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GEOTECHNICAL ENGINEER

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7064 DAVIS CREEK RD.
JACKSONVILLE, FLORIDA 32256
PH: (904) 880-0960
FX: (904) 880-0970

ENGINEER:

MAI ENGINEERING SERVICES, INC
2510 US 1 S, SUITE D
ST. AUGUSTINE, FL 32086
PHONE: (904) 794-1760
FAX: (904)-794-1768
ATTN: QUOC H. MAI, P.E.

TOPO SURVEYOR

FRANK JONES & ASSOCIATES
6015 CHESTER CIRCLE
JACKSONVILLE, FLORIDA 32217
PH: (904) 448-5424

ELECTRIC:

GREEN COVE SPRINGS ELECTRIC
321 WALNUT ST.
GREEN COVE SPRINGS, FL 32043
PHONE: (904)-297-7500

COMMUNICATION

AT&T
8171 BAYMEADOWS WAY W. 3RD FLOOR
JACKSONVILLE, FL 32256
PHONE: (904) 407-2549
ATTN: KEVIN DOW

WATER & SEWER:

CITY OF GREEN COVE SPRINGS UTILITIES
321 WALNUT ST
GREEN COVE SPRINGS, FL 32043

THE CITY OF GREEN COVE SPRINGS

321 WALNUT ST
GREEN COVE SPRINGS, FL 32043
904-297-7500

ST JOHNS RIVER WATER MANAGEMENT DISTRICT

7775 BAYMEADOWS WAY, SUITE 102
JACKSONVILLE, FL 32256
904-730-6270
800-852-1563

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION:

FDEP-NORTHEAST DISTRICT
8800 BAYMEADOWS WAY WEST, SUITE 100
JACKSONVILLE, FLORIDA 32256
(904) 256-1700

SITE DEVELOPMENT PLANS FOR RIVER OAKS INDUSTRIAL PARK

PARCEL ID. NO. : 38-06-26-016564-002

SITE ADDRESS: 1609 COOKS LANE., GREEN COVE SPRINGS, FLORIDA

PREPARED BY:

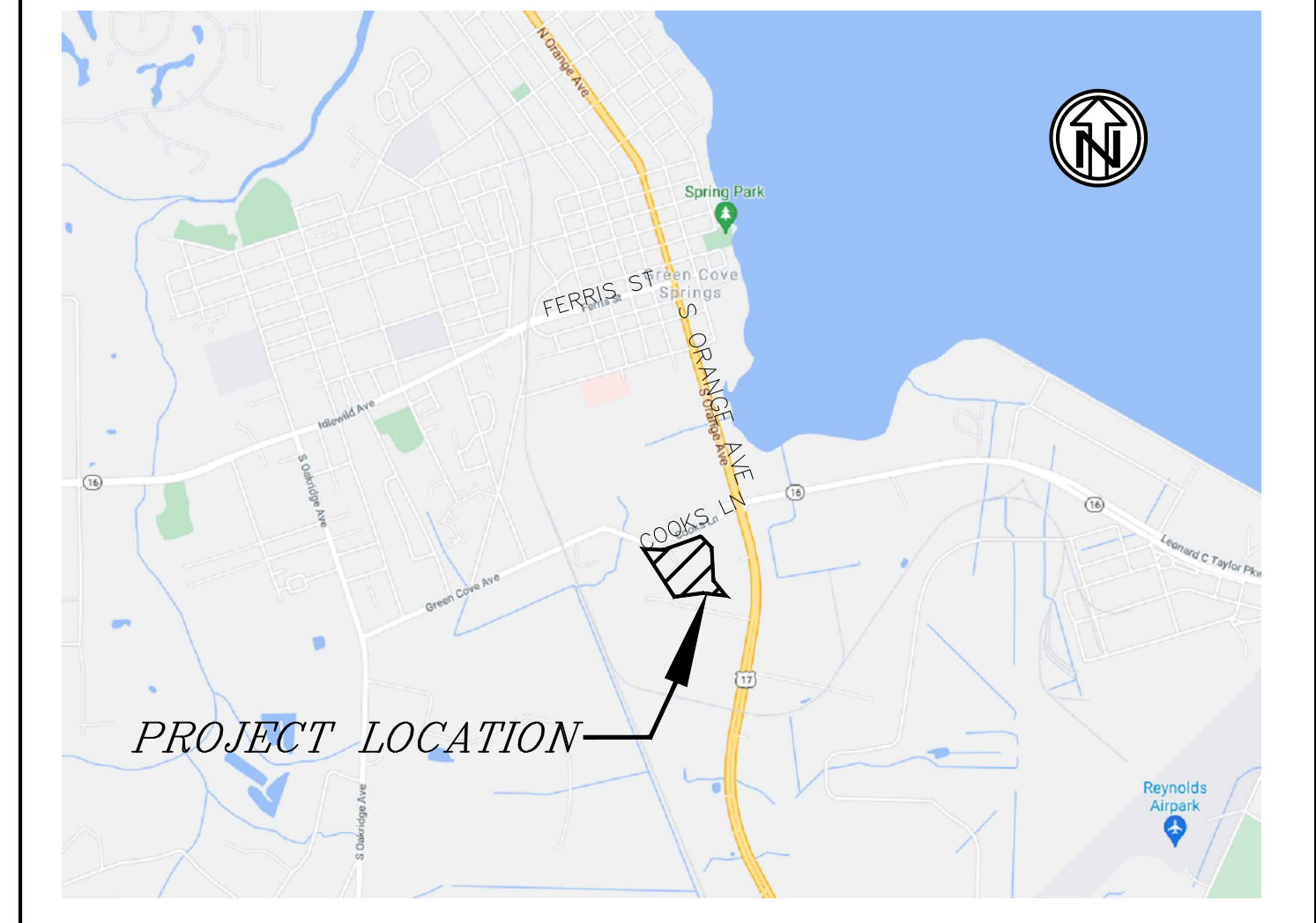


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DRAWING INDEX

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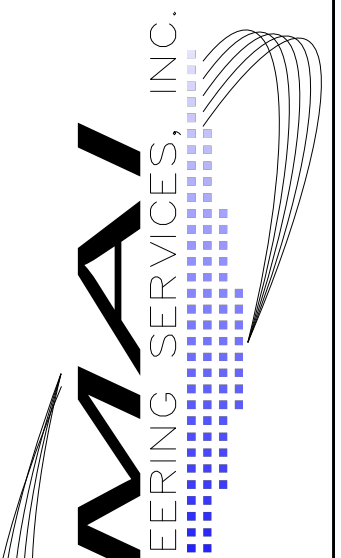
LOCATION MAP (NTS)



ARIAL MAP (NTS)



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quoc@maiengineer.com



Quoc H. Mai, P.E. #64006, State of Florida
Date: 2024.01.18
16:09:33-05'00'

LICENSED ENGINEER
QUOC H. MAI
FL #64006 CA#2516

REVISIONS	DATE	BY	DESCRIPTION
1	08/10/2023	QHM	ISSUED FOR CITY PERMIT
2	08/10/2023	QHM	ISSUED FOR CITY COMMENTS

COVER SHEET
RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY: QHM
DWO BY: GMG
CHK BY: QHM
DATE: 8/10/2023
JOB No.: 1369
SHEET No.: 1

GENERAL NOTES:

- ALL WORK SHALL BE COMPLETED IN CONFORMANCE AS APPLICABLE WITH FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION
- SHOP DRAWINGS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO MANUFACTURE.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ANY EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL LINE AND GRADE STAKES IN THE FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ENGINEER OR THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY ERRORS.
- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO START OF CONSTRUCTION FOR LOCATION OF EXISTING UTILITIES, IN ORDER TO PREVENT DAMAGE AND COORDINATE ADJUSTMENT AND/OR RELOCATION OF SAME IF REQUIRED.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER AND OWNER OF ANY CHANGES OR DEVIATIONS FROM THE ORIGINAL PLANS PRIOR TO CONSTRUCTION OF SAID CHANGE OR DEVIATION.
- THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING STRUCTURES AND UTILITIES. ANY DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY INSURANCE AND BONDS REQUESTED BY THE OWNER FOR THIS PROJECT.
- THE OWNER WILL PROVIDE THE SELECTED CONTRACTOR WITH COPIES OF ALL PERMITS RECEIVED FOR THE PROJECT.
- THE CONTRACTOR SHALL PROTECT AND USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD TRANSMISSION LINES OR UNDERGROUND UTILITIES.
- ALL PROPERTY CORNERS AND SURVEY MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED. IF A MONUMENT IS IN DANGER OF BEING DESTROYED, THE PROJECT ENGINEER AND OWNER SHOULD BE NOTIFIED IMMEDIATELY IN ORDER THAT THE COUNTY MAY HAVE A SURVEYOR REFERENCE SAID POINT PRIOR TO DISTURBANCE. ALSO, ALL G.P.S. CONTROL POINTS ARE TO BE PROTECTED. IF DESTROYED DURING CONSTRUCTION IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO REPLACE THE CONTROL POINT(S) AT THEIR EXPENSE.
- THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE, AT ALL TIMES, ONE COPY OF APPROVED CONSTRUCTION PLANS, SPECIFICATIONS ANY SPECIAL PROVISIONS, AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS IN COMPLIANCE WITH THE TOWN OF MARINELAND LAND DEVELOPMENT CODE.
- SUBMITTAL OF AS-BUILT SITE SURVEY, INCLUDING BENCH MARKS, IS REQUIRED.
- THE CONTRACTOR SHALL CONTACT THE TOWN OF MARINELAND DEVELOPMENT SERVICES INSPECTOR 24 HOURS PRIOR TO ALL NECESSARY SITE WORK INSPECTIONS AND 5 DAYS PRIOR TO THE FINAL INSPECTION.
- ANY CHANGES TO THE EXISTING BUILDING (INCLUDING BUT NOT LIMITED TO RE-ROOF AND PAINT COLOR CHANGES) LANDSCAPING, AND FENCES/WALL REQUIRES THE APPROVAL BY THE TOWN OF MARINELAND.

EROSION CONTROL NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION CONTROL WITHIN BEST MANAGEMENT PRACTICES FOR THE DURATION OF THE PROJECT UNTIL SUCH TIME AS THE PROJECT HAS BEEN CERTIFIED AS COMPLETE.
- THE CONTRACTOR SHALL SEED & MULCH OR SOD ALL OPEN SPACE AREAS TO BE GRASSED IMMEDIATELY FOLLOWING FINAL GRADING AND COMPLETION OF ALL UNDERGROUND UTILITIES.
- SILT FENCES SHALL BE INSTALLED ALONG LIMITS OF CONSTRUCTION .
- SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRED IMMEDIATELY IF DAMAGED.
- ALL SIDE SLOPES OF STORM WATER MANAGEMENT AREAS SHALL BE SODDED UPON COMPLETION OF FINAL GRADING.
- ALL INLETS SHALL BE PROTECTED FROM COLLECTION OF ERODED MATERIALS BY INSTALLATION OF TEMPORARY FILTER FABRIC AND/OR HAYBALES.
- FLOATING TURBIDITY BARRIERS SHALL BE INSTALLED WITHIN ALL WATER BODIES DOWNSTREAM OF CONSTRUCTION ACTIVITIES WHERE PROTECTION AGAINST TURBID WATERS DISCHARGE MAY OCCUR.

MAINTENANCE OF TRAFFIC NOTES:

- ADVANCE CONSTRUCTION SIGNAGE INDEX 602 SHALL BE POSTED.
- TRAFFIC SHALL BE RESTRICTED TO A SINGLE LANE WHEN ANY WORK ENCROACHES THE AREA BETWEEN THE CENTERLINE AND 2 FEET OUTSIDE THE EDGE OF PAVEMENT. ONE-LANE CLOSURES SHALL BE IN ACCORDANCE WITH F.D.O.T. STANDARD INDEX No. 603.
- ALL WORK WITHIN THE FDOT RIGHT OF WAY SHALL CONFORM TO THE MOST CURRENT FDOT STANDARDS AND SPECIFICATIONS.
- ALL CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED A MINIMUM OF 30 FEET FROM THE EDGE OF EXISTING PAVEMENT AND SHALL BE PROTECTED BY TYPE II BARRICADES WITH FLASHING YELLOW LIGHTS.
- THERE SHALL BE NO EXCAVATIONS LEFT OPEN AFTER DARK.
- CONTRACTOR SHALL NOTIFY CITY OF GREEN COVE SPRINGS PERMITTING OFFICE.
- IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT THE SUNSHINE STATE ONE CALL SYSTEM AT (800)-432-4770 FOR LOCATION OF UNDERGROUND UTILITIES.

TRAFFIC CONTROL/STRIPING NOTES:

- SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE FLORIDA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE JURISDICTIONAL TRAFFIC DEPARTMENT TYPICAL DRAWINGS FOR ROADWAY SIGNING, STRIPING & GEOMETRICS
- ALL PAVEMENT MARKINGS ARE TO CONSIST OF 90 MIL. THERMOPLASTIC.
- REPLACE ALL EXISTING RPM'S REMOVED OR DAMAGED BY THIS PROJECT, TO MEET 2015 FDOT STANDARDS.
- SIGNS THAT REQUIRE RELOCATION TO BE RELOCATED PER CURRENT STANDARDS 11860 AND 17302.

SITE PREPARATION NOTES:

- NORMAL, GOOD PRACTICE SITE PREPARATION PROCEDURES SHALL BE USED FOR THIS PROJECT. THESE PROCEDURES INCLUDE: STRIPPING THE SITE OF EXISTING VEGETATION AND TOPSOIL, COMPACTING THE SUBGRADE AND PLACING NECESSARY FILL OR BACKFILL TO GRADE WITH ENGINEERED FILL. A MORE DETAILED SYNOPSIS OF THIS WORK IS AS FOLLOWS:
 - PRIOR TO CONSTRUCTION, THE LOCATION OF ANY EXISTING UNDERGROUND UTILITY LINES WITHIN THE CONSTRUCTION AREA SHOULD BE ESTABLISHED. PROVISIONS SHOULD THEN BE MADE TO RELOCATE INTERFERING UTILITIES TO APPROPRIATE LOCATIONS. ABANDONED PIPES SHALL BE PROPERLY REMOVED OR PLUGGED, AS THEY MAY SERVE AS CONDUITS FOR SUBSURFACE EROSION WHICH MAY SUBSEQUENTLY LEAD TO EXCESSIVE SETTLEMENT OF OVERLAY STRUCTURE(S).
 - STRIP THE PROPOSED CONSTRUCTION LIMITS OF ALL GRASS, ROOTS, TOPSOIL AND OTHER DELETERIOUS MATERIALS WITHIN AND FOR 3 FEET BEYOND THE PERIMETER OF THE PROPOSED PAVED AREAS. SOME ISOLATED AREAS MAY REQUIRE MORE THAN 12 INCHES OF STRIPPING OR UNDERCUTTING. TYPICAL STRIPPING AT THIS SITE TO DEPTHS OF 6 TO 12 INCHES.
 - IT IS RECOMMENDED THE TOP OF THE CLAYEY SANDS BE MAINTAINED A MINIMUM OF 2 FEET BELOW THE PROPOSED BOTTOM OF THE BASE MATERIAL OR CONCRETE PAVEMENT. IF THE SITE GRADING IS SUCH THAT THE MINIMUM SEPARATION DOES NOT EXIST, WE RECOMMEND UNDERCUTTING THE CLAYEY MATERIALS TO MAINTAIN THIS SEPARATION AND BACKFILLING WITH CLEAN STRUCTURAL FILL, AS DESCRIBED BELOW.
 - THE SEASONAL HIGH GROUNDWATER LEVEL IS ESTIMATED TO BE ONE FOOT BELOW THE EXISTING GROUND. FOR PLANNING PURPOSES, GROUNDWATER CONTROL MEASURES (DEWATERING) SHOULD BE ANTICIPATED FOR THE STRIPPING AND EARTHWORK OPERATIONS. TEMPORARY GROUNDWATER CONTROL MAY BE ACHIEVED BY PUMPING FROM SUMPS LOCATED IN PERIMETER DITCHES. EACH SUMP SHOULD BE LOCATED OUTSIDE THE ROADWAY AREAS TO AVOID LOOSENING OF THE FINE SANDY SUBGRADE SOILS.
 - COMPACT THE SUBGRADE FROM THE SURFACE WITH A LIGHT WEIGHT VIBRATORY ROLLER (A 2 TO 3 TON ROLLER, STATIC WEIGHT AND 3 FOOT DRUM DIAMETER) OR TRACKED DOZER EQUIPMENT UNTIL A MINIMUM DENSITY OF AT LEAST 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557), TO A DEPTH OF 12 INCHES BELOW THE COMPACTED SURFACE IS OBTAINED. A MINIMUM OF EIGHT (8) COMPLETE COVERAGES SHOULD BE MADE IN THE PAVEMENT CONSTRUCTION AREA WITH A ROLLER TO IMPROVE THE UNIFORMITY AND INCREASE THE DENSITY OF THE UNDERLYING SANDY SOILS. THE USE OF HEAVY VIBRATORY COMPACTION EQUIPMENT SHALL NOT BE UTILIZED DUE TO THE POTENTIAL FOR PUMPING OF THE NEAR-SURFACE CLAYEY SOILS ENCOUNTERED, UNLESS APPROVED BY THE ENGINEER.
 - SHOULD THE SUBGRADE SOILS EXPERIENCE PUMPING AND SOIL STRENGTH LOSS DURING THE COMPACTION OPERATIONS, COMPACTION WORK SHOULD BE IMMEDIATELY TERMINATED AND (1) THE DISTURBED SOILS REMOVED AND BACKFILLED WITH DRY STRUCTURAL FILL SOILS WHICH ARE THEN COMPACTED, OR (2) THE EXCESS PORE PRESSURES WITHIN THE DISTURBED SOILS ALLOWED TO DISSIPATE BEFORE RECOMPACTING.
 - TO AVOID PUMPING OF THE UNDERLAYING CLAYEY SOILS, SELF PROP-ELLED VIBRATING EQUIPMENT SHALL REMAIN A MINIMUM OF 2 FEET ABOVE THE CLAYEY SOILS. THE SANDY SOILS WITHIN 2 FEET OF THE CLAYEY SOILS MAY BE COMPACTED WITH A VIBRATORY ROLLER.
 - OPERATE IN THE STATIC MODE OR WITH A TRACK-MOUNTED DOZER TO AVOID DISTURBING THE CLAYEY SOILS. A MINIMUM OF 18 INCHES OF SAND SHALL OVERLAY THE CLAYEY SOILS PRIOR TO OPERATION OF ANY TYPE OF CONSTRUCTION EQUIPMENT. EXCESS DISTURBANCE OF THE CLAYEY SOILS WILL DEGRADE THE STRENGTH CHARACTERISTICS OF THE SOIL AND MAY RESULT IN AN UNSUITABLE SOIL WHICH WILL REQUIRE OVER-EXCAVATION AND SUBSEQUENT BACKFILLING WITH CLEAN FINE SAND FILL MATERIAL. IN AREAS WHERE CLAYEY SOILS ARE ENCOUNTERED NEAR THE GROUND SURFACE OR ARE EXPOSED BY OVER EXCAVATION, AN INITIAL LIFT OF STRUCTURAL FILL MAY BE PLACED PRIOR TO COMPACTION OF THE SUBGRADE SOILS.
 - DUE TO THE PRESENCE OF THE NEAR SURFACE CLAYEY SOILS, THE SITE MAY BECOME DIFFICULT TO WORK DURING WET WEATHER. IF CONSTRUCTION IS BEGUN DURING WET WEATHER, IT IS RECOMMENDED THE BUILDING AND PAVEMENT SUBGRADES NