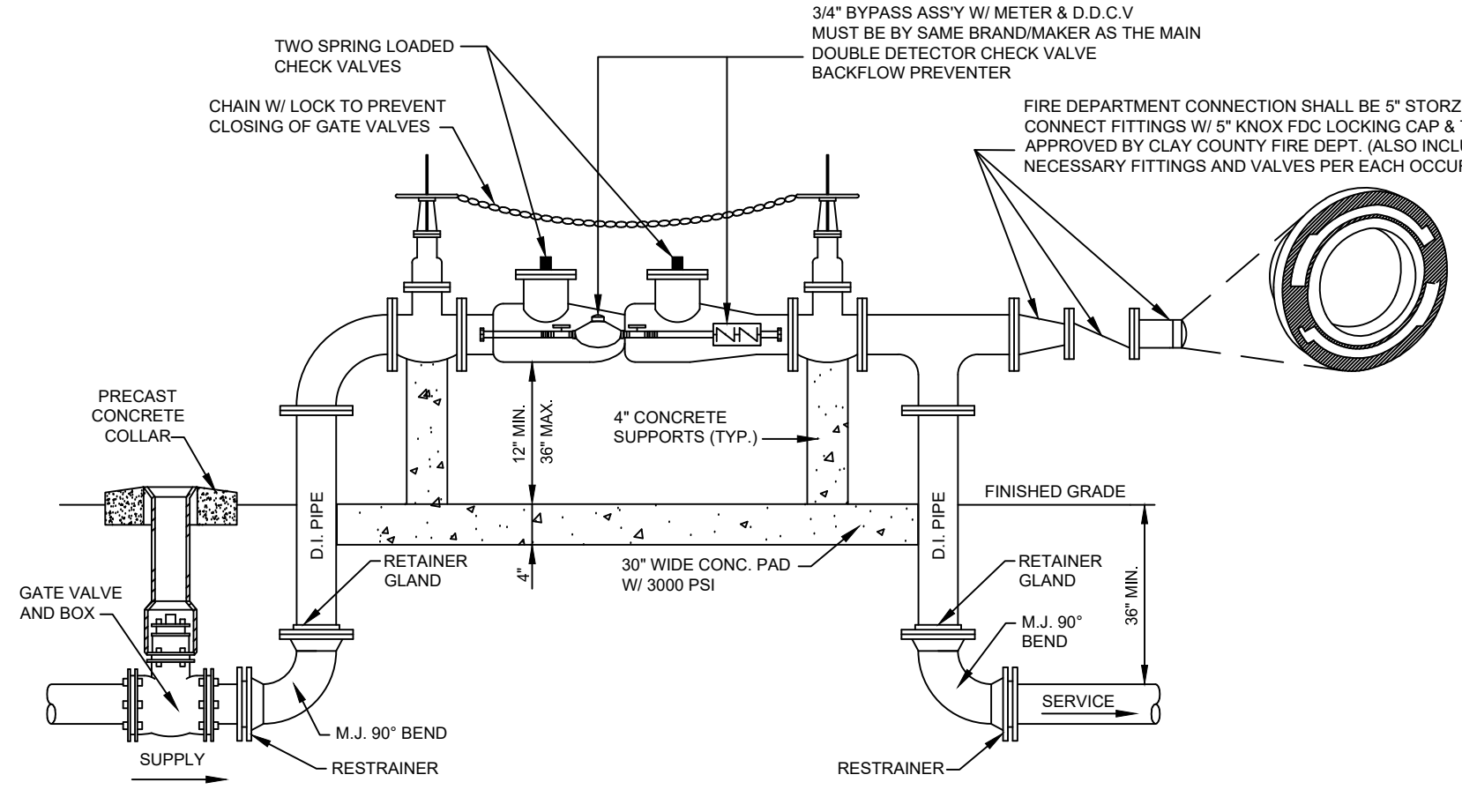


**BACKFLOW PREVENTER SIZES 6" & ABOVE WHERE BACKFLOW IS BETWEEN RECLAIMED & POTABLE (NTS)**



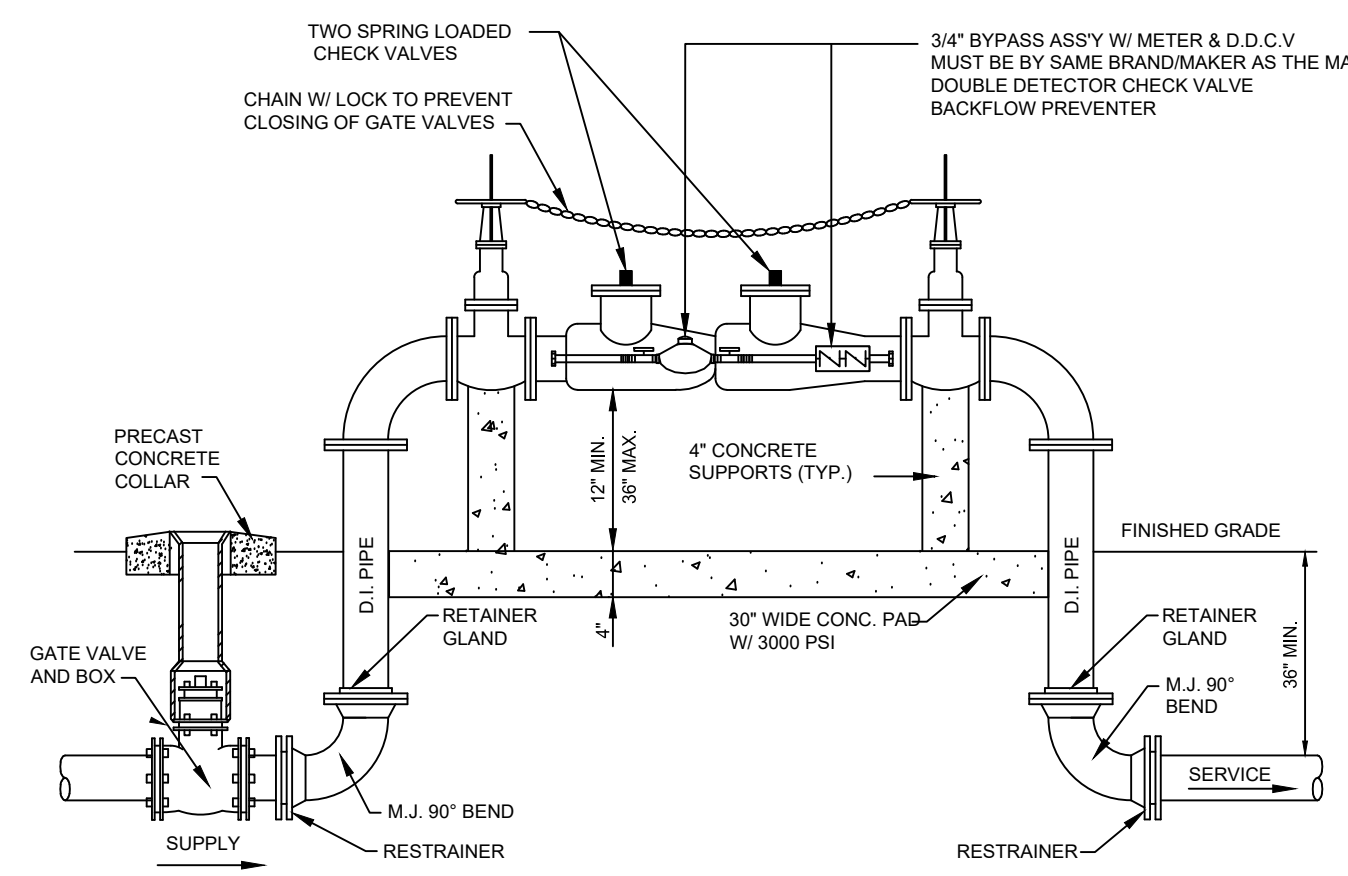
**REDUCED PRESSURE BACKFLOW PREVENTER - SIZES 3" & ABOVE (NTS)**

**BACKFLOW PREVENTER NOTE:**  
 DESIGNS SHOWN FOR BACKFLOW PREVENTER INSTALLATIONS ARE REQUIRED FOR CCUA OWNED INSTALLATIONS - SEE CCUA APPROVED MATERIALS MANUAL. THE BOTTOM OF THE BACKFLOW PREVENTER VALVE IS TO BE NO LESS THAN 12" OR MORE THAN 36" ABOVE THE NATURAL FLOOD GRADE. (SEE CCUA PUMP STATION DETAIL SHEETS (ALL) FOR BACKFLOW PREVENTERS AT PUMP STATIONS)



**DOUBLE DETECTOR CHECK VALVE BACKFLOW PREVENTER WITHOUT ABOVE GROUND ENCLOSURE - 3" AND ABOVE WITH FIRE DEPARTMENT CONNECTION**

NOTES:  
 1. DOUBLE DETECTOR CHECK VALVE W/ 3/4" BYPASS METER & 3/4" D.D.C.V. ARE REQUIRED ON ALL ON-SITE FIRE SPRINKLER SYSTEMS.  
 2. PROVIDE FREEZE PROTECTION FOR COMPLETE ASSEMBLY.



**DOUBLE DETECTOR CHECK VALVE BACKFLOW PREVENTER WITHOUT ABOVE GROUND ENCLOSURE - 3" & ABOVE WITHOUT FIRE DEPARTMENT CONNECTION**

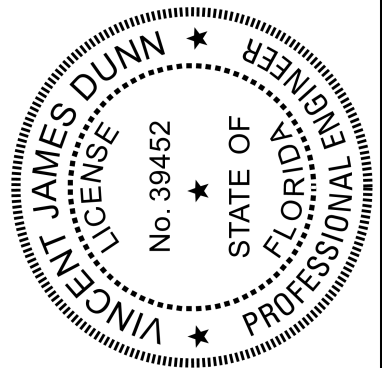
NOTES:  
 1. DOUBLE DETECTOR CHECK VALVE W/ 3/4" BYPASS METER & 3/4" D.D.C.V. ARE REQUIRED ON ALL ON-SITE FIRE SPRINKLER SYSTEMS.  
 2. PROVIDE FREEZE PROTECTION FOR COMPLETE ASSEMBLY.

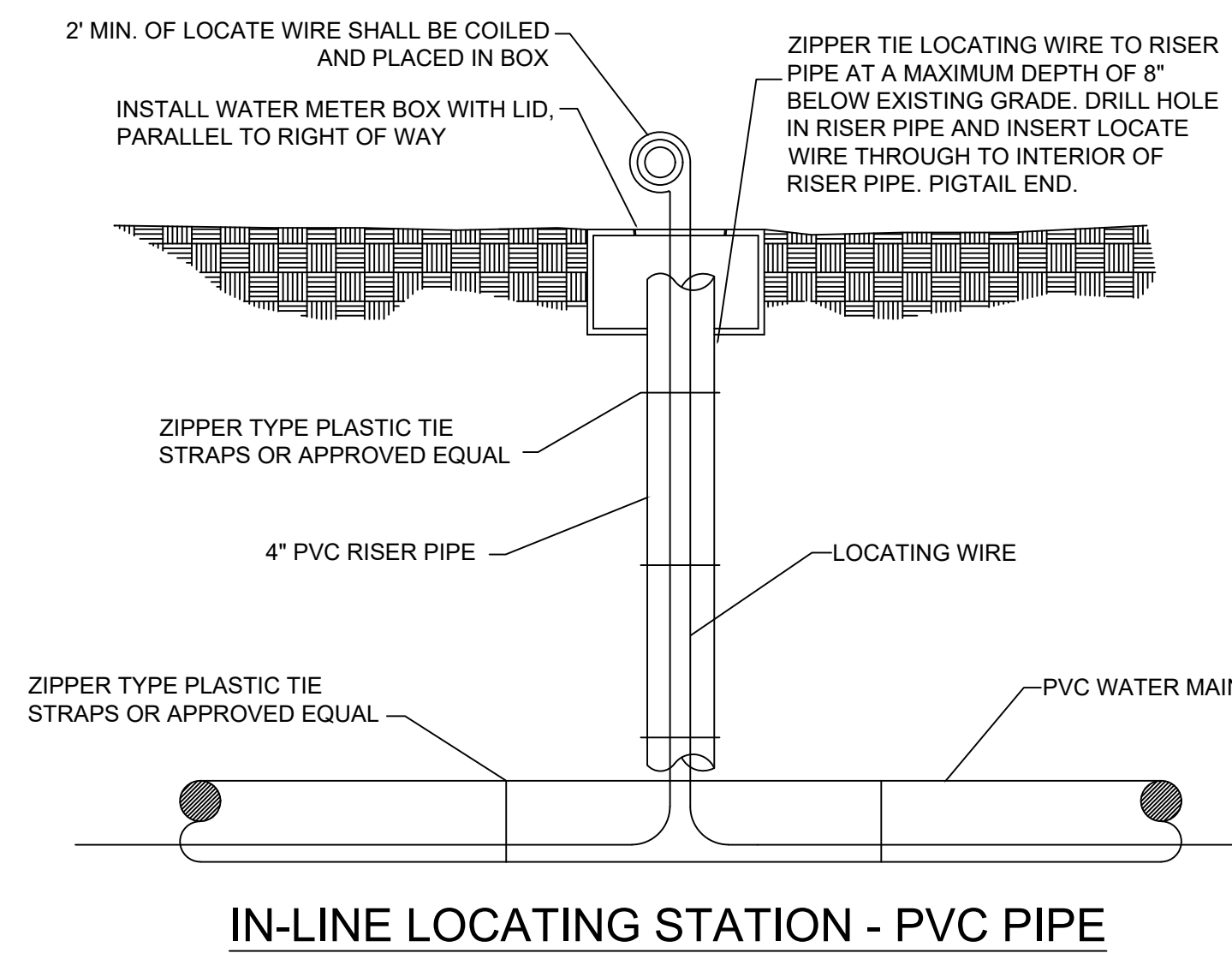
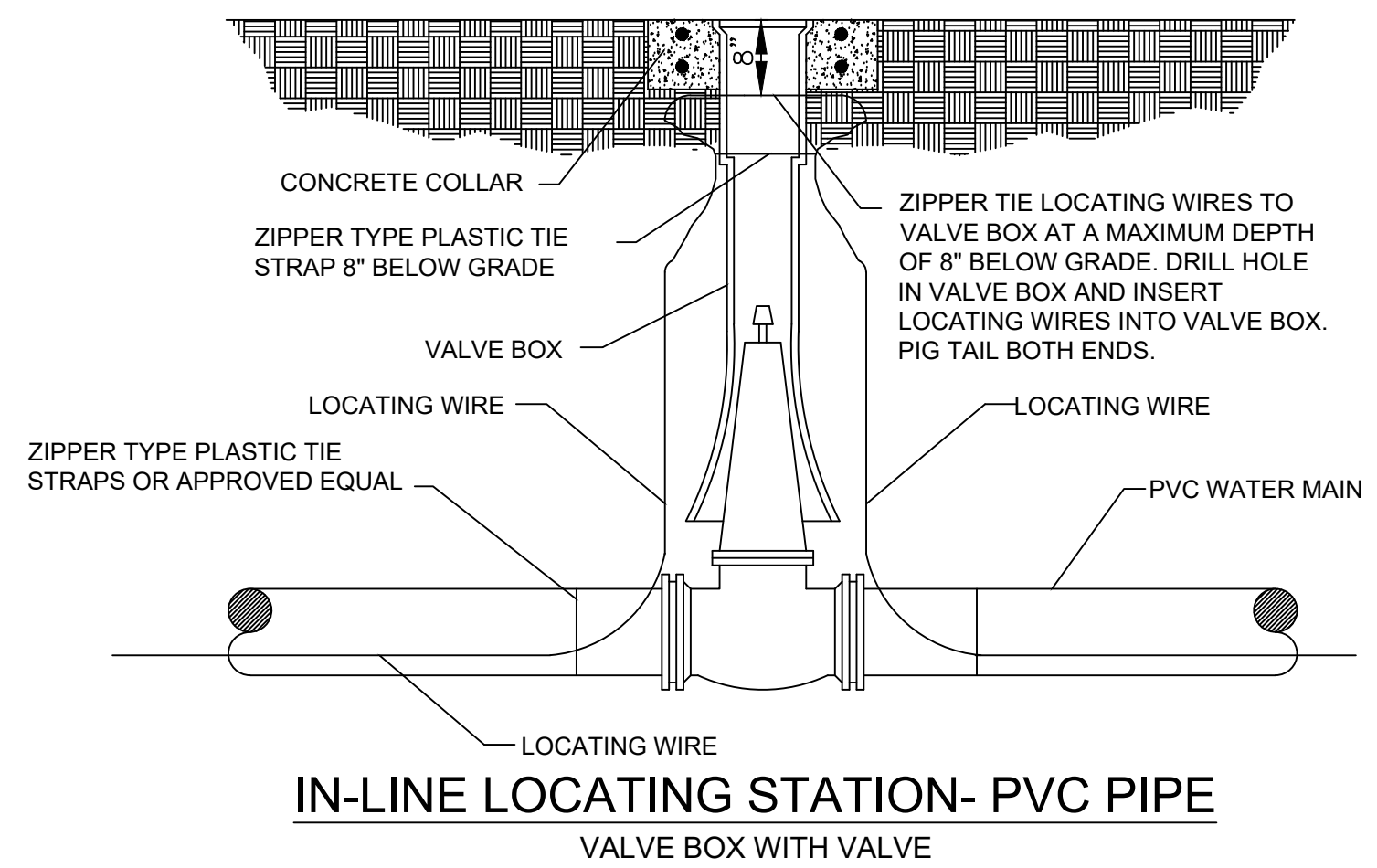
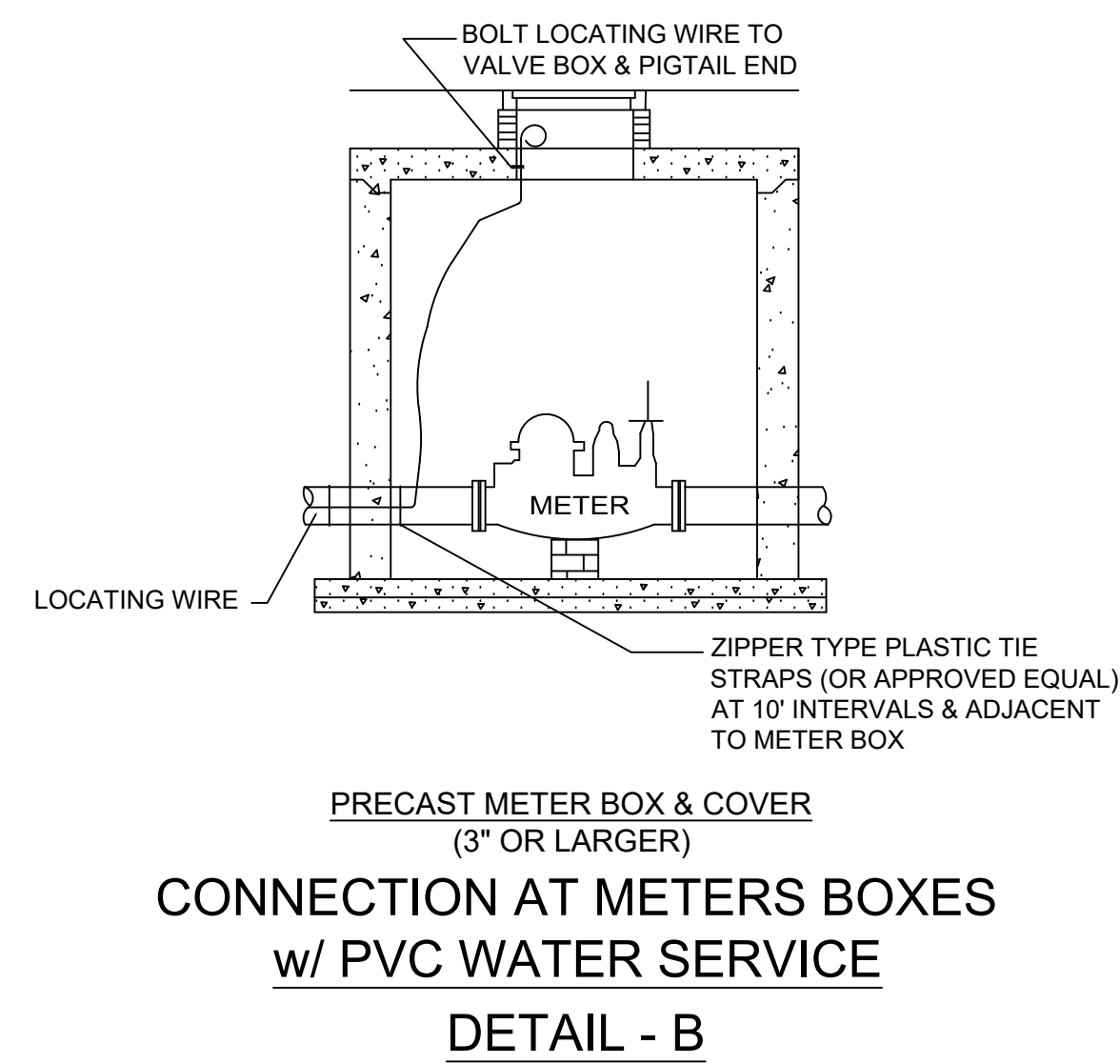
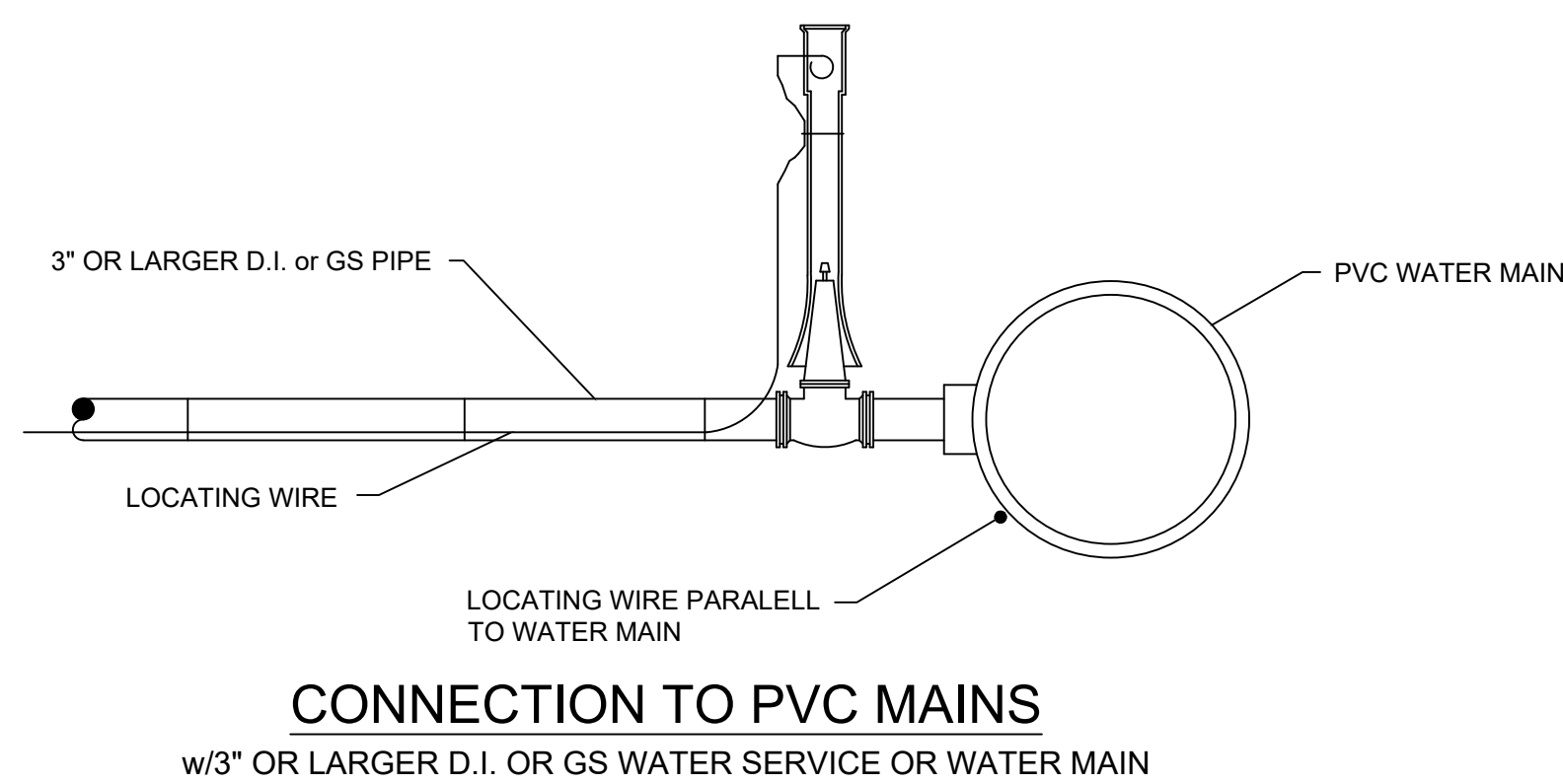
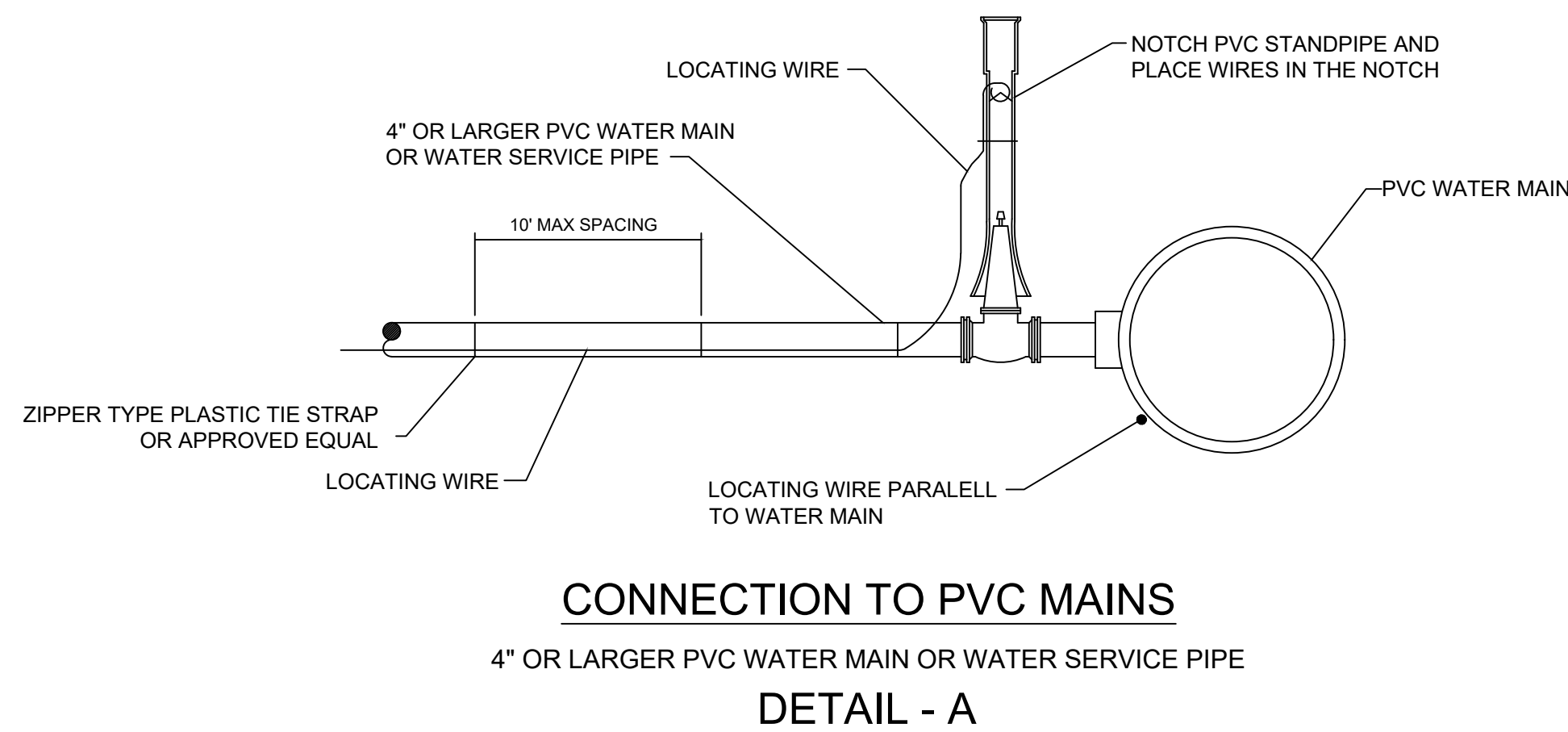
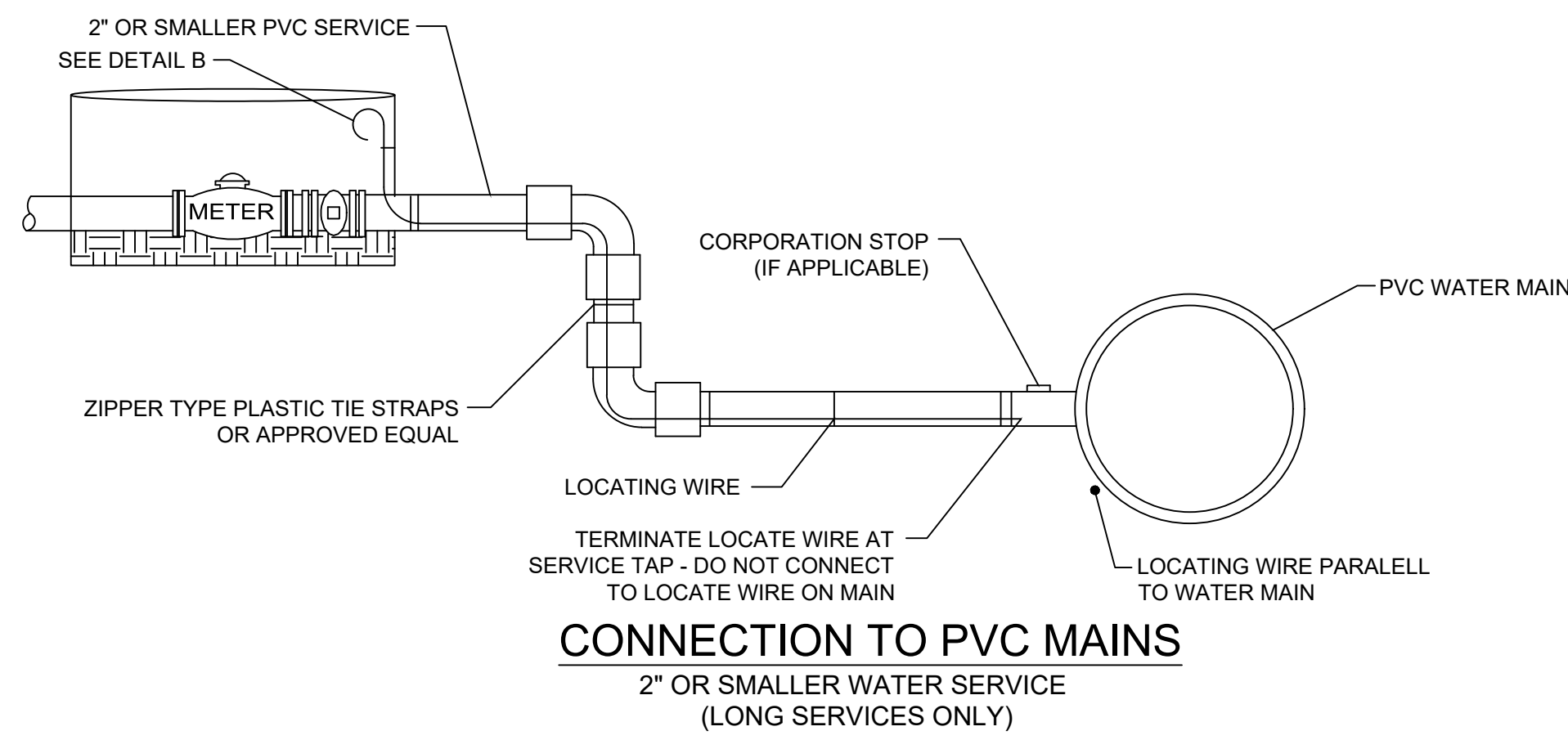
DESIGN	DATE	NO.	BY	REVISION DESCRIPTION
DRWN	AUG 17, 2015	1	RND	ADDED HYDRANT GENERAL NOTES NEW DETAIL SHEET DESIGN
CHKD				
APPR				

**STANDARD FIRE HYDRANT AND D.D.C.V. BACKFLOW PREVENTER DETAILS**

**CLAY COUNTY UTILITY AUTHORITY**  
 3176 OLD JENNINGS ROAD  
 MIDDLEBURG, FLORIDA 32068-3907  
 TELEPHONE: (904) 272-5999

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**LOCATE WIRE**

**LOCATE WIRE TESTING REQUIREMENTS**  
Installed locate wiring shall be tested by the contractor as part of the final inspection procedure, using a certified tester and approved testing equipment. The Contractor shall notify CCUA at least 48 hours in advance of the testing period. At this time the Contractor shall tell CCUA the number of locate personnel to be used for the wire testing, so that CCUA can assign an inspector to work with each locate wire tester. If CCUA has not been notified of the correct number of testing personnel to be used, then the only testers allowed to test the wire shall be those who have a CCUA assigned inspector to work with them. The CCUA inspector shall have the plans on-site, as shall the testing personnel, for the purpose of recording the required test information (ie passed and failed sections) and for as-built preparation. The CCUA field representative or inspector shall be present during the testing period, and have the authority to request retest sections if inspector suspects any problems within that section. The contractor shall provide the Certified Tester a copy of the project site drawings (as-builts preferred). A tone shall be put on the locate wire. The technician shall trace the entire length of the installed wire and spot paint the location at least at 100-foot intervals along the route. The depth shall be tested at 100-foot intervals and tester shall record the depth of pipe/wire on the report at each 100' interval. The certified tester shall report (show on drawings), where the pipe/wire has less than the allowable minimum cover (36 inches) or more than the maximum allowable cover (50 inches) unless called for on the plans or requested and approved by CCUA during the installation of said piping. All lateral stub-outs shall be marked with pain and the depth recorded. A final Locate Wire Report (statement by the certified tester), shall be submitted to CCUA for review and approval. The report shall include a signed statement from the certified tester which certifies that all installed wire (where shown on the drawing), was successfully (sounded), traced with no open breaks. The report shall also include a copy of the project site drawings which indicate all field notes, breaks found/repaired, depths (if installed outside the acceptable cover limits), and other applicable field remarks by the certified tester. A Certified copy of the report and marked-up drawings shall be furnished to CCUA prior to final acceptance of the project or as approved otherwise by CCUA.

**Definitions:**  
Approved Testing Equipment shall include variable frequency controls, digital depth read-out and tone continuity. The following is a list of approved equipment - Dynatel (3M)-2273 Cable/Fault Locator, Metrotech 9800XT, Ditch Witch 950 R/T or CCUA pre-approved equal.

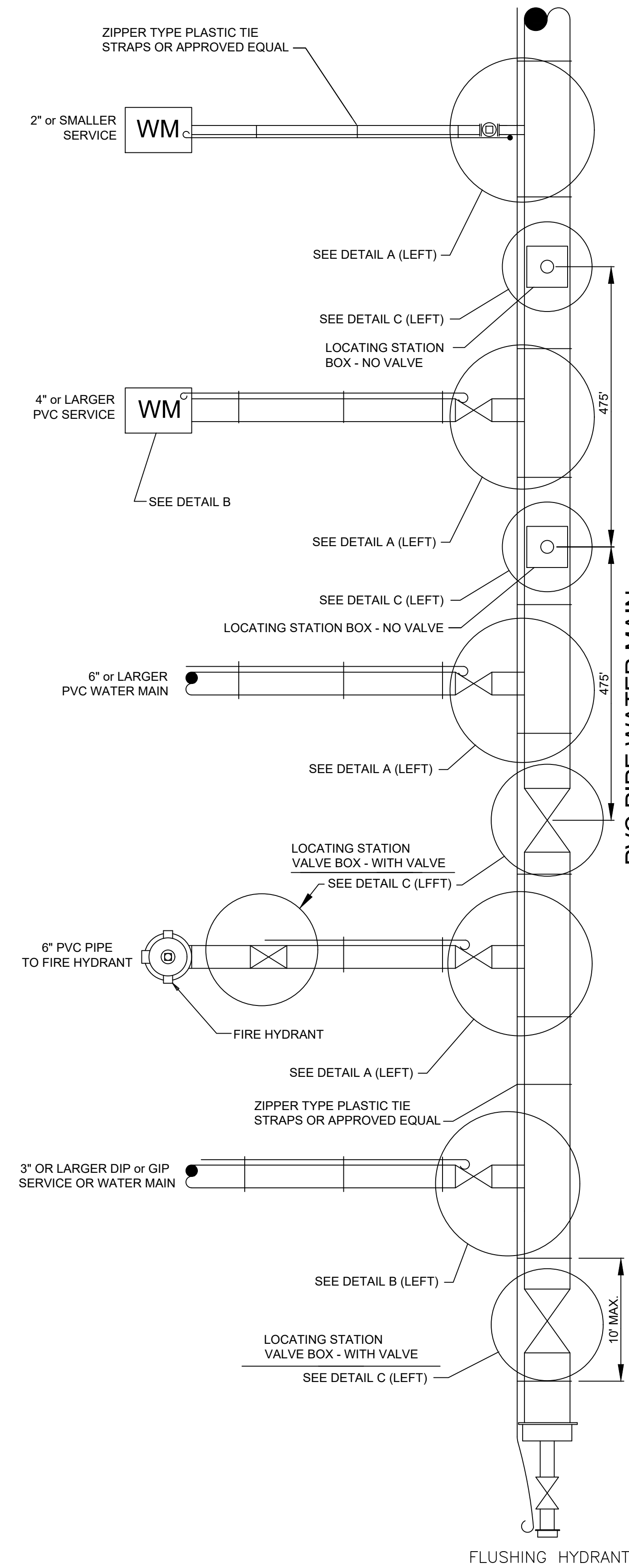
Certified Tester - A person or company that has been certified by the Manufacturer of the approved testing equipment as proficient in the use of the equipment has 8 months experience in the use of the equipment including documented proof of past performance.

CCUA Approval: Clay County Utility Authority shall have the authority to approve Certified Tester, or deny the approval of Certified Tester to work on Utility's System. CCUA shall have the authority to remove any previously Certified Tester from its approved list of Certified Testers as CCUA deems necessary.

**LOCATE WIRE INSTALLATION**  
Contractor shall furnish and install locate wiring on all water mains, sewer force mains, and reclaimed water mains (both PVC and ductile 1" inch size and greater). Locate wire must be attached to mains and services with duct tape or approved iron) and on all service mains 1 2 plastic zipper ties, (pulled tight to keep wire from rotating out of location), at each side of bell joint or fitting and at 10 foot intervals along pipeline (at a minimum). Locate wire shall be brought to grade within a valve box or locating station box, as required, at 475 foot intervals (see note # 2 this page). Locate wire shall be installed in box and along pipeline as detailed in the CCUA Standard Details. Locate wire shall be installed beneath the pipe line at the 5:00 to 7:00 o'clock position on the pipe. Connection or splices underground which are not inside a locate box (or valve box), shall be prohibited unless approved otherwise by CCUA. The request to make an underground connection or wire splice shall be done in writing to CCUA. The request shall contain the complete job name, name of street, station number as shown on plans and scaled as close as possible to the location of splice or connection, and the reason for request. CCUA shall have at least 48 hrs. to respond verbally and 5 working days to respond in writing. If an underground connection is unavoidable and approved by CCUA, then the wire shall be first tied in a knot (to minimize future separation), then the wire ends shall be connected utilizing an electric wire nut, then make the connection water tight by using either vinyl mast tape (4" wide X 0.09" thick by 3M-Scotch 2210), or plastic enclosure (Snaploo Model LV 9500/951-4 large by TKH) or CCUA approved equipment.

**LOCATE WIRE BOX INSTALLATION**  
Where utility mains are to be installed beneath sidewalks, valve boxes shall be installed instead of locate wire boxes. The valve box lids shall indicate the type of line (i.e. water, sewer, or reclaimed water). The valve box shall be adjusted so the top of valve box is flush with the finished sidewalk grade. If for any reason a locate wire box must be offset from the C/L of pipeline, then the contractor shall have installed an adequate length of wire to avoid splices and the exact location of the locate box including the amount of the offset distance shall be recorded on the As-builts.

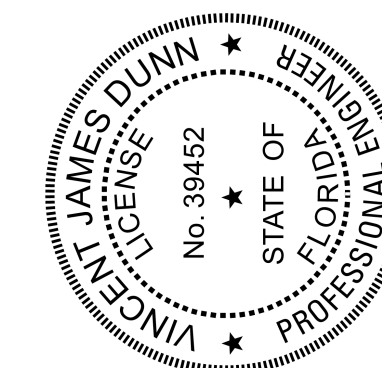
**AS-BUILT DRAWINGS**  
Shall comply to the guidance set forth in CCUA's 'As-built Specifications Standards Manual', which can be obtained from CCUA's website (www.clayutility.org).



**NOTES:**

- LOCATING WIRE SHALL BE 10 GAUGE, SINGLE STRAND UF RATED (DIRECT BURIAL), COPPER WIRE, OR APPROVED EQUAL.
- ALL DIRECTIONAL DRILLED PIPES SHALL HAVE 2-8 GAUGE STRAND COPPER-CLAD STEEL CONDUCTORS WITH 45mil HDPE EXTRUDED COATING, AND SHALL BE OF SUFFICIENT LENGTH TO AVOID SPLICING. UNDER NO CIRCUMSTANCES SHALL THE TRACER WIRE BE SPLICED; IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ORDER ROLLS OF WIRE OF THE REQUIRED LENGTH TO AVOID THE NEED FOR SPLICING THE TRACER WIRE.
- LOCATE BOXES SHALL BE INSTALLED AT THE LOT LINE IN RESIDENTIAL SUBDIVISIONS, OR COMMERCIAL PROPERTIES; BOXES SHALL NOT BE LOCATED IN SIDEWALKS OR DRIVEWAYS. LOCATE BOXES SPACING SHALL NOT EXCEED 500 FEET.
- WHERE IT IS NOT POSSIBLE TO LOCATE THE BOX OUTSIDE OF A PAVED STREET OR PARKING LOT, THE LOCATE WIRE SHALL BE PLACED IN A VALVE BOX INSTEAD OF A ROME BOX. VALVE BOX LID SHALL BE MARKED ACCORDING TO THE TYPE OF PIPE SERVED.

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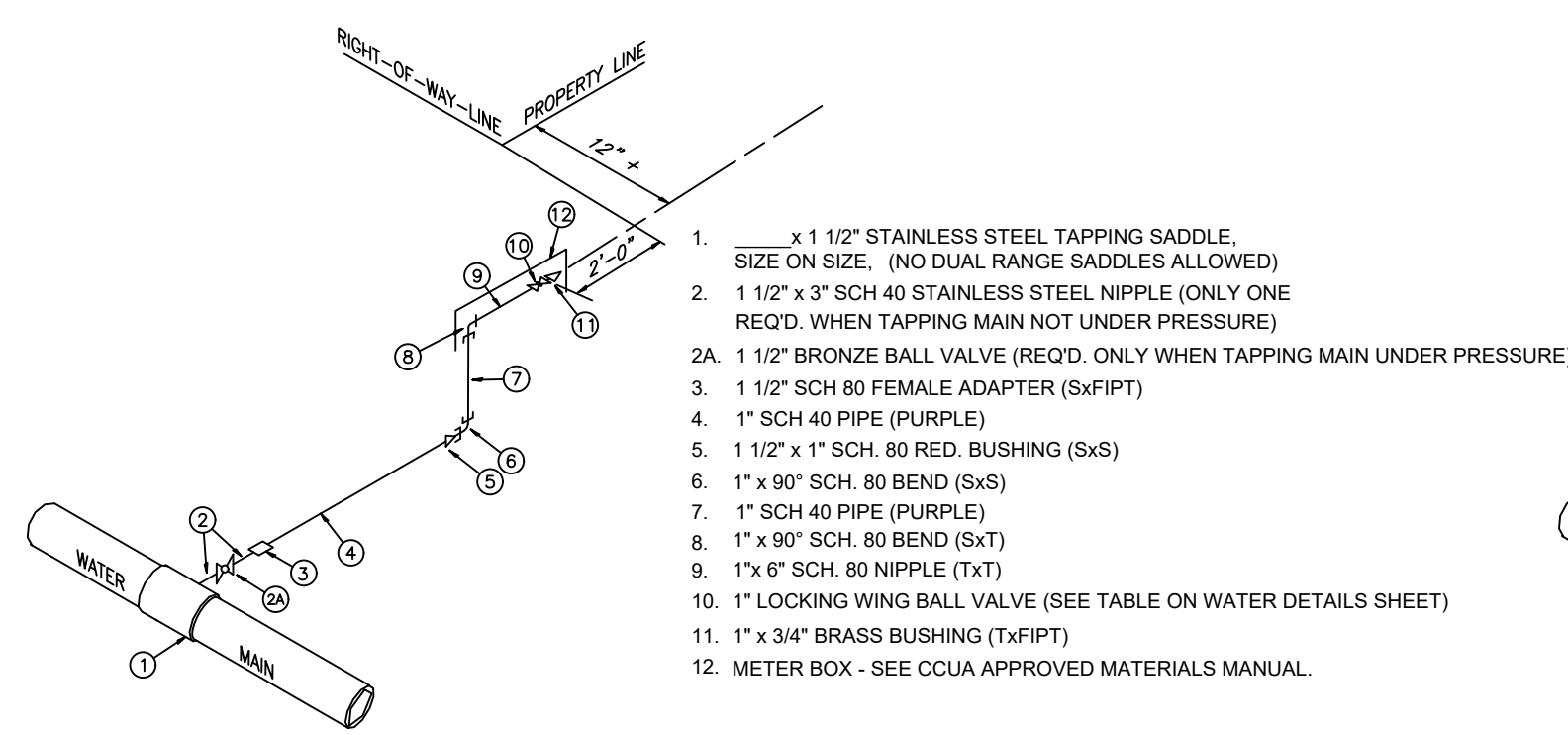
NO	DATE	BY	REVISION DESCRIPTION
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5	04/01/2023	RDJ	REVISED TRACER WIRE DIAGRAM NOTES
4	03/01/2023	RDJ	REVISED GENERAL NOTES
3	02/01/2023	RDJ	GENERAL UPDATES & REVISIONS
2	01/01/2023	RDJ	GENERAL UPDATES & REVISIONS
1			

PROJECT: **STANDARD LOCATOR WIRING INSTALLATIONS**

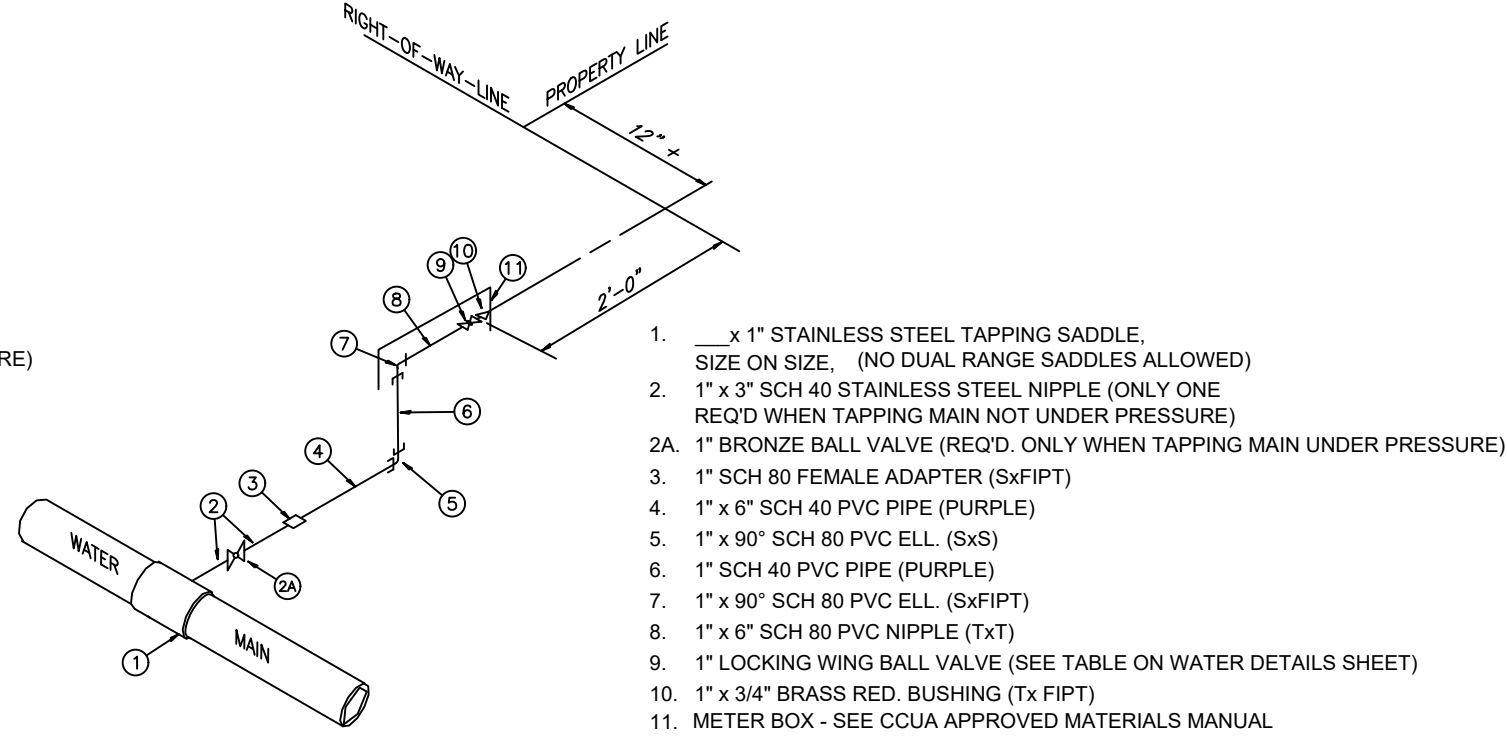
**CLAY COUNTY UTILITY AUTHORITY**  
3176 OLD JENNINGS ROAD  
MIDDLEBURG, FLORIDA 32068-3907  
TELEPHONE: (904) 272-5999



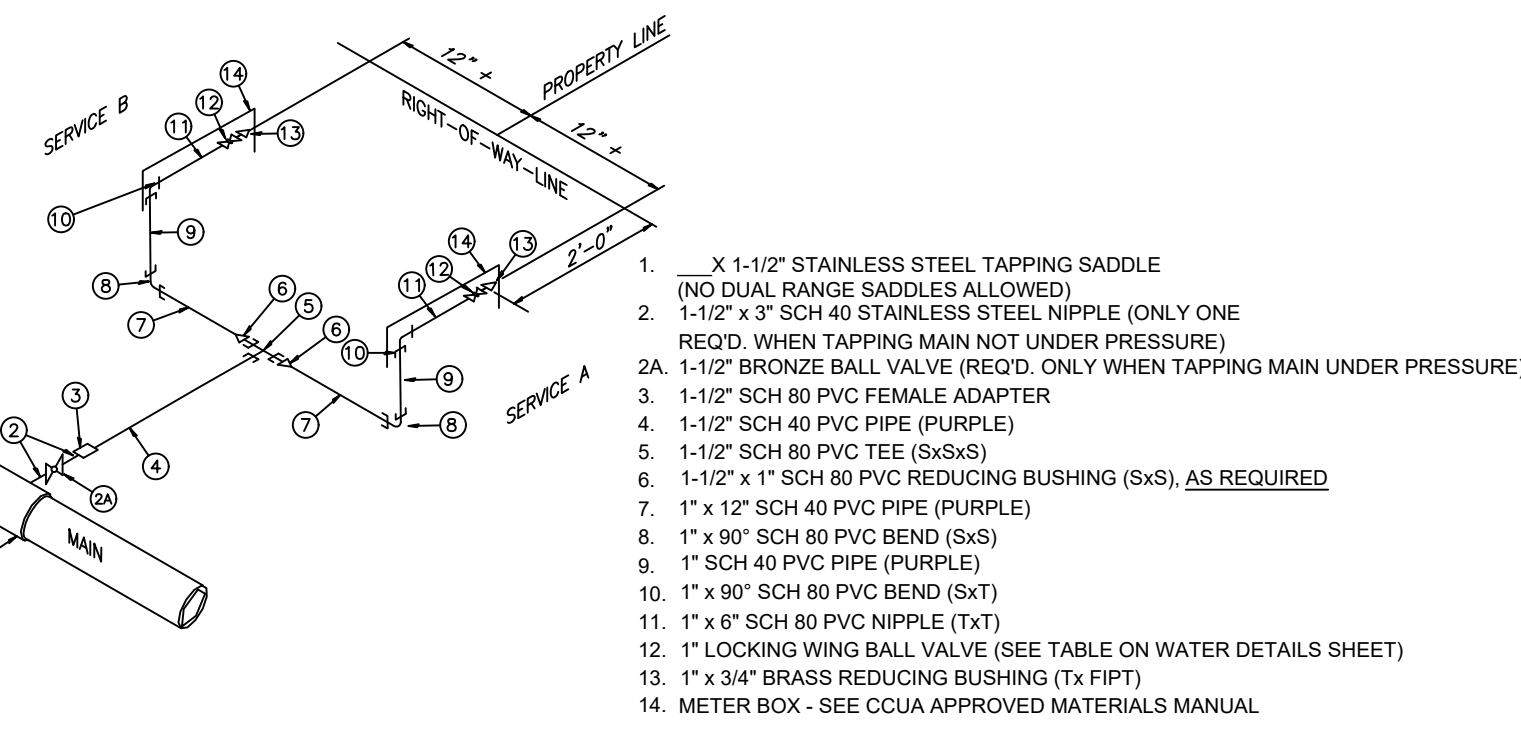
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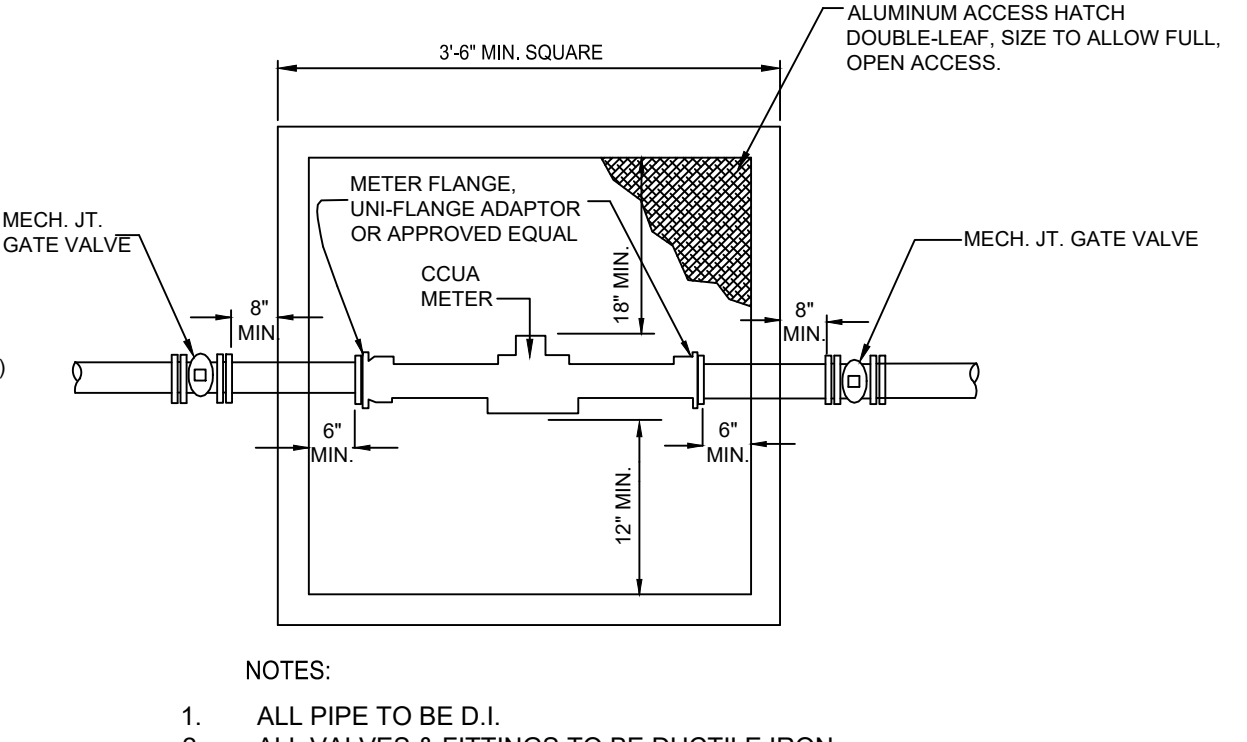
**LONG SINGLE RECLAIMED SERVICES**



**SHORT SINGLE RECLAIMED SERVICES**



**DOUBLE RECLAIMED SERVICES**



- NOTES:
1. ALL PIPE TO BE D.I.
  2. ALL VALVES & FITTINGS TO BE DUCTILE IRON.
  3. MINIMUM LENGTH OF 8 DIAMETERS OF STRAIGHT PIPE TO BE INSTALLED ON INLET SIDE OF METER.
  4. ALL PIPE AND FITTINGS TO BE SAME SIZE AS METER.
  5. CONC. BOX SHALL BE 42" DEEP WITH OPEN BOTTOM, PRECAST WITH NOTCH TO ACCOMMODATE PIPE INSTALLED 36" DEEP, INSTALLED ON 12" OF #57 STONE.
  6. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF BOX WITH DIMENSIONS FOR APPROVAL BY CCUA.
  7. DIMENSIONS SHOWN ARE MINIMUM AND SHALL BE INCREASED BASED UPON ACTUAL SIZE OF METER PROVIDED.
  8. THE COST OF THE METER WILL BE ASSESSED TO DEVELOPER UNDER SEPARATE AGREEMENT. THE METER ONLY WILL BE FURNISHED TO THE CONTRACTOR BY THE CLAY COUNTY UTILITY AUTHORITY AND THE CONTRACTOR SHALL INSTALL THE METER TO COMPLETE THE INSTALLATION SHOWN HEREON.

NO.	DATE	BY	REVISION DESCRIPTION
19	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
18	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
17	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
16	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
15	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
14	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
13	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
12	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
11	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
10	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
9	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
8	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
7	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
6	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
5	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
4	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
3	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
2	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS
1	06/03/2023	JVD	GENERAL UPDATES AND REVISIONS TO ALL SHEETS

**NOTE: ALL RECLAIMED WATER SERVICES ARE TO BE INSTALLED ON ONE LOT LINE AND POTABLE WATER SERVICES ARE TO BE INSTALLED ON THE OTHER. THIS IS TO ALLOW SEPARATION OF THE TWO WATER SERVICES. SEWER SERVICES ARE TO BE INSTALLED AT THE MIDDLE OF THE LOT.**

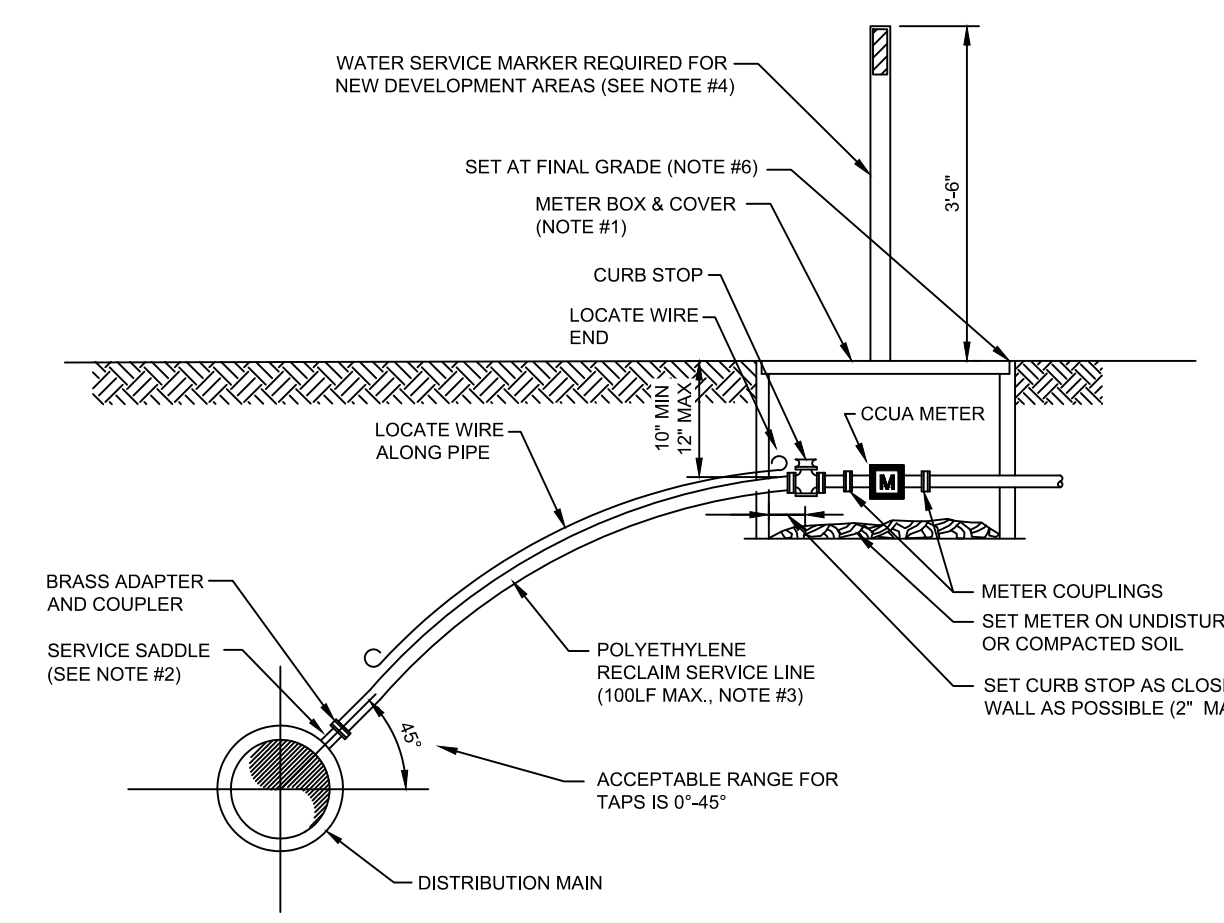
**FINAL INSPECTION PROCEDURES**

- PRIOR TO FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:
1. The pressure test and flushing report.
  2. The Engineer of Record certification to FDEP. This can be done with preliminary as-builts.
  3. Preliminary as-builts showing at least the following: location of valves, mains, services and manholes.
  4. All services and valves to be plainly marked with a treated fence post.
  5. The reclaimed water use warning signs shall be installed.

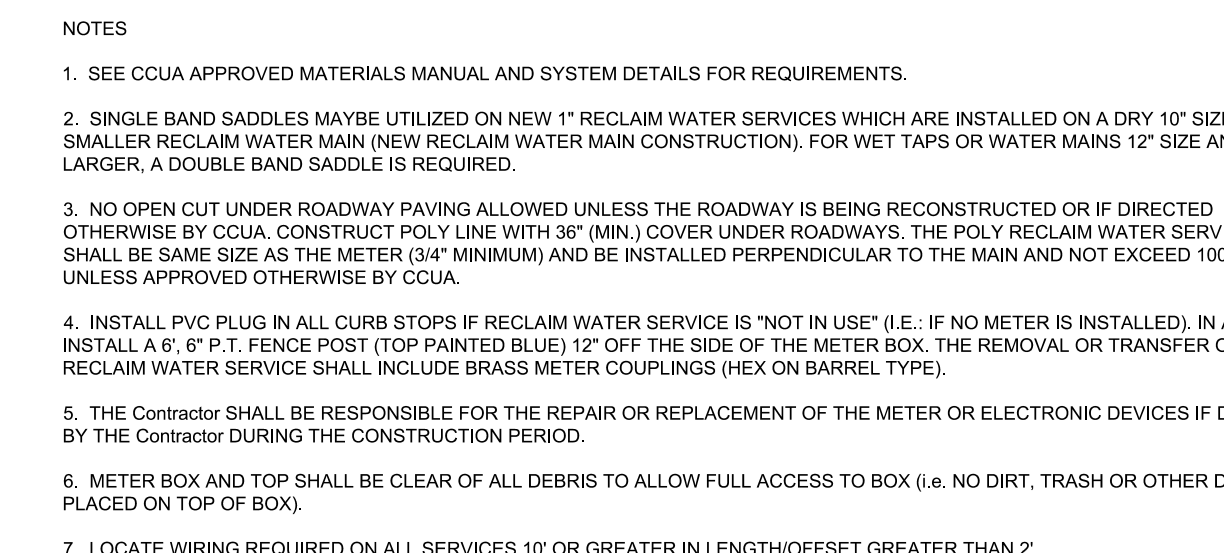
- PRIOR TO FINAL ACCEPTANCE FOR OWNERSHIP, THE FOLLOWING MUST BE COMPLETED:
1. Reclaimed water services must be lowered and meter boxes installed, valve boxes must be set on all gate valves, recast concrete valve collar must be in place on all gate valves.
  2. As-built drawings shall have been updated to accommodate the Clay County Utility Authority's comments (shall comply to the guidance set forth in CCUA's 'As-Built Specifications Standards Manual', which can be obtained from CCUA's website www.claycounty.org).
  3. As-builts must be accepted by the Clay County Utility Authority.
  4. All valves and single services should be scribed in curb and painted the correct color code.

**OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF RECLAIMED WATER DISTRIBUTION SYSTEM**

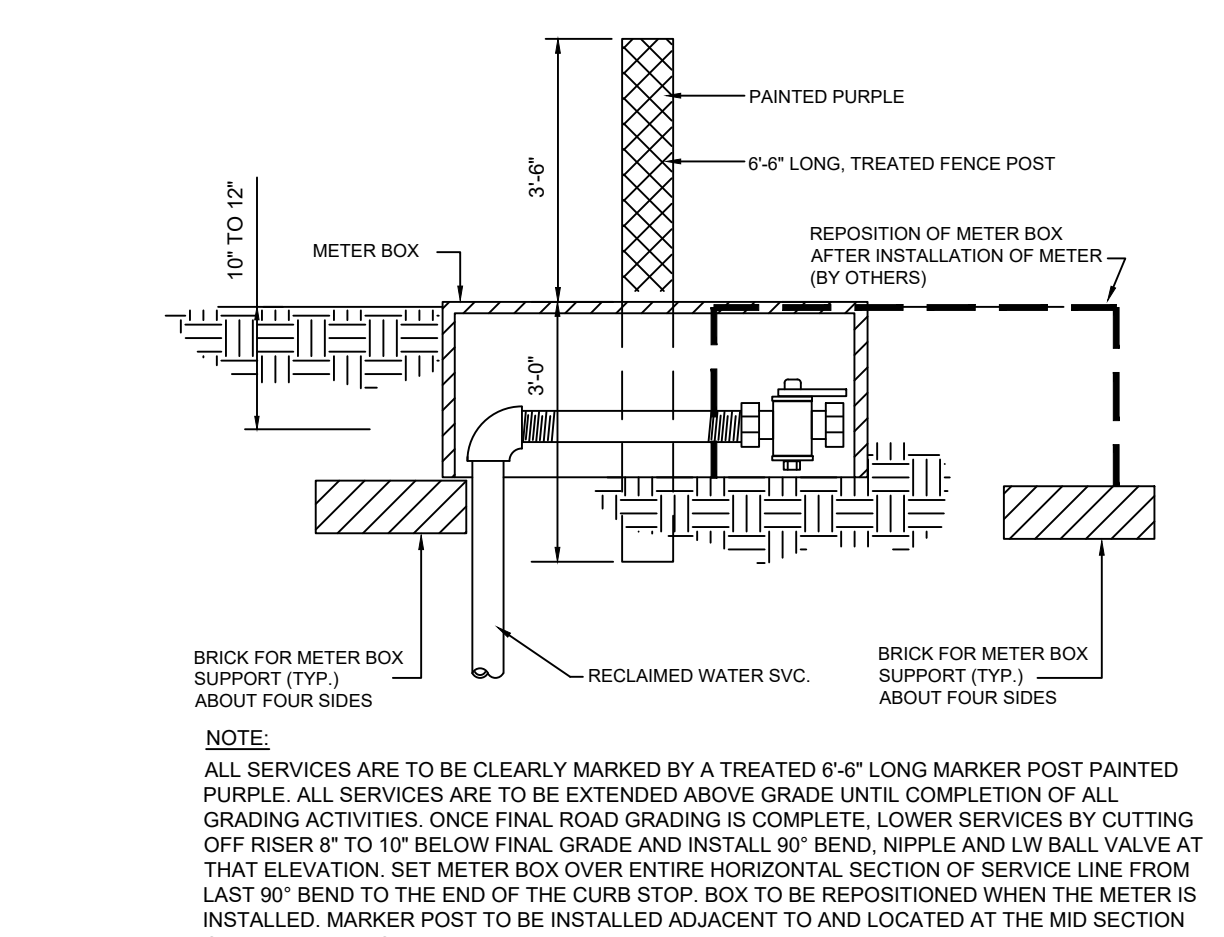
- 01. INTENTION.** It is declared and acknowledged intention to secure a new reclaimed water distribution system, complete, in accordance with the plans and specifications, and contract documents. All new work shall be in accordance with Clay County Utility Authority Specifications and Details and Approved Materials Manual and Clay County Engineering Department Details and Specifications and any other Government Regulatory Agency. All work shall conform to the above whether or not specifically called out or noted on the plans.
- 02. GENERAL.** All materials shall be in conformance to National Sanitation Foundation (NSF) 61 and those listed in the CCUA Approved Materials Manual. Materials shall be warranted by the Contractor as to materials, workmanship and accuracy of As-built drawings for a period of two years from the date of completion of the work or beneficial use of the facilities. Workmanship shall be of good quality; i.e., mains shall be laid in a uniform alignment, fittings shall be properly restrained, trenches shall be properly excavated and backfilled, and valve boxes shall be adjusted to finished grade.
- 02.1. CONTRACTOR LICENSE AND APPROVAL.** Utility reserves the right to approve or deny approval of Contractor prior to construction of any on-site or off-site utility facilities. Contractor must hold a State Of Florida Underground Utility Contractors license, that named contracting company being the one doing the work on project, and demonstrate acceptable experience in the field of utility construction.
- 03. SURVEYS.** The Utility Contractor shall provide all surveys necessary for the layout and construction of the work of his contract.
- 04. EARTHWORK.** Earthwork shall include all excavation, fill and backfill (hand/machine), compaction and rough grading of materials encountered. No unsuitable materials clay, muck, or peat, removed from pipe trenches are to be used for backfill. All fill or backfill shall be either sand or sandy clay, free of roots, trash or other debris. All backfill alongside of and to a height twenty-four inches above all pipe shall be free of clay or organic material, compacted by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 95% (outside of paving), 98% (under paving) of its optimum moisture content as determined by ASTM D698, later. Copies of compaction density test reports from a licensed testing agency shall be made available to CCUA if requested.
- 05. JOINT RESTRAINT.** All fittings shall be properly and adequately restrained against lateral movement at all water main tees, crosses, valves, bends and fire hydrants. Restraints shall be Uni-Flange Series 1300, 1350, 1390 or approved equal installed per Manufacturer's recommendations and Clay County Utility Authority Details and Specifications (SEE RESTRAINED JOINT SCHEDULE). See CCUA Approved Materials Manual for acceptable restraints.
- 06. DUCTILE IRON PIPE.** Ductile iron pipe shall conform to ANSI Specification A21.50 (AWWA C150) latest, "Thickness Design of Ductile Iron Pipe", Table 50.5, laying condition Type 2, internal operating pressure of 250 p.s.i. for an 8-foot depth of cover, Class 51 minimum and shall be ANSI A21.51 (AWWA C151), latest centrifugally cast pipe. Laying lengths shall be 20 feet or less in length, and shall be clearly marked with pressure rating, thickness, class, height of pipe without lining, length and Manufacturer. Ductile iron pipe for water service shall be furnished with cement lining per AWWA C110, C115 and C151. The pipe shall have design values of 60,000 p.s.i. minimum tensile strength, and 42,000 p.s.i. minimum yield strength. All ductile iron piping shall be wrapped with purple tape and stamped "Reclaimed Water" on at least two sides @ 12" o.c. along pipe barrel. Ductile iron pipe for reclaimed water or service lines shall be used in any easement, right-of-way, between lots, and any instance where a building foundation or other permanent appurtenance is within 10' of the water main or a service line larger than 3".
- 07. DUCTILE IRON FITTINGS.** shall be 150 cast iron lined and suitable for the type and class of pipe to which connected. Gaskets shall be suitable for reclaimed water service. Minimum working pressure shall be 150 p.s.i.
- 08. POLYVINYL CHLORIDE PIPE.** Polyvinyl chloride pipe for water mains 4 inch through 24 inches in diameter, shall be DR18 (C900) Pressure Class 235 pvc 1120, reclaim mains above 24 inches in diameter shall be DR25 (C900) PVC 1120, Pressure Class 165 psi, conforming to ASTM D-1784, D-2241, D-3139 and F-477, latest, or P.V.C. C900, Class 165, DR-25, conforming to ASTM D-1784, Cell Class 12454, ASTM F-477, ASTM D-3139, latest, and shall bear the seal of the National Sanitation Foundation. Pipe shall be color coded and marked "RECLAIMED WATER" at every 12' along the barrel of the pipe, with lettering facing up. Couplings shall be rubber gasketed, push-on type conforming to ASTM D-2122.
- 09. STEEL CASING PIPE.** Steel casing pipe shall be of size indicated on the Drawings and shall conform to ASTM A139, with a minimum yield strength of 35,000 p.s.i.
- 10. POLYVINYL CHLORIDE (PVC 1120, SCHEDULE 40) PIPE** shall conform to the requirements of ASTM D 1785. Fittings and threaded nipples shall be Schedule 80 PVC. All piping smaller than 4" shall be Schedule 40 or Schedule 80 as detailed. Schedule 40 PVC pipe shall be Pantone purple 522C and marked "Reclaimed Water".
- 11. GATE VALVES AND BOXES.** Gate valves shall be non-rising stem type and shall be suitable for a 200 p.s.i. non-shock working pressure. Gate valves shall be mechanical joint, flanged or screwed. Gate valves shall have a 2" operating nut and open left. Gate valves shall have joints suitable for the type of main on which installed. Valves 3" and larger shall be iron body, bronze fitted with resilient seat. Valves shall be of DOMESTIC (American) manufacture and shall be those listed in CCUA Approved Materials Manual. Valves 16" and larger shall be AWWA C-515. Valve boxes with screw extensions shall be provided for all gate valves. Boxes shall be of cast iron construction, 7/32" minimum wall thickness and shall be nontacky tar enamel coated. The word "RECLAIMED WATER" shall be cast in the cover. Other gate valves smaller than 2" shall be heavy-duty bronze ball valves. Box covers to be primed and painted Pantone Purple 522C.
- 12. RECLAIMED WATER METER BOXES.** Developer shall be responsible for installation of meter boxes on all water services as part of the water main installation. All curb stops shall be adjusted to the proper elevation and shall be accessible for the installation of the water meter. The Contractor shall be required to open all boxes for the Authority's inspector at the final inspection. A treated 6'-6" fence post marker shall be installed at the side of and centered on the meter box and painted Pantone Purple 522C for identification. Meter boxes shall not be placed in any sidewalk or driveway without the approval of CCUA.
- 13. CURB STOPS.** Curb stops shall be cast bronze, inverted key stop, roundway, with check, lock wing type, for locking in the closed position. See CCUA Approved Materials Manual for acceptable curb stops.
- 14. PRESSURE REDUCING VALVES** (when and where required) The pressure reducing valve shall maintain a constant delivery pressure as part of the service to each residential irrigation system. Pressure reducing valves shall conform with the standard requirements of the ASSE (Std. 1003) and WPOA Uniform Plumbing Code. Approved model: Watts Series USB or equal.
- 15. INSTALLATION.** The minimum cover over top of reclaimed water main shall be 48". All lines and appurtenances shall be thoroughly cleaned of all foreign matter before being lowered into the trench and shall be kept clean during laying operations by means of plugs or other approved methods. All pipe shall be checked for defects before being lowered into the trench. Defective pipe shall not be used. Pipe found to be defective after installation, shall be removed and replaced with sound pipe at no additional expense to the Owner. The full length of each section of pipe shall rest solidly upon the pipe bed, with recess excavated to accommodate the bells and joints. All pipe that has the grade or joint disturbed after laying shall be taken up and reinstalled. The pipe shall not be laid in water or when trench or weather conditions are unsuitable for the work. All joints shall be cleaned of all foreign matter before making the joint. Fittings at bends in the pipe shall be properly restrained with joint restrainers adequately sized to prevent movement and dislocating or blowing off when the line is under pressure. Service laterals shall terminate at the point noted in the details. All reclaimed mains shall be installed with tracer wire per CCUA standard location wire details.
- 16. SEPARATION OF RECLAIMED WATER MAINS.** Maximum separation of reclaimed water lines and potable water lines shall be practiced. A minimum horizontal separation of three feet, outside-to-outside, shall be maintained between reclaimed water mains and other potable water mains or wastewater pipes. Reclaimed water mains crossing under water mains shall be laid to provide a minimum vertical separation of 18 inches between the invert of the upper pipe and the crown of the lower pipe. Where the minimum separation cannot be maintained, the crossing shall be arranged such that the reclaimed water main pipe joints and potable water main joints are equidistant from the point of crossing with no less than ten feet between joints. Alternatively, the reclaimed water main shall be placed in a sleeve to obtain the equivalent of the required ten feet separation. Where there is no alternative to reclaimed water pipes crossing over a water main, the criteria for minimum separation between lines and joints shall be required.
- 17. PIPE FLUSHING.** All reclaimed water system piping shall be flushed with clean water utilizing full pipe diameter flushing. In cases where the water supply is inadequate to flush the full pipe diameter, flushing shall occur to the extent of the water supply that is available. All flushing must be contained.
- 18. TESTS.** After the pipe is laid, the joints completed, and the trench backfilled, the newly laid pipe and appurtenances shall be subjected to a Hydrostatic and Leakage test of 150 pounds per square inch for a period of at least two hours. During this period, all joints shall be inspected to determine water tightness of the system. Any leaks detected shall be corrected. Tests shall be in accordance with the CCUA's requirements and specifications. Curb and limerock may be installed after construction of the reclaimed water mains, however, limerock priming cannot proceed until such time as the CCUA inspector approves the reclaimed water distribution system pressure test. This will be strictly enforced. If the reclaimed water system is damaged during any of the operations prior to paving, a follow up test may be required by the Clay County Utility Authority.
- 19. WARNING SIGNS.** Each development, regardless of the number of buildings, shall install reclaimed water use warning signs at the entrance or any other street or driveway entering any properties which use reclaimed water. The signs shall meet the requirements of CCUA details and specifications. The signs shall be a requirement whether shown on plans or not. Direction of locating those signs shall be given by the CCUA inspector on site.
- 20. POLYETHYLENE TUBING SERVICE LINES AND MAINS (2 INCH AND SMALLER):** Tubing shall be manufactured of PE 4710, High Density Polyethylene (HDPE), in accordance with AWWA C901, ASTM D1248, ASTM D2239, ASTM D3737 and ASTM D3350. The tubing shall have a minimum working pressure of 250 psi. Polyethylene tubing shall be copper tube size SDR-9 and shall be colored purple. HDPE pipe shall have ultraviolet (UV) inhibitors for protection against direct sunlight for 1 year. Inserts for polyethylene tubing may be utilized, at Contractor's option, and, if used, shall be 316 stainless steel. The use of non-leak brass couplings, tees and "Y" fittings are acceptable on poly service tubing, if not located under a roadway. Tubing shall be approved for use with potable water by the National Sanitation Foundation (NSF-14) and shall be continuously marked at intervals of not more than four feet with the following:  
Nominal size  
Pressure rating  
NSF seal  
Manufacturer's name or trademark  
Standard dimension ratio  
ASTM specification



