

PAVING, GRADING AND DRAINAGE IMPROVEMENTS

FOR

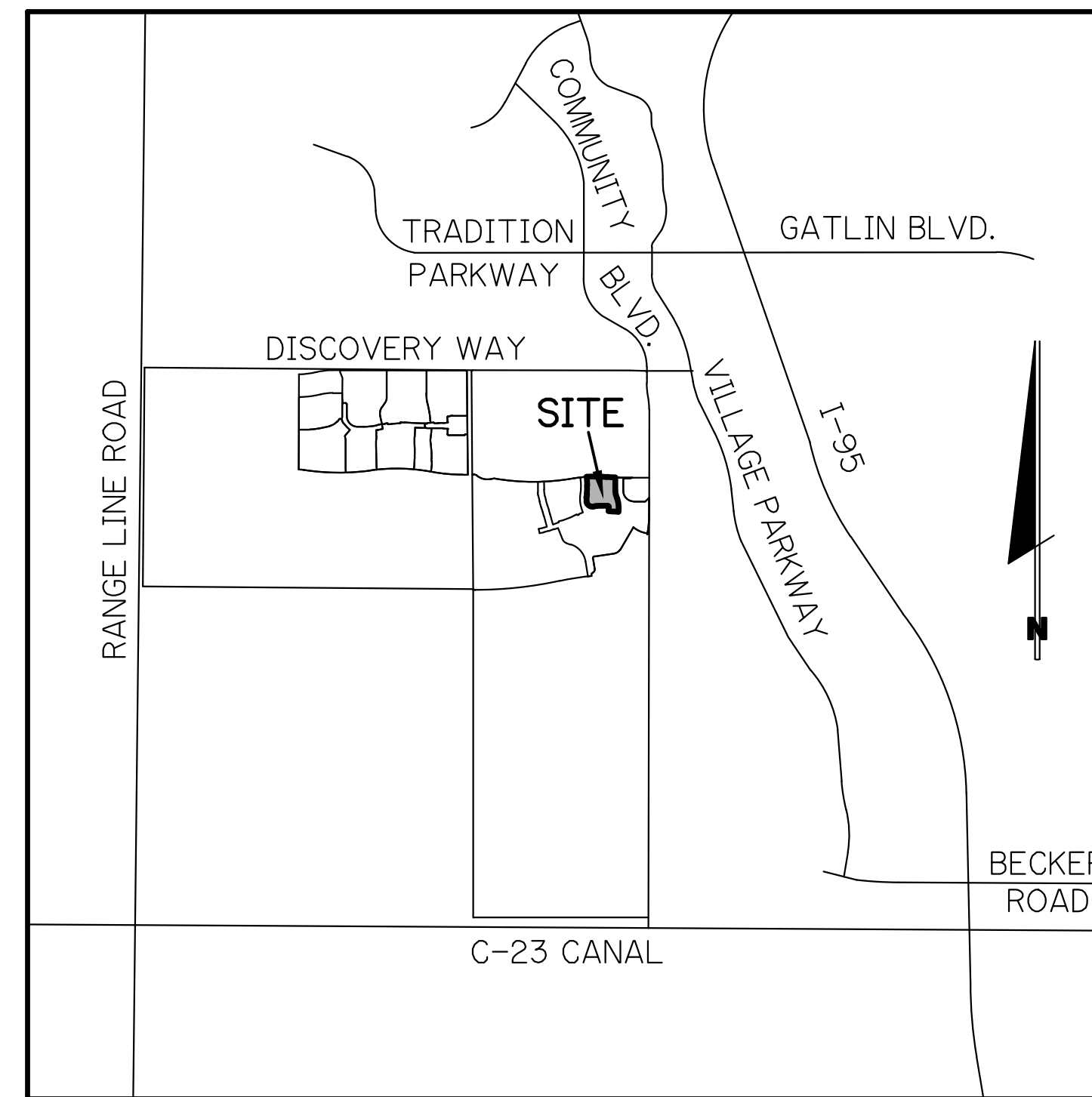
RIVERLAND — PARCEL B

PLAT TWO

CITY OF PORT ST. LUCIE, ST. LUCIE COUNTY, FLORIDA

LAST REVISED: 9/9/2021  
RIV-B PL 2 PD

DEVELOPER: **RIVERLAND ASSOCIATES II, LLLP**  
1600 SAWGRASS CORPORATE PARKWAY, SUITE 400  
SUNRISE, FLORIDA 33323  
(954) 753-1730



**LOCATION MAP**

N.T.S.  
SEC. 21 TWP. 37 S RGE. 39 E

PREPARED BY:

**GLH ENGINEERING, LLC**

1600 SAWGRASS CORPORATE  
PARKWAY, SUITE 400  
SUNRISE, FLORIDA 33323  
PHONE: (954) 753-1730  
FL CERTIFICATE OF AUTHORIZATION NO. 27459

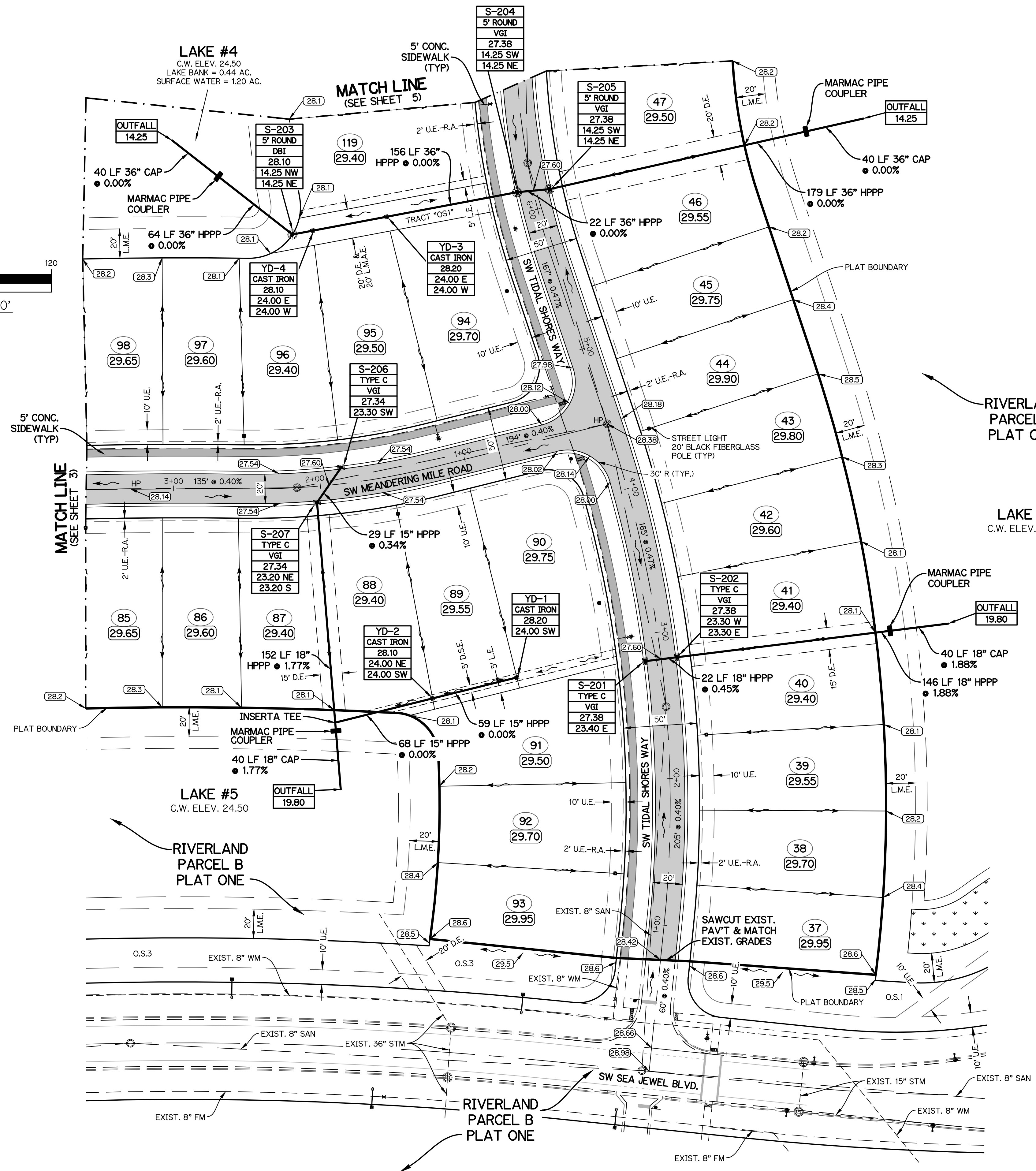
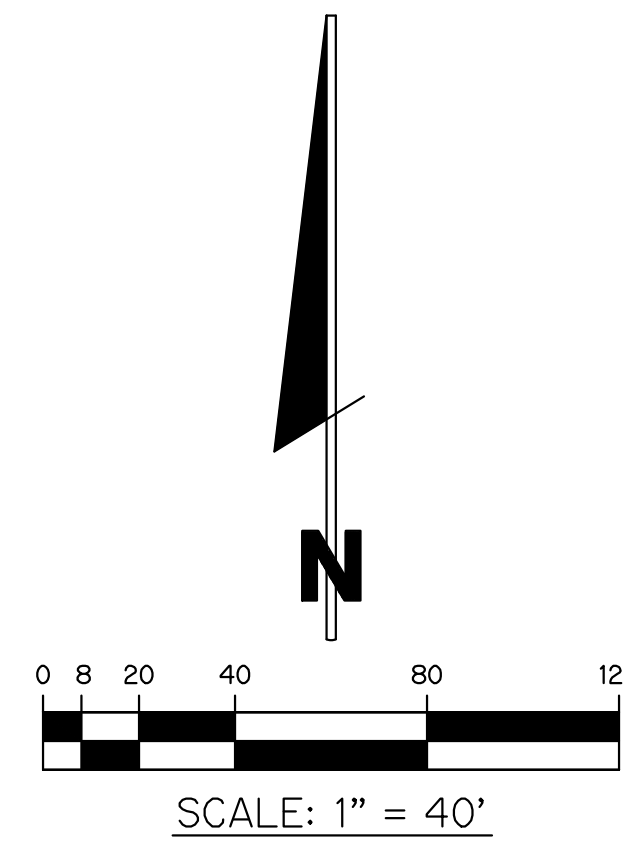
<u>INDEX OF SHEETS</u>	
<u>SHEET No.</u>	<u>DESCRIPTION</u>
1	COVER SHEET
2-5	PAVING, GRADING AND DRAINAGE PLANS
6-9	PAVING, GRADING AND DRAINAGE DETAILS
10	MASTER DRAINAGE PLAN

REVISION NO.	DATE

BRIAN ARNOLD, P.E. FLORIDA P.E. #81294	
RIV-B PL 2	PD
SHEET 1 OF 10	

NOTE: ALL GRADES SHOWN ARE IN NAVD88

**P21-105**



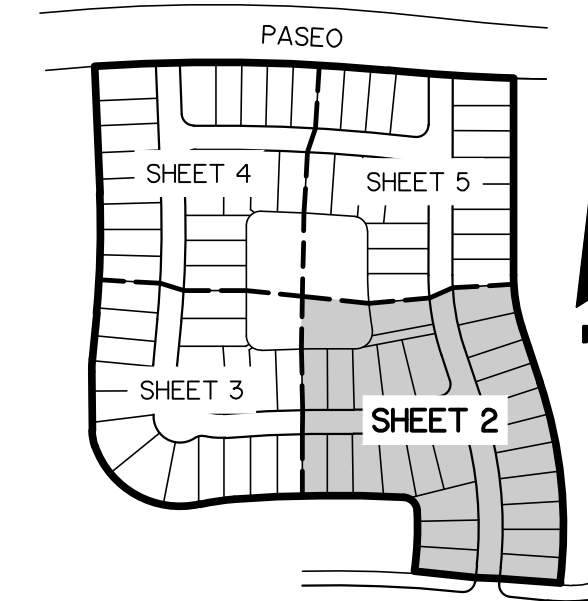
STR #	TYPE	TYPE	TYPE	TYPE
	GRATE	RIM EL.	INV. EL.	

**LEGEND**

- STORM MAIN WITH CATCH BASIN AND CALL OUT
- EXISTING STORM MAIN WITH CATCH BASIN
- SANITARY SEWER MAIN WITH MANHOLE
- WATER MAIN WITH VALVE
- PROPOSED ELEVATION
- ELEVATION BY OTHERS
- EXISTING ELEVATION
- DIRECTION OF FLOW
- STREET LIGHTS
- STOP SIGN (R-1 w/ D-3)
- LOT NUMBER
- FINISHED FLOOR ELEVATION
- CONTROL WATER ELEVATION
- CORRUGATED ALUMINUM PIPE
- DITCH BOTTOM INLET
- CURB & GUTTER INLET
- DRAINAGE EASEMENT
- DRAINAGE SWALE EASEMENT
- HIGH POINT
- HIGH PERFORMANCE POLYPROPYLENE
- LANDSCAPE EASEMENT
- LAKE MAINTENANCE ACCESS EASEMENT
- LAKE MAINTENANCE EASEMENT
- CITY OF PORT ST. LUCIE UTILITY EASEMENT
- OPEN SPACE
- REINFORCED CONCRETE PIPE
- UTILITY EASEMENT
- UTILITY EASEMENT - RESTRICTED AREA (SEE "U.E." PLAT DEDICATION)
- VALLEY GUTTER INLET
- YARD DRAIN
- PAVEMENT/SIDEWALK
- DETECTABLE WARNING SURFACE (SEE NOTE)
- LITTORAL PLANTING AREA
- SECTION CALLOUT
- D.E.
- D.S.E.
- HP
- HPPP
- L.E.
- L.M.A.E.
- L.M.E.
- P.S.L.U.E.
- OS#
- RCP
- U.E.
- U.E.-R.A.
- VGI
- YD

**NOTES:**

1. MINIMUM FINISH FLOOR ELEVATION FOR ANY STRUCTURE SHALL BE ELEVATION 29.30' NAVD88, WHICH A MINIMUM OF SIX INCHES IS ABOVE THE 100-YEAR, 3-DAY STORM STAGE ELEVATION.
2. MINIMUM PERIMETER ELEVATION SHALL BE ELEVATION 28.5' NAVD88, WHICH IS ABOVE THE 25-YEAR, 3-DAY STORM STAGE ELEVATION.
3. MINIMUM ROAD CROWN ELEVATION SHALL BE ELEVATION 27.60' NAVD88, WHICH IS ABOVE THE 10-YEAR, 1-DAY STORM STAGE ELEVATION.
4. ALL ELEVATIONS SHOWN ON THESE PLANS ARE IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TO CONVERT ELEVATIONS TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29), ADD 1.475 FEET TO THE NAVD88 ELEVATION. FOR EXAMPLE, NAVD88 + 1.475' = NGVD29.
5. DETECTABLE WARNING SURFACES SHALL COMPLY WITH THE REQUIREMENTS OF F.D.O.T. DESIGN STANDARDS INDEX 304 AND F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 527 (CURRENT EDITIONS). DETECTABLE WARNING SURFACES SHALL BE CHARCOAL GRAY.
6. AS AN ALTERNATE TO ADVANCED DRAINAGE SYSTEMS, INC. HPPP DRAINAGE, RCP STORM PIPE MAY BE SUBSTITUTED WITH WRITTEN APPROVAL FROM THE CITY OF PORT ST. LUCIE AND GLH ENGINEERING, LLC.
7. THE PROPERTY OWNER, CONTRACTOR, AND AUTHORIZED REPRESENTATIVES SHALL PROVIDE PICKUP, REMOVAL, AND DISPOSAL OF LITTER WITHIN THE PROJECT LIMITS AND SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE AREA FROM THE EDGE OF PAVEMENT TO THE PROPERTY LINE WITHIN THE CITY'S RIGHT-OF-WAY IN ACCORDANCE WITH CITY CODE, SECTION 41.08 (G).
8. A SITE ENVIRONMENTAL ASSESSMENT PREPARED BY EW CONSULTANTS, INC. FOR RIVERLAND PARCEL B WAS PERFORMED ON MARCH 15, 2021 WITH ASSOCIATED MEMORANDUM DATED MARCH 25, 2021.



PAVING, GRADING AND DRAINAGE PLAN  
 FOR  
**RIVERLAND-PARCEL B**  
**PLAT TWO**

NO.	REVISIONS	DATE	BY	CK

**GLH ENGINEERING, LLC**  
 1600 SAWGRASS CORPORATE  
 PARKWAY, SUITE 400  
 SUNRISE, FLORIDA 33323  
 PHONE: (954) 753-1730

SCALE: 1"=40'  
 DATE: 9/9/21  
 DESIGNED BY: AQC  
 CHECKED BY: BA  
 FILE NAME:  
 RIV-B PL 2 PD

BRIAN ARNOLD, P.E.  
 FLORIDA P.E. #81294

RIV-B PL 2 PD

SHEET 2 OF 10

NOTE: ALL GRADES SHOWN ARE IN NAVD88

P21-105

PAVING, GRADING AND DRAINAGE PLAN  
FOR  
**RIVERLAND-PARCEL B**  
PLAT TWO

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SHEET 3 OF 10

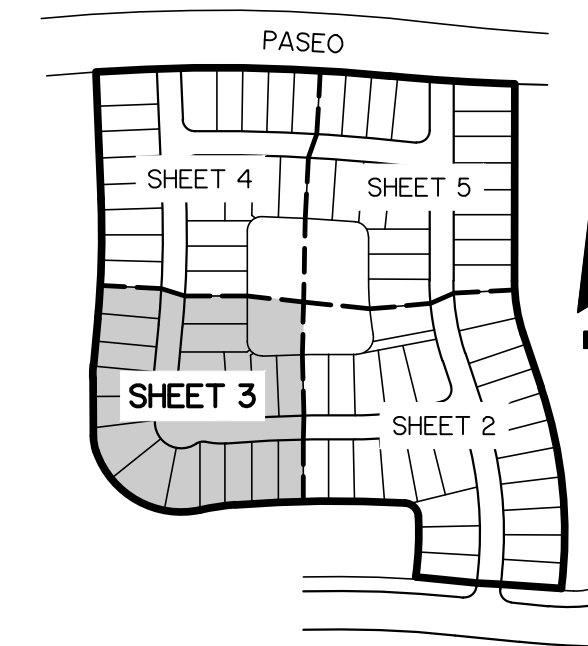
STR #	TYPE	GRATE	RIM EL.	INV EL.

**LEGEND**

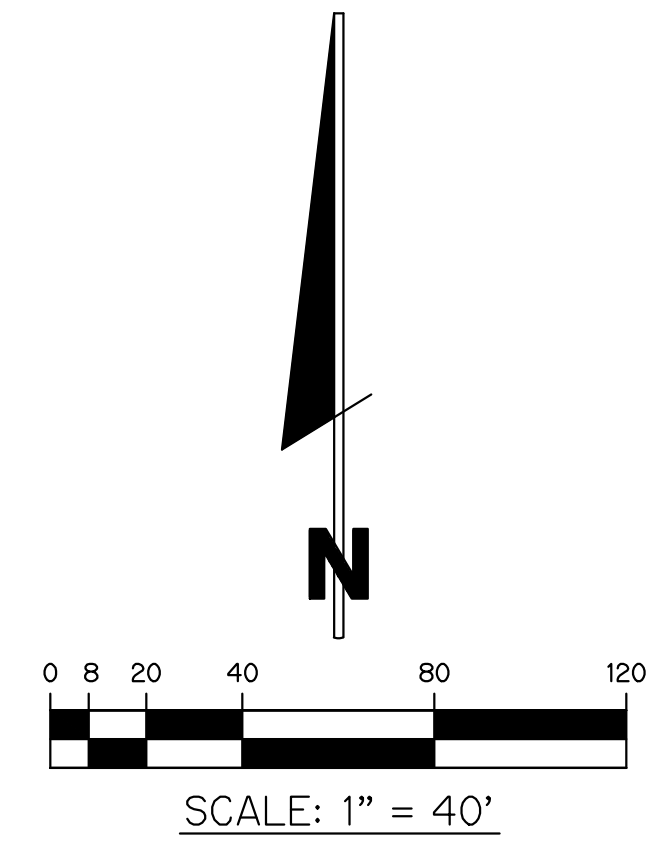
- |  |       |  |            |
|--|-------|--|------------|
| STORM MAIN WITH CATCH BASIN AND CALL OUT | ---   | DRAINAGE EASEMENT  | D.E.       |
| EXISTING STORM MAIN WITH CATCH BASIN     | ---   | DRAINAGE SWALE EASEMENT  | D.S.E.     |
| SANITARY SEWER MAIN WITH MANHOLE         | ---   | HIGH POINT   | HP         |
| WATER MAIN WITH VALVE                    | ---   | HIGH PERFORMANCE POLYPROPYLENE                                       | HPPP       |
| PROPOSED ELEVATION                       | 20.00 | LANDSCAPE EASEMENT   | L.E.       |
| ELEVATION BY OTHERS                      | 20.00 | LAKE MAINTENANCE ACCESS EASEMENT                                     | L.M.A.E.   |
| EXISTING ELEVATION                       | 25.53 | LAKE MAINTENANCE EASEMENT  | L.M.E.     |
| DIRECTION OF FLOW                        | →     | CITY OF PORT ST. LUCIE UTILITY EASEMENT (SEE "U.E." PLAT DEDICATION) | P.S.L.U.E. |
| STREET LIGHTS                            | ■     | OPEN SPACE   | OS#        |
| STOP SIGN (R1-1 w/ D-3)                  | ■     | REINFORCED CONCRETE PIPE   | RCP        |
| LOT NUMBER                               | 1     | UTILITY EASEMENT   | U.E.       |
| FINISHED FLOOR ELEVATION                 | 20.00 | UTILITY EASEMENT - RESTRICTED AREA (SEE "U.E." PLAT DEDICATION)      | U.E.-R.A.  |
| CONTROL WATER ELEVATION                  | CAP   | VALLEY GUTTER INLET  | VGI        |
| CORRUGATED ALUMINUM PIPE                 | DBI   | YARD DRAIN   | YD         |
| DITCH BOTTOM INLET                       | CGI   | PAVEMENT/SIDEWALK  |            |
| CURB & GUTTER INLET                      |       | DETECTABLE WARNING SURFACE (SEE NOTE)                                |            |
|  |       | LITTORAL PLANTING AREA   |            |
|  |       | SECTION CALLOUT  |            |

**NOTES:**

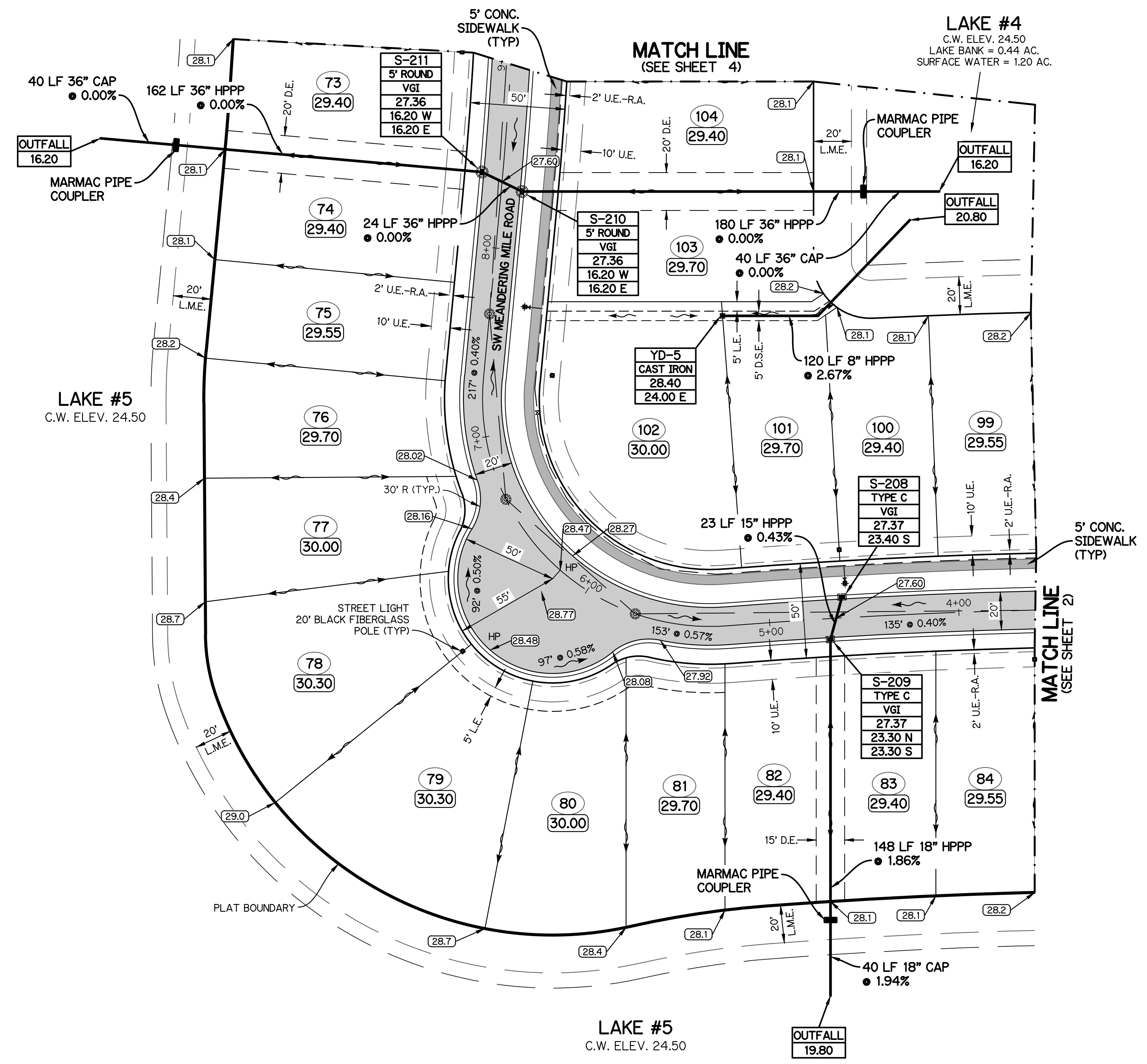
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- A SITE ENVIRONMENTAL ASSESSMENT PREPARED BY EW CONSULTANTS, INC. FOR RIVERLAND PARCEL B WAS PERFORMED ON MARCH 15, 2021 WITH ASSOCIATED MEMORANDUM DATED MARCH 25, 2021.



**KEY MAP**  
N.T.S.



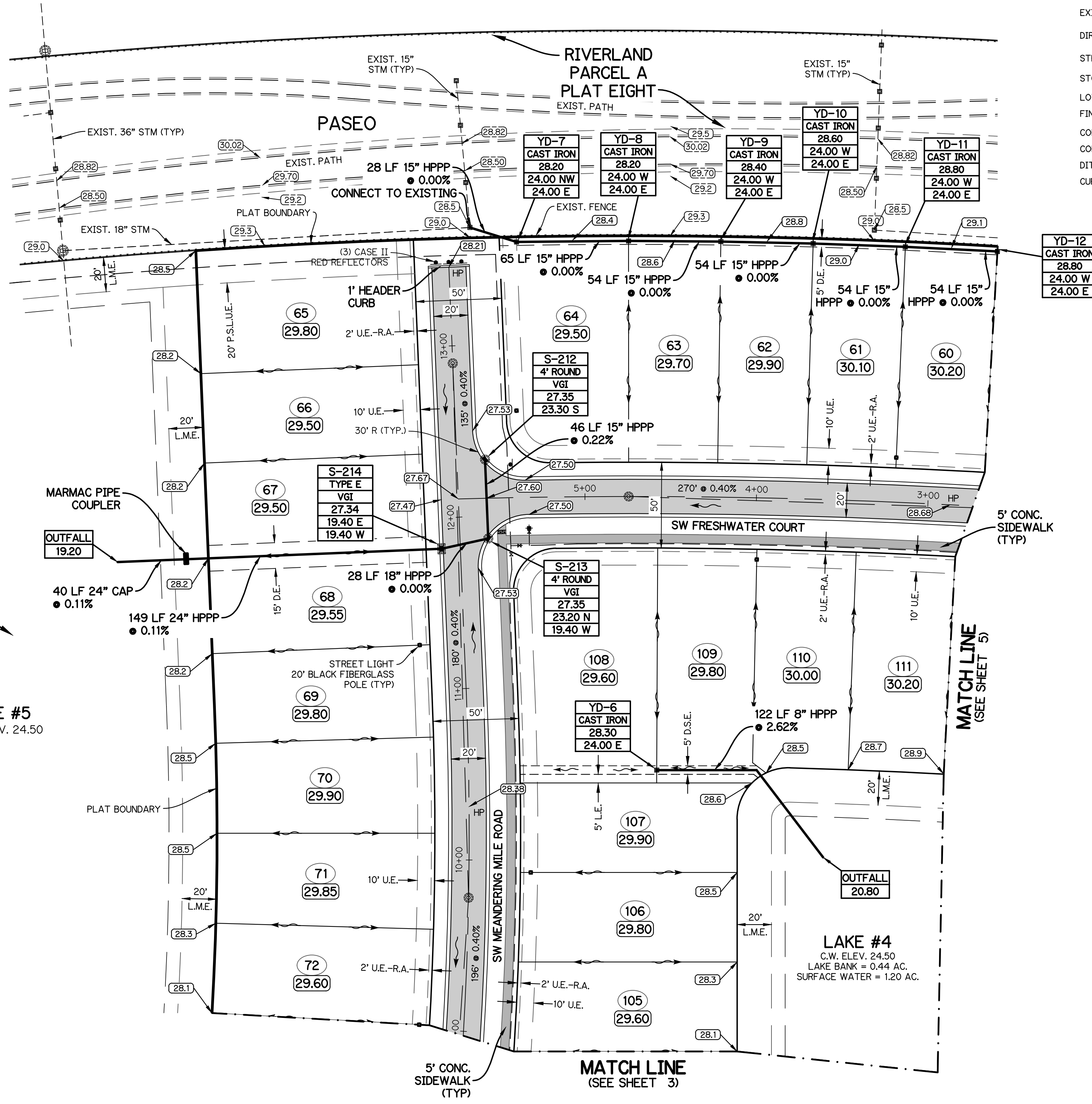
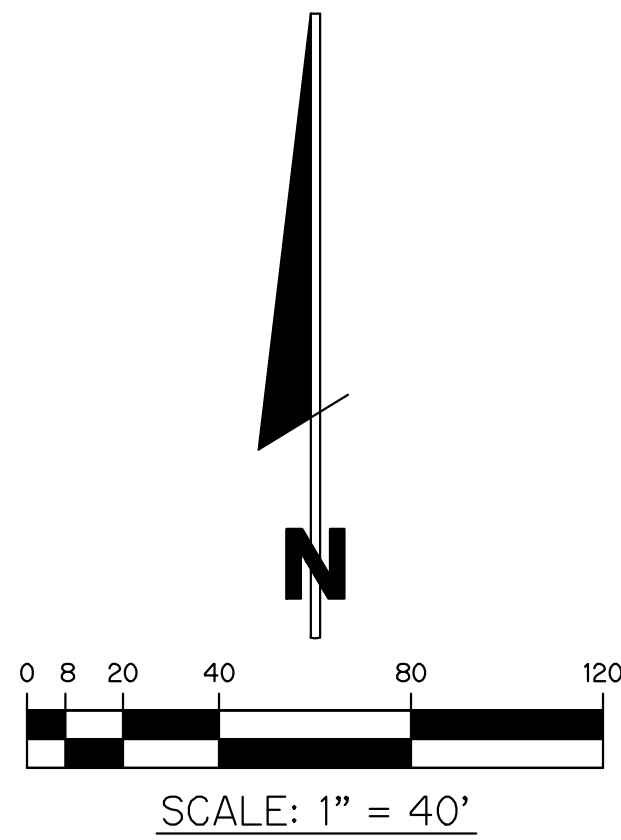
RIVERLAND  
PARCEL B  
PLAT ONE



RIVERLAND  
PARCEL B  
PLAT ONE

NOTE: ALL GRADES SHOWN ARE IN NAVD88

P21-105



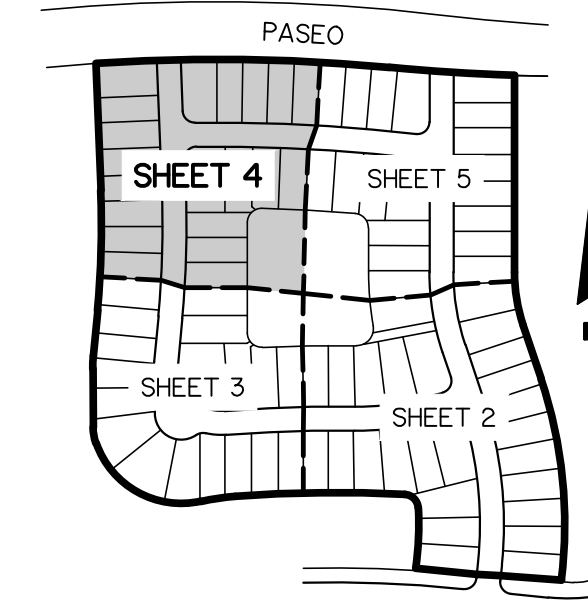
STR #
TYPE
GRATE
RIM EL.
INV. EL.

**LEGEND**

- |  |            |     |   |            |
|--|------------|-----|---|------------|
| STORM MAIN WITH CATCH BASIN AND CALL OUT | ---        | --- | DRAINAGE EASEMENT   | D.E.       |
| EXISTING STORM MAIN WITH CATCH BASIN     | ---        | --- | DRAINAGE SWALE EASEMENT   | D.S.E.     |
| SANITARY SEWER MAIN WITH MANHOLE         | ---        | --- | HIGH POINT  | HP         |
| WATER MAIN WITH VALVE                    | ---        | --- | HIGH PERFORMANCE POLYPROPYLENE                                  | HPPP       |
| PROPOSED ELEVATION                       | (20.00)    |     | LANDSCAPE EASEMENT  | L.E.       |
| ELEVATION BY OTHERS                      | (20.00)    |     | LAKE MAINTENANCE ACCESS EASEMENT                                | L.M.A.E.   |
| EXISTING ELEVATION                       | x 25.5     |     | LAKE MAINTENANCE EASEMENT                                       | L.M.E.     |
| DIRECTION OF FLOW                        | →          |     | CITY OF PORT ST. LUCIE UTILITY EASEMENT                         | P.S.L.U.E. |
| STREET LIGHTS                            | ■          |     | OPEN SPACE  | OS#        |
| STOP SIGN (R1-1 w/ D-3)                  | ■          |     | REINFORCED CONCRETE PIPE  | RCP        |
| LOT NUMBER                               | 1          |     | UTILITY EASEMENT  | U.E.       |
| FINISHED FLOOR ELEVATION                 | (20.00)    |     | UTILITY EASEMENT - RESTRICTED AREA (SEE "U.E." PLAT DEDICATION) | U.E.-R.A.  |
| CONTROL WATER ELEVATION                  | C.W. ELEV. |     | VALLEY GUTTER INLET   | VGI        |
| CORRUGATED ALUMINUM PIPE                 | CAP        |     | YARD DRAIN  | YD         |
| DITCH BOTTOM INLET                       | DBI        |     | PAVEMENT/SIDEWALK   |            |
| CURB & GUTTER INLET                      | CGI        |     | DETECTABLE WARNING SURFACE (SEE NOTE)                           |            |
|  |            |     | LITTORAL PLANTING AREA  |            |
|  |            |     | SECTION CALLOUT   |            |

**NOTES:**

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**KEY MAP**  
N.T.S.

**PAVING, GRADING AND DRAINAGE PLAN**  
**FOR**  
**RIVERLAND-PARCEL B**  
**PLAT TWO**

REVISIONS	DATE	BY	CK

**GLH ENGINEERING, LLC**  
 1600 SAWGRASS CORPORATE  
 PARKWAY, SUITE 400  
 SUNRISE, FLORIDA 33323  
 PHONE: (954) 753-1730

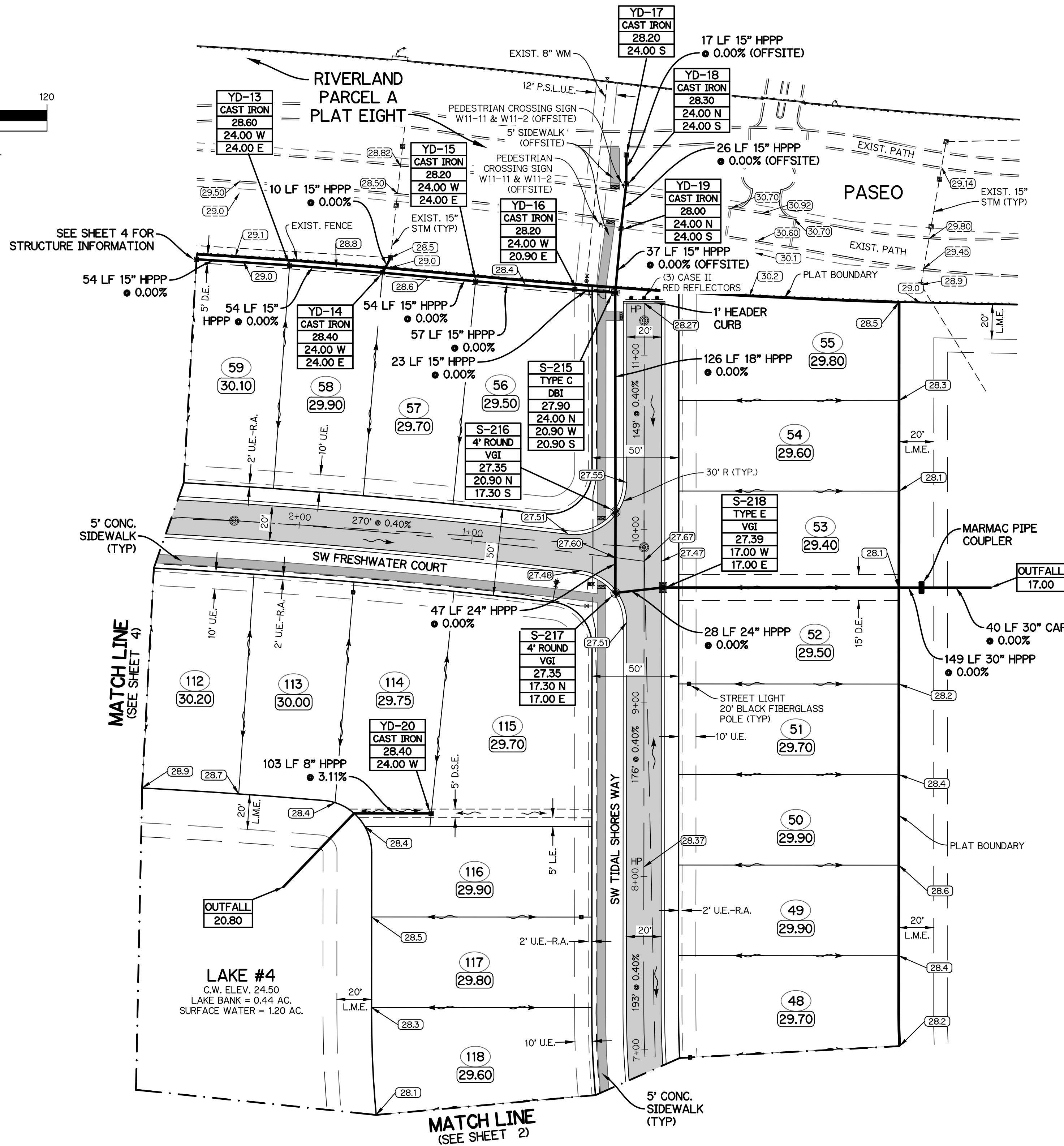
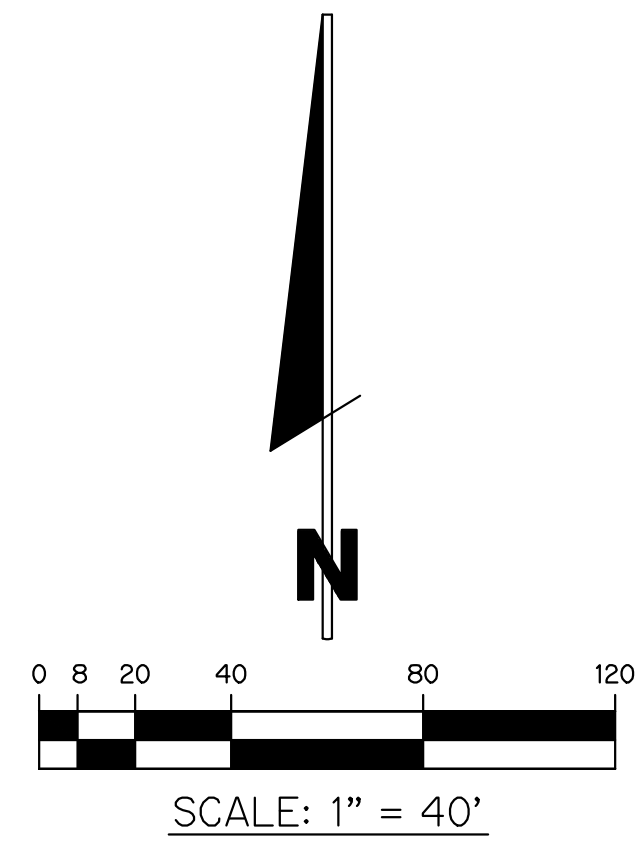
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BRIAN ARNOLD, P.E.  
 FLORIDA P.E. #81294

RIV-B PL 2 PD

SHEET 4 OF 10

NOTE: ALL GRADES SHOWN ARE IN NAVD88



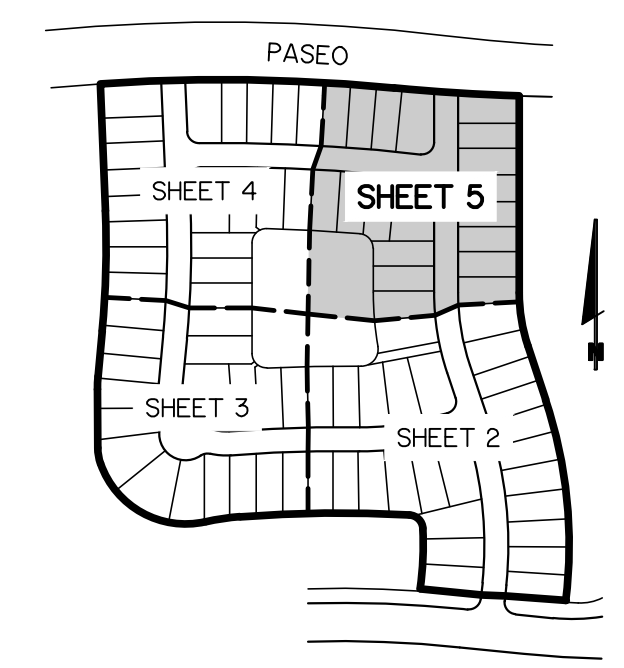
STR #
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GRATE
RIM EL.
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**LEGEND**

- |  |         |   |            |
|--|---------|---|------------|
| STORM MAIN WITH CATCH BASIN AND CALL OUT | ---     | DRAINAGE EASEMENT   | D.E.       |
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| SANITARY SEWER MAIN WITH MANHOLE         | ---     | HIGH POINT  | HP         |
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| STREET LIGHTS                            | ■       | OPEN SPACE  | OS#        |
| STOP SIGN (R1-1 w/ D-3)                  | ■       | REINFORCED CONCRETE PIPE  | RCP        |
| LOT NUMBER                               | (1)     | UTILITY EASEMENT  | U.E.       |
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| CONTROL WATER ELEVATION                  | CAP     | VALLEY GUTTER INLET   | VGI        |
| CORRUGATED ALUMINUM PIPE                 | CGI     | YARD DRAIN  | YD         |
| DITCH BOTTOM INLET                       | DBI     | PAVEMENT/SIDEWALK   | ---        |
| CURB & GUTTER INLET                      | CGI     | DETECTABLE WARNING SURFACE (SEE NOTE)                           | ---        |
|  |         | LITTORAL PLANTING AREA  | ---        |
|  |         | SECTION CALLOUT   | ---        |

**NOTES:**

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**PAVING, GRADING AND DRAINAGE PLAN**  
**FOR**  
**RIVERLAND-PARCEL B**  
**PLAT TWO**

NO.	REVISIONS	DATE	BY	CK

**GLH ENGINEERING, LLC**  
 1600 SAWGRASS CORPORATE  
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 PHONE: (954) 753-1730

SCALE: 1"=40'  
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BRIAN ARNOLD, P.E.  
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RIV-B PL 2 PD

SHEET 5 OF 10

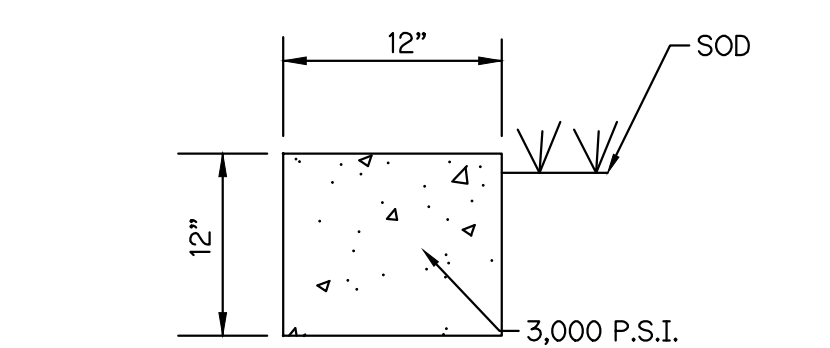
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P21-105

**GENERAL NOTES**

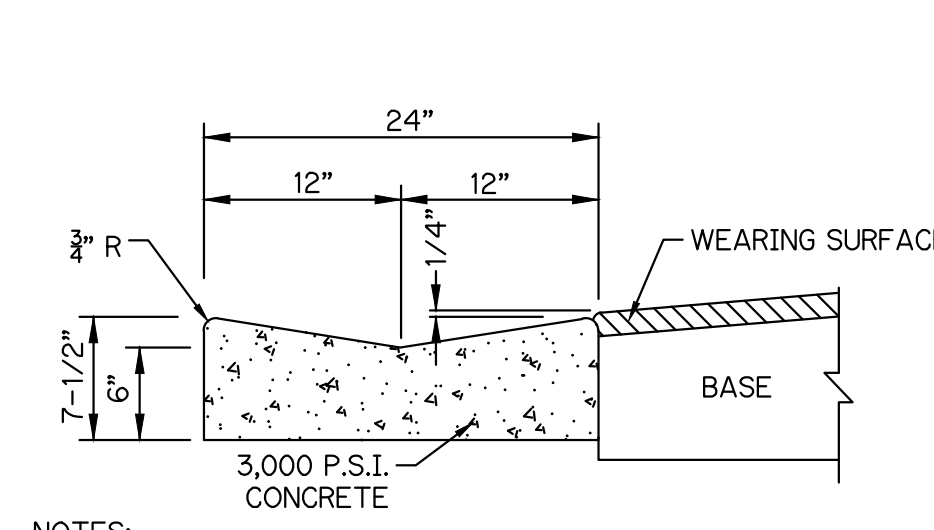
- MINIMUM FINISH FLOOR ELEVATION FOR ANY STRUCTURE SHALL BE ELEVATION 29.40' NAVD88, WHICH IS ABOVE THE 100-YEAR, 3-DAY STORM STAGE ELEVATION WITH ZERO DISCHARGE.
- MINIMUM PERIMETER ELEVATION SHALL BE ELEVATION 28.50' NAVD88, WHICH IS ABOVE THE 25-YEAR, 3-DAY STORM STAGE ELEVATION.
- MINIMUM ROAD CROWN ELEVATION SHALL BE ELEVATION 27.60' NAVD88, WHICH IS ABOVE THE 10-YEAR, 1-DAY STORM STAGE ELEVATION AND 2' ABOVE THE AVERAGE WET SEASON WATER TABLE.
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- ALL WORK SHALL BE DONE IN A WORKMANLIKE MANNER AND SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY, STATE OR FEDERAL REGULATIONS AND/OR CODES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND LICENSES REQUIRED PRIOR TO INITIATING THE WORK.
- THE CONTRACTOR SHALL CALL SUNSHINE (1-800-432-4770), 48 HOURS BEFORE DIGGING FOR FIELD LOCATIONS OF UNDERGROUND UTILITIES.
- UTILITIES - IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE EXACT LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES, WHETHER SHOWN OR NOT, PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION. NOTIFY ENGINEER PRIOR TO CONSTRUCTION OF ANY DEVIATION FROM WHAT IS SHOWN ON THE PLAN.
- AS-BUILTS - THE CONTRACTOR SHALL SUBMIT "AS-BUILT" INFORMATION OBTAINED BY A FLORIDA REGISTERED LAND SURVEYOR. INFORMATION SHALL BE IN A FORMAT SPECIFIED BY THE GOVERNING AGENCIES.
- GUARANTY - ALL MATERIAL AND EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR UNDER THIS CONTRACT SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE THEREOF, AGAINST DEFECTIVE MATERIALS, INSTALLATION AND WORKMANSHIP. UPON RECEIPT OF NOTICE FROM THE OWNER OF FAILURE OF ANY PART FOR THE GUARANTEED EQUIPMENT OR MATERIALS, DURING THE GUARANTY PERIOD, THE AFFECTED PART, PARTS OR MATERIALS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
- SEQUENCE OF CONSTRUCTION - THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF EVERY KIND THAT ARE BENEATH THE PAVEMENT, SHALL BE IN PLACE AND HAVE PROPER DENSITY PRIOR TO THE CONSTRUCTION AND COMPACTION OF THE SUBGRADE.
- CLEARING AND GRUBBING - WITHIN THE LIMITS OF CONSTRUCTION, ALL VEGETATION AND ROOT MATERIAL SHALL BE REMOVED.
- GUMBO - WHERE GUMBO OR OTHER PLASTIC CLAYS ARE ENCOUNTERED, THEY SHALL BE REMOVED WITHIN THE ROADWAY AND PARKING AREAS ONE FOOT BELOW THE SUBGRADE EXTENDING HORIZONTALLY TO THE OUTSIDE EDGE OF THE SHOULDER AREA.
- MUCK AND PEAT - IF MUCK AND/OR PEAT ARE ENCOUNTERED IN THE ROAD, PARKING OR BUILDING AREA, THEY SHALL BE REMOVED COMPLETELY TO A WIDTH OF TEN FEET BEYOND THE EDGE OF PAVEMENT OR FOUNDATION AND SHALL BE BACKFILLED WITH GRANULAR MATERIAL.
- SOD - WHERE SOD IS SHOWN, LOWER THE GROUND 2 INCHES BELOW THE FINISHED GRADE TO ALLOW FOR THE THICKNESS OF THE SOD.
- SUBGRADE - SHALL BE COMPACTED AS NOTED ON THE PLANS AND MEET THE DENSITY REQUIREMENTS AS DETERMINED BY THE A.A.S.H.T.O. T-180 SPECIFICATIONS. SUBGRADE SHALL BE 12" THICK AND EXTEND 12" BEYOND THE PROPOSED EDGE OF PAVEMENT AND/OR 6" BEYOND VALLEY GUTTER. TYPE "F" CURB & GUTTER OR TYPE "D" CURB. IF SUBGRADE IS REQUIRED TO BE STABILIZED, THE REQUIRED BEARING VALUE DETERMINATIONS SHALL BE MADE PER FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, LATEST EDITION. WHEN FILLING IS REQUIRED, SUBGRADE SHALL BE COMPACTED IN 6" LIFTS.
- BASE MATERIAL - APPROVED BASE MATERIAL, MINIMUM L.B.R. 100, SHALL BE COMPACTED TO NOT LESS THAN 98% MAXIMUM DENSITY AS DETERMINED BY A.A.S.H.T.O. T-180 SPECIFICATIONS AND MEET THE CRITERIA SET FORTH IN THE PLANS AND SPECIFICATIONS AND AS CALLED FOR IN BOTH FLORIDA D.O.T. INDEX 514 AND FLORIDA D.O.T. SPECIFICATIONS, LATEST EDITION. CONTRACTOR SHALL NOTIFY BOTH THE OWNER AND OWNER'S GEOTECHNICAL ENGINEER A MINIMUM OF 48 HOURS PRIOR TO BASE MATERIAL DELIVERY TO THE PROJECT TO SCHEDULE MATERIAL TESTING. TEST RESULTS THAT DO NOT MEET THE SPECIFIED CRITERIA, SHALL CAUSE THE CONTRACTOR, AT HIS SOLE EXPENSE, TO REMOVE ANY AND ALL OF SAME MATERIAL THAT IS EITHER ALREADY PLACED IN ROADWAYS OR IN STOCKPILES AND NOT USE IT IN AREAS REQUIRING BASE MATERIAL. CONTRACTOR SHALL NOTIFY OWNER AND OWNER'S GEOTECHNICAL ENGINEER 48 HOURS PRIOR TO DELIVERY OF BASE MATERIAL THAT IS FROM A NEW SOURCE TO SCHEDULE MATERIAL TESTING. CONTRACTOR SHALL PROVIDE THE OWNER AND OWNER'S GEOTECHNICAL ENGINEER A SCHEMATIC INDICATING WHERE ON THE PROJECT THE CHANGE IN MATERIAL SOURCE HAS OCCURRED. AT MINIMUM, ALL BASE MATERIAL SHALL BE TESTED PRIOR TO THE START OF EACH NEW PHASE OF THE WORK AND AS THE OWNER OR OWNER'S GEOTECHNICAL ENGINEER DEEMS AS NECESSARY DURING FIELD INSPECTIONS TO ENSURE ALL BASE MATERIAL THROUGHOUT THE PROJECT MEETS ALL MINIMUM CRITERIA.
- PRIME COAT - BITUMINOUS PRIME COAT SHALL CONFORM WITH THE REQUIREMENTS OF THE FLORIDA D.O.T. SPECIFICATIONS, LATEST EDITION AND SHALL BE APPLIED AT A RATE OF 0.25 GALLONS PER SQUARE YARD, UNLESS A DIFFERENT RATE IS DIRECTED BY THE ENGINEER. PRIME COAT IS TO BE APPLIED AT LEAST 24 HOURS PRIOR TO PLACEMENT OF PAVEMENT WITH AN ABSOLUTE MINIMUM APPLICATION LEAD TIME OF 12 HOURS PERMITTED ONLY WITH THE WRITTEN APPROVAL FROM THE ENGINEER.
- TACK COAT - BITUMINOUS TACK COAT SHALL CONFORM WITH THE REQUIREMENTS OF THE FLORIDA D.O.T. SPECIFICATIONS, LATEST EDITION AND SHALL BE APPLIED AT THE RATE OF 0.08 GALLONS PER SQUARE YARD, UNLESS A VARIATION IS APPROVED BY THE ENGINEER.
- SURFACE COURSE - ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM WITH THE REQUIREMENTS OF THE FLORIDA D.O.T. SPECIFICATIONS, LATEST EDITION. THE MINIMUM COMPACTED THICKNESS TO BE AS NOTED ON PLANS.
- PAVEMENT MARKINGS AND GEOMETRICS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.
- CONCRETE - ALL CONCRETE SHALL DEVELOP 2500 P.S.I. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH OR GREATER WHERE NOTED ON PLANS. CLASS I CONCRETE SHALL CONFORM WITH THE FLORIDA D.O.T. SPECIFICATIONS, LATEST EDITION. CLASS I CONCRETE USED AS PAVING SHALL DEVELOP 3000 P.S.I. (MINIMUM) 28 DAYS COMPRESSIVE STRENGTH.
- ANY EXISTING ROADWAY AND/OR UTILITY THAT IS DAMAGED BY THE CONTRACTOR SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER'S ENGINEER.
- PIPE BACKFILL - REQUIREMENTS FOR PIPE BACKFILL CROSSING ROADS OR PARKING AREAS SHALL BE DEFINED IN THE FLORIDA D.O.T. SPECIFICATIONS, LATEST EDITION. PIPELINE BACKFILL SHALL BE PLACED IN SIX INCH LIFTS AND COMPACTED TO 100% OF THE STANDARD PROCTOR (A.A.S.H.T.O.) T-99 SPECIFICATIONS.
- ALL PIPE LENGTHS AND CENTERLINE SLOPE LENGTHS SHOWN ON THESE DRAWINGS ARE SCALED DISTANCES. THE CONTRACTOR SHALL CONFIRM ALL MEASUREMENTS IN THE FIELD AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCY WITH THE DRAWINGS PRIOR TO PERFORMING THE WORK. ALL CONCRETE PIPES SHALL HAVE GASKET JOINTS.
- THE PROPERTY OWNER, CONTRACTOR AND AUTHORIZED REPRESENTATIVES SHALL PROVIDE PICKUP, REMOVAL AND DISPOSAL OF LITTER WITHIN THE PROJECT LIMITS AND SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE AREA FROM THE EDGE OF PAVEMENT TO THE PROPERTY LINE WITHIN THE CITY'S RIGHT-OF-WAY IN ACCORDANCE WITH CITY CODE, SECTION 41.08 (G).
- AN ENVIRONMENTAL ASSESSMENT WAS PREPARED ON MARCH 15, 2021 BY EW CONSULTANTS, INC. THE FOLLOWING TABLE HAS BEEN COMPLETED BASED ON THE ENVIRONMENTAL ASSESSMENT:

DESCRIPTION	FOUND (YES/NO)	AGENCY CONTACT INFORMATION	MANAGEMENT PLAN (YES/NO)	RELOCATION PLAN (YES/NO)
WETLANDS	NO	N/A	NO	NO
RARE HABITAT	NO	N/A	NO	NO
THREATENED SPECIES	NO	N/A	NO	NO
ENDANGERED SPECIES	NO	N/A	NO	NO
SPECIES OF SPECIAL CONCERN	NO	N/A	NO	NO
INVASIVE/EXOTIC VEGETATION	NO	N/A	NO	NO



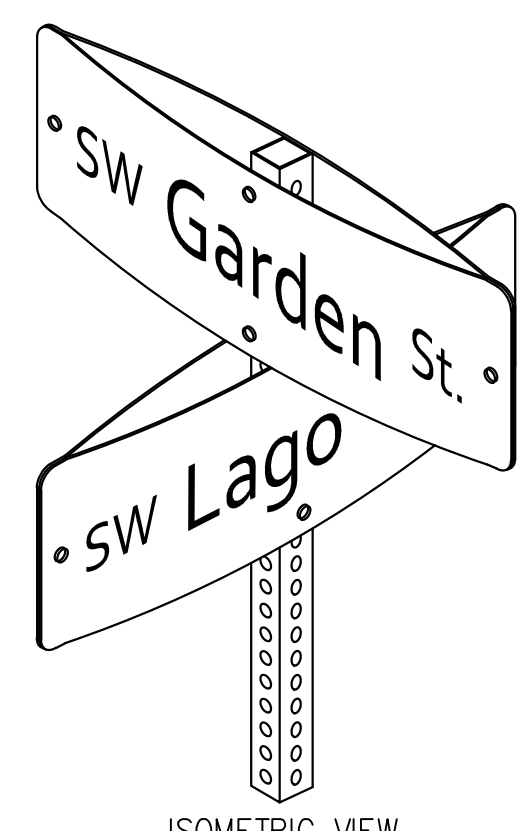
NOTES:  
 1. CONTRACTOR SHALL EXCAVATE 2" ON EITHER SIDE OF CURB WHEN INSTALLING HEADER CURB. EXCAVATED AREA SHALL BE BACKFILLED WITH BASE MATERIAL AND COMPACTED IN 6" MAXIMUM LIFTS. WORK SHALL BE INSPECTED BY ENGINEER.  
 2. 1/2" EXPANSION JOINT SHALL BE INSTALLED WHERE HEADER CURB ADJOINS OTHER CONCRETE CURB.

**1' HEADER CURB (NON-TRAFFIC)**  
N.T.S.

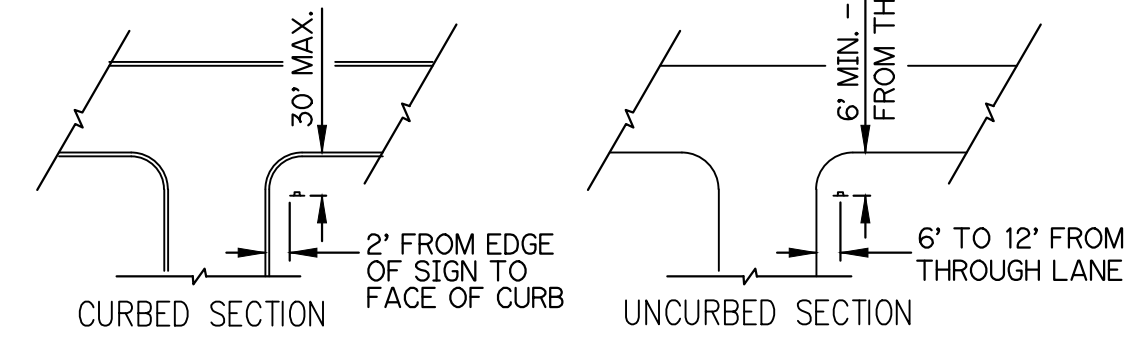


NOTES:  
 1. SAWCUTS REQUIRED AT 5' CENTERS.  
 2. CURB SHALL BE PLACED ON SPECIFIED SUBGRADE COURSE.

**2' VALLEY GUTTER**  
N.T.S.



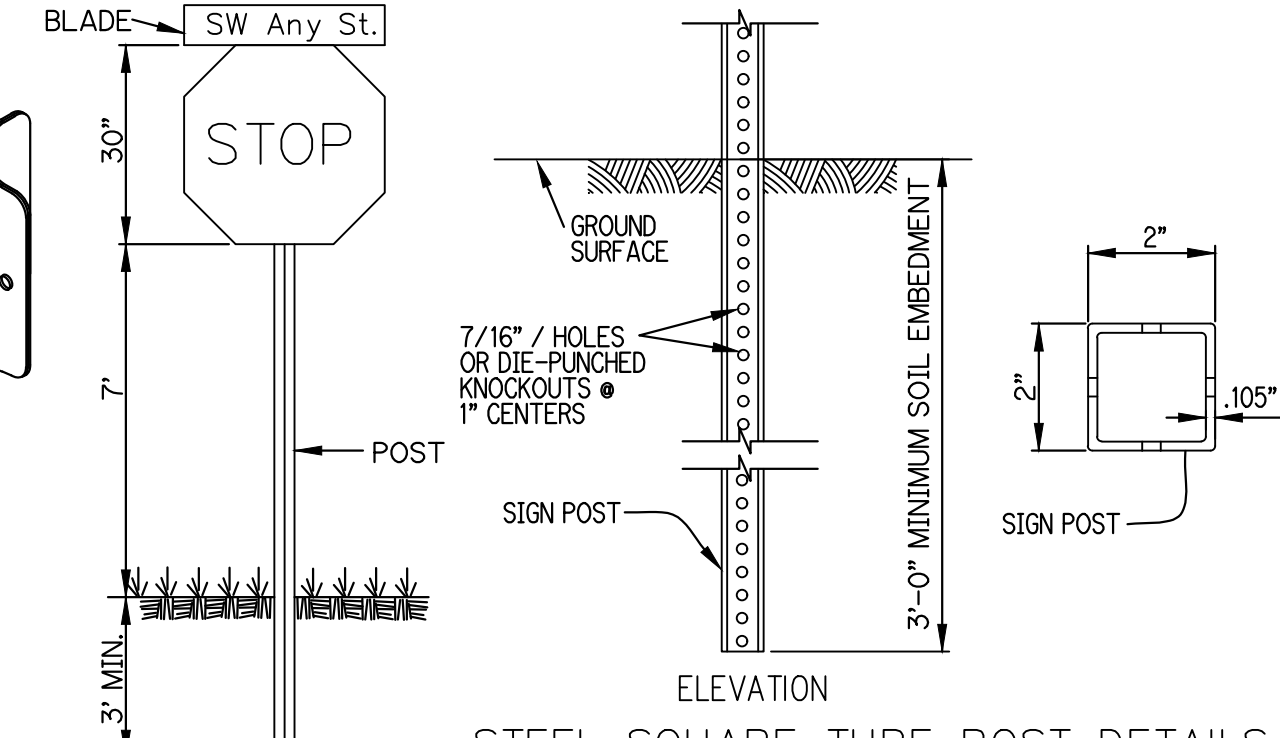
ISOMETRIC VIEW



TYPICAL STOP SIGN PLACEMENT



STREET NAME SIGN (SNS) OR (D-3)



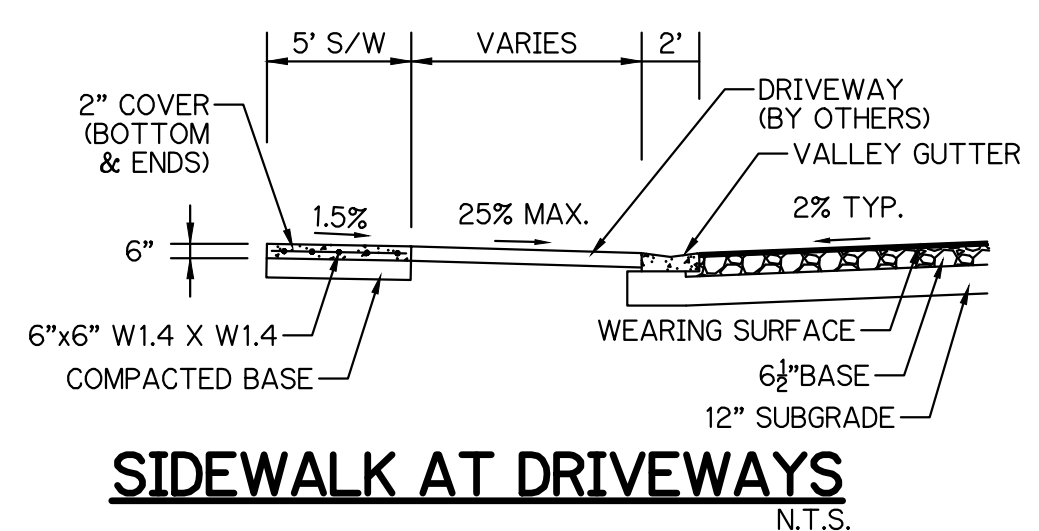
**STREET NAME SIGN WITH STOP SIGN**  
N.T.S.

**PAVING / SIDEWALK SPECIFICATIONS**

TYPE	WEARING SURFACE	BASE	SUBGRADE	STRUCTURAL NUMBER (SN) (LOCAL ROADS SN = 1.89 MIN.)
50' RIGHT-OF-WAY ROAD SECTION	2" THICK, TYPE S-III A.C.A.C. INSTALLED IN TWO LIFTS (FIRST LIFT TO BE 1" & SECOND LIFT TO BE 1"). TACK COAT REQUIRED WITH MULTIPLE LIFTS.	6-1/2" THICK, LIMEROCK (LBR 100) COMPACTED IN ONE LIFT TO 98% MAXIMUM DRY DENSITY, A.A.S.H.T.O. T-180  OPTIONAL BLACK BASE 5" THICK, TYPE B-12.5 (BLACK BASE) MAY BE SUBSTITUTED IN LIEU OF 6-1/2" LIMEROCK  OPTIONAL DOUBLE ROCK 5.5" ADDITIONAL LIMEROCK BASE AND 12" COMPACTED SUBGRADE MAY BE SUBSTITUTED IN LIEU OF 12" STABILIZED SUBGRADE	12" THICK, STABILIZED SUBGRADE, COMPACTED TO 98% MAXIMUM DRY DENSITY A.S.H.T.O. T-180 AND STABILIZED TO EITHER L.B.R. = 40 OR F.B.V. = 75	2 X 0.44 = 0.88 6.5 X 0.18 = 1.17 12 X 0.08 = 0.96 SN = 3.01  2 X 0.44 = 0.88 5 X 0.30 = 1.50 12 X 0.08 = 0.96 SN = 3.34  2 X 0.44 = 0.88 12.0 X 0.18 = 2.16 12 X 0 = 0 SN = 3.04
SIDEWALKS *	4" THICK 3,000 PSI CONCRETE OR 6" THICK 3,000 PSI CONCRETE WITH W1.4 X W1.4, 6" X 6" REINFORCING MESH AT ALL DRIVEWAYS & L.M.A.E.'S	N/A	4" THICK, CLEAN SAND COMPACTED TO 98% PER A.A.S.H.T.O. T-180	N/A

**\*SIDEWALK NOTES:**

- SIDEWALKS ADJACENT TO RESIDENTIAL UNITS WILL BE CONSTRUCTED WITH RESPECTIVE UNIT.
- SIDEWALK TO BE 4" THICK, PORTLAND CEMENT CONCRETE, MINIMUM 3,000 P.S.I. @ 28 DAYS.
- SIDEWALK TO BE BROOM FINISHED WITH EVEN DUSTLESS SURFACE.
- COMPACTED BASE TO BE A MINIMUM 4" OF CLEAN SAND OR SANDY LOAM, COMPACTED TO 98% PER A.A.S.H.T.O. T-180, FULL WIDTH.
- AT DRIVEWAYS, SIDEWALKS SHALL BE THICKENED TO 6" WITH 6"X6" W1.4 X W1.4 MESH.
- TYPE "A" EXPANSION JOINTS (A) WITH PREFORMED JOINT FILLER PER F.D.O.T. STANDARD INDEX #310) SHALL BE LOCATED WHERE NEW CONCRETE MEETS EXISTING CONCRETE.
- TYPE "B" (B) TOOLED JOINTS) OR TYPE "D" (D) SAWCUT JOINTS) PER F.D.O.T. STANDARD INDEX #310 SHALL BE LOCATED AT 5' O.C. SAW-CUT JOINTS AVOIDED WHENEVER POSSIBLE.



**SIDEWALK AT DRIVEWAYS**  
N.T.S.

**DETAILS LEGEND:**

- C/L - CENTERLINE
- CONC. - CONCRETE
- EL. - ELEVATION
- L/L - LOT LINE
- LME - LAKE MAINTENANCE EASEMENT
- MAX. - MAXIMUM
- MIN. - MINIMUM
- P.S.L.U.E. - CITY OF PORT ST. LUCIE UTILITY EASEMENT
- R - RADIUS
- R/W - RIGHT-OF-WAY
- S/W - SIDEWALK
- TYP. - TYPICAL
- U.E. - UTILITY EASEMENT
- U.E.-R.A. - UTILITY EASEMENT - RESTRICTED AREA

**GENERAL SIGN SPECIFICATIONS:**

SIGNS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD. COORDINATE WITH DEVELOPER FOR SPECIFIC SIGN TYPE AND MAINTAIN CONSISTENCY THROUGHOUT PROJECT.

FLAT BLADE: ALCOA #86054.6063-T6 ALLOY, ETCHED, DECREASED WITH #1200 ALODINE FINISH WITH #3877 GREEN HIGH INTENSITY BACKGROUND AND EQUAL DIMENSIONS - 9" & 12" MIN. H. 24", 30", 36" AND 42" L.

LETTERS: NAME - 6" UPPERCASE WITH 4.5" LOWERCASE & 9" UPPERCASE WITH 6.75" LOWERCASE. SERIES 'B' # 3870 HIGH INTENSITY (SILVER) OR EQUAL - PREFIX & SUFFIX - 4.5".

POST: STEEL FLANGED CHANNEL POST 3 LBS. WEIGHT PER FOOT WITH BAKED GREEN ALKYD OR GALVANIZED FINISH PER A.S.T.M. - A-123 WITHOUT ANCHOR PLATES. SQUARE POST PER FDOT INDEX 11860.

BRACKETS SHALL BE ATTACHED FIRMLY ON STANDARD SQUARE TUBE OR U-CHANNEL POSTS BY MEANS OF (2) 3/16" DIAMETER HEX HEAD BOLTS.

STOP SIGN: R1-1 MUTCD (HIGH INTENSITY)

LOCATION: ONE PER INTERSECTION AS INDICATED ON THE PLANS.

POLICY: 9" BLADES WITH 6" UPPERCASE WITH 4.5" LOWERCASE LETTERS FOR TWO ROADS WITH A SPEED LIMIT UNDER 45 MPH.

12" BLADES WITH 9" UPPERCASE WITH 6.75" LOWERCASE LETTERS FOR THROUGHFARE ROADS FOUR LANES OR WIDER. TWO LANE ROADS WITH A POSTED SPEED LIMIT OF 45 MPH OR MORE.

ONLY ONE BLADE WILL BE INSTALLED AT INTERSECTION WITH THROUGHFARE ROAD INDICATING THE SIDE STREET NAME.

NOTE: ALL GRADES SHOWN ARE IN NAVD88

PAVING, GRADING AND DRAINAGE DETAILS

FOR  
**RIVERLAND - PARCEL B**  
 PLAT TWO

NO.	DATE	BY	CK

GLH ENGINEERING, LLC  
 1600 SAWGRASS CORPORATE PARKWAY, SUITE 400  
 SUNRISE, FLORIDA 33323  
 PHONE: (954) 753-1730

SCALE: 1"=40'  
 DATE: 9/9/21  
 DESIGNED BY: AQC  
 CHECKED BY: BA  
 FILE NAME:  
 RIV-B PL 2 PD

BRIAN ARNOLD, P.E.  
 FLORIDA P.E. #81294

RIV-B PL 2 PD

	DATE
	BY
	CK

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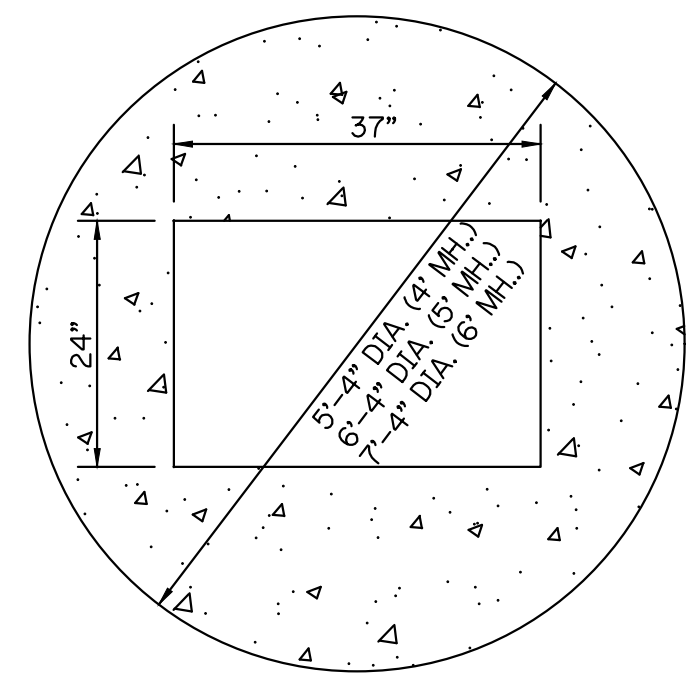
RIV-B PL 2 PD

**INLET AND MANHOLE NOTES:**

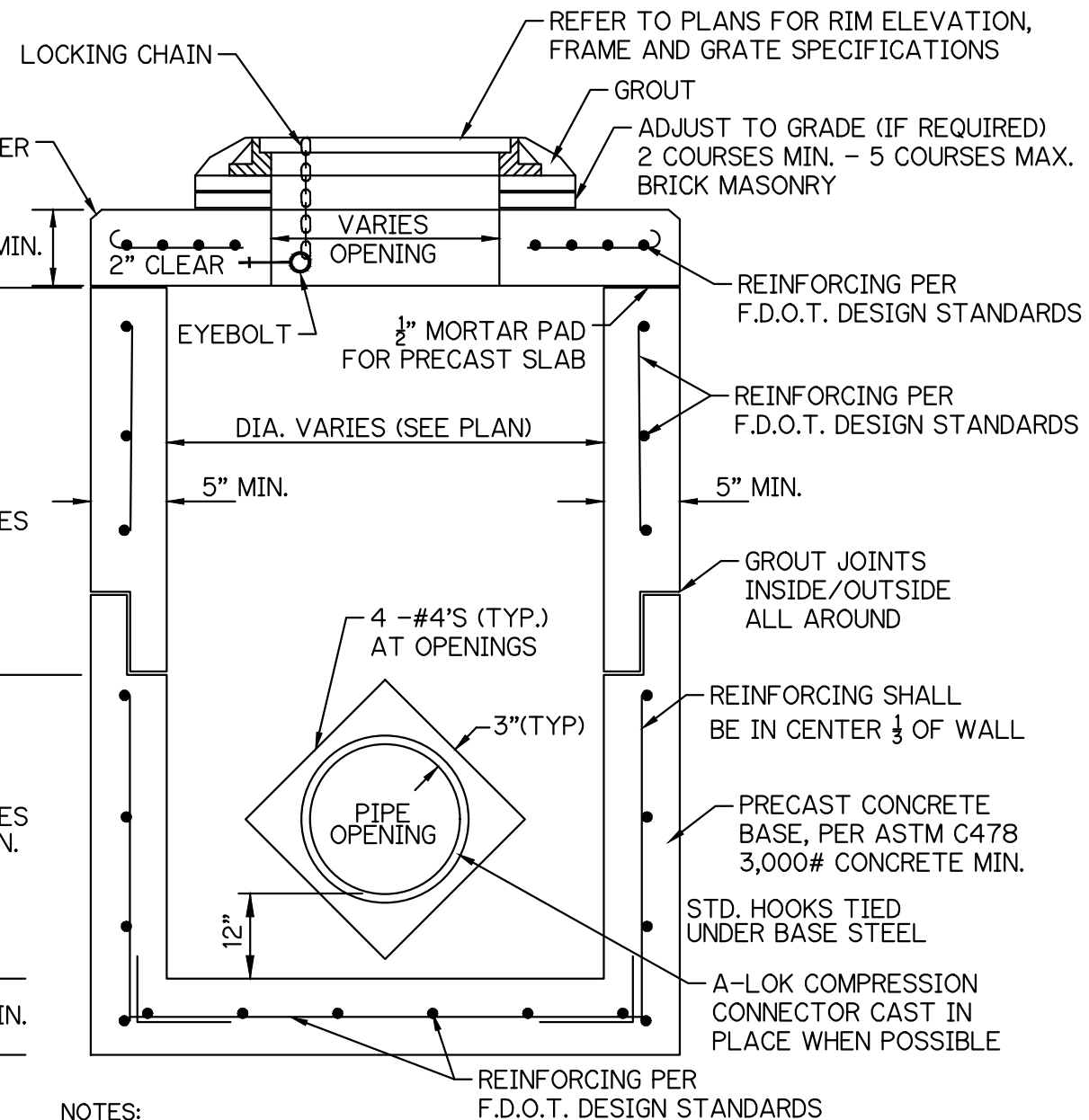
1. ALL INLET CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT F.D.O.T. STANDARDS INDEX #201 & 232.
2. AS AN ALTERNATE, PRECAST CIRCULAR (MANHOLES) MAY BE FURNISHED IN ACCORDANCE WITH F.D.O.T. STANDARD INDEX #200 WITH WALLS AND REINFORCEMENT IN ACCORDANCE WITH A.S.T.M. C478 SPECIFICATIONS. MINIMUM WALL THICKNESS SHALL BE 5" FOR ANY STRUCTURE.
3. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER.
4. STRUCTURES WITH SKEWED PIPE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH F.D.O.T. STANDARDS INDEX #200 AND INDEX #201. ROUND STRUCTURES ARE TO BE USED WHERE SKEW ANGLES EXCEED MAXIMUM ALLOWED OR WHEN PIPE CONNECTION WOULD BE AT THE CORNER OF A RECTANGULAR STRUCTURE. RECTANGULAR STRUCTURES WITH A CORNER OPENING ARE ONLY TO BE USED WHEN A ROUND STRUCTURE IS NOT POSSIBLE.
5. ALL EXPOSED CORNERS AND EDGES SHALL BE CHAMFERED 3/4".
6. INLETS AND MANHOLES SHALL BE PRECAST CLASS "A" 3,000 P.S.I. CONCRETE OR GREATER.
7. FRAMES AND GRATES SHALL BE CAST IRON AND IN ACCORDANCE WITH F.D.O.T. SPECIFICATIONS.
8. GRATES SHALL BE U.S. FOUNDRY OR EQUAL.
9. ALL GRATES SHALL HAVE LOCKING CHAINS IN ACCORDANCE WITH F.D.O.T. STANDARD INDEX #201, OR AN APPROVED ALTERNATE SECURING MECHANISM.
10. ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. 615 GRADE 40 AND F.D.O.T. DESIGN STANDARDS.
11. ALL GRATES IN GRASSED AREAS SHALL BE PROTECTED FROM SEDIMENT BY INSTALLATION OF A 4" WIDE PERIMETER APRON OF SOD. ADDITIONALLY ALL GRATES SHALL BE WRAPPED WITH FILTER CLOTH DURING CONSTRUCTION.

**SECTIONS/DETAILS LEGEND:**

- C/L - CENTERLINE
- CONC. - CONCRETE
- EL. - ELEVATION
- FF - FINISHED FLOOR
- HPPP - HIGH PERFORMANCE POLYETHYLENE PIPE
- L/L - LOT LINE
- LME - LAKE MAINTENANCE EASEMENT
- MAX. - MAXIMUM
- MIN. - MINIMUM
- P.S.L.U.E. - CITY OF PORT ST. LUCIE UTILITY EASEMENT
- R/W - RIGHT-OF-WAY
- S/W - SIDEWALK
- TYP. - TYPICAL
- U.F. - UTILITY EASEMENT
- U.F.-R.A. - UTILITY EASEMENT RESTRICTED AREA



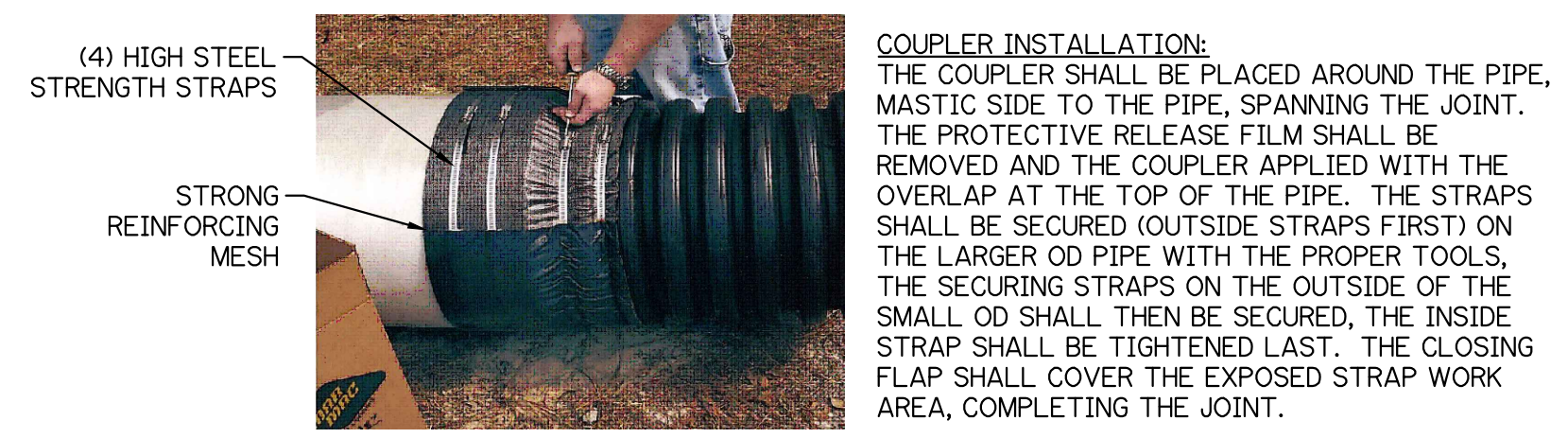
**PLAN (4', 5' OR 6' MH)**  
N.T.S.



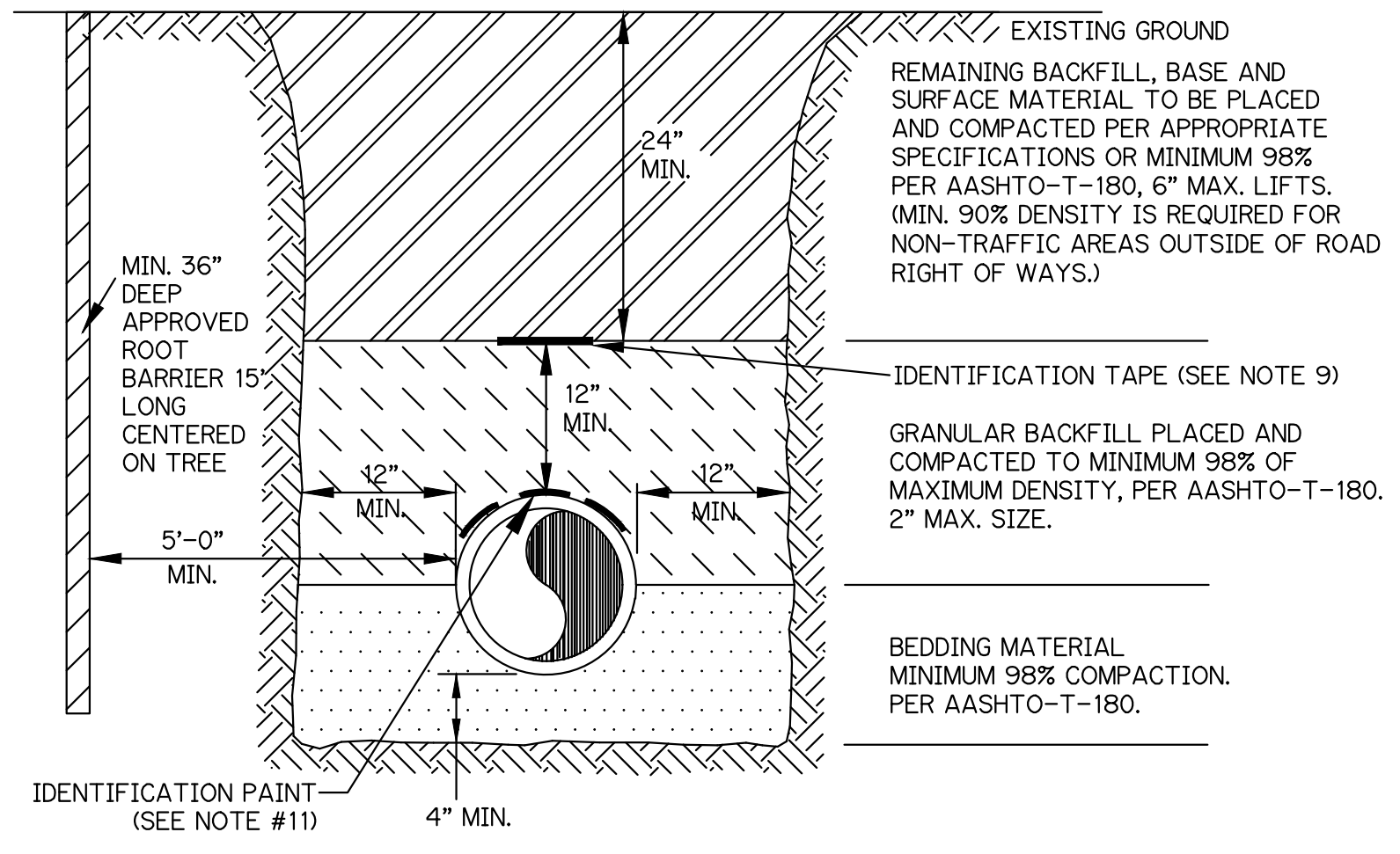
- NOTES:**
1. ALL REINFORCEMENT TO MEET CURRENT F.D.O.T. DESIGN STANDARDS AND SPECIFICATIONS.
  2. THIS STRUCTURE MAY BE SUBSTITUTED WITH OTHER STRUCTURES ONLY IF THE STANDARDS HAVE BEEN MET.

**STORM MANHOLE DETAIL**  
N.T.S.

NOTE: ALL GRADES SHOWN ARE IN NAVD88

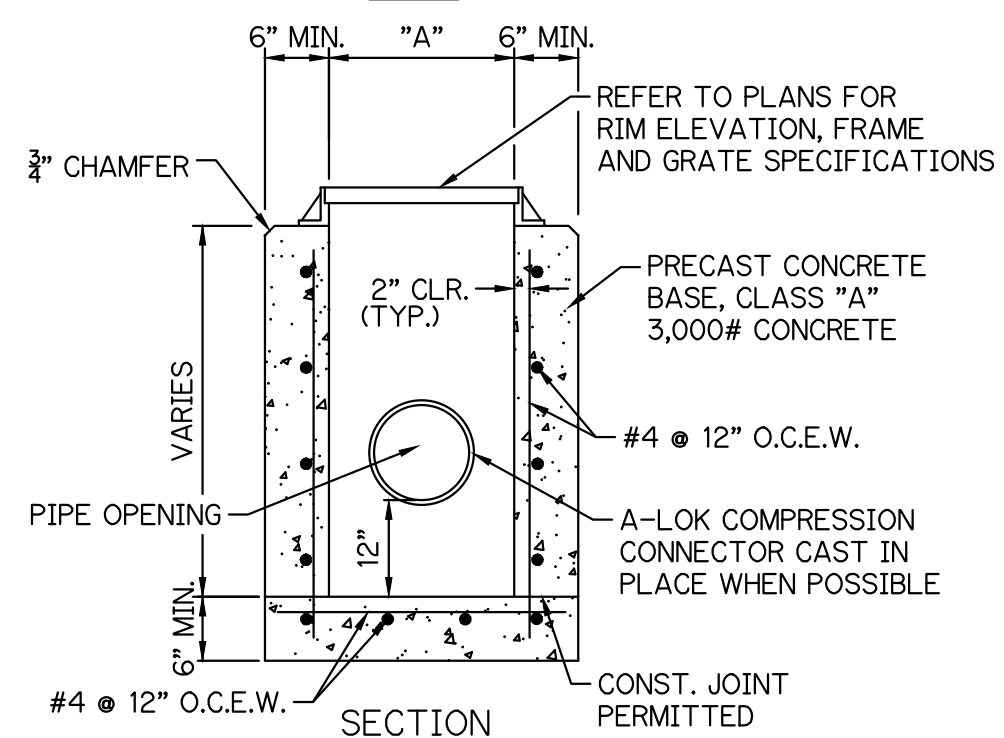
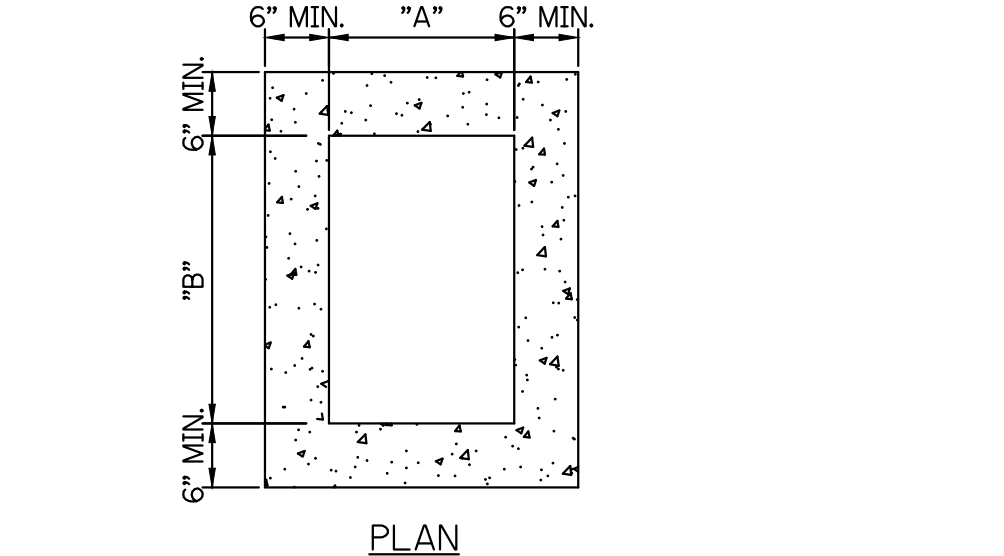


**MARMAC COUPLER DETAIL**  
N.T.S.



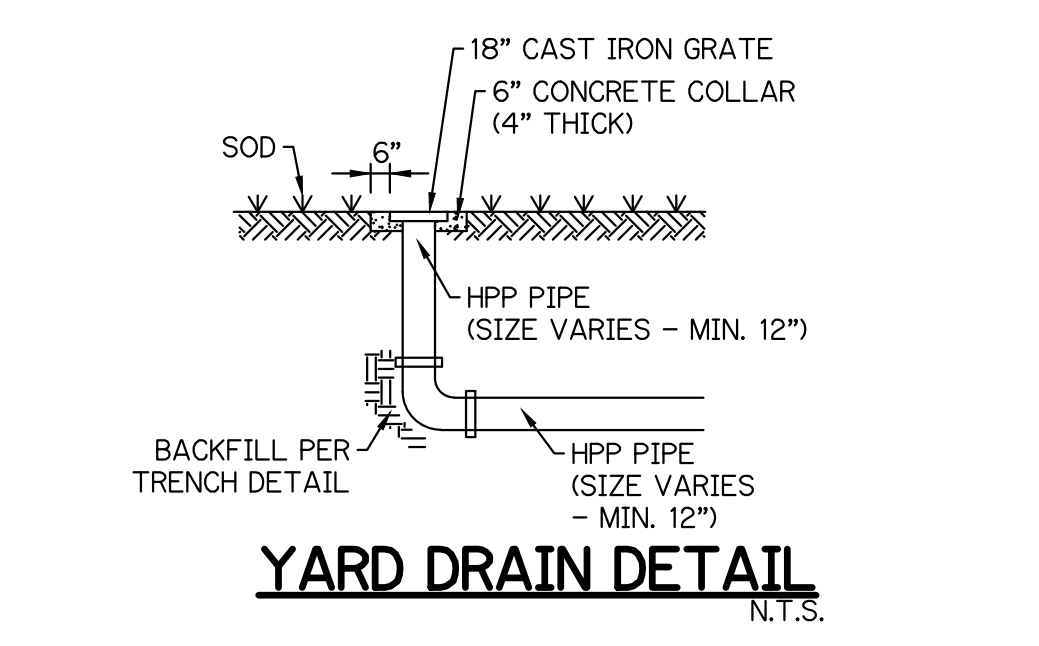
- TRENCH NOTES:**
1. BEDDING SHALL CONSIST OF IN-SITU GRANULAR MATERIAL OR WASHED AND GRADED LIMEROCK 3/8"- 7/8" SIZING WITH EQUAL OR GREATER STRUCTURAL ADEQUACY AS EXISTING. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED.
  2. THE PIPE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
  3. THE PIPE SHALL BE PLACED IN A DRY TRENCH.
  4. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK AND DEBRIS.
  5. DENSITY TESTS SHALL BE TAKEN IN 1 FOOT LIFTS ABOVE THE PIPE AT INTERVALS OF 400' MAXIMUM, (MINIMUM 1 SET) OR AS DIRECTED BY THE CONSTRUCTION COORDINATION DIVISION. RESULTS SHALL BE SUBMITTED TO CONSTRUCTION COORDINATION AS PART OF THEIR FIELD REVIEW.
  6. THE PERMITTEE/DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL TRENCH SAFETY LAWS AND REGULATIONS.
  7. SEE SEPARATE DETAIL FOR PAVED AREAS (OPEN CUT FOR THOROUGHFARE AND NON-THOROUGHFARE ROADS).
  8. THE AFFECTED AREA SHALL BE RESTORED TO EQUAL OR BETTER CONDITION OR AS SPECIFIED IN PERMIT/CONTRACT DOCUMENTS.
  9. APPROVED MAGNETIC TAPE IS REQUIRED FOR ALL MAIN PRESSURE PIPES AND CONDUIT IN THE CITY'S RIGHT-OF-WAY. INSTALL TAPE 24" BELOW FINISHED GRADE.
  10. ROOT BARRIER IS REQUIRED FOR APPROVED PIPE INSTALLATION CLOSER THAN 10 FEET FROM AN EXISTING TREE.
  11. CONTINUOUS 4" WIDE PAINT STRIPING IS REQUIRED FOR DIP/PCCP WATER MAINS (BLUE), DIP SANITARY FORCE MAINS (GREEN), DIP RECLAIMED WATER MAINS (PURPLE), GAS MAINS (YELLOW), OR AS REQUIRED BY THE APWA.
  12. PERMANENT ABOVE GROUND UTILITY MARKER SHALL BE INSTALLED IF REQUIRED BY PROPERTY OWNER GRANTING THE PIPE INSTALLATION PERMIT.

**TYPICAL TRENCH DETAIL**  
N.T.S.

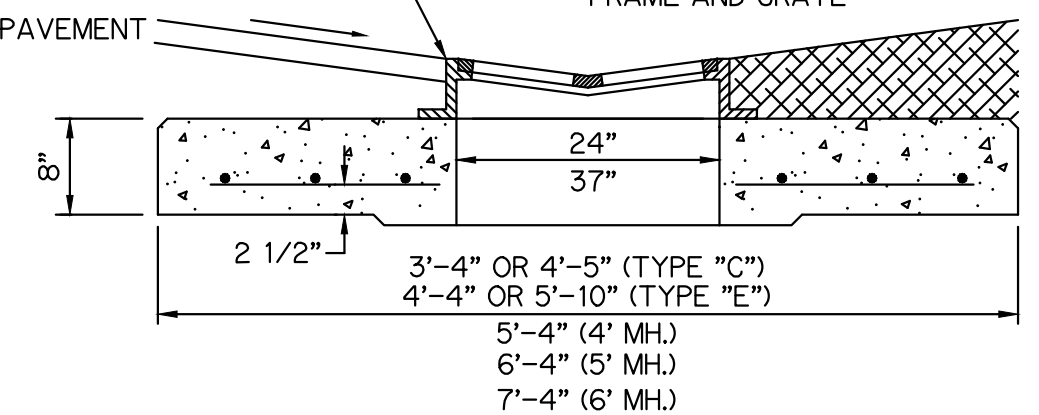


TYPE INLET	DIMENSIONS	
	"A"	"B"
C	2'-0"	3'-1"
E	3'-0"	4'-6"

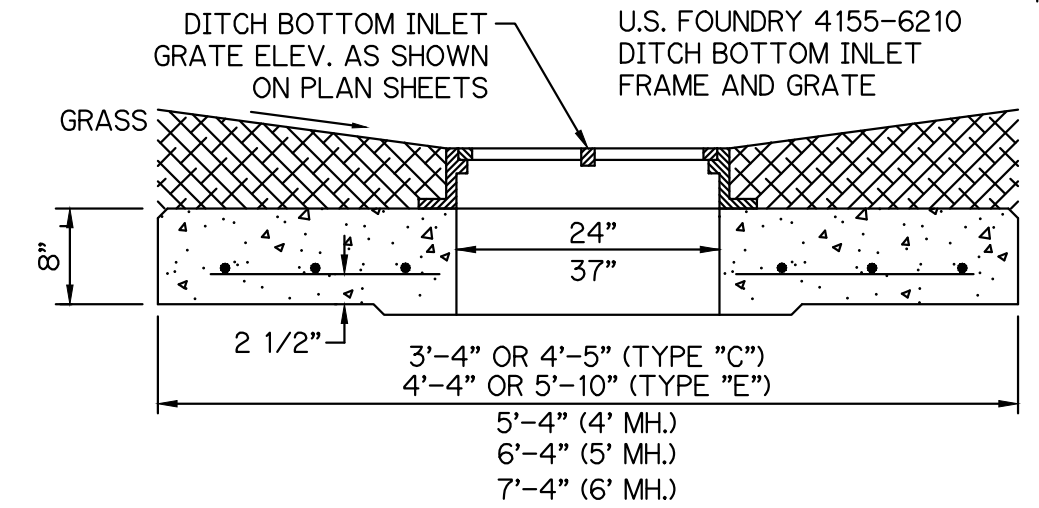
**STANDARD TYPE "C" & "E" INLET DETAIL**  
N.T.S.



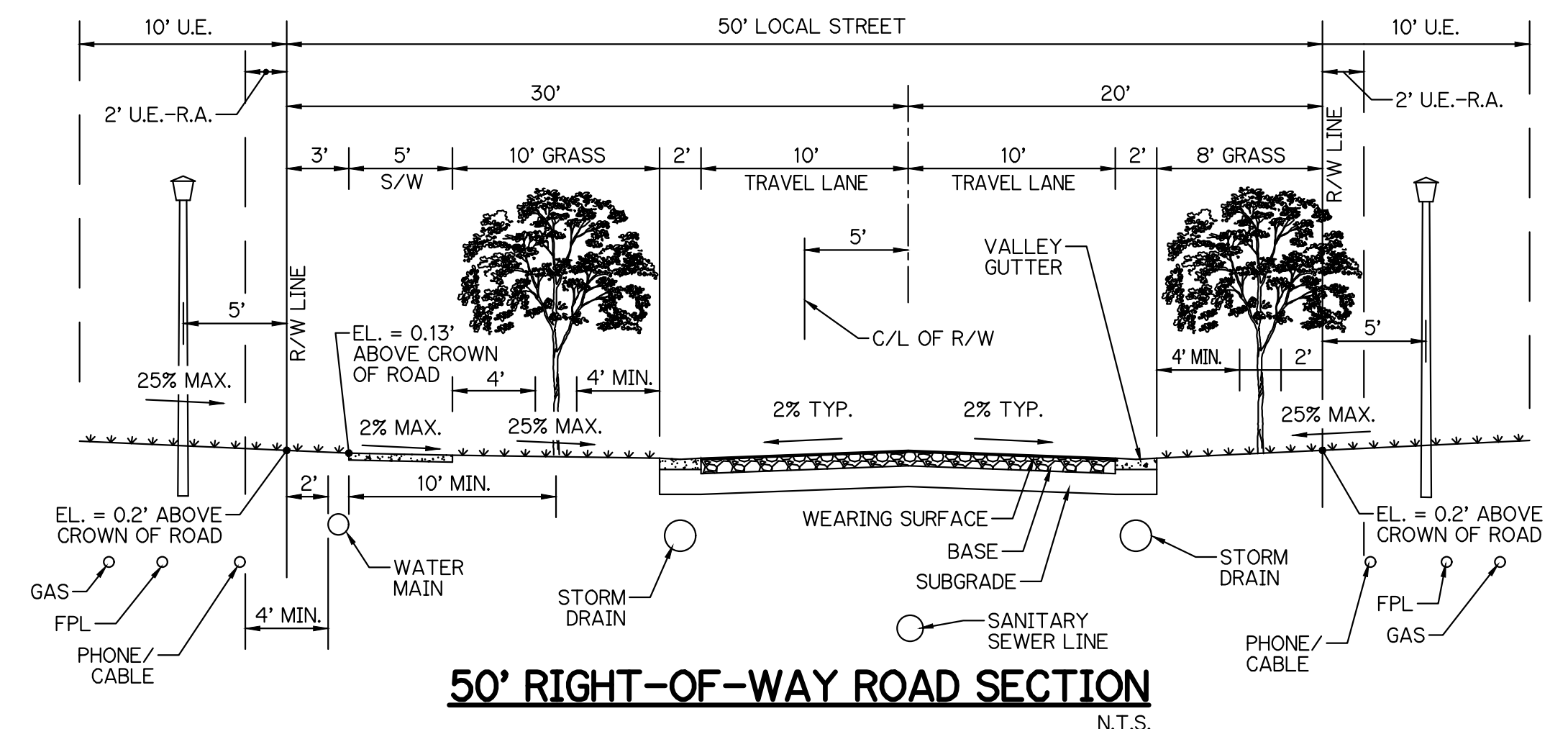
**YARD DRAIN DETAIL**  
N.T.S.



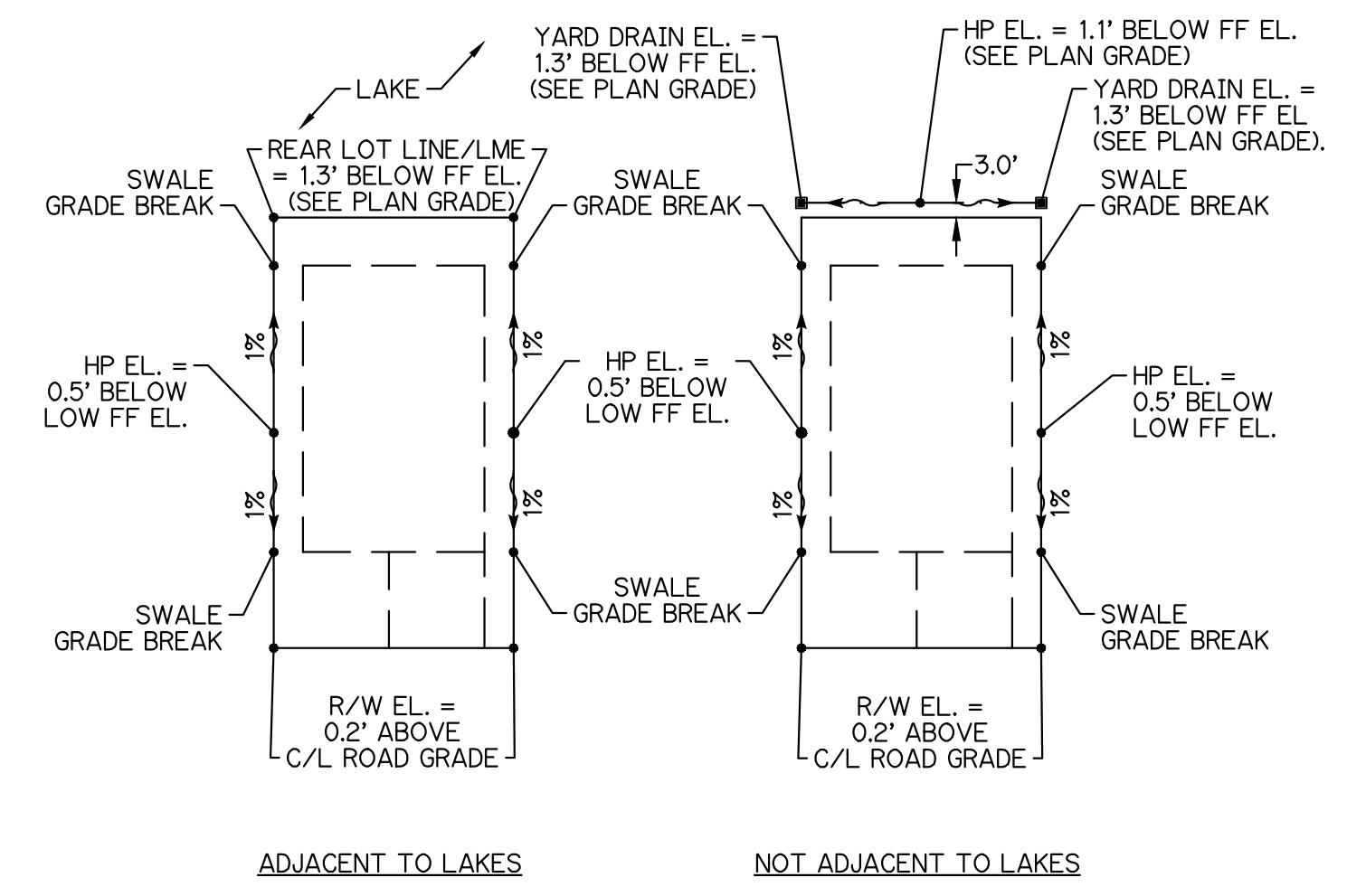
**VALLEY GUTTER INLET (VGI) DETAIL**  
N.T.S.



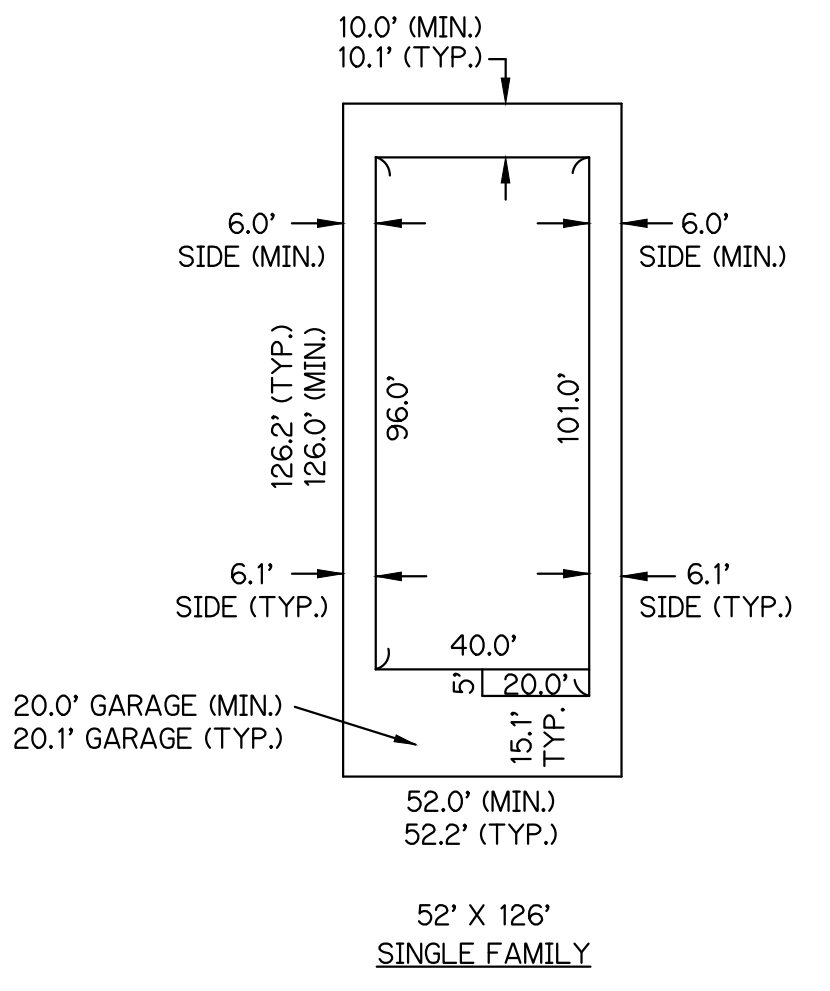
**DITCH BOTTOM INLET (DBI) DETAIL**  
N.T.S.



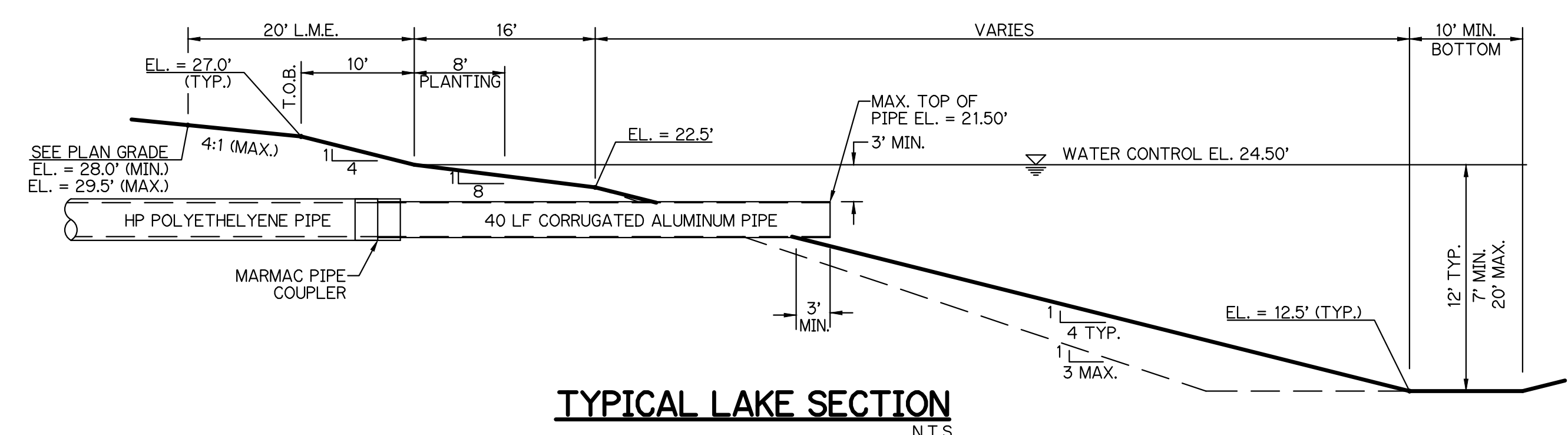
- SECTIONS/DETAILS LEGEND:**
- C/L - CENTERLINE
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  - L/L - LOT LINE
  - LME - LAKE MAINTENANCE EASEMENT
  - MAX. - MAXIMUM
  - MIN. - MINIMUM
  - P/L - PROPERTY LINE
  - P.S.L.U.E. - CITY OF PORT ST. LUCIE UTILITY EASEMENT
  - R/W - RIGHT-OF-WAY
  - S/W - SIDEWALK
  - T/L - TRACT LINE
  - TYP. - TYPICAL
  - U.F. - UTILITY EASEMENT
  - U.F.-R.A. - UTILITY EASEMENT RESTRICTED AREA



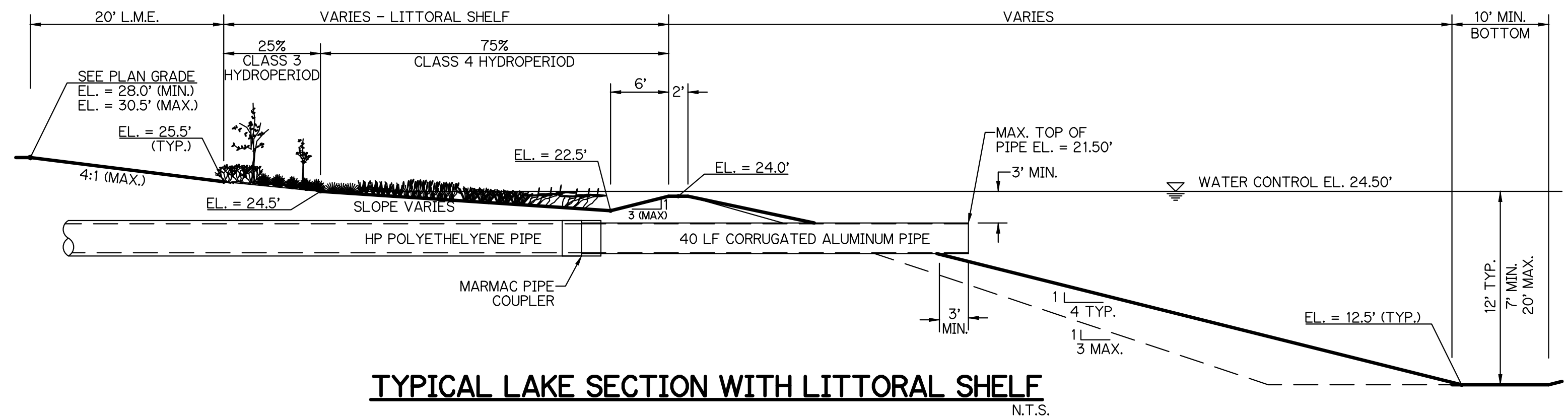
**TYPICAL LOT GRADING PLAN**  
N.T.S.



**TYPICAL LOT/  
BUILDING DIMENSIONS**  
N.T.S.



**TYPICAL LAKE SECTION**  
N.T.S.



**TYPICAL LAKE SECTION WITH LITTORAL SHELF**  
N.T.S.

- LAKE SECTIONS LEGEND:**
- C.A.P. - CORRUGATED ALUMINUM PIPE
  - CONC. - CONCRETE
  - EL. - ELEVATION
  - L.M.E. - LAKE MAINTENANCE EASEMENT
  - MAX. - MAXIMUM
  - MIN. - MINIMUM
  - R.C.P. - REINFORCED CONCRETE PIPE
  - T.O.B. - TOP OF BANK
  - TYP. - TYPICAL

- LAKE SECTION NOTES:**
1. LAKE BANKS TO BE GRADED TO THE ABOVE TYPICAL SECTION AND REGRADED WHERE FINISHED LAKE AREAS ARE DISTURBED BY OUTFALL CONSTRUCTION.
  2. ALL ELEVATIONS SHOWN ON THESE PLANS ARE IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TO CONVERT ELEVATIONS TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29), ADD 1.475 FEET TO THE NAVD88 ELEVATION. FOR EXAMPLE NAVD88 + 1.475' = NGVD29.
  3. LAKE CONTROL ELEVATION SHALL BE 25.50 NAVD88.

**NOTE: ALL GRADES SHOWN ARE IN NAVD88**

**P21-105**

REVISIONS	DATE	BY	CK

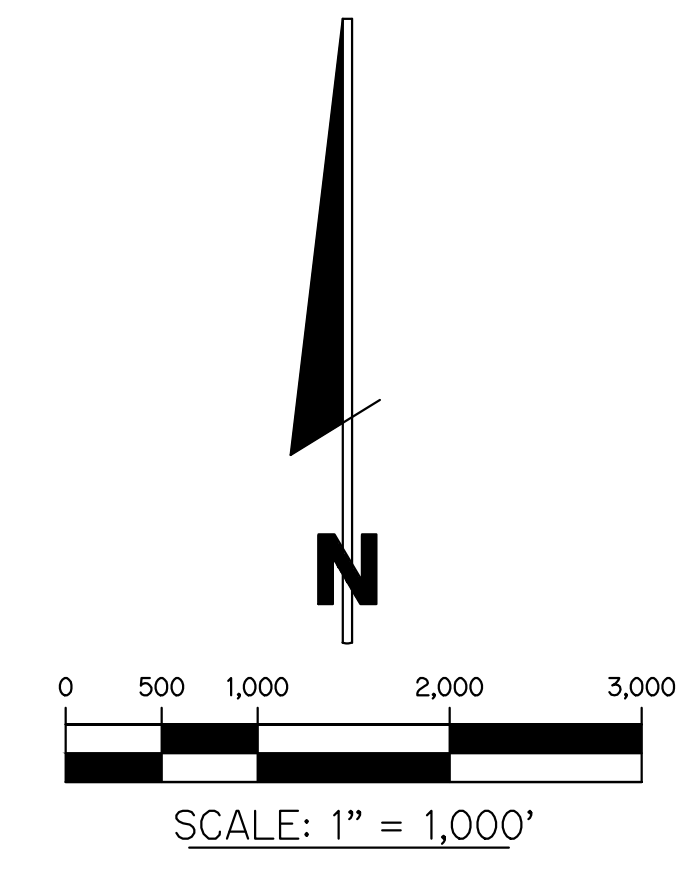
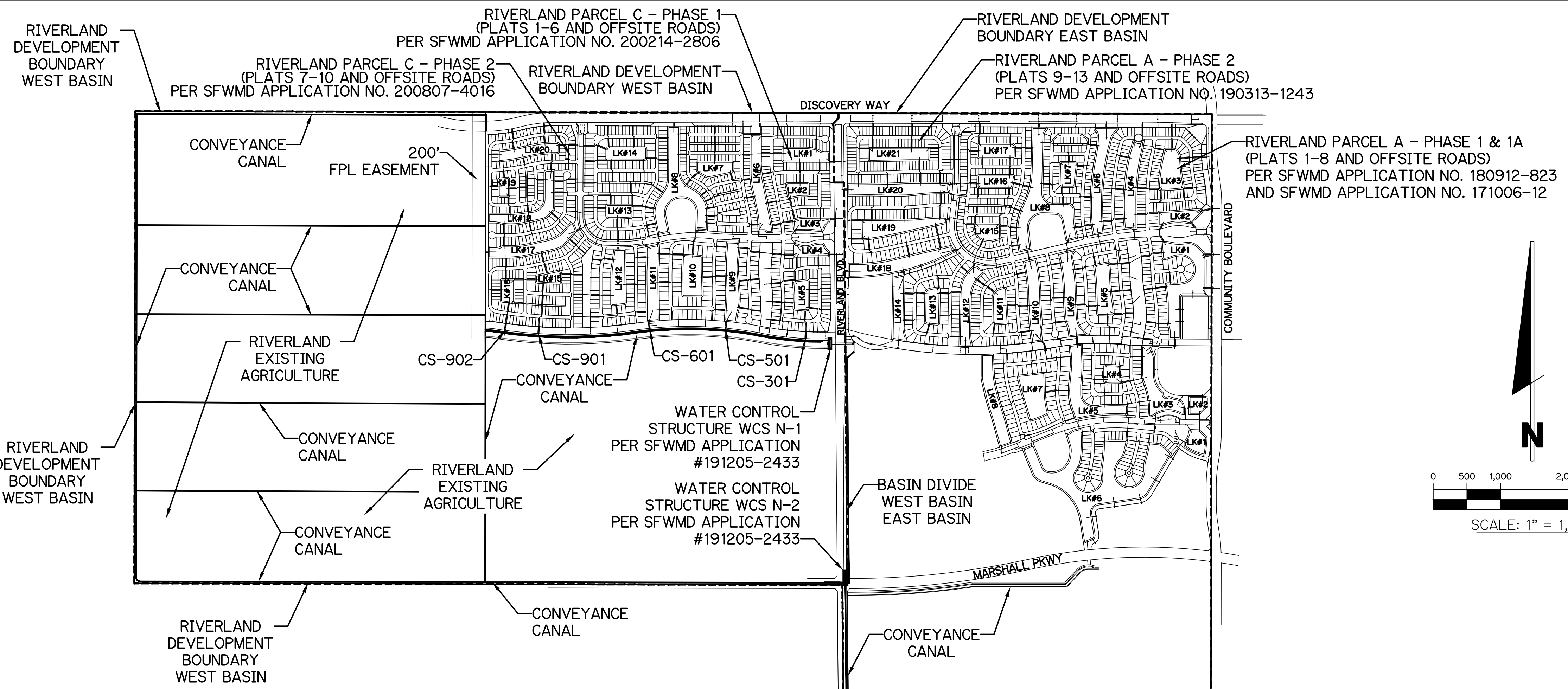
**GLH ENGINEERING, LLC**  
 1600 SAWGRASS CORPORATE  
 PARKWAY, SUITE 400  
 SUNRISE, FLORIDA 33323  
 PHONE: (954) 753-1730

SCALE: 1"=40'  
 DATE: 9/9/21  
 DESIGNED BY: AQC  
 CHECKED BY: BA  
 FILE NAME:  
 RIV-B PL 2 PD

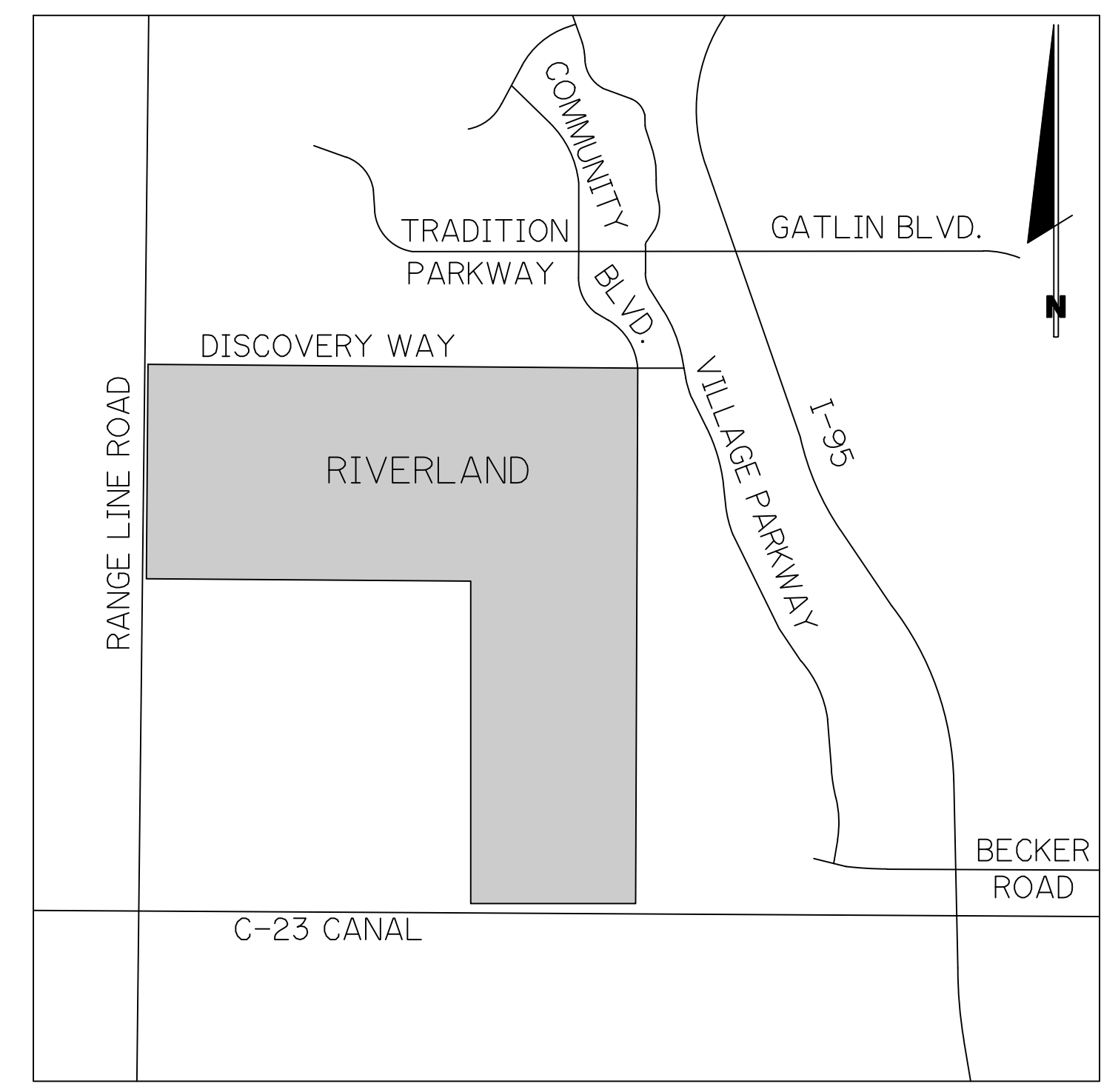
BRIAN ARNOLD, P.E.  
 FLORIDA P.E. #81294







**NOTE:**  
 WEST BASIN CONTROL WATER ELEVATION = 25.5 NAVD88  
 EAST BASIN CONTROL WATER ELEVATION = 24.5 NAVD88



**LOCATION MAP**  
 N.T.S.  
 SEC. 15, 16, 21 & 22, TWP. 37 S., RGE. 39 E.

EXISTING AGI PUMP  
 PER SFWMD ERP NO. 56-00558-S AND  
 SFWMD APPLICATION NO. 171003-13  
 AND APPLICATION NO. 191205-2433

EXISTING CONTROL STRUCTURE PC-22  
 AGI DISCHARGE TO THE C-23 CANAL  
 PER SFWMD ERP NO. 56-00558-S AND  
 SFWMD APPLICATION NO. 171003-13  
 AND APPLICATION NO. 191205-2433

WATER CONTROL STRUCTURE WCS-1  
 DISCHARGE TO THE C-23 CANAL  
 PER SFWMD ERP NO. 56-00558-S,  
 SFWMD APPLICATION NO. 16-1101-2M

PAYING, GRADING AND DRAINAGE DETAILS  
 FOR  
**RIVERLAND-PARCEL B**  
**PLAT TWO**

REVISIONS	DATE	BY	CK

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