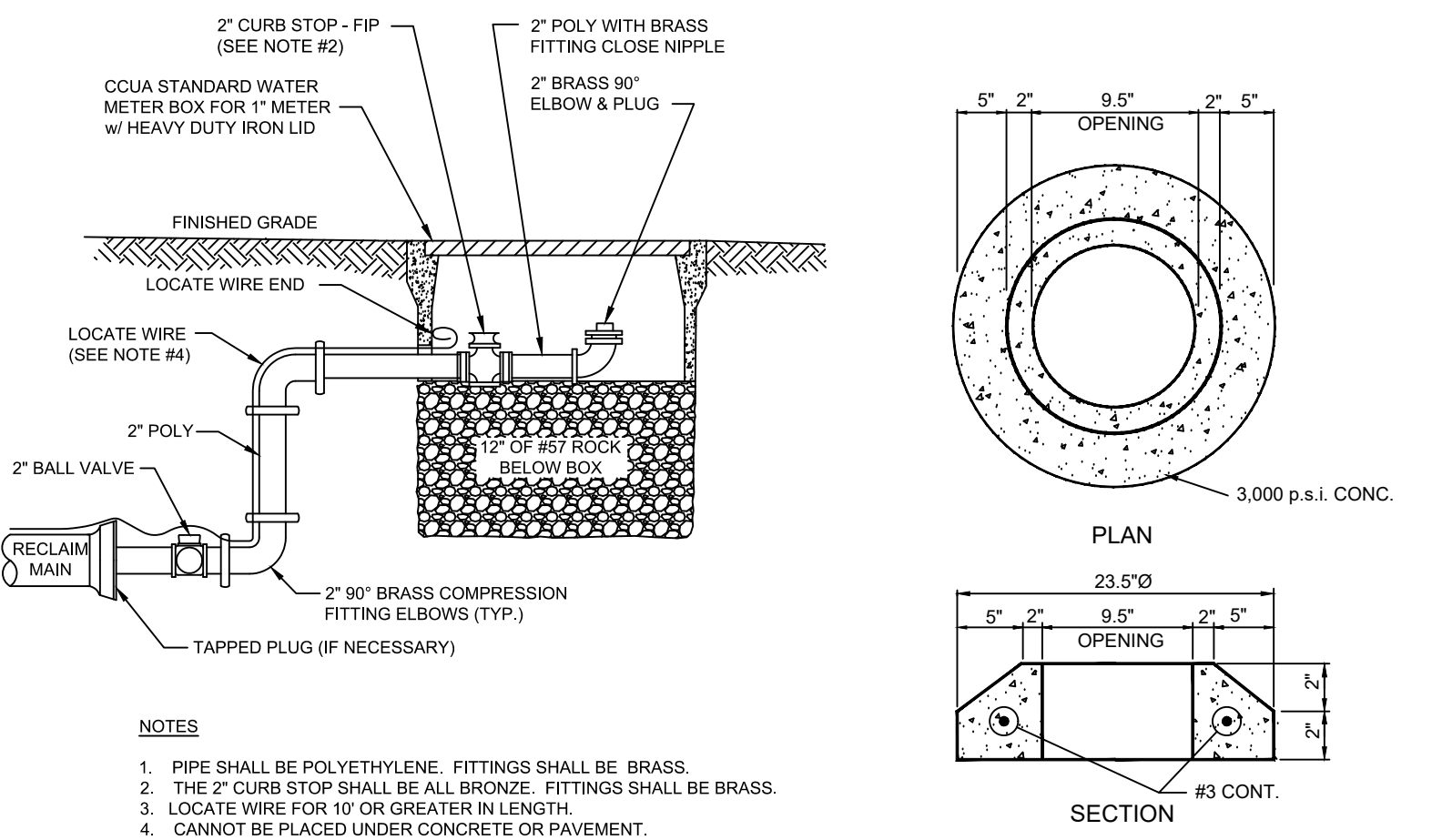
**PRECAST CONCRETE VALVE BOX COLLAR**



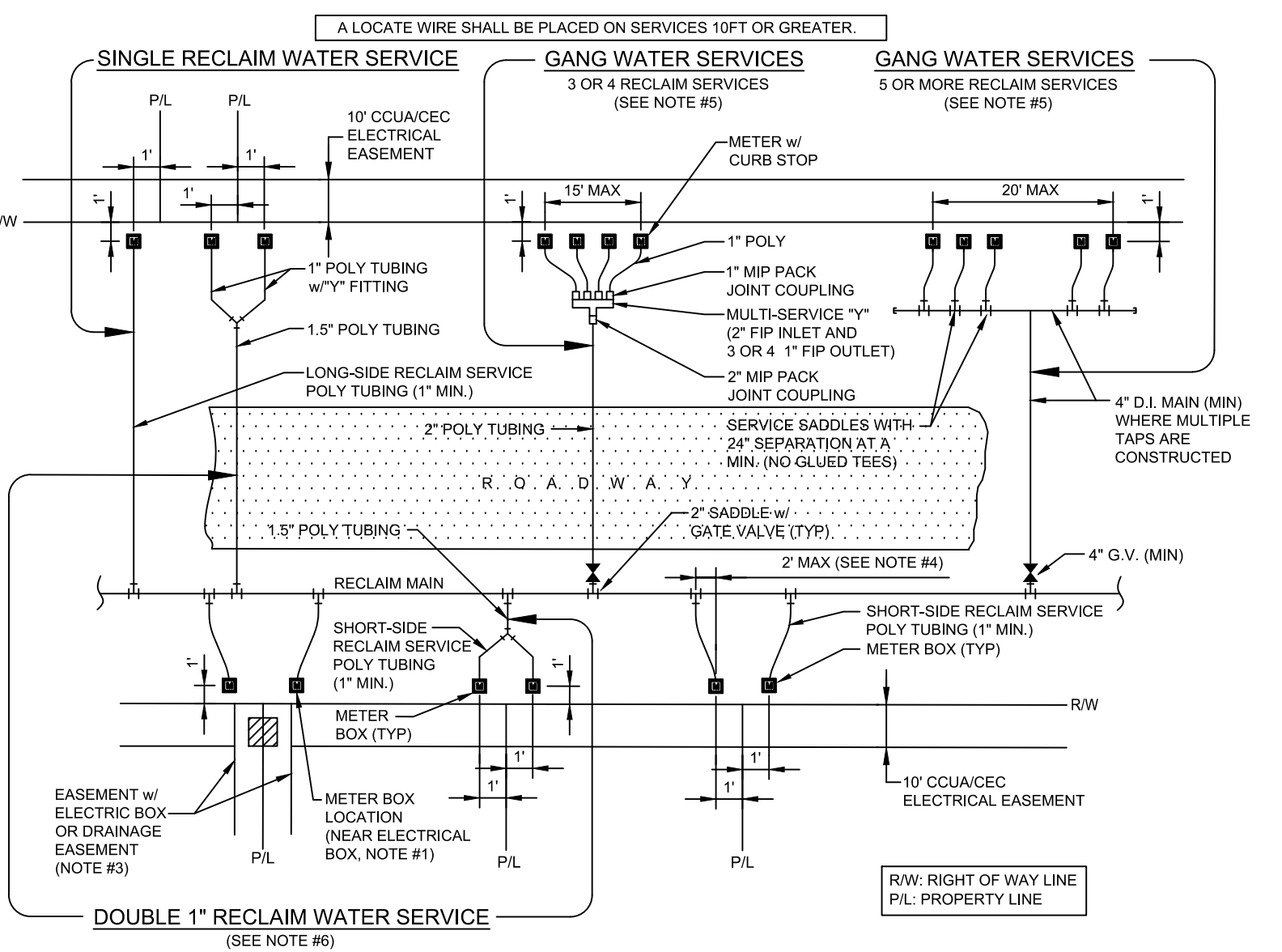
**RECLAIM WATER SERVICE DETAIL 2" AND SMALLER METER**



**RECLAIMED SERVICE LOCATION POST**



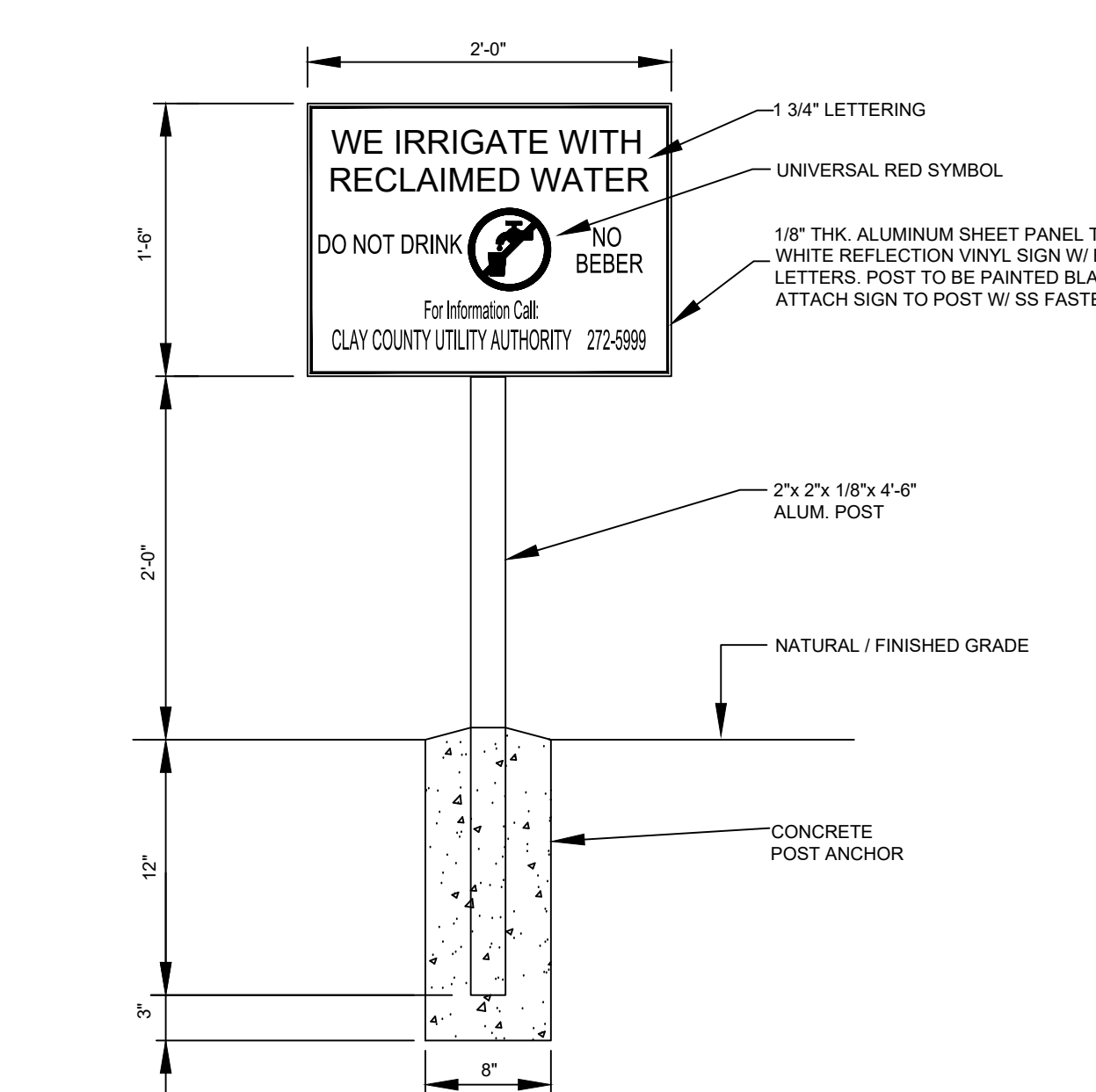
**FLUSHING VALVE BELOW GRADE**



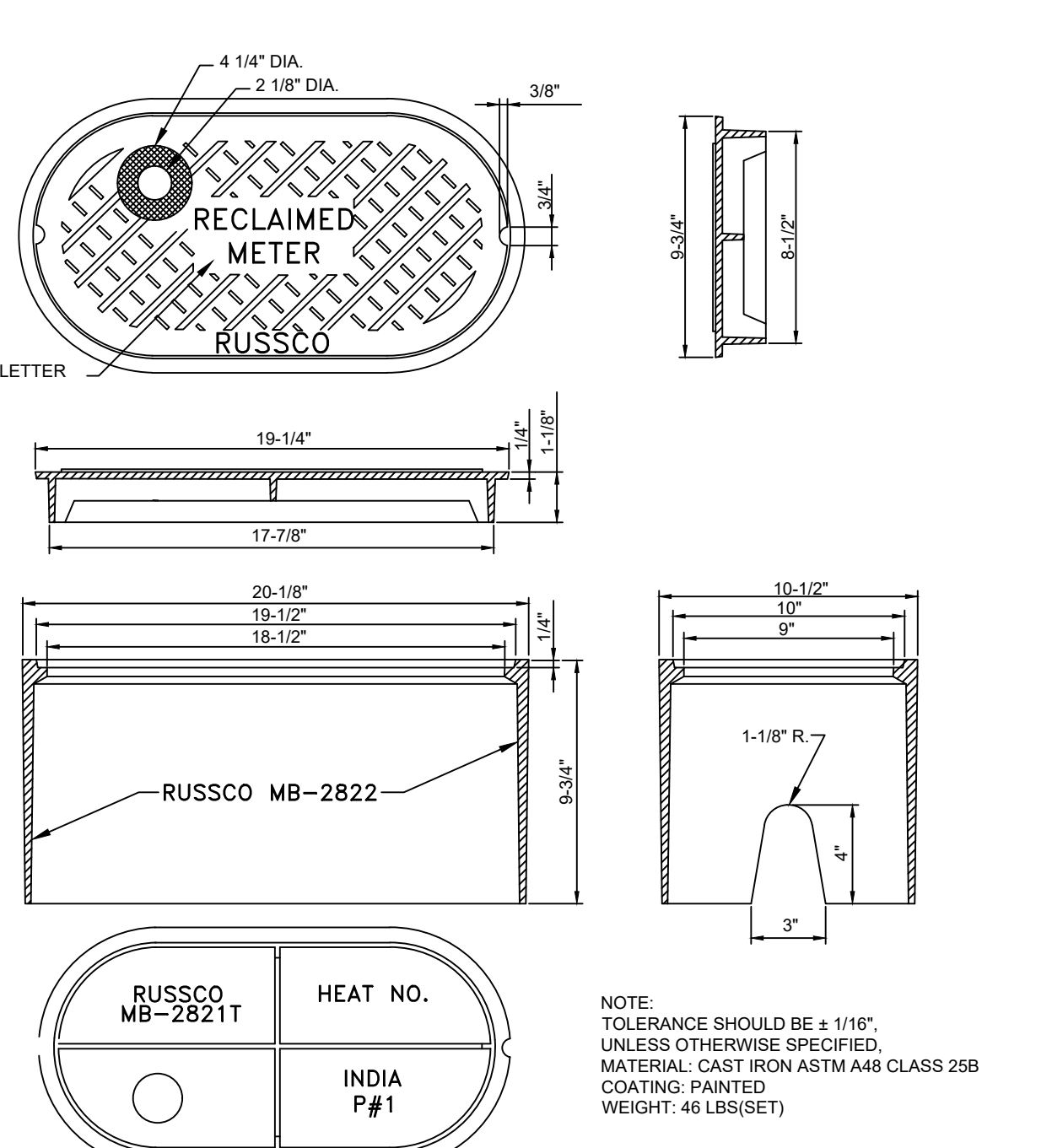
- NOTES:
1. THE SKETCHES ABOVE INDICATE TYPICAL RECLAIM WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL LOCATED 1' OFF OF THE ROW LINE.
  2. UNLESS SPECIFIED OTHERWISE BY THE APPLICABLE COUNTY (CLAY OR BROWARD), THE METER BOX SHALL BE LOCATED 1' OFF OF THE ROW LINE, AND 1' FROM INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CORNER CUT UTILITIES, THE METER BOX SHALL BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES ON LIEU OF 1' OFF FEET, UNLESS APPROVED OTHERWISE BY CCUA. THE WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN SIDEWALKS OR DRIVEWAYS). IF AN UNAPPROVED METER BOX IS IDENTIFIED BY CCUA, THEN THE CONTRACTOR OR CUSTOMER SHALL BE RESPONSIBLE FOR THE COST OF RELOCATING ANY METER BOX WHICH IS LOCATED IN THE SIDEWALK OR DRIVEWAY OR THE COST TO PROVIDE THE CORRECT METER BOX. CCUA SHALL APPROVE ALL DEVIATIONS TO THE ABOVE PRIOR TO CONSTRUCTION.
  3. IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.
  4. FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN) BETWEEN THE SERVICE'S SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 1" SERVICES, THE 1" POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES 1" OR GREATER IN LENGTH. IF LOCATE WIRE IS REQUIRED, THE WIRE SHALL RUN FROM THE METER BOX TO THE MAIN (WITH NO CONNECTION TO MAIN WIRE WITH THE LAST 24 INCHES STRIPPED OF INSULATION/BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY CCUA. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.
  5. GANG WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTILE IRON PIPE (D.I.P.) WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. LOCATE WIRE SHALL EXTEND FROM ONE METER BOX TO CURB STOP AT WATER MAIN. FOR 5 OR MORE SERVICES IN ONE AREA, A WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS (TAPS STAGGERED AND AT 2 FEET ON CENTERING). FOR WATER SUPPLY READERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED, THE HEADER PIPE SHALL BE 4" AT A MINIMUM. EXAMPLE: CONSTRUCT A 4" MAIN D.I.P. CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS, UTILIZING 4" Q.V., 4" PIPE, 4"x1" SADDLES AND 1" CURB STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.
  6. DOUBLE 1" RECLAIM WATER SERVICES IS ALLOWED FOR SHORT-SIDE OR LONG-SIDE SERVICES AND WHERE SHOWN ON THE DRAWINGS.
  7. RECLAIMED WATER METER BOXES OR SERVICES SHALL BE LOCATED AT A MIN. OF 10' FROM THE EXISTING POTABLE WATER SERVICE AND/OR BOX, AND NOT ALLOWED IN CONCRETE OR ASPHALT UNLESS APPROVED OTHERWISE BY CCUA.

**RECLAIM WATER SERVICE INSTALLATIONS 2" AND SMALLER METER**

**METER VAULT - 3" AND LARGER METERS**



**RECLAIMED WATER USE WARNING SIGN**



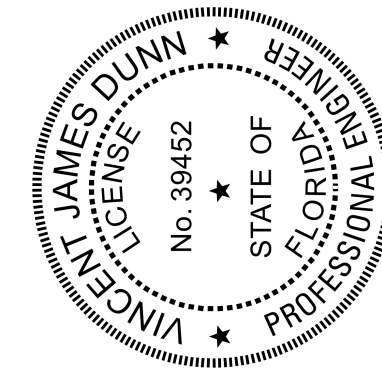
**ROME METER BOX & LID W/ TOUCH READ HOLE**

**RECLAIMED WATER DISTRIBUTION SYSTEM DETAILS AND SPECIFICATIONS**

**CLAY COUNTY UTILITY AUTHORITY**  
3176 OLD JENNINGS ROAD  
MIDDLEBURG, FLORIDA 32068-3907  
PHONE (904) 272-5999



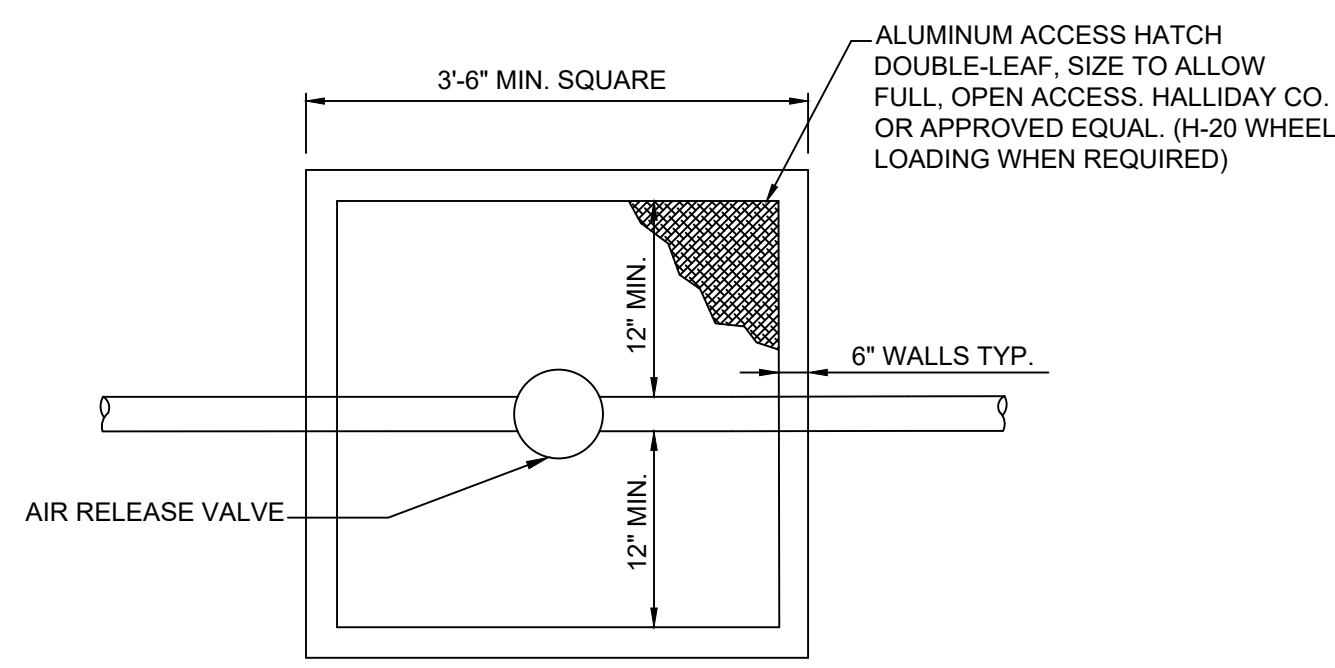
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**RD-1**

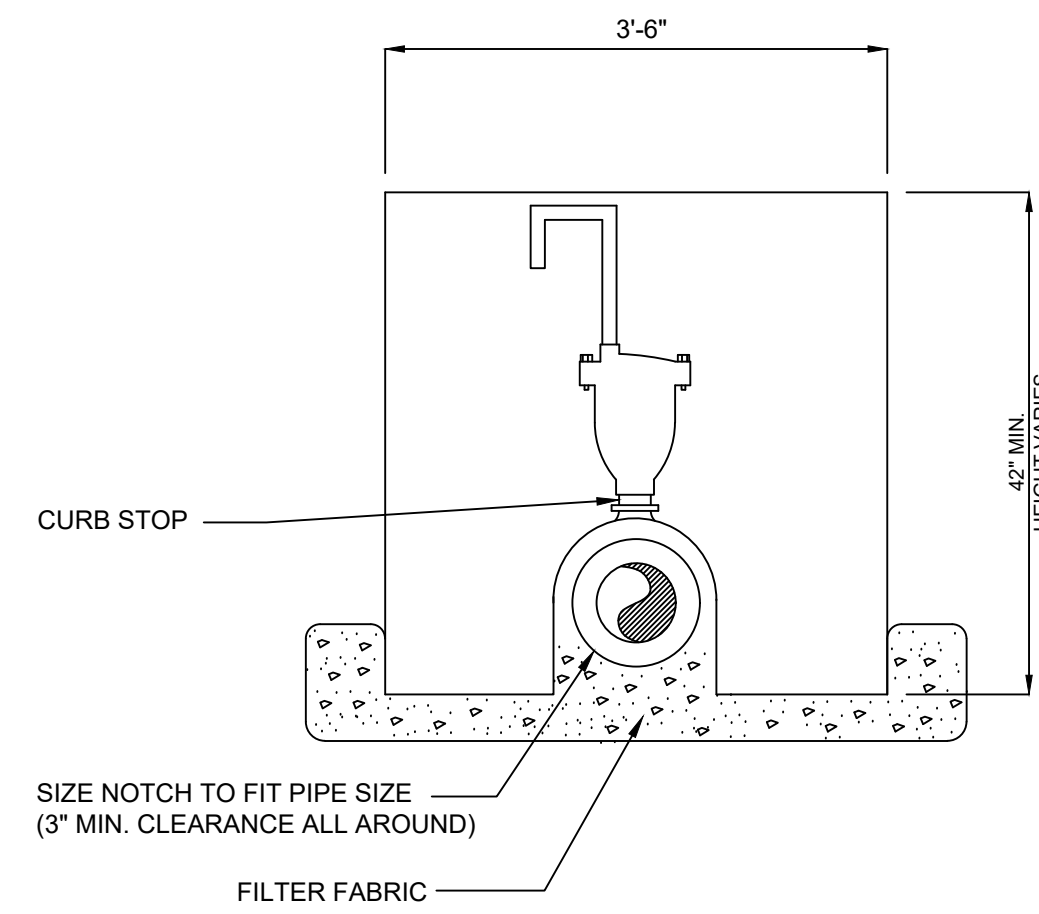




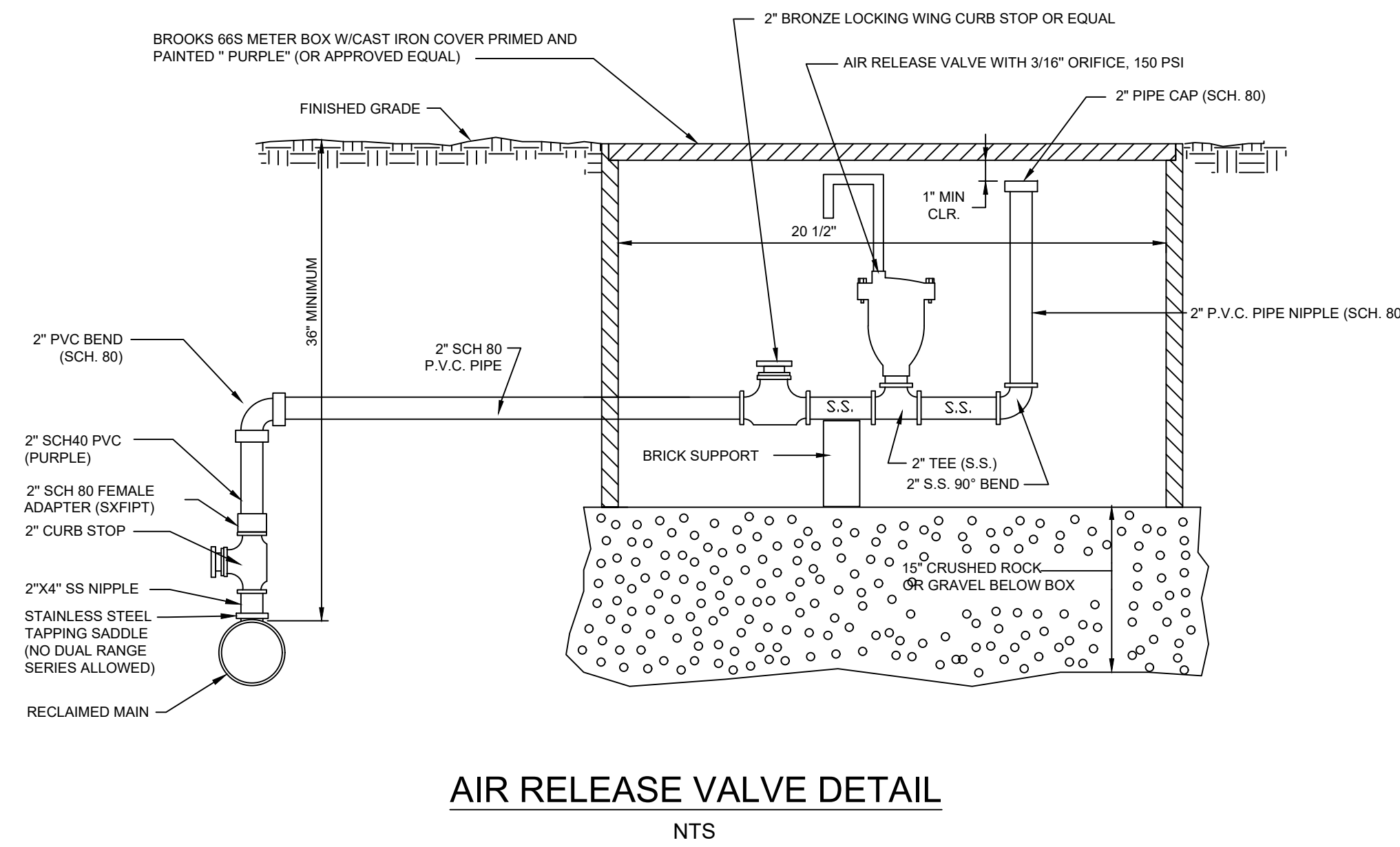
NOTES:

1. CONC. BOX SHALL BE 42" MIN. DEPTH BUT SHALL BE DEEP ENOUGH TO ACCOMMODATE THE SIZE PIPE AND TYPE OF AIR RELEASE VALVE REQUIRED, WITH OPEN BOTTOM, PRECAST WITH NOTCH TO ACCOMMODATE PIPE INSTALLED WITH 36" COVER FROM TOP OF PIPE TO FINISH GRADE, ON 12" OF #57 STONE, WITH FILTER FABRIC ABOVE AND BELOW THE STONE.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF BOX WITH DIMENSIONS FOR APPROVAL BY C.C.U.A.
3. DIMENSIONS SHOWN ARE MINIMUM AND SHALL BE INCREASED BASED UPON ACTUAL SIZE OF PIPE INSTALLED

NOTE: WIDTH VARIES TO ACCEPT PIPE SIZES OVER 8"

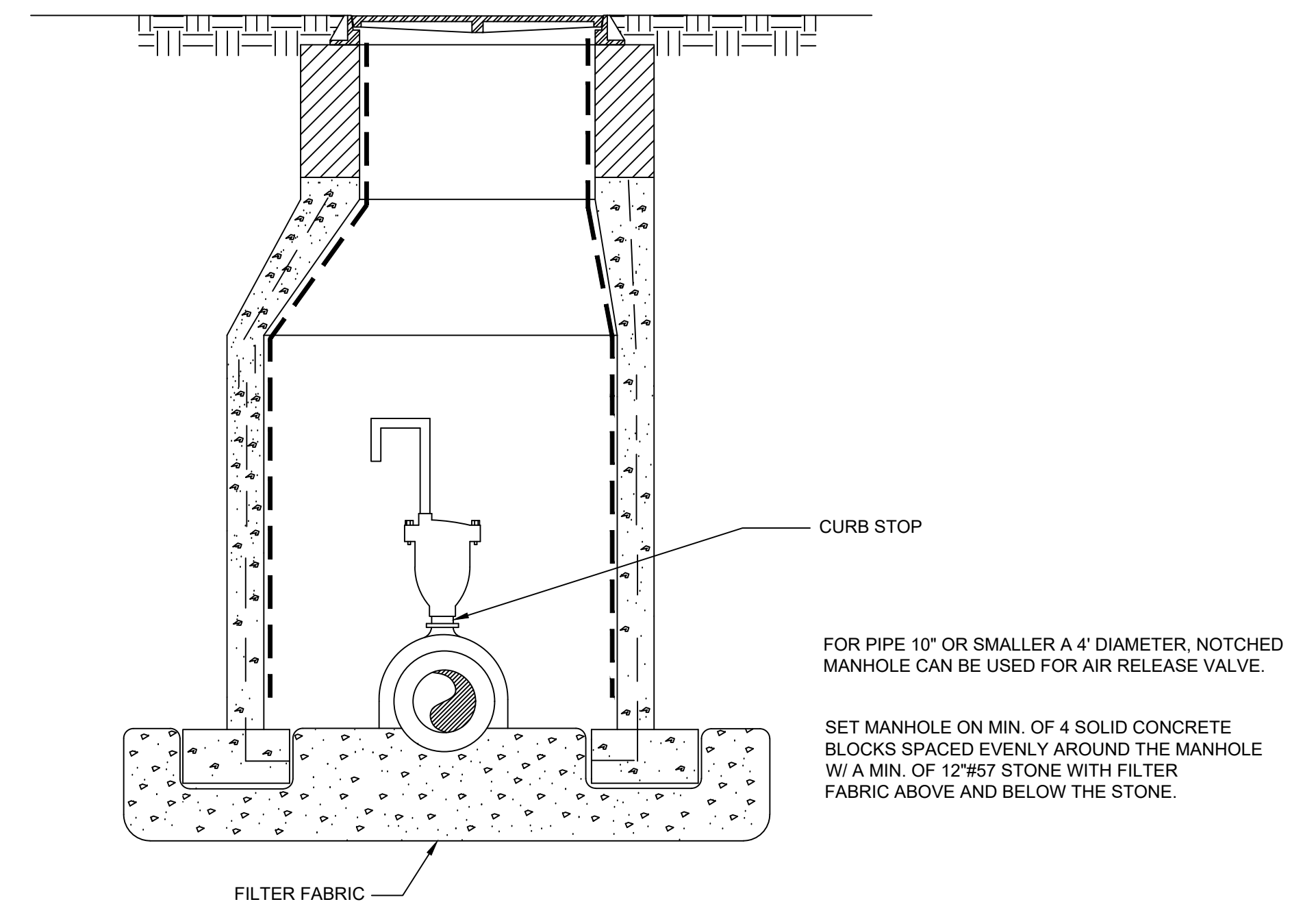


**REUSE MAIN AIR RELEASE VALVE VAULT**  
TO BE USED ON ALL PIPES 12" OR LARGER



**AIR RELEASE VALVE DETAIL**

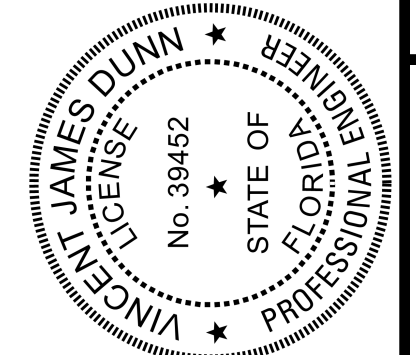
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**REUSE MAIN AIR RELEASE VALVE VAULT**

TO BE USED ON ALL PIPES 12" OR SMALLER

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NO.	DATE	BY	REVISION DESCRIPTION
7	MAY 06	MRS	PRECAST CONCRETE ADJUSTING BRINGS
5	JUN 03	DLR	GENERAL UPDATES AND REVISIONS
4	AUG 01	CAR	GENERAL UPDATES AND REVISIONS
3	SEPT 00	CAR	GENERAL UPDATES AND REVISIONS
1	JULY 98	CAR	GENERAL UPDATES AND REVISIONS

DESIGN	DATE
DRWN	
CHKD	
APRV	

PROJECT:  
**RECLAIMED WATER DISTRIBUTION SYSTEM DETAILS AND SPECIFICATIONS 2**

**CLAY COUNTY UTILITY AUTHORITY**  
3176 OLD JENNINGS ROAD  
MIDDLEBURG, FLORIDA 32068-3907  
PHONE (904) 272-5999

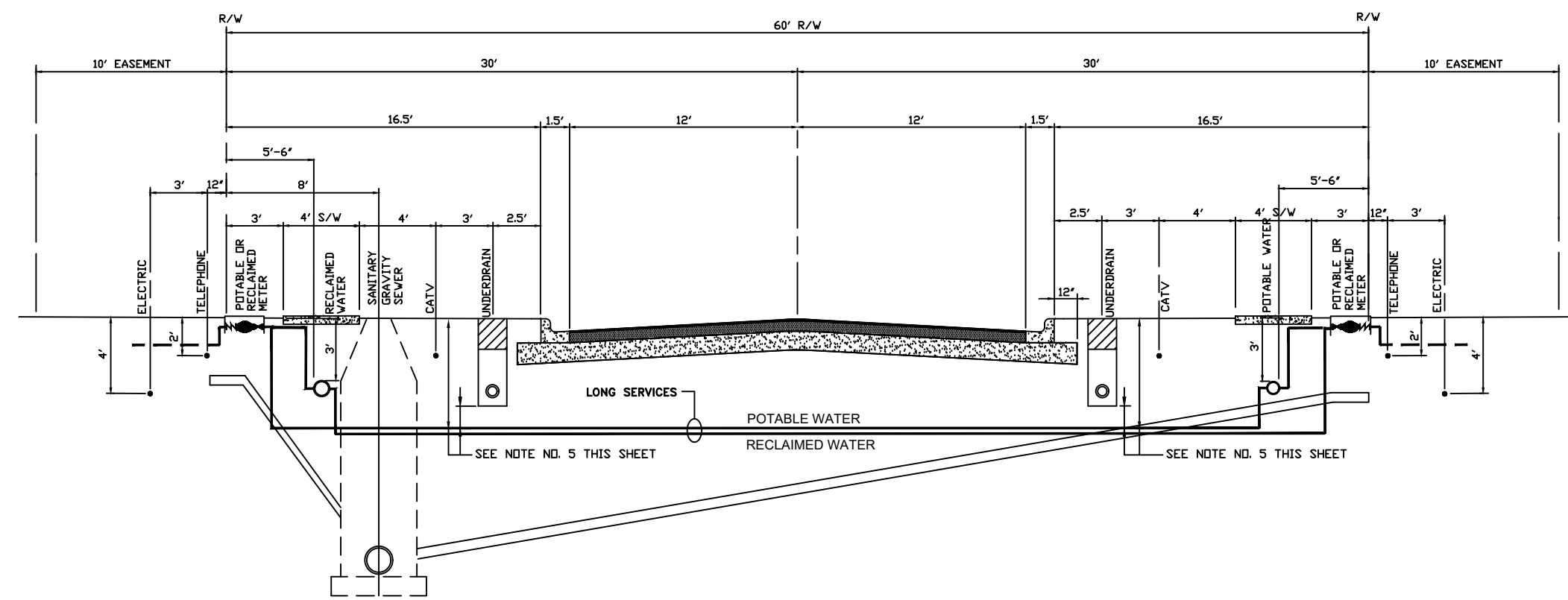


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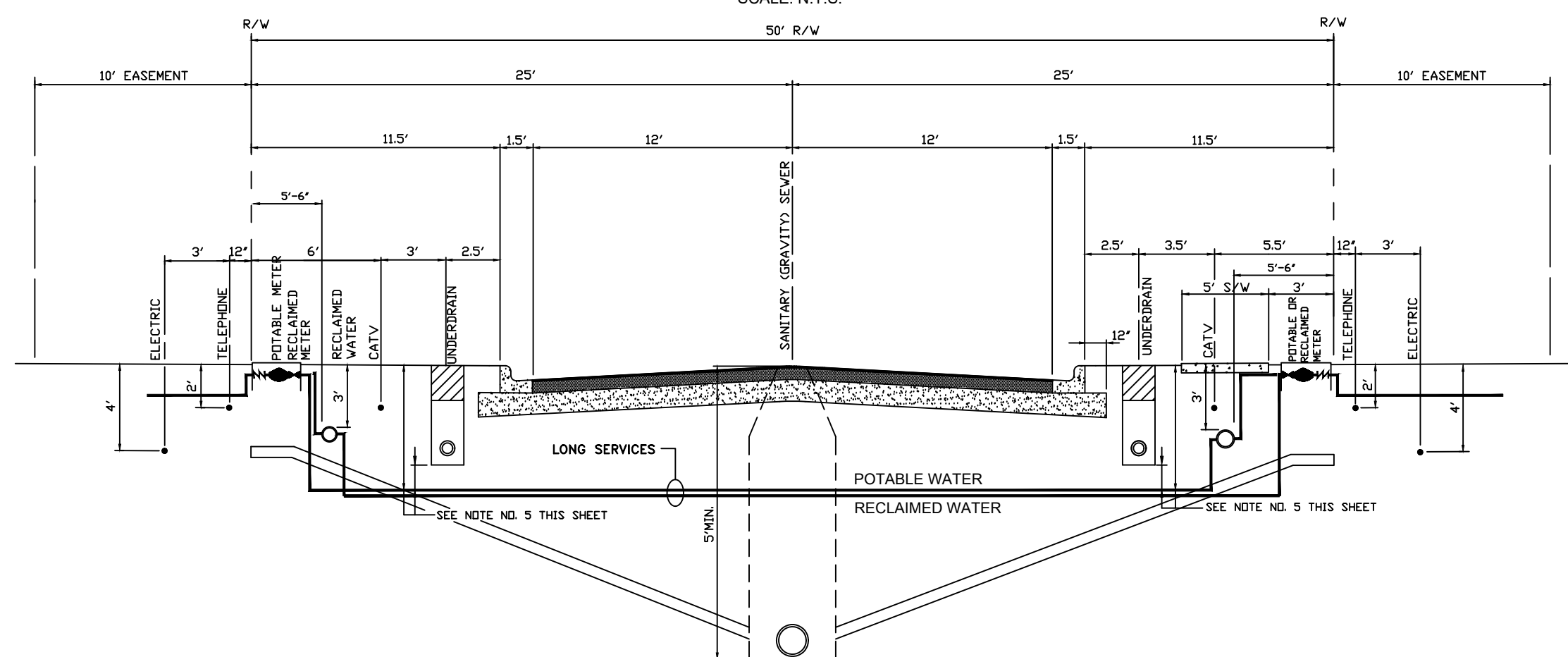
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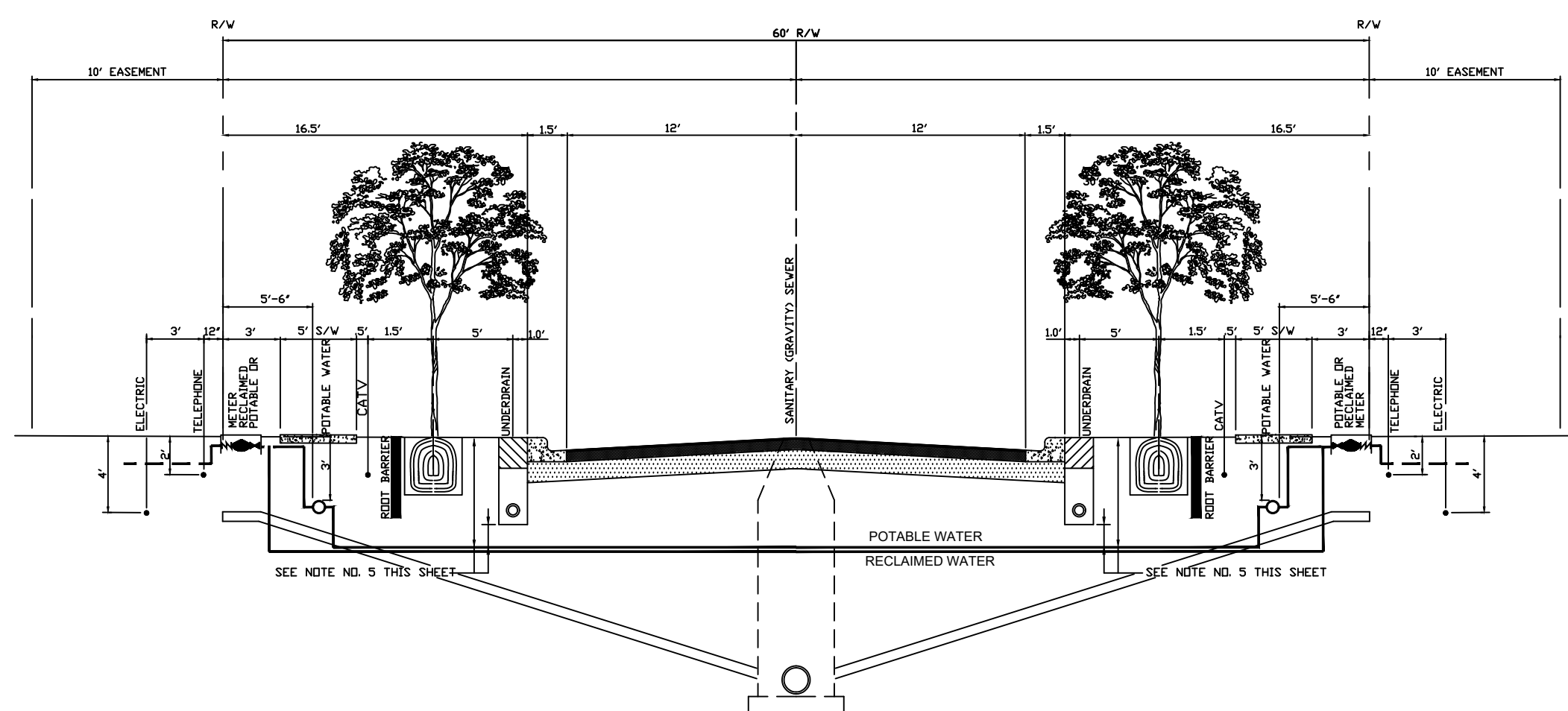




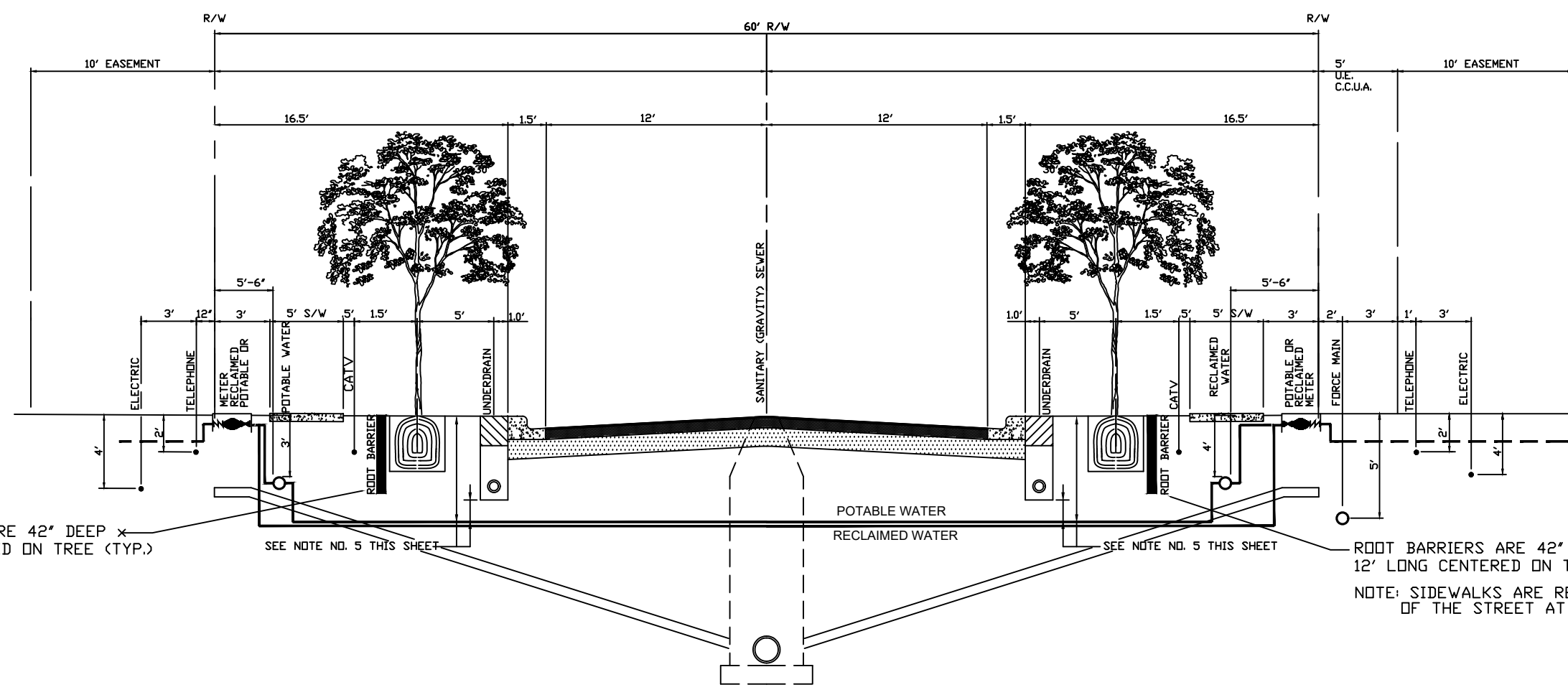
**PROPOSED UTILITY TYPICAL SECTION FOR 60' R/W WITH GRAVITY SEWER BACK OF CURB W/ RECLAIMED WATER**  
SCALE: N.T.S.



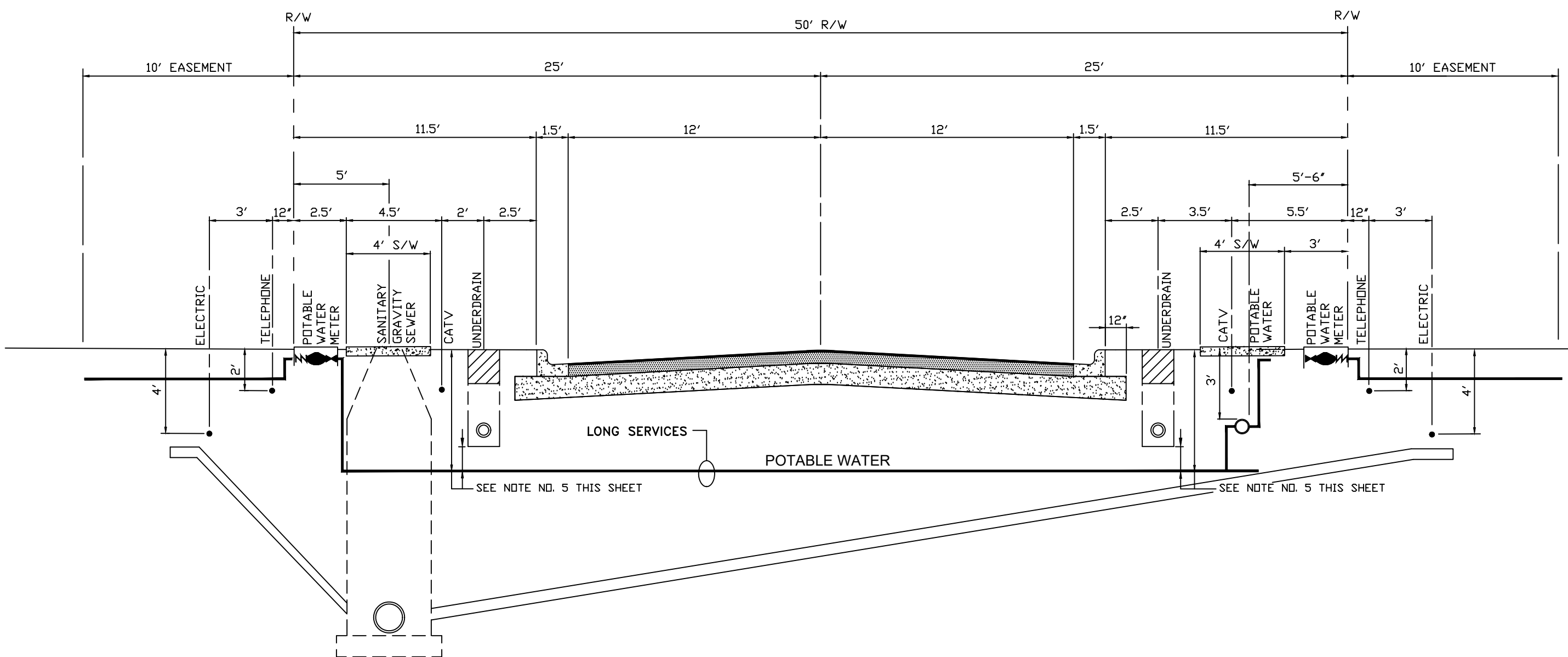
**PROPOSED UTILITY TYPICAL SECTION FOR 50' R/W WITH GRAVITY SEWER IN CENTER OF ROAD W/ RECLAIMED WATER**  
SCALE: N.T.S.



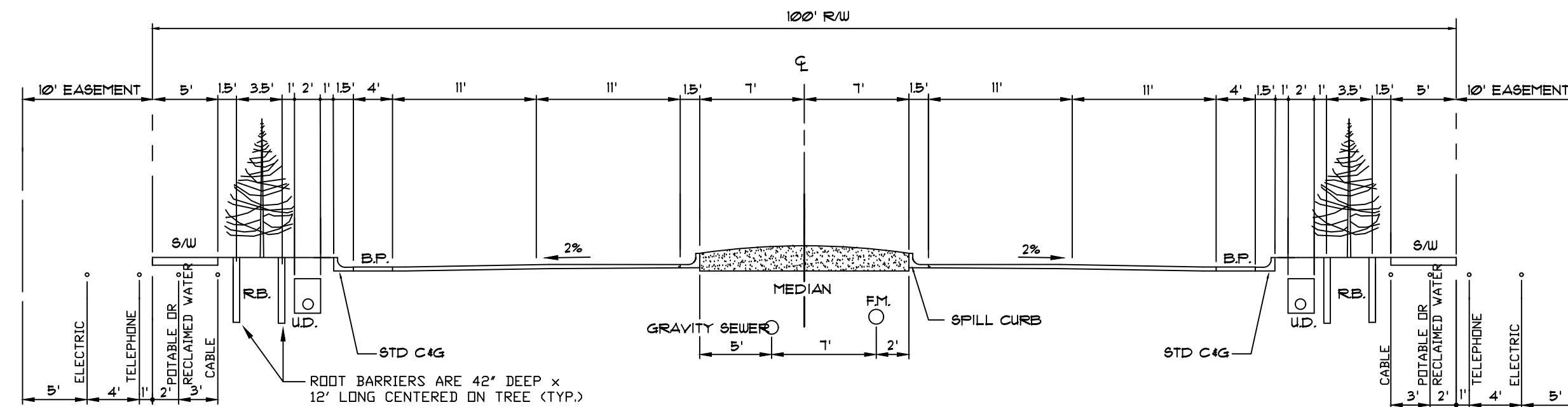
**PROPOSED UTILITY TYPICAL SECTION FOR 60' R/W WITH GRAVITY SEWER IN CENTER OF ROAD W/ RECLAIMED WATER**  
SCALE: N.T.S.



**PROPOSED UTILITY TYPICAL SECTION FOR 60' R/W WITH GRAVITY SEWER IN CENTER OF ROAD W/ FORCE MAIN PARALLEL TO RECLAIMED WATER**  
SCALE: N.T.S.



**PROPOSED UTILITY TYPICAL SECTION FOR 50' R/W WITH GRAVITY SEWER BACK OF CURB W/O RECLAIMED WATER**  
SCALE: 1"=5'

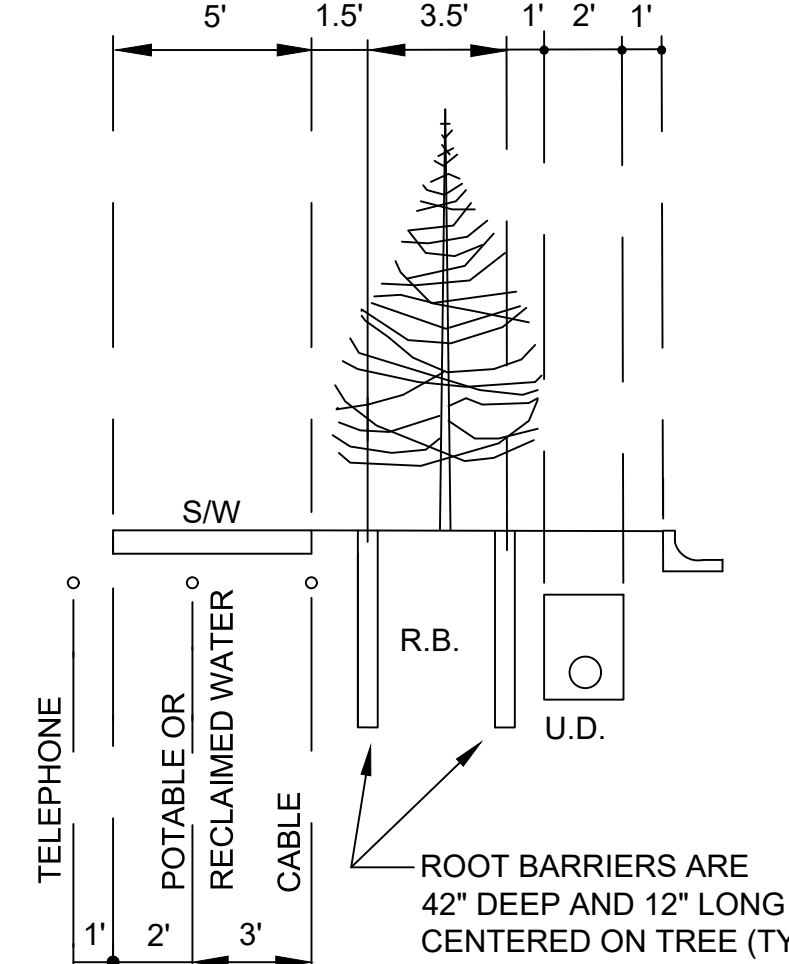


**ROOT BARRIER SPECIFICATIONS:**  
ROOT BARRIER SHALL BE LONG TERM ROOT CONTROL SYSTEM WHICH UTILIZES TIME RELEASE OF AN HERBICIDE TO PREVENT ROOT INTRUSION. EFFECTIVE LIFE OF THE MATERIAL SHALL BE AT LEAST 15 YEARS. SIMILAR AND / OR EQUAL TO "BIDBARRIER" AS MANUFACTURED BY BBA NUNDOVEN / BEEWAY, INC. 70 OLD HICKORY BLVD., OLD HICKORY, TN. 37138-3651, (800)284-2780.

SEE CCUA APPROVED MATERIALS MANUAL TO ROOT BARRIER SPECIFICATIONS.

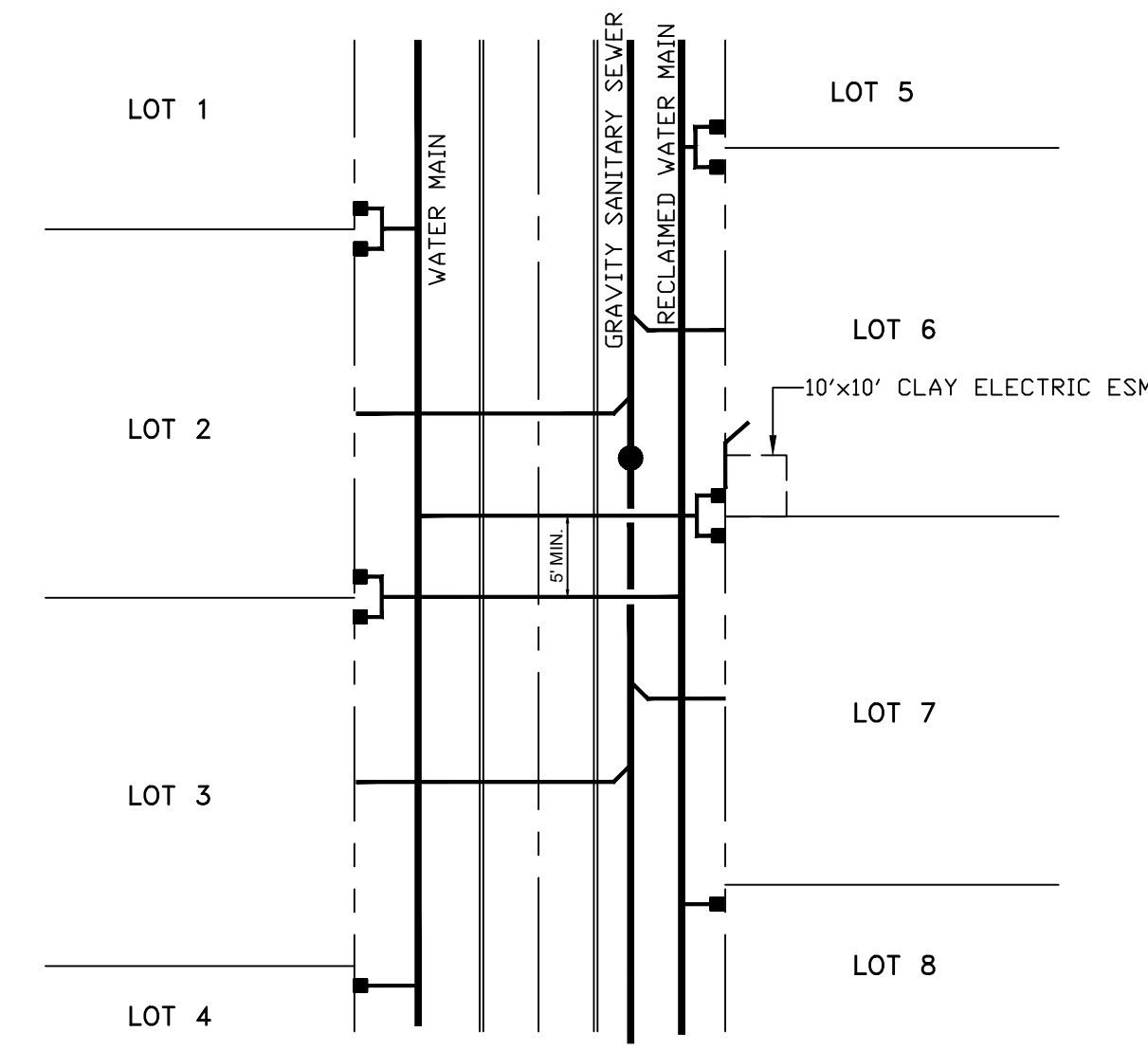
100' CROSS SECTION SHOWN IS FOR INFORMATION PURPOSES ONLY. THIS CROSS SECTION MAY NEED TO BE MODIFIED TO FIT THE PROPOSED ROADWAY DESIGN, REQUIRES CCUA APPROVAL.

**PROPOSED UTILITY TYPICAL SECTION FOR 100' R/W WITH RAISED MEDIAN AND GRAVITY SEWER IN CENTER OF ROAD**  
NOT TO SCALE



**ROOT BARRIER DETAIL**  
SCALE: N.T.S.

EXTRUDED SHEETS OR PANELS WITH INTEGRAL MALE/FEMALE SLIDING LOCK CONNECTION ENDS. MATERIAL SHALL BE HDPE WITH A MINIMUM THICKNESS OF 60 MIL AND SHALL BE RIBBED. ROOT BARRIER SHALL EXTEND TO A MINIMUM DEPTH OF 42" BELOW FINISH GRADE. THE ROOT BARRIER SHALL BE A MINIMUM OF 12" LONG, CENTERED ON THE TREE AND PARALLEL WITH THE UTILITY MAIN OR SERVICE LINE BEING PROTECTED. UNLESS SHOWN OTHERWISE ON THE PLANS, ROOT BARRIER SHALL BE INSTALLED AT ANY TREE PLANTED IN A CCUA UTILITY EASEMENT, OR ANY TREE PLANTED WITHIN 10' OF ALL CCUA UTILITY MAINS OR SERVICES. NO TREES SHALL BE PLANTED IN A CCUA UTILITY EASEMENT WITHOUT THE APPROVAL OF CCUA. NO TREES SHALL BE CLOSER THAN 5' TO ANY CCUA UTILITY LINE OR SERVICES.



**TYPICAL WATER AND SEWER SERVICE LOCATION PLAN**

- 1.) ALL WATER AND RECLAIMED DOUBLE SERVICES ON PROPERTY LINE.
- 2.) ANY SINGLE WATER OR RECLAIMED SERVICE LINES ON LOT LINE.
- 3.) ALL SEWER SERVICES ARE TO CENTER OF LOTS.
- 4.) IF FITTINGS ARE REQUIRED TO ACHIEVE 5'-0" SEPARATION BETWEEN THE RECLAIMED AND POTABLE WATER SERVICE LATERALS THEN ASBUILT THE LOCATIONS WILL BE REQUIRED FOR THE SERVICE FITTINGS. THE OFFSET REQUIRED TO ACHIEVE THE SEPARATION SHALL OCCUR OUTSIDE OF THE PAVED ROADWAY.
- 5.) POTABLE AND RECLAIMED WATER SERVICE LINES SHALL ONLY BE DEEP ENOUGH TO CLEAR THE BOTTOM OF THE UNDERDRAIN TRENCH. MINIMUM COVER SHALL BE MAINTAINED IN ALL CASES.

DESIGN	DATE	NO.	BY	REVISION DESCRIPTION
GAR				
GAR				
CHKO				
APRV				

**PROJECT:**  
WATER, SEWER AND RECLAIMED WATER UTILITY PLACEMENT IN RW 27' PAVEMENT WIDTH

**CLAY COUNTY UTILITY AUTHORITY**  
3178 OLD JENNINGS ROAD  
MIDDLEBURG, FLORIDA 32068-3907  
TELEPHONE: (904) 272-5999

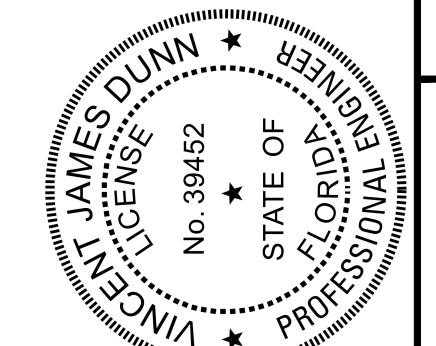


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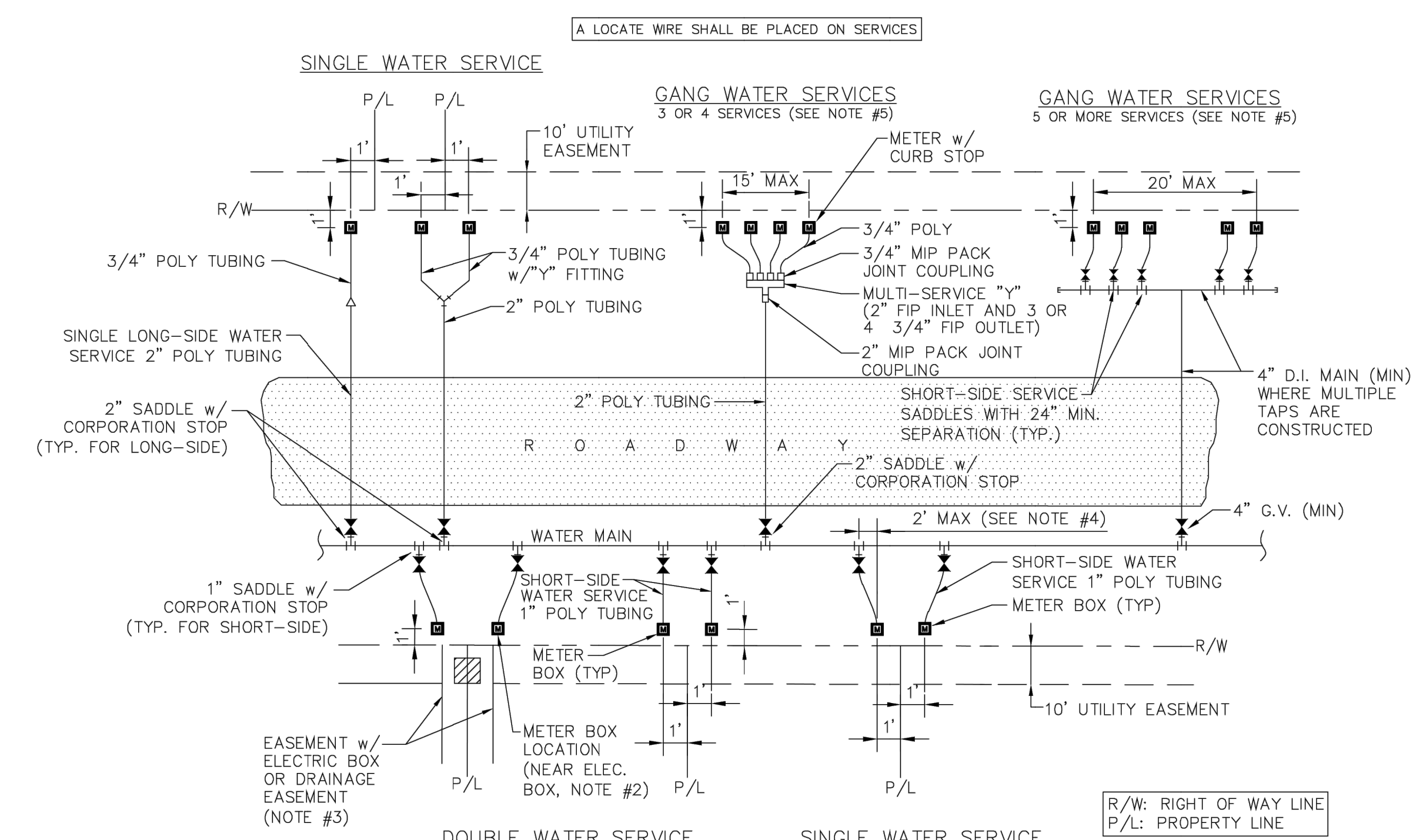
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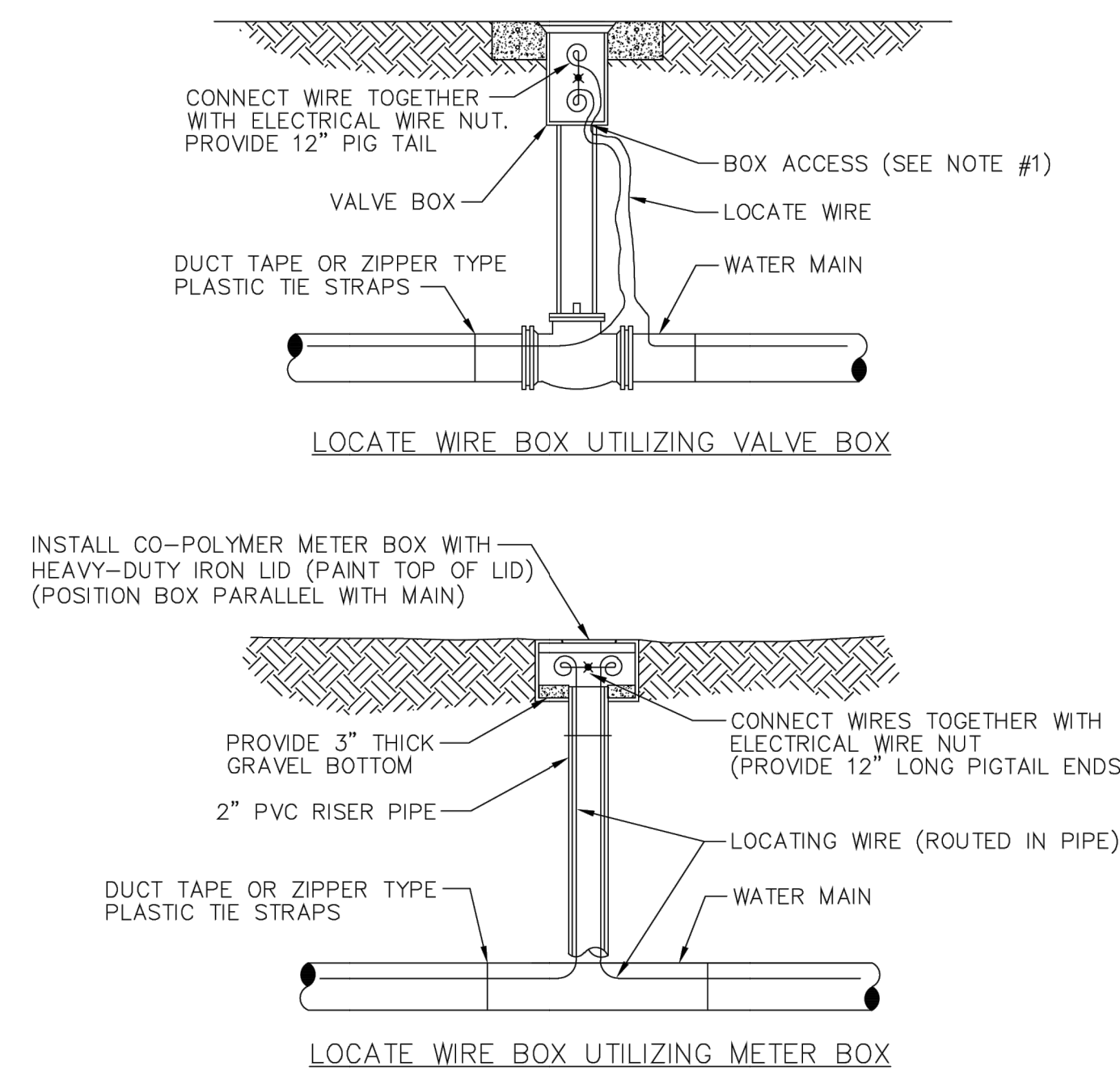


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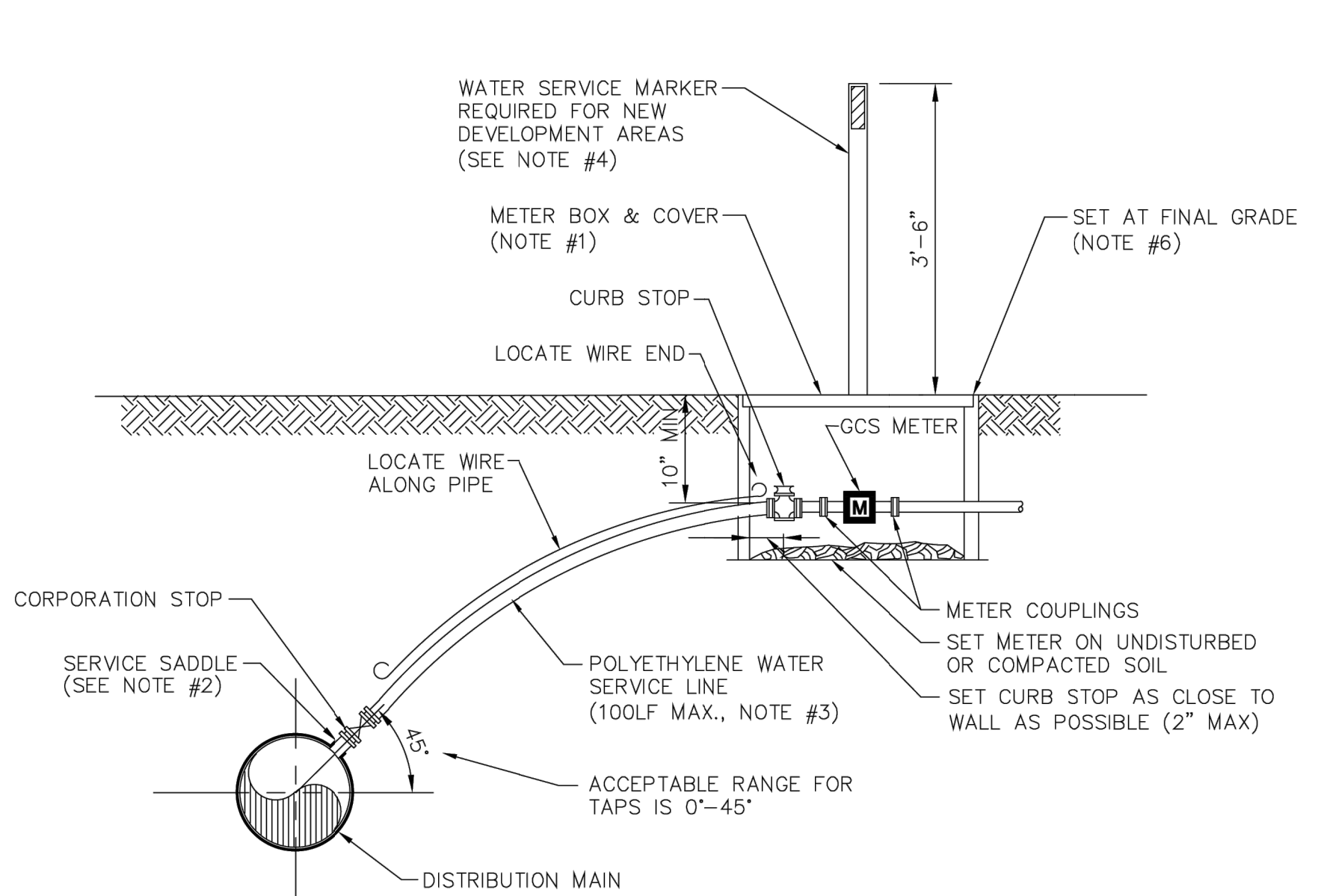
- NOTES**
- THE SKETCHES ABOVE INDICATE TYPICAL WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE.
  - UNLESS SPECIFIED OTHERWISE BY THE CITY OF GREEN COVE SPRINGS, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE, AND 1.0' FOOT INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES (IN LIEU OF 1.0' FEET). UNLESS APPROVED OTHERWISE BY THE CITY, THE WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN SIDEWALKS OR DRIVEWAYS). IF AN UNAPPROVED METER BOX WHICH IS LOCATED IN THE SIDEWALK OR DRIVEWAY OR THE COST TO PROVIDE THE CORRECT METER BOX. THE CITY SHALL APPROVE ALL DEVIATIONS TO THE ABOVE PRIOR TO CONSTRUCTION.
  - IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.
  - FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN) BETWEEN THE SERVICE'S SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 3/4" SERVICES, THE 2" POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES. THE WIRE SHALL RUN FROM THE METER BOX TO THE MAIN (WITH NO CONNECTION TO MAIN WIRE WITH THE LAST 24 INCHES STRIPPED OF INSULATION/BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY THE CITY OF GREEN COVE SPRINGS. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.
  - GANG WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTILE IRON PIPE (D.I.P.) WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. LOCATE WIRE SHALL EXTEND FROM ONE METER BOX TO CURB STOP AT WATER MAIN. FOR 5 OR MORE SERVICES IN ONE AREA, A WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS (TAPS STAGGERED AND AT 2 FEET ON CENTER (MIN). FOR WATER SUPPLY HEADERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED, THE HEADER PIPE SHALL BE 4" AT A MINIMUM. EXAMPLE: CONSTRUCT A 4" MAIN D.I. CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS, UTILIZING 4" G.V., 4" PIPE, 4"x1" SADDLES AND 1" CURB STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.
  - ALL COMMERCIAL WATER SERVICES SHALL BE 2" POLYETHYLENE PIPING CONNECTED TO 2" CURB STOP IN METER BOX, UNLESS OTHERWISE APPROVED BY THE CITY.

**WATER SERVICE INSTALLATIONS 2" AND SMALLER METER**



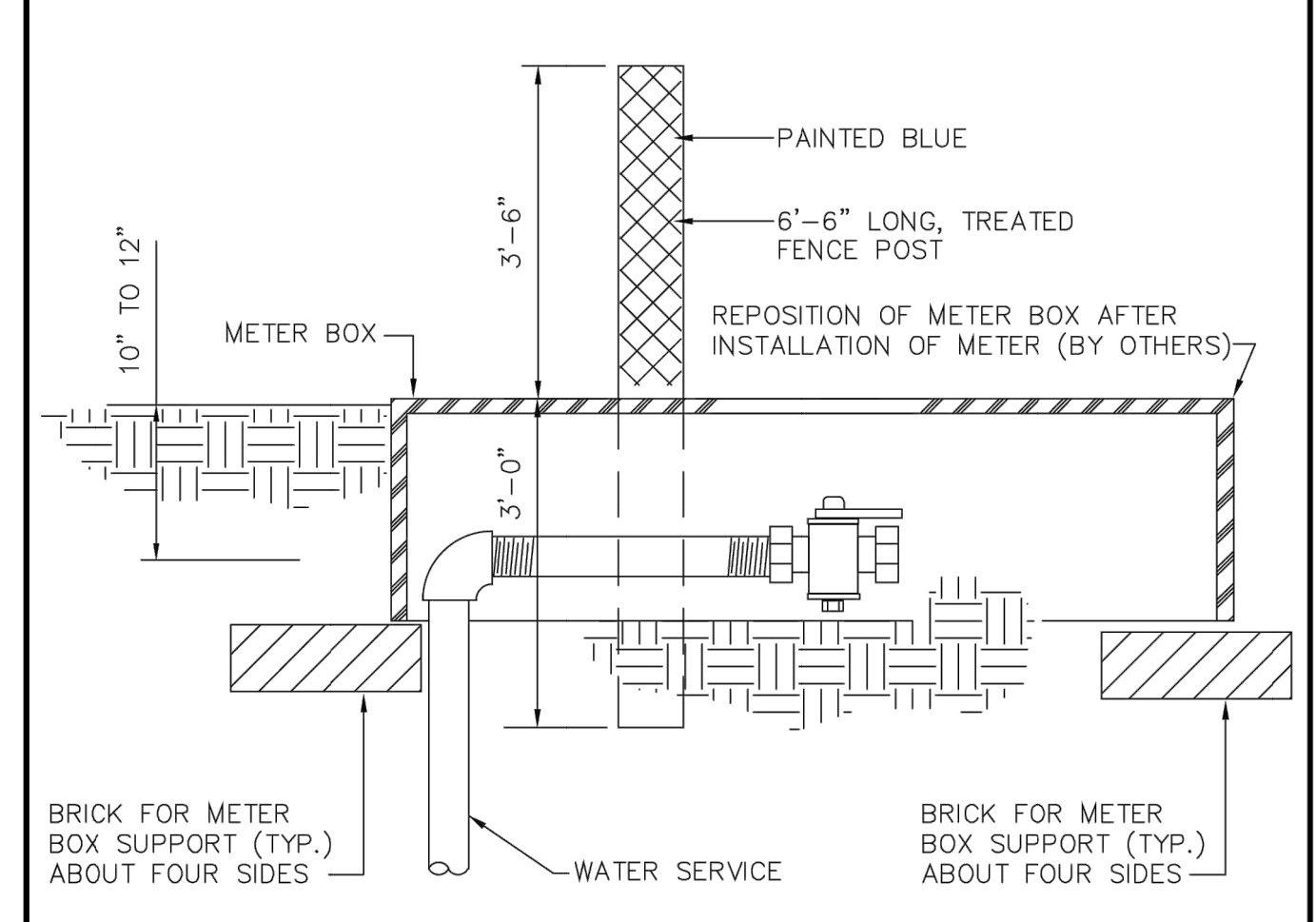
- NOTES**
- LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE.

**LOCATE WIRE BOX**



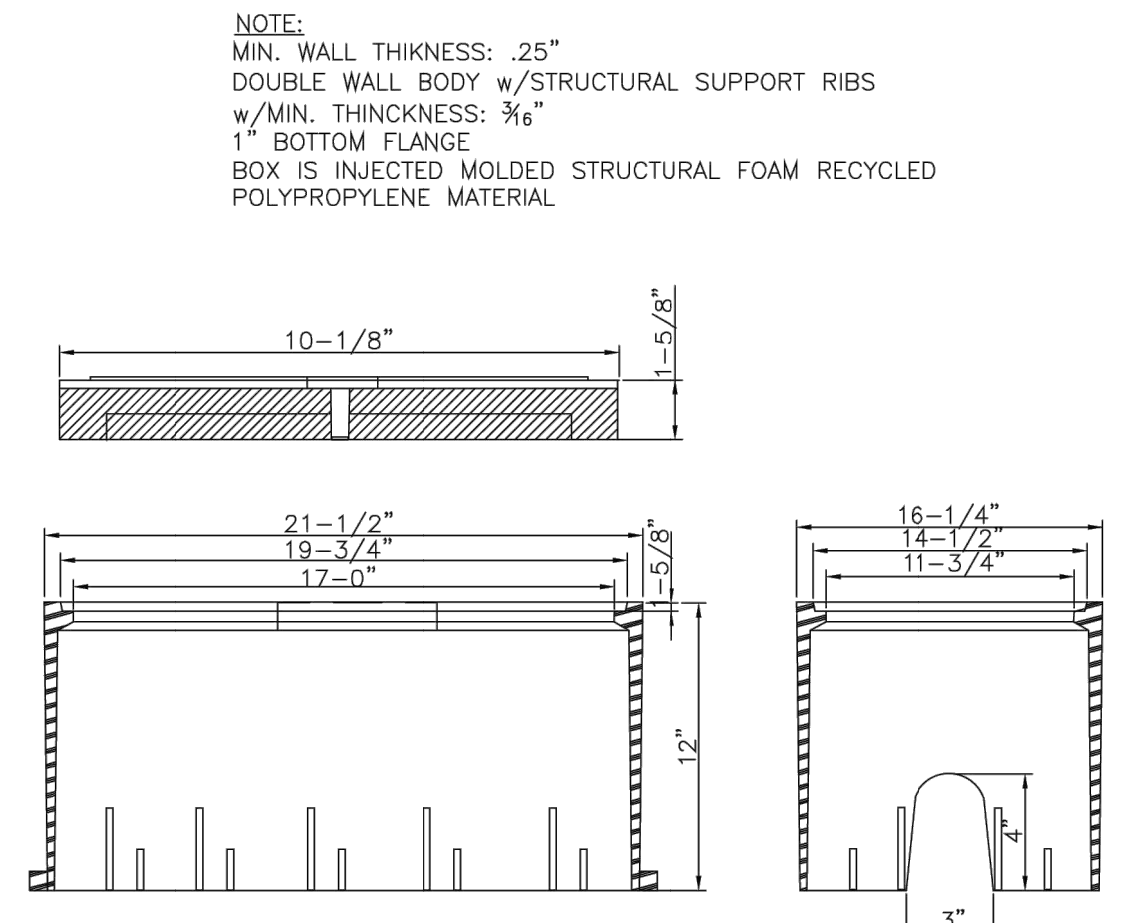
- NOTES**
- SEE CITY OF GREEN COVE SPRINGS APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.
  - SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.
  - NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CITY OF GREEN COVE SPRINGS. CONSTRUCT POLY LINE WITH 36" (MIN.) COVER UNDER ROADWAYS. THE POLY WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (3/4" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS OTHERWISE APPROVED BY CITY OF GREEN COVE SPRINGS.
  - INSTALL PVC PLUG IN ALL CURB STOPS IF WATER SERVICE IS "NOT IN USE" (I.E.: IF NO METER IS INSTALLED). IN ADDITION, INSTALL A 6", 6" P.T. FENCE POST (TOP PAINTED BLUE) 12" OFF SIDE OF METER BOX. THE REMOVAL OR TRANSFER OF A WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE BOXES, METERS OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.
  - METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (I.E., NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).
  - LOCATE WIRING REQUIRED ON ALL LONG AND SHORT SERVICES.

**WATER SERVICE DETAIL- 2" AND SMALLER METER**

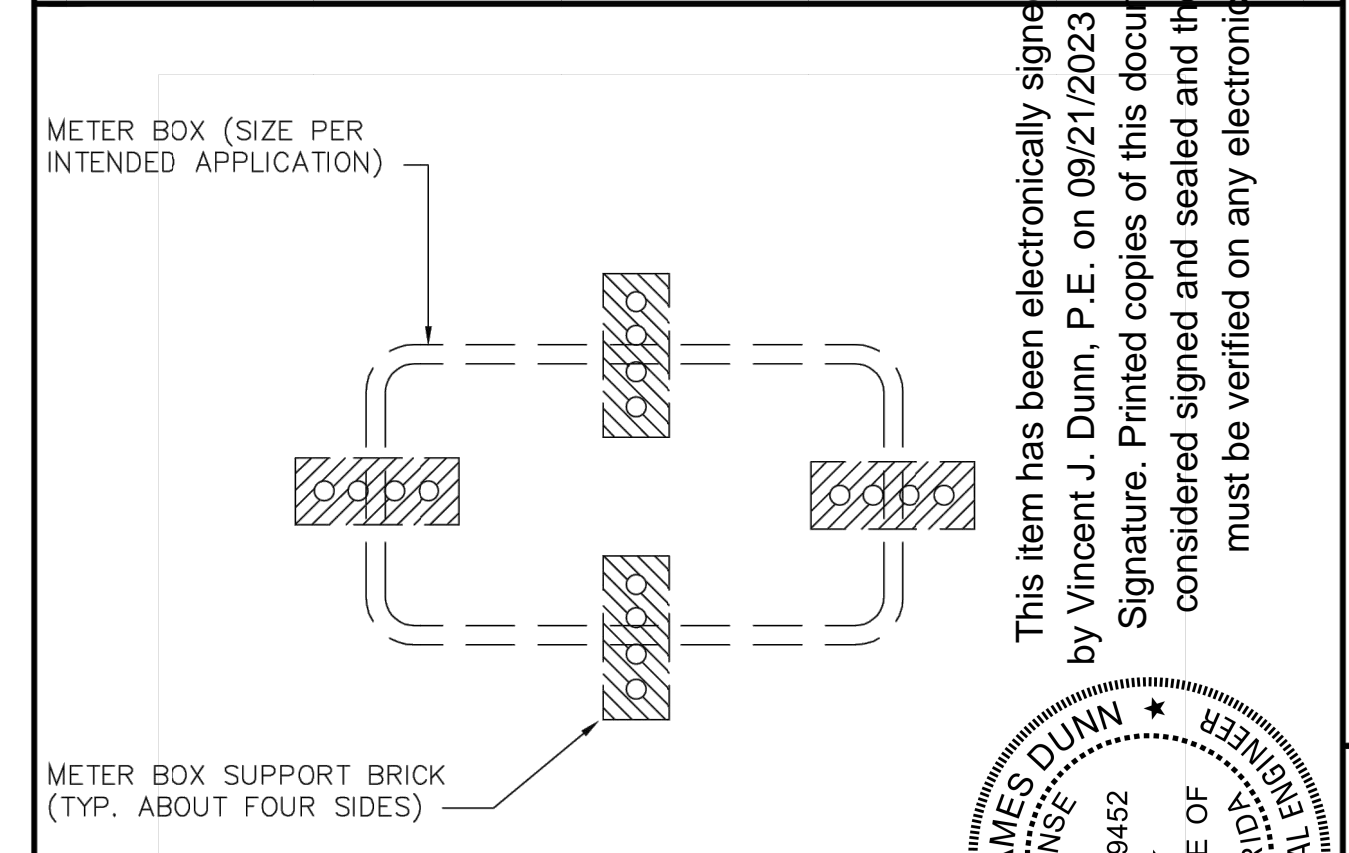


**WATER SERVICE MARKER POST**

- NOTE:**  
 ALL SERVICES ARE TO BE CLEARLY MARKED BY A TREATED 6'-6" LONG MARKER POST PAINTED BLUE. ALL SERVICES ARE TO BE EXTENDED ABOVE GRADE UNTIL COMPLETION OF ALL GRADING ACTIVITIES. ONCE FINAL ROAD GRADING IS COMPLETE, LOWER SERVICES BY CUTTING OFF RISER 10" TO 12" BELOW FINAL GRADE AND INSTALL 90° BEND, NIPPLE AND LW BALL VALVE AT THAT ELEVATION. SET METER BOX OVER ENTIRE HORIZONTAL SECTION OF SERVICE LINE FROM LAST 90° BEND TO THE END OF THE CURB STOP. BOX TO BE REPOSITIONED WHEN THE METER IS INSTALLED. MARKER POST TO BE INSTALLED ADJACENT TO AND LOCATED AT THE MID SECTION OF THE METER BOX.

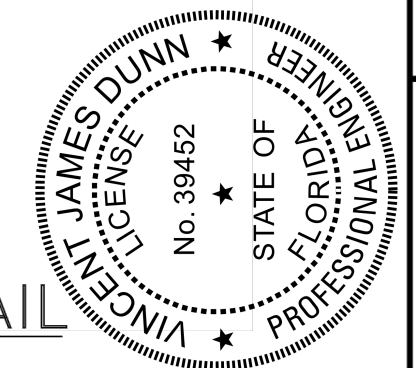


**METER BOX & SOLID BLUE LID**



**METER BOX SUPPORT DETAIL**

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 09/21/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



REVISION DESCRIPTION

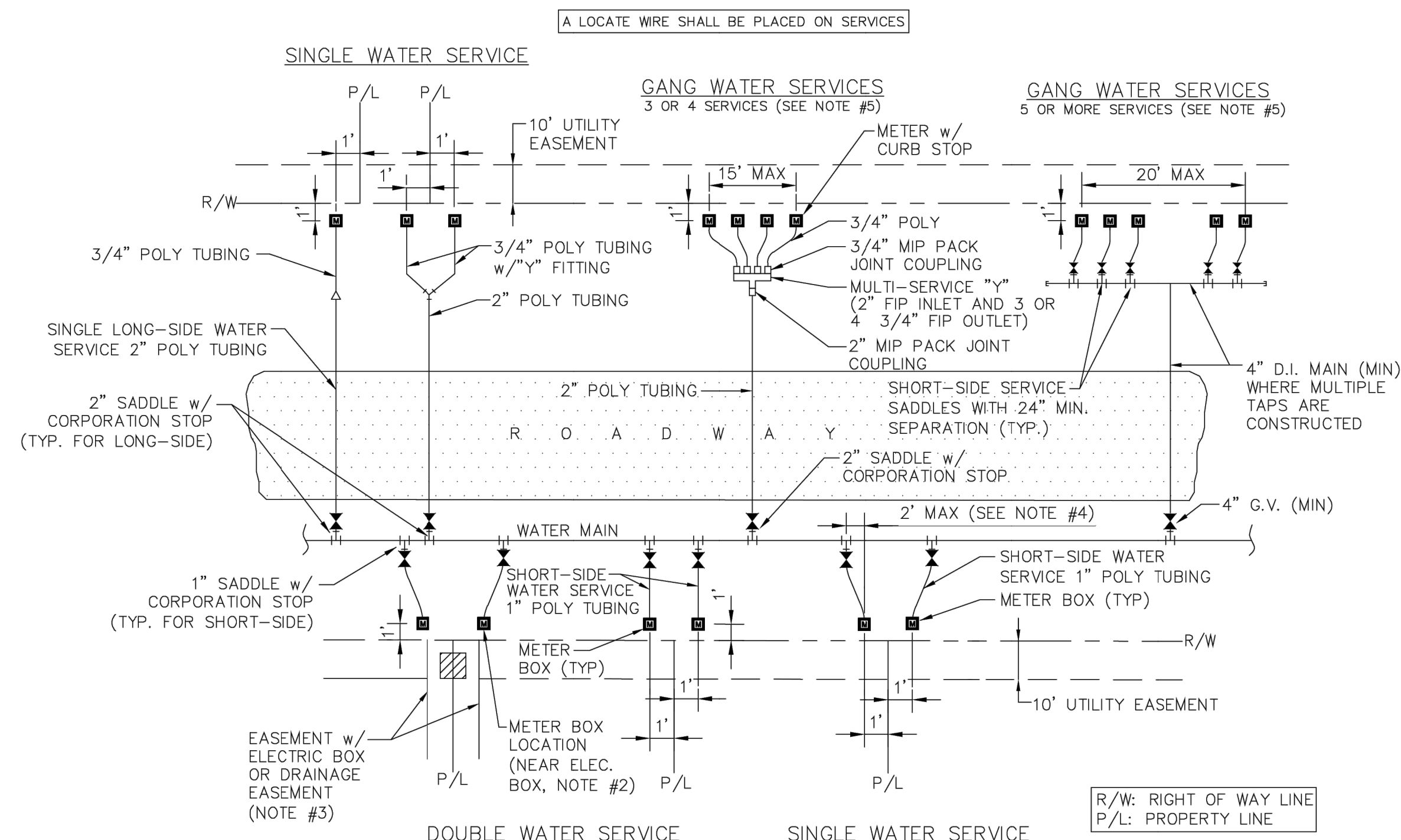
NO	DATE	SS	BY
1	FEB.2016	SS	GENERAL UPDATES

DESIG: \_\_\_\_\_  
 DRWN: \_\_\_\_\_  
 CHKD: \_\_\_\_\_  
 APRV: \_\_\_\_\_  
 DATE: \_\_\_\_\_

PROJECT: STANDARD WATER SERVICE DETAILS

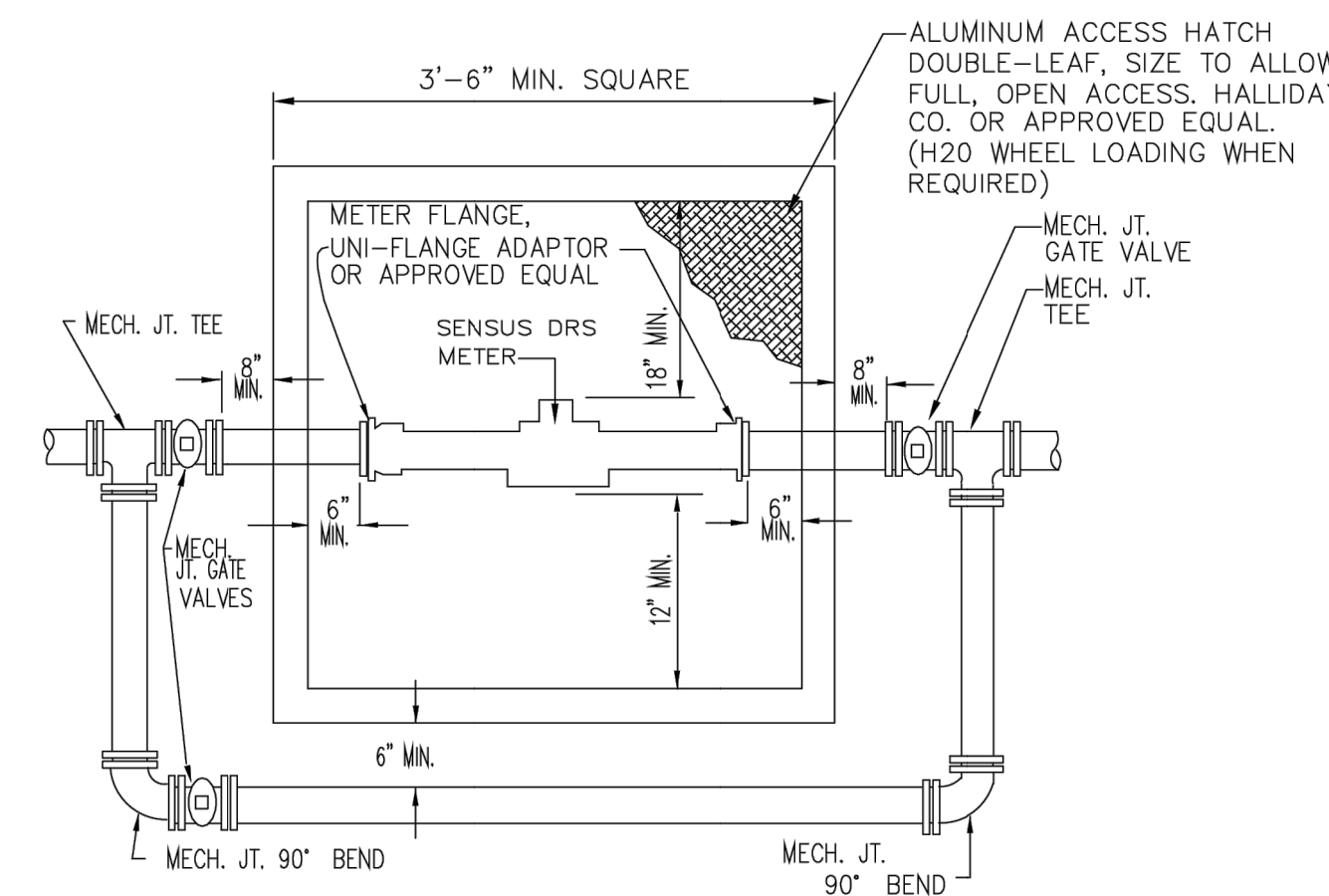
CITY OF GREEN COVE SPRINGS  
 321 WALNUT STREET  
 GREEN COVE SPRINGS, FLORIDA 32043

ACAD FILE NAME: SERVICES.DWG  
 SHEET NO.: WD-6



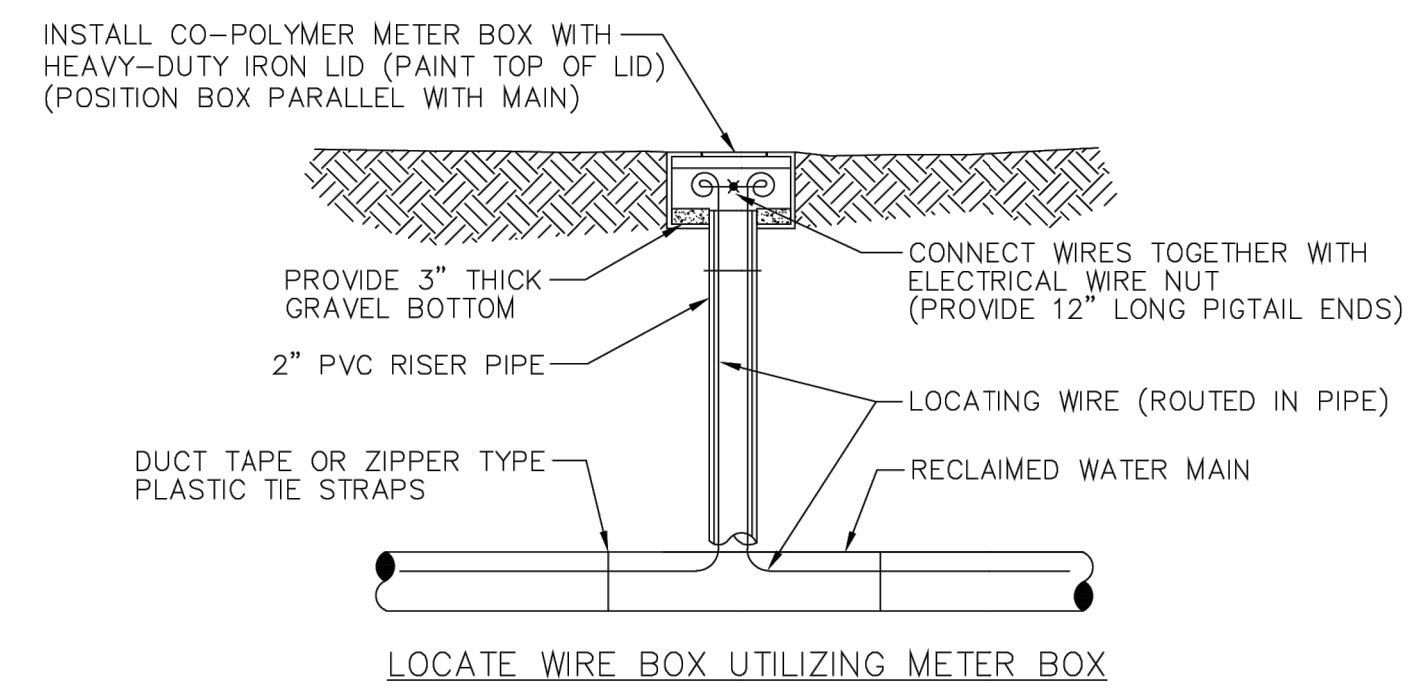
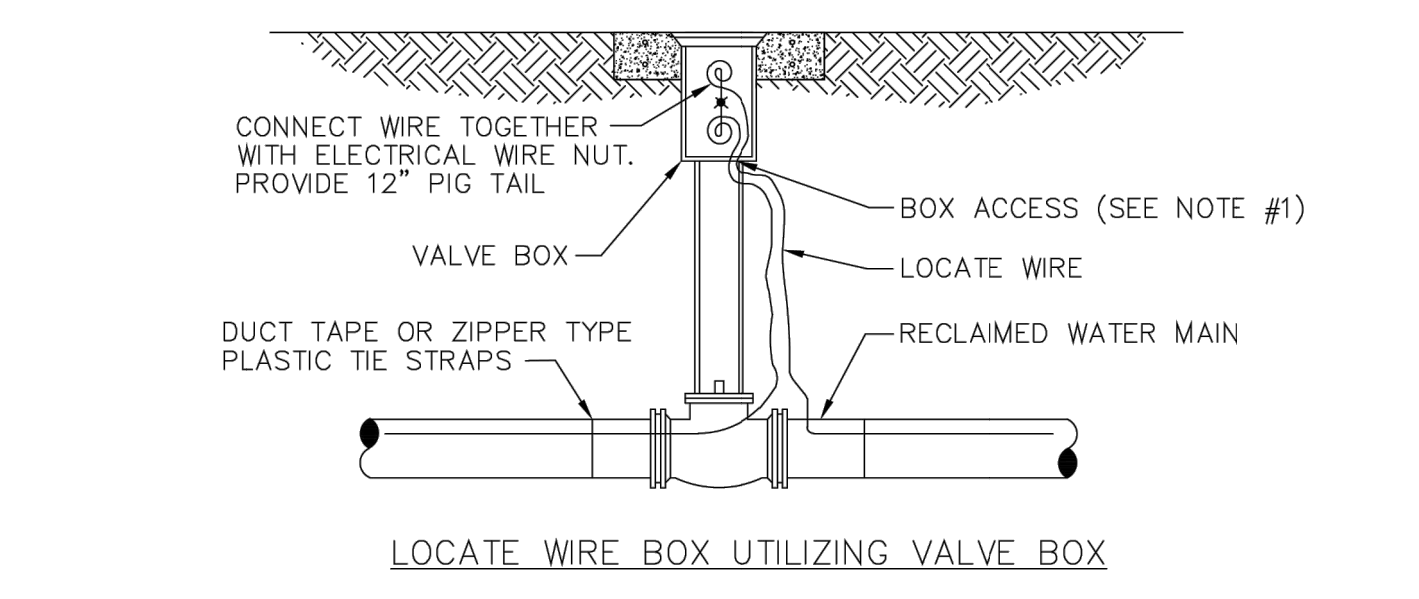
- NOTES**
- THE SKETCHES ABOVE INDICATE TYPICAL RECLAIMED WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE.
  - UNLESS SPECIFIED OTHERWISE BY THE CITY OF GREEN COVE SPRINGS, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE, AND 1.0' FOOT INSIDE OF THE PROLONGATION OF ONE OF THE SIDE PROPERTY LINES. IF A CONFLICT EXISTS WITH OTHER UTILITIES, THE METER BOX MAY BE ADJUSTED TO FOUR FEET (MAX.) INSIDE PROPERTY LINES (IN LIEU OF 1.0' FEET). UNLESS APPROVED OTHERWISE BY THE CITY, THE RECLAIMED WATER METER BOX SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN SIDEWALKS OR DRIVEWAYS). IF AN UNAPPROVED METER BOX IS IDENTIFIED BY THE CITY, THEN THE CONTRACTOR OR CUSTOMER SHALL BE RESPONSIBLE FOR THE COST OF RELOCATING ANY METER BOX WHICH IS LOCATED IN THE SIDEWALK OR DRIVEWAY OR THE COST TO PROVIDE THE CORRECT METER BOX. THE CITY SHALL APPROVE ALL DEVIATIONS TO THE ABOVE PRIOR TO CONSTRUCTION.
  - IF DRAINAGE OR OTHER EASEMENT IS LOCATED BETWEEN LOTS, METER BOXES SHALL BE LOCATED AT THE EASEMENT LINE BUT OUTSIDE THE EASEMENT AREA.
  - FOR SINGLE SERVICES, THE HORIZONTAL DISTANCE (PERPENDICULAR TO THE MAIN) BETWEEN THE SERVICE'S SADDLE AND THE METER BOX SHALL BE 2 FEET MAXIMUM. FOR DOUBLE 3/4" SERVICES, THE 2" POLY MAIN SHALL BE LOCATED CENTERED BETWEEN THE TWO METER BOXES. LOCATE WIRE IS REQUIRED ON ALL SERVICES. THE WIRE SHALL RUN FROM THE METER BOX TO THE MAIN (WITH NO CONNECTION TO MAIN WIRE WITH THE LAST 24 INCHES STRIPPED OF INSULATION/BARE WIRE AS GROUND). ALL EXCEPTIONS TO THIS REQUIREMENT MUST BE APPROVED BY THE CITY OF GREEN COVE SPRINGS. THIS WILL ASSIST IN LOCATING EXISTING SERVICE LINES IN THE FUTURE.
  - GANG RECLAIMED WATER SERVICES: FOR 3 OR 4 SERVICES IN ONE AREA, A DUCTILE IRON PIPE (D.I.P.) RECLAIMED WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS. LOCATE WIRE SHALL EXTEND FROM ONE METER BOX TO CURB STOP AT RECLAIMED WATER MAIN. FOR 5 OR MORE SERVICES IN ONE AREA, A RECLAIMED WATER MAIN EXTENSION W/LOCATE WIRE MAY BE UTILIZED ON EITHER SHORT-SIDE OR LONG-SIDE SERVICES WHERE SHOWN ON THE DRAWINGS (TAPS STAGGERED AND AT 2 FEET ON CENTER (MIN). FOR WATER SUPPLY HEADERS WHERE 5 OR MORE TAPS ARE CONSTRUCTED, THE HEADER PIPE SHALL BE 4" AT A MINIMUM. EXAMPLE: CONSTRUCT A 4" MAIN D.I. CROSSING THE STREET FOR 5 RESIDENTIAL CUSTOMERS, UTILIZING 4" G.V., 4" PIPE, 4"x1" SADDLES AND 1" CURB STOPS (NO GLUED TEE FITTINGS). THE 4" OR LARGER D.I.P. RECLAIMED WATER MAIN MUST BE SIZED AND DESIGNED BY THE ENGINEER.
  - ALL COMMERCIAL WATER SERVICES SHALL BE 2" POLYETHYLENE PIPING CONNECTED TO 2" CURB STOP IN METER BOX, UNLESS OTHERWISE APPROVED BY THE CITY.

**RECLAIMED WATER SERVICE INSTALLATIONS  
2" AND SMALLER METER**



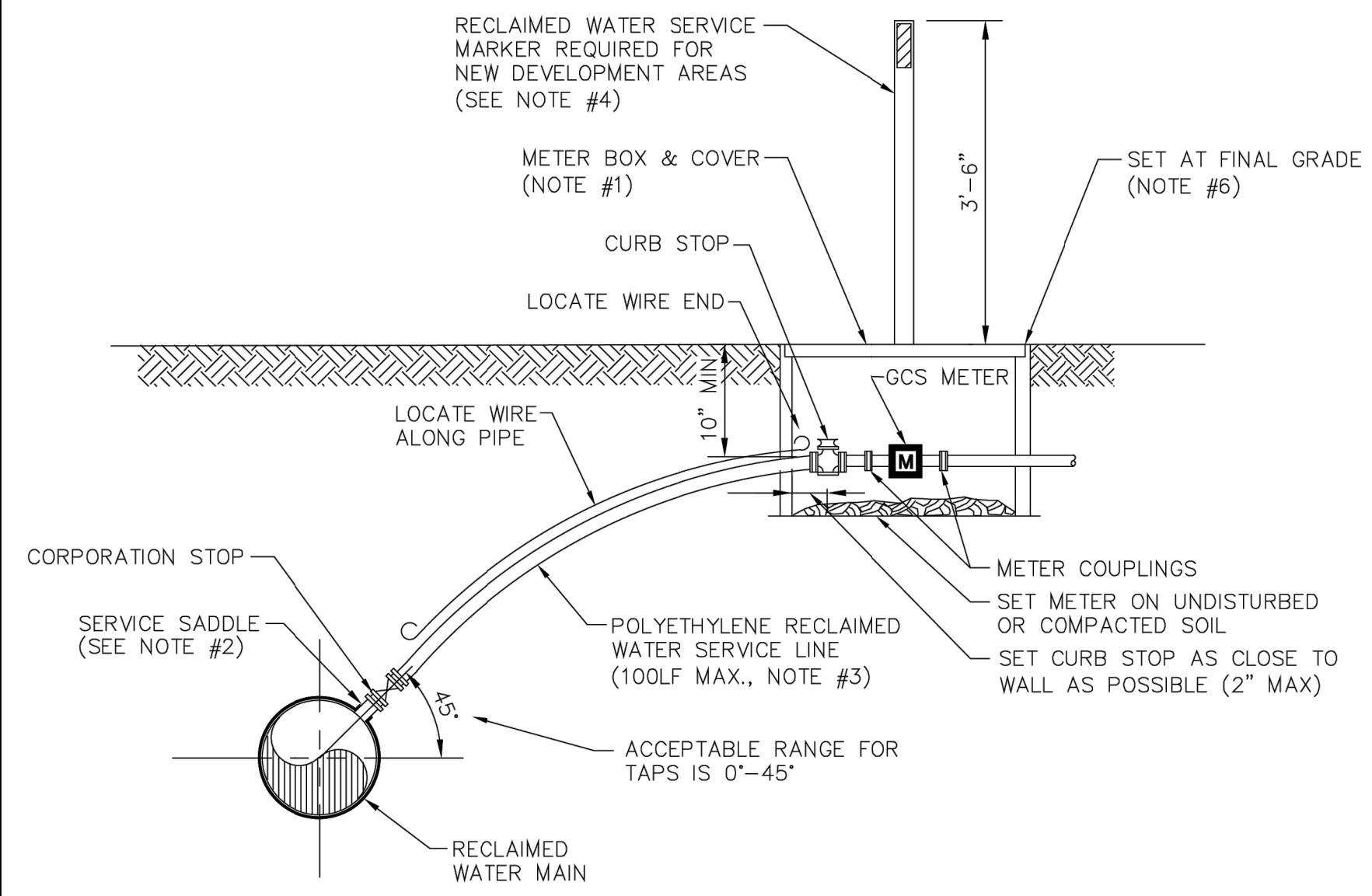
- NOTES**
- ALL PIPE TO BE D.I.
  - ALL VALVES & FITTINGS TO BE DUCTILE IRON.
  - MINIMUM LENGTH OF 8 DIAMETERS OF STRAIGHT PIPE TO BE INSTALLED ON INLET SIDE OF METER.
  - ALL PIPE AND FITTINGS TO BE SAME SIZE AS METER.
  - CONC. BOX SHALL BE 42" DEEP WITH OPEN BOTTOM. PRECAST WITH NOTCH TO ACCOMMODATE PIPE INSTALLED 36" DEEP. INSTALLED ON 12" OF #57 STONE.
  - CONTRACTOR SHALL PROVIDE SHOP DRAWING OF BOX WITH DIMENSIONS FOR APPROVAL BY C.C.U.A.
  - DIMENSIONS SHOWN ARE MINIMUM AND SHALL BE INCREASED BASED UPON ACTUAL SIZE OF METER PROVIDED.

**METER VAULT 3" AND LARGER METERS**



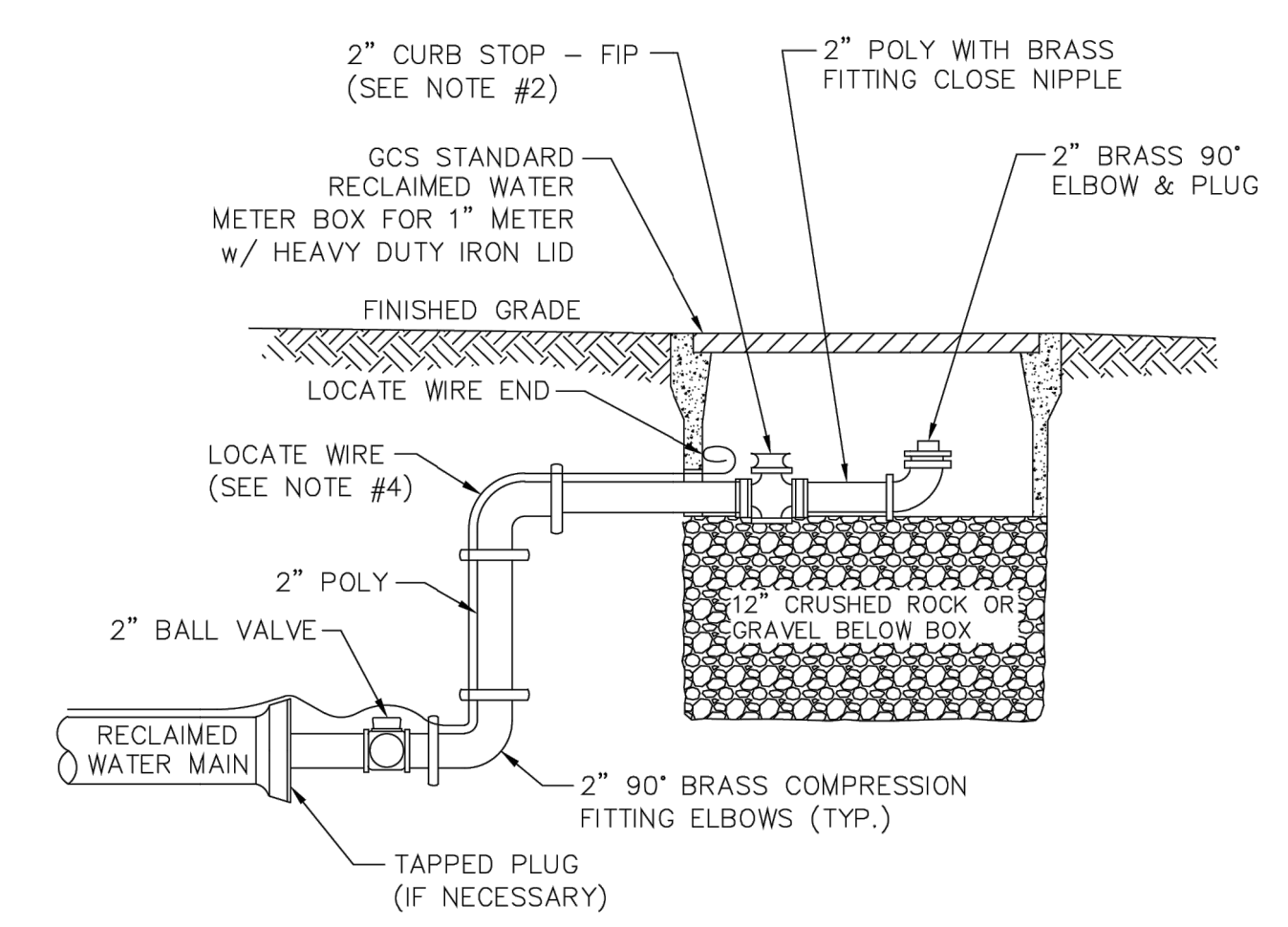
- NOTES**
- LOCATE WIRE SHALL ENTER THE VALVE BOX THROUGH A "V" CUT IN THE 6" PVC RISER PIPE.

**LOCATE WIRE BOX**



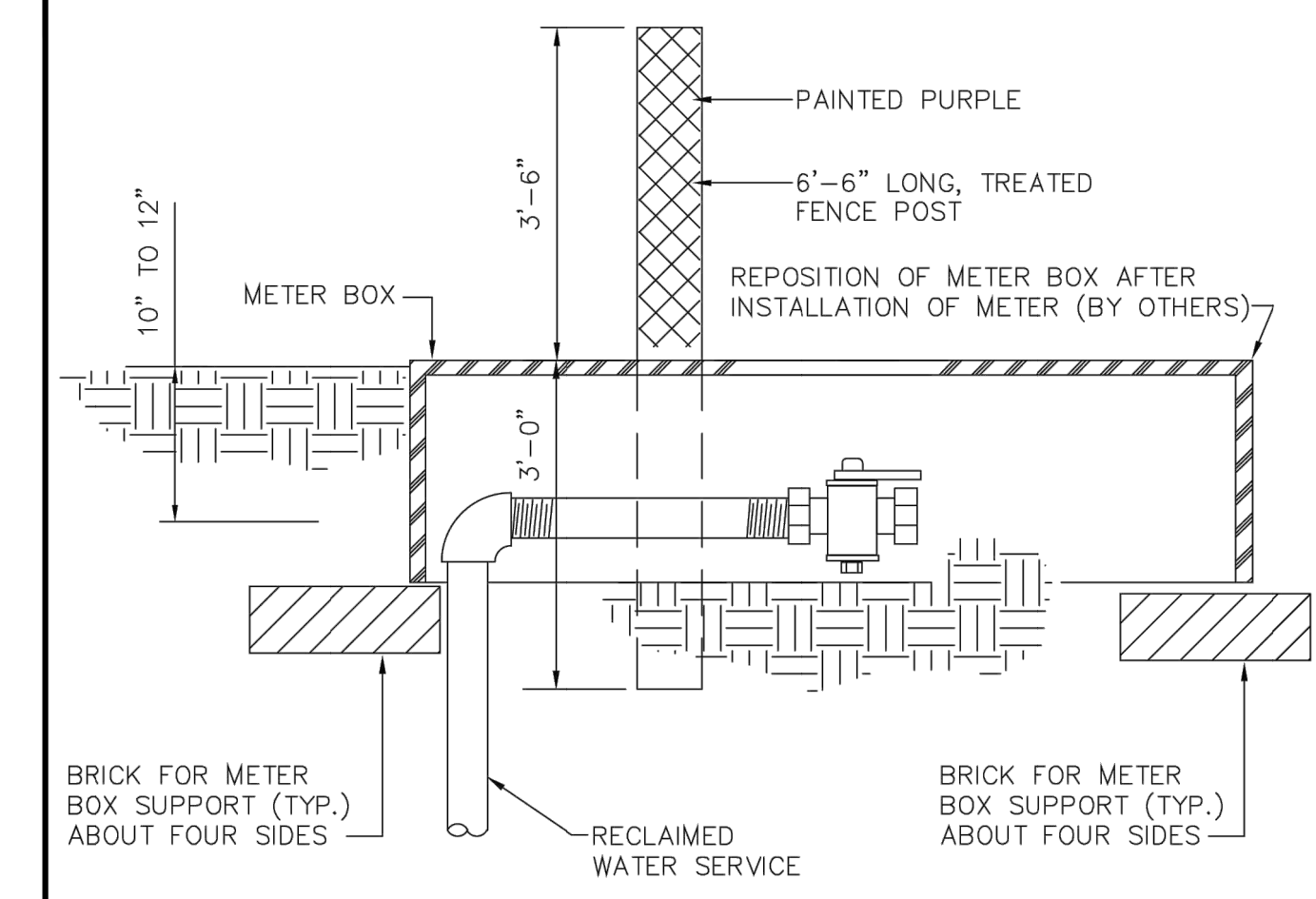
- NOTES**
- SEE CITY OF GREEN COVE SPRINGS APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.
  - SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" RECLAIMED WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER RECLAIMED WATER MAIN (NEW RECLAIMED WATER MAIN CONSTRUCTION). FOR WET TAPS OR RECLAIMED WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.
  - NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY CITY OF GREEN COVE SPRINGS. CONSTRUCT POLY LINE WITH 36" (MIN.) COVER UNDER ROADWAYS. THE POLY RECLAIMED WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (3/4" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS OTHERWISE APPROVED BY CITY OF GREEN COVE SPRINGS.
  - INSTALL PVC PLUG IN ALL CURB STOPS IF RECLAIMED WATER SERVICE IS "NOT IN USE" (I.E.: IF NO METER IS INSTALLED). IN ADDITION, INSTALL A 6', 6" P.T. FENCE POST (TOP PAINTED PURPLE) 12" OFF SIDE OF METER BOX. THE REMOVAL OR TRANSFER OF A RECLAIMED WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE BOXES, METERS OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.
  - METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (I.E., NO DIRT, TRASH OR OTHER DEBRIS PLACED ON TOP OF BOX).
  - LOCATE WIRING REQUIRED ON ALL LONG AND SHORT SERVICES.

**RECLAIMED WATER SERVICE DETAIL  
2" AND SMALLER METER**



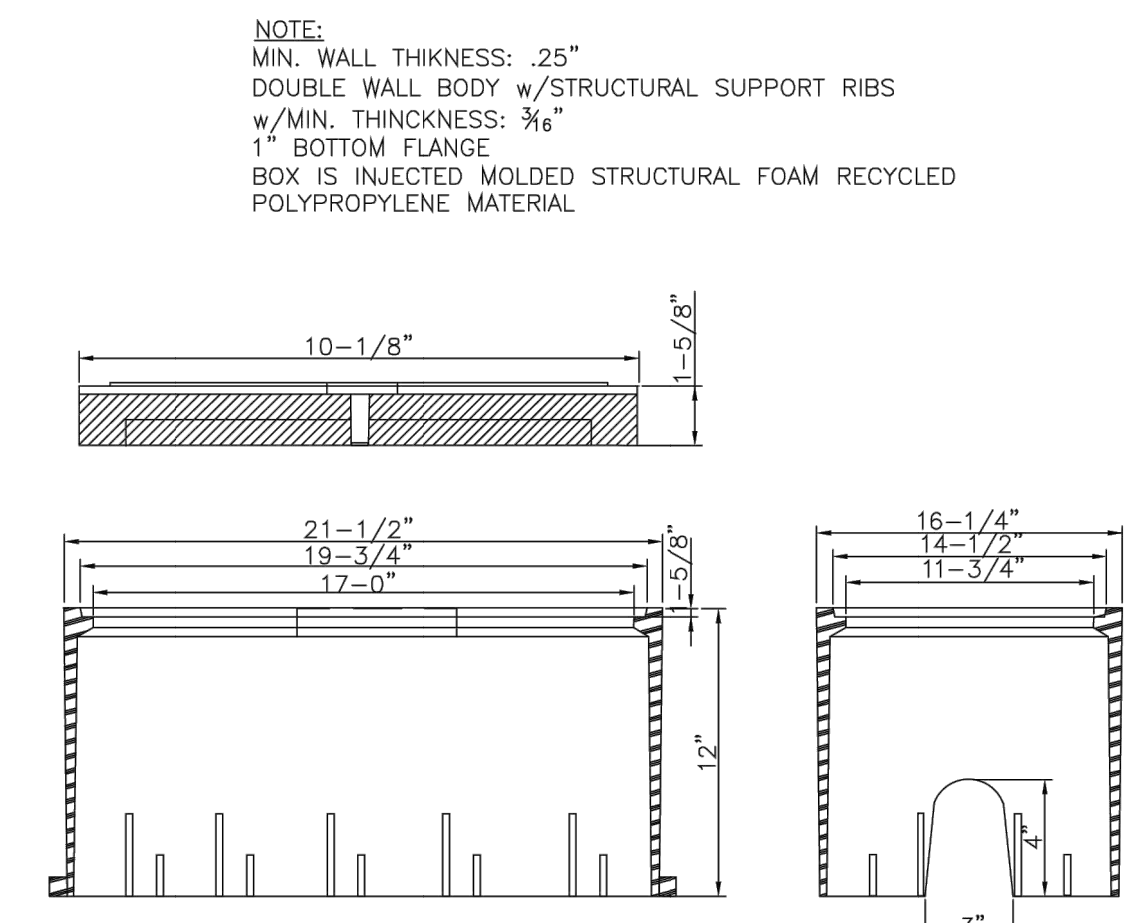
- NOTES**
- PIPE SHALL BE POLYETHYLENE. FITTINGS SHALL BE BRASS.
  - THE 2" CURB STOP SHALL BE ALL BRONZE. FITTINGS SHALL BE BRASS.
  - CANNOT BE PLACED UNDER CONCRETE OR PAVEMENT.
  - PLACE 2 FEET PAST LAST RECLAIMED WATER MAIN SERVICE CONNECTION.

**FLUSHING VALVE BELOW GRADE**

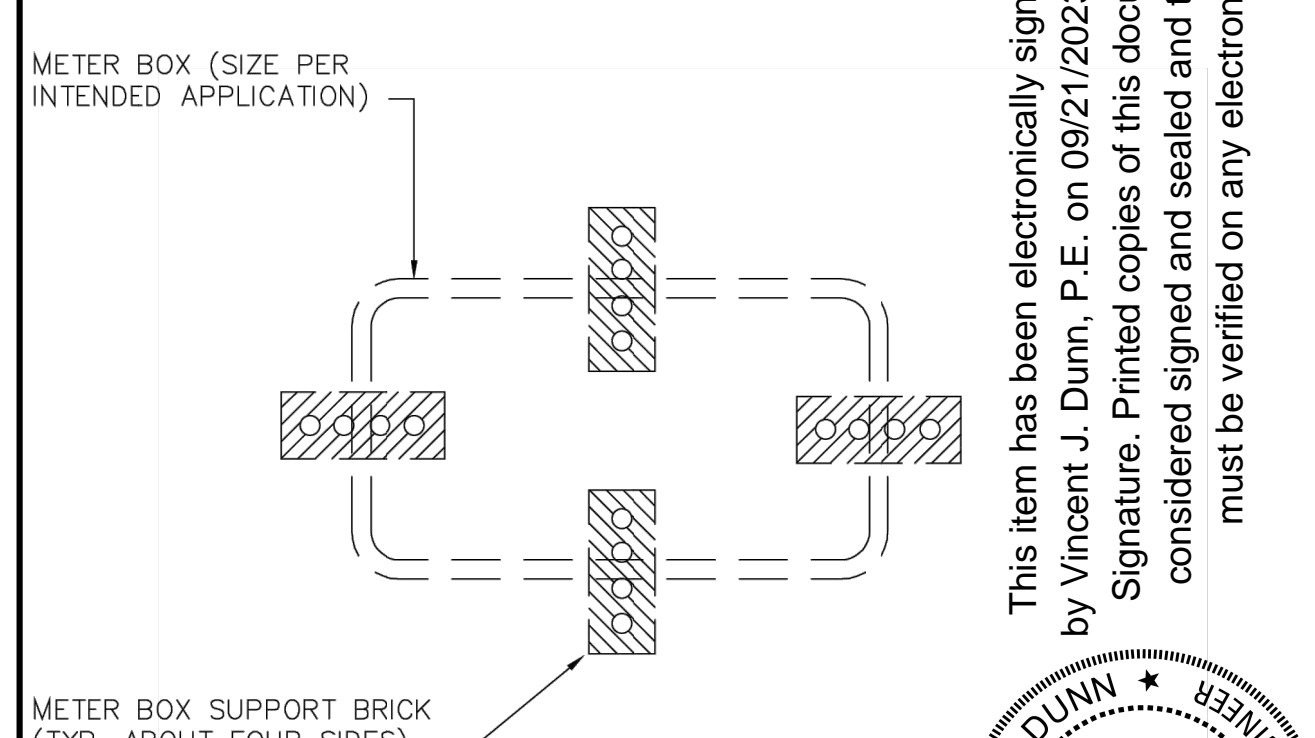


**RECLAIMED WATER SERVICE  
MARKER POST**

**NOTE:**  
ALL SERVICES ARE TO BE CLEARLY MARKED BY A TREATED 6'-6" LONG MARKER POST PAINTED PURPLE. ALL SERVICES ARE TO BE EXTENDED ABOVE GRADE UNTIL COMPLETION OF ALL GRADING ACTIVITIES. ONCE FINAL ROAD GRADING IS COMPLETE, LOWER SERVICES BY CUTTING OFF RISER 10" TO 12" BELOW FINAL GRADE AND INSTALL 90° BEND, NIPPLE AND LW BALL VALVE AT THAT ELEVATION. SET METER BOX OVER ENTIRE HORIZONTAL SECTION OF SERVICE LINE FROM LAST 90° BEND TO THE END OF THE CURB STOP. BOX TO BE REPOSITIONED WHEN THE METER IS INSTALLED. MARKER POST TO BE INSTALLED ADJACENT TO AND LOCATED AT THE MID SECTION OF THE METER BOX.



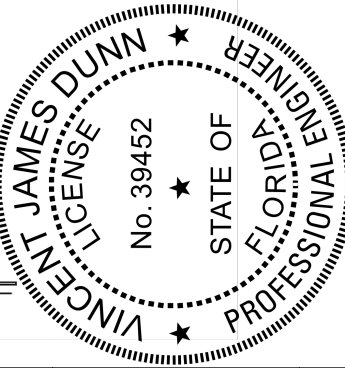
**PURPLE METER BOX & SOLID  
PURPLE LID**



**NOTE:**  
METER BOX (SIZE PER INTENDED APPLICATION)  
METER BOX SUPPORT BRICK (TYP. ABOUT FOUR SIDES)

**METER BOX SUPPORT DETAIL**

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 09/21/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



PROJECT: **STANDARD RECLAIMED WATER SYSTEM DETAILS**

CITY OF GREEN COVE SPRINGS  
321 WALNUT STREET  
GREEN COVE SPRINGS, FLORIDA 32043

ACAD FILE NAME: REUSE.DWG  
SHEET NO. RD-3

DESIGN	DATE	BY	SS
DRAWN	1 FEB 2016	SS	
CHKD			
APRV			
DATE			

GENERAL UPDATES

# OUTLINE SPECIFICATIONS FOR CONSTRUCTION OF RECLAIMED WATER DISTRIBUTION SYSTEM

01. INTENTION. It is the declared and acknowledged intention to secure a new reclaimed water distribution system, complete, in accordance with the plans and specifications, and contract documents. All new work shall be in accordance with Green Cove Springs Details and Specifications and Approved Materials Manual.

02. GENERAL. All materials shall be new and unused. Materials shall be warranted by the Contractor as to materials, workmanship and accuracy of As-Built drawings for a period of two years from the date of completion of the work or beneficial use of the facilities. Workmanship shall be of good quality; i.e., mains shall be laid in a uniform alignment, fittings shall be properly restrained, trenches shall be properly excavated and backfilled, valve boxes shall be adjusted to finished grade.

03. SURVEYS. The Utility Contractor shall provide all surveys necessary for the layout and construction of the work of his contract.

04. EARTHWORK. Earthwork shall include all excavation, fill and backfill (hand/machine), compaction and rough grading of materials encountered. No unsuitable materials clay, muck, or peat removed from pipe trenches are to be used for backfill. All fill or backfill shall be either sand or sandy clay, free of roots, trash or other debris. All backfill alongside of and to a height twenty-four inches above all pipe shall be free of clay or organic material, compacted by either hand or machine operation carefully to 98%. All other backfill shall be compacted by either hand or machine operation carefully to 95% (outside of paving), 98% (under paving) of its optimum moisture content as determined by ASTM D698, latest.

05. JOINT RESTRAINT. All fittings shall be properly and adequately restrained against lateral movement of all reclaimed water main tees, crosses, valves, bends and fire hydrants. Restrainers shall be Uni-Flange Series 1300, 1350, 1390 or approved equal installed per manufacturer's recommendations and GCS Details and Specifications.

06. DUCTILE IRON PIPE. Ductile iron pipe shall conform to ANSI Specification A21.50 (AWWA C150) latest, "Thickness Design of Ductile Iron Pipe", Table 50.5, laying condition Type 2, internal operating pressure 250 p.s.i. for an 8-foot depth of cover, Class 51 minimum and shall be ANSI A21.51 (AWWA C151), latest centrifugally cast pipe. Laying lengths shall be 20 feet or less, each length clearly marked with pressure rating, thickness class, height of pipe without lining, length, and manufacturer. Ductile iron pipe for reclaimed water service shall be furnished with cement lining per AWWA C110, C115 and C151. The pipe shall have design values of 60,000 PSI minimum tensile strength, and 42,000 P.S.I. minimum yield strength. Ductile iron pipe for reclaimed water service shall be used only with prior approval of the city of GCS. All ductile iron piping shall be wrapped with purple tape and stamped "Reclaimed Water" on at least two sides @ 12" o.c. along pipe barrel.

07. DUCTILE IRON FITTINGS shall be C153 cement lined and suitable for the type and class of pipe to which connected. Gaskets shall be suitable for reclaimed water service. Minimum working pressure shall be 150 P.S.I.

08. POLYVINYL CHLORIDE PIPE. Polyvinyl chloride pipe for reclaimed water mains 4 inch in diameter and larger, shall be P.V.C. C-900, DR-18, conforming to ASTM D-1784, D-2241, D-3139 and F-477, latest, and shall bear the seal of the National Sanitation Foundation. Pipe shall be purple color and marked on at least 2 sides with the word "RECLAIMED WATER" and at every 12" along the barrel of the pipe. Couplings shall be rubber gasketed, push-on type conforming to ASTM D-2122.

09. STEEL CASING PIPE. Steel casing pipe shall be of size indicated on the Drawings and shall conform to ASTM A139, with a minimum yield strength of 35,000 p.s.i.

10. POLYVINYL CHLORIDE (PVC 1120, SCHEDULE 40) PIPE shall conform to the requirements of ASTM D 1785. Fittings and threaded nipples shall be Sch. 80 PVC. All piping smaller than 4" shall be Sch. 80 PVC, shall be purple in color and stamped "Reclaimed Water".

11. GATE VALVES AND BOXES. Gate valves shall be non-rising stem type and shall be suitable for a 200 p.s.i. non-shock working pressure. Gate valves shall be mechanical joint, flanged or screwed. Gate valves shall have a 2" operating nut and open left. Gate valves shall have joints suitable for the type of main on which installed. Valves 2" & 3" shall be bronze (distribution mains only). Gate valves 4" and larger shall be iron body, bronze fitted with resilient seat. Valves shall be of domestic (American) manufacture and shall be A.F.C., M&H, Mueller or approved equal. Valves 16" and larger shall be AWWA C-509, M&H Valve Co. Valve boxes with screw extensions shall be provided for all gate valves. Boxes shall be of cast iron construction, 7/32" minimum wall thickness and shall be nontacky tar enamel coated. The word "RECLAIMED WATER" shall be cast in the cover. Other gate valves 2" and smaller shall be heavy-duty bronze, wheel operated gate valves. Box covers to be primed and painted purple.

12. RECLAIMED WATER METER BOXES. Reclaimed water meter boxes for 5/8"x3/4", 3/4" and 1" meters shall be DFW D1200 w/ purple lids. Meter boxes for flushing hydrants and 1" meters shall be Russell D-112, 1 1/2" and 2" meter boxes shall be DFW D1500. Developer shall be responsible for installation of meter boxes on all reclaimed water services as part of the reclaimed water main installation. All curb stops shall be adjusted to the proper elevation and shall be accessible for the installation of the reclaimed water meter. The contractor shall be required to open all boxes for the City's inspector at the final inspection. A treated 6' - 6" long treated fence post marker shall be installed at the side of and centered on the meter box and painted purple for identification. The box lid shall be painted purple.

13. CURB STOPS. Curb stops shall be cast bronze, no lead, inverted key stop roundway, with check, lock wing type, for locking in the closed position. Curb stops shall be Ford Ball Valve or Mueller, with F.I.P.T.

14. CORP STOPS. Corp stops shall be cast bronze, no lead, inverted key stop roundway, with check. Corp stops shall be Ford Ball Valve or Mueller with F.I.P.T.

15. PRESSURE REDUCING VALVES (when and where required) The pressure reducing valve shall maintain a constant delivery pressure as part of the service to each residential irrigation system. Pressure reducing valves shall conform with the standard requirements of the ASSE (Std. 1003) and WPOA Uniform Plumbing Code. Approved model: Watts Series U58 or equal.

16. INSTALLATION. The minimum cover over top of reclaimed water main shall be 36" minimum. All lines and appurtenances shall be thoroughly cleaned of all foreign matter before being lowered into the trench and shall be kept clean during laying operations by means of plugs or other approved methods. All pipe shall be checked for defects before being lowered into the trench. Defective pipe shall not be used. Pipe found to be defective, after installation, shall be removed and replaced with sound pipe at no additional expense to the Owner. The full length of each section of pipe shall rest solidly upon the pipe bed, with recesses excavated to accommodate the bells and joints. All pipe that has the grade or joint disturbed after laying shall be taken up and reinstalled. The pipe shall not be laid in water, or, when trench or weather conditions are unsuitable for the work. All joints shall be cleaned of all foreign matter before making the joint. Fittings at bends in the pipe shall be properly restrained with joint restrainers adequately sized to prevent movement and dislocating or blowing off when the line is under pressure. Service laterals shall terminate at the point noted in the details.

17. SEPARATION OF RECLAIMED WATER MAINS. Maximum separation of reclaimed water lines and potable water lines shall be practiced. A minimum horizontal separation of six feet, center-to-center, or five feet, outside-to-outside, shall be maintained between reclaimed water mains and either potable water mains or sewage collection lines. Reclaimed water lines crossing under water mains shall be laid to provide a minimum vertical separation of 18 inches between the invert of the upper pipe and the crown of the lower pipe. Where the minimum separation cannot be maintained, the crossing shall be arranged such that the reclaimed water main pipe joints and water main joints are equidistant from the point of crossing with no less than ten feet between joints. Alternatively, the reclaimed water main shall be placed in a sleeve to obtain the equivalent of the required ten feet separation. Where there is no alternative to reclaimed water pipes crossing over a water main, the criteria for minimum separation between lines and joints shall be required.

18. PIPE FLUSHING. All reclaimed water system piping shall be flushed with clean water utilizing full pipe diameter flushing for all piping up to and including 8" diameter.

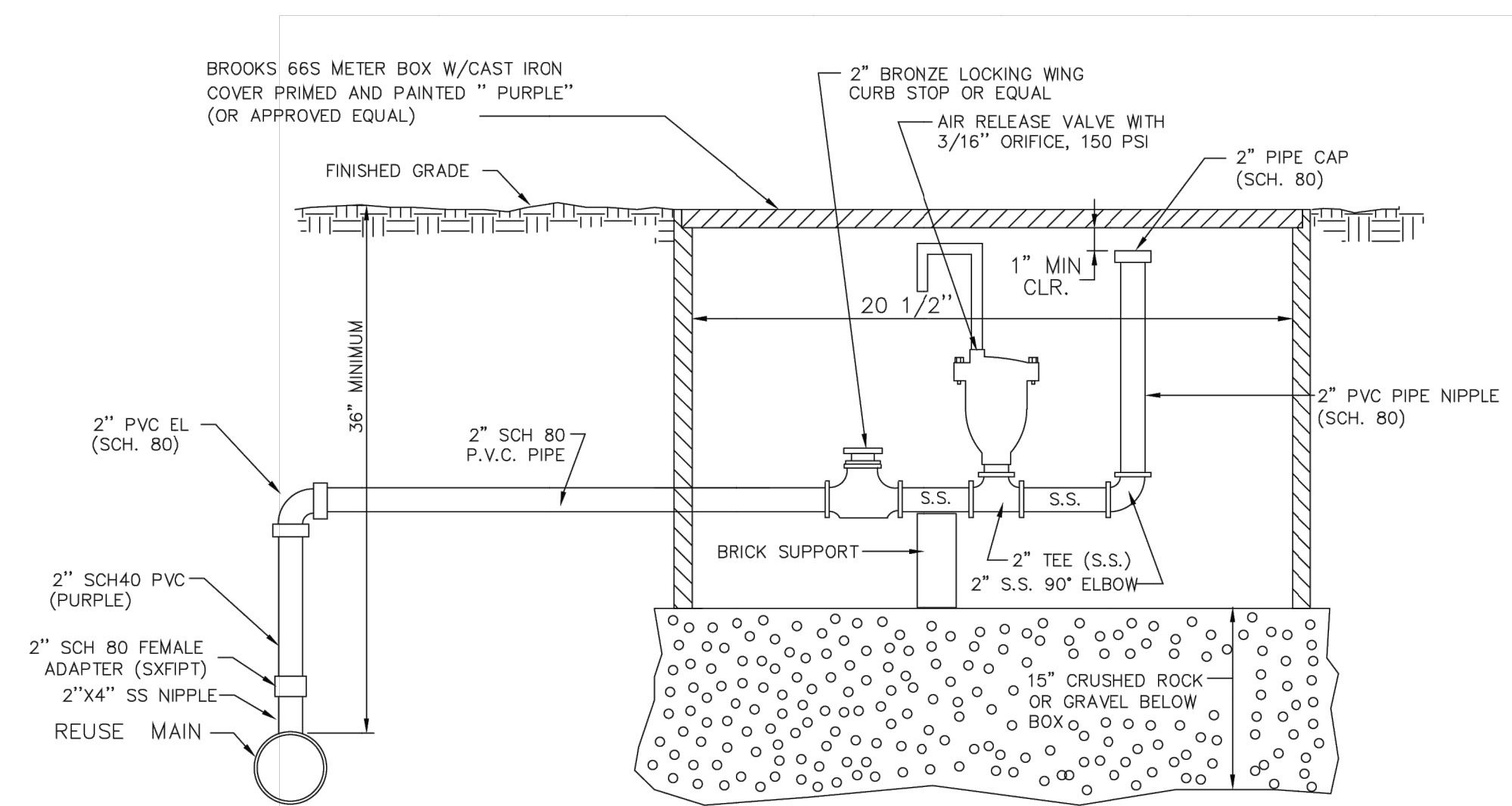
19. TESTS. After the pipe is laid, the joints completed, and the trench backfilled, the newly laid pipe and appurtenances shall be subjected to a Hydrostatic and Leakage test of 150 pounds per square inch for a period of at least two hours. During this period, all joints shall be inspected to determine water tightness of the system. Any leaks detected shall be corrected. Tests shall be in accordance with the City of Green Cove Springs requirements and specifications. Curb and limerock may be installed after construction of the reclaimed water mains, however, limerock priming cannot proceed until such time as the C.C.U.A. inspector approves the reclaimed water distribution system pressure test. This will be strictly enforced. If the reclaimed water system is damaged during any of the operations prior to paving, a follow up test may be required by the City of Green Cove Springs.

20. CURB MARKING. After installation, reclaimed water main valves and service lateral locations shall be scribed in the face of the concrete curb with the appropriate marking (RW=reclaimed service, RV=reclaimed main valve, etc.). Markings shall be a minimum of 3" high.

## FINAL INSPECTION PROCEDURES

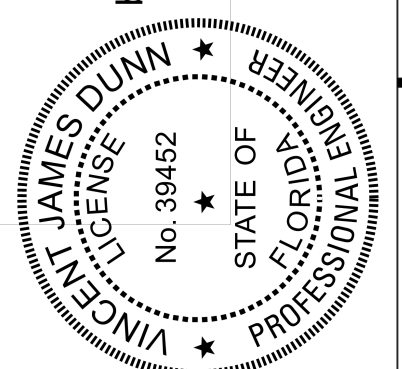
PRIOR TO FINAL INSPECTION, THE FOLLOWING MUST BE COMPLETED:

1. Pressure test and flushing report.
2. The Engineer of Record Certification to FDEP. This can be done w/ preliminary as-builts.
3. Water services must be lowered and meter boxes installed, valve boxes must be set on all gate valves.
4. As-built drawings shall have been updated to accommodate the C.G.C.S. comments and the final elevation of the manhole tops must be included.
5. All valves, locate wire boxes, sewer, water and reclaimed services shall be scribed in curb and painted the correct color.
6. As-builts, must be accepted and approved by the City of Green Cove Springs Public Works.



AIR RELEASE VALVE DETAIL  
NTS

This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 09/21/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



PROJECT:

STANDARD RECLAIMED WATER  
SYSTEM SPECIFICATIONS & DETAILS

CITY OF  
GREEN COVE SPRINGS  
321 WALNUT STREET  
GREEN COVE SPRINGS, FLORIDA 32043

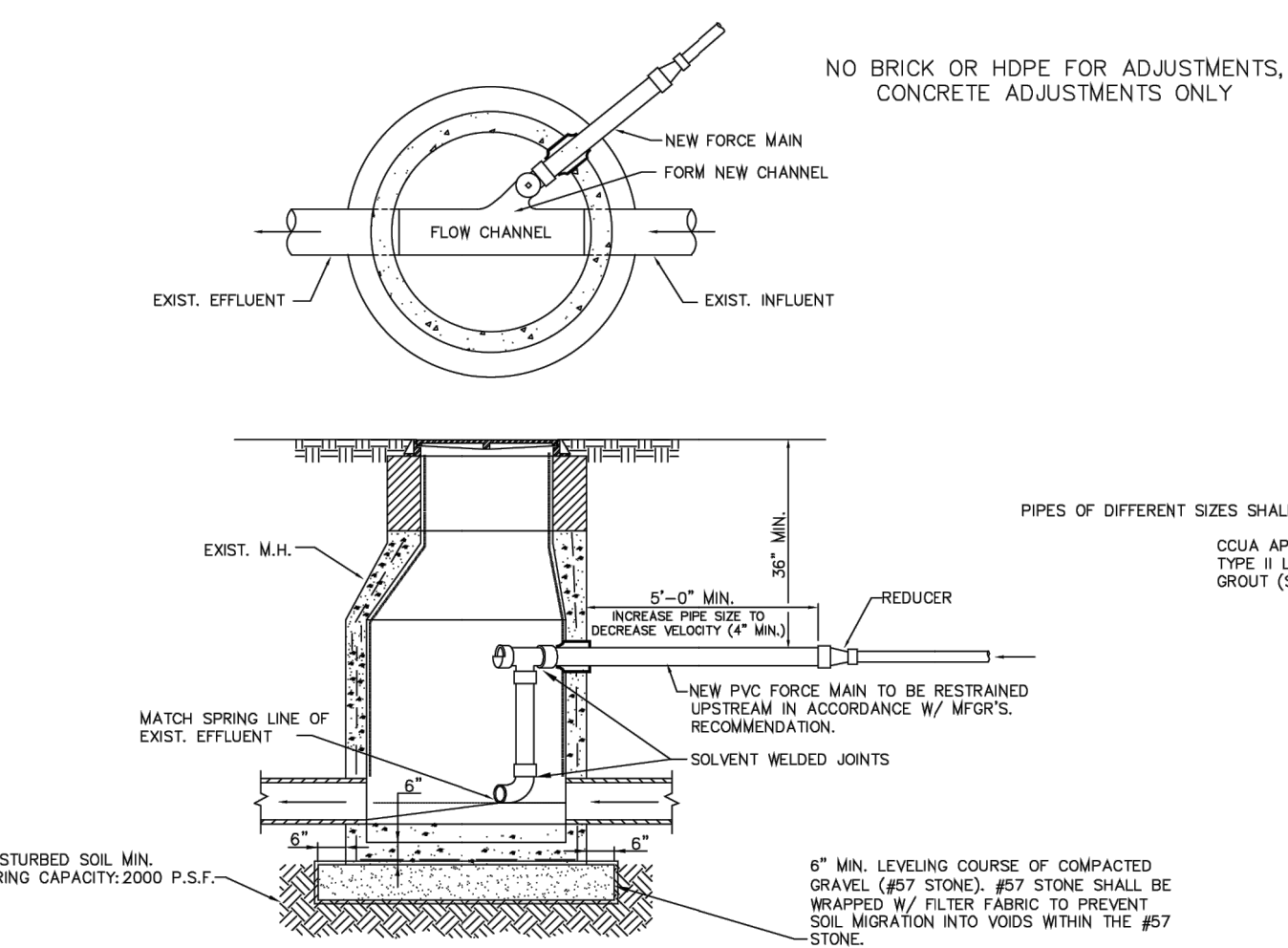
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RD-4

NO	DATE	BY	GENERAL UPDATES	REVISION DESCRIPTION
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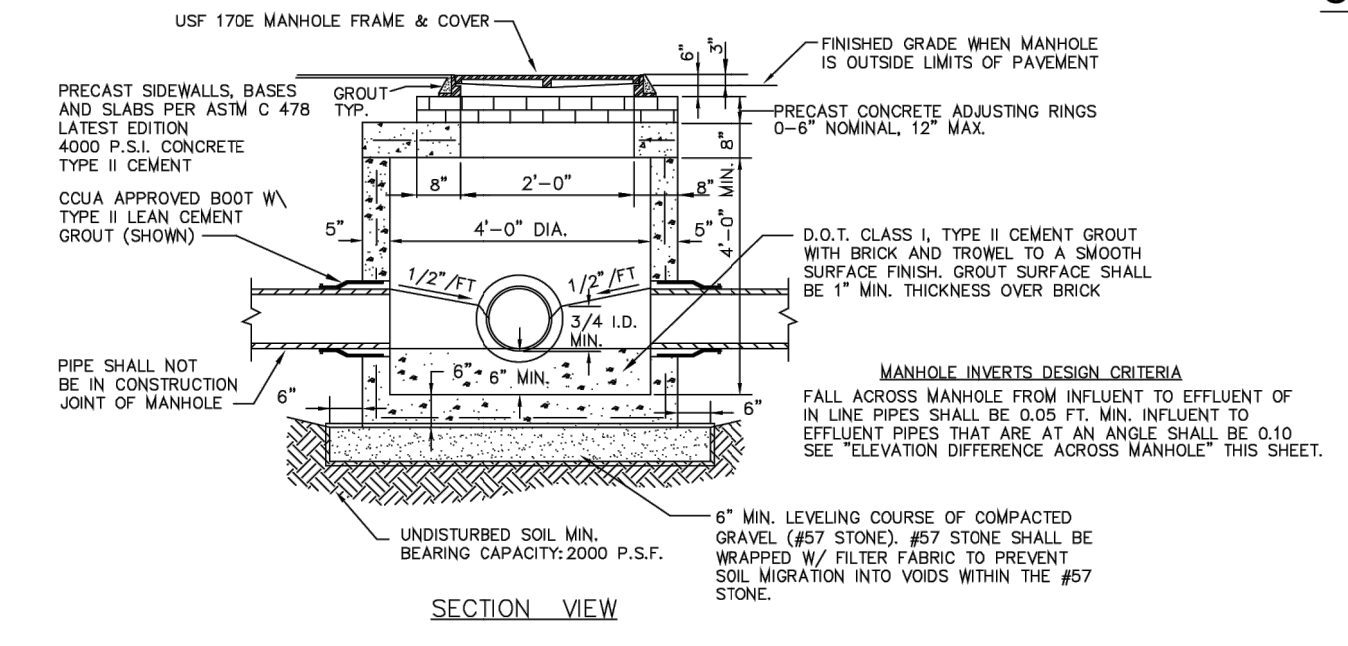
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CHKD	_____
APRV	_____
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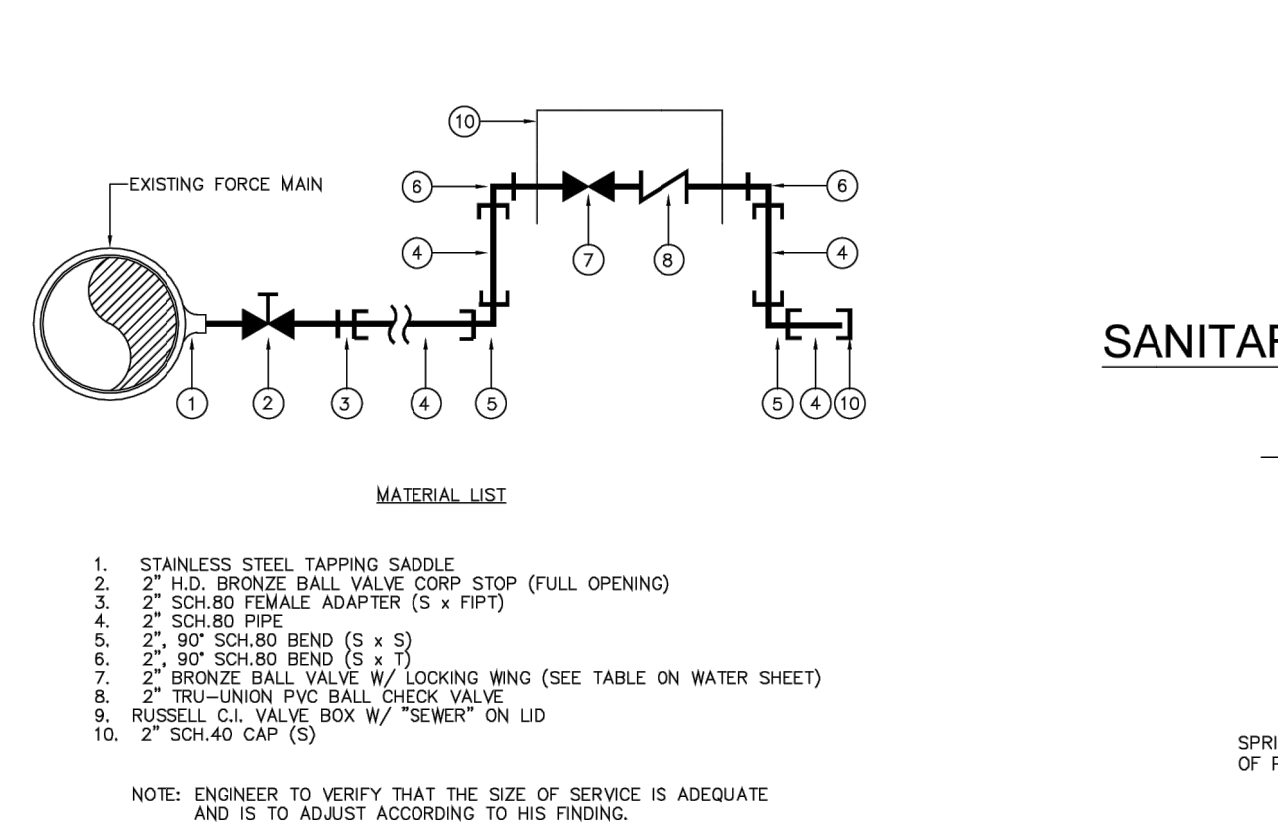


TYP. FORCE MAIN CONNECTION TO MANHOLE

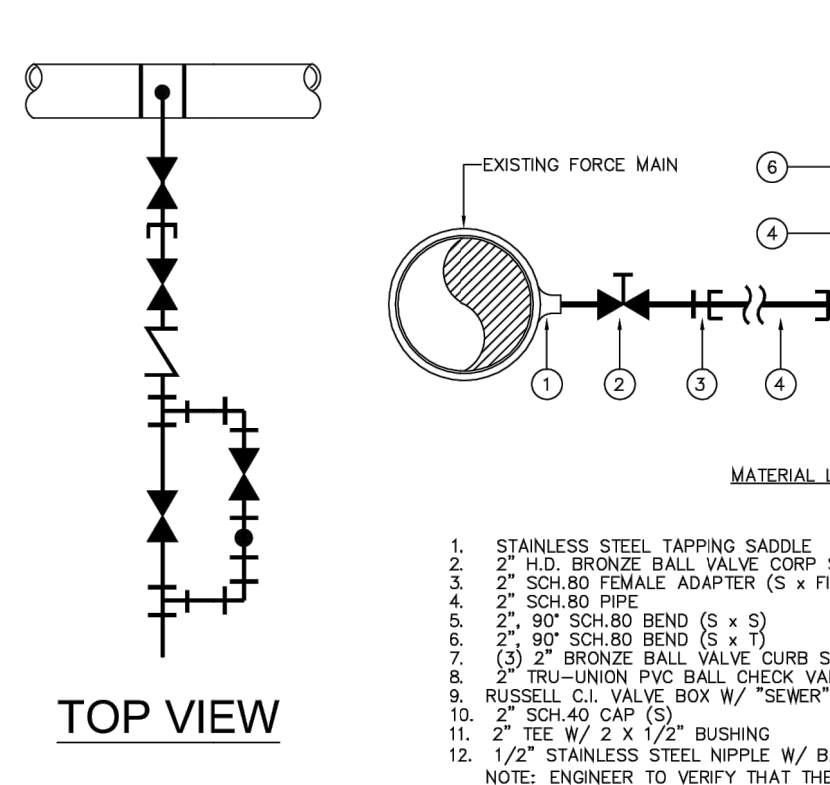
- 1. THIS MANHOLE AND THE NEXT TWO MANHOLES DOWNSTREAM (AS REQUIRED BY UTILITY) ARE TO HAVE POLYETHYLENE LINER AS MANUFACTURED BY STANDARD PRECAST CO. (AGRU SURE GRIP) OR APPROVED EQUAL.
2. IF CONNECTION IS BEING MADE TO AN EXISTING MANHOLE, THAT MANHOLE AND THE NEXT TWO MANHOLES DOWNSTREAM (AS REQUIRED BY UTILITY), SHALL BE LINED WITH 'SPECTRASHIELD' OR APPROVED EQUAL.
3. SIZE OF DROP PIPE CONNECTION TO MANHOLE SHALL BE DESIGNED BY THE PROJECT ENGINEER. MINIMUM SIZE SHALL BE 4" CONNECTION AND DROP PIPE SHALL BE SIZED TO REDUCE THE VELOCITY AND PREVENT 'SPLOSHOVER' WITHIN THE MANHOLE. 5'-0" MINIMUM DISTANCE FROM MANHOLE TO REDUCER MAY BE INCREASED TO ASSIST IN THIS VELOCITY REDUCTION.



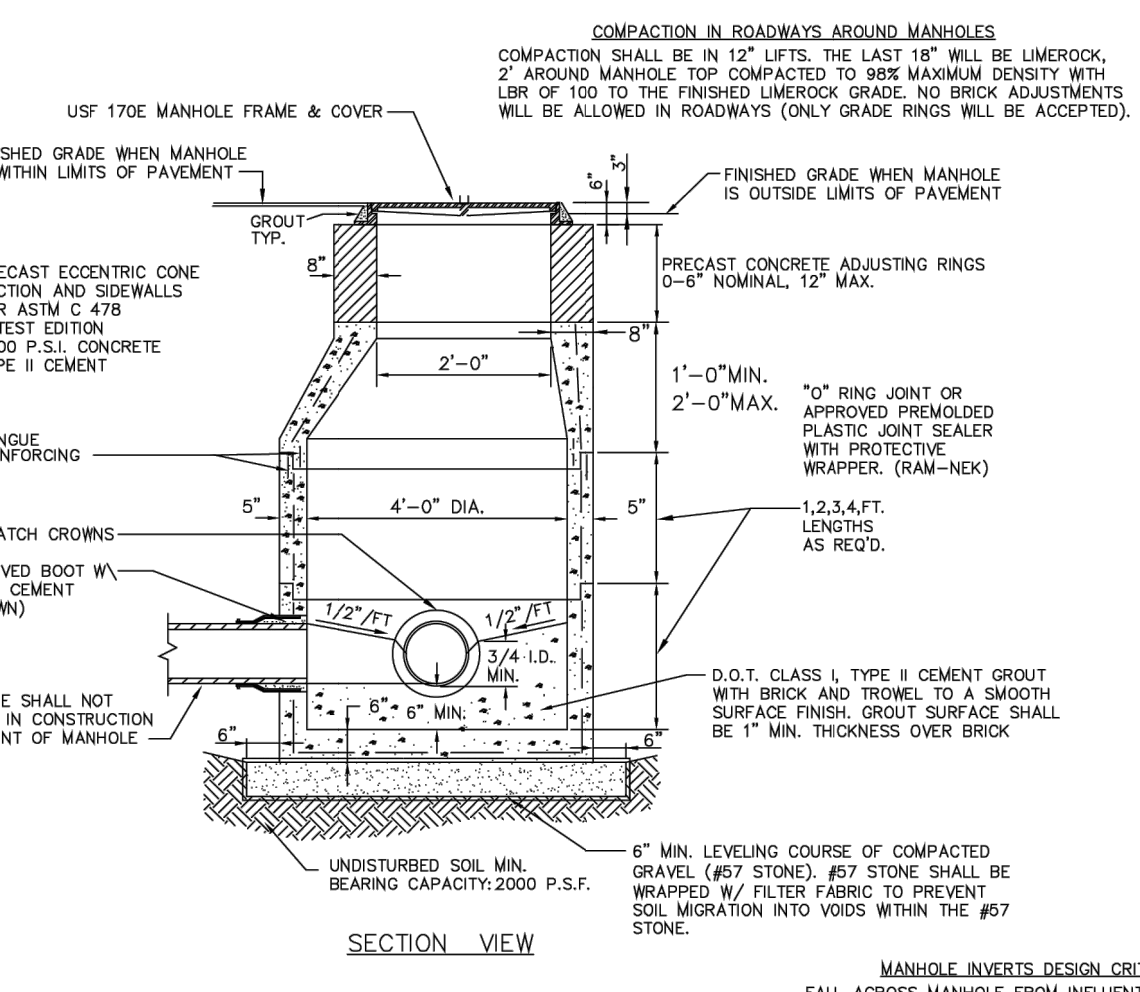
SHALLOW SANITARY SEWER MANHOLE



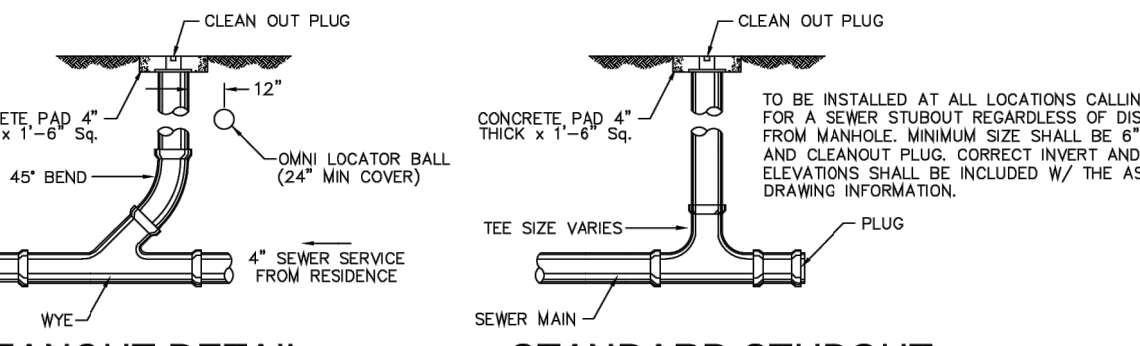
2" SEWAGE FORCE MAIN MANIFOLD SERVICE CONNECTION DETAIL FOR MEDIUM TO HIGH PRESSURE CONNECTION SYSTEMS



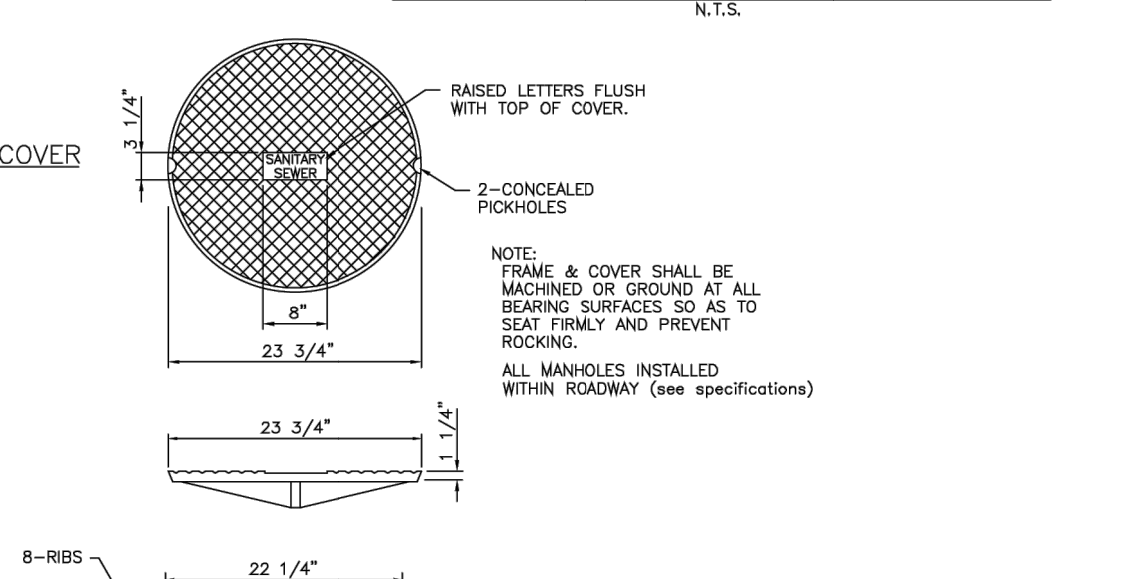
" SEWAGE FORCE MAIN MANIFOLD SERVICE CONNECTION / WITH PRESSURE GAUGE FITTING / FOR LOW PRESSURE RECEIVING SYSTEMS FOR CREATING ARTIFICIAL HEAD PRESSURE



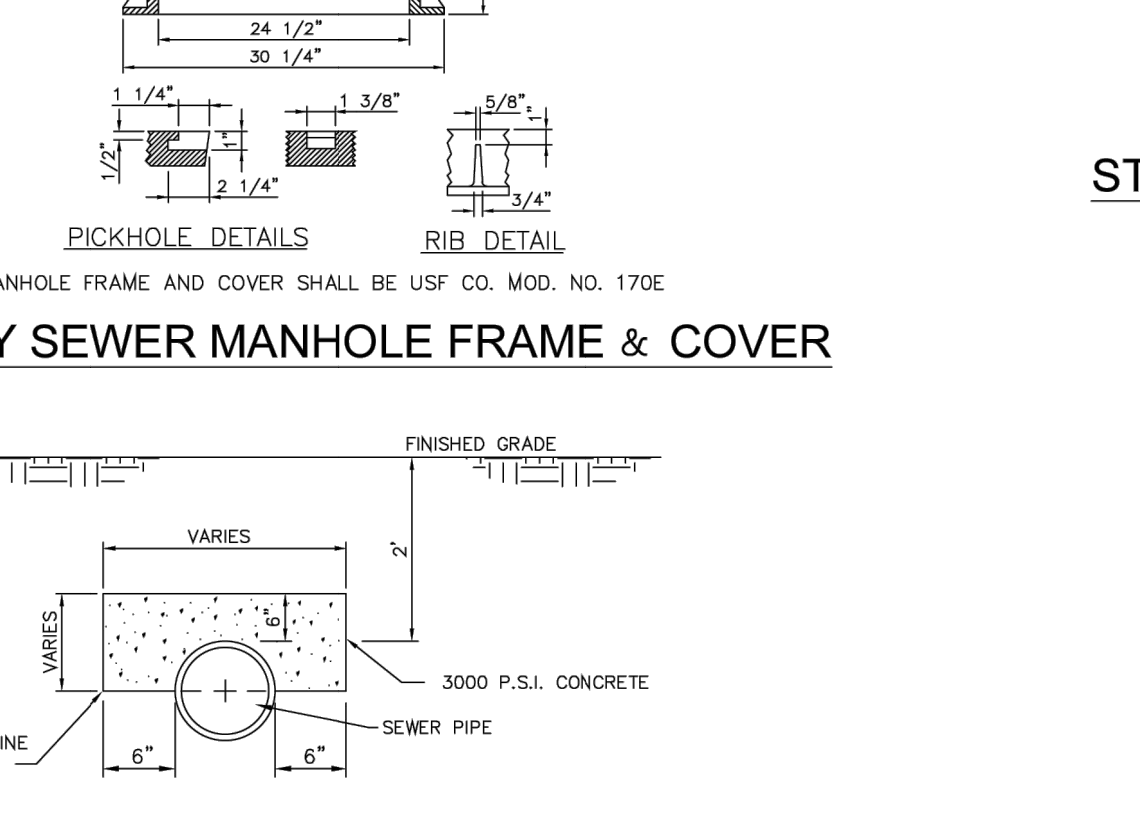
SANITARY SEWER MANHOLE



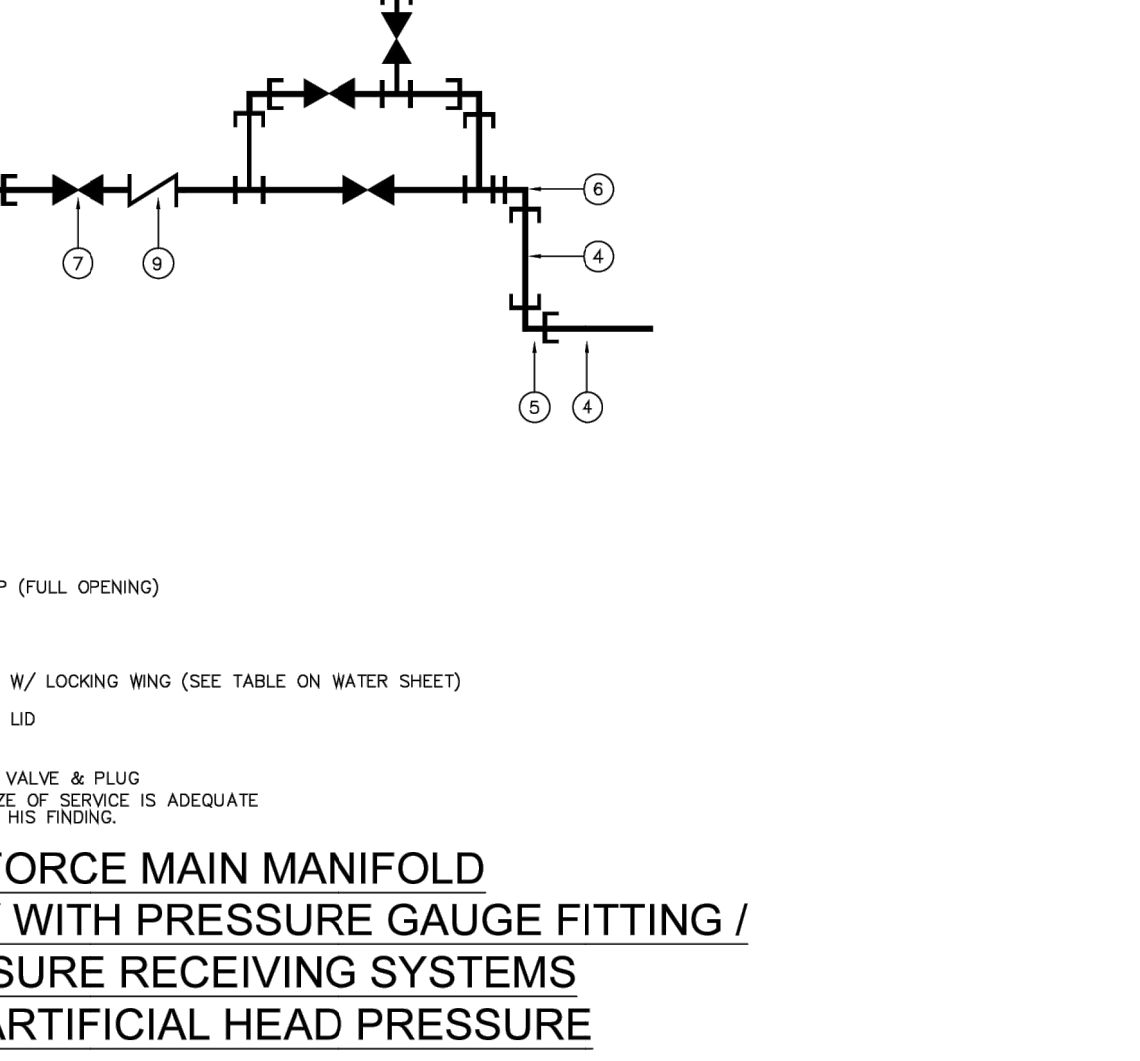
STANDARD STUBOUT SURVEY ACCESSIBLE CLEANOUT



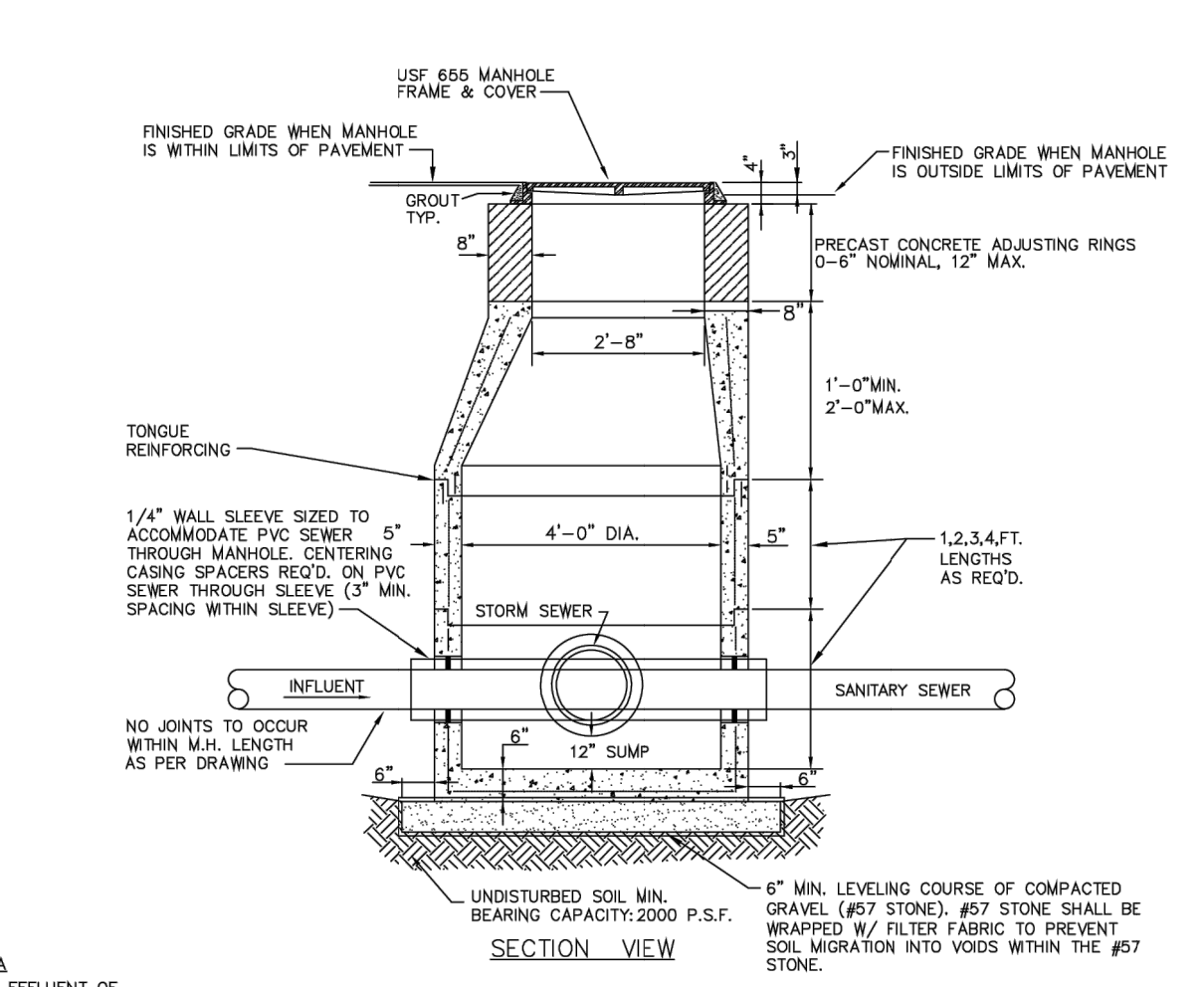
SANITARY SEWER MANHOLE FRAME & COVER



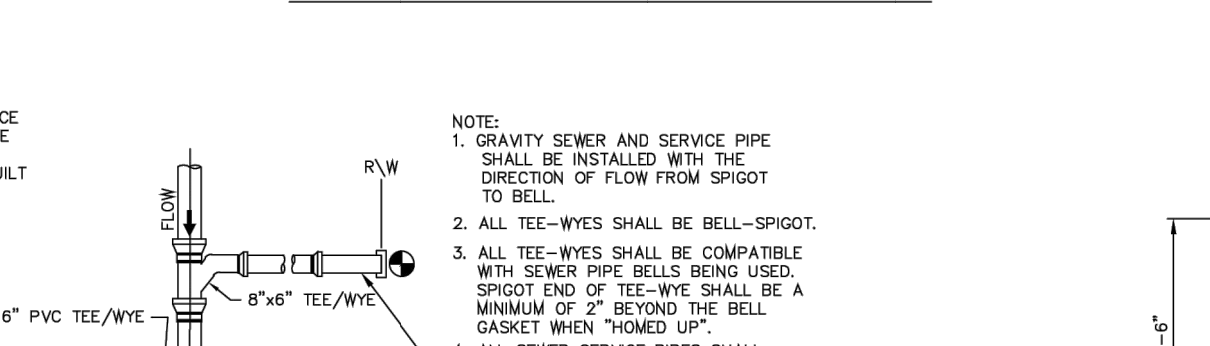
GRINDER PUMP STATION FORCE MAIN CONNECTION TO SINGLE GRAVITY SERVICE



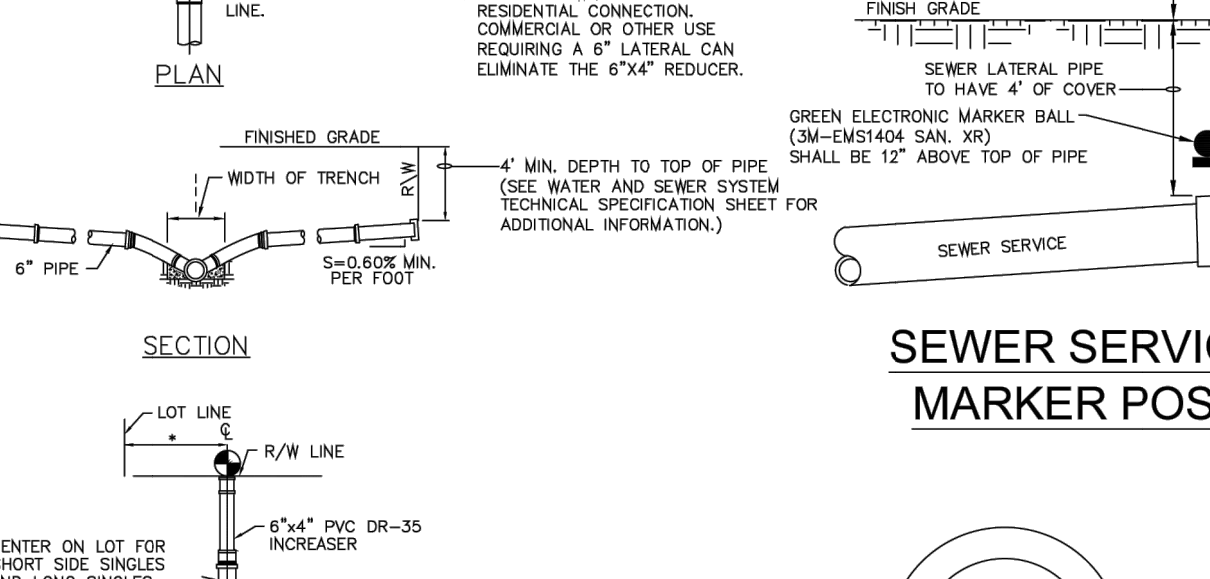
FLOOR DRAIN WITH STRAINER DETAIL



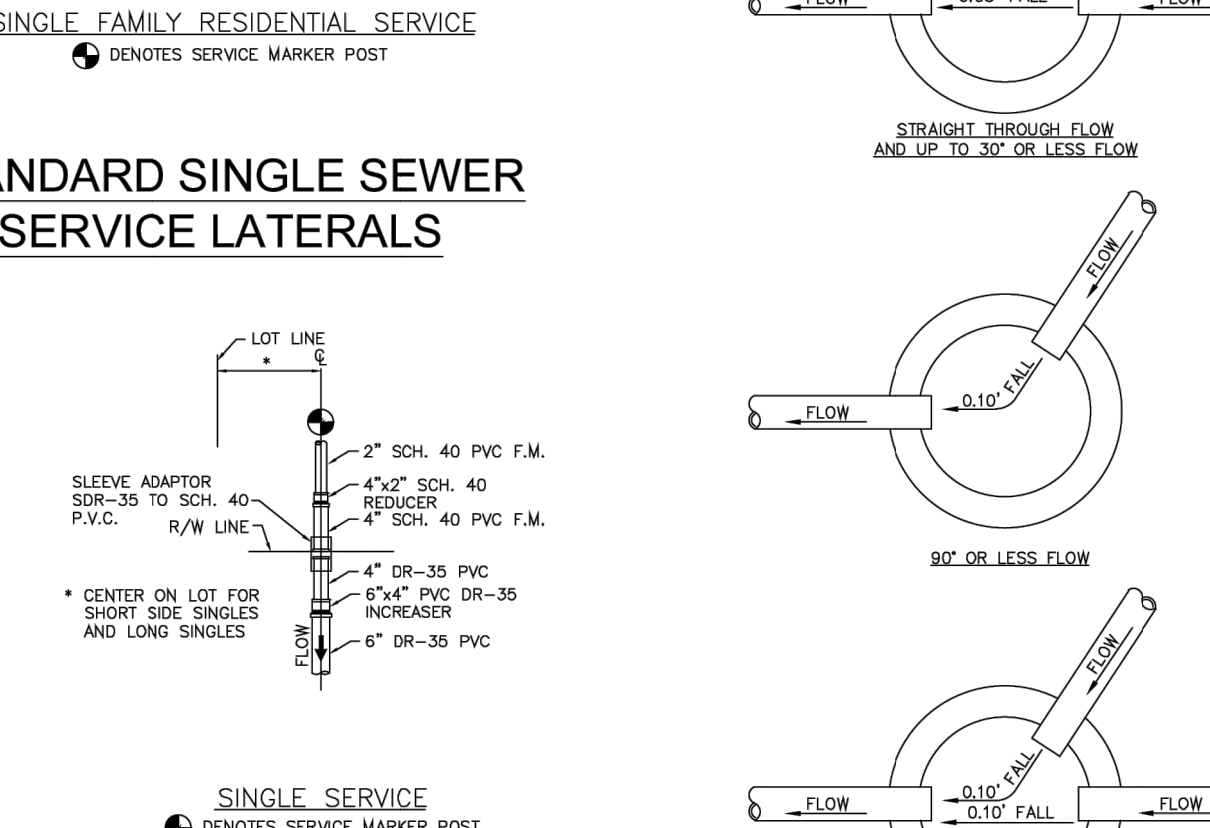
STORM CONFLICT MANHOLE



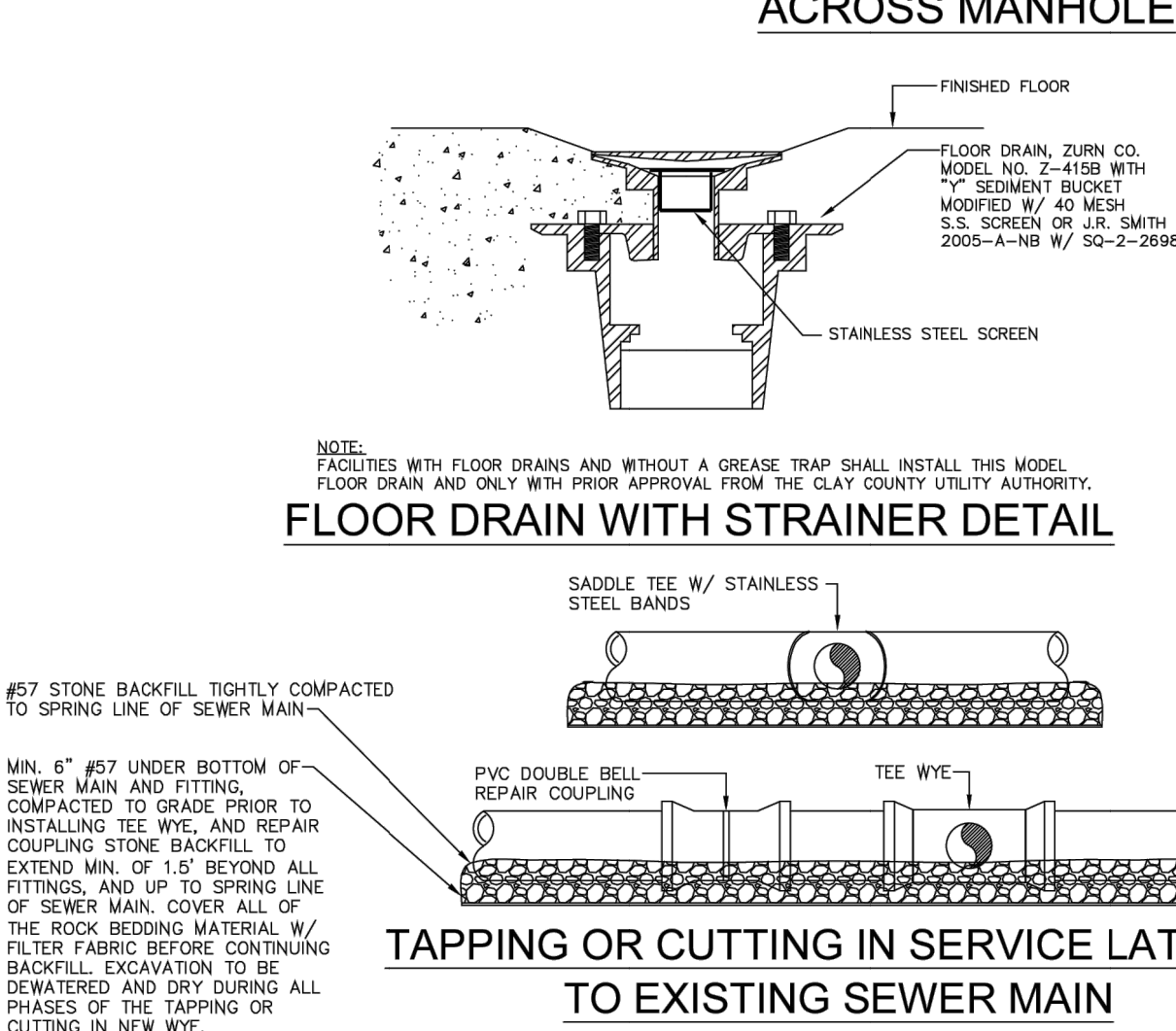
SEWER SERVICE MARKER POST



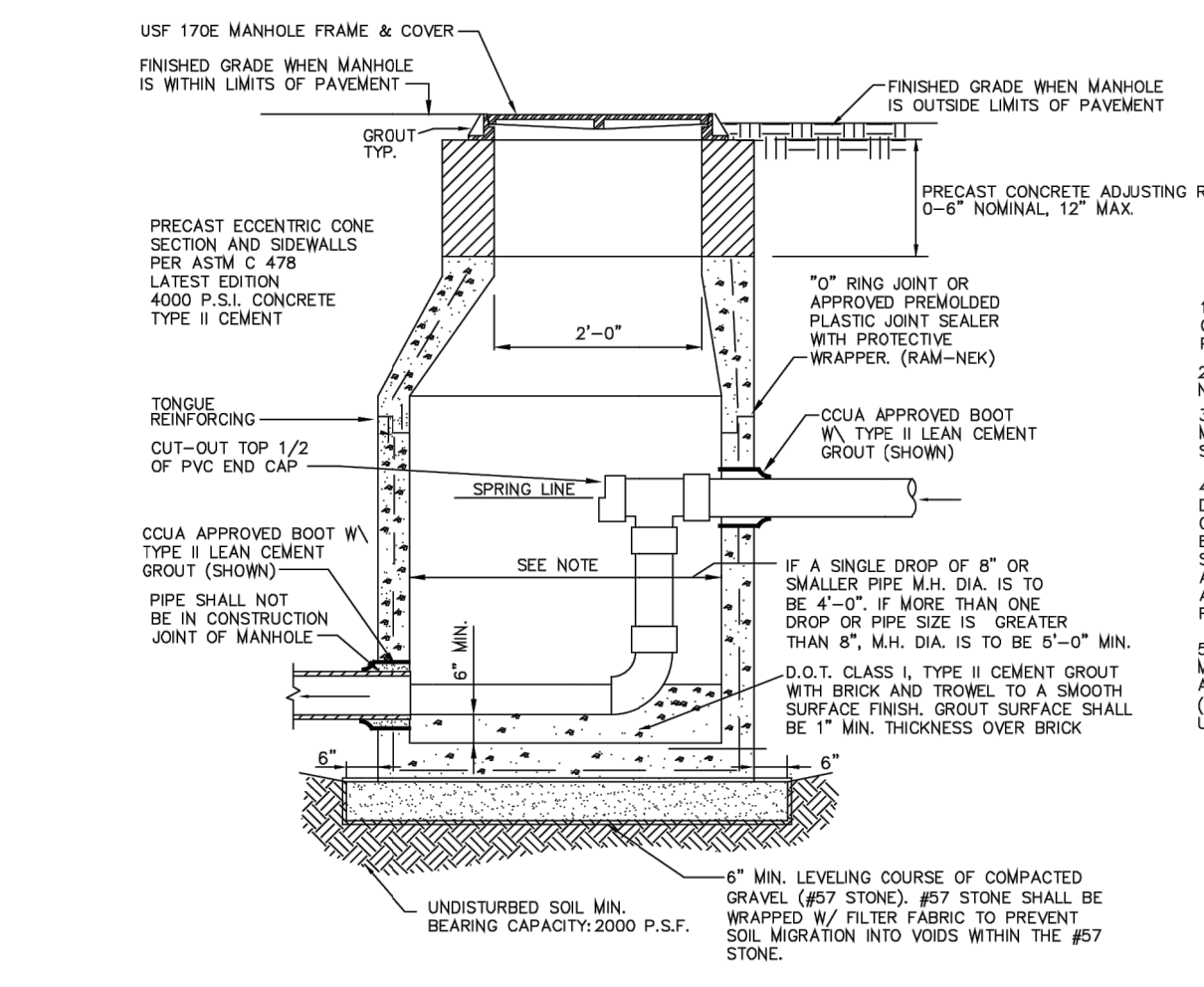
STANDARD SINGLE SEWER SERVICE LATERALS



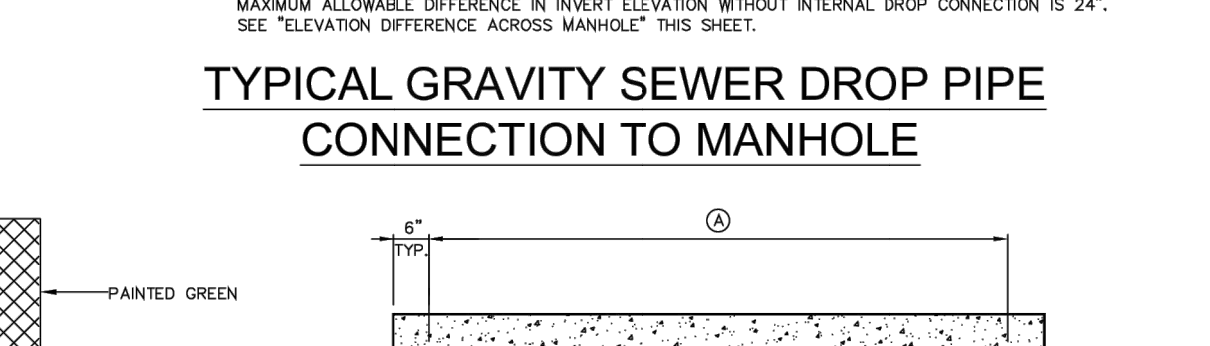
ELEVATION DIFFERENCE ACROSS MANHOLE



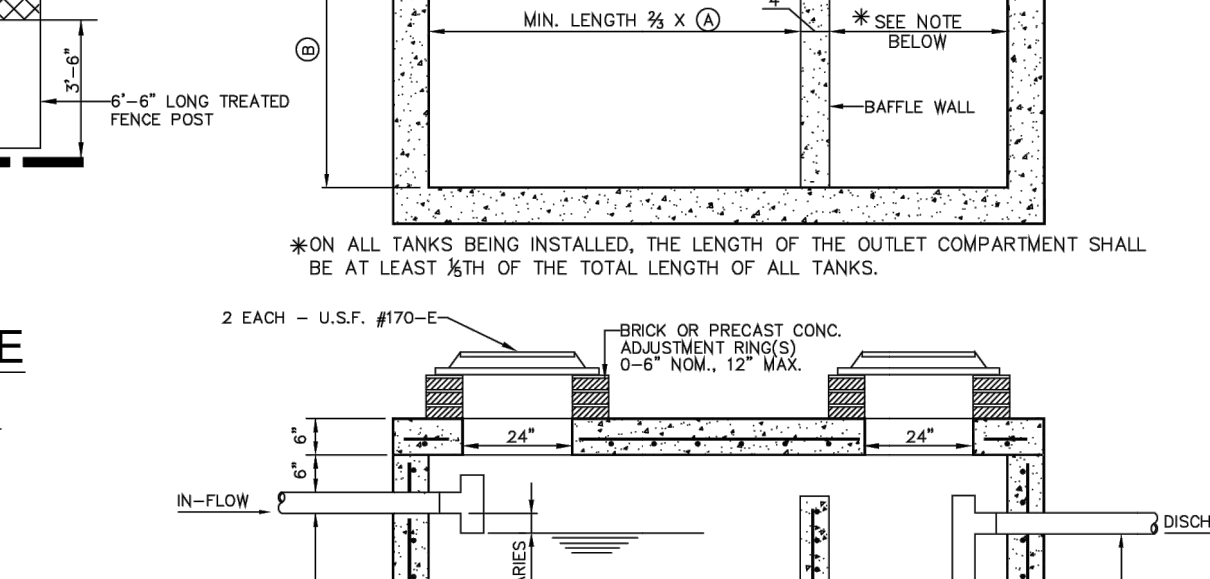
TAPPING OR CUTTING IN SERVICE LATERAL TO EXISTING SEWER MAIN



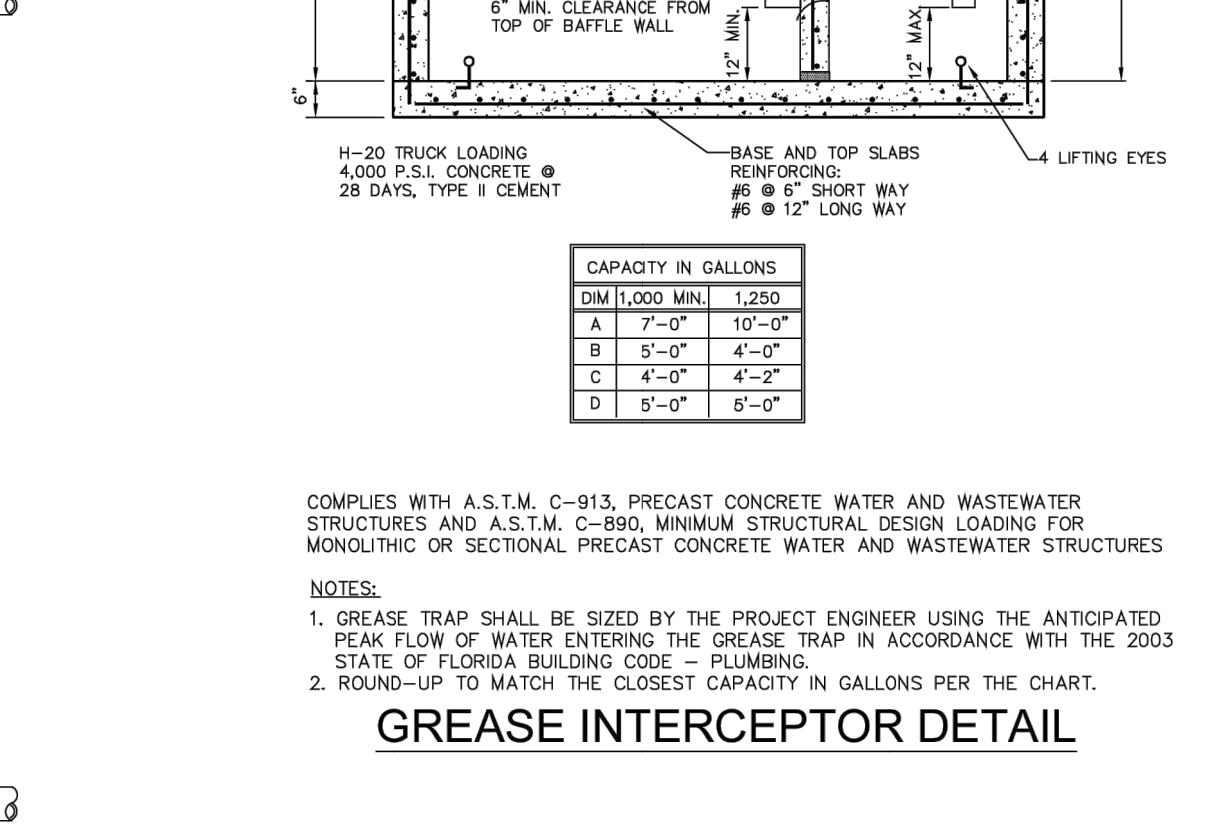
TYPICAL GRAVITY SEWER DROP PIPE CONNECTION TO MANHOLE



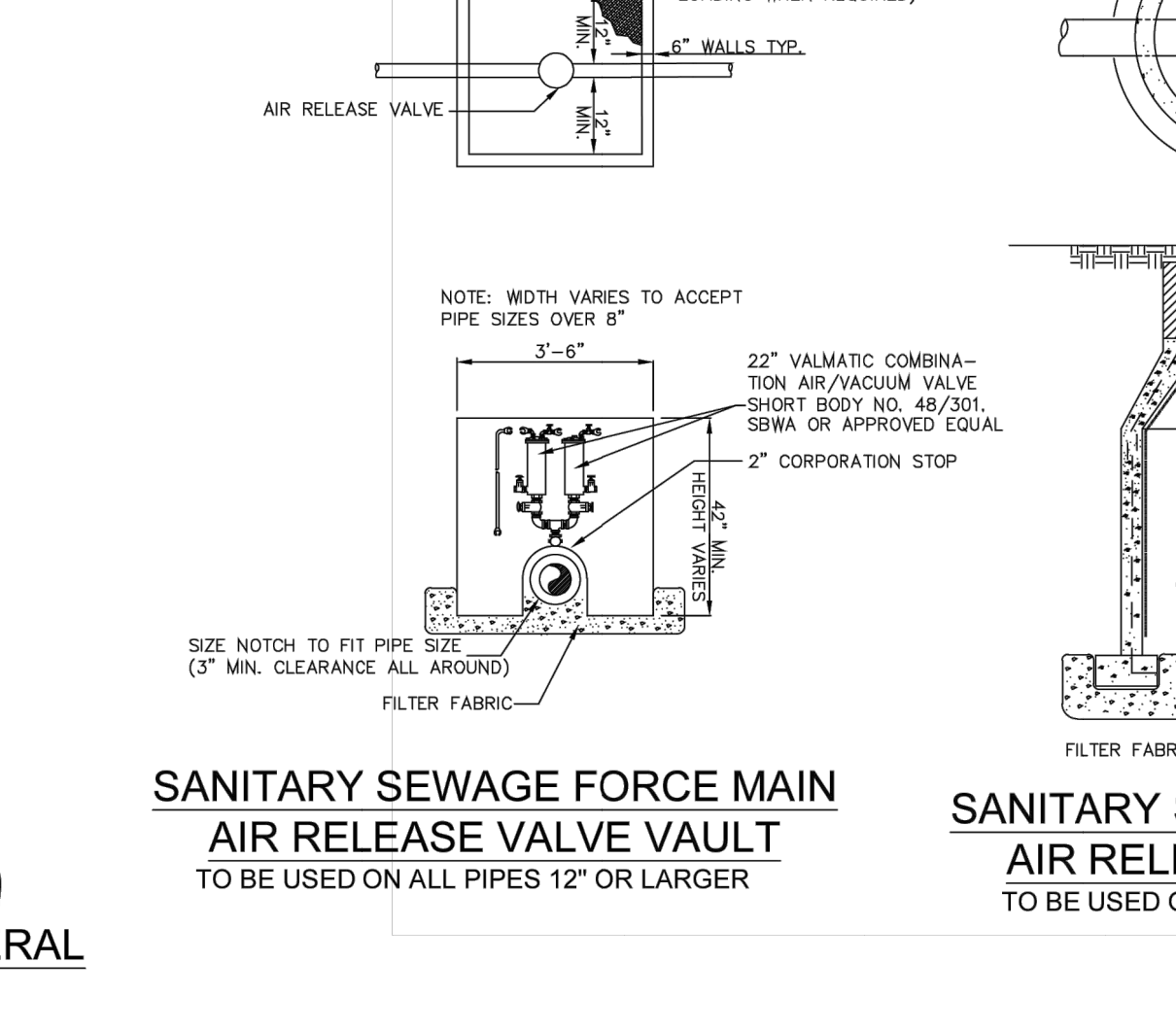
SADDLE MANHOLE DETAIL SECTION



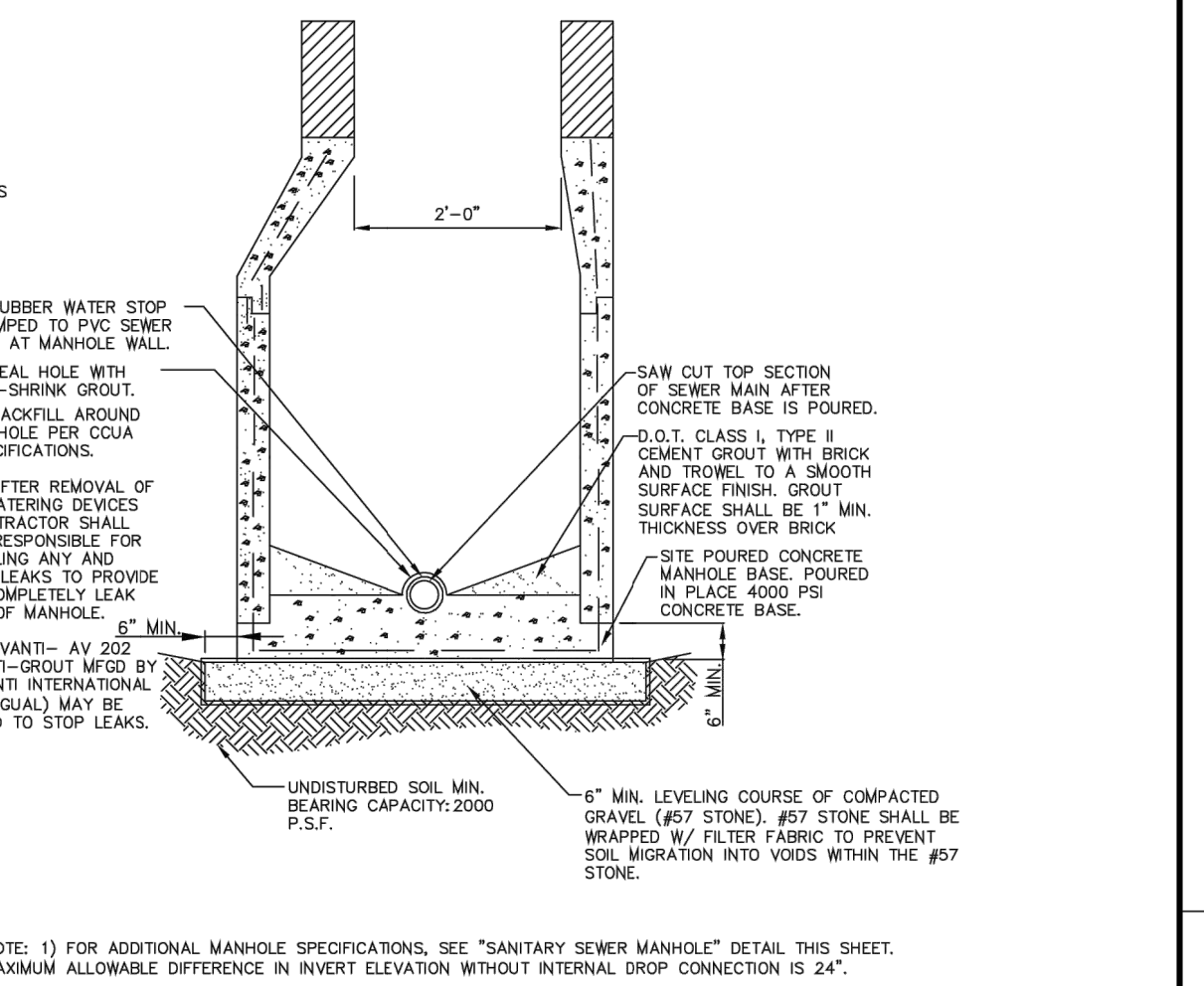
GREASE INTERCEPTOR DETAIL



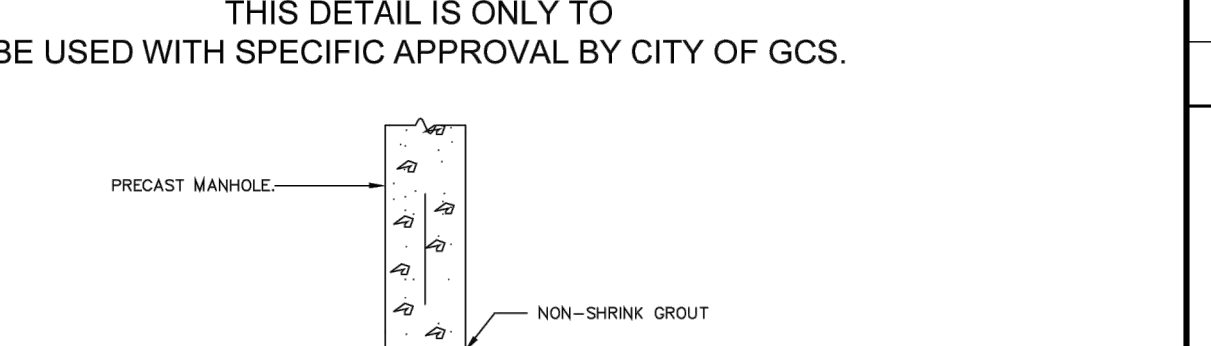
SANITARY SEWAGE FORCE MAIN AIR RELEASE VALVE VAULT



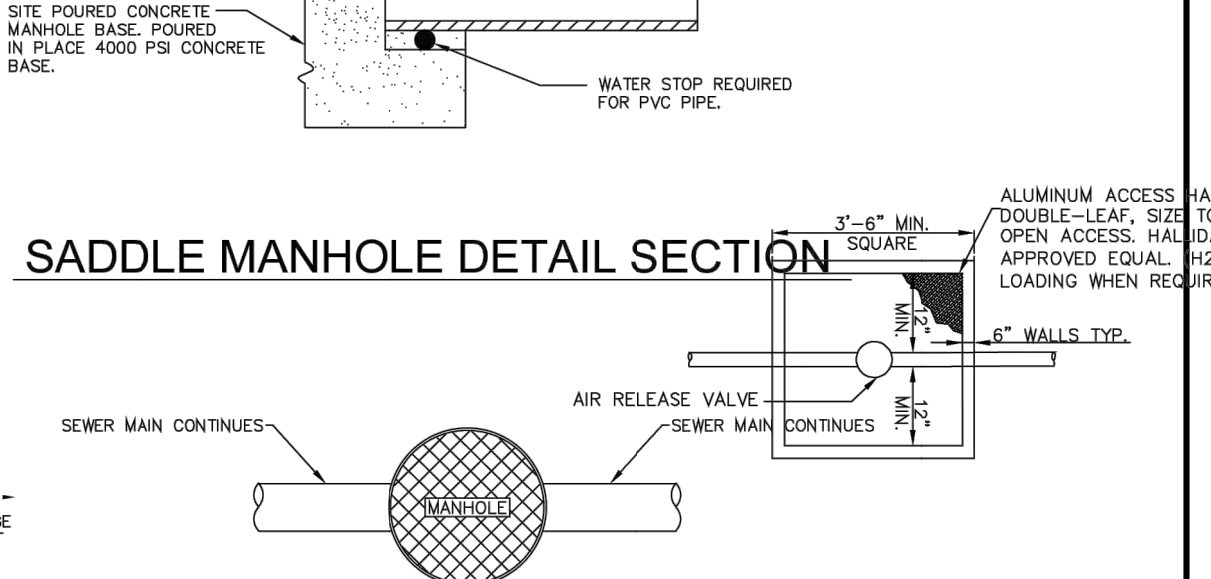
SANITARY SEWAGE FORCE MAIN AIR RELEASE VALVE VAULT



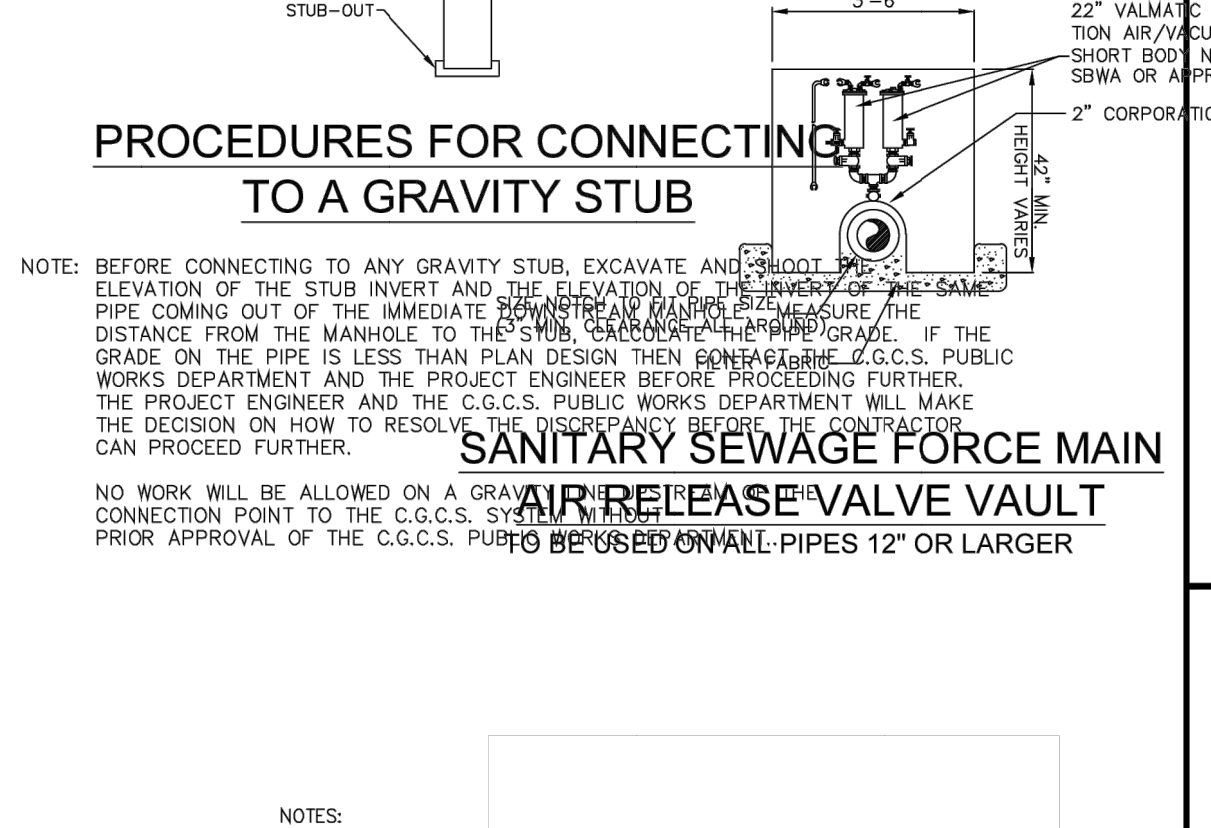
SADDLE MANHOLE DETAIL



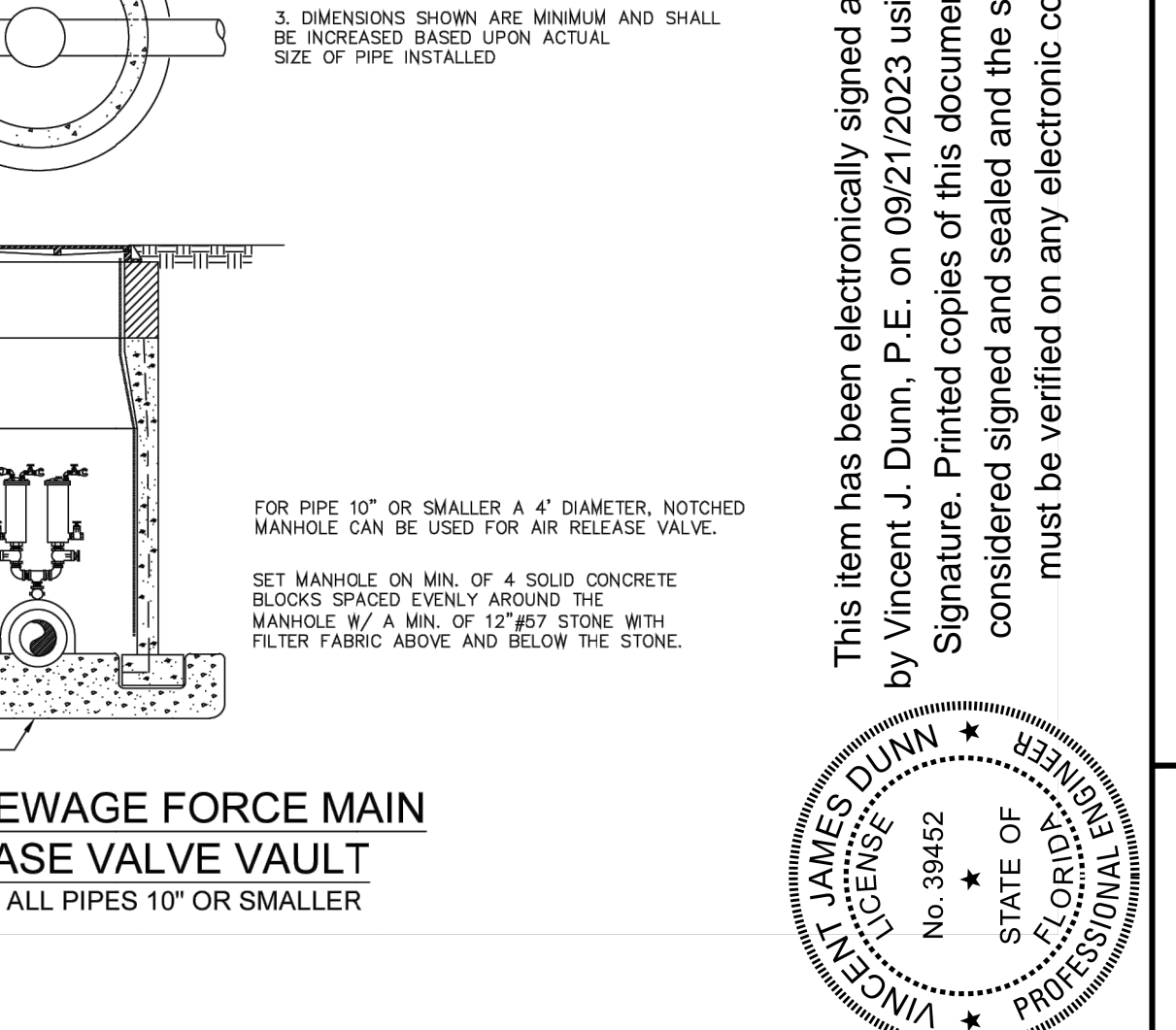
SANITARY SEWAGE FORCE MAIN AIR RELEASE VALVE VAULT



SANITARY SEWAGE FORCE MAIN AIR RELEASE VALVE VAULT



SANITARY SEWAGE FORCE MAIN AIR RELEASE VALVE VAULT

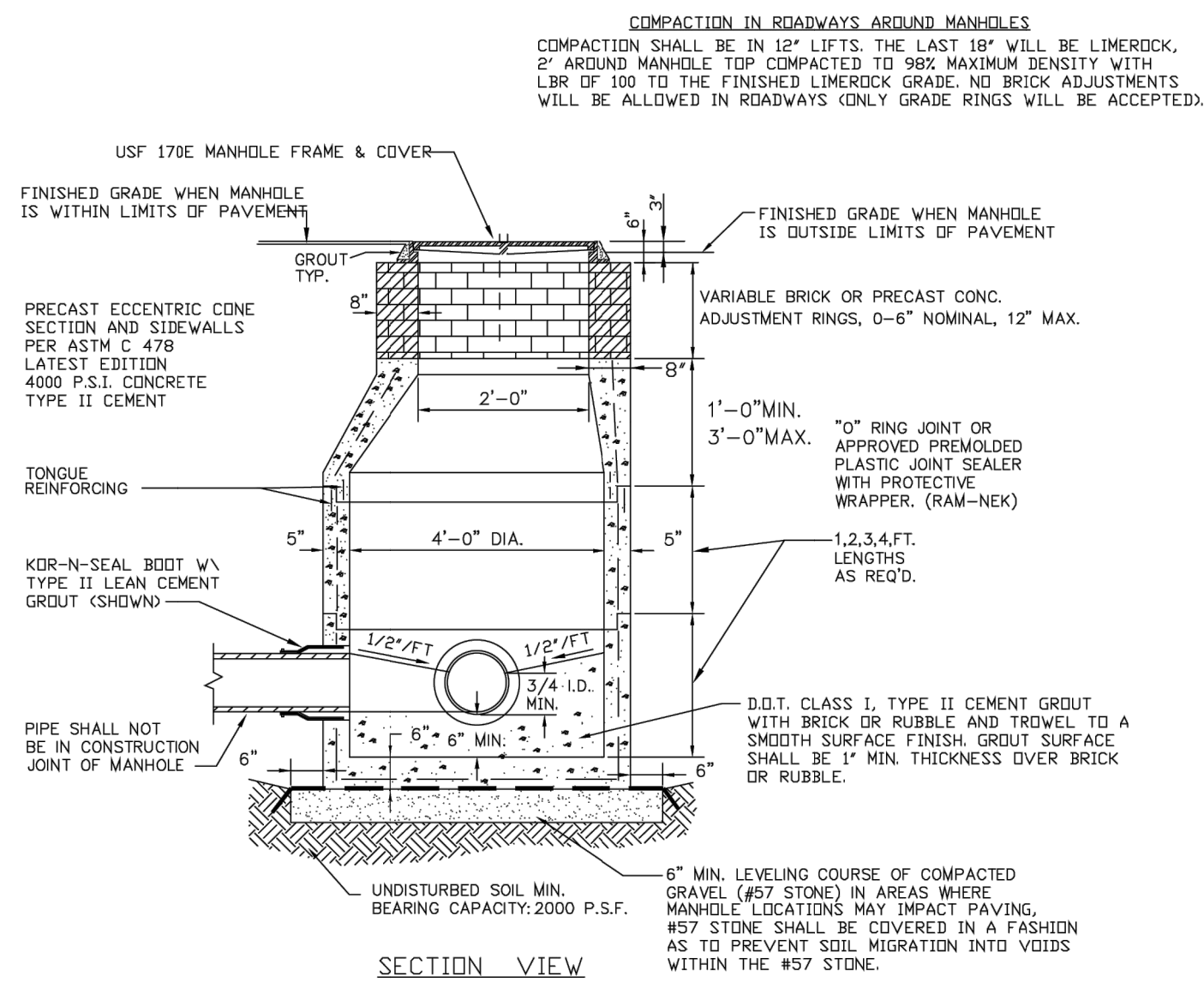


SANITARY SEWAGE FORCE MAIN AIR RELEASE VALVE VAULT

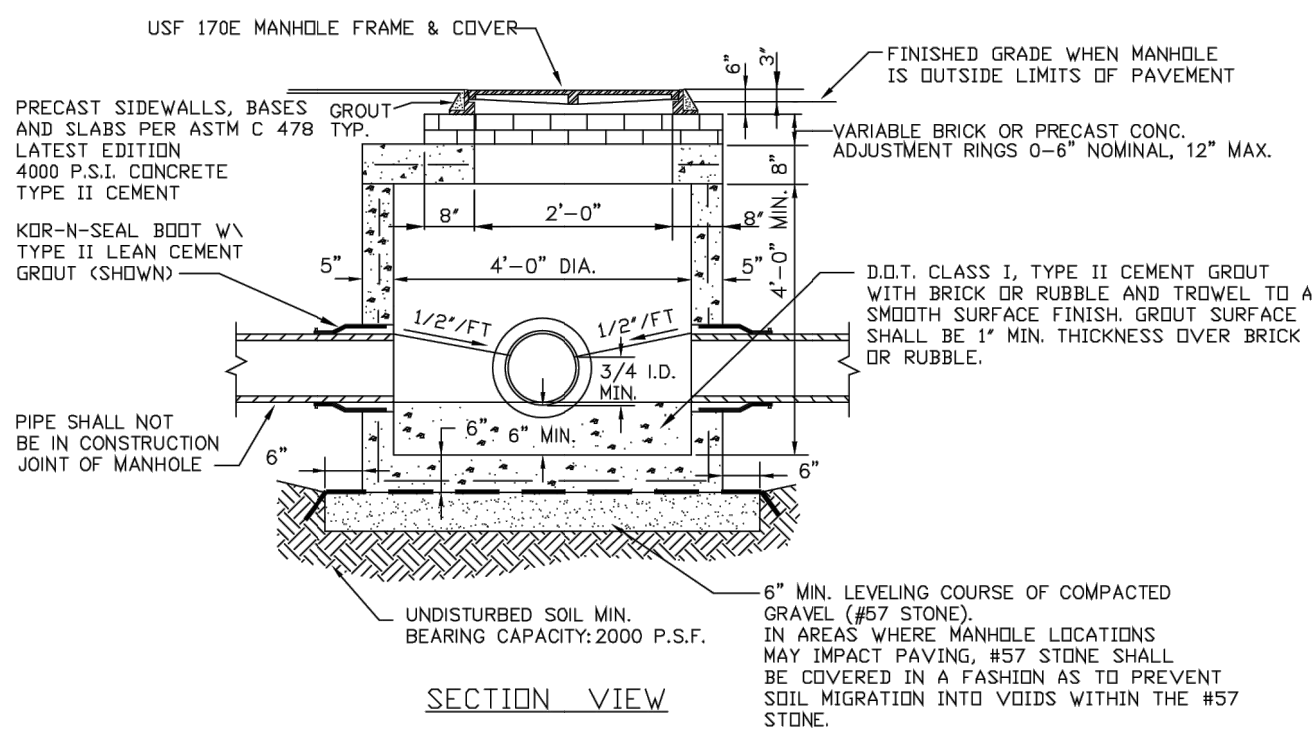
Project information including City of Green Cove Springs, project name (SEWSTAND.DWG), sheet number (SD-2), and a professional seal for Vincent J. Dunn, P.E.



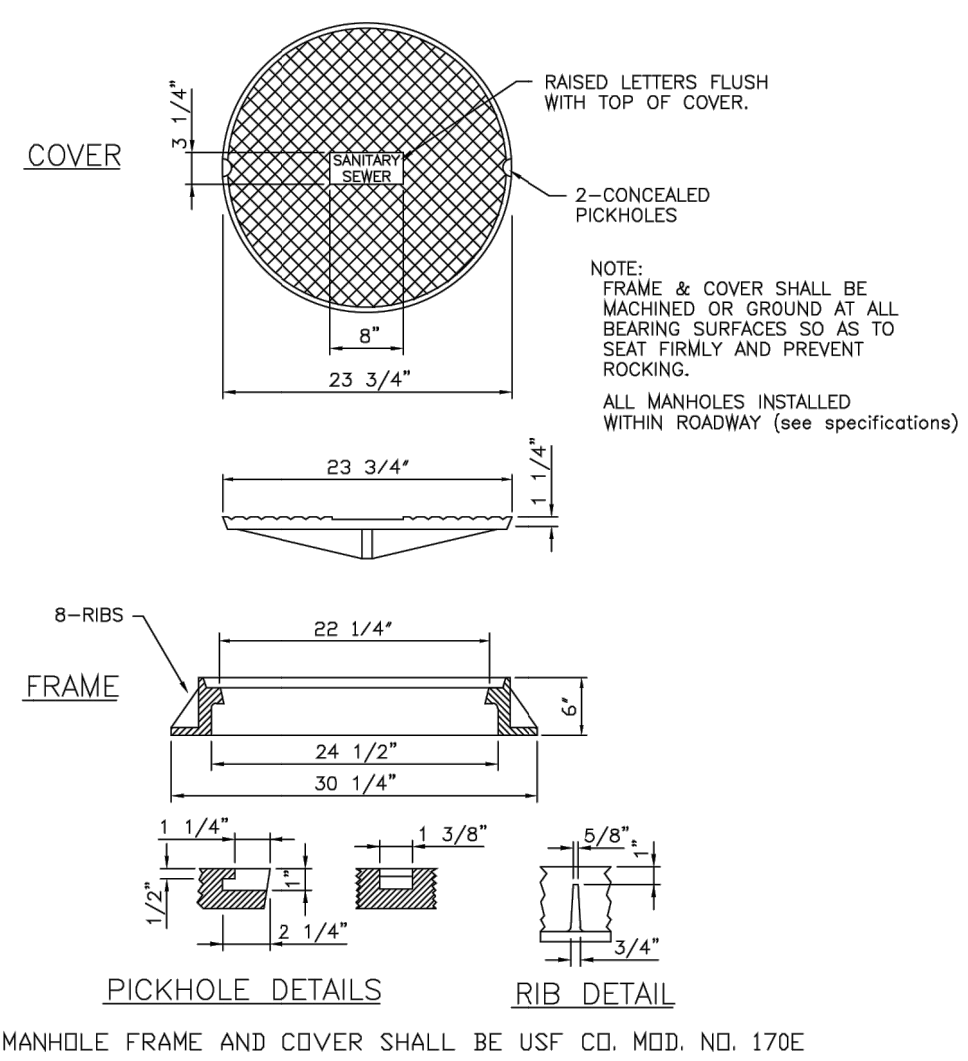
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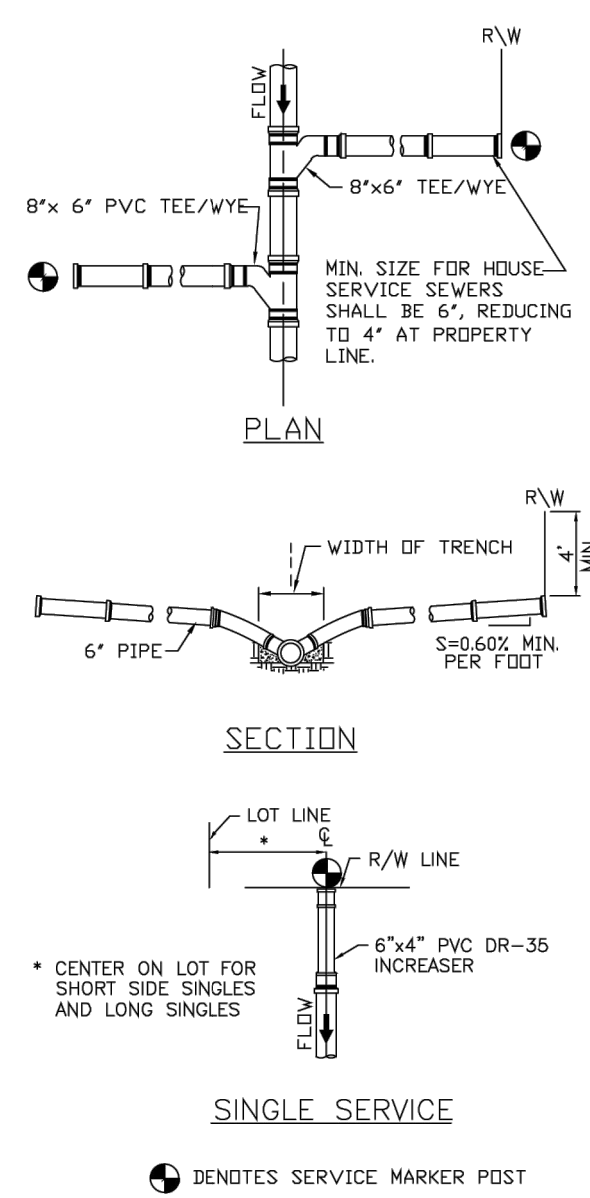
**SANITARY SEWER MANHOLE**



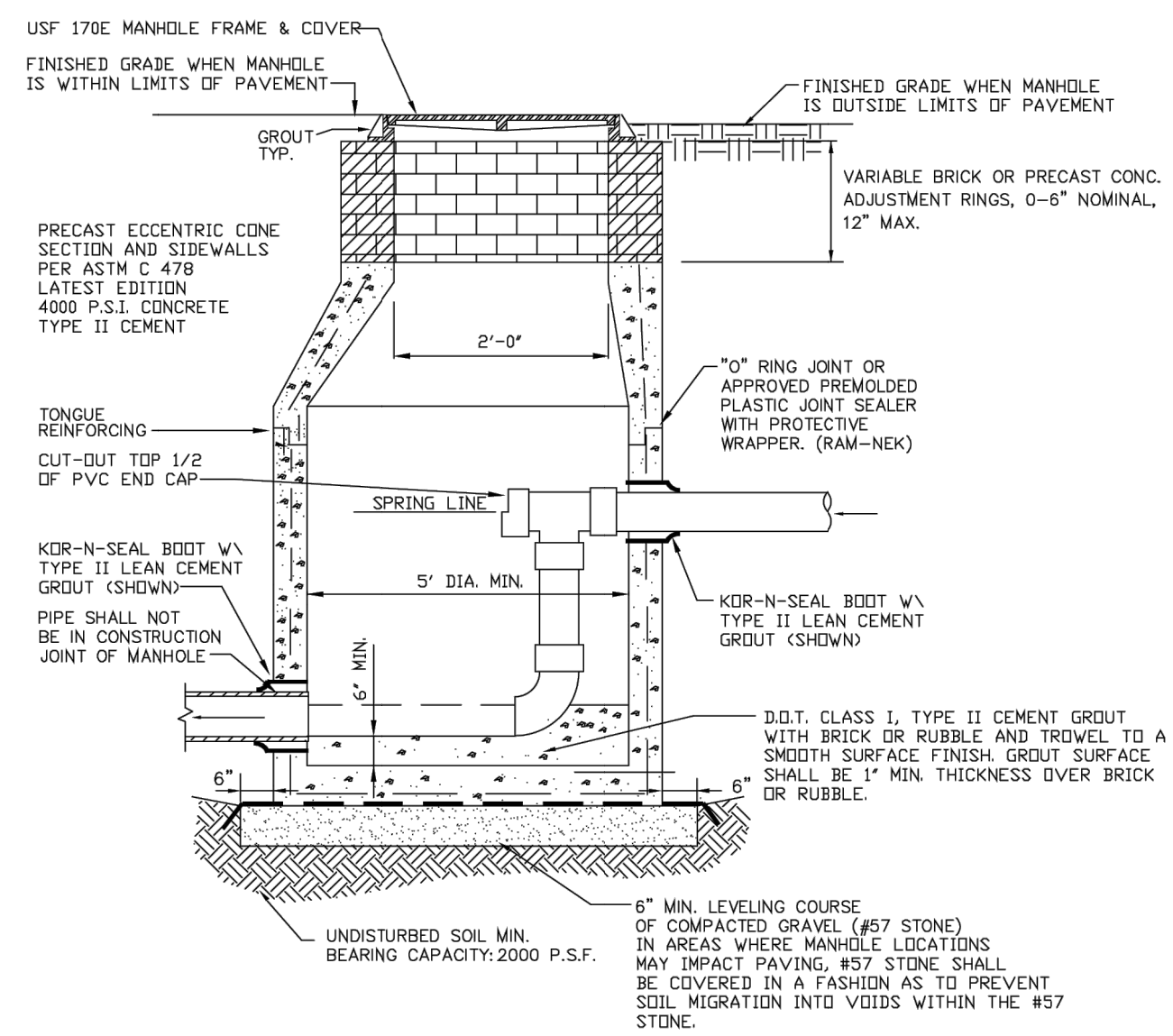
**SHALLOW SANITARY SEWER MANHOLE**



**SANITARY SEWER MANHOLE FRAME + COVER**

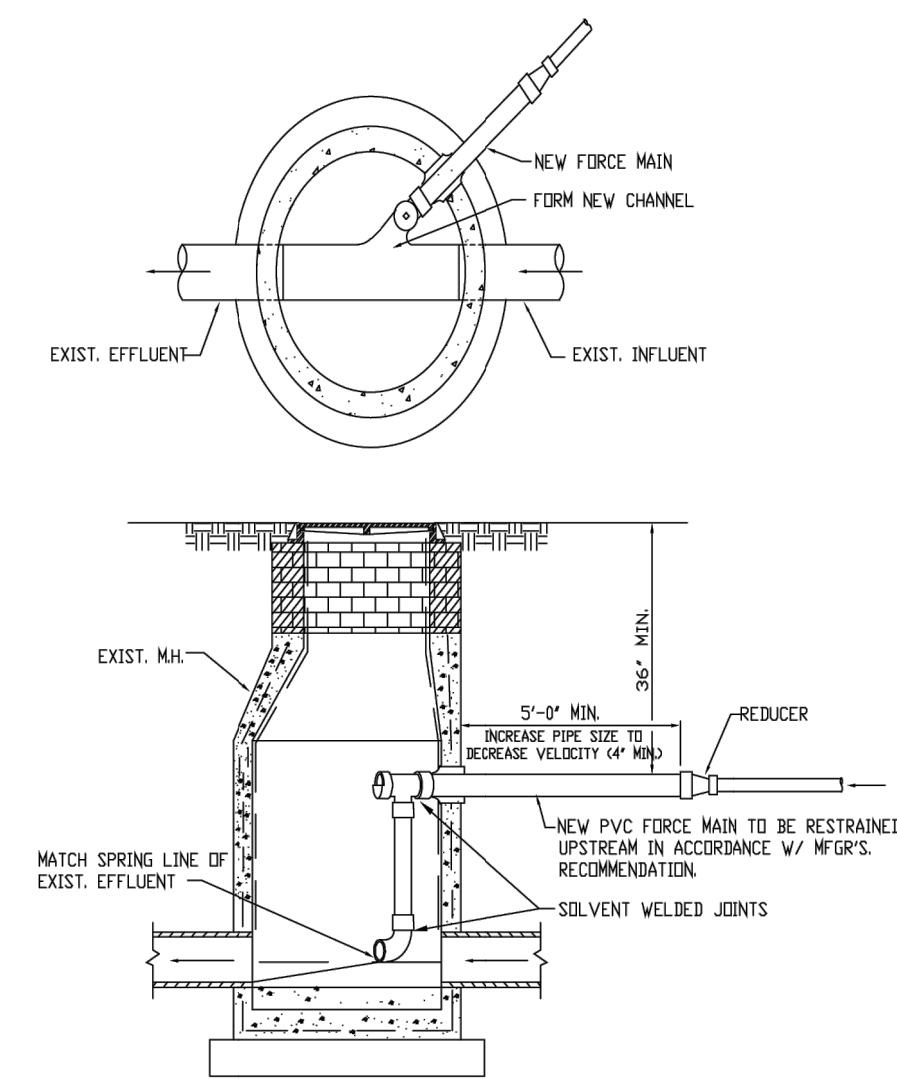


**STANDARD SINGLE SEWER SERVICE LATERALS**



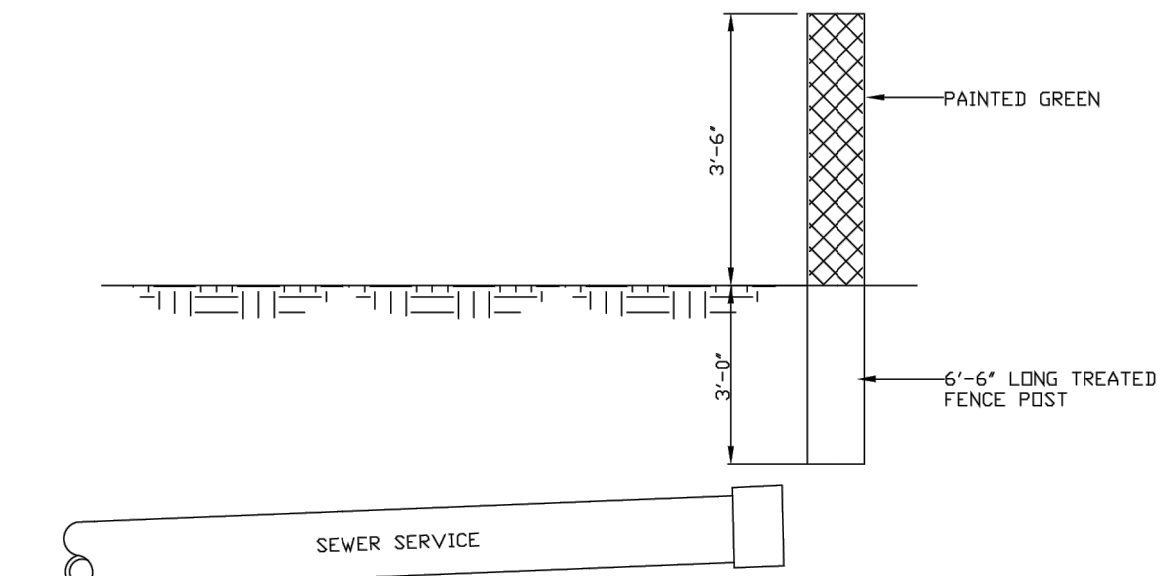
**TYPICAL GRAVITY SEWER DROP PIPE CONNECTION TO MANHOLE**

NOTE: FOR ADDITIONAL MANHOLE SPECIFICATIONS, SEE "SANITARY SEWER MANHOLE" DETAIL THIS SHEET. MAXIMUM ALLOWABLE DIFFERENCE IN INVERT ELEVATION WITHOUT INTERNAL DROP CONNECTION IS 24".

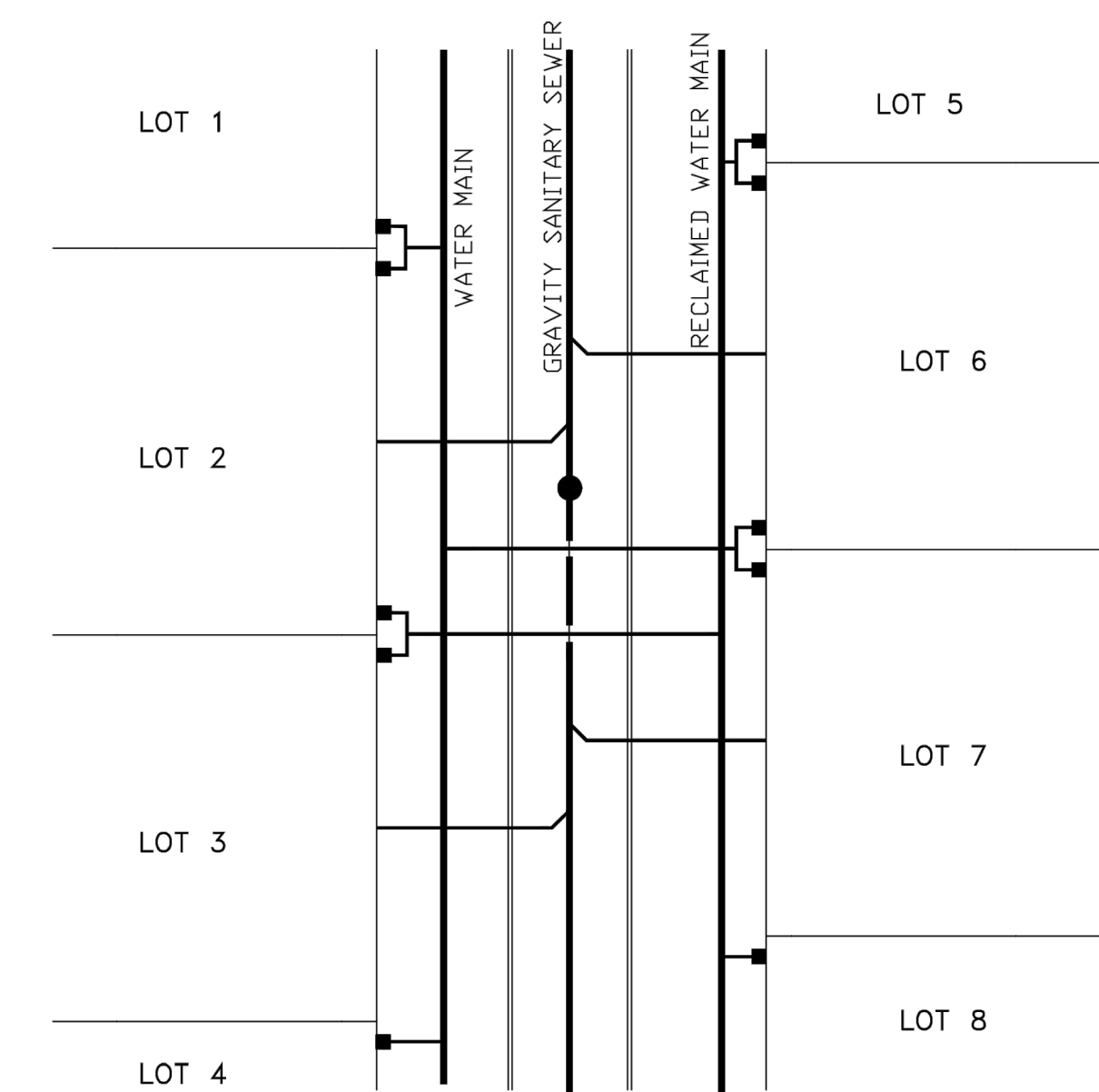


**TYP. FORCE MAIN CONNECTION TO MANHOLE**

NOTE: 1. THIS MANHOLE AND THE NEXT TWO MANHOLES DOWNSTREAM (AS REQUIRED BY UTILITY) ARE TO HAVE POLYETHYLENE LINER AS MANUFACTURED BY TAYLOR PRECAST CO. OR APPROVED EQUAL.  
 2. SIZE OF DROP PIPE CONNECTION TO MANHOLE SHALL BE DESIGNED BY THE PROJECT ENGINEER. MINIMUM SIZE SHALL BE 4". CONNECTION AND DROP PIPE SHALL BE SIZED TO REDUCE THE VELOCITY AND PREVENT "SPASHOVER" WITHIN THE MANHOLE. 5'-0" MINIMUM DISTANCE FROM MANHOLE TO REDUCER MAY BE INCREASED TO ASSIST IN THIS VELOCITY REDUCTION.



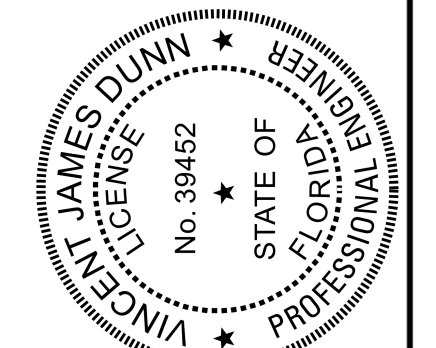
**SEWER SERVICE MARKER POST**



**TYPICAL WATER AND SEWER SERVICE LOCATION PLAN**

1) ALL WATER AND REUSE DOUBLE SERVICES ON PROPERTY LINE.  
 2) ANY SINGLE WATER OR REUSE SERVICE LINES ON LOT LINE.  
 3) ALL SEWER SERVICES ARE TO CENTER OF LOTS.

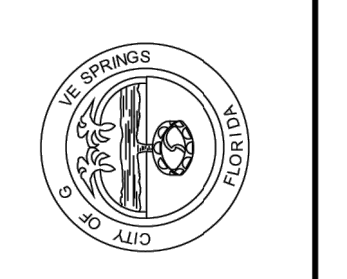
This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 09/21/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



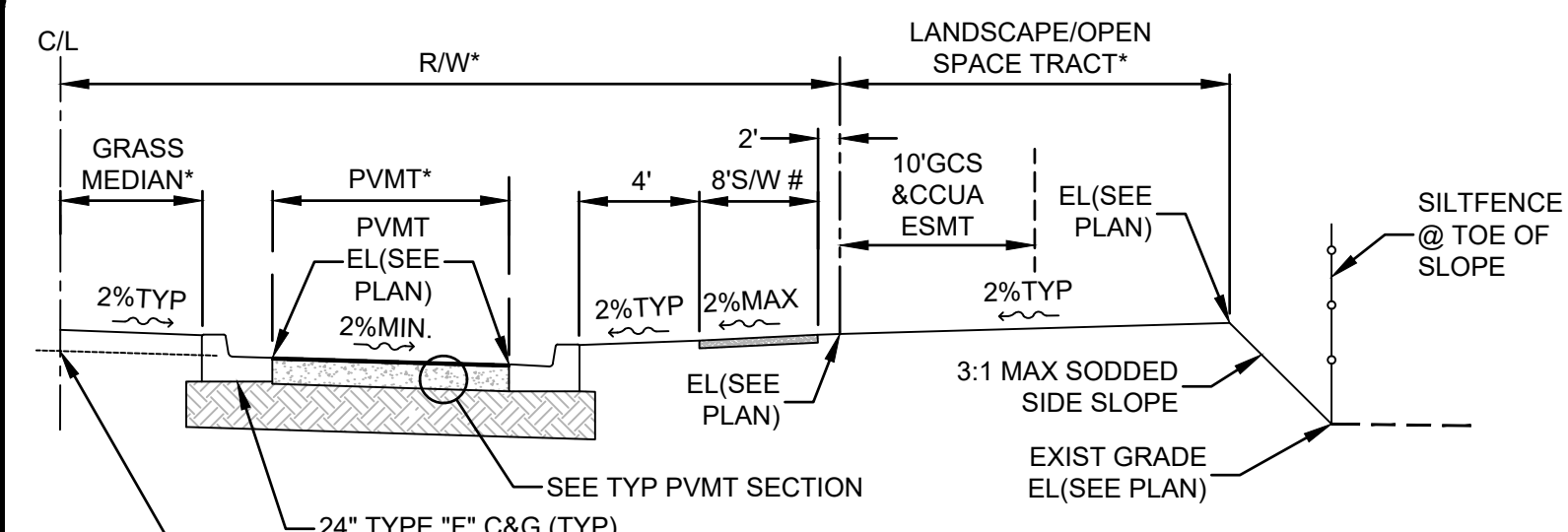
NO	DATE	BY	DESCRIPTION
1	FEB 2016	SS	GENERAL UPDATES

**GRAVITY SEWER SERVICE DETAILS**

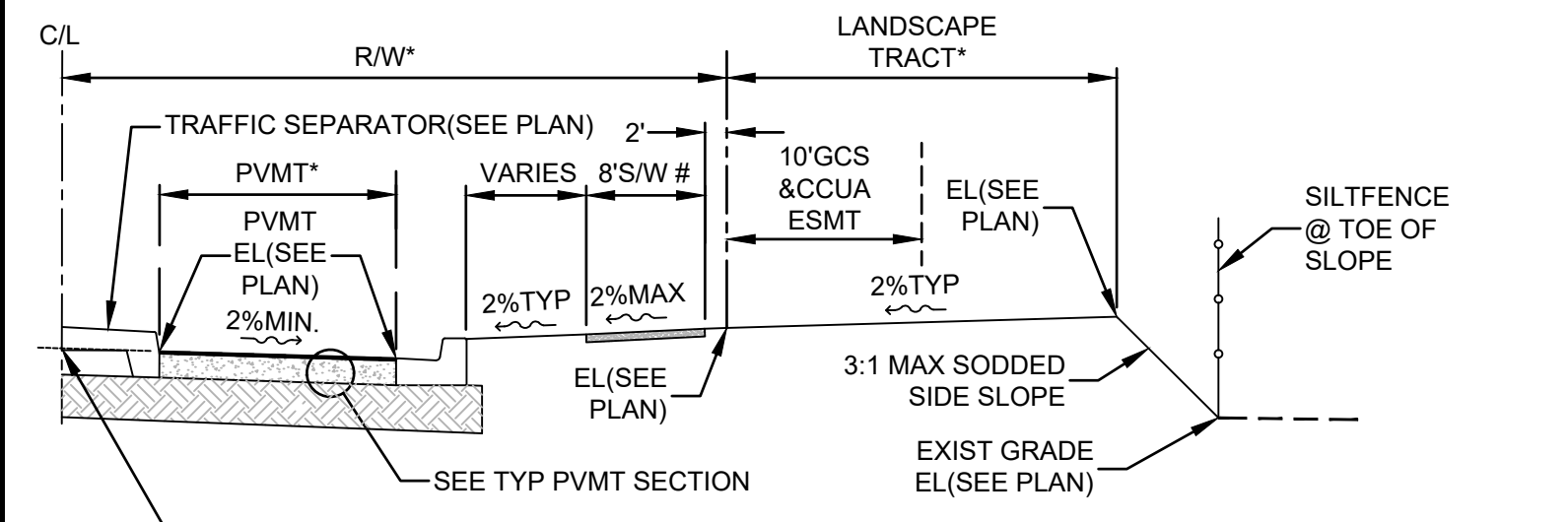
**CITY OF GREEN COVE SPRINGS**  
 321 WALNUT STREET  
 GREEN COVE SPRINGS, FLORIDA 32043



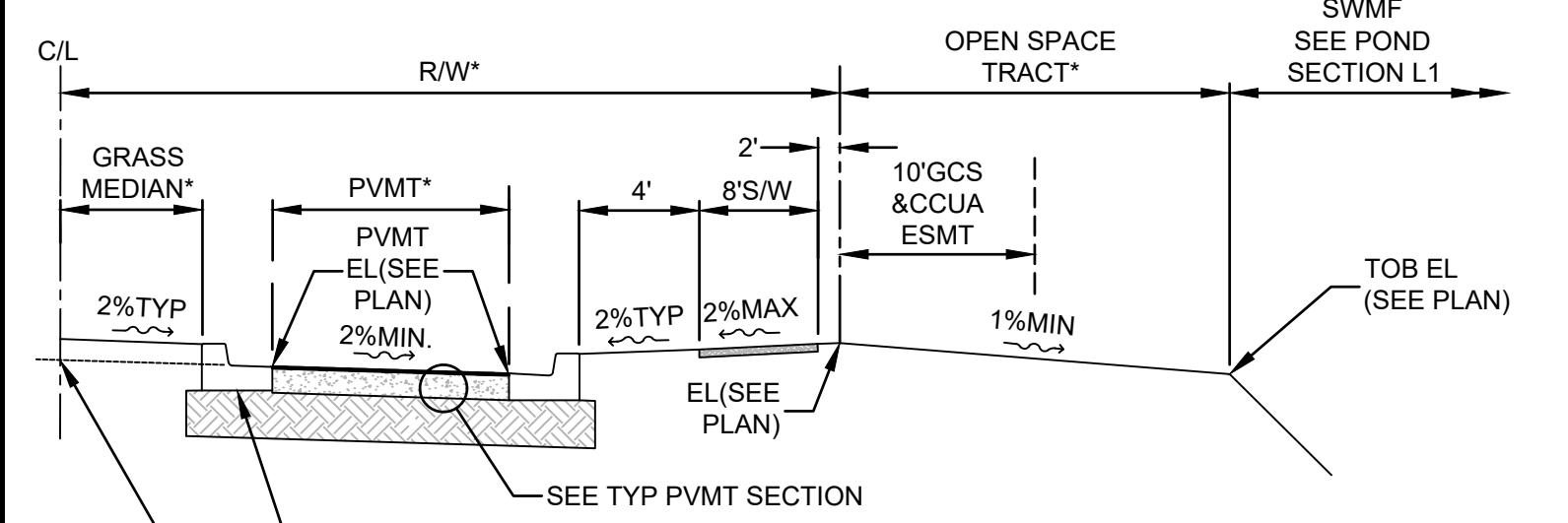
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 SHEET NO.



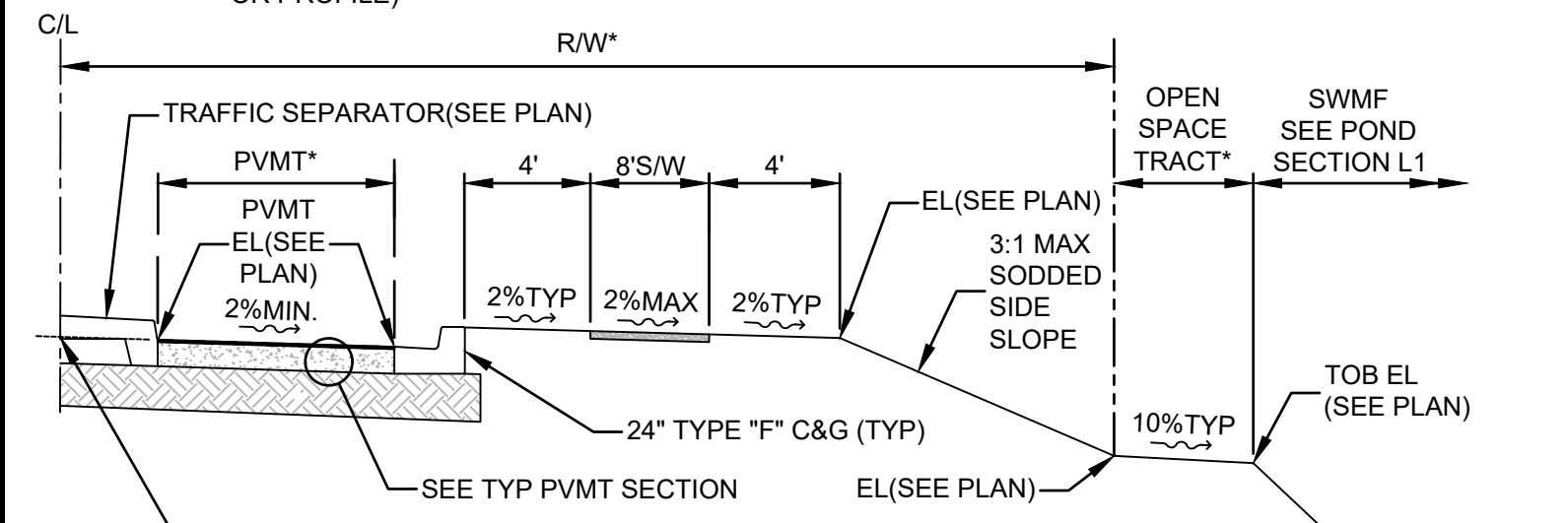
PEARCE BLVD ROAD SECTION (100' R/W)  
EASTBOUND LANE ROUNDABOUT TO -STA 90+50  
& FROM -STA 116+45 TO US-17



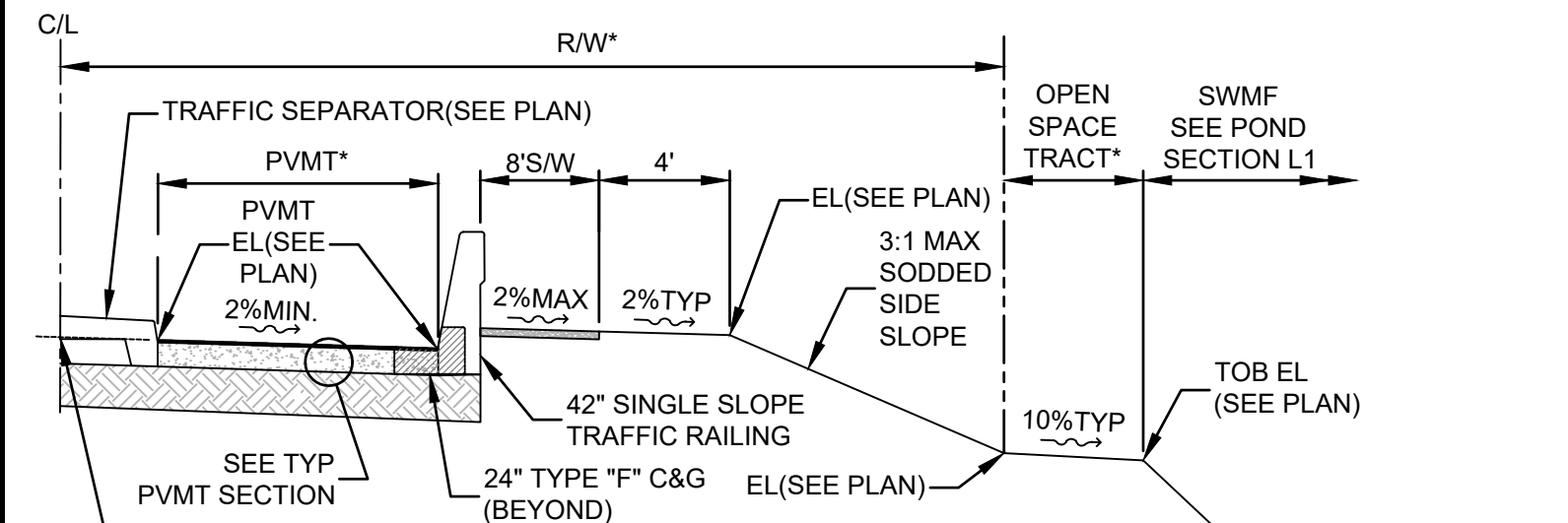
PEARCE BLVD ROAD SECTION (100' R/W)  
EASTBOUND LANE -STA 107+75 TO -STA 116+45



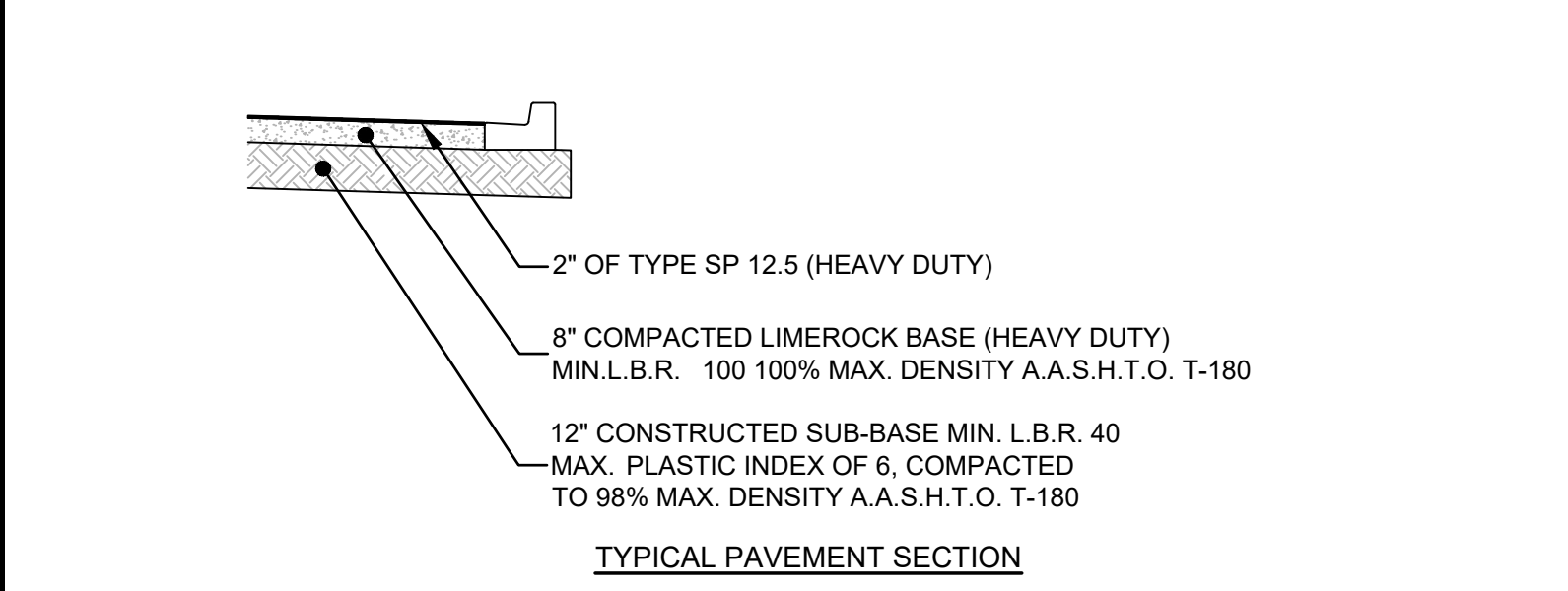
PEARCE BLVD ROAD SECTION (100' R/W)  
EASTBOUND LANE -STA 90+50 TO -STA 92+32



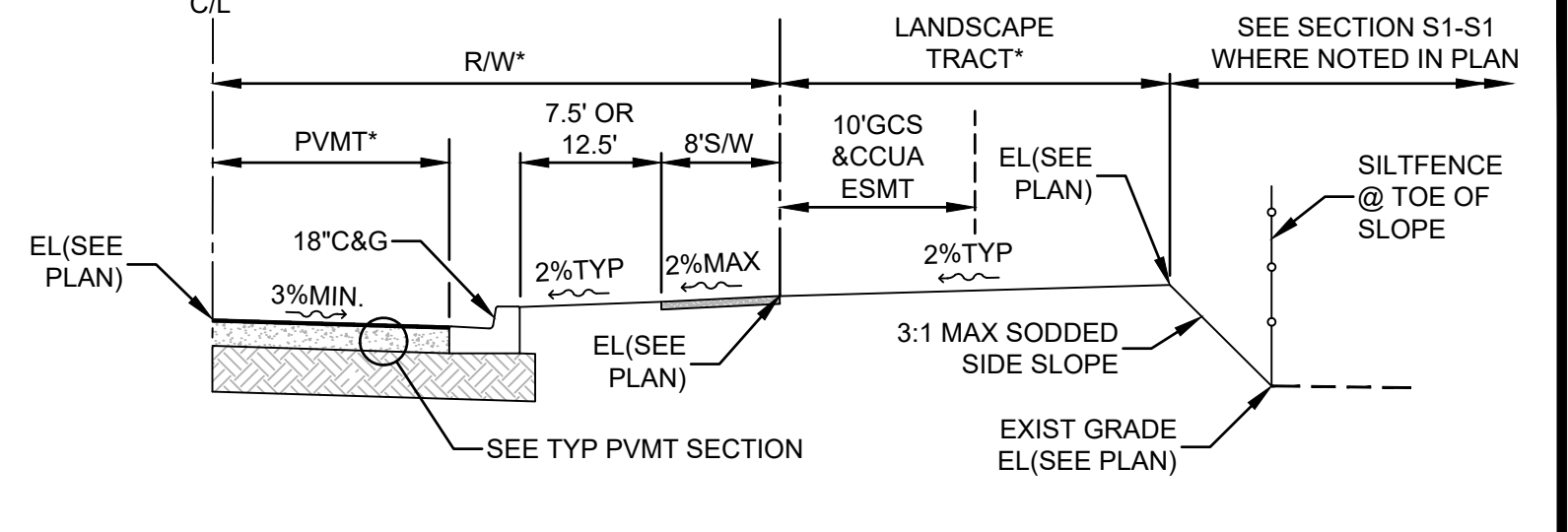
PEARCE BLVD ROAD SECTION (R/W VARIES)  
EASTBOUND LANE -STA 92+32 TO -STA 96+00  
& -STA 105+50 TO -STA 107+75



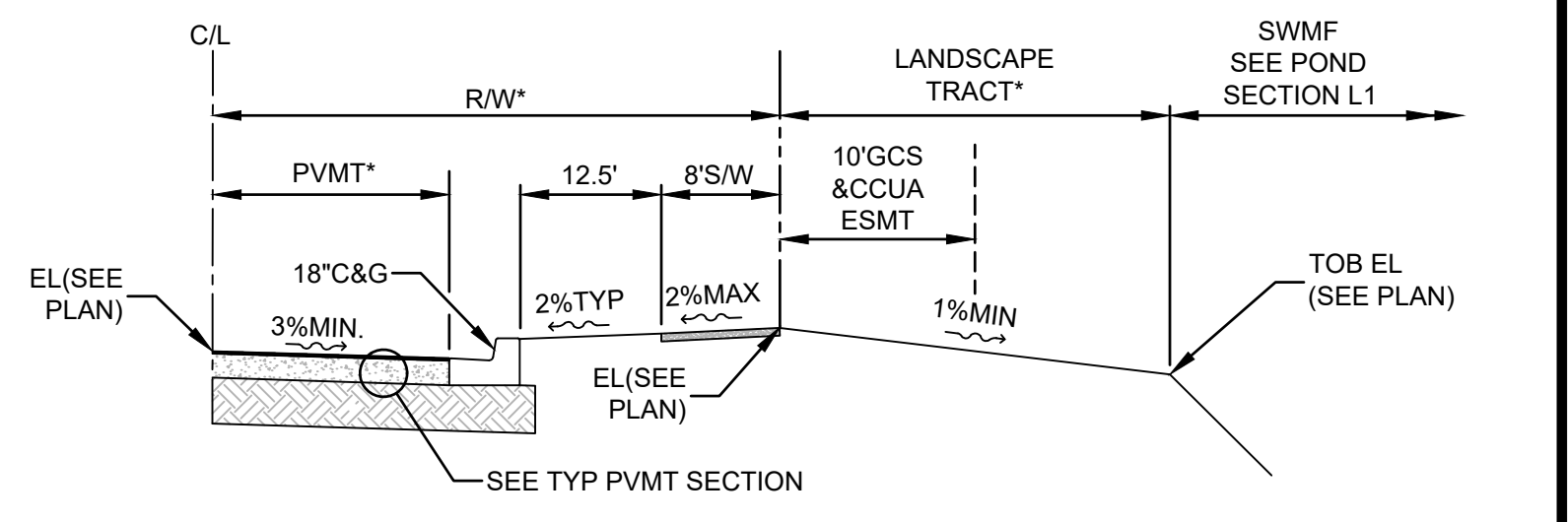
PEARCE BLVD ROAD SECTION (R/W VARIES)  
EASTBOUND LANE -STA 96+00 TO -STA 98+74  
& -STA 101+26 TO -STA 105+50



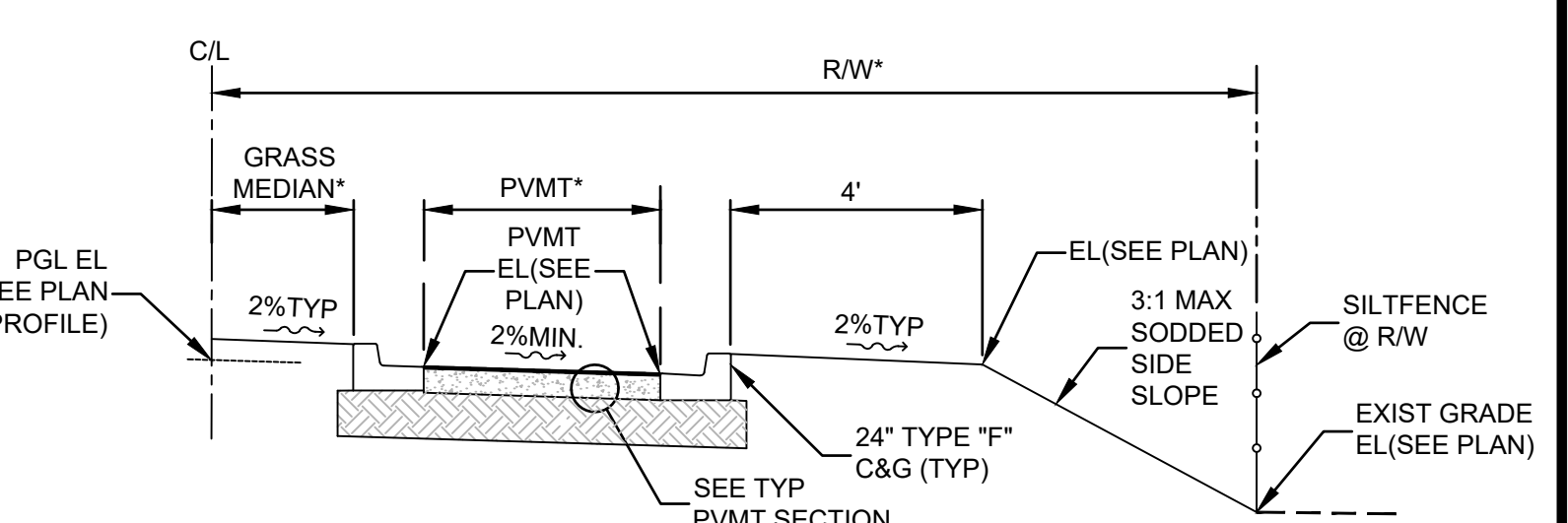
TYPICAL PAVEMENT SECTION



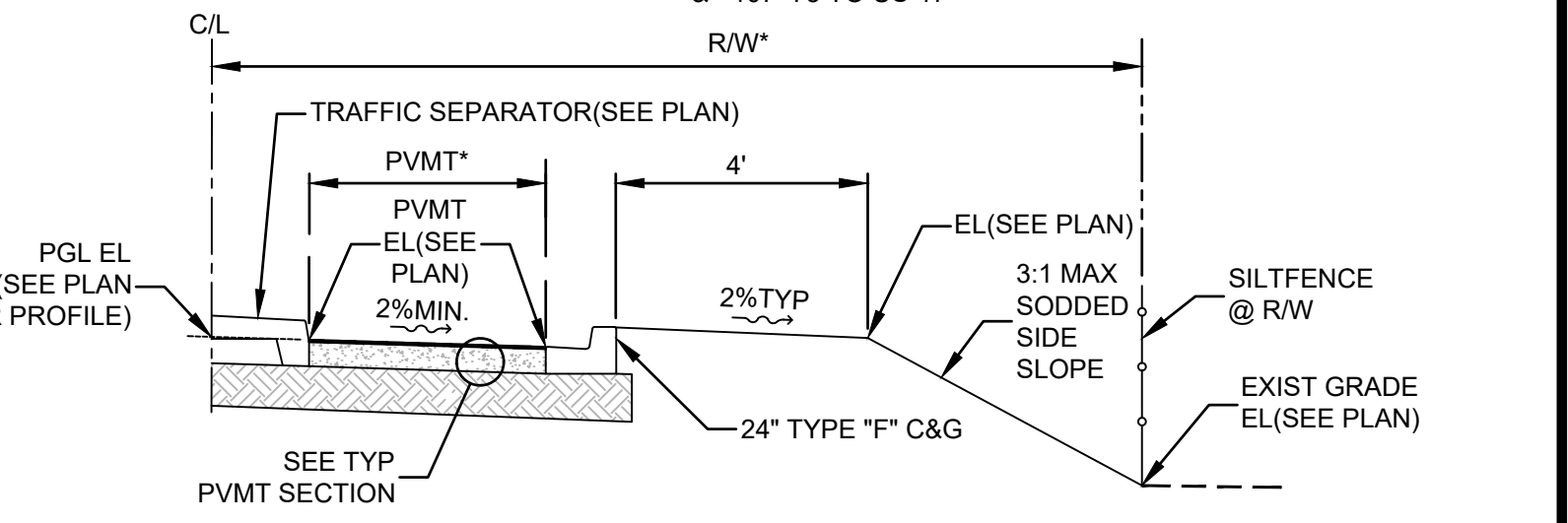
DARTER CHASE ST (70' R/W) & PEARCE BLVD (80' R/W)  
TYPICAL ROAD SECTION



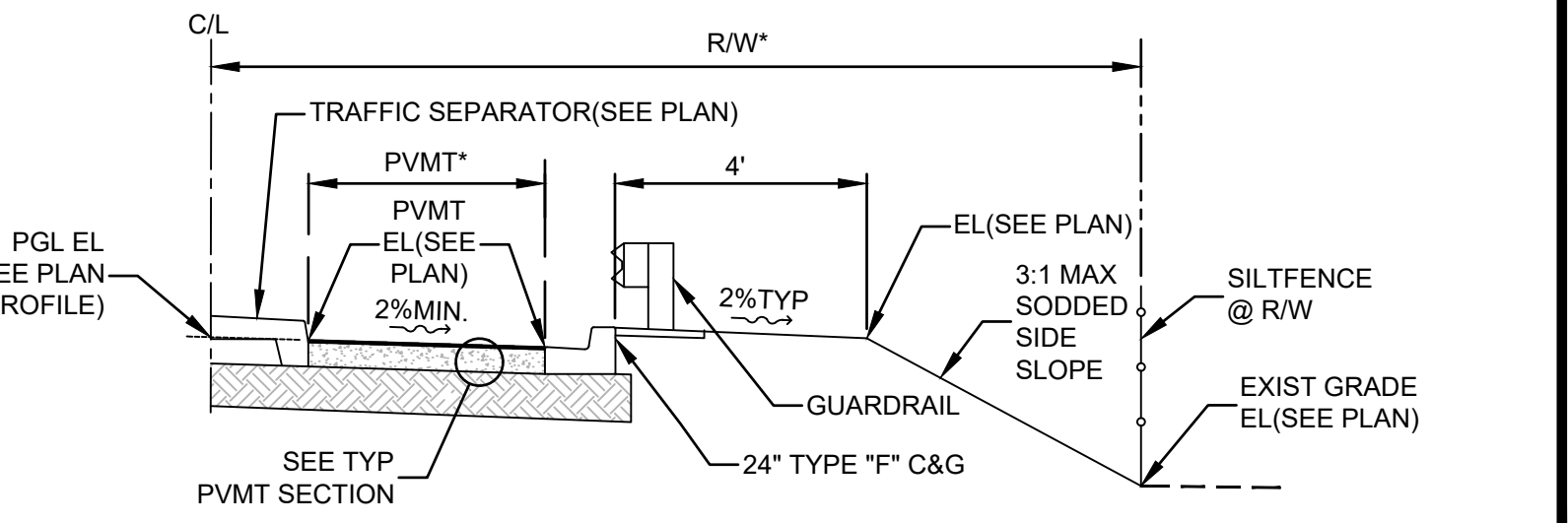
PEARCE BLVD ROAD SECTION (80' R/W)  
@ SWMF #18



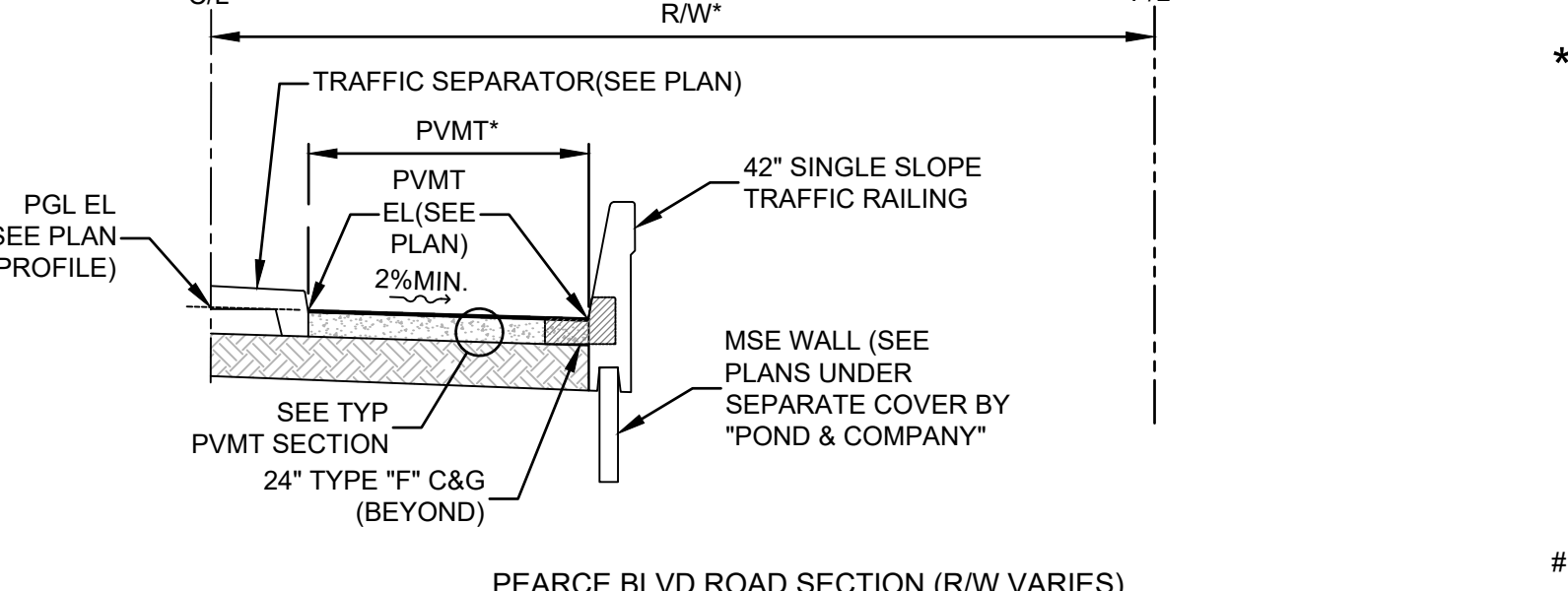
PEARCE BLVD ROAD SECTION (R/W VARIES)  
WESTBOUND LANE ROUNDABOUT TO -STA 90+50  
& -107+75 TO US-17



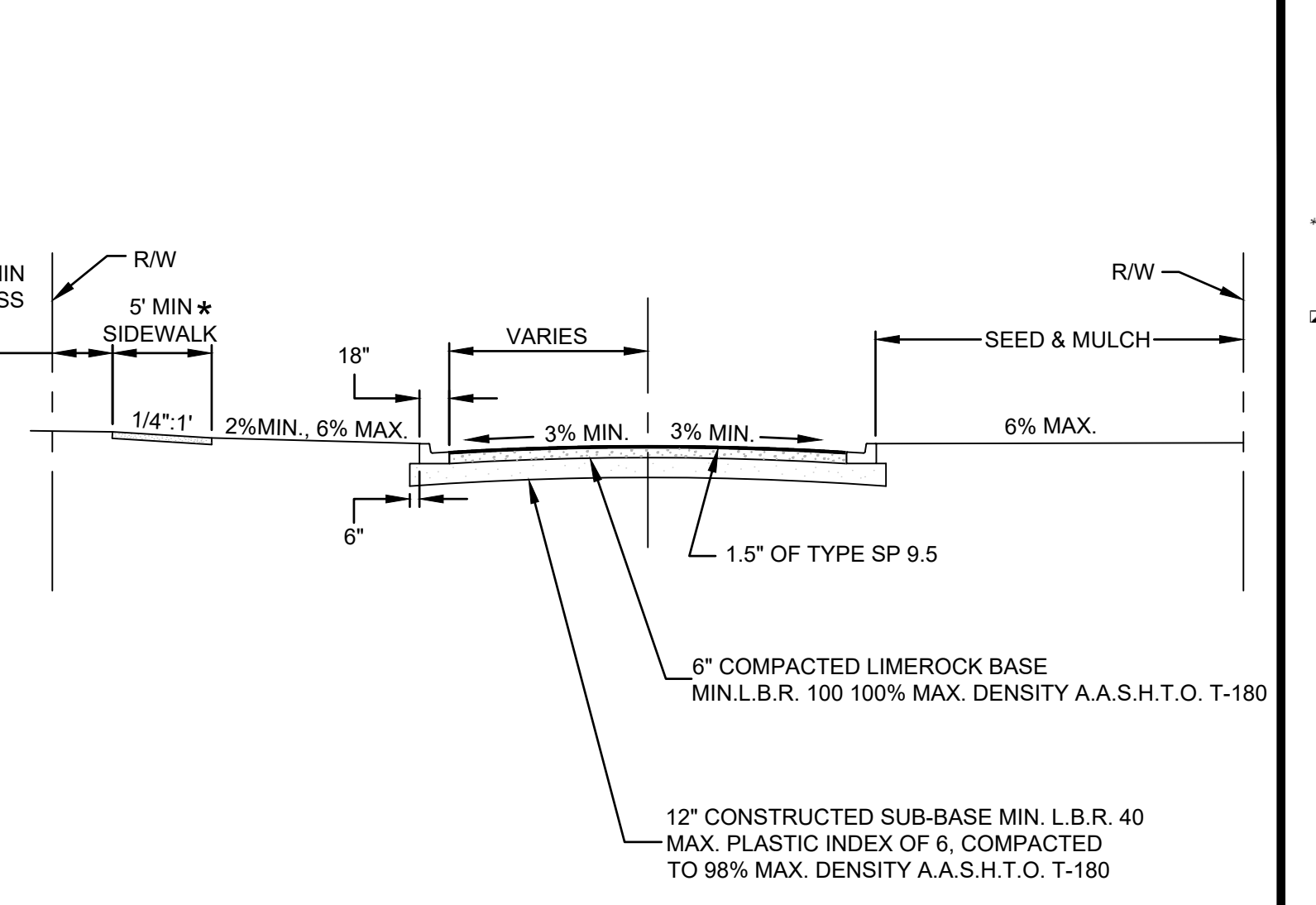
PEARCE BLVD ROAD SECTION (R/W VARIES)  
WESTBOUND LANE -STA 90+50 TO -STA 95+82



PEARCE BLVD ROAD SECTION (R/W VARIES)  
WESTBOUND LANE -STA 95+82 TO -STA 98+74



PEARCE BLVD ROAD SECTION (R/W VARIES)  
WESTBOUND LANE -STA 101+26 TO -STA 107+75

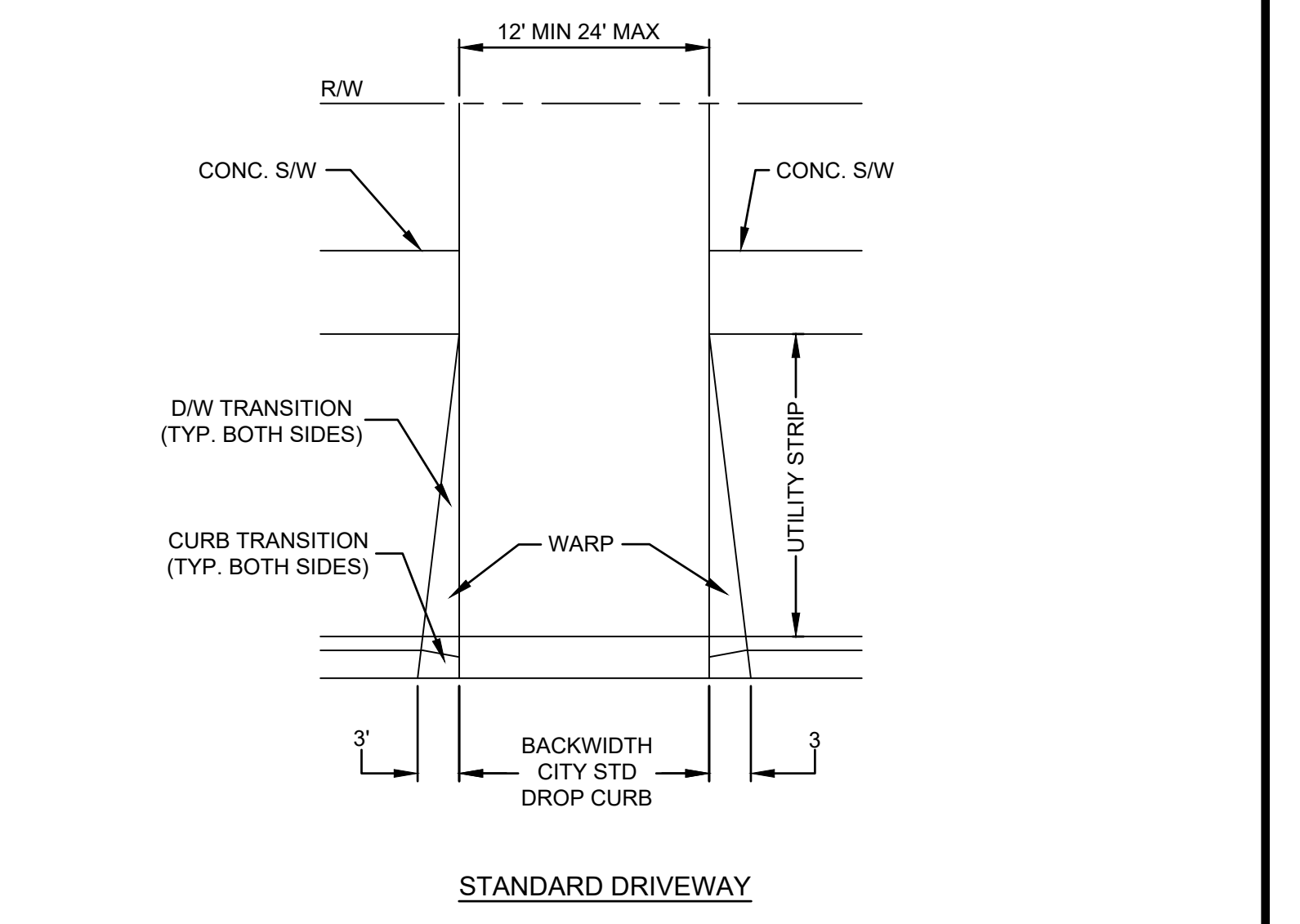


STANDARD ROADWAY SECTION FOR 60' R/W

- NOTE:
- SOIL ANALYSIS MAY INDICATE THE NEED FOR THICKER BASE COURSES THAN THOSE SHOWN HEREIN. THE PAVEMENT THICKNESS SHOWN HEREIN ARE NOT INTENDED TO BE ABSOLUTE, BUT ARE PRELIMINARY CRITERIA & MAY BE MODIFIED TO ACCOMMODATE THE BEARING CAPACITIES OF VARIOUS SUB-GRADES.
  - ALL DISTURBED AREAS SHALL BE SEEDED & MULCHED. ALL AREAS WHERE SOD HAS BEEN DISTURBED OR REMOVED SHALL BE RE-SODDED TO SATISFACTION OF OWNER.
  - ALL ASPHALTIC CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 331 AND/OR SECTION 333, F.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
  - OR IN ACCORDANCE WITH APPROVED CONSTRUCTION PLANS. VARIATIONS IN SIDEWALK LOCATION/ MEANDERING DUE TO CONFLICTS SUCH AS TREES, HYDRANTS, UTILITIES, TRAFFIC SIGN, ETC. IS PERMITTED AS PER THE APPROVED PLANS, OR AS OTHERWISE REQUIRED TO BE ADJUSTED IN THE FIELD.

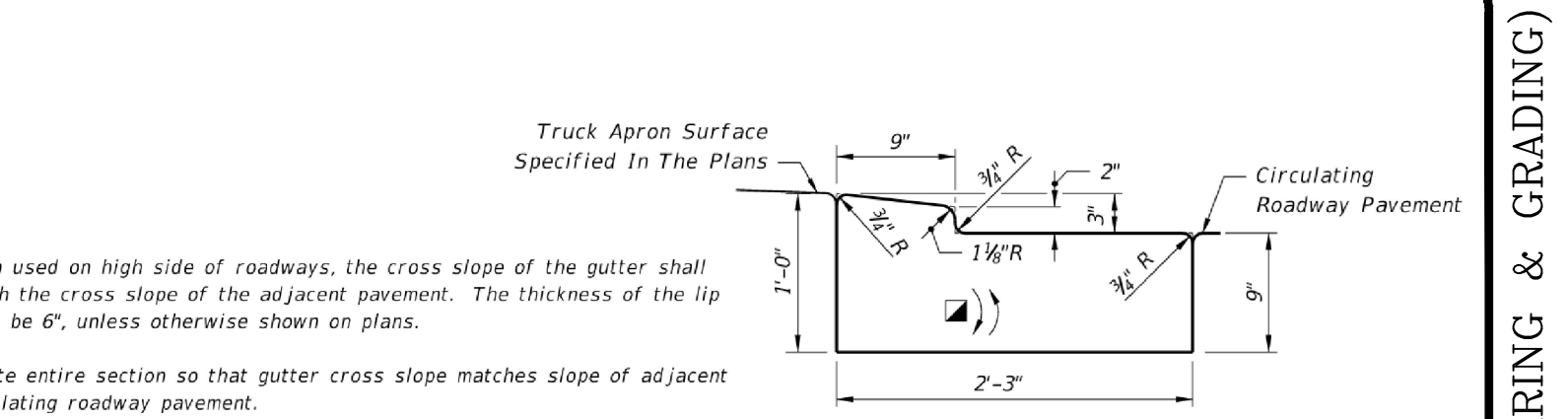


STANDARD DRIVEWAY

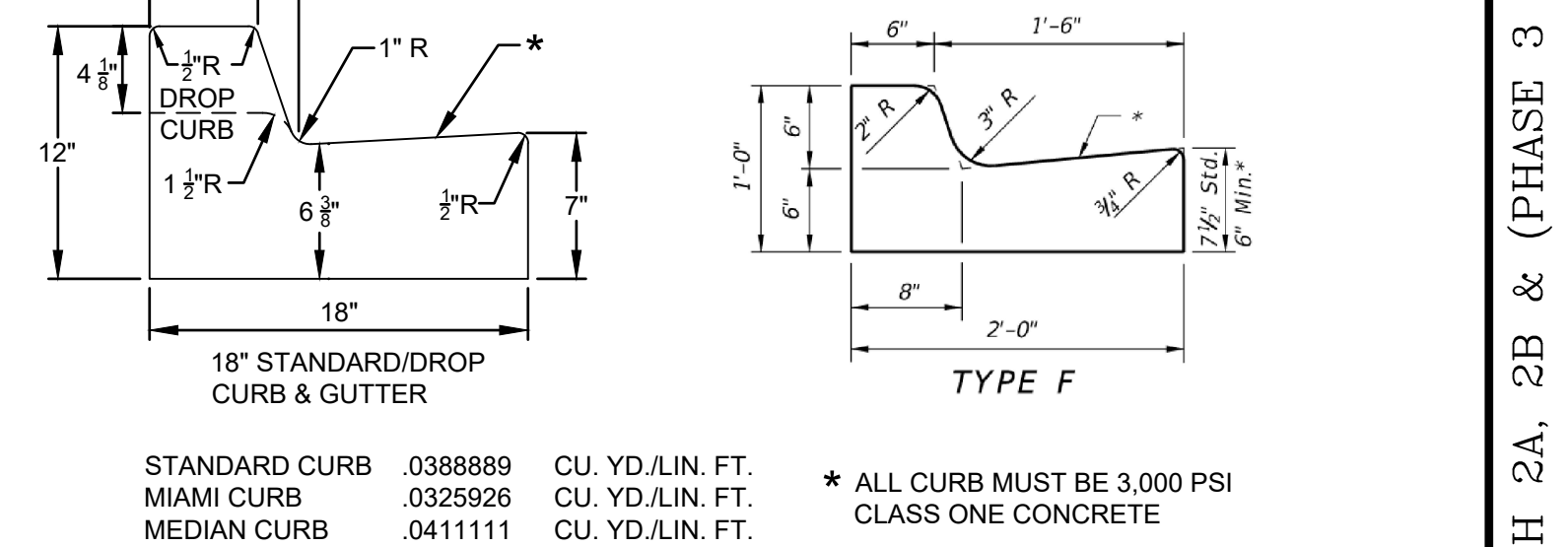


STANDARD CURB TEMPLATES

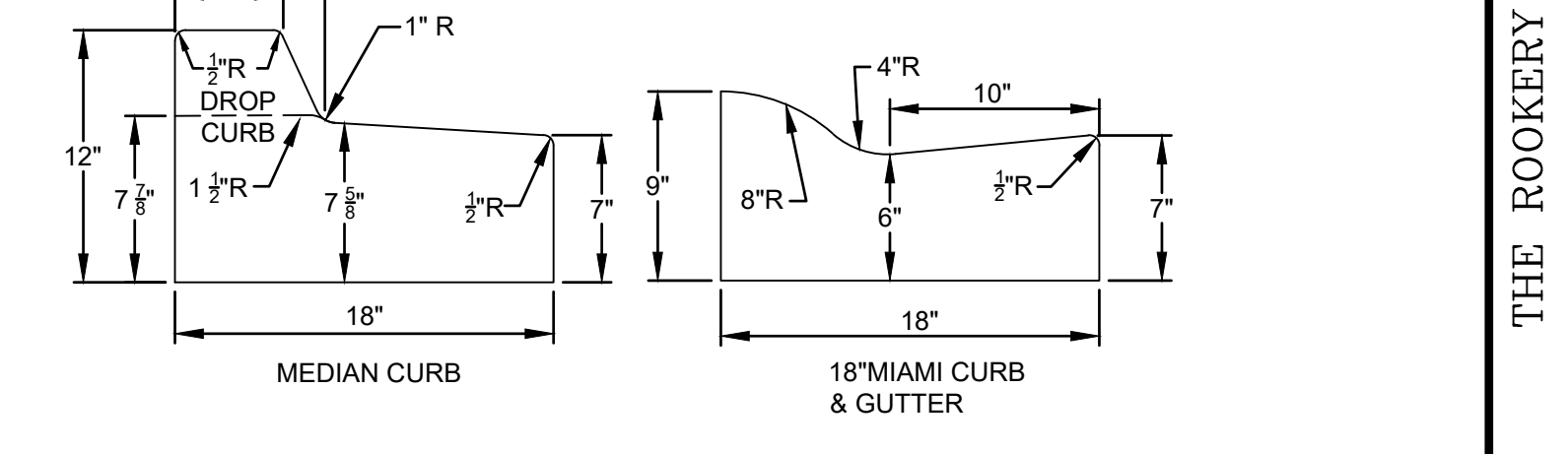
- NOTES:
- HEAVY DUTY PAVEMENT TO BE USED FOR DARTER CHASE ST TO STA 18=00.00 AND ALL OF PEARCE BLVD.
  - SEE GEOMETRY PLANS FOR VARIATIONS IN PAVEMENT, R/W, MEDIAN AND LANDSCAPE TRACT WIDTHS.
  - PGL = PROFILE GRADE LINE.
  - SOIL ANALYSIS MAY INDICATE THE NEED FOR THICKER BASE COURSES THAN THOSE SHOWN HEREIN. THE PAVEMENT THICKNESS SHOWN HEREIN ARE NOT INTENDED TO BE ABSOLUTE, BUT ARE PRELIMINARY CRITERIA & MAY BE MODIFIED TO ACCOMMODATE THE BEARING CAPACITIES OF VARIOUS SUB-GRADES.
  - INSTALL 1' SOD BEHIND ALL CURBS AND ALONG EDGE OF SIDEWALK. ALL OTHER DISTURBED AREAS SHALL BE SEEDED & MULCHED UNLESS OTHERWISE NOTED.
  - ALL ASPHALTIC CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 331 AND/OR SECTION 333, F.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
  - LANDSCAPE TRACT, OPEN SPACE TRACT AND GCS/CCUA EASEMENT ON SOUTHERN SIDE OF ROADWAY ONLY.
  - SIDEWALK ON SOUTHERN SIDE OF ROADWAY ONLY. SEE PLAN FOR VARIATIONS IN SIDEWALK SIZE OR LOCATION. MEANDERING DUE TO CONFLICTS SUCH AS TREES, HYDRANTS, UTILITIES, TRAFFIC SIGN, ETC. IS PERMITTED AS PER THE APPROVED PLANS, OR AS OTHERWISE REQUIRED TO BE ADJUSTED IN THE FIELD.



TRAFFIC BEARING SECTION FOR USE IN  
ROUNDABOUT CENTRAL ISLAND CONSTRUCTION  
TYPE RA



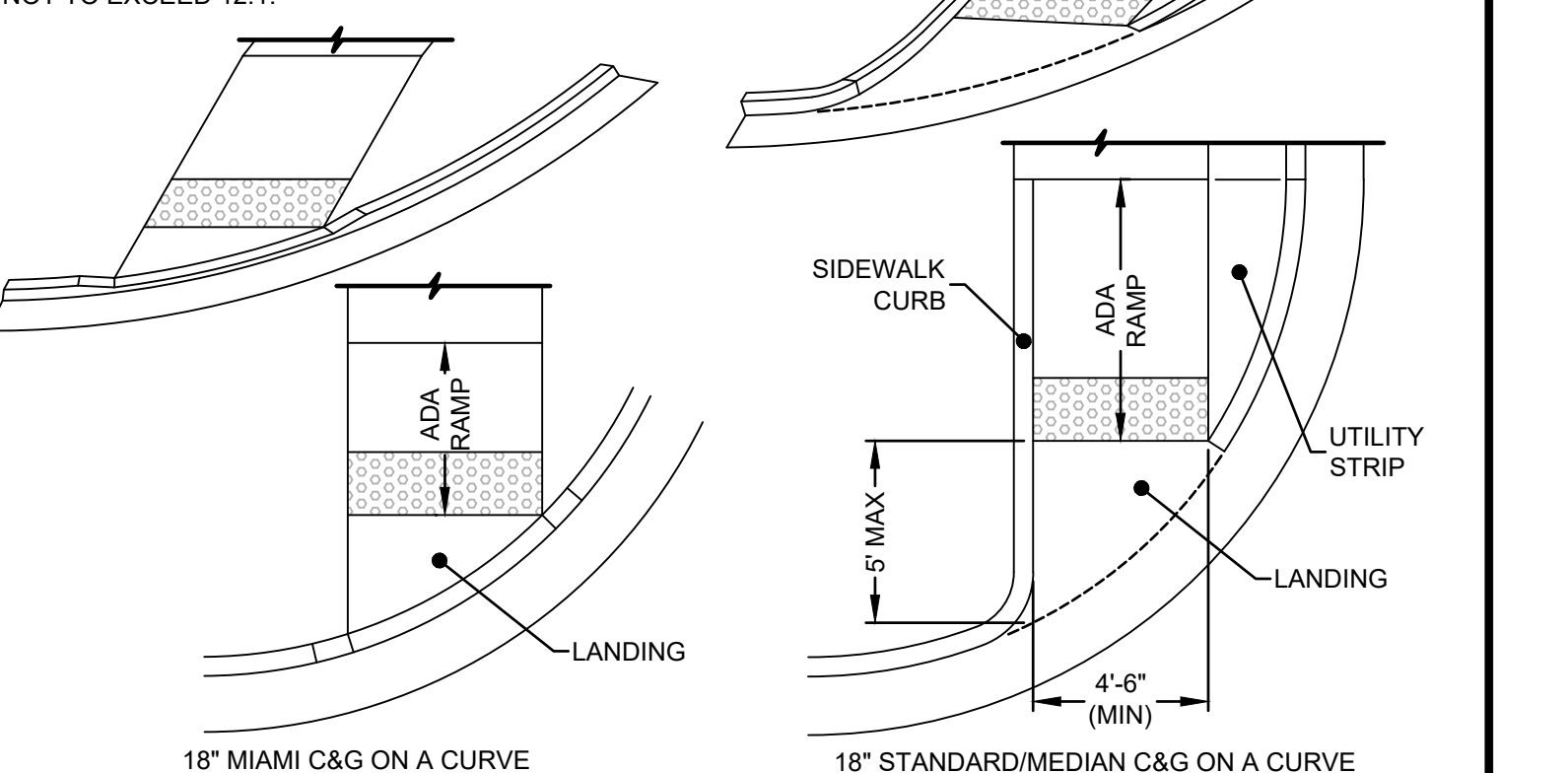
STANDARD CURB & GUTTER



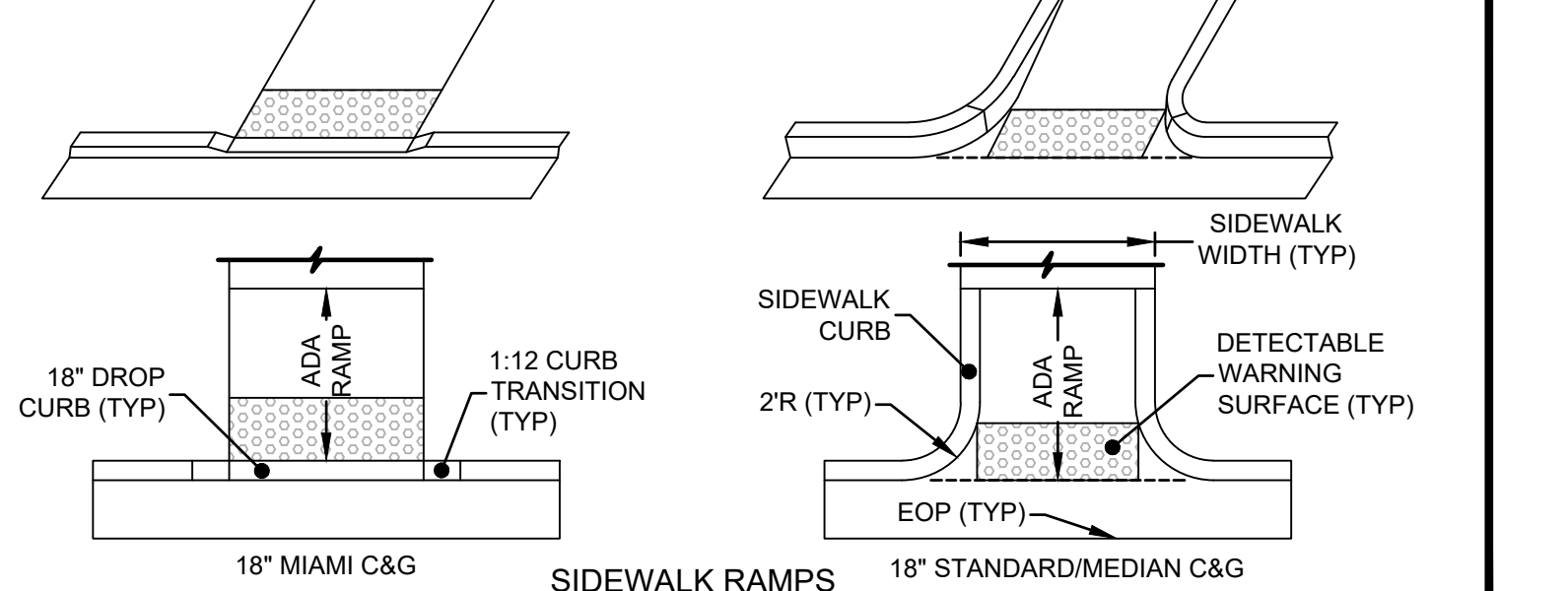
MEDIAN CURB and 18" MIAMI CURB & GUTTER

STANDARD CURB TEMPLATES

- NOTES:
- SEE GEOMETRY PLAN FOR SIDEWALK WIDTH AND LOCATION
  - SEE CURB TEMPLATE DETAILS FOR ADDITIONAL INFORMATION
  - ADA RAMP TO BE 6' LONG (MAX) AT 1:12 MAXIMUM SLOPE
  - DETECTABLE WARNING SURFACE TO BE FULL WIDTH OF RAMP OR LANDING AND A DEPTH OF 2"
  - DETECTABLE WARNING SURFACE SHALL NOT BE "STAMPED" OR "CAST" IN THE CONCRETE
  - FOR ADDITIONAL ADA RAMP AND DETECTABLE WARNING SURFACE INFORMATION SEE THE LATEST FDOT STANDARDS
  - IF FINAL LIFT OF ASPHALT IS NOT INSTALLED AN ASPHALT RAMP IS REQUIRED FOR THE FULL WIDTH OF THE WALK, FLUSH WITH SIDEWALK, WITH SLOPES NOT TO EXCEED 12:1.



SIDEWALK RAMP

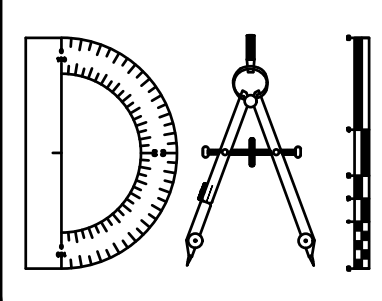


SIDEWALK RAMP

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2 PDD.DWG9/21/2023 7:12 AMMike Reilly

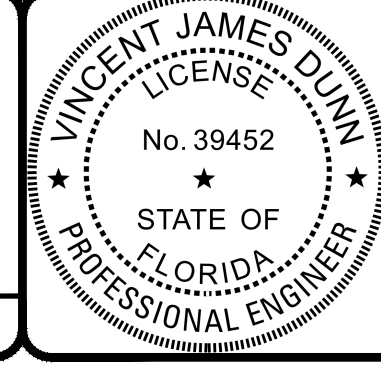
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI	BY:
DRAWN BY: MR/NS/SM/SS	
CHECKED BY: VJD	
SCALE: N/A	
DATE: 9/21/2023	
PROJ. NO.: 2008-499-2	



**Dunn & Associates, Inc.**  
CIVIL ENGINEERS / LAND PLANNERS  
8647 Baypine Road, Suite 200  
Jacksonville, Florida 32256  
Phone: (904)363-8916 Fax: (904)363-8917  
www.dunneng.com

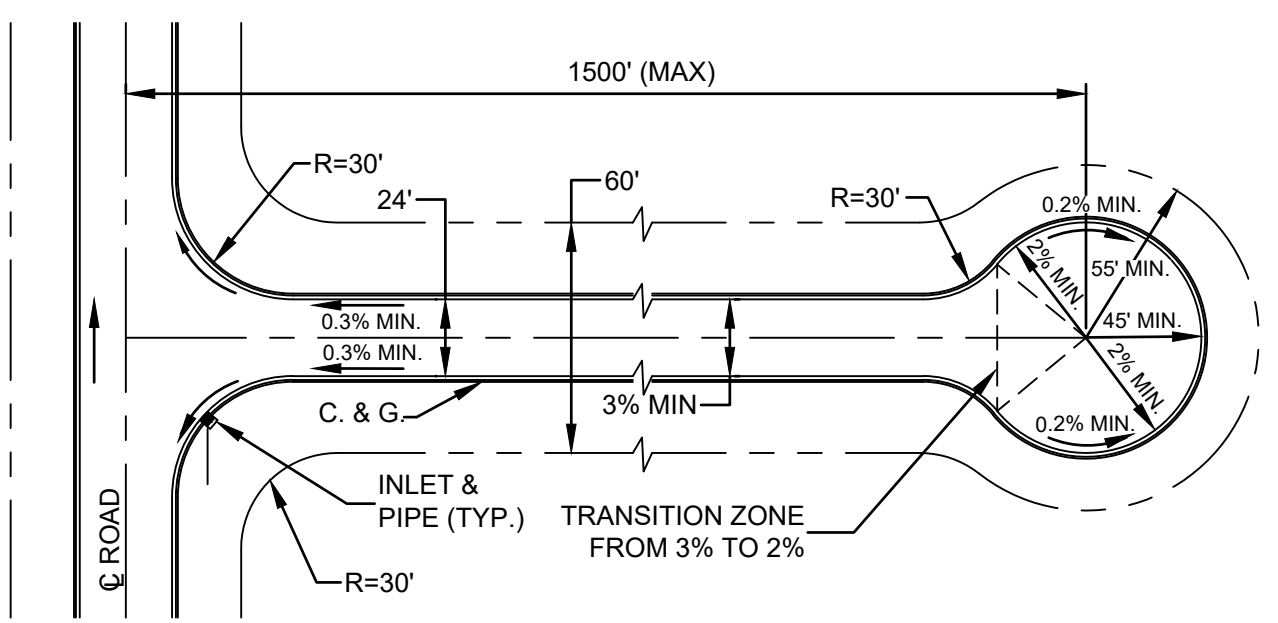
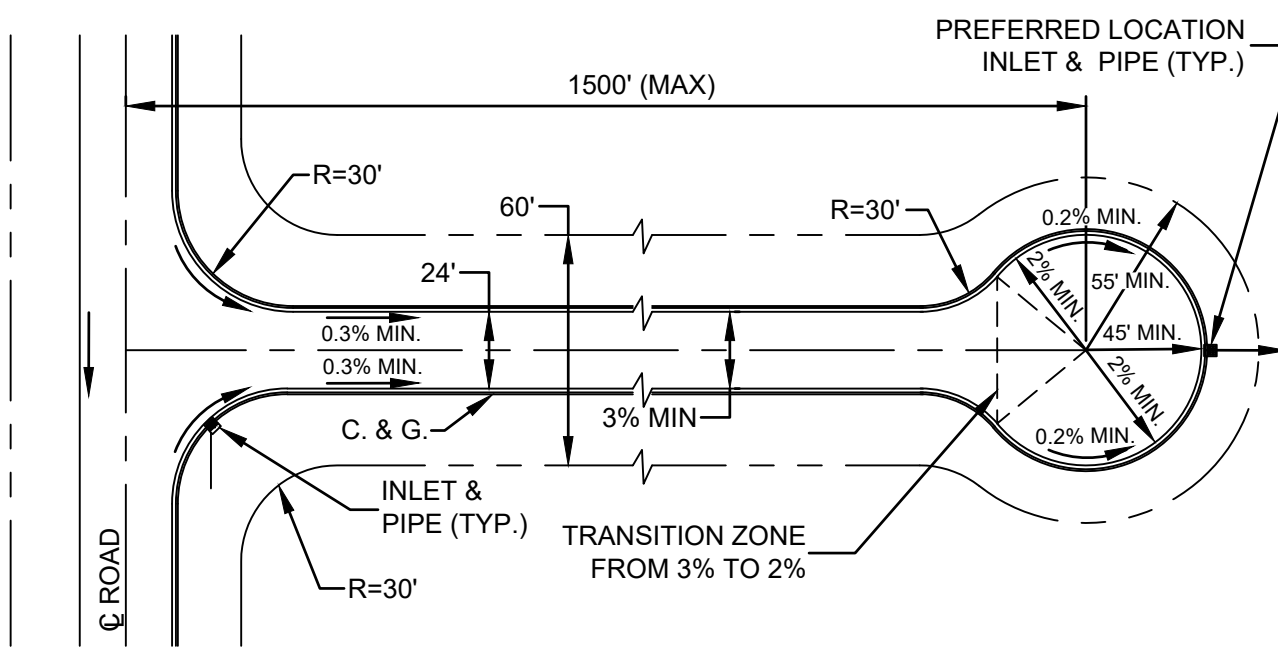
**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
CLAY COUNTY, FLORIDA  
PAVING AND DRAINAGE DETAILS



This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 09/21/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

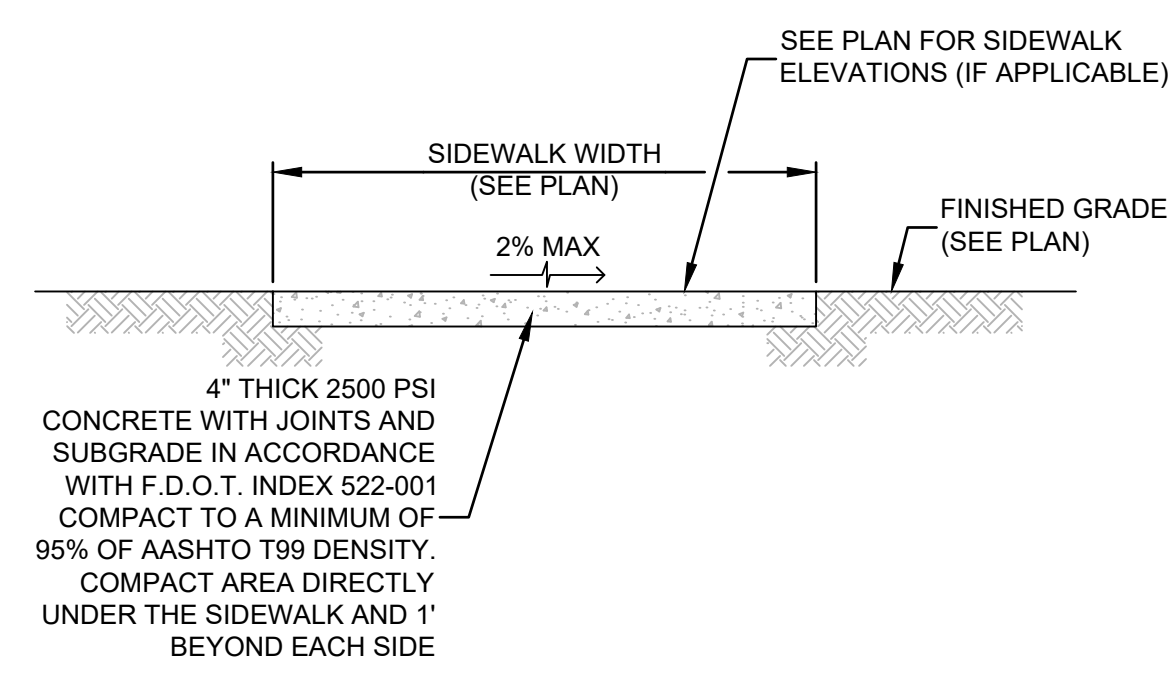
VINCENT J. DUNN ENGINEER NO. 39452  
DAVID M. TAYLOR ENGINEER NO. 44184  
GLEN R. WIEBER ENGINEER NO. 81412

Sheet No. 122 of 130  
**PDD-1**  
DWG. NO.

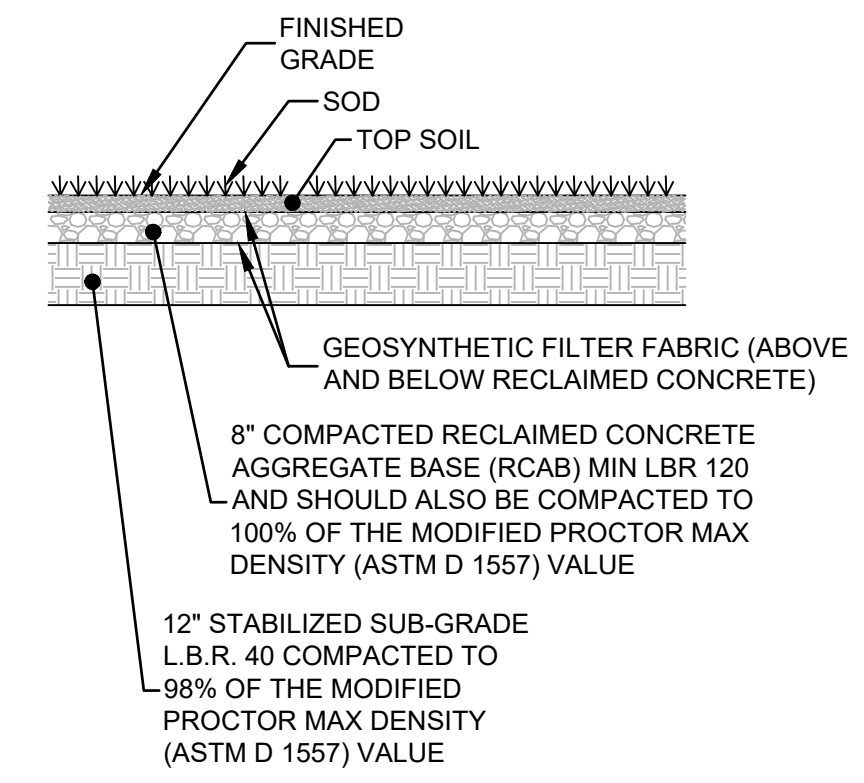


- NOTES:
1. CURB & GUTTER ALONG ROAD TO MAINTAIN MIN. SLOPE OF 0.3% IN DIRECTION OF POSITIVE DRAINAGE.
  2. CURB & GUTTER AROUND THE CUL-DE-SAC TO MAINTAIN MIN. SLOPE OF 0.2% IN DIRECTION OF POSITIVE DRAINAGE.
  3. PAVING SHALL BE CROWNED MIN. OF 3% TO PROVIDE ADEQUATE RUN-OFF OFF PAVEMENT.
  4. PAVING SHALL BE CROWNED MIN. OF 2% TO PROVIDE ADEQUATE RUN-OFF OFF CUL-DE-SAC PAVEMENT
  5. VALLEY GUTTERS ARE NOT ALLOWED.
  6. INLETS & PIPES TO BE LOCATED AS NECESSARY.

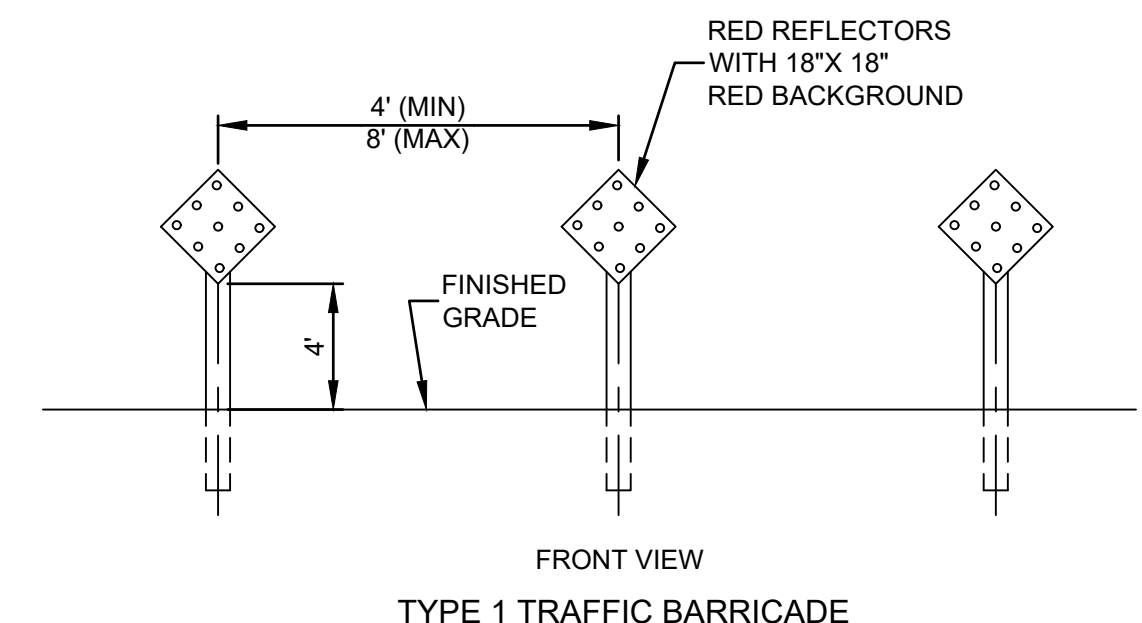
STANDARD CUL-DE-SAC W/CURB & GUTTER



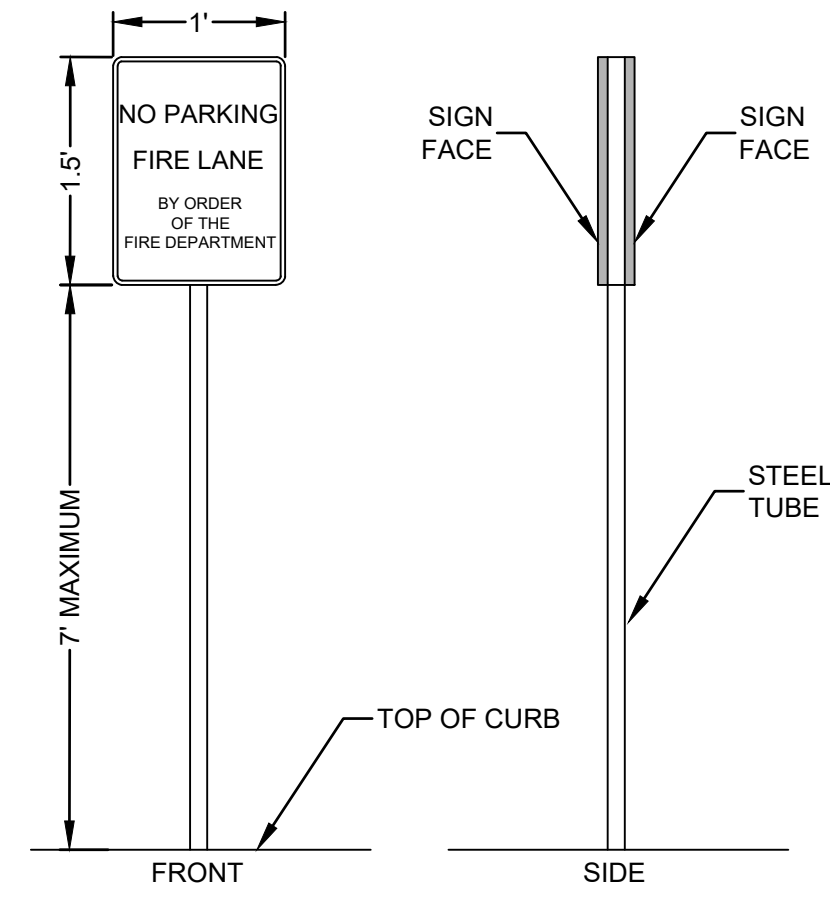
CONCRETE SIDEWALK / MULTI-PURPOSE PATH



STABILIZED FIRE DEPARTMENT ACCESS SECTION

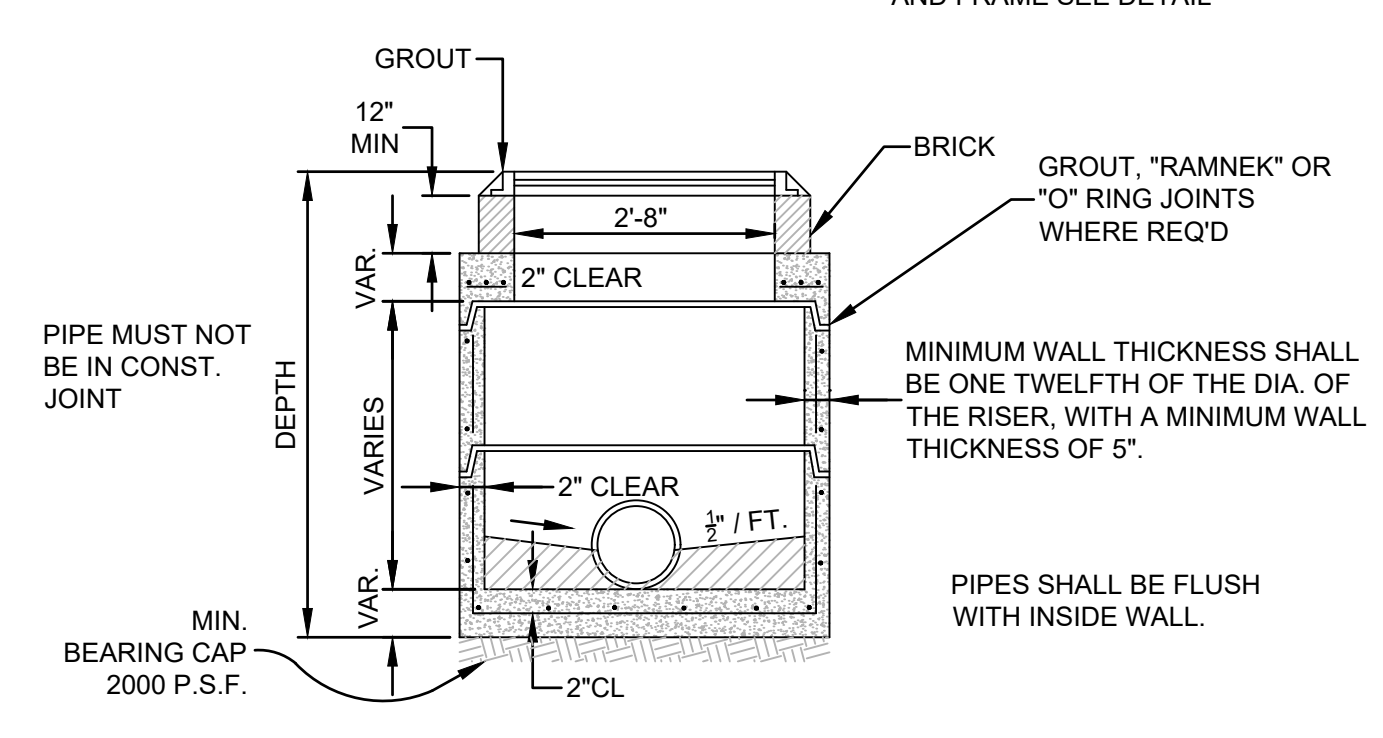
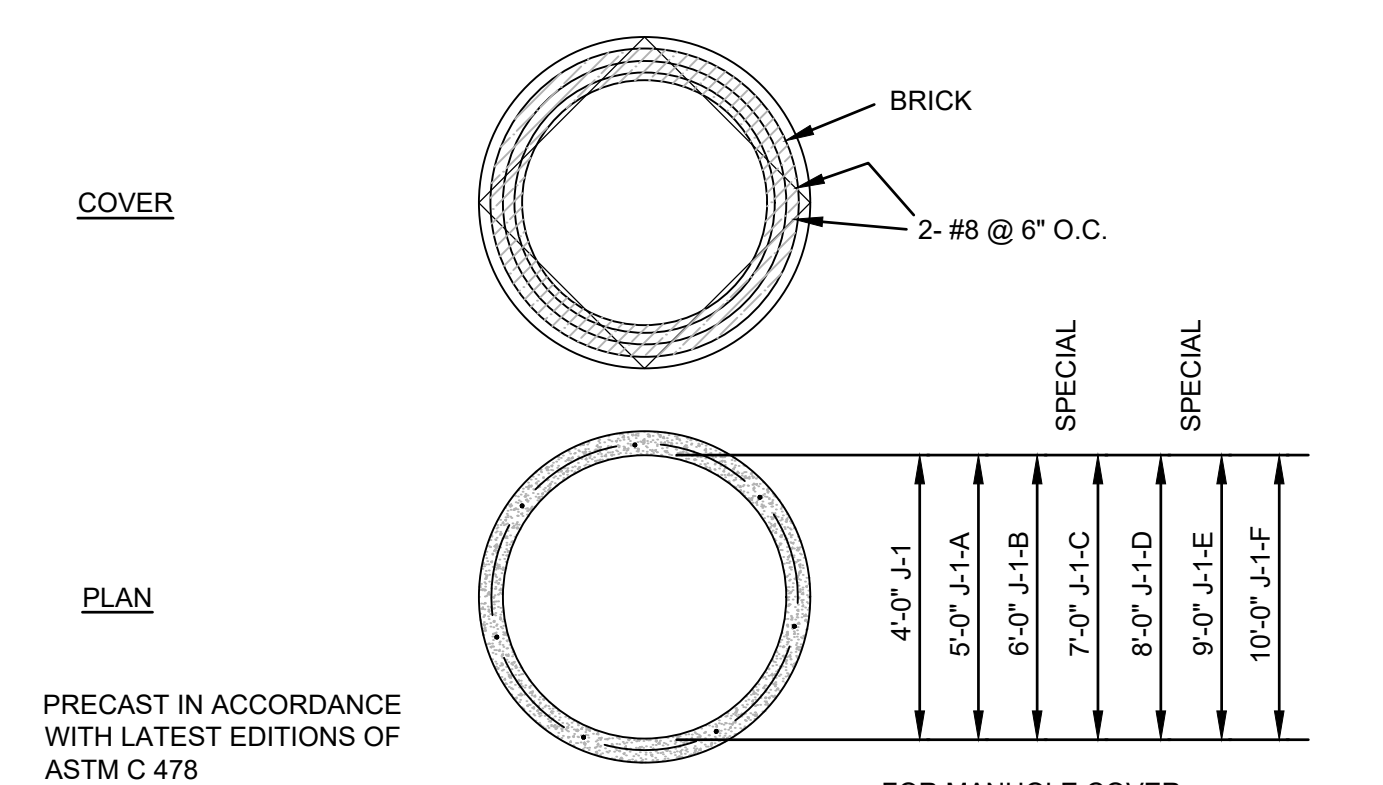


TYPE 1 TRAFFIC BARRICADE

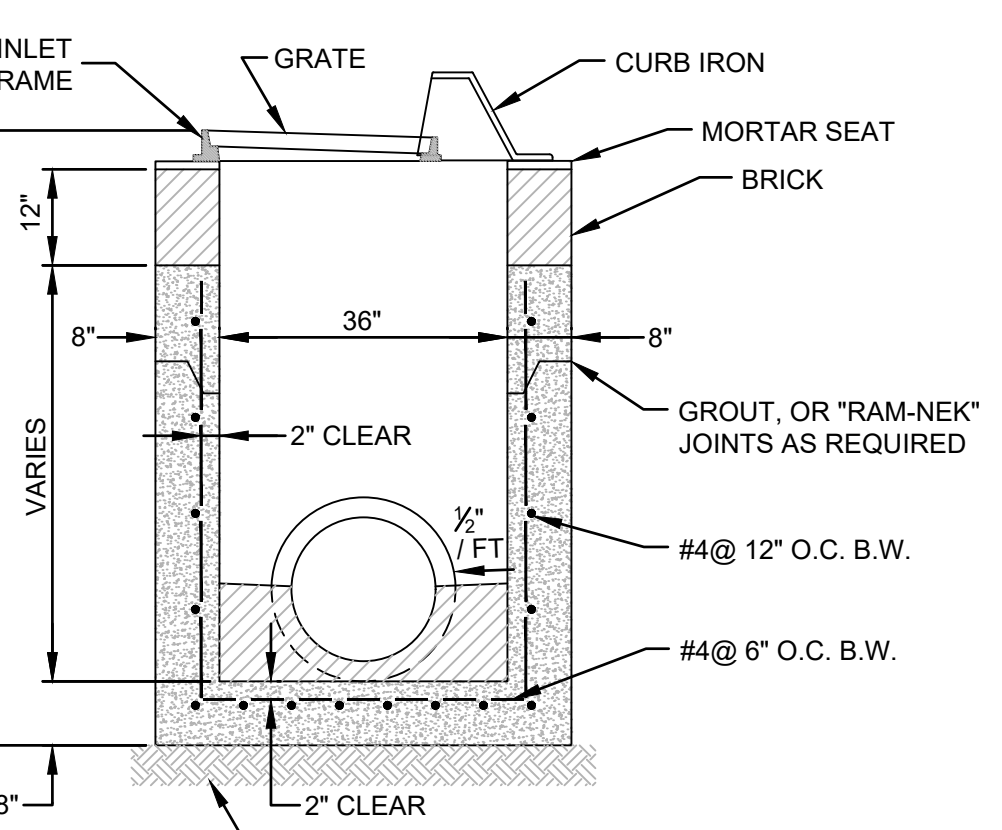
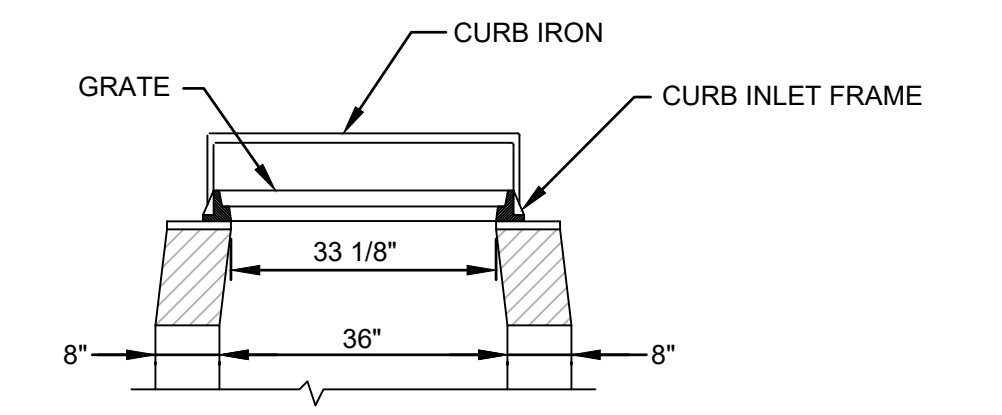


- NOTES:
1. FOR REFERENCE ONLY. REFER TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
  2. SIGN SHALL HAVE 2\"/>

FIRE LANE SIGN DETAIL



STORM SEWER MANHOLE

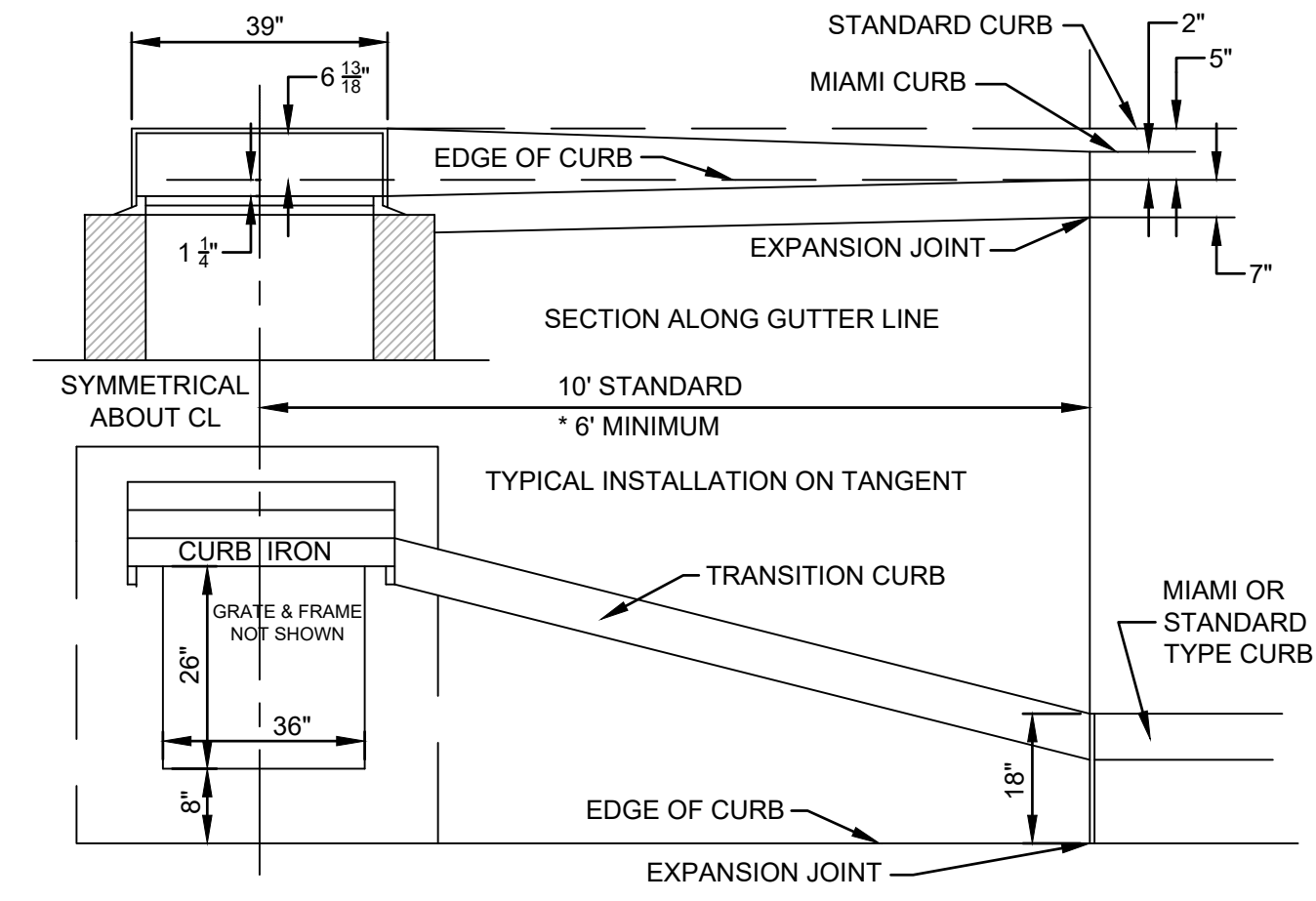


PIPES SHALL BE FLUSH WITH INSIDE WALL

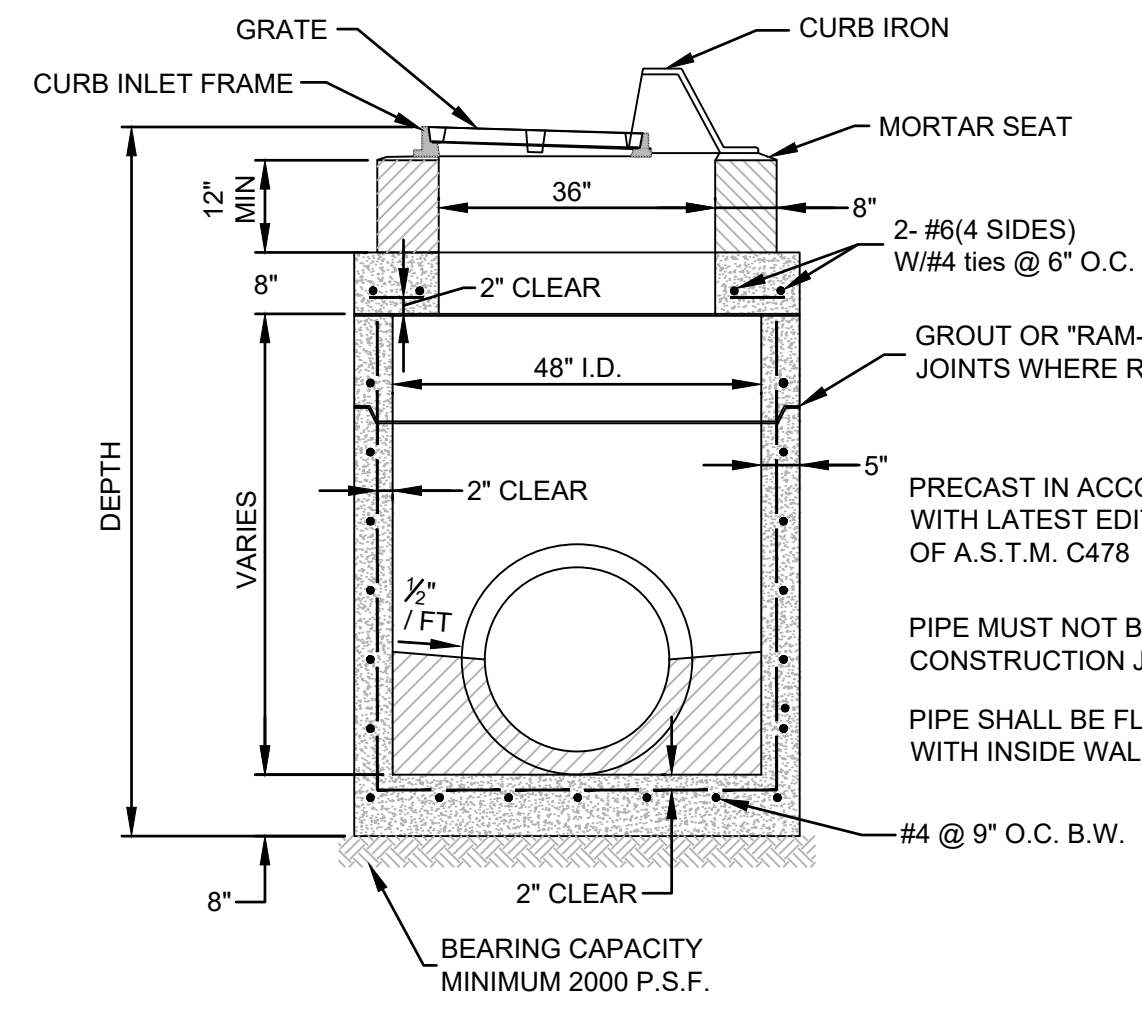
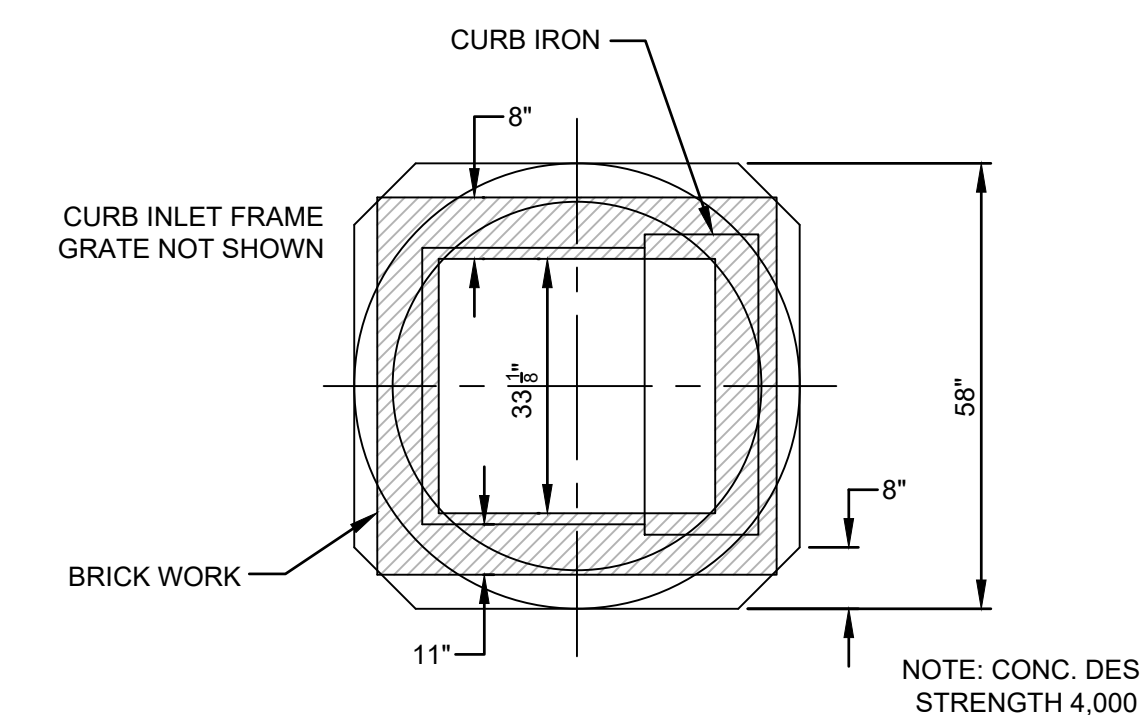
NOTE: CONC. DESIGN STRENGTH 4,000 PSI

PIPE MUST NOT BE IN CONST. JOINT

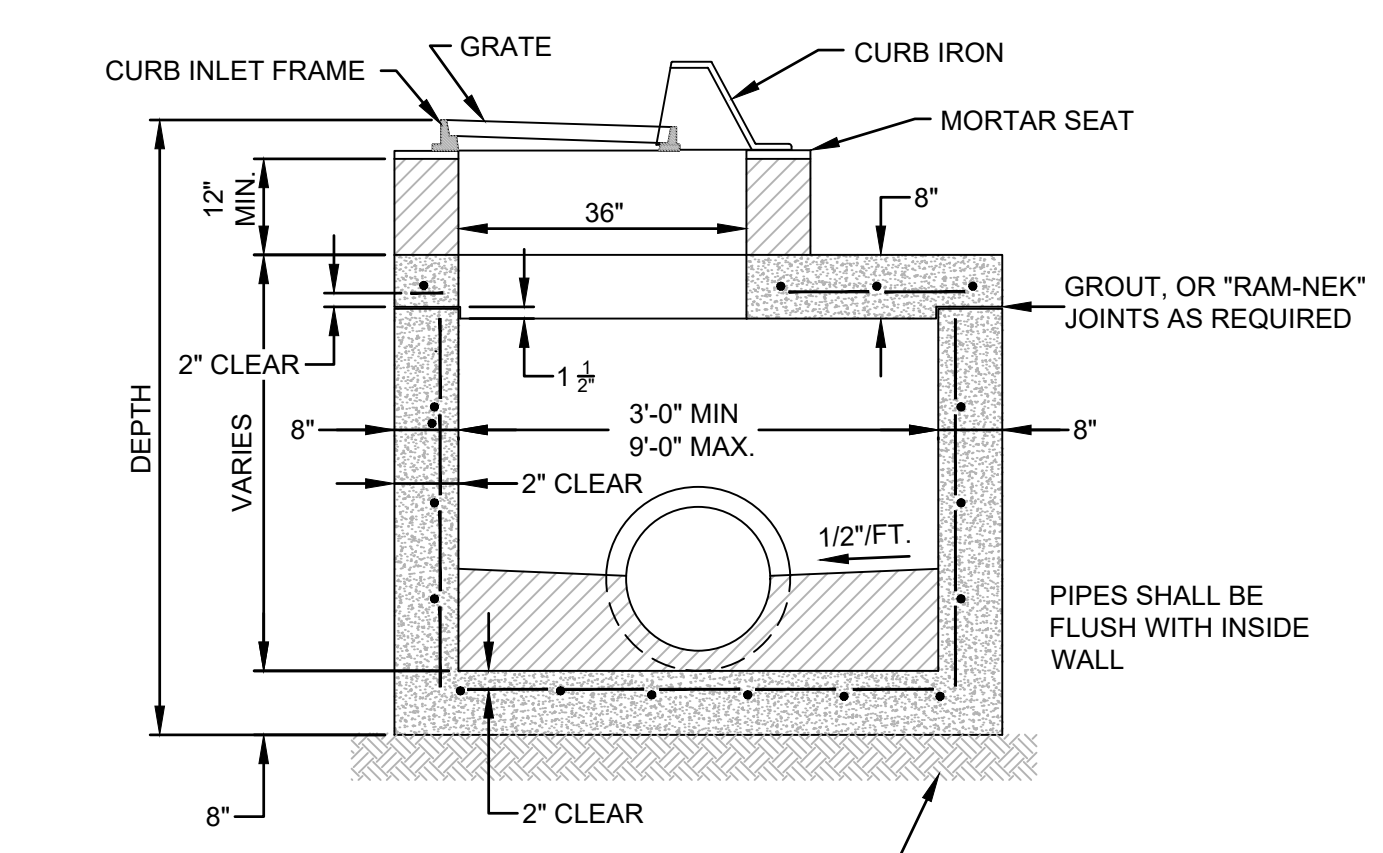
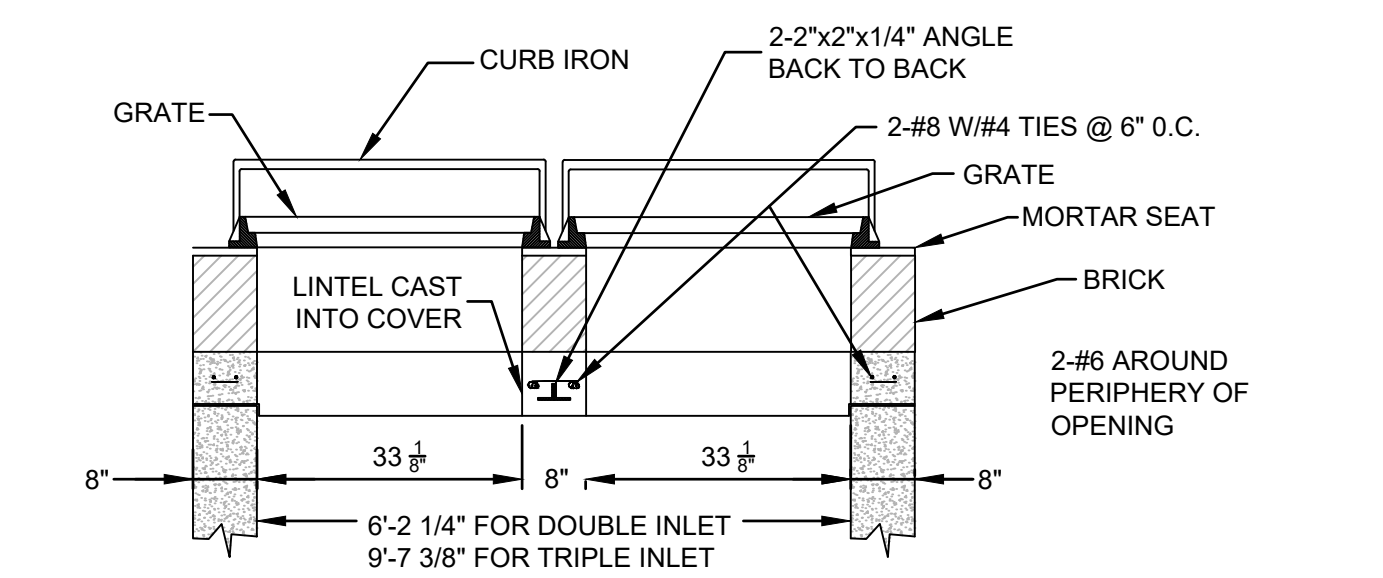
STORM SEWER CURB INLET



STANDARD CURB INLET INSTALLATION



STORM SEWER 48\"/>



PIPES SHALL BE FLUSH WITH INSIDE WALL

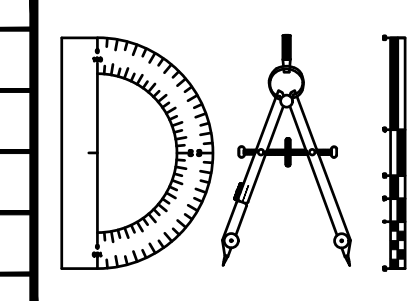
UNDISTURBED SOIL MIN. BEARING CAPACITY 2000 PSF

PIPE MUST NOT BE IN CONST. JOINT

STORM SEWER DOUBLE AND TRIPLE CURB INLET

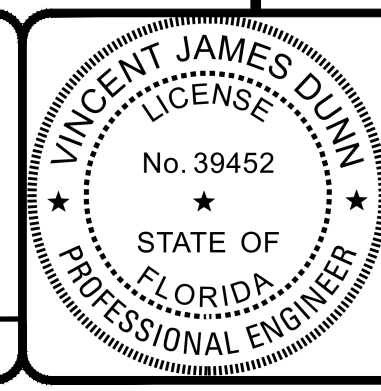
REVISIONS		BY:
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI
DRAWN BY: MR/NS/SM/SS
CHECKED BY: VJD
SCALE: N/A
DATE: 9/21/2023
PROJ. NO.: 2008-499-2



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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 PAVING AND DRAINAGE DETAILS



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VINCENT J. DUNN  
 ENGINEER NO. 39452

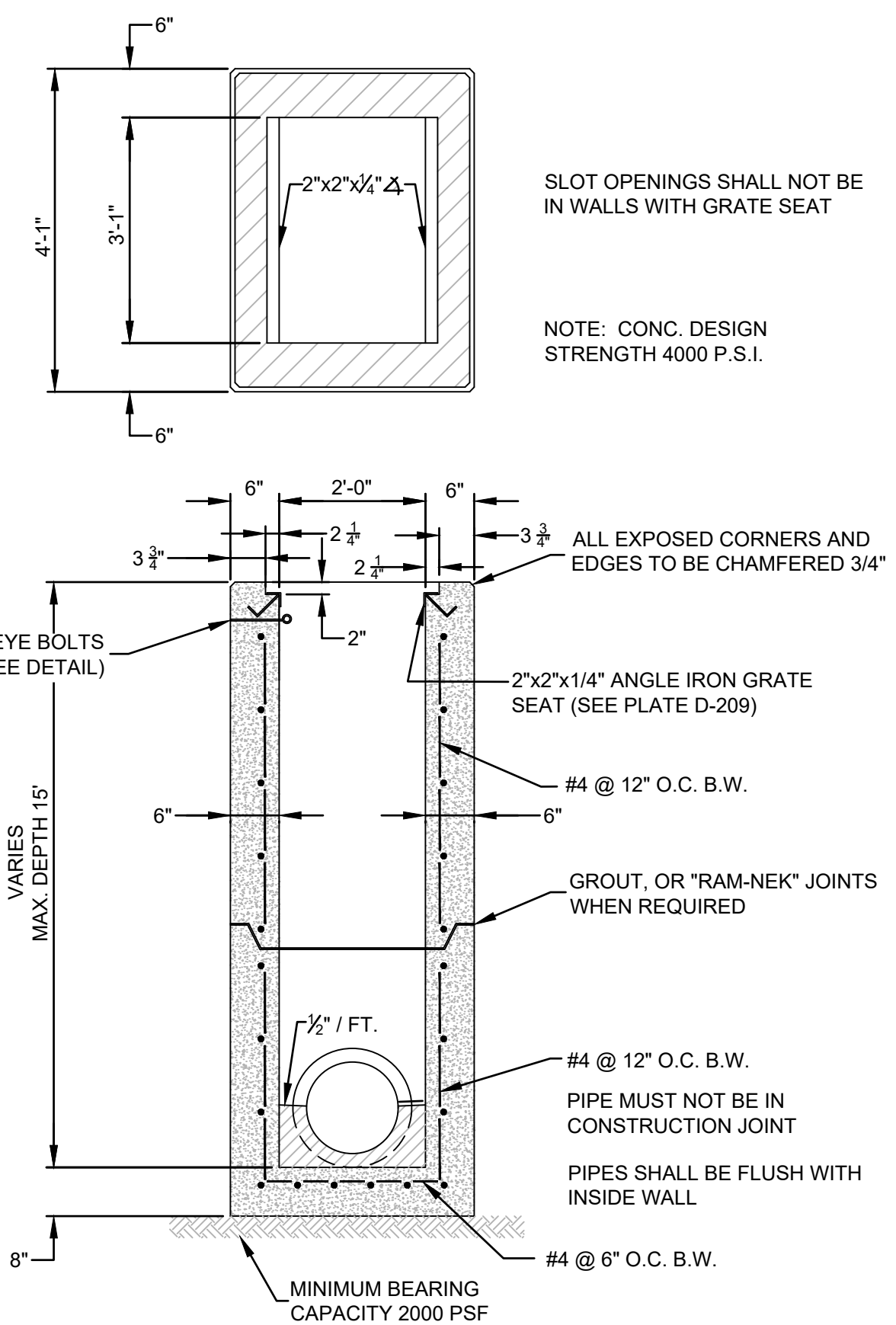
DAVID M. TAYLOR  
 ENGINEER NO. 44184

GLEN R. WIEBER  
 ENGINEER NO. 81412

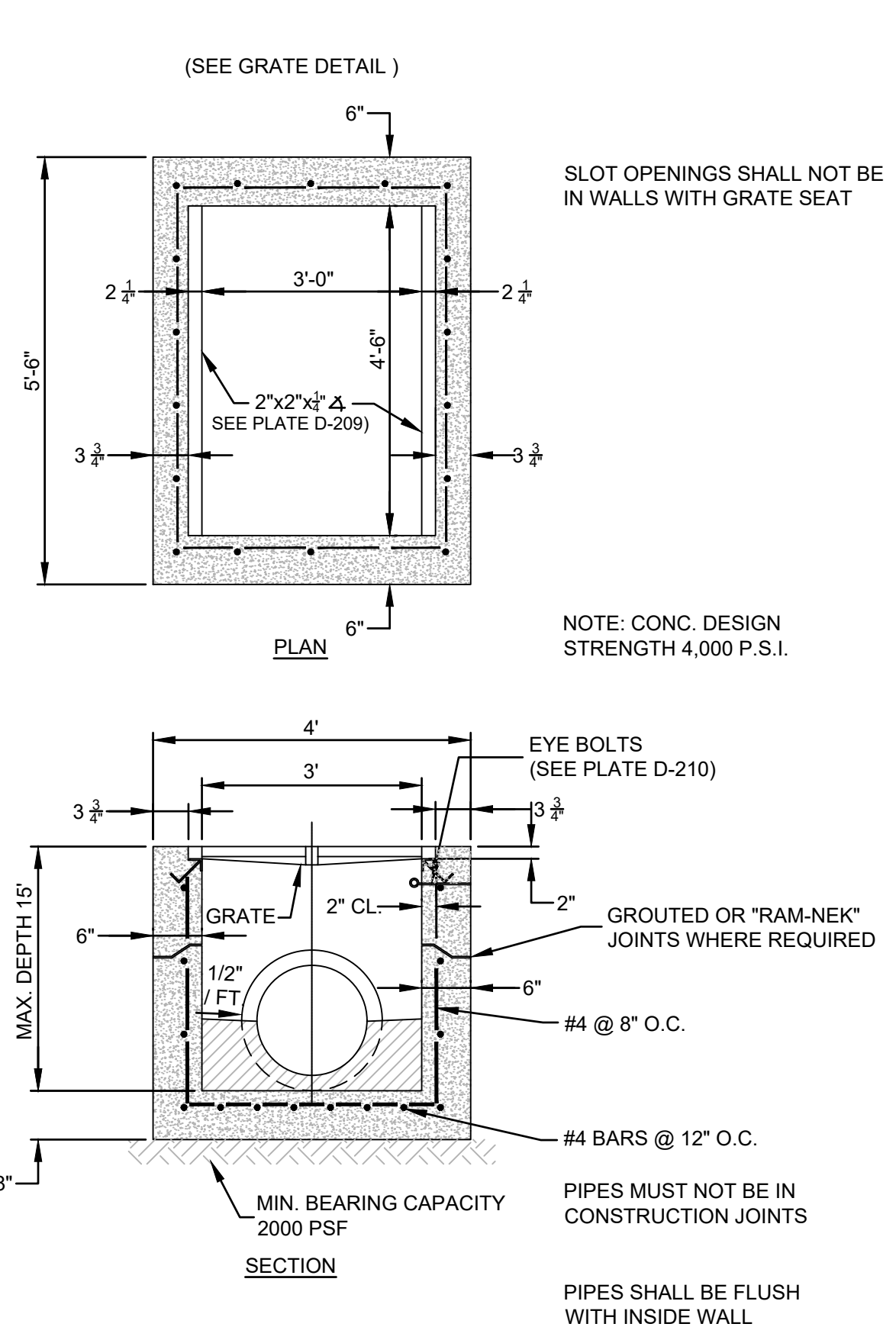
Sheet No. 123 of 130

**PDD-2**

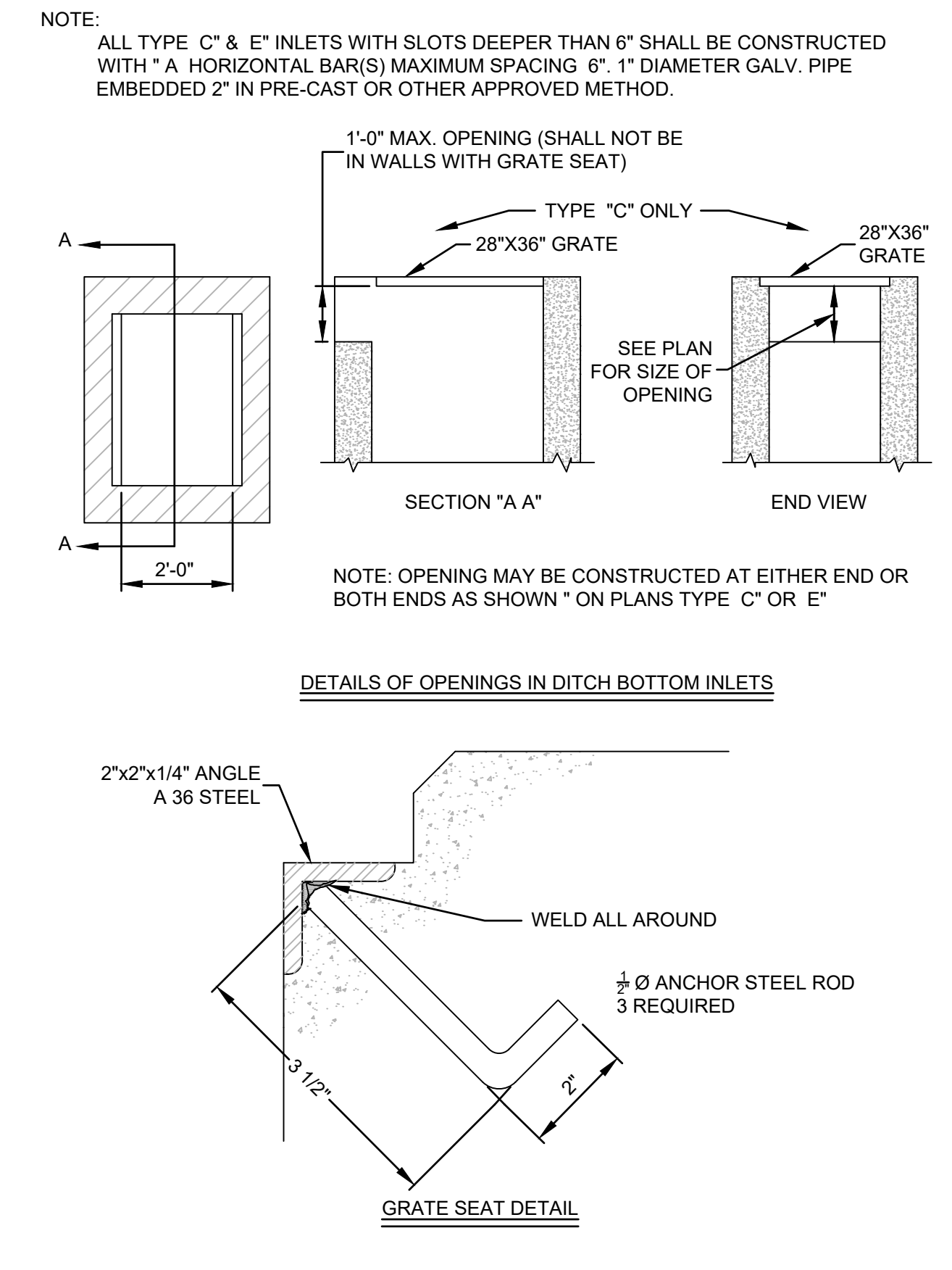
DWG. NO.



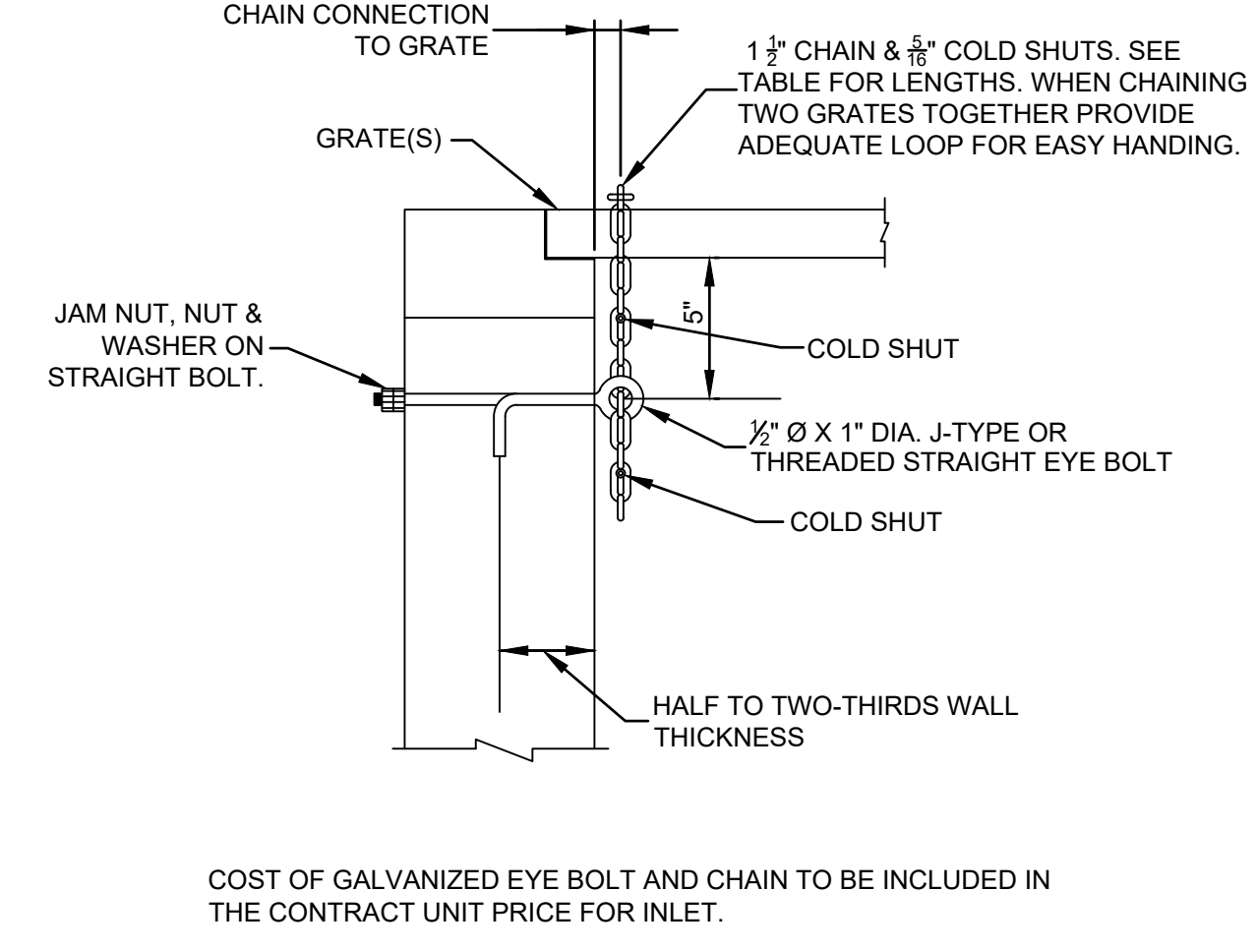
STORM SEWER TYPE "C" INLET



STORM SEWER TYPE "E" INLET



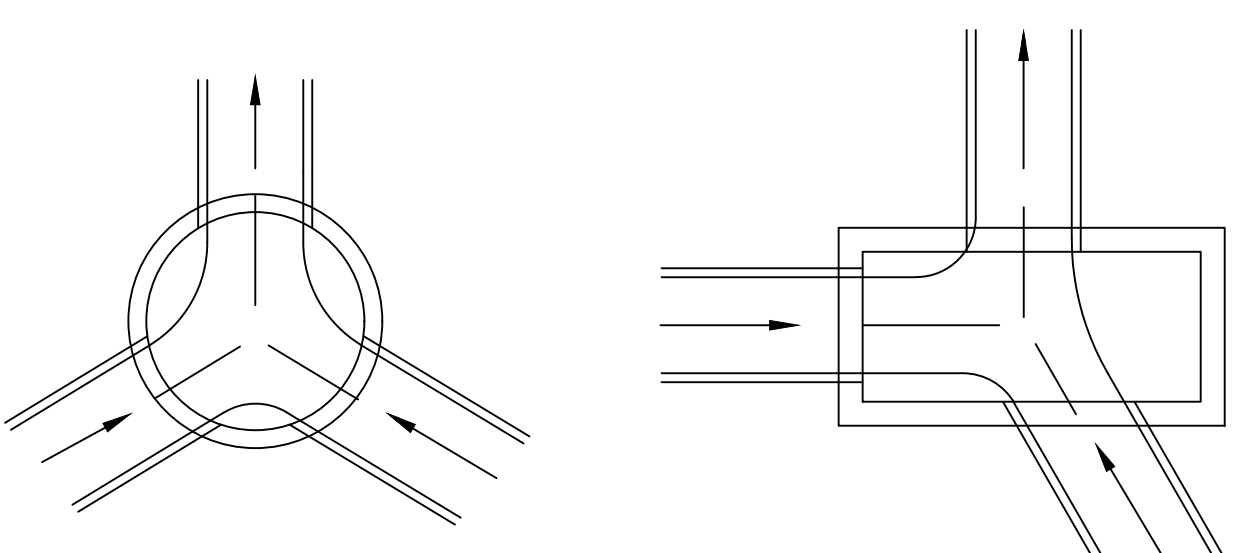
DETAIL FOR TYPE "C & E" INLET



EYE BOLT AND CHAIN REQUIREMENTS				
Plate Number	Inlet Type	Eye Bolt	Length Of Chain	Handling & Remarks
207	C	1	2'-6"	Slide & Spin
208	E	2	2@ 2'-6"	Slide & Spin

EYE BOLT AND CHAIN FOR LOCKING GRATES TO INLETS

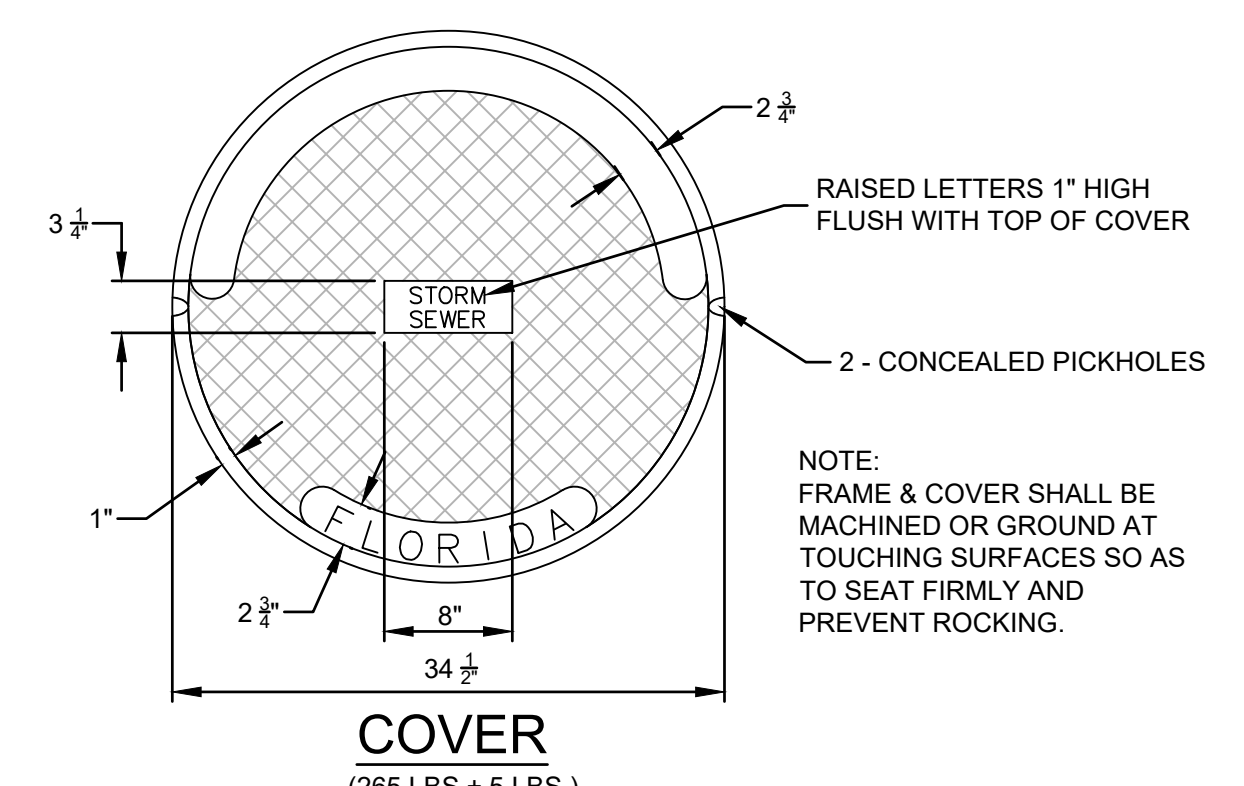
GENERAL NOTE:  
MORTAR USED TO SEAL THE PIPE INTO THE WALLS OF PRECAST UNITS WILL BE OF SUCH A MIX THAT SHRINKAGE WILL NOT CAUSE LEAKAGE INTO OR OUT OF THE UNITS. MAXIMUM OPENING FOR PIPE SHALL BE THE O.D. OF THE PIPE REQUIRED PLUS 6".



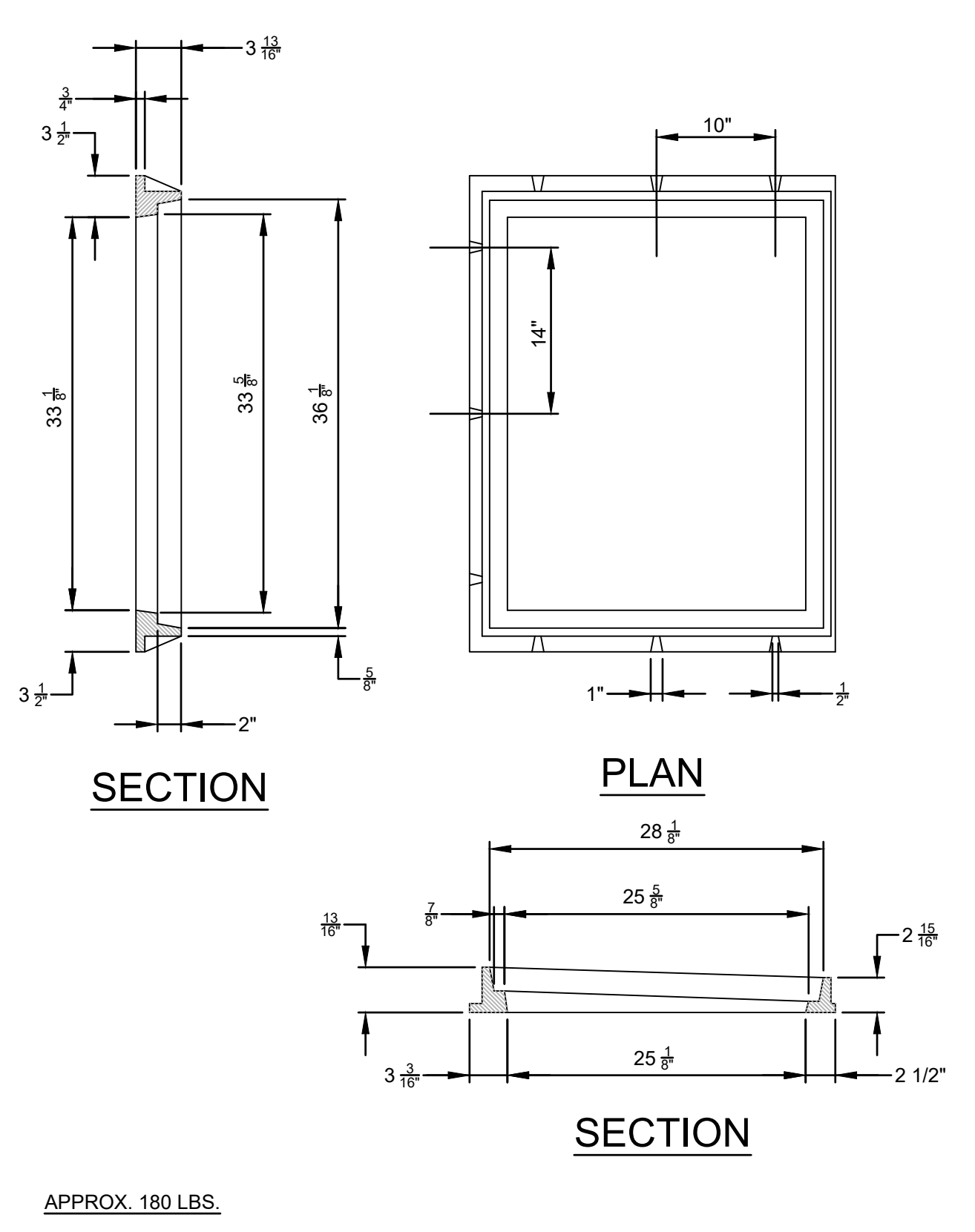
DETAIL OF CHANNELIZATION

SMOOTH FLOW CHANNELS COMPOSED OF CONCRETE OR BRICK AND MORTAR SHALL BE CONSTRUCTED ON THE BOTTOMS OF ALL STRUCTURES TO A DEPTH EQUAL TO HALF THE DIAMETER OF THE LARGEST PIPE.

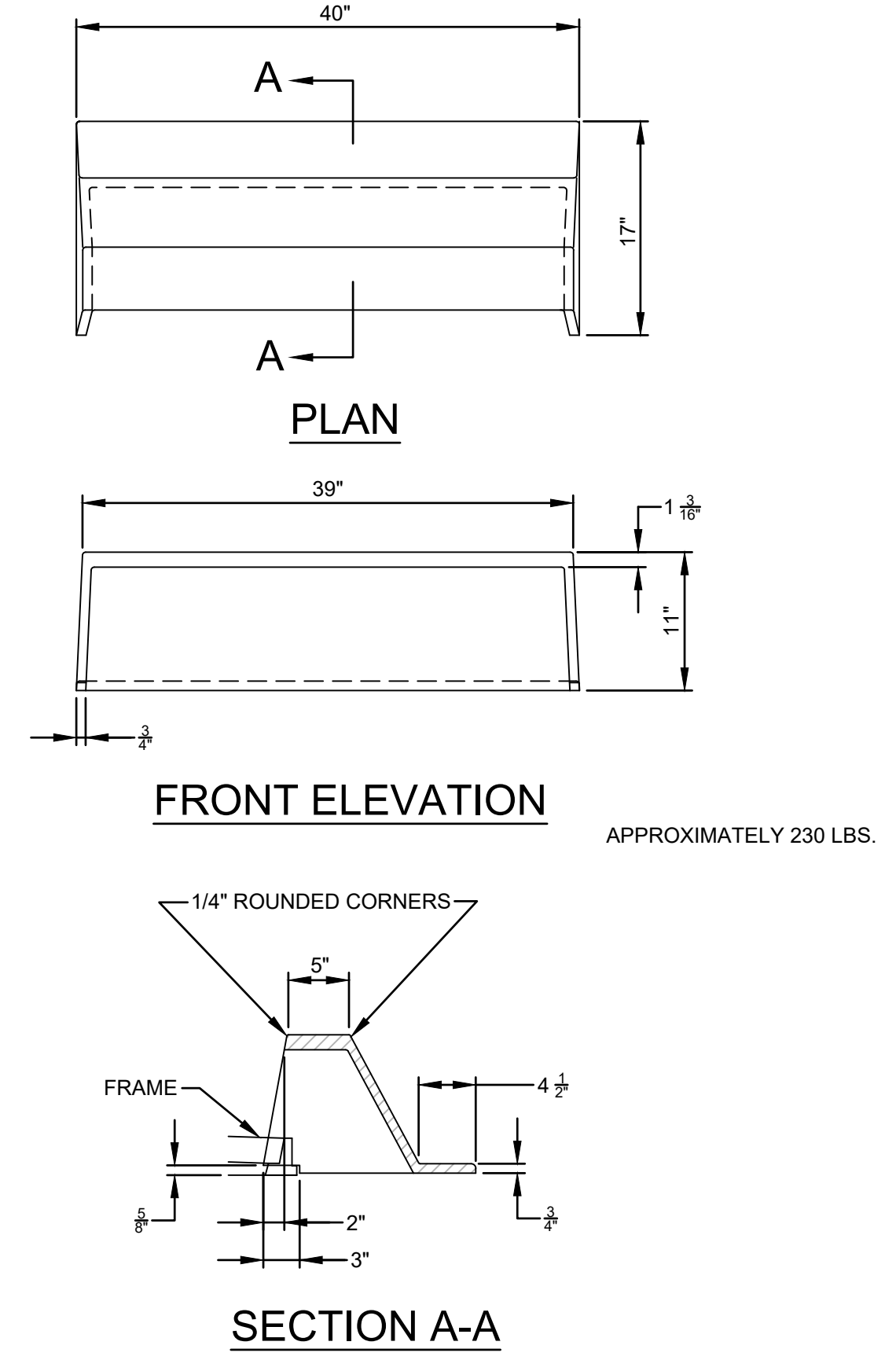
STORM SEWER INVERT DETAIL



STORM SEWER MANHOLE COVER AND FRAME



STORM SEWER CURB INLET FRAME



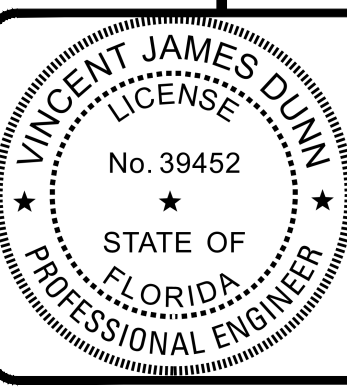
STORM SEWER CURB IRON

REVISIONS		
NO.	DATE	DESCRIPTION

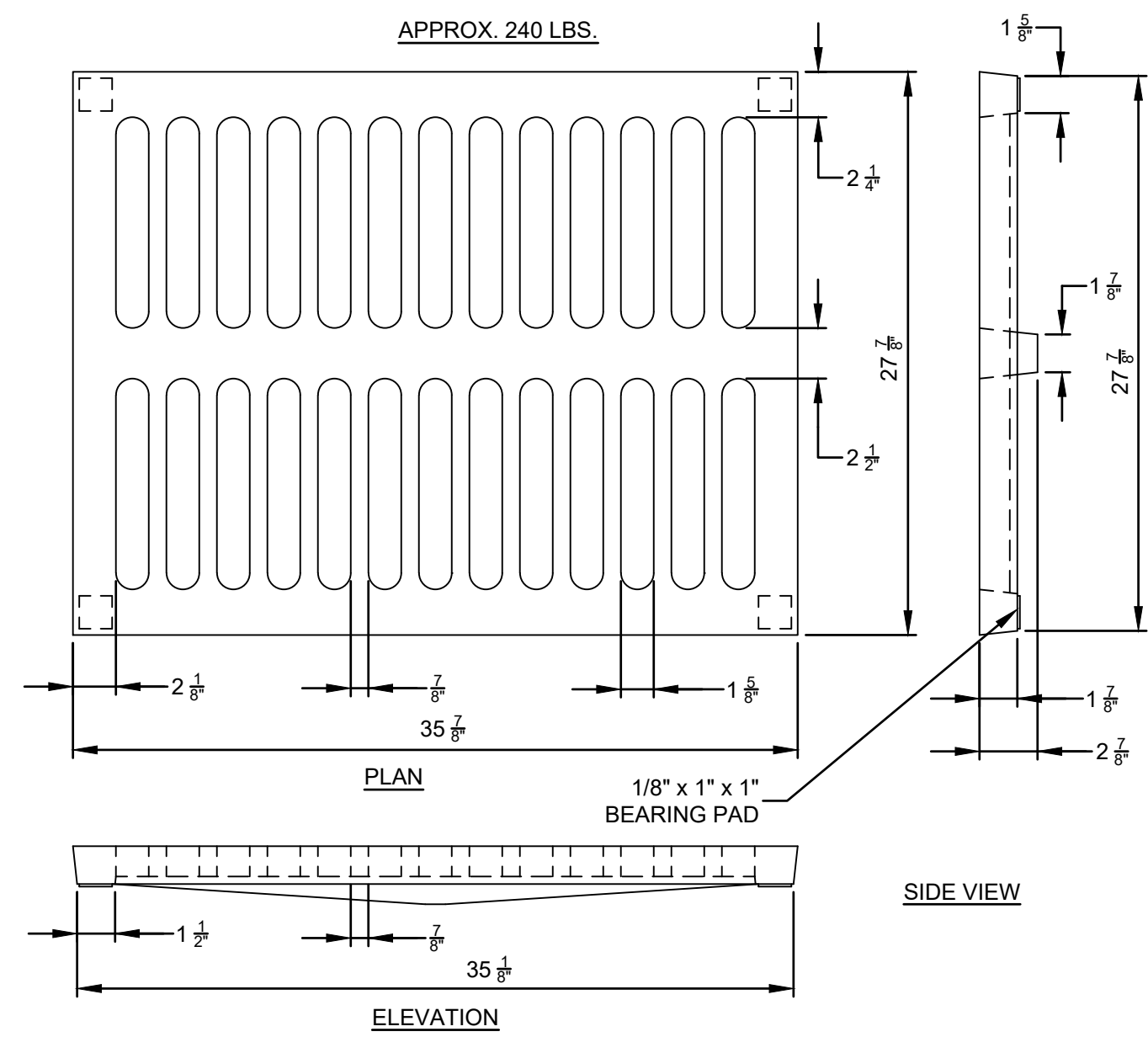
DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: N/A  
 DATE: 9/21/2023  
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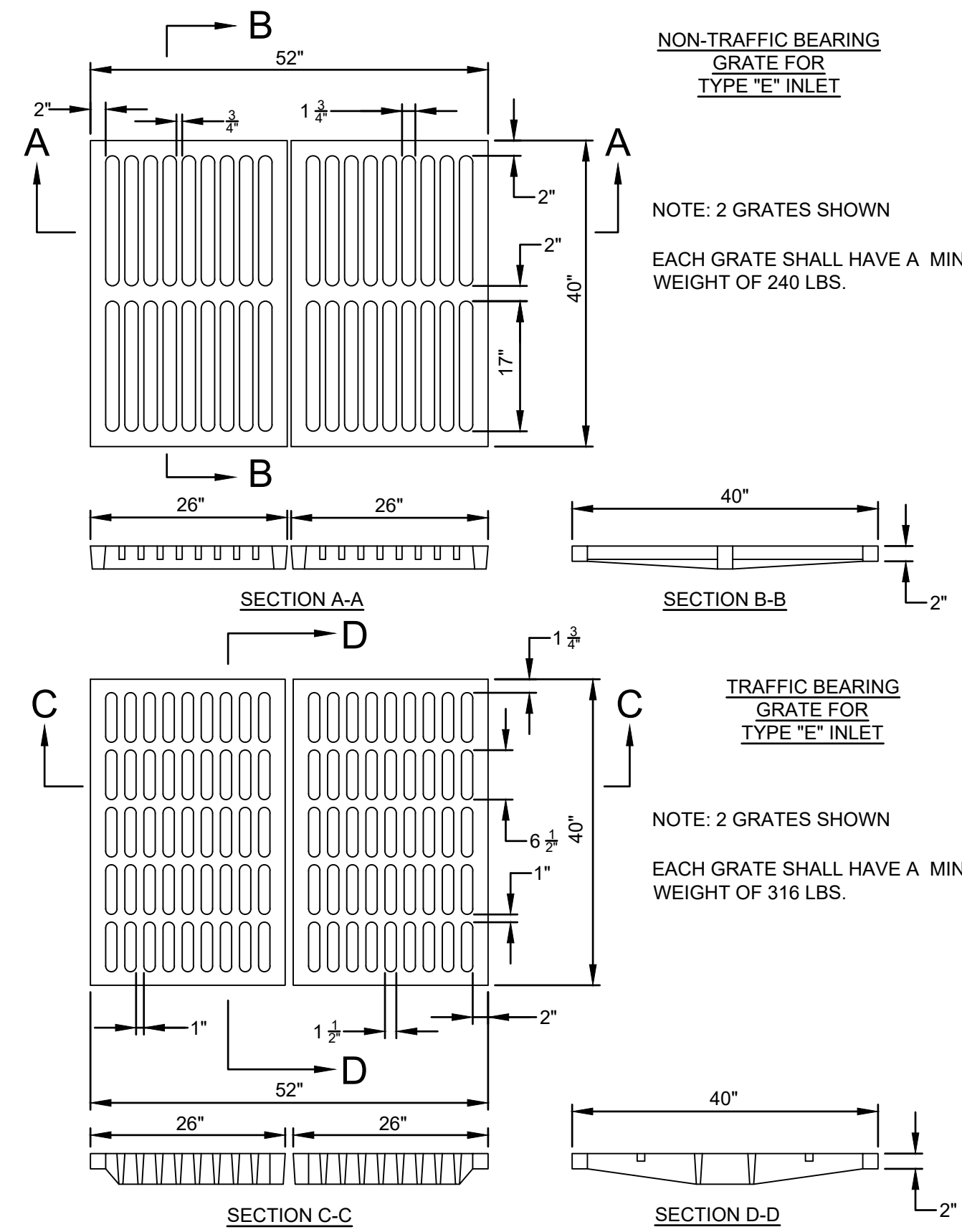
**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
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 CLAY COUNTY, FLORIDA  
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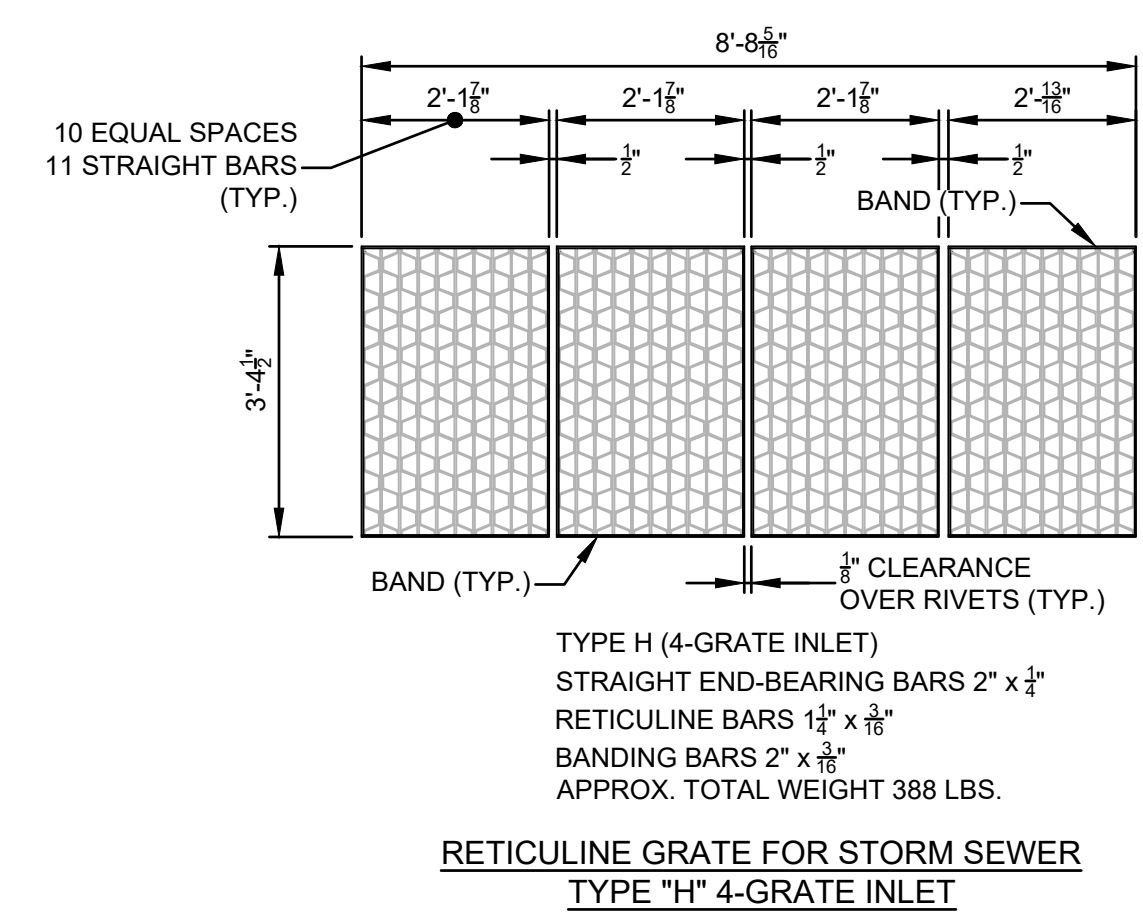
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 VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEBERG ENGINEER NO. 81412



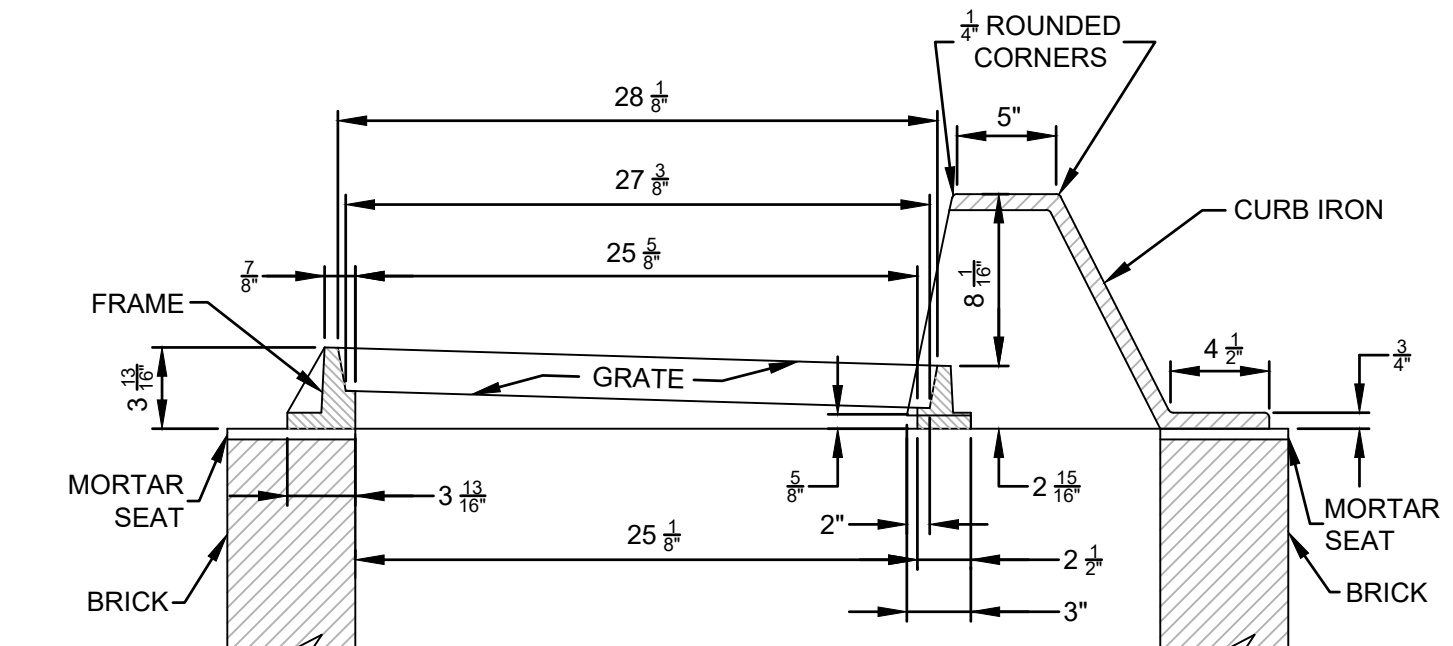
STORM SEWER INLET GRATE



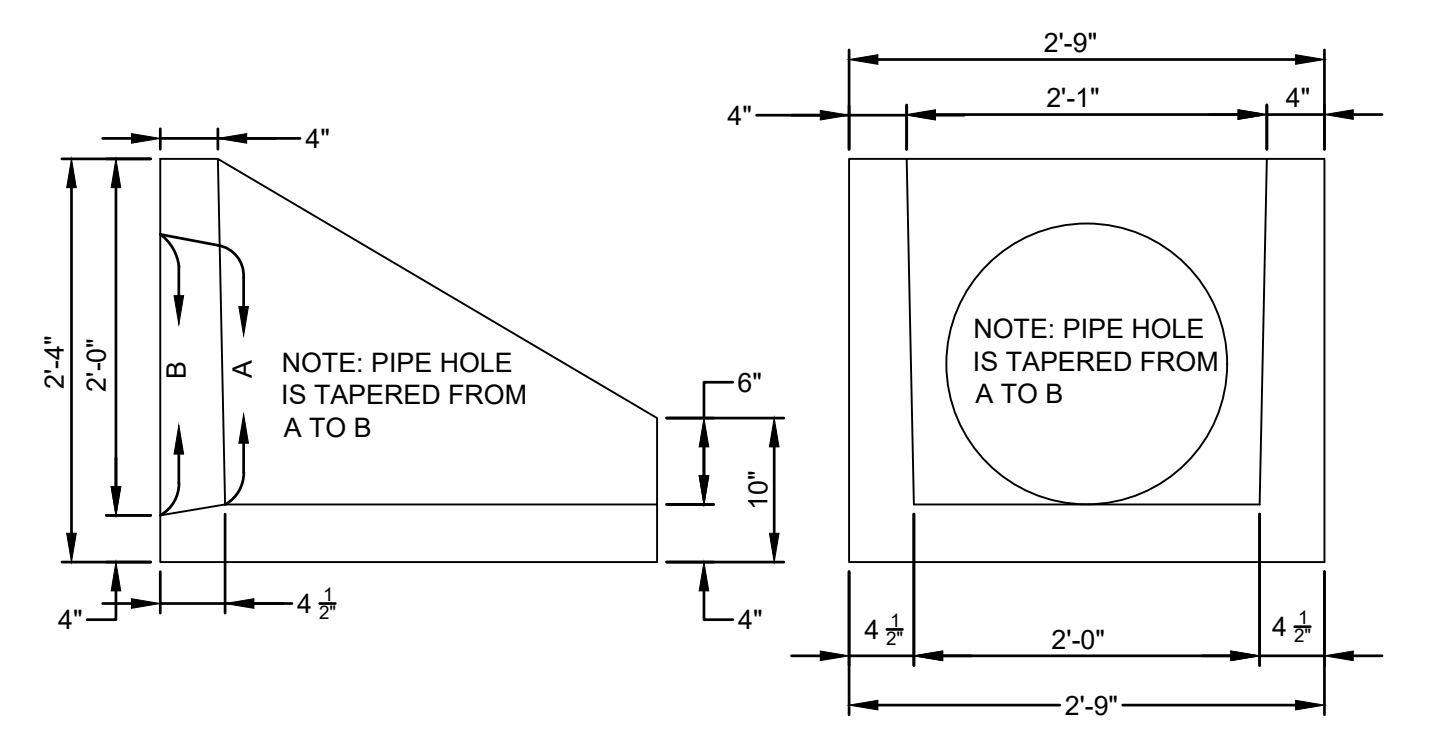
INLET GRATE FOR TYPE "E" INLET



RETICULINE GRATE FOR STORM SEWER TYPE "H" 4-GRATE INLET



STORM SEWER CURB IRON W/ GRATE AND FRAME

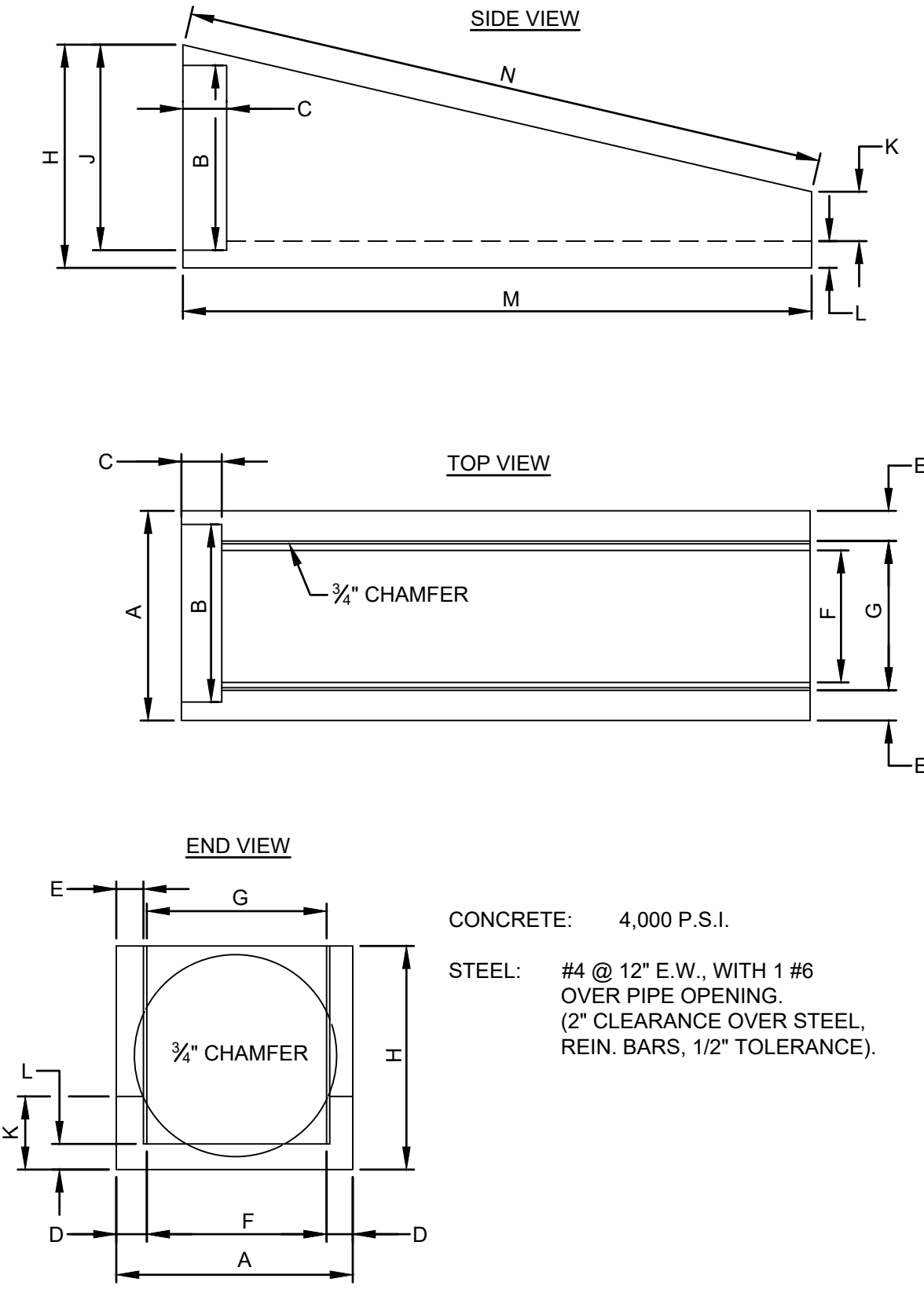


SPECIFICATIONS:

- BASE SLAB #4 BARS @ 9" O.C.E.W. WALLS #4 BARS @ 9" O.C.E.W.
- 4,000 P.S.I. CONCRETE

	A	B
15" RCP	20"	21"
15" CMP	15 1/2"	17"
18" RCP	25"	26"
18" CMP	18"	19 1/2"
24" CMP	25"	26"

PRECAST MITERED END - DRIVEWAY CULVERTS



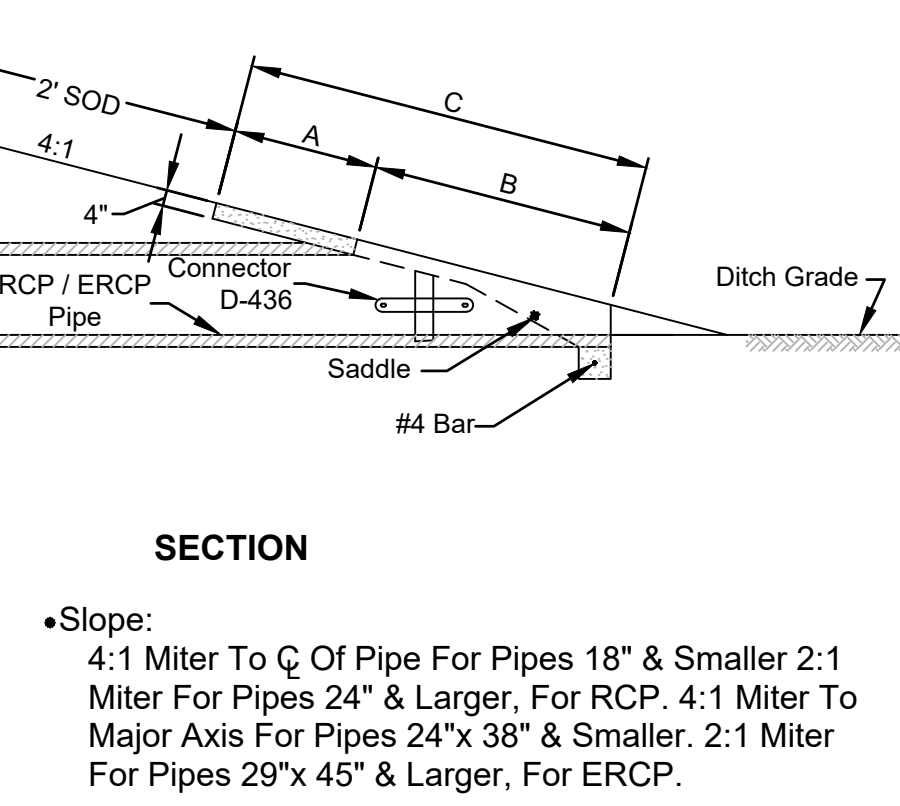
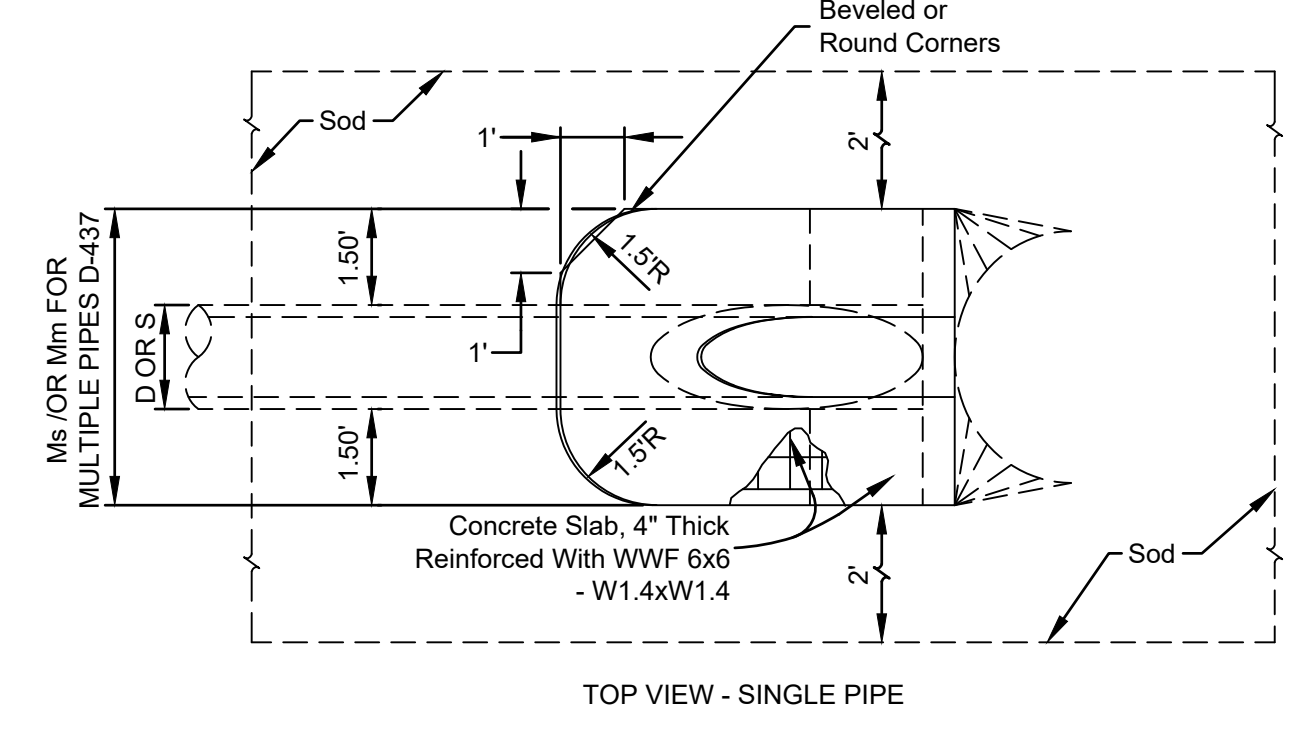
STANDARD MITERED END SECTION

TABLE OF DIMENSIONS

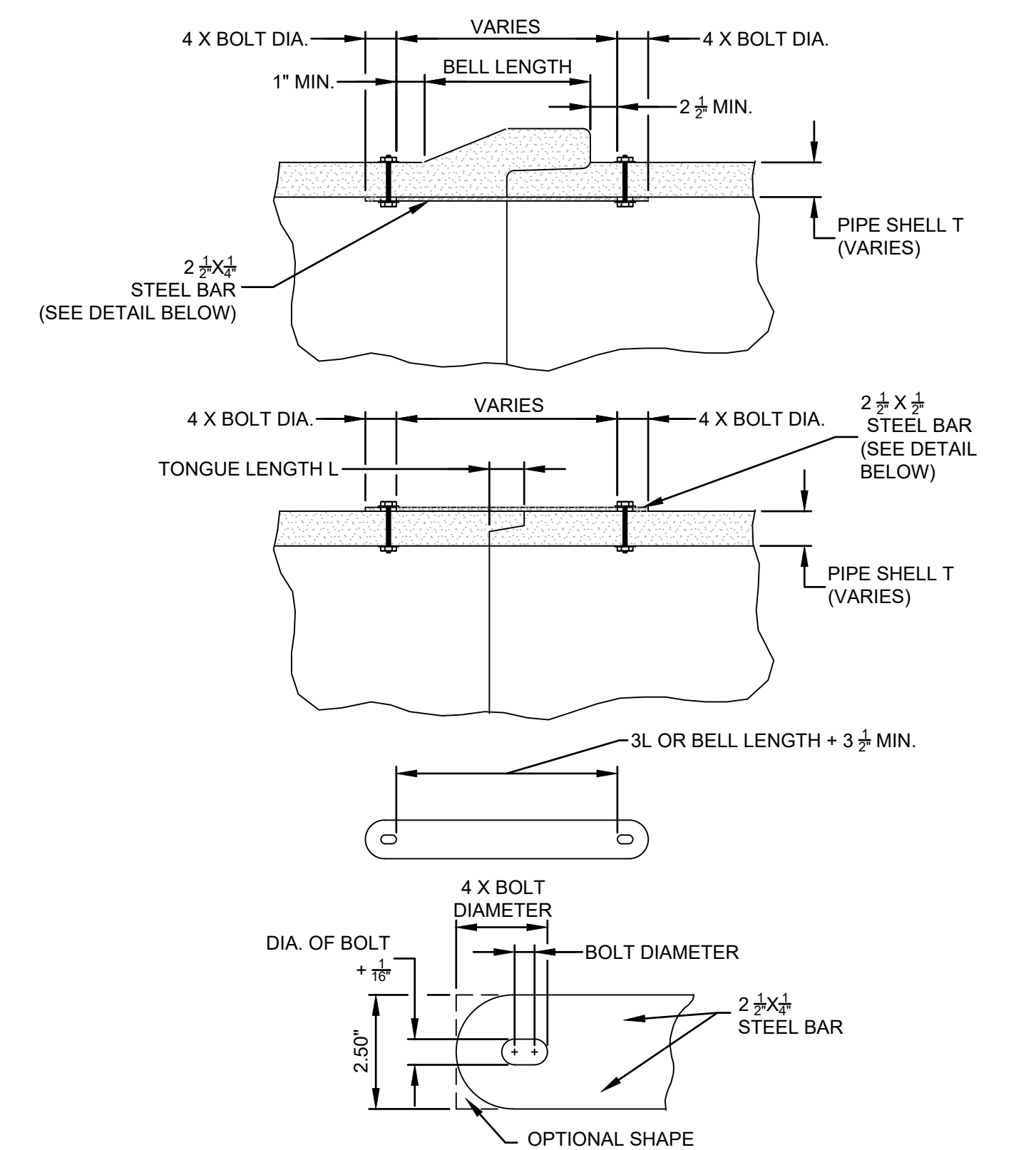
RCP /CMP	A	B	C	D	E	F	G
15" - 18"	2'-7"	2'-1"	6"	6"	6 3/4"	1'-6"	1'-7"
24"	2'-11"	2'-8"	6"	5"	4 1/2"	1'-11"	2'-0"
30"	3'-6"	3'-2"	6"	6"	5 1/2"	2'-5"	2'-6 1/2"
36"	4'-1"	3'-10"	6"	7"	5 1/2"	2'-9"	3'-0"

STANDARD MITERED END SECTION - TABLE OF DIMENSIONS

RCP /CMP	H	J	K	L	M	N
15" - 18"	2'-10"	2'-4"	8"	6"	6'-10"	7'-0"
24"	3'-6"	3'-1"	7 1/2"	5"	10'-0"	10'-3 1/2"
30"	3'-9"	3'-5"	7"	5"	11'-5"	11'-8 1/4"
36"	4'-6"	4'-0"	6"	6"	14'-0"	14'-4 1/2"



POURED IN PLACE MITERED END SECTION



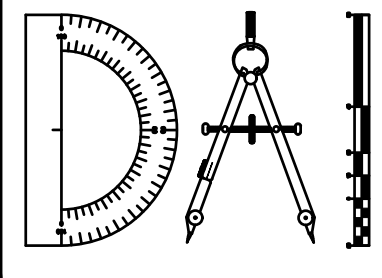
ALL BARS, BOLTS, NUTS AND WASHERS ARE TO BE GALVANIZED STEEL. BOLTS DIAMETER SHALL BE 3/8" FOR 15" TO 36" PIPE AND 5/8" FOR 42" TO 72" PIPE. TWO CONNECTORS REQUIRED PER JOINT, LOCATED 60° RIGHT AND LEFT OF BOTTOM CENTER OF PIPE. BOLT HOLES IN PIPE SHELL ARE TO BE DRILLED.

P.I.P. M.E.S. PIPE CONNECTION

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2 PDD.DWG9/21/2023 7:18 AMMike Reilly

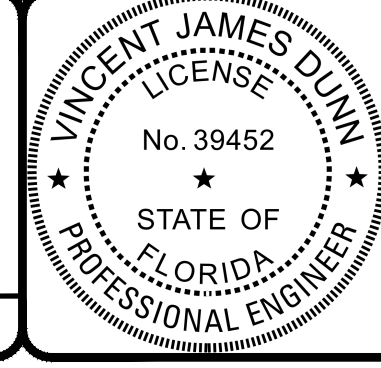
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
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CLAY COUNTY, FLORIDA  
PAVING AND DRAINAGE DETAILS



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VINCENT J. DUNN ENGINEER NO. 99452  
DAVID M. TAYLOR ENGINEER NO. 44184  
GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 125 of 130  
**PDD-4**  
DWG. NO.

**DIMENSIONS FOR R.C.P.**

D	X	A	B	C	E	F	G	Ms	N
15"	2.58'	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.63'	1.19'
18"	2.83'	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.92'	1.21'
24"	3.42'	2.53'	7.18' Δ	9.71' Δ	7.03' Δ	11'	1.73'	5.50'	1.25'
30"	4.25'	2.70'	9.25'	11.95'	9.03'	13'	2.00'	6.08'	1.29'
36"	5.08'	2.87'	11.31' ◇	14.18' ◇	11.03' ◇	15'	2.24'	6.67'	1.33'
42"	6.00'	3.05'	13.37'	16.42'	13.03'	17'	2.45'	7.25'	1.38'
48"	6.75'	3.22'	15.43'	18.65'	15.03'	19'	2.63'	7.83'	1.42'
54"	7.67'	3.39'	17.49'	20.88'	17.03'	21'	2.83'	8.42'	1.46'
60"	8.50'	3.56'	19.55'	23.11'	19.03'	23'	3.00'	9.00'	1.50'

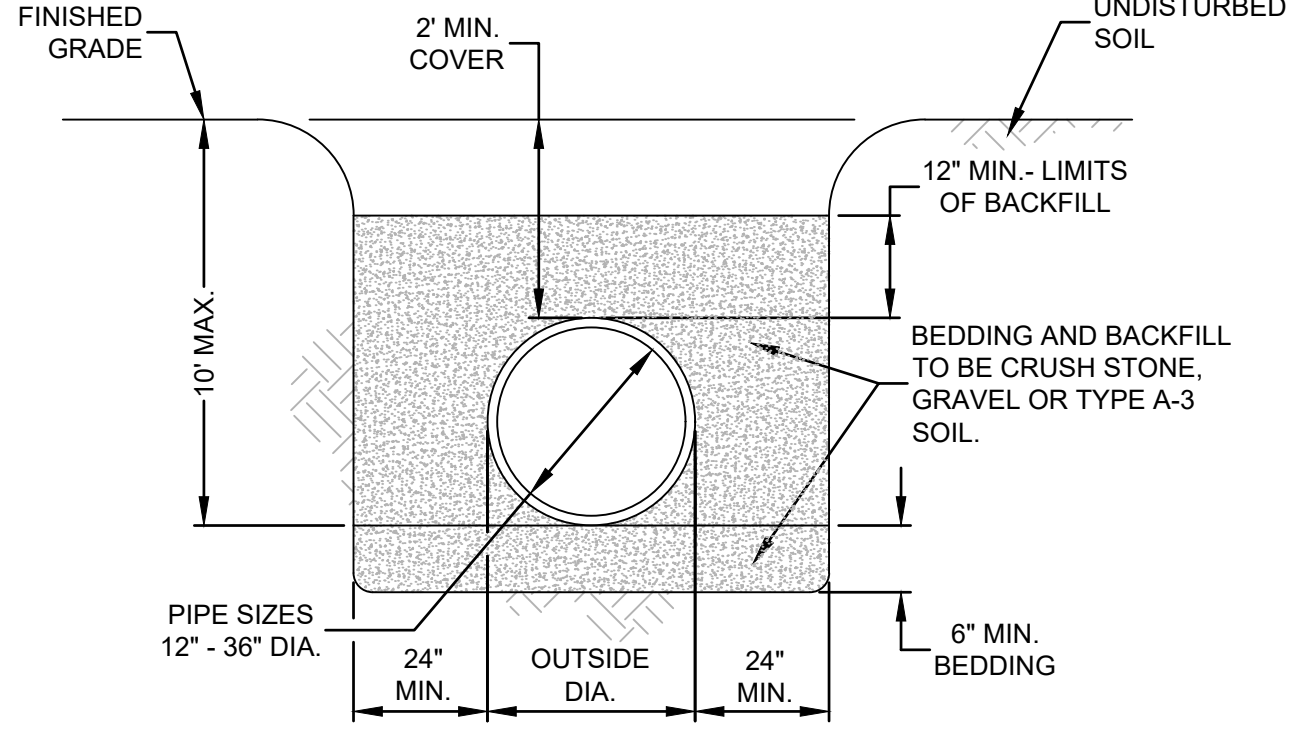
Δ 6.42' Δ 6.25' DIMENSIONS PERMITTED TO ALLOW USE OF 8' STANDARD PIPE LENGTHS.  
 ◇ 10.40' ◇ 10.10' DIMENSIONS PERMITTED TO ALLOW USE OF 12' STANDARD PIPE LENGTHS.  
 Δ◇ CONCRETE SLAB SHALL BE DEEPENED TO FROM BRIDGE ACROSS CROWN OF PIPE. SEE SECTION.

**DIMENSIONS FOR E.R.C.P.**

RISE R	SPAN S	X	A	B	C	E	F	G	Ms	N
12"	18"	2.83'	2.36'	3.06'	5.42'	3.03'	5'	1.50'	4.92'	1.21'
14"	23"	3.33'	2.44'	3.75'	6.19'	3.70'	6'	1.90'	5.38'	1.23'
19"	30"	4.00'	2.62'	5.47'	8.09'	5.36'	8'	2.37'	6.04'	1.27'
24"	38"	5.00'	2.79'	7.18'	9.97'	7.03'	10'	2.85'	6.79'	1.31'
29"	45"	5.92'	3.05'	8.90'	11.95'	8.70'	12'	3.19'	7.50'	1.38'
34"	53"	7.00'	3.22'	10.62'	13.84'	10.36'	13'	3.57'	8.25'	1.42'
38"	60"	7.83'	3.39'	11.99'	15.38'	11.70'	15'	3.95'	8.92'	1.46'
43"	68"	8.92'	3.56'	13.71'	17.27'	13.36'	17'	4.28'	9.67'	1.50'
48"	76"	9.92'	3.73'	15.43'	19.16'	15.03'	19'	4.59'	10.42'	1.54'
53"	83"	10.67'	3.91'	17.15'	21.06'	16.70'	20'	4.77'	11.08'	1.58'
58"	91"	11.67'	4.08'	18.87'	22.95'	18.36'	22'	5.01'	11.83'	1.63'

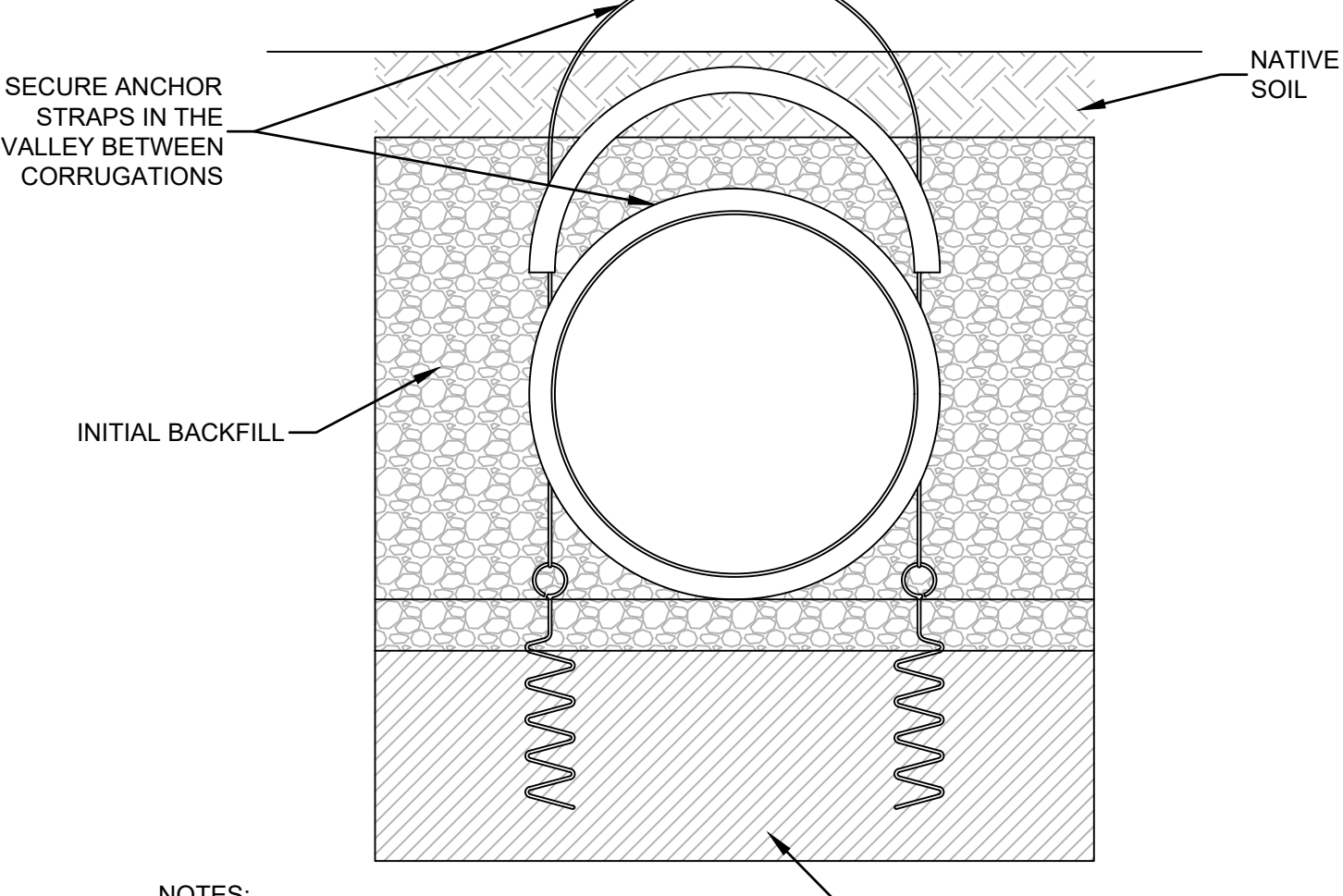
"X"=DISTANCE FROM CENTER OF PIPE TO CENTER OF PIPE.  
 "Mm"=DIMENSIONS FOR MULTIPLE PIPES.  
 FORMULA TO DETERMINE "Mm" FOR MULTIPLE PIPES = M+X (NO. OF PIPES -1)  
 FOR "Ms" AND "X" DIMENSIONS, SEE TABLE ABOVE.  
 \* SPECIAL ORDER; NOT STANDARD SIZE

POURED IN PLACE MITERED END SECTION - TABLE OF DIMENSIONS



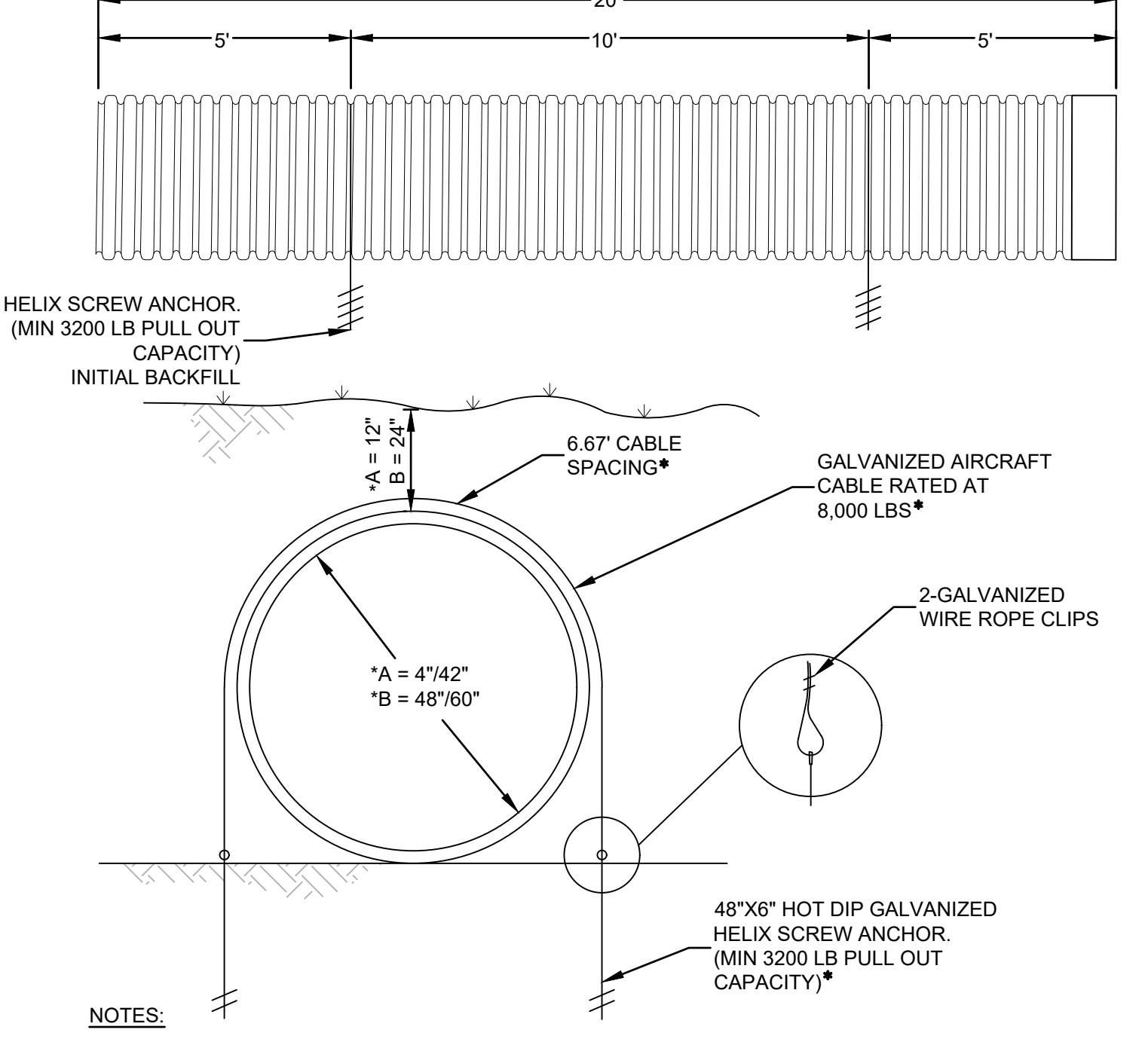
- NOTES:**
- RUBBER OR NEOPRENE GASKETS REQUIRED AT ALL PIPE JOINTS.
  - HYDROSTATIC FIELD TESTING IS REQUIRED OR FILTER FABRIC WRAP ALL PIPE JOINTS WITH 4LF OF FABRIC CENTERED ON PIPE JOINT.
  - MAXIMUM PIPE DEFLECTION IS 5%. DEFLECTION SHALL BE TESTED USING A MANDREL.
  - PIPE TERMINATION END SECTION MUST BE FABRICATED FROM APPROVED MATERIAL.

PIPE BEDDING - POLYETHYLENE



- NOTES:**
- SEE MANUFACTURERS STANDARD DETAIL FOR PIPE INSTALLATION RECOMMENDATIONS
  - ANCHORS TO BE 10' MAX SPACING.  
 1 ANCHOR EACH END AND IN MIDDLE OF PIPE. SEE ANCHOR DETAIL BELOW FOR ADDITIONAL INFORMATION.

ANCHOR PLACEMENT

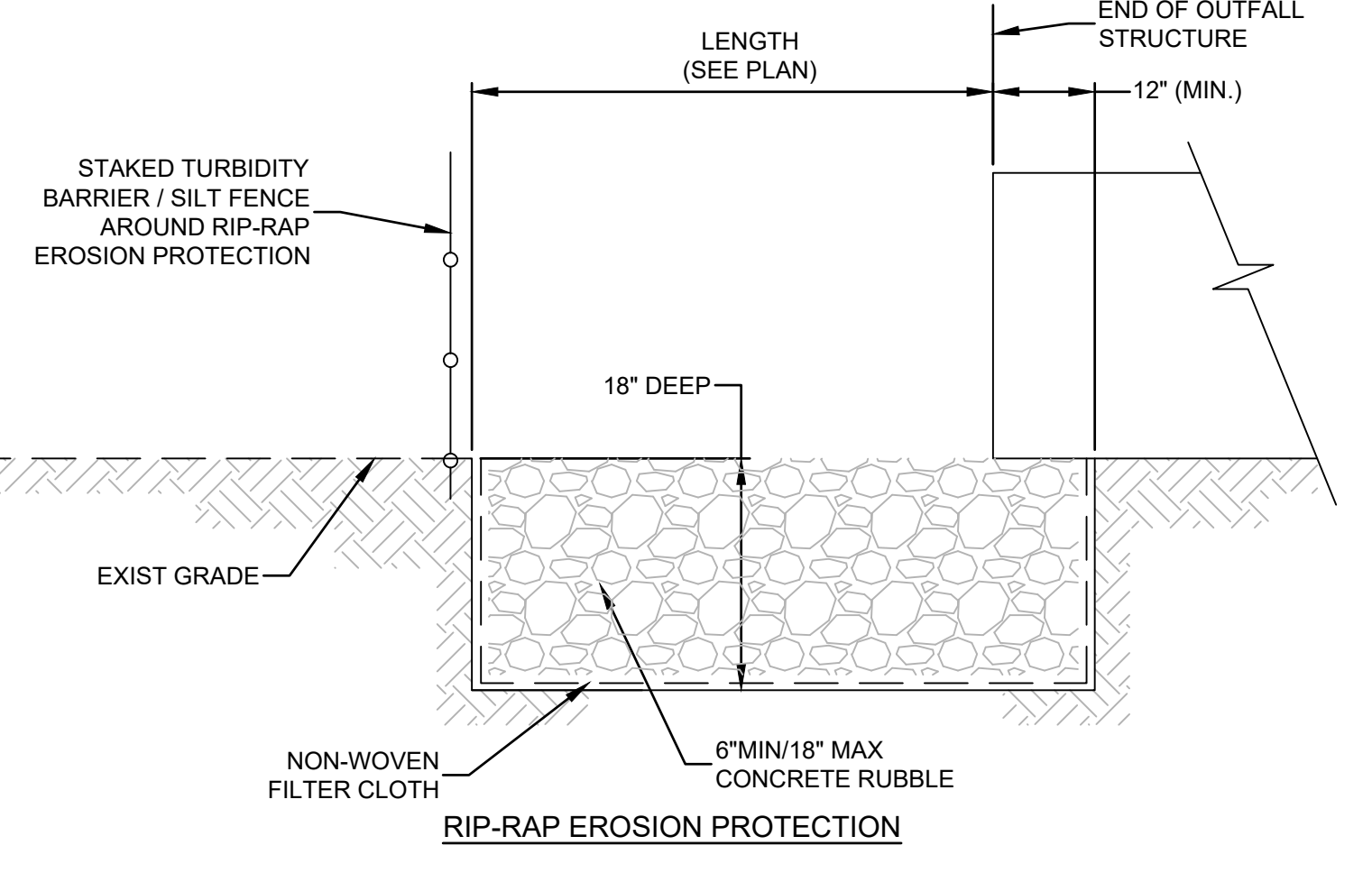


- NOTES:**
- SEE MANUFACTURERS STANDARD DETAIL FOR PIPE INSTALLATION RECOMMENDATIONS.
  - SEE ANCHOR PLACEMENT DETAIL.
  - FOR MINIMUM STRUCTURAL COVER
  - MINIMUM COVER FOR NO FLOTATION DURING CONSTRUCTION. ASSUMES SATURATED SOILS TO GROUND SURFACE.
- OPTION:  
 10' CABLE SPACING.  
 11,000LB CABLE RATING.  
 5,500LB PULL OUT CAPACITY.

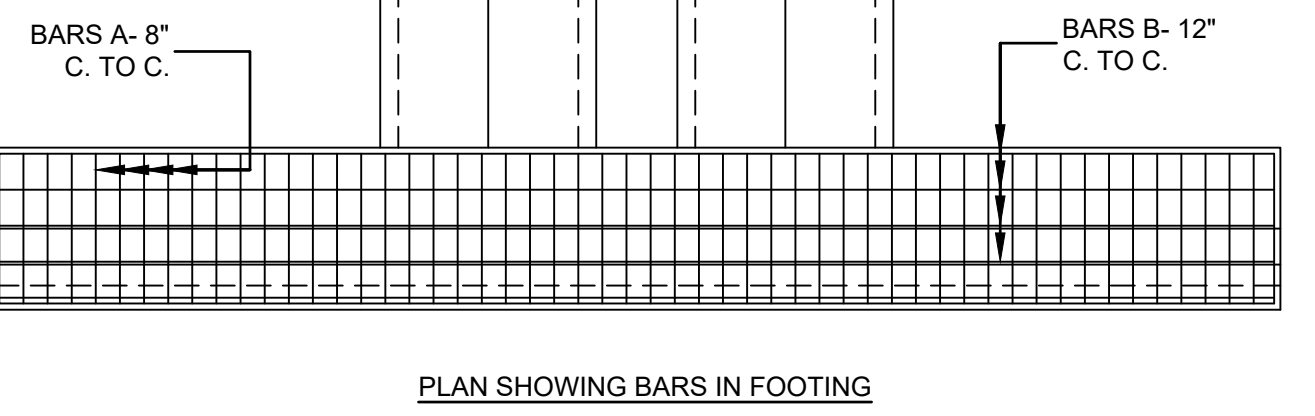
**MIN COVER REQUIRED**

PIPE SIZE	MIN COVER
15"	11"
18"	13"
24"	17"
30"	22"
36"	25"
42"	29"
48"	33"
60"	40"

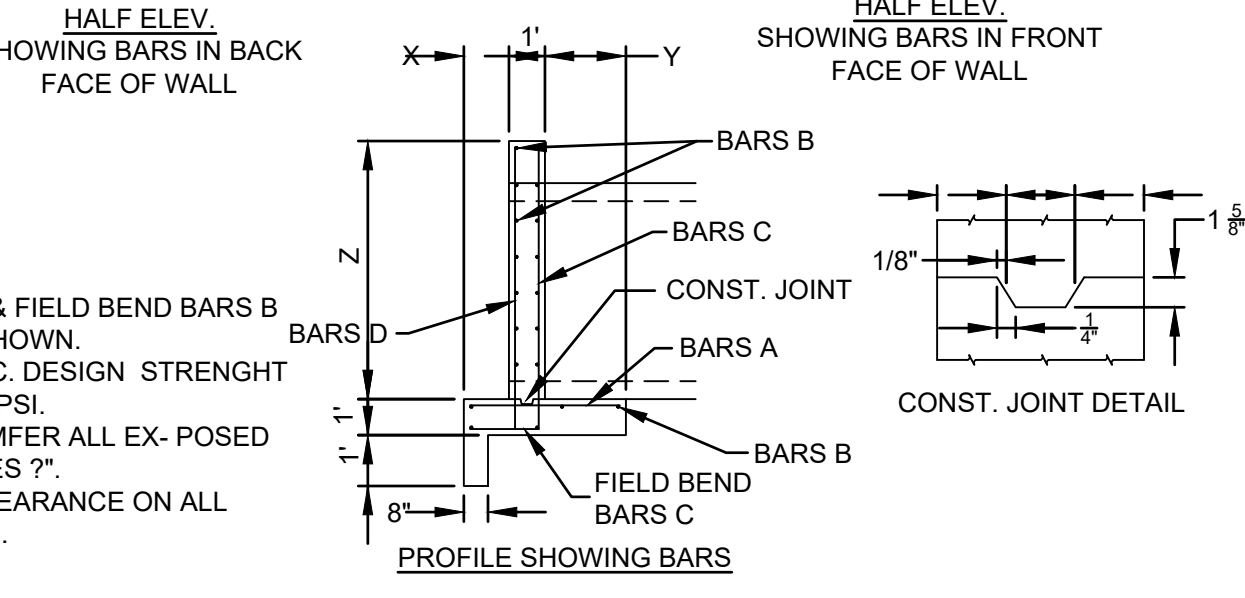
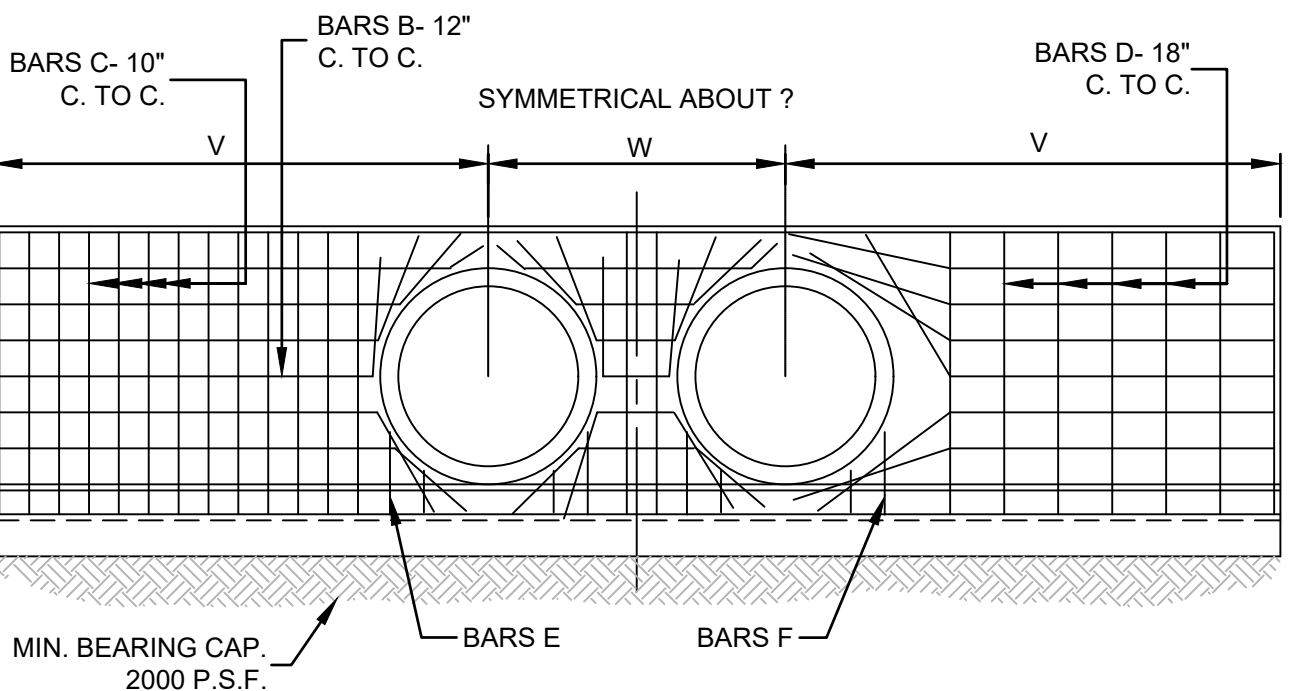
PIPE ANCHOR



RIP-RAP EROSION PROTECTION



PLAN SHOWING BARS IN FOOTING



- NOTES:**
- CUT & FIELD BEND BARS B AS SHOWN.
  - CONC. DESIGN STRENGTH 3000 PSI.
  - CHAMFER ALL EX-POSED EDGES 7°.
  - 2" CLEARANCE ON ALL BARS.

CONC ENDWALL FOR MULTIPLE 60" - 78" ROUND PIPES

**DIMENSIONS**

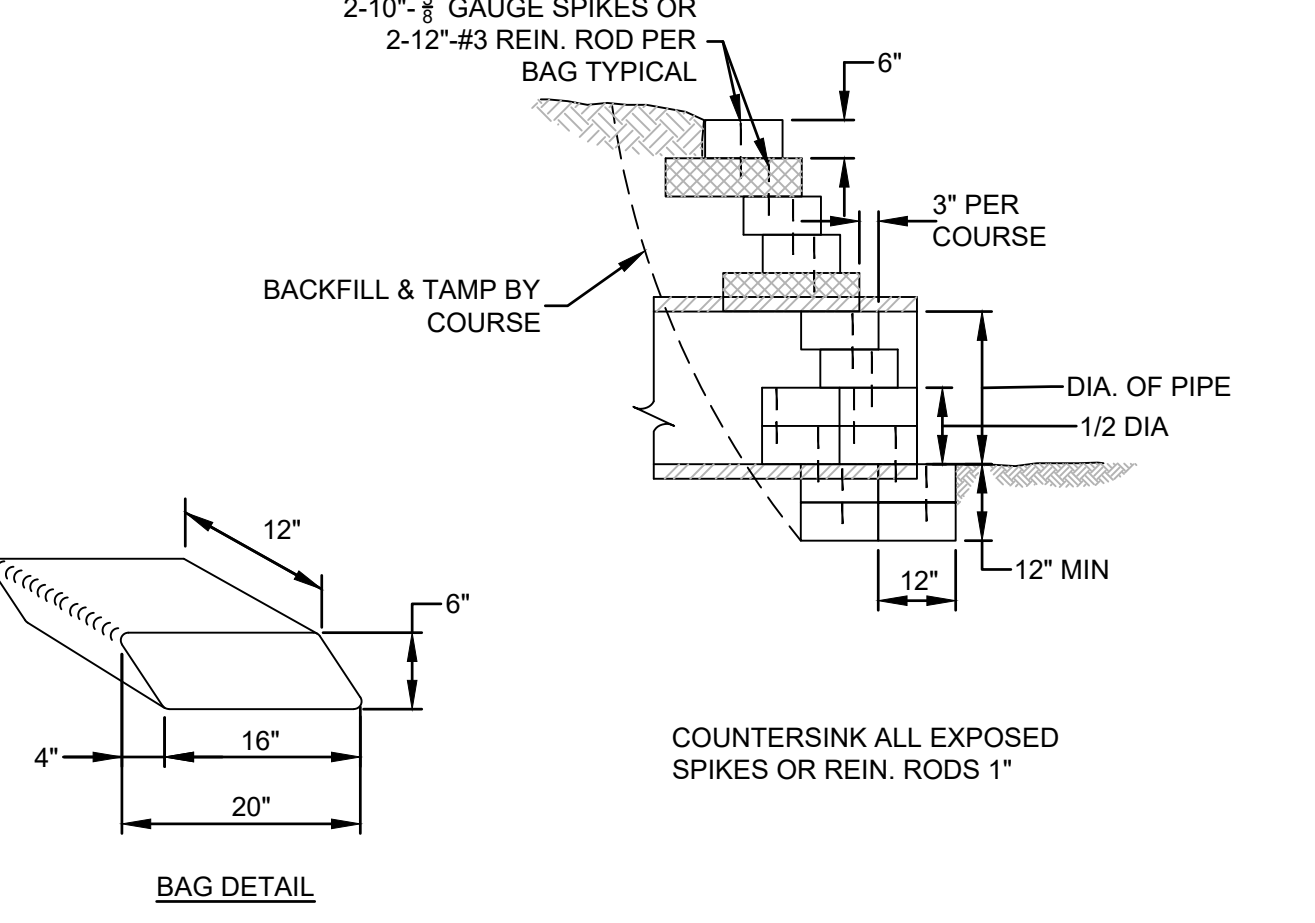
PIPE SIZE	DIMENSIONS					NO. BARS REQ.				
	V	W	X	Y	Z	BAR SIZE	LENGTH	2-PIPES	3-PIPES	4-PIPES
60"	13'-9"	8'-3"	1'-3"	2'-3"	7'-2"	A	6 4'-2"	54	66	78
						B	4 *	17	17	17
						C	6 9'-9"	29	31	34
						D	4 7'-10"	18	20	22
						E	6 2'-6"	8	12	16
						F	6 1'-6"	8	12	16
66"	14'-9"	9'-1"	1'-3"	2'-8"	7'-8"	A	6 4'-7"	58	71	84
						B	4 *	17	17	17
						C	6 10'-3"	31	34	37
						D	4 8'-4"	18	20	22
						E	6 2'-6"	8	12	16
						F	6 1'-6"	8	12	16
72"	15'-9"	9'-8"	1'-4"	3'-1"	8'-3"	A	6 5'-1"	62	77	92
						B	4 *	17	17	17
						C	6 10'-11"	33	36	39
						D	4 8'-11"	20	22	24
						E	6 2'-6"	8	12	16
						F	6 1'-6"	8	12	16
78"	16'-9"	10'-3"	1'-4"	3'-8"	8'-10"	A	6 5'-8"	66	81	96
						B	4 *	17	17	17
						C	6 11'-6"	35	38	41
						D	4 9'-6"	20	22	24
						E	6 2'-6"	8	12	16
						F	6 1'-6"	8	12	16

\* WIDTH OF ENDWALL LESS 4"

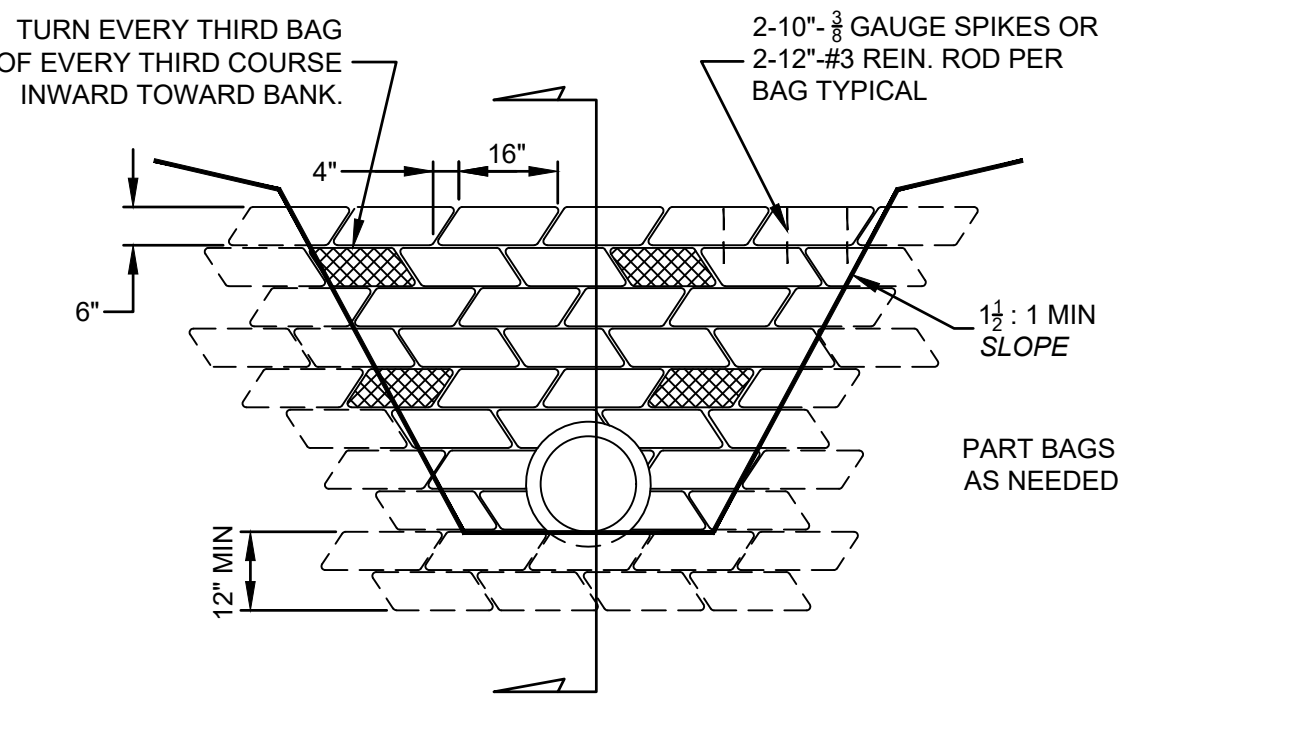
**ESTIMATED QUANTITIES**

PIPE SIZE	2-PIPES		3-PIPES		4-PIPES	
	CONC. CU. YD.	STEEL LB.	CONC. CU. YD.	STEEL LB.	CONC. CU. YD.	STEEL LB.
60"	14.24	1307	16.97	1555	19.69	1802
66"	16.43	1459	19.63	1733	22.83	2007
72"	18.88	1645	22.51	1955	26.15	2264
78"	21.62	1835	25.76	2167	29.90	2501

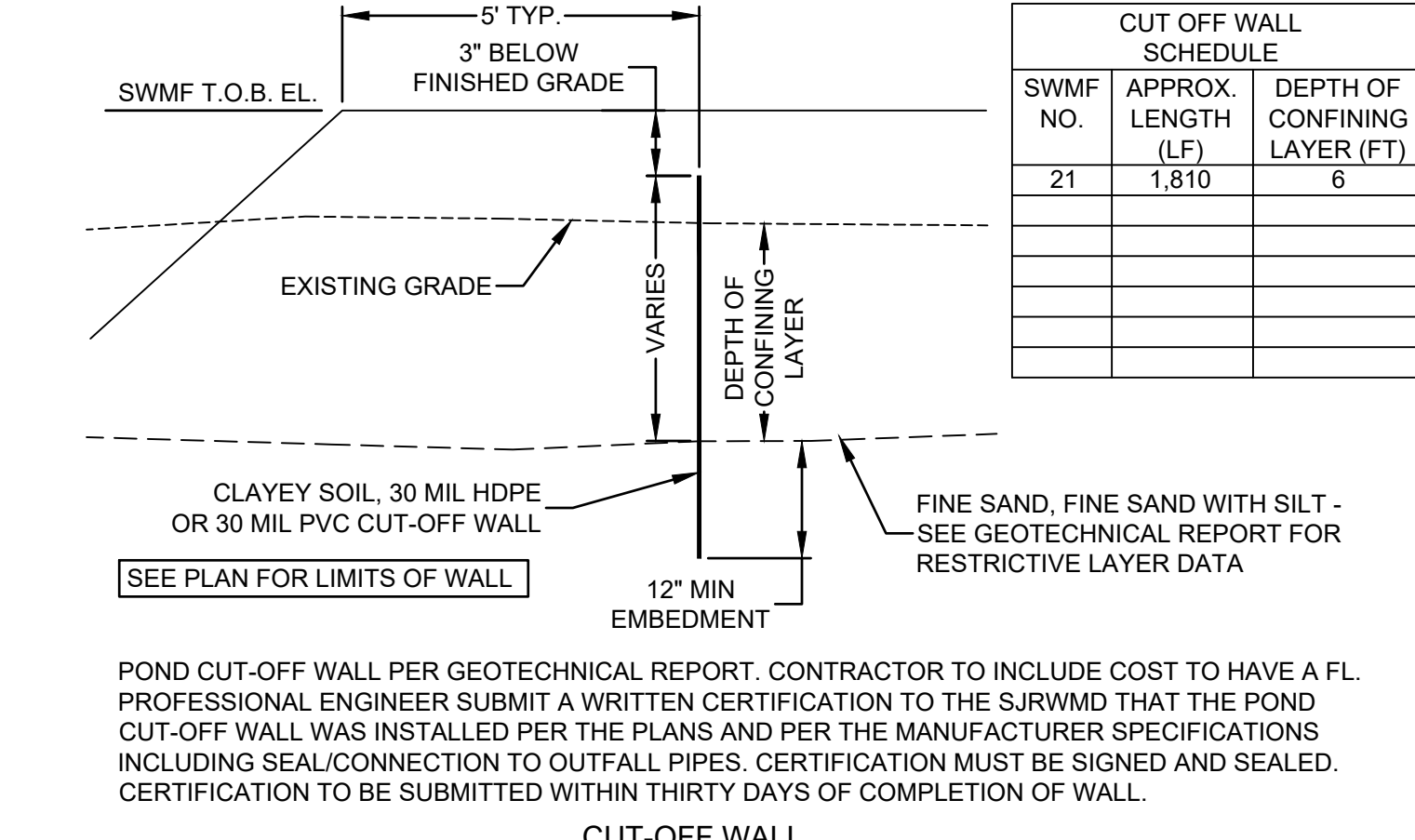
DIMENSIONS AND QUANTITATIVE DATA FOR MULTIPLE 60" - 78" CONG PIPE ENDWALLS



BAG DETAIL



SAND - CEMENT RIP RAP HEADWALL



**CUT OFF WALL SCHEDULE**

SWMF NO.	APPROX LENGTH (LF)	DEPTH OF CONFINING LAYER (FT)
21	1,810	6

POND CUT-OFF WALL PER GEOTECHNICAL REPORT. CONTRACTOR TO INCLUDE COST TO HAVE A FL PROFESSIONAL ENGINEER SUBMIT A WRITTEN CERTIFICATION TO THE SJRWMD THAT THE POND CUT-OFF WALL WAS INSTALLED PER THE PLANS AND PER THE MANUFACTURER SPECIFICATIONS INCLUDING SEAL CONNECTION TO OUTFALL PIPES. CERTIFICATION MUST BE SIGNED AND SEALED. CERTIFICATION TO BE SUBMITTED WITHIN THIRTY DAYS OF COMPLETION OF WALL.

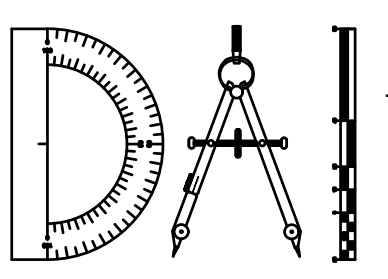
CUT-OFF WALL

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2 PDD.DWG/9/21/2023 7:19 AM Mike Reilly

**REVISIONS**

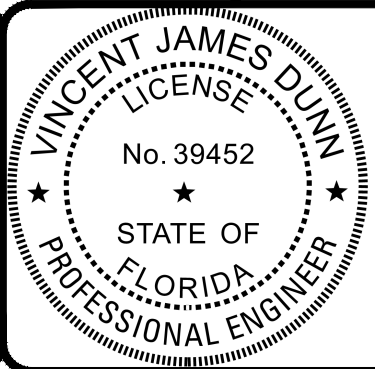
NO.	DATE	DESCRIPTION	BY:

DESIGNED BY: DAI  
 DRAWN BY: MR/NS/SM/SS  
 CHECKED BY: VJD  
 SCALE: N/A  
 DATE: 9/21/2023  
 PROJ. NO.: 2008-499-2



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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
 FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
 CLAY COUNTY, FLORIDA  
 PAVING AND DRAINAGE DETAILS

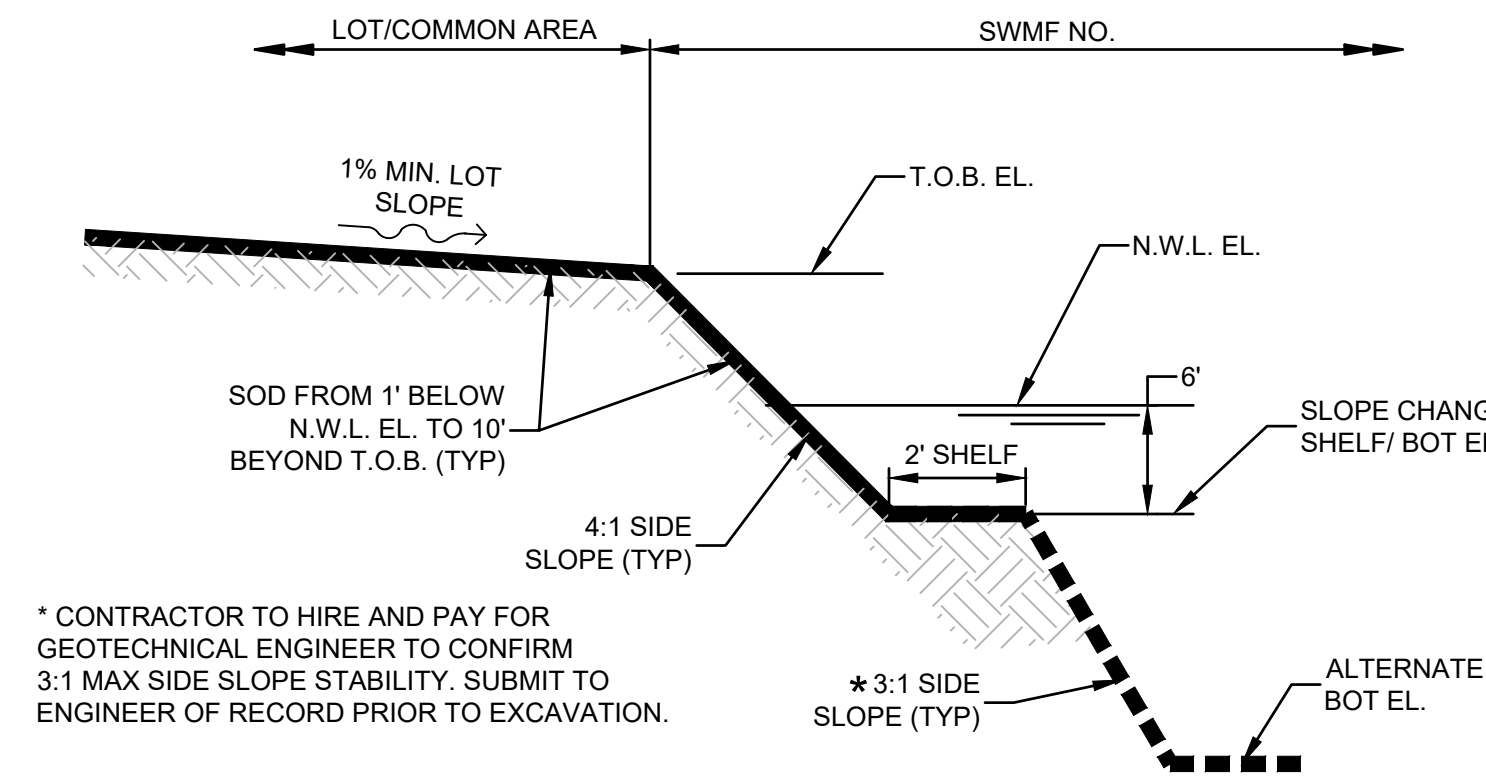


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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

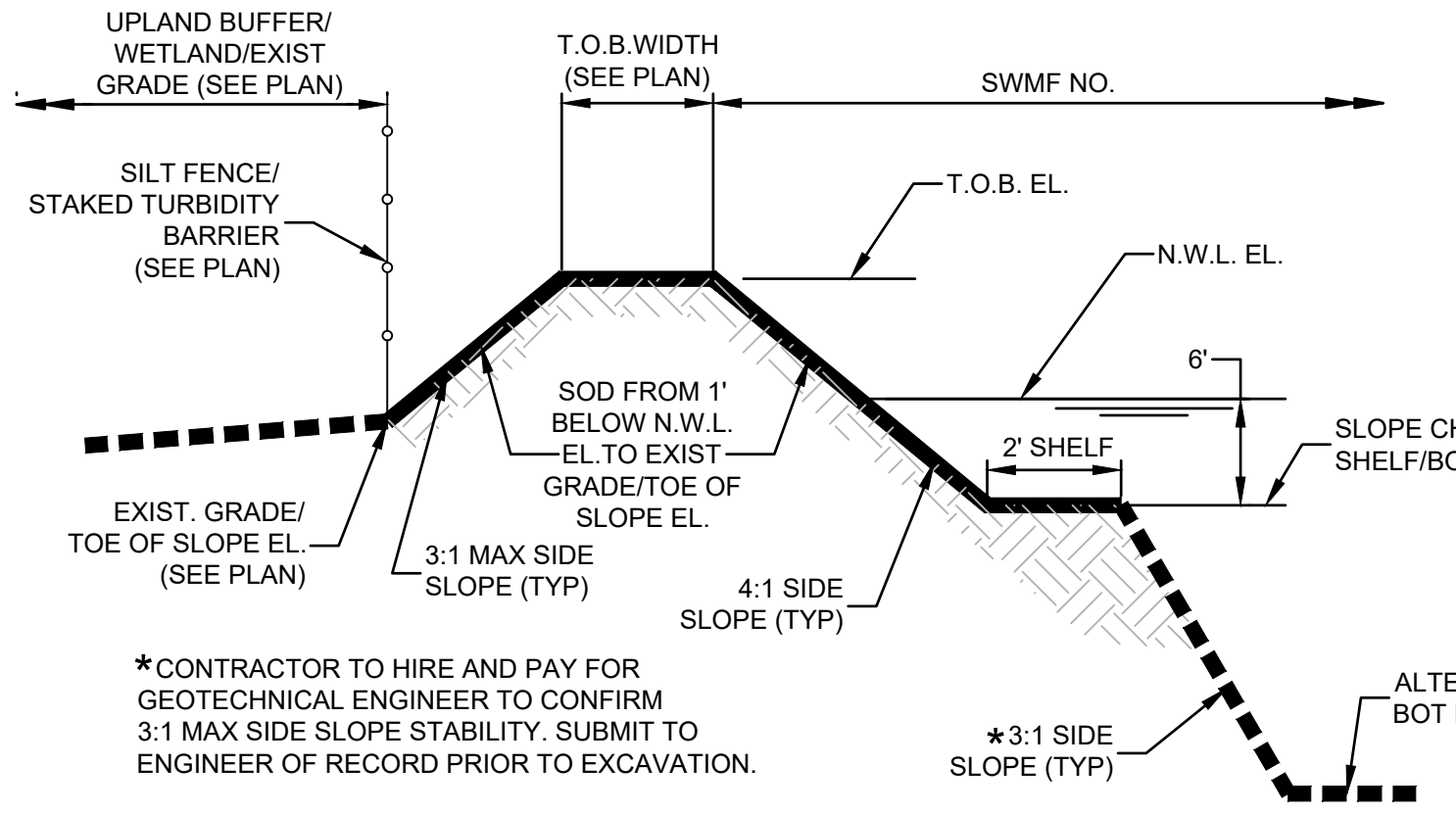
Sheet No. 126 of 130  
**PDD-5**  
 DWG. NO.

SWMF SCHEDULE		7	8	9	10	15	16	17	18	19	20	21	22	23	24
T.O.B. EL.	33.7	33.7	33.7	33.3	28.8	27.7	28.1	28.5	27.8	27.4	27.0	27.8	27.4	24.5	
25YR DHW	32.06	32.07	32.06	27.43	27.06	26.64	26.61	26.57	26.32	25.79	26.58	26.42	23.63		
3YR DHW	30.86	30.86	30.86	25.63	25.51	25.41	25.31	25.40	25.36	25.06	25.41	25.38	22.63		
N.W.L. EL.	29.0	29.0	29.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0		
SC/SHELF EL.	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	15.0		
BOT. EL.	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	15.0		
ALT BOT. EL.	13.0	9.0	5.0	10.0	0.0	-8.0	-6.0	-2.0	3.0	10.0	-15.0	6.0	3.0		



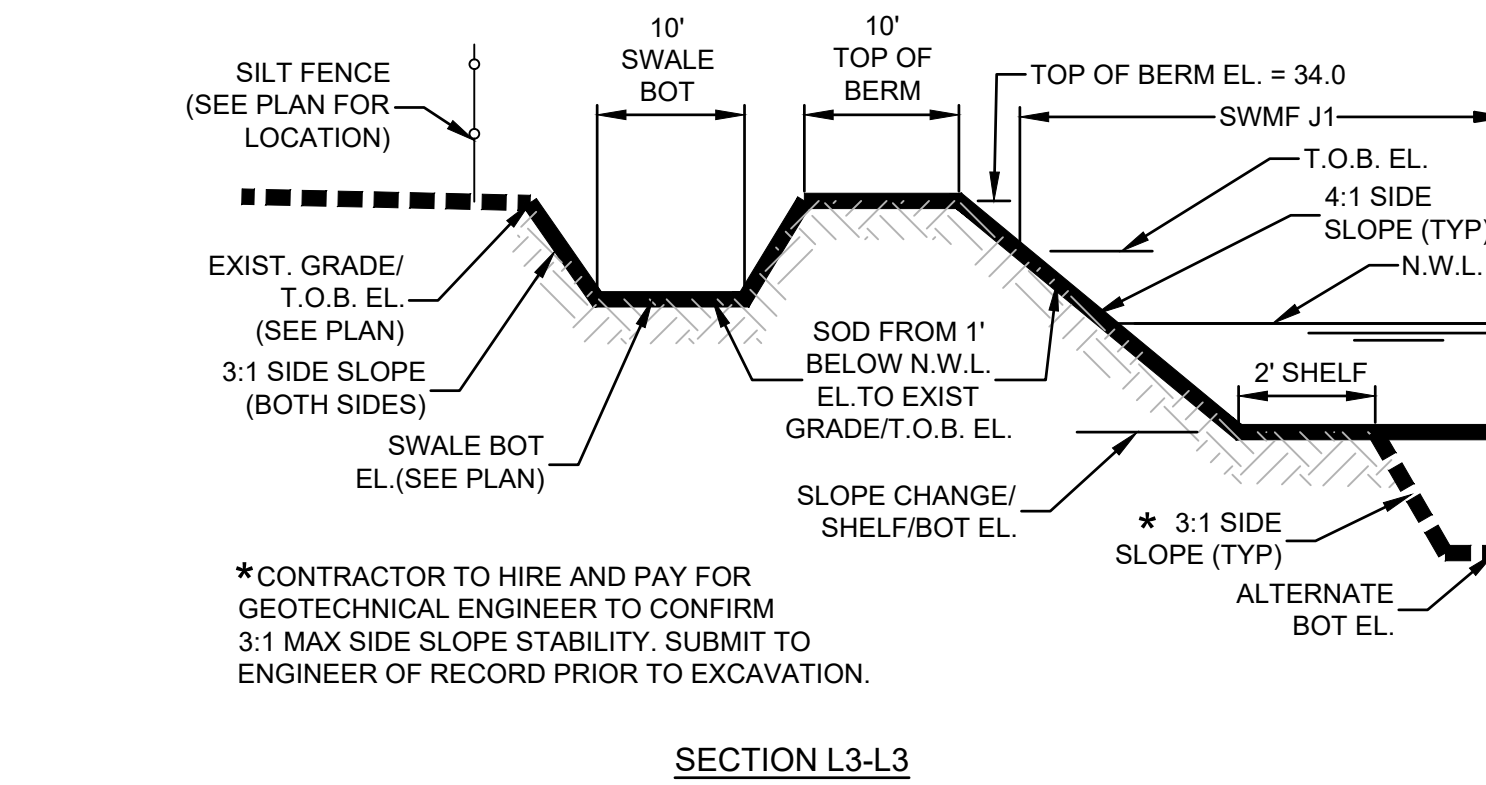
SECTION L1-L1

SWMF SCHEDULE		7	20	21	23	24
T.O.B. EL.	33.7	27.4	27.0	27.4	24.5	
25YR DHW	32.06	26.32	25.79	26.42	23.63	
3YR DHW	30.86	25.36	25.06	25.38	22.63	
N.W.L. EL.	29.0	24.0	24.0	24.0	21.0	
SC/SHELF EL.	23.0	18.0	18.0	18.0	15.0	
BOT. EL.	23.0	18.0	18.0	18.0	15.0	
ALT BOT. EL.	13.0	10.0		3.0		

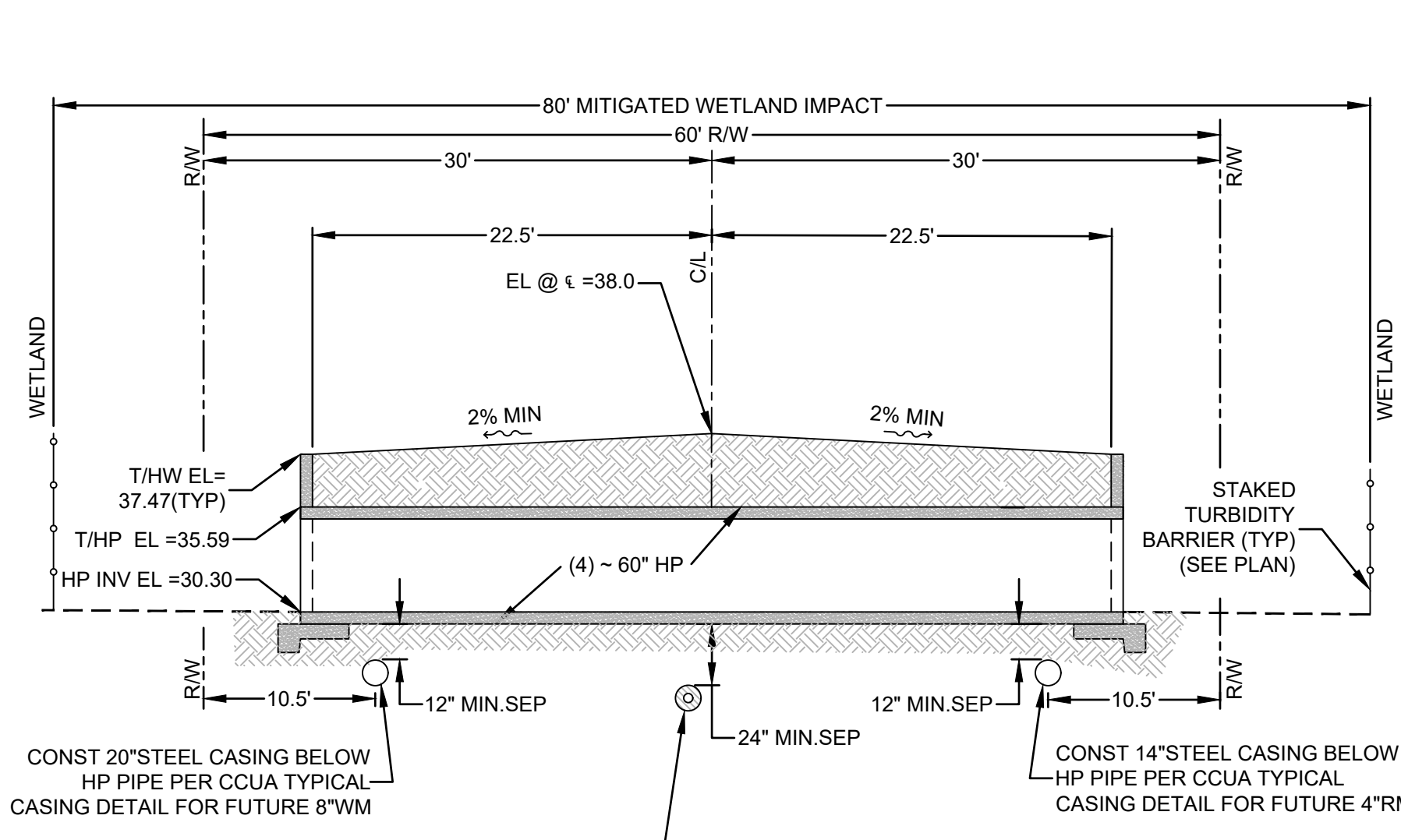


SECTION L2-L2

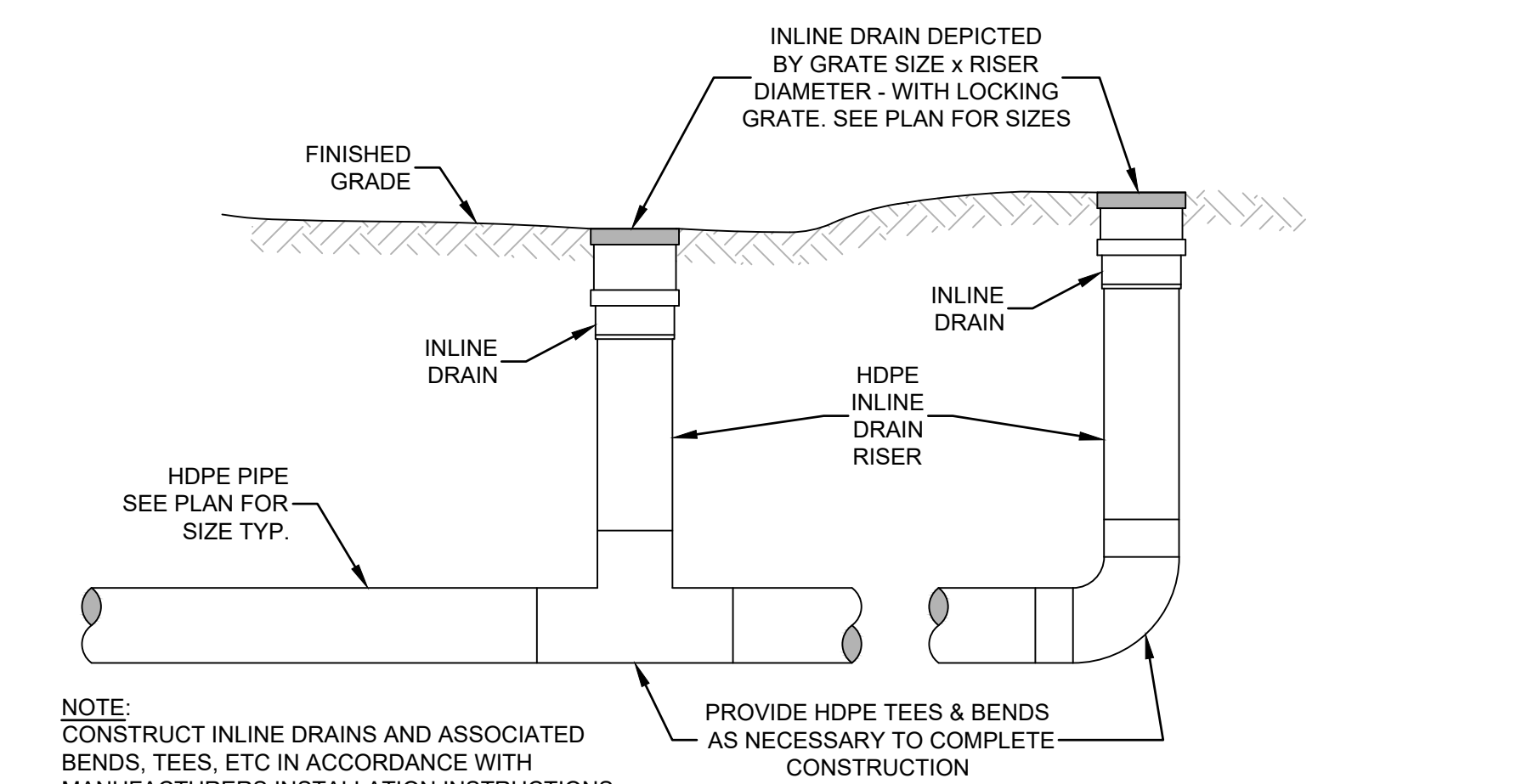
SWMF SCHEDULE		8
T.O.B. EL.	33.7	
25YR DHW	32.07	
3YR DHW	30.86	
N.W.L. EL.	29.0	
SC/SHELF EL.	23.0	
BOT. EL.	23.0	
ALT BOT. EL.	9.0	



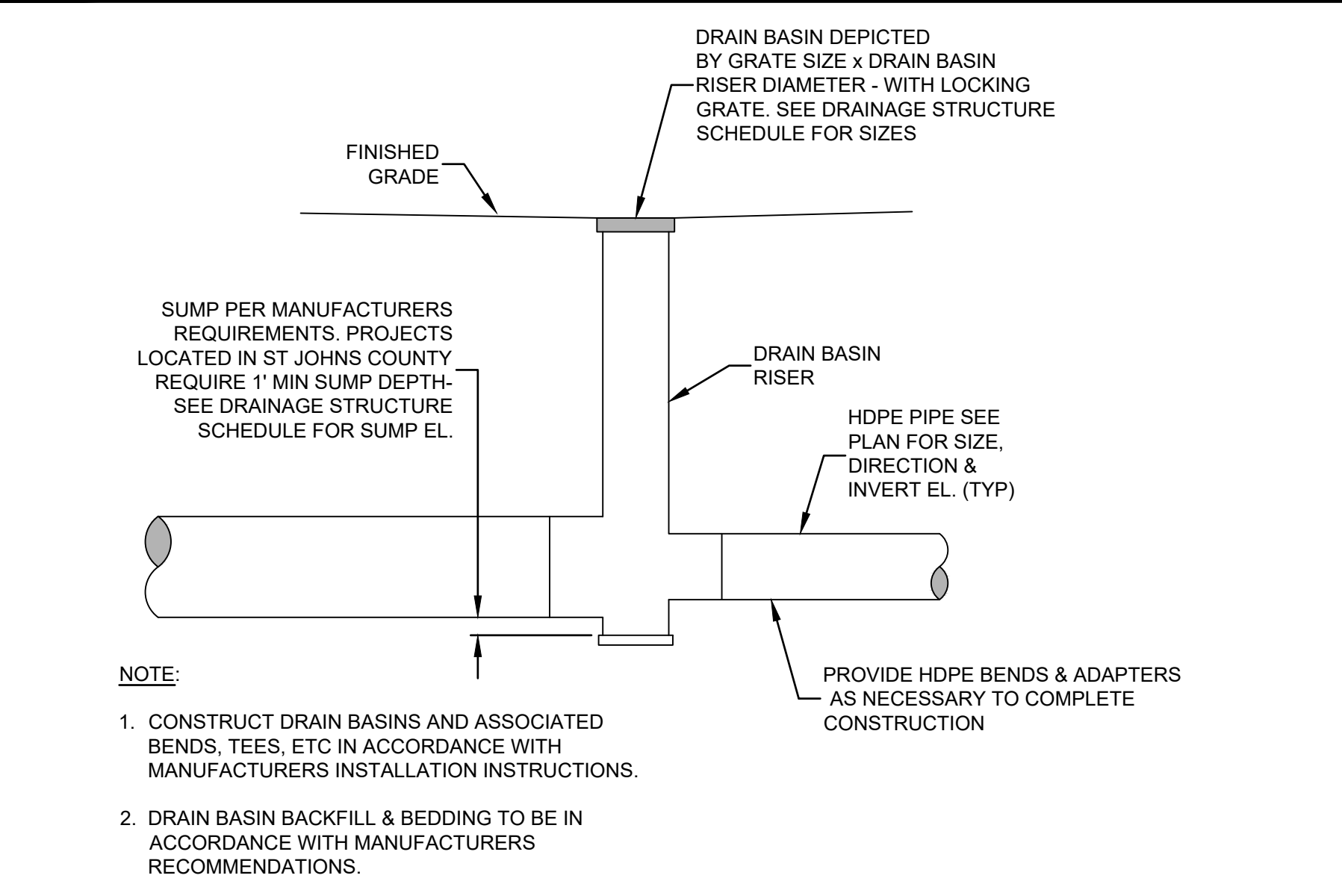
SECTION L3-L3



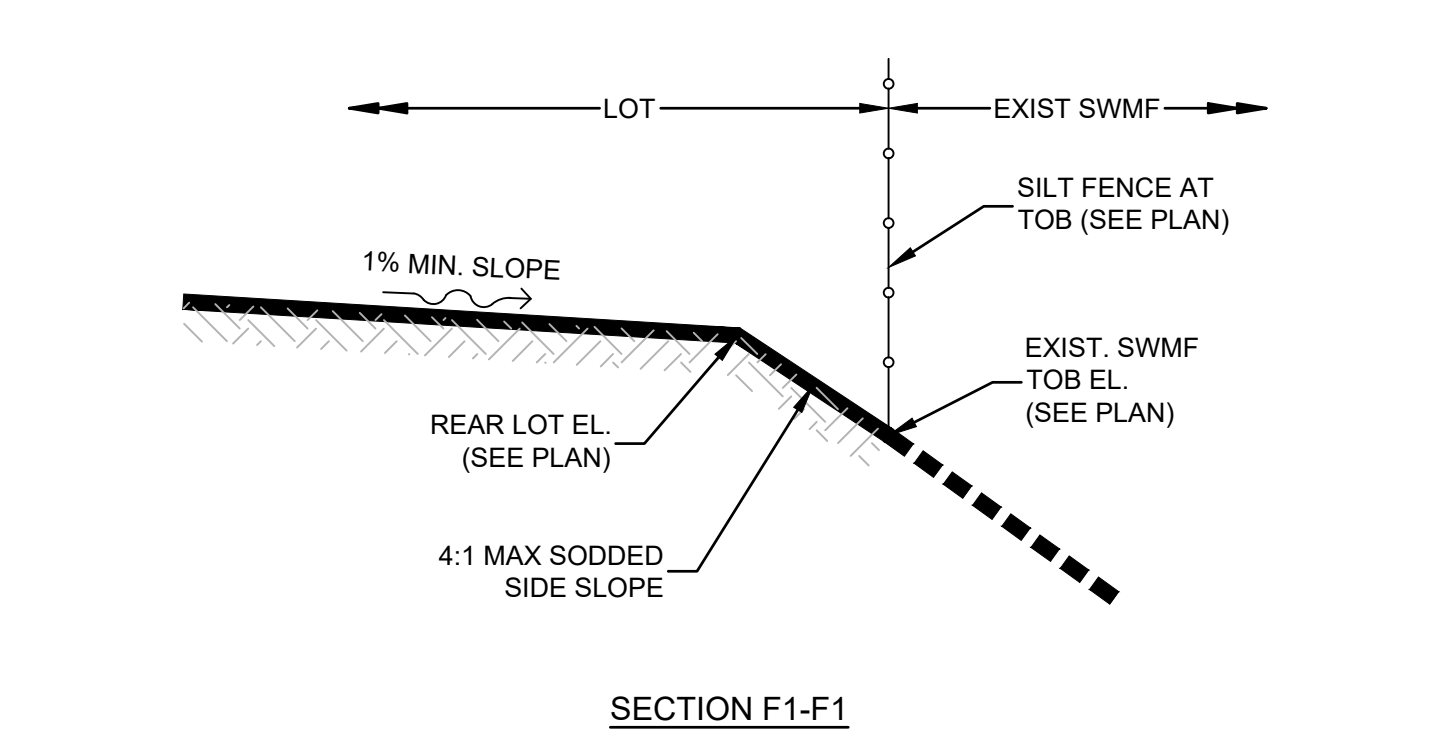
SECTION HW-HW @ WETLAND CROSSING



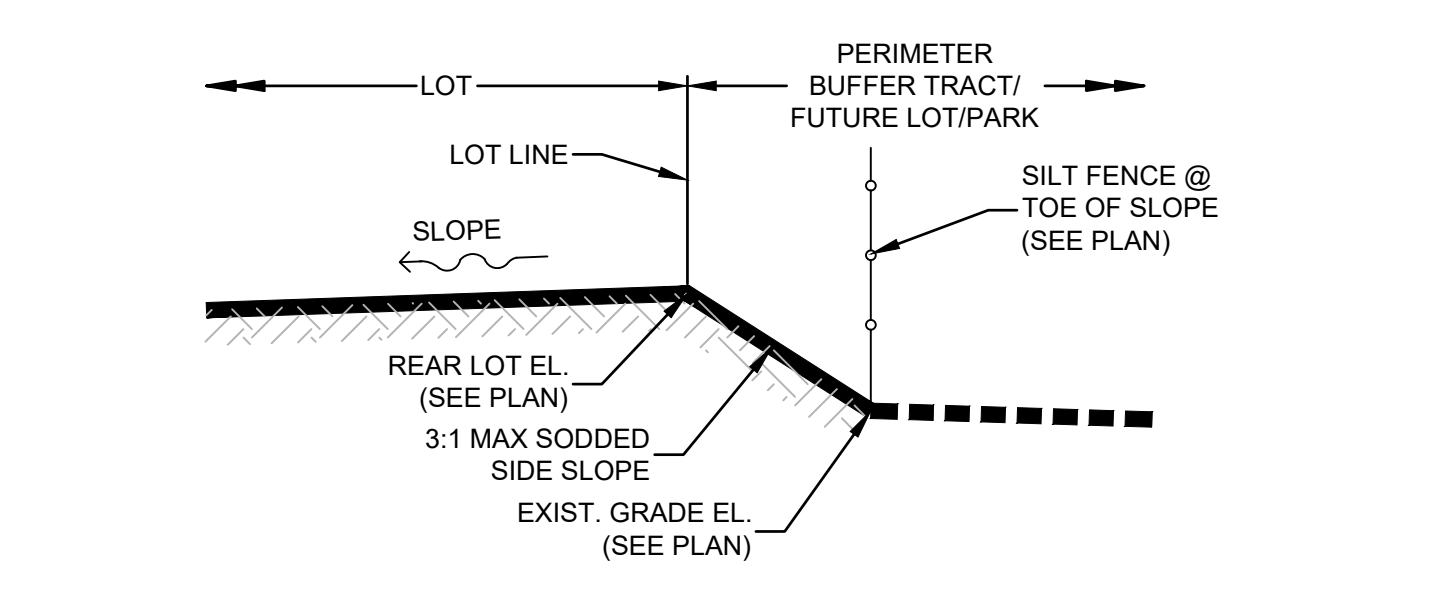
TYPICAL INLINE DRAIN INSTALLATION



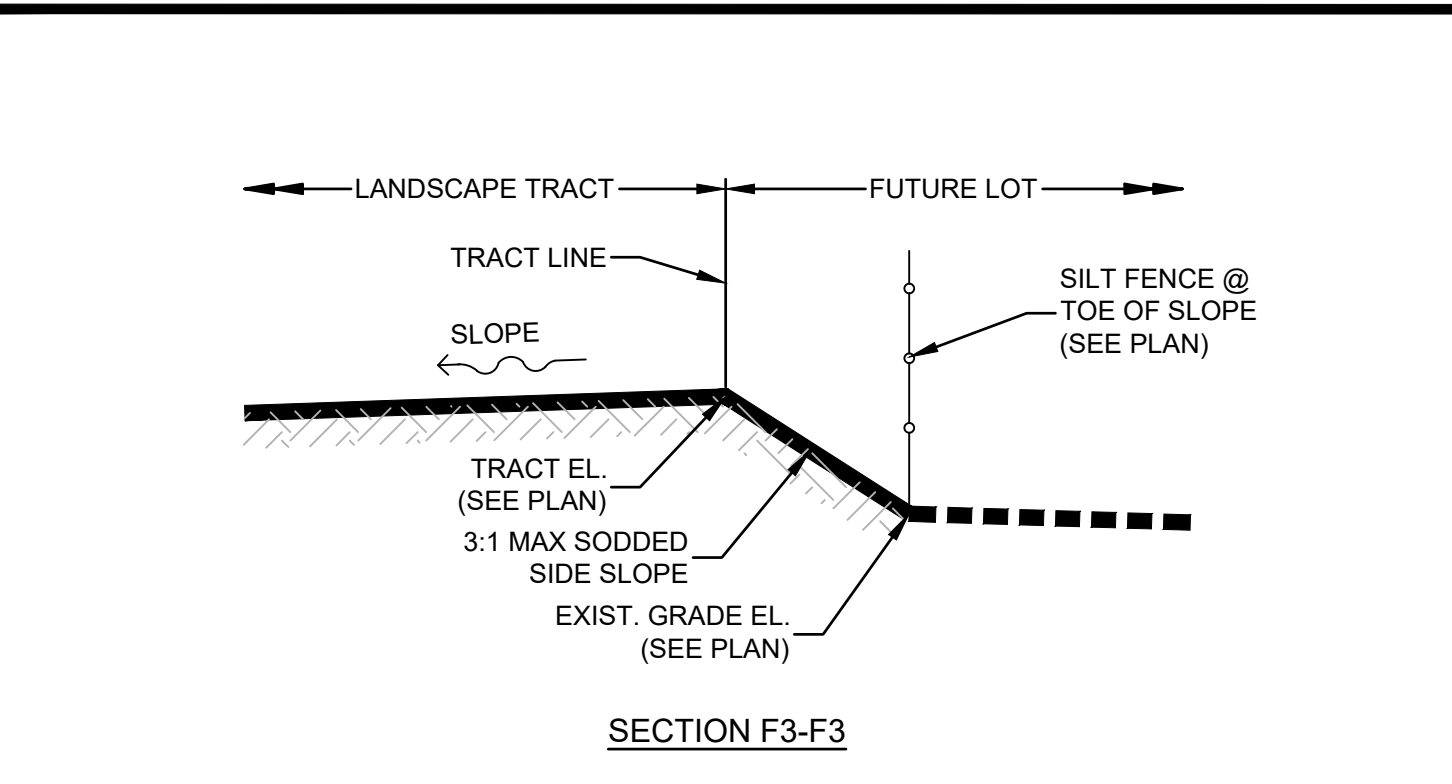
TYPICAL DRAIN BASIN INSTALLATION



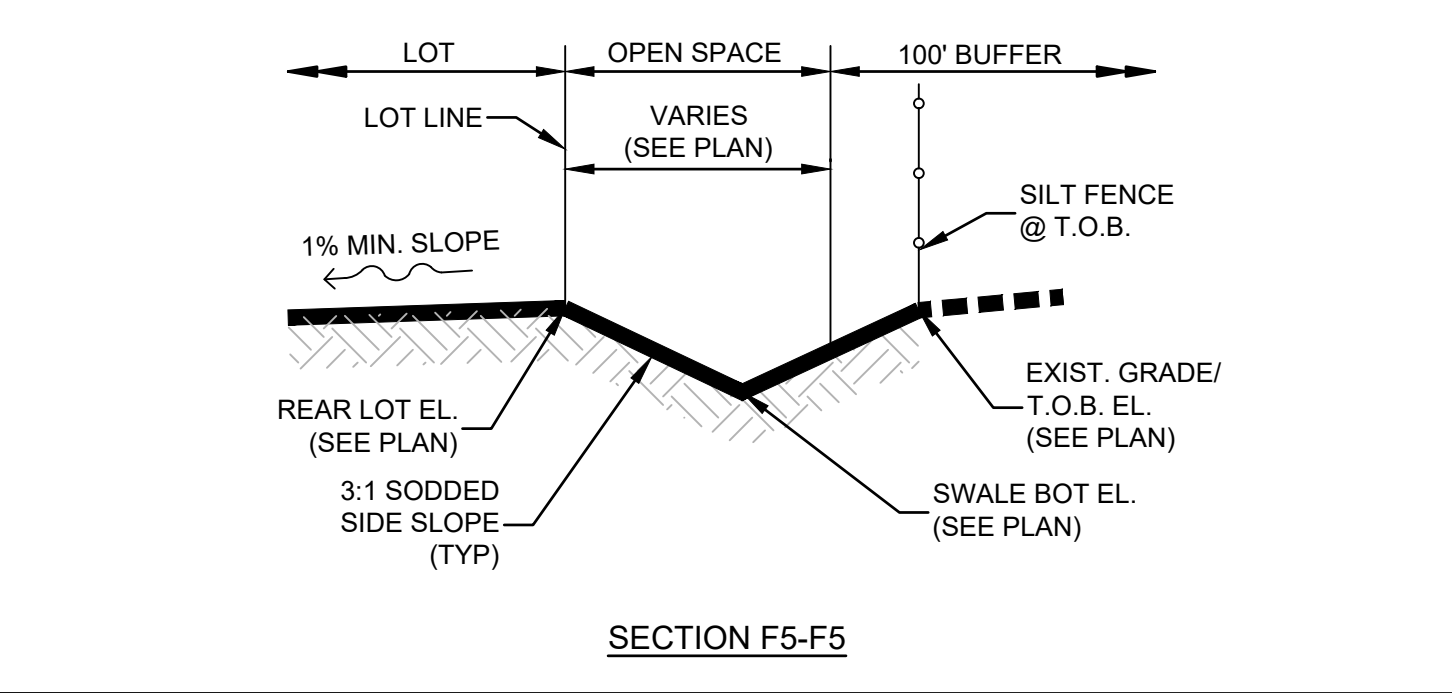
SECTION F1-F1



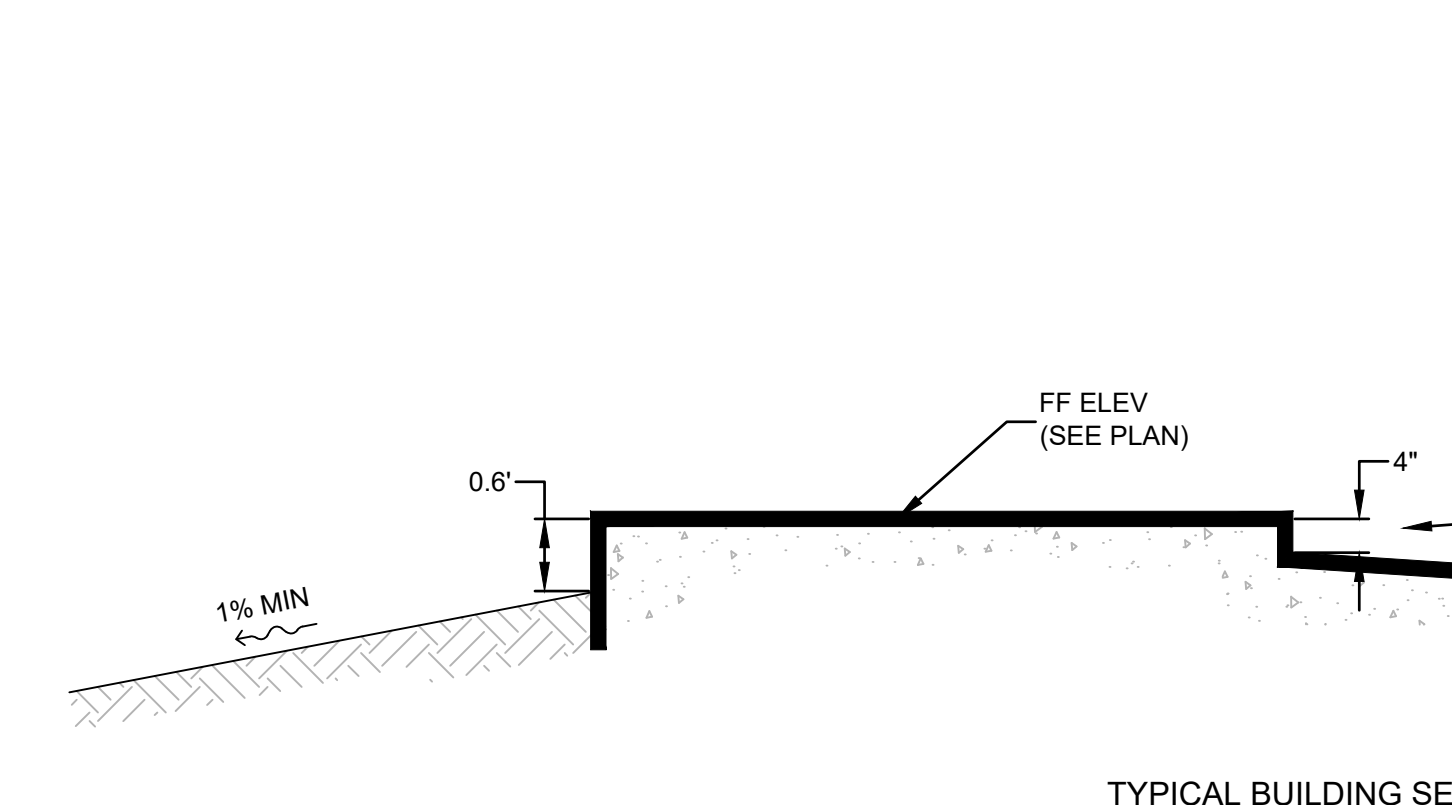
SECTION F2-F2



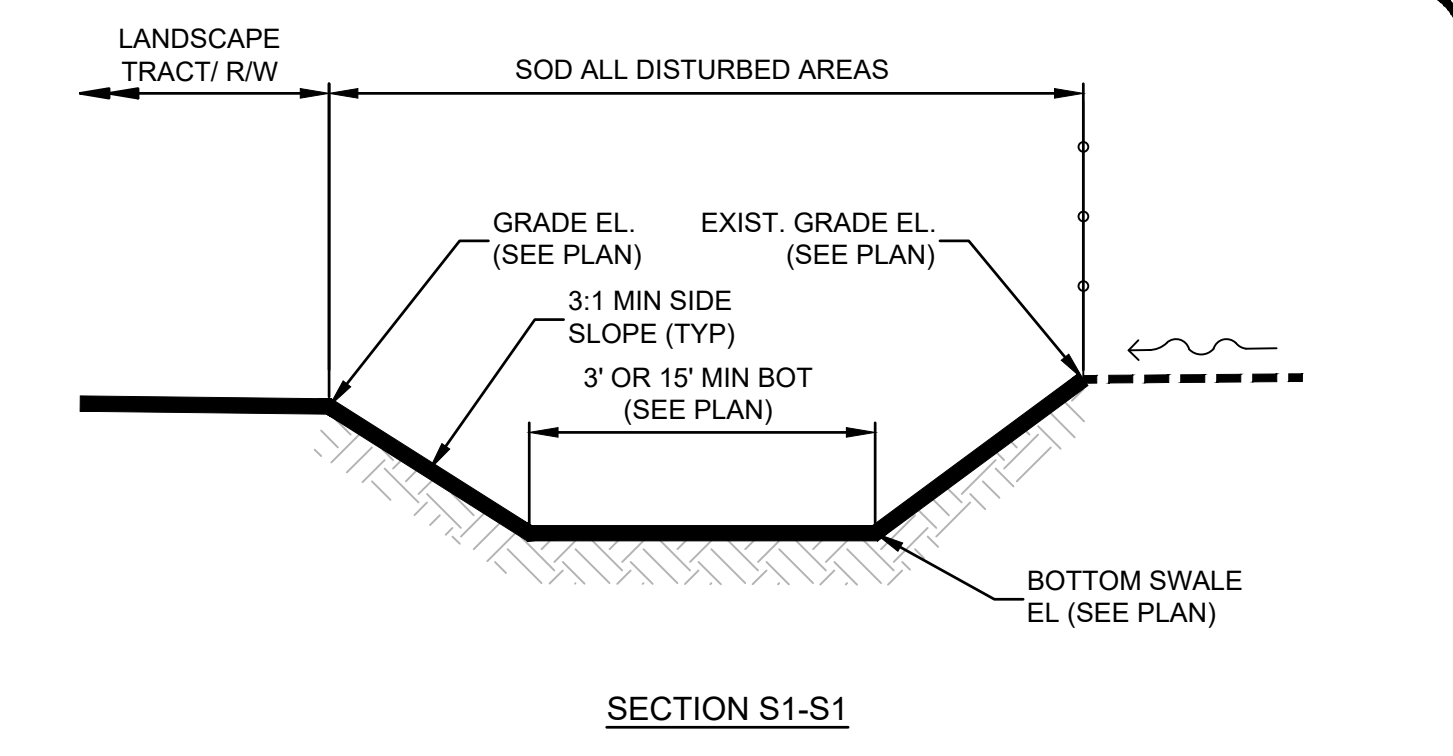
SECTION F3-F3



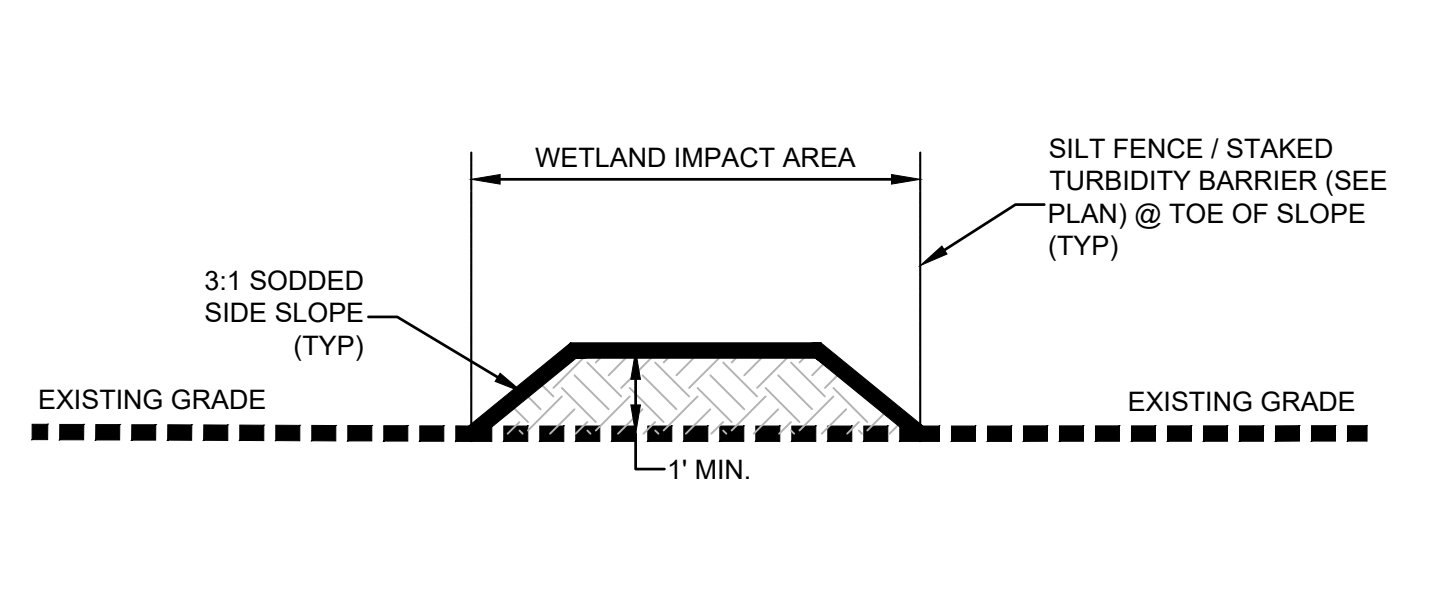
SECTION F4-F4



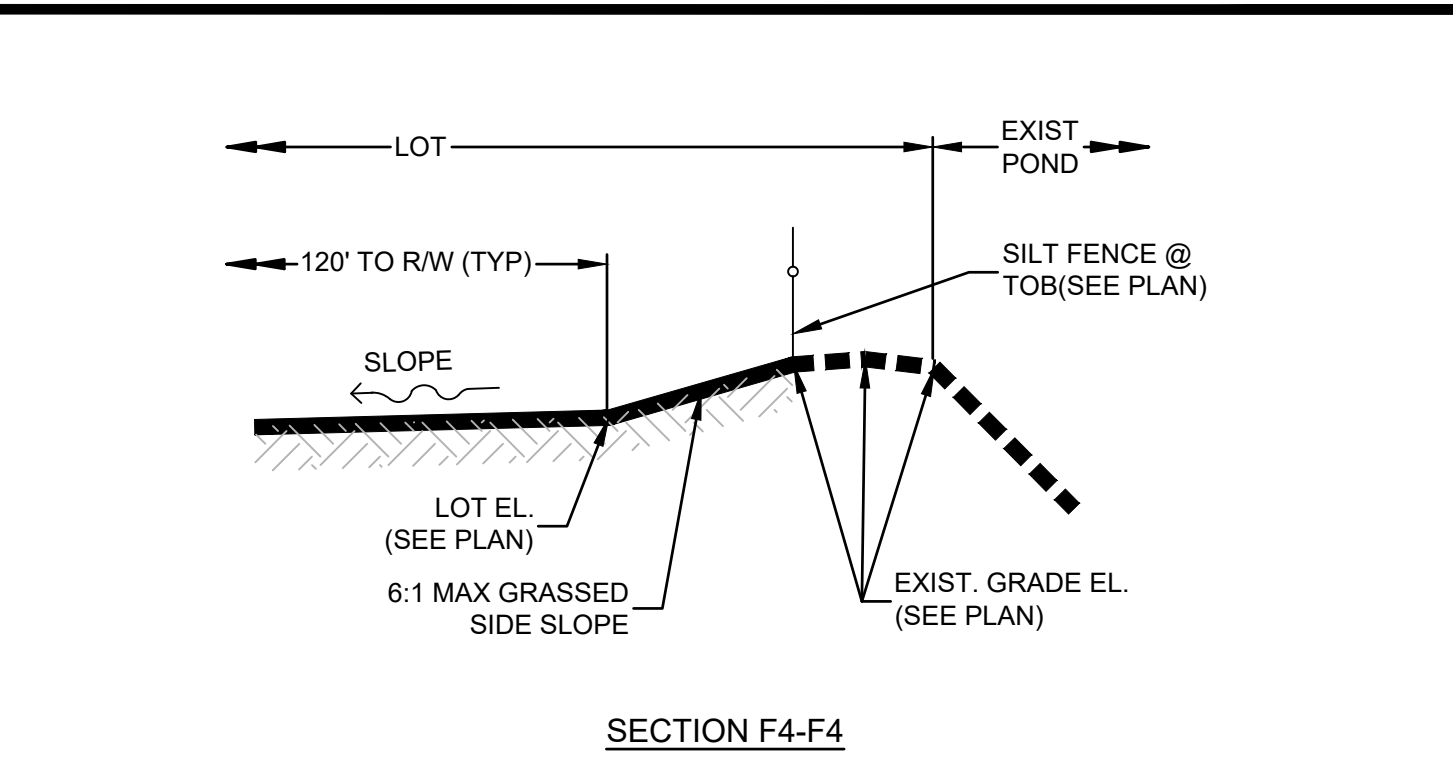
TYPICAL BUILDING SECTION



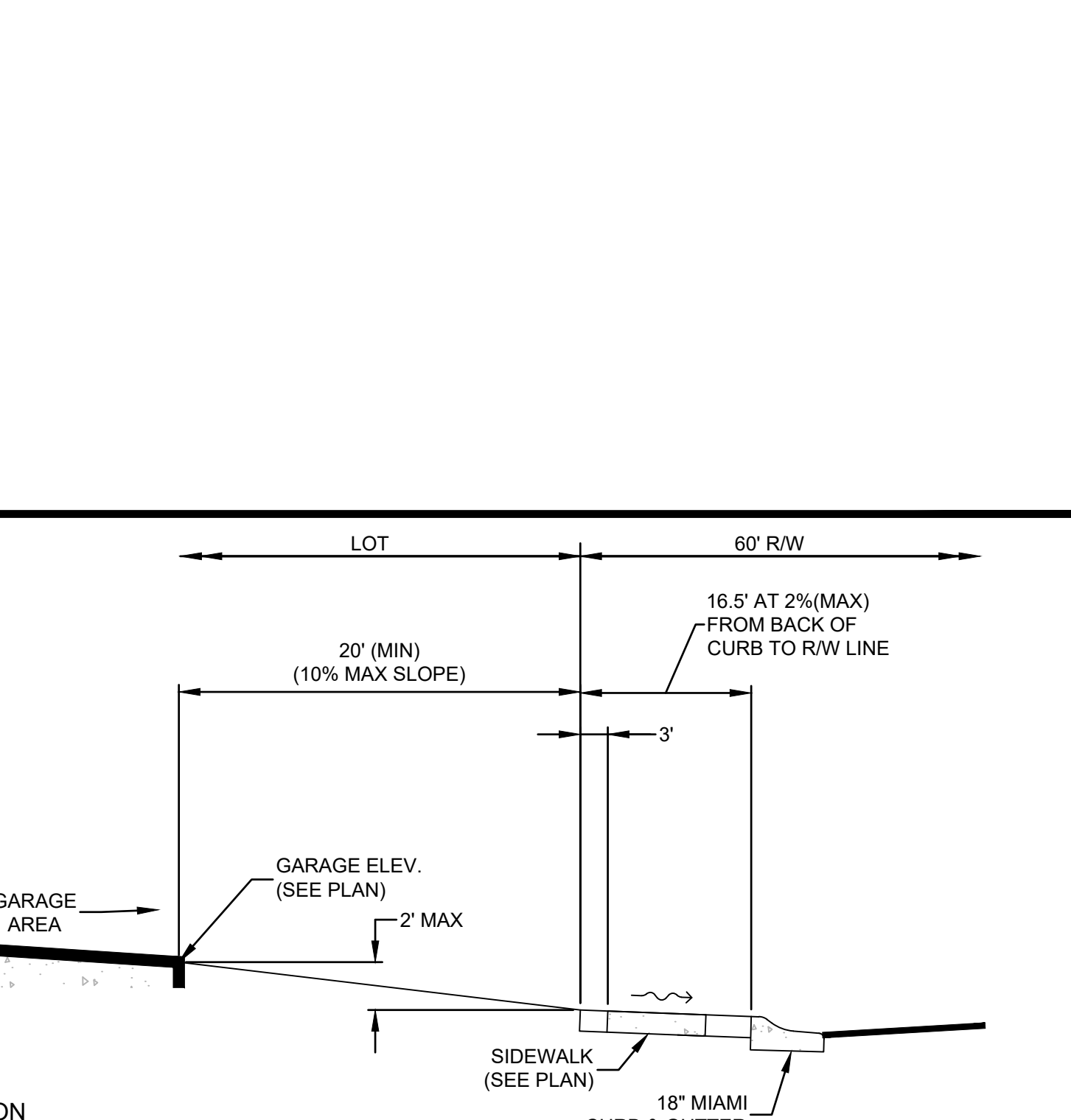
SECTION S1-S1



SECTION W-W



SECTION F5-F5



TYPICAL BUILDING SECTION

REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI	BY:
DRAWN BY: MR/NS/SM/SS	
CHECKED BY: VJD	
SCALE: N/A	
DATE: 9/21/2023	
PROJ. NO.: 2008-499-2	

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 CLAY COUNTY, FLORIDA  
 PAVING AND DRAINAGE DETAILS

VINCENT J. DUNN  
 LICENSE No. 39452  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER

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VINCENT J. DUNN ENGINEER NO. 39452  
 DAVID M. TAYLOR ENGINEER NO. 44184  
 GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 127 of 130  
**PDD-6**  
 DWG. NO.

**NOTES:**

- PROVIDE NO. 4 REBAR @ 6" O.C. HORIZONTALLY AT WEIR OPENING.
- CONC. DESIGN STRENGTH 4000 P.S.I.
- PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
- STRUCTURE GRATE NOT SHOWN, STRUCTURE GRATE SHALL BE FOR TYPE "E" INLET AND SHALL BE TRAFFIC BEARING UNLESS OTHERWISE NOTED.

**CONTROL STRUCTURE SCHEDULE**

STRUCT NO.	SWMF NO.	TOP OF STRUCT. EL.	BOTTOM OF STRUCT. EL.	PIPE INV. EL.	PIPE DIA.	WEIR EL.	WEIR LENGTH	WEIR LOCATION	BLEEDDOWN INV. EL.	BLEEDDOWN DIA.	ORIFICE * DIA.	(D) BLEEDDOWN DISTANCE	PHASE
S-174	24	23.70	17.50	19.90	30"	22.522, 22.22	48"112, 112"	W, N, S	21.00	6"	5.1"	20"	2A

\* ONLY ONE BLEEDDOWN PIPE TO RECEIVE ORIFICE DIAMETER. ADDITIONAL BLEEDDOWN PIPE TO REMAIN CAPPED AND DO NOT GLUE

TYPE "E" CONTROL STRUCTURE WITH DUAL BLEEDDOWN

**NOTES:**

- PROVIDE NO. 4 REBAR @ 6" O.C. HORIZONTALLY AT WEIR OPENING.
- CONC. DESIGN STRENGTH 4000 P.S.I.
- PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
- STRUCTURE GRATE NOT SHOWN, STRUCTURE GRATE SHALL BE FOR TYPE "H" INLET AND SHALL BE TRAFFIC BEARING UNLESS OTHERWISE NOTED.

**CONTROL STRUCTURE SCHEDULE**

STRUCT NO.	SWMF NO.	TOP OF STRUCT. EL.	BOTTOM OF STRUCT. EL.	PIPE INV. EL.	PIPE DIA.	WEIR EL.	WEIR LENGTH	WEIR LOCATION	PHASE
S-280C	10	32.50	25.00	26.00	48"	31.50	66" 27" 27"	N, E, W	2B
S-262	20	27.00	20.50	21.50	48"	24.60	66" 27" 27"	W, N, S	2B

\* TO BE BUILT IN PH2B & COVERED/PLUGGED FOR FUTURE PHASE

TYPE "H" CONTROL STRUCTURE

**NOTES:**

- PROVIDE NO. 4 REBAR @ 6" O.C. HORIZONTALLY AT WEIR OPENING.
- CONC. DESIGN STRENGTH 4000 P.S.I.
- PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
- STRUCTURE GRATE NOT SHOWN, STRUCTURE GRATE SHALL BE FOR TYPE "H" INLET AND SHALL BE TRAFFIC BEARING UNLESS OTHERWISE NOTED.

**CONTROL STRUCTURE SCHEDULE**

STRUCT NO.	SWMF NO.	TOP OF STRUCT. EL.	BOTTOM OF STRUCT. EL.	PIPE INV. EL.	PIPE DIA.	WEIR EL.	WEIR LENGTH	WEIR LOCATION	BLEEDDOWN INV. EL.	BLEEDDOWN DIA.	ORIFICE * DIA.	(D) BLEEDDOWN DISTANCE	PHASE
S-153	21	26.50	19.50	22.80	30"	24.60	48", 24", 24"	W, N, S	24.0	15"	13"	30"	2A

\* ONLY ONE BLEEDDOWN PIPE TO RECEIVE ORIFICE DIAMETER. ADDITIONAL BLEEDDOWN PIPE TO REMAIN CAPPED AND DO NOT GLUE

TYPE "H" CONTROL STRUCTURE WITH DUAL BLEEDDOWN

**NOTES:**

- PROVIDE NO. 4 REBAR @ 6" O.C. HORIZONTALLY AT WEIR OPENING.
- CONC. DESIGN STRENGTH 4000 P.S.I.
- PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
- STRUCTURE GRATE NOT SHOWN, STRUCTURE GRATE SHALL BE FOR TYPE "E" INLET AND SHALL BE TRAFFIC BEARING UNLESS OTHERWISE NOTED.

**CONTROL STRUCTURE SCHEDULE**

STRUCT NO.	SWMF NO.	TOP OF STRUCT. EL.	BOTTOM OF STRUCT. EL.	PIPE INV. EL.	PIPE DIA.	WEIR EL.	WEIR LENGTH	WEIR LOCATION	PHASE
S-290	23	27.30	21.00	23.90	36"	24.60	48", 19", 19"	W, N, S	3

TYPE "E" CONTROL STRUCTURE

**PLAN (CAST-IN-PLACE INLET SHOWN WITHOUT GRATE; PRECAST INLET SIMILAR)**

**SECTION AA (CAST-IN-PLACE INLET SHOWN PRECAST INLET SIMILAR)**

**SECTION BB (CAST-IN-PLACE INLET SHOWN PRECAST INLET SIMILAR)**

**SECTION AA (PRECAST INLET)**

**SECTION BB (PRECAST INLET)**

**INLET TYPE "V" TRANSITION APRON**

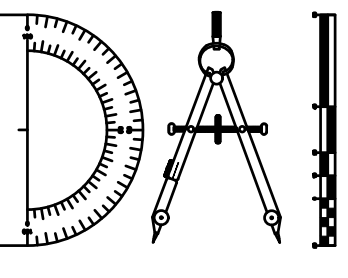
**OPTIONAL BAR SPACING**

**TWO REQUIRED PER INLET**  
 5" Steel Grate: Main Bars 5"x1"  
 Intermediate Bars 1 1/2"x1/4"  
 Reticuline Bars 1 1/2"x3/16"

TYPE "V" INLET

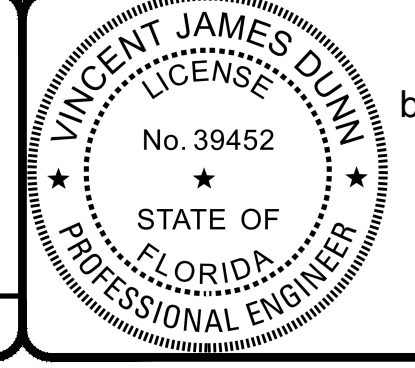
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI	BY:
DRAWN BY: MR/NS/SM/SS	
CHECKED BY: VJD	
SCALE: N/A	
DATE: 9/21/2023	
PROJ. NO.: 2008-499-2	



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Sheet No. 128 of 130

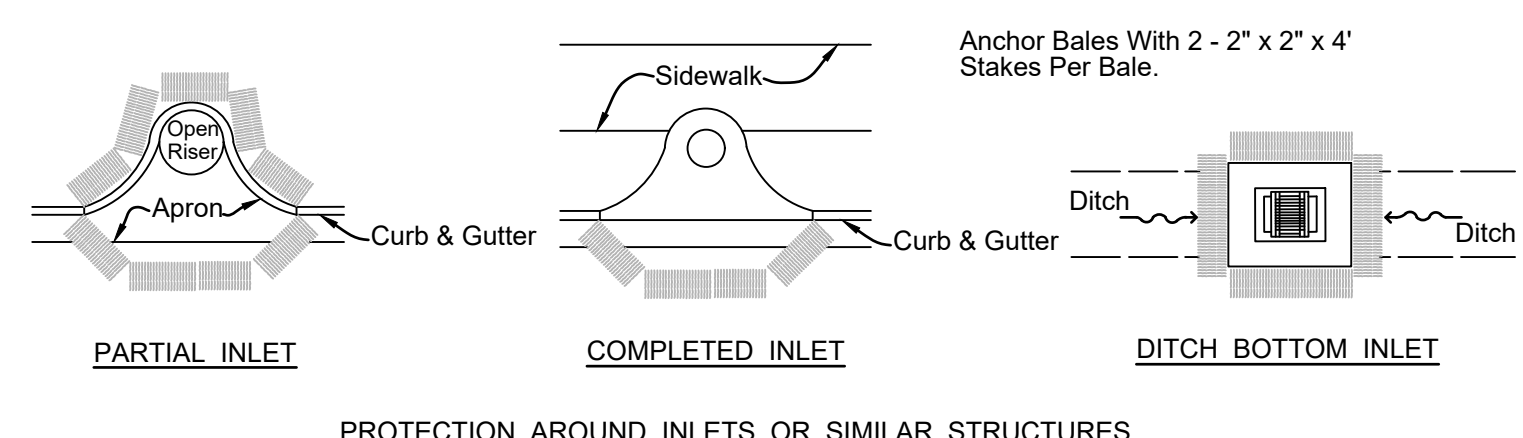
**PDD-7**

DWG. NO.

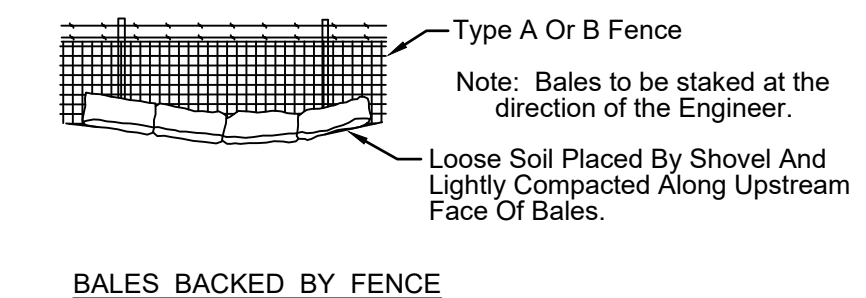


**EROSION AND SEDIMENT CONTROL NOTES**

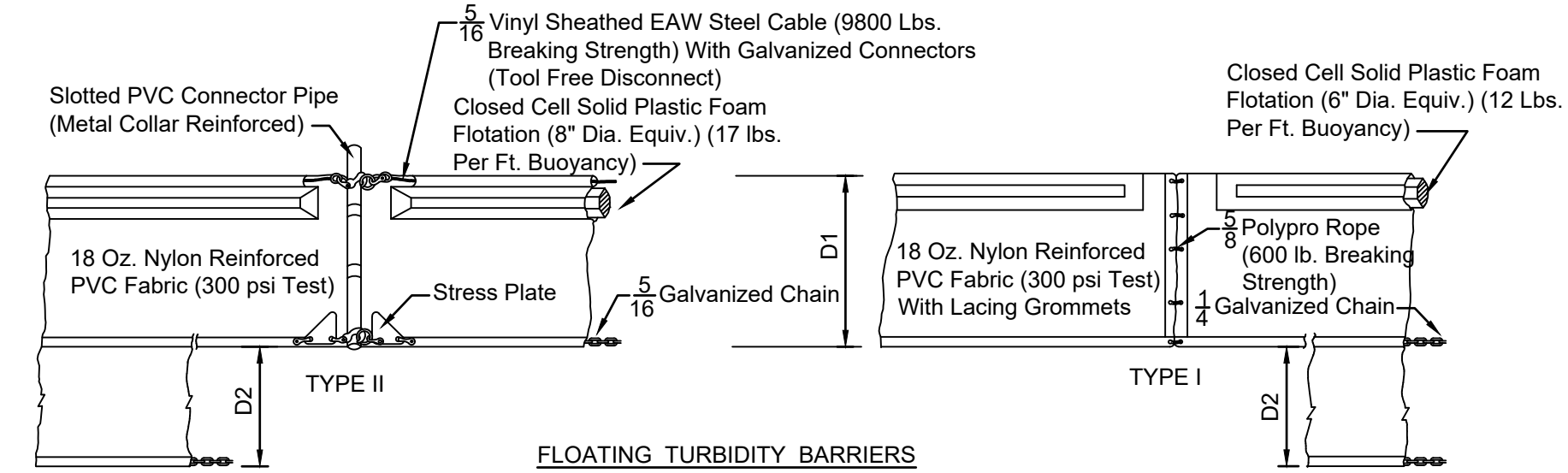
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
- THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
- ADDITIONAL PROTECTION - ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
- CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
- WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.
- FDOT NO. 1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED IN D-903. THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
- IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
- BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.
- BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
- THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 8 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
- EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.
- LOOSE SYNTHETIC MATERIAL SHOULD BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.
- SYNTHETIC BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
- CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.
- NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SYNTHETIC BALE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
- SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-THIRD THE HEIGHT OF THE BARRIER.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
- THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
- SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/4 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (F.D.E.R.) CHAPTER 6.
- EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAIL SHEET FOR TYPICAL CONSTRUCTION.
- ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
- SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
- ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
- DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
- ALL DISTURBED AREAS TO BE STABILIZED THROUGH COMPACTION, SILT SCREENS, SYNTHETIC BALES, AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.
- ALL DEWATERING, EROSION, AND SEDIMENT CONTROL TO REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION AND REMOVED ONLY WHEN AREAS HAVE BEEN STABILIZED.
- THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
- THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER MANAGEMENT DISTRICT INQUIRIES, RELATIVE TO COMPLIANCE OF SJRWMD FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.



**PROTECTION AROUND INLETS OR SIMILAR STRUCTURES**

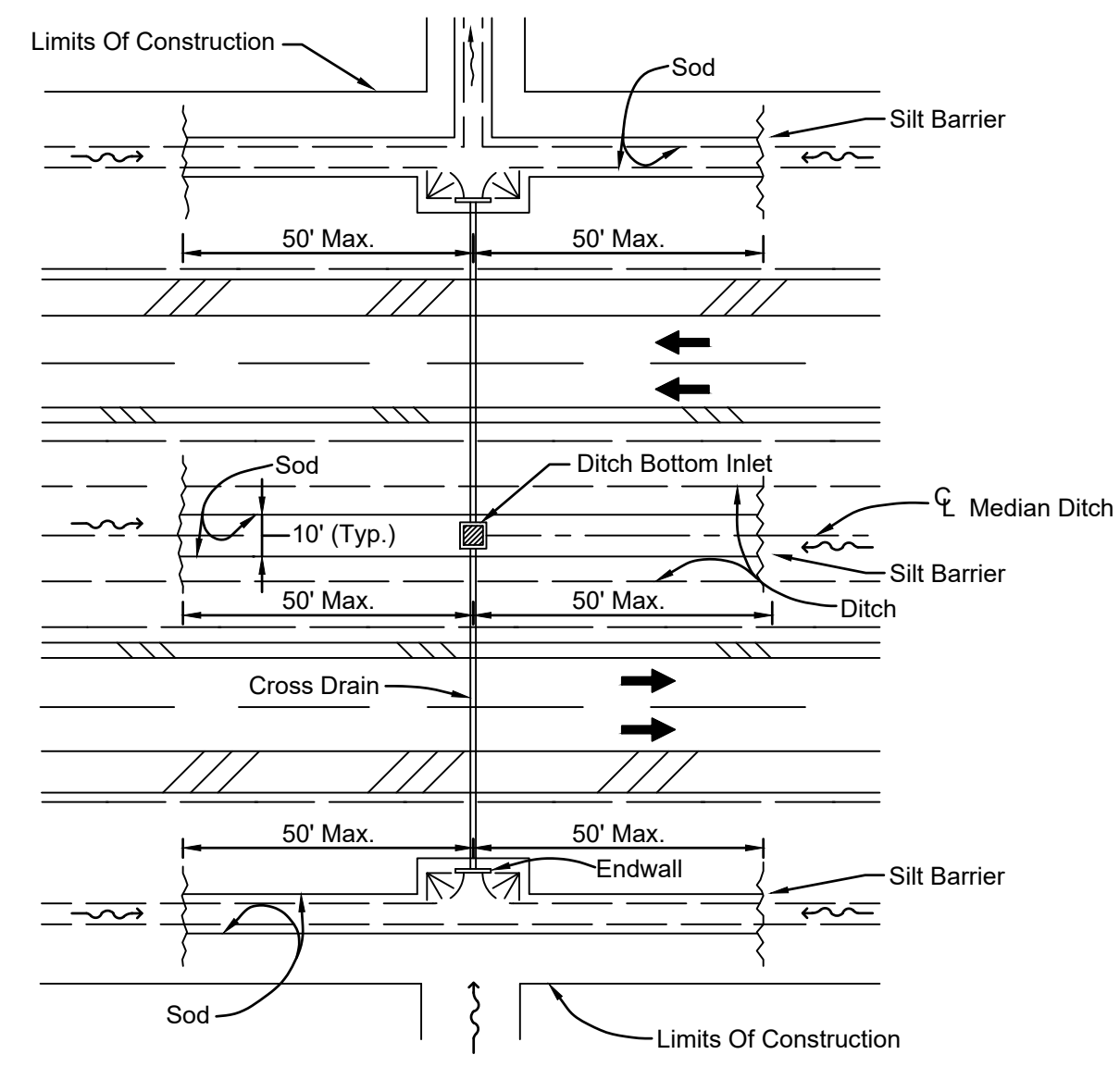


**BALES BACKED BY FENCE**

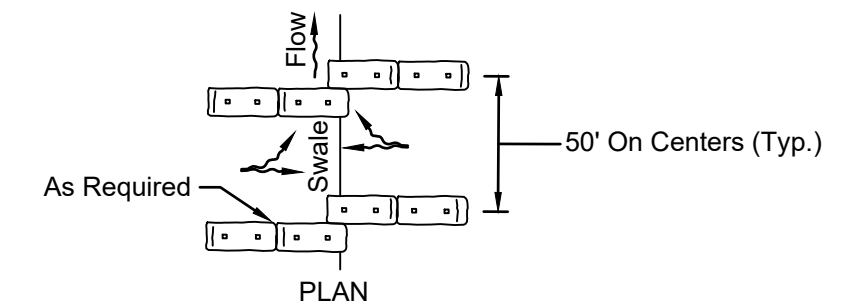


**FLOATING TURBIDITY BARRIERS**

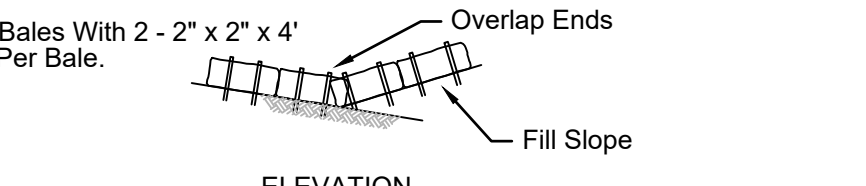
**NOTE:**  
COMPONENTS OF TYPES I & TYPE II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.



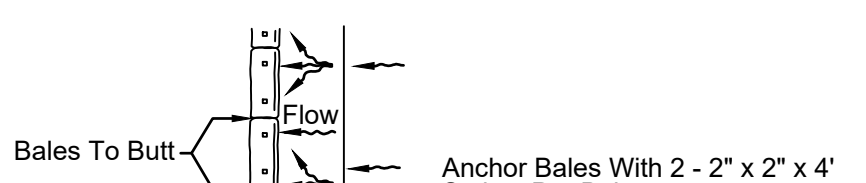
**DITCH INSTALLATIONS AT DRAINAGE STRUCTURES**



**BARRIERS FOR FILL SLOPES**



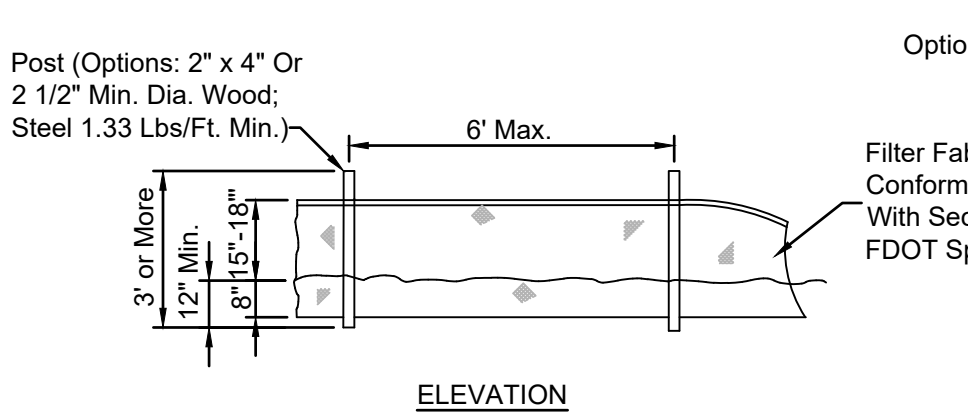
**BARRIERS FOR FILL SLOPES**



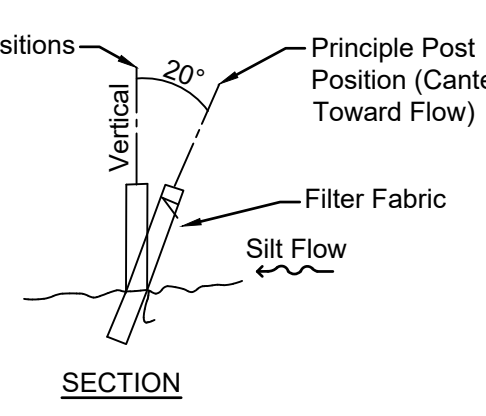
**BARRIERS FOR FILL SLOPES**

**SYNTHETIC BALE LOCATION**

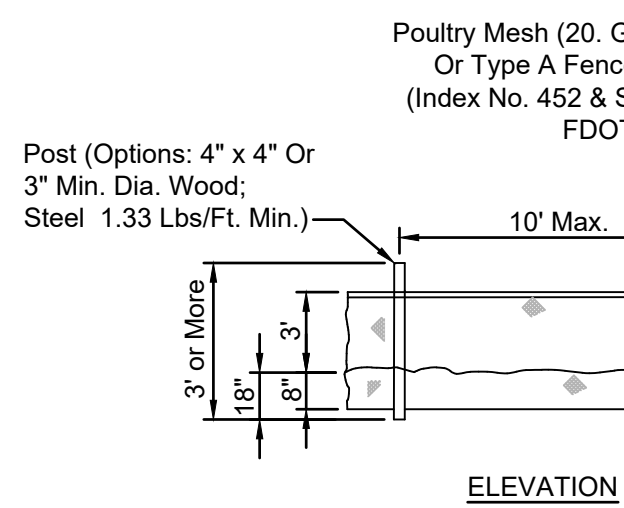
(D-901)  
N.T.S.



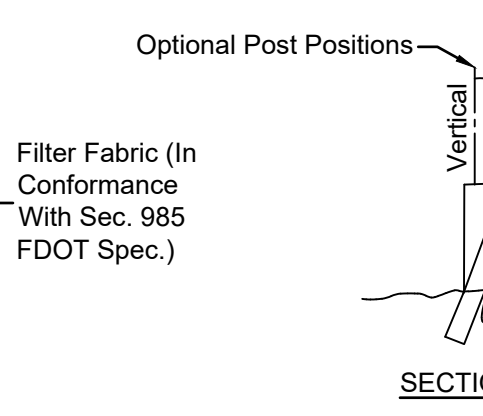
**ELEVATION**



**SECTION**



**ELEVATION**



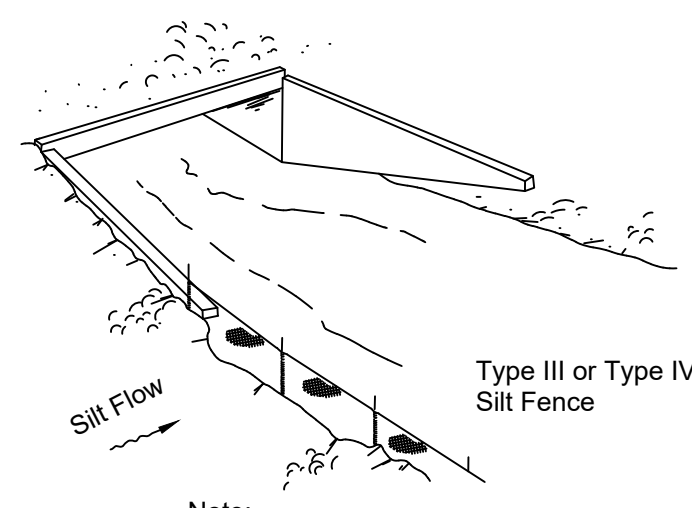
**SECTION**

**Note:**  
Silt Fence to be paid for under the contract lump sum price for Erosion and Sediment Control.

**Note:**  
Silt Fence to be paid for under the contract lump sum price for Erosion and Sediment Control.

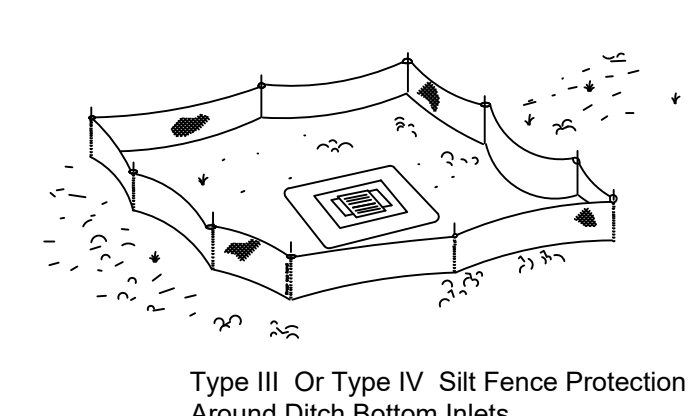
**TYPE III SILT FENCE**

**TYPE IV SILT FENCE**

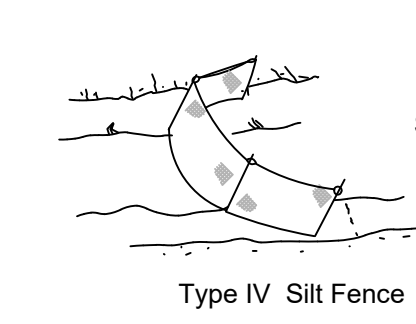


**Note:**

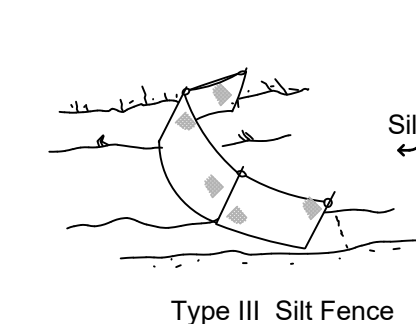
Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.



**Type III Or Type IV Silt Fence Protection Around Ditch Bottom Inlets.**



**Type IV Silt Fence**



**Type III Silt Fence**

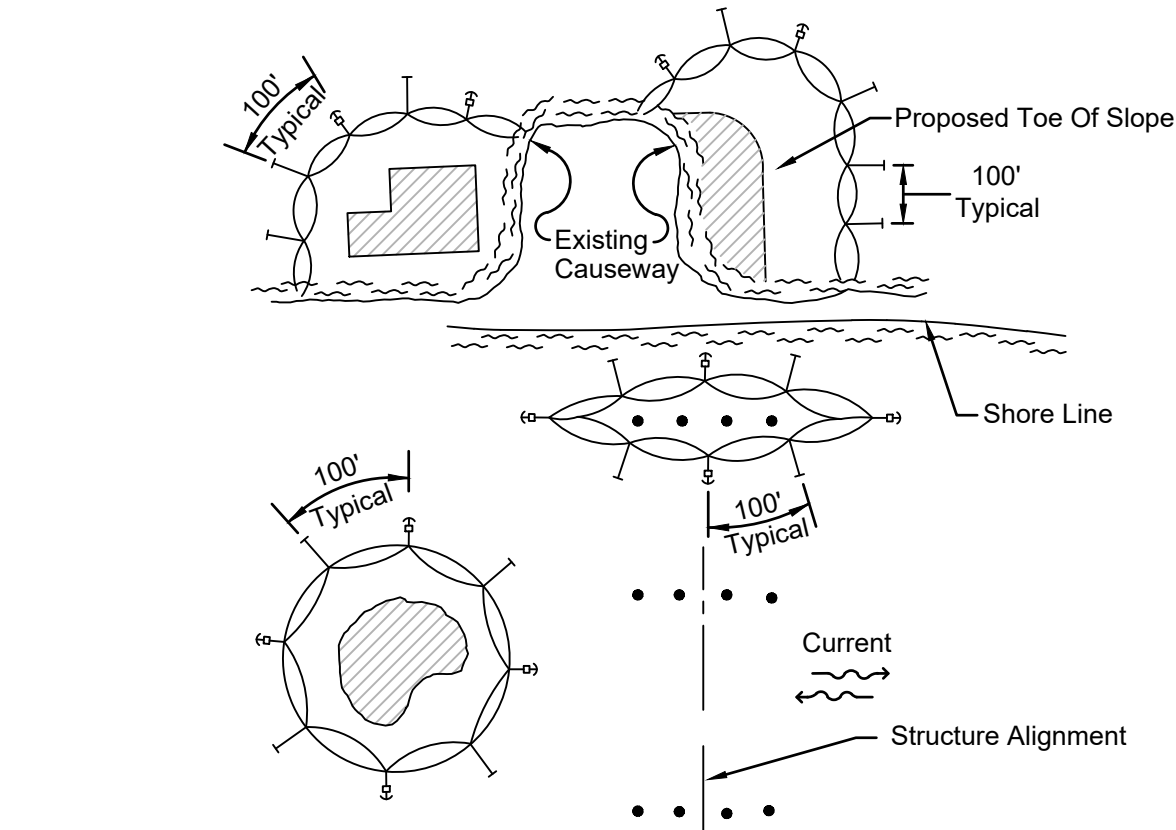
**Note:**  
Spacing for Type III & TYPE IV Fence to be in accordance with Chart 1, Sheet 1 of 3, FDOT Index No. 102 and ditch installations at drainage structures Sheet 2 of 3, FDOT Index No. 102.

**SILT FENCE APPLICATIONS**

**SILT FENCE TYPE III & IV**

(D-908)  
N.T.S.

**NOTE:**  
WHERE FDOT SPECS AND INDEX ARE REFERENCED, PLEASE REFER TO FDOT ROADWAY & TRAFFIC DESIGN STANDARDS, AND FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.



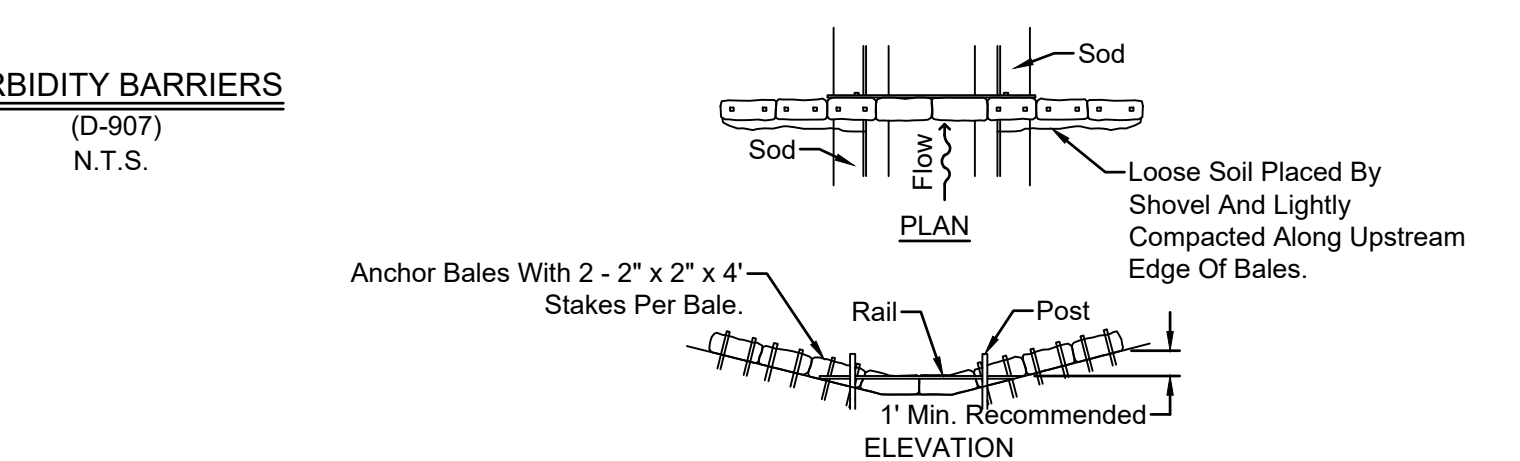
**NOTES:**

- Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
- Number and spacing of anchors dependent on current velocities.
- Deployment of barrier around pile locations may vary to accommodate construction operations.
- Navigation may require segmenting barrier during construction operations.
- For additional information see Section 104 of the FDOT Standard Specifications.

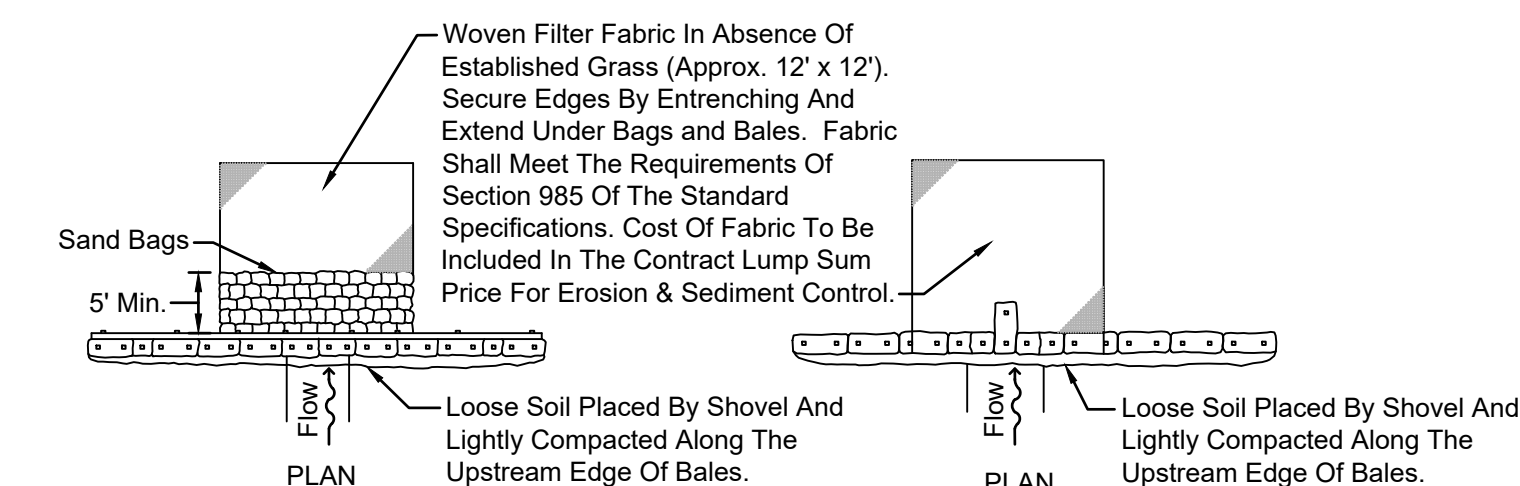
**TURBIDITY BARRIER APPLICATIONS**

**TURBIDITY BARRIERS**

(D-907)  
N.T.S.



**Barrier for Paved Ditch**



**ELEVATION**

**TYPE II**

**BARRIER FOR UNPAVED DITCHES**

**SYNTHETIC BALE BARRIERS TYPE I & II**

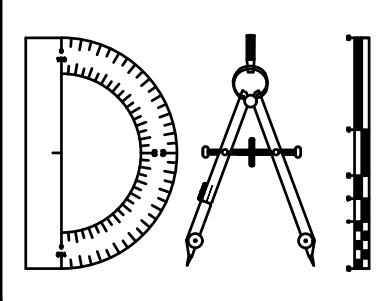
(D-912)  
N.T.S.

**Application and Spacing:** The use of Types I & II bale barriers should be limited to the conditions outlined in Chart 1, Sheet 1 of 3, Index No. 102

P:\2008-499-2 THE ROOKERY PHASE 2\ENG PLANS\499 2 SPP.DWG9/21/2023 7:20 AM Mike Reilly

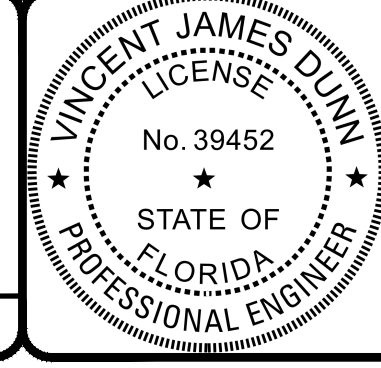
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI
DRAWN BY: MR/NS/SM/SS
CHECKED BY: VJD
SCALE: N/A
DATE: 9/21/2023
PROJ. NO.: 2008-499-2



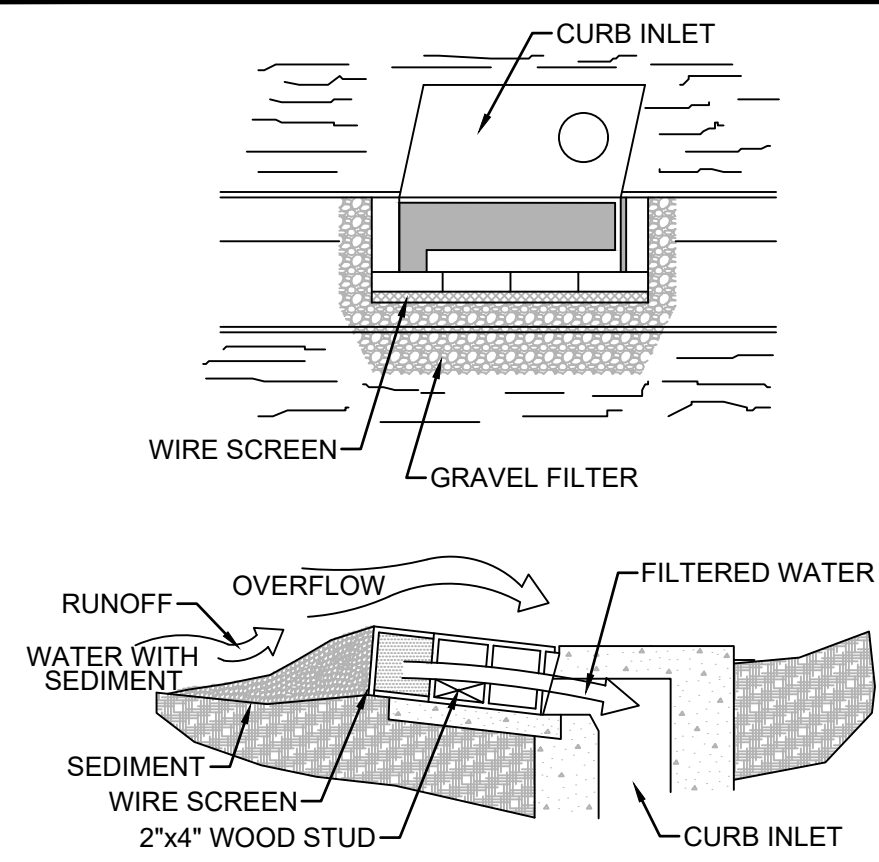
**Dunn & Associates, Inc.**  
CIVIL ENGINEERS / LAND PLANNERS  
8647 Baypine Road, Suite 200  
Jacksonville, Florida 32256  
Phone: (904)363-8916 Fax: (904)363-8917  
www.dunneng.com

**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
CLAY COUNTY, FLORIDA  
**STORMWATER POLLUTION PREVENTION PLAN**



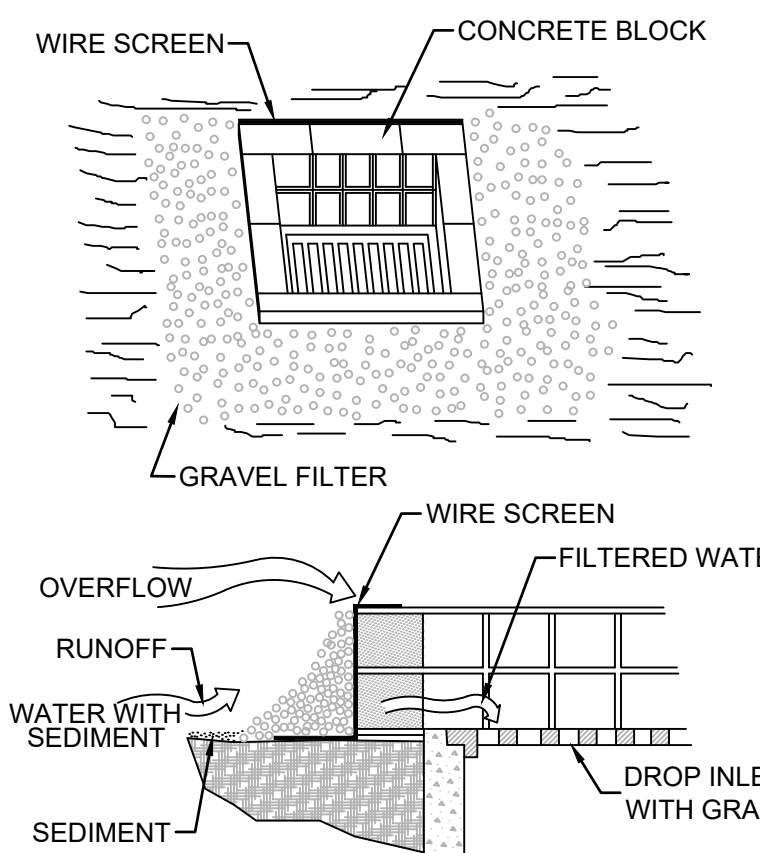
This item has been electronically signed and sealed by Vincent J. Dunn, P.E. on 09/21/2023 using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.  
VINCENT J. DUNN ENGINEER NO. 39452  
DAVID M. TAYLOR ENGINEER NO. 44184  
GLEN R. WIEGER ENGINEER NO. 81412

Sheet No. 129 of 130  
**SPP-1**  
DWG. NO.



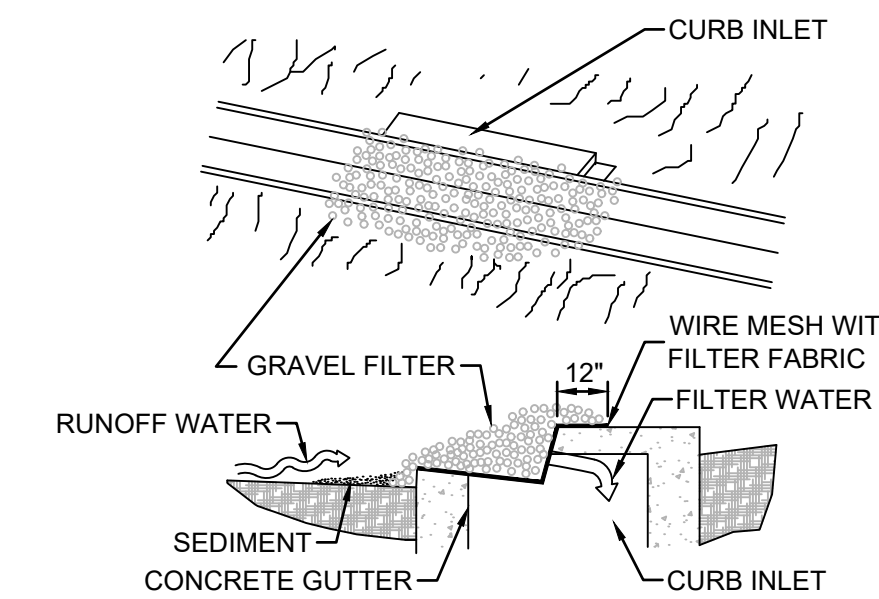
**SPECIFIC APPLICATION**  
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

**BLOCK & GRAVEL CURB INLET SEDIMENT FILTER**  
(D-902)  
N.T.S.



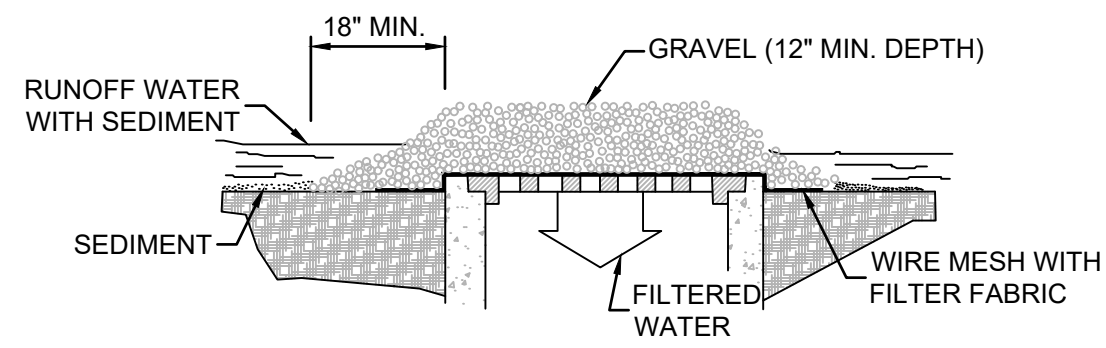
**SPECIFIC APPLICATION**  
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

**BLOCK & GRAVEL DROP INLET SEDIMENT FILTER**  
(D-904)  
N.T.S.



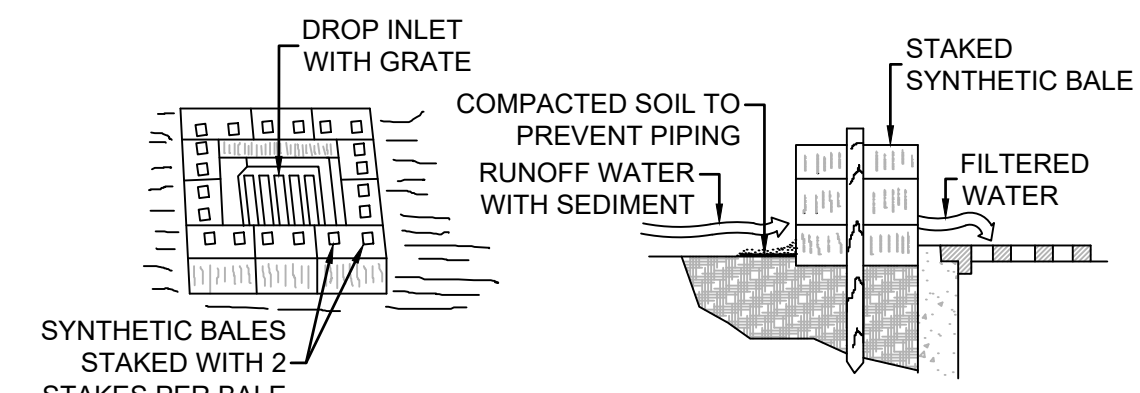
**SPECIFIC APPLICATION**  
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

**GRAVEL CURB INLET SEDIMENT FILTER**  
N.T.S.



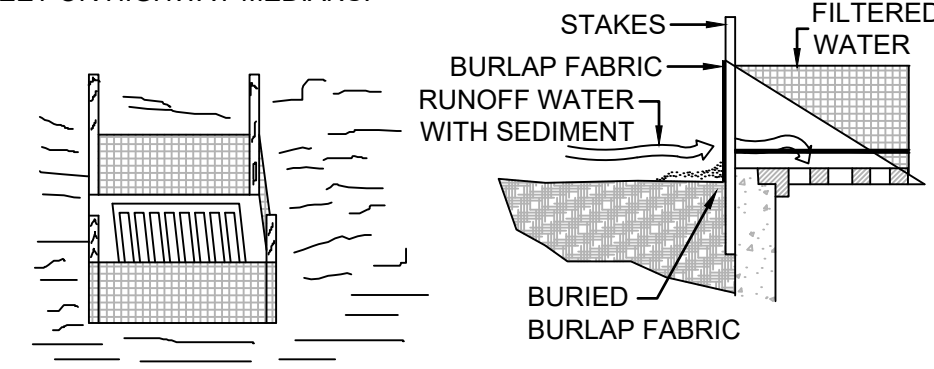
**SPECIFIC APPLICATION**  
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

**GRAVEL INLET SEDIMENT TRAP**  
(D-903)  
N.T.S.



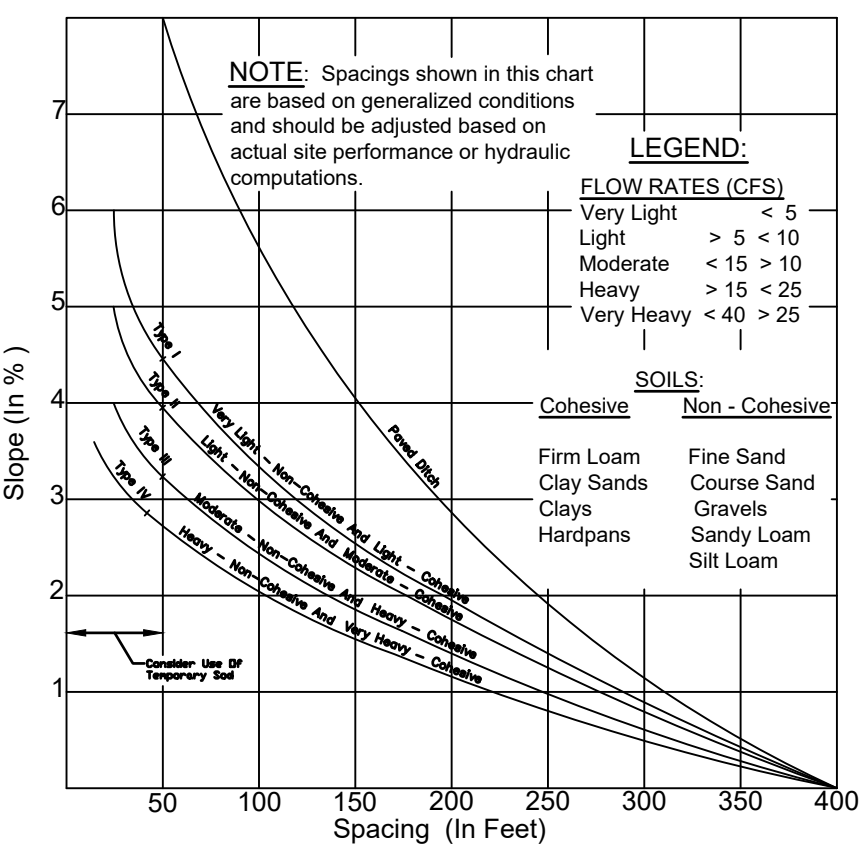
**SPECIFIC APPLICATION**  
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

**SYNTHETIC BALE SEDIMENT FILTER**  
N.T.S.



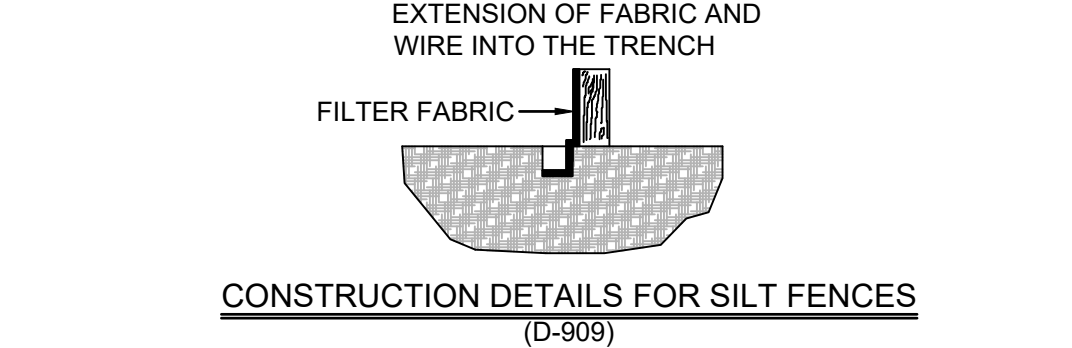
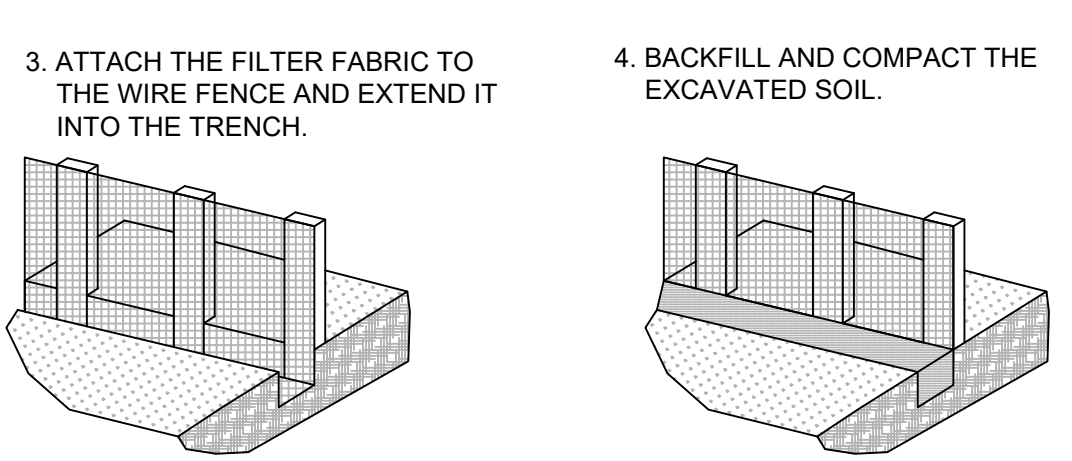
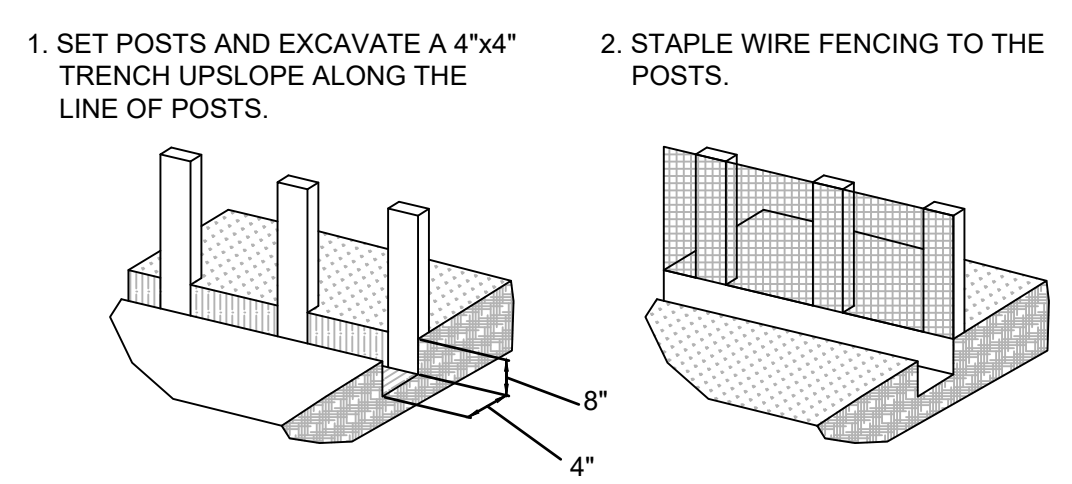
**SPECIFIC APPLICATION**  
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

**DROP INLET SEDIMENT TRAP**  
(D-905)  
N.T.S.

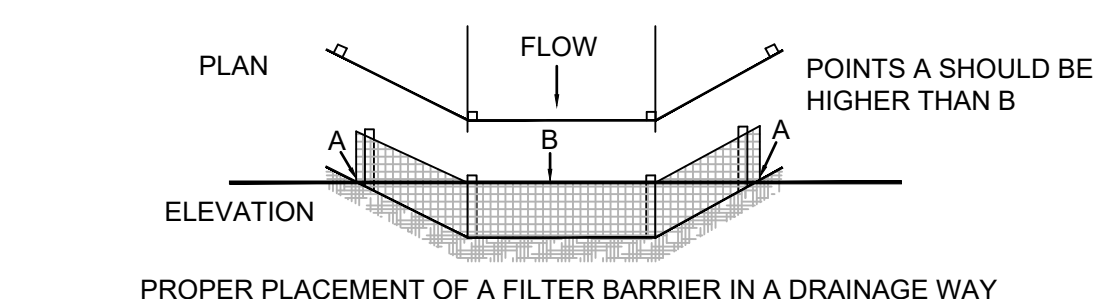
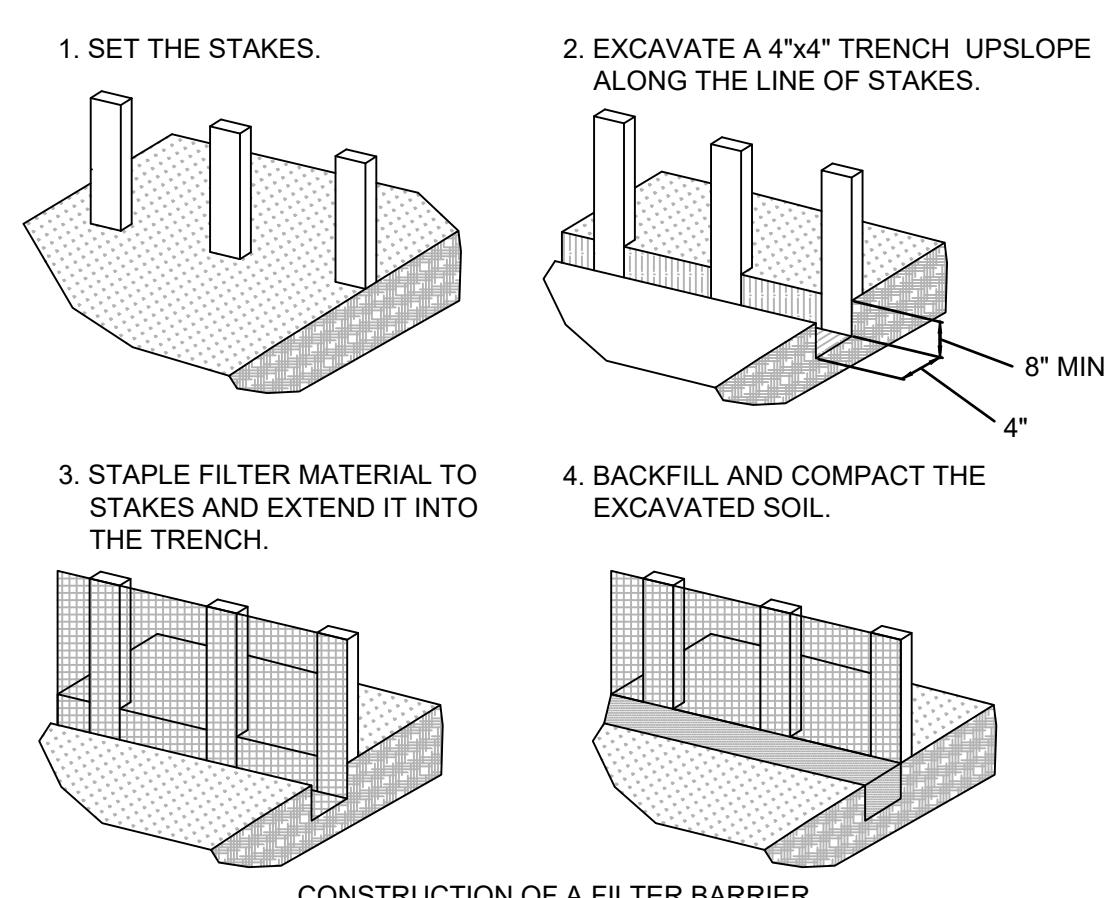


**CHART 1**  
RECOMMENDED SPACING FOR TYPE I AND TYPE II SYNTHETIC BALE BARRIERS, AND TYPE III AND TYPE IV SILT FENCES AND PAVED DITCH SYNTHETIC BALE BARRIERS

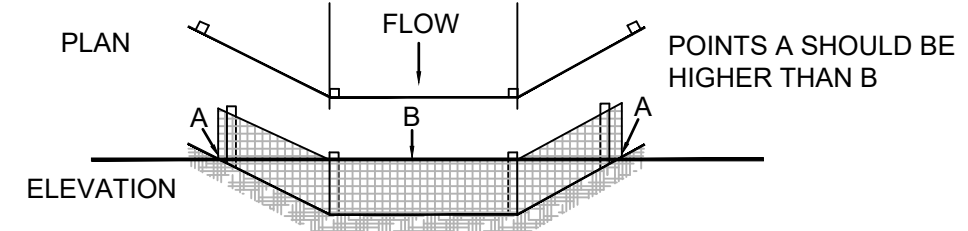
**SPACING RECOMMENDATION FOR SILT FENCES & SYNTHETIC BALES**  
(D-906)  
N.T.S.



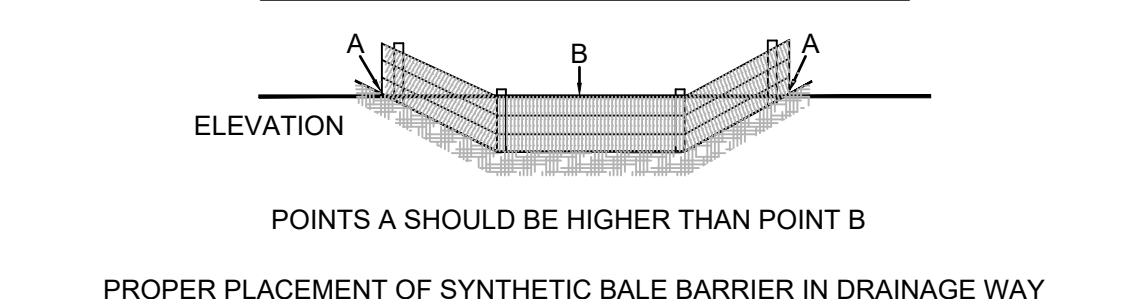
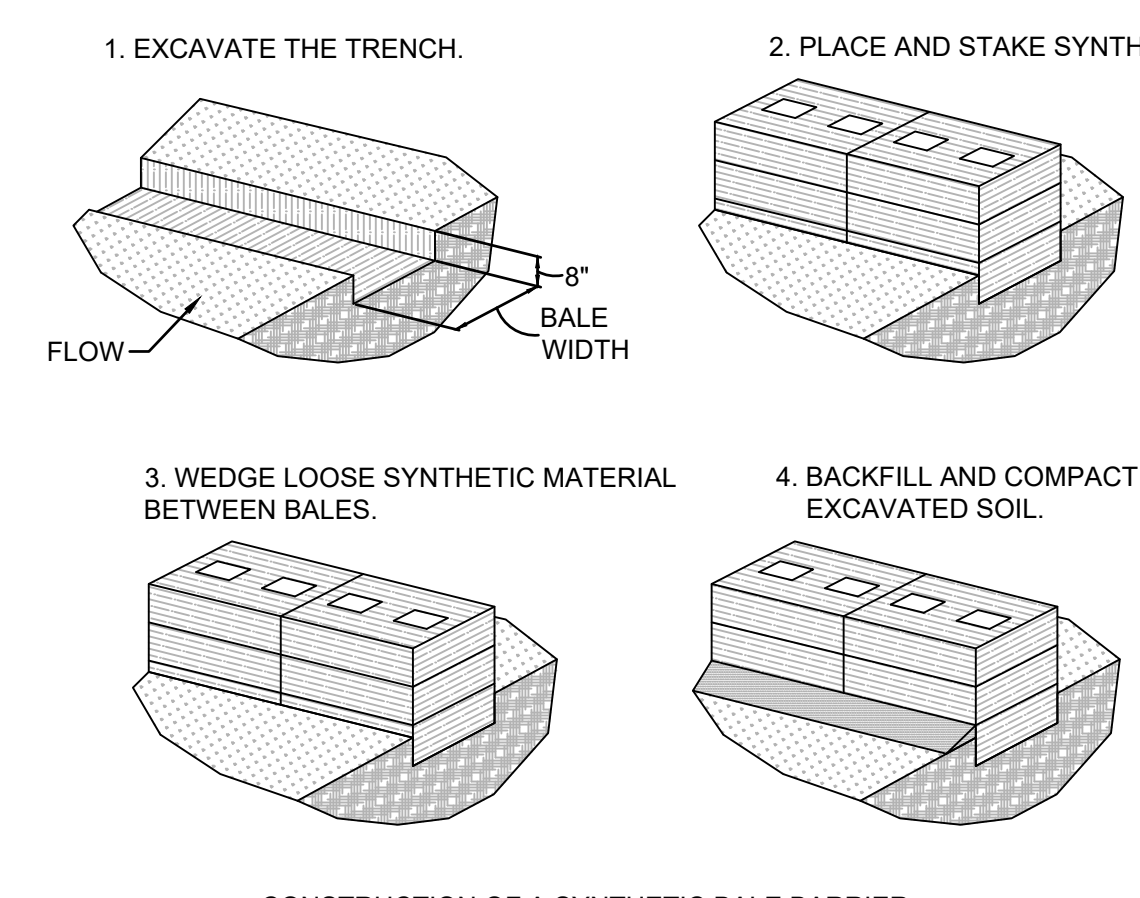
**CONSTRUCTION DETAILS FOR SILT FENCES**  
(D-909)



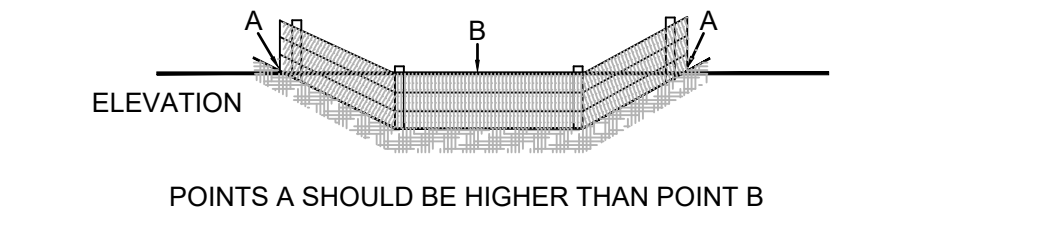
**CONSTRUCTION OF A FILTER BARRIER**  
(D-910)  
N.T.S.



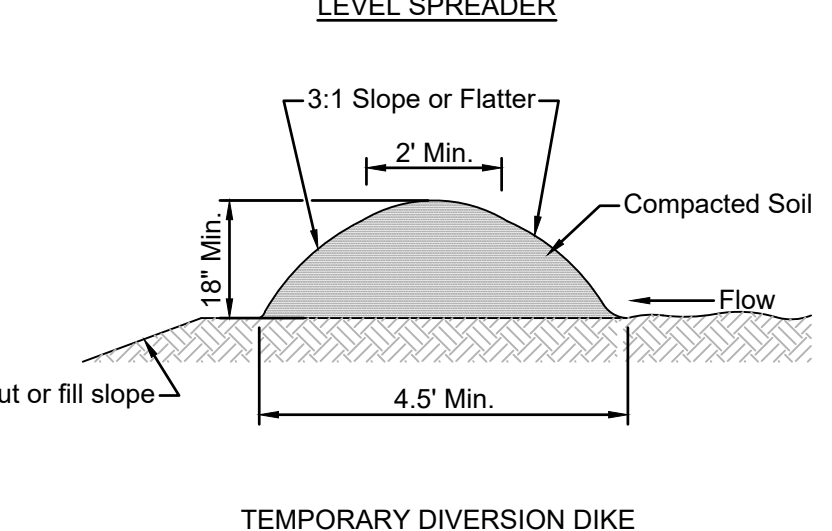
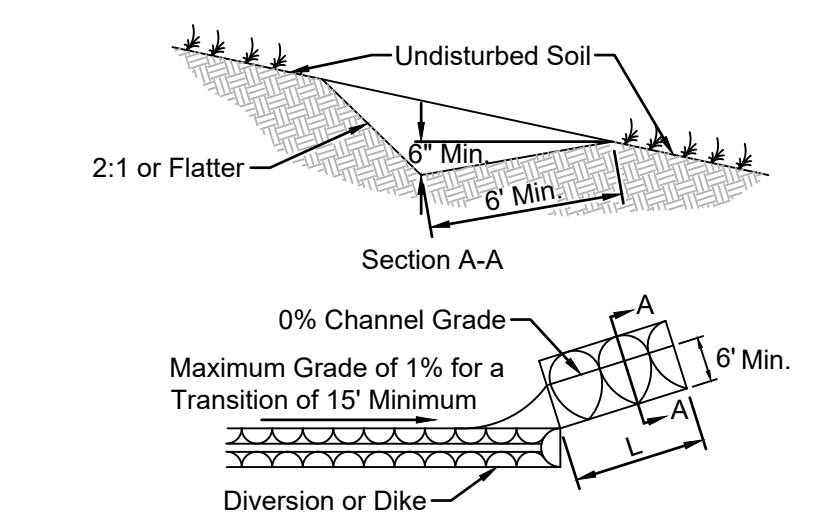
**PROPER PLACEMENT OF A FILTER BARRIER IN A DRAINAGE WAY**  
**FILTER BARRIER CONSTRUCTION DETAIL**  
(D-910)  
N.T.S.



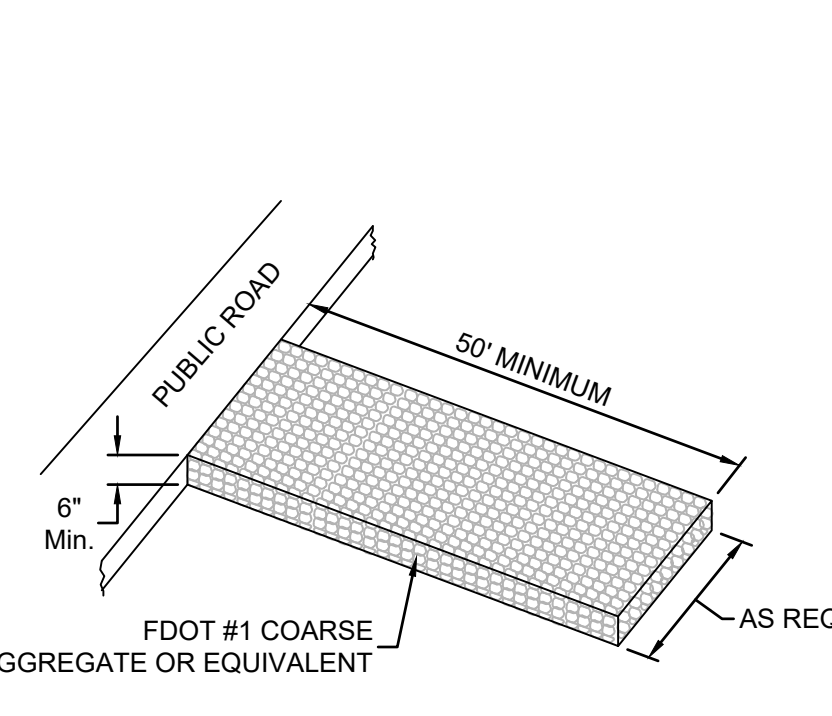
**CONSTRUCTION OF A SYNTHETIC BALE BARRIER**  
(D-913)  
N.T.S.



**PROPER PLACEMENT OF SYNTHETIC BALE BARRIER IN DRAINAGE WAY**  
**SYNTHETIC BALE BARRIER CONSTRUCTION DETAILS**  
(D-913)  
N.T.S.

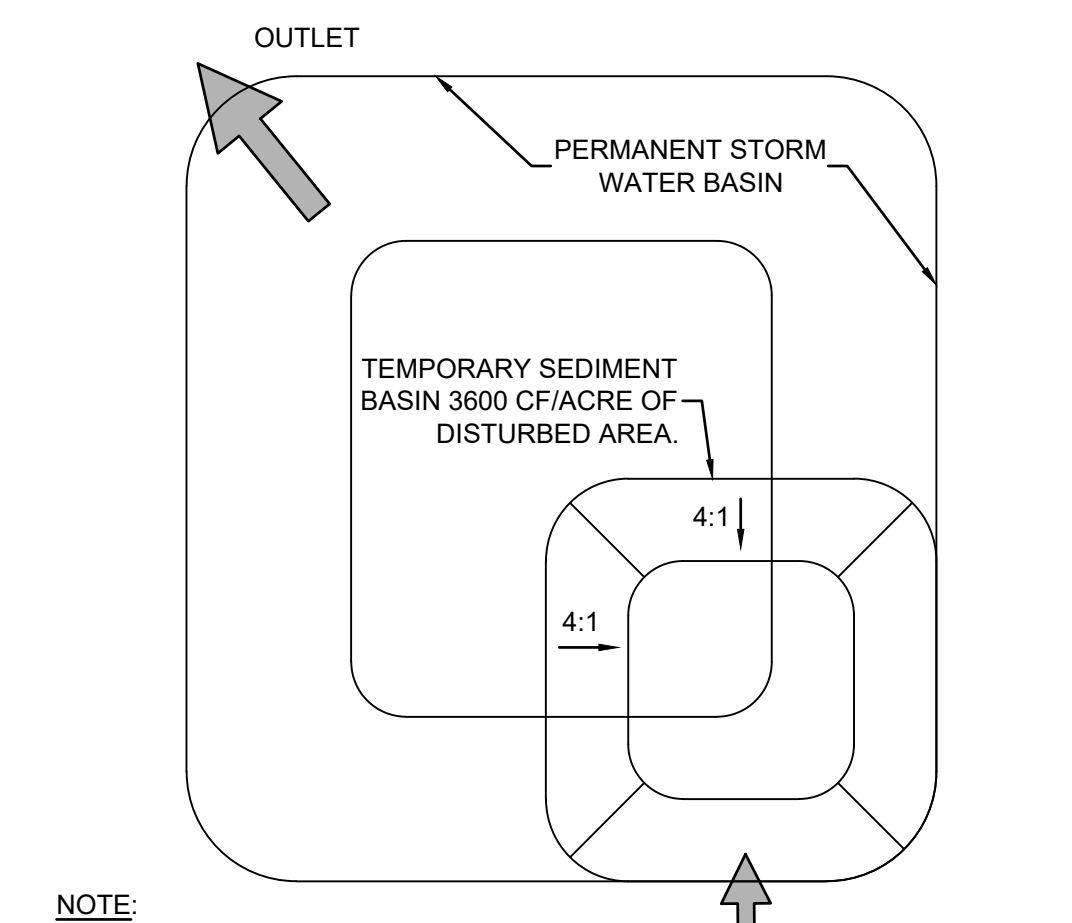


**LEVEL SPREADER**  
(D-914)  
N.T.S.

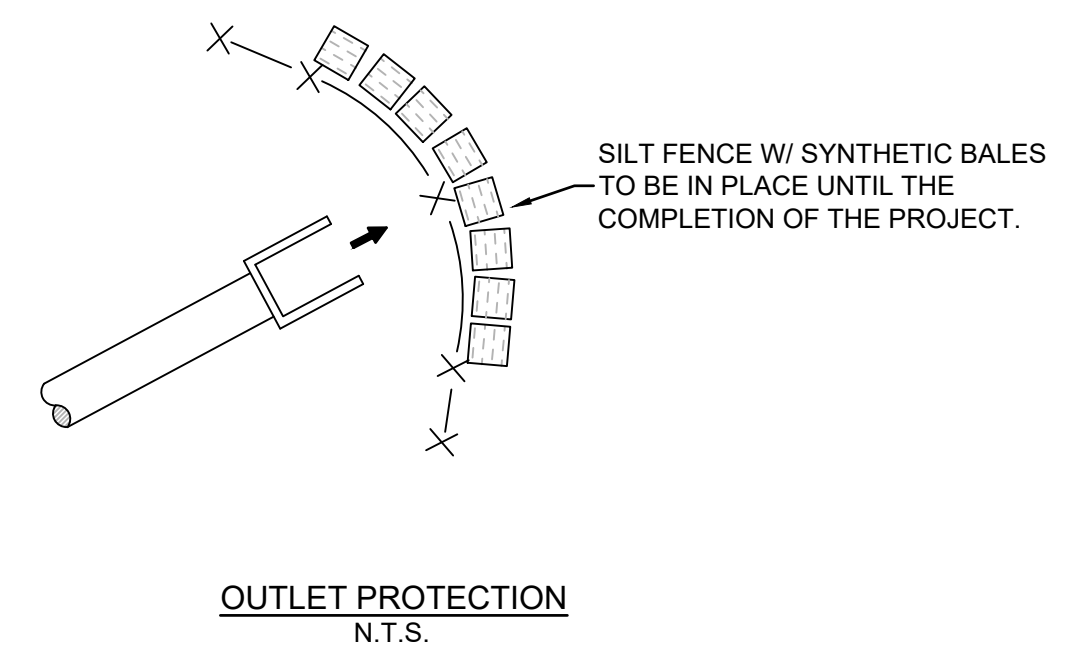


**TEMPORARY DIVERSION DIKE**  
(D-914)  
N.T.S.

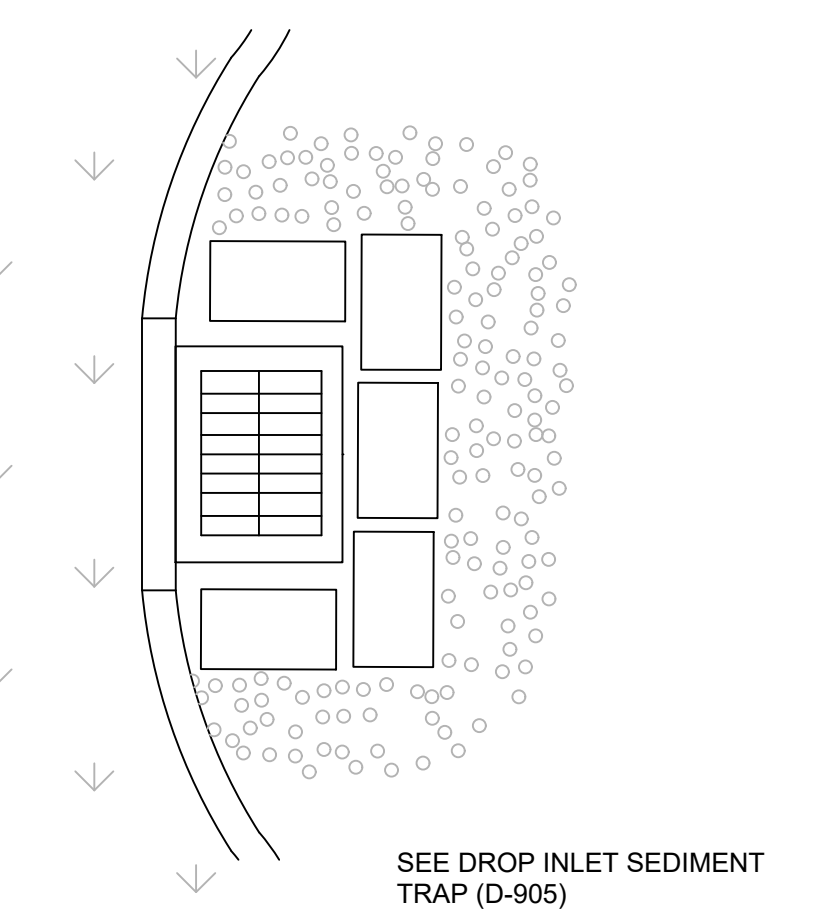
**STABILIZED CONSTRUCTION ENTRANCE**  
N.T.S.  
A STABILIZED CONSTRUCTION ENTRANCE TO REDUCE SEDIMENT TRANSPORT IS REQUIRED AT ANY LOCATION WORK VEHICLES ENTER PUBLIC ROADS.



**TEMPORARY SEDIMENT BASIN**  
N.T.S.



**OUTLET PROTECTION**  
N.T.S.

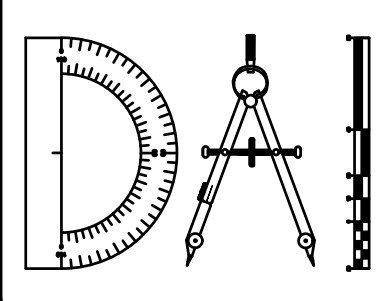


**ERECT SEDIMENT BARRIERS AT CATCH BASINS**  
(TYPICAL)  
N.T.S.

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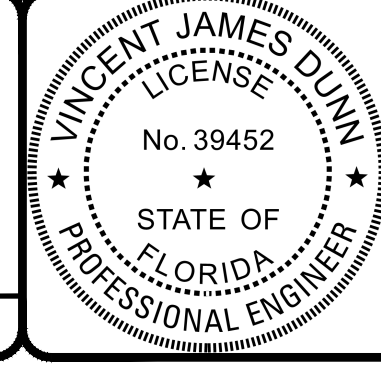
REVISIONS		
NO.	DATE	DESCRIPTION

DESIGNED BY: DAI  
DRAWN BY: MR/NS/SM/SS  
CHECKED BY: VJD  
SCALE: N/A  
DATE: 9/21/2023  
PROJ. NO.: 2008-499-2



**Dunn & Associates, Inc.**  
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**THE ROOKERY - PH 2A, 2B & (PHASE 3 CLEARING & GRADING)**  
FOR:  
**D.R. HORTON INC. - JACKSONVILLE**  
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**STORMWATER POLLUTION PREVENTION PLAN**



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VINCENT J. DUNN ENGINEER NO. 39452  
DAVID M. TAYLOR ENGINEER NO. 44184  
GLEN R. WIEGER ENGINEER NO. 91412

Sheet No. 130 of 130  
**SPP-2**  
DWG. NO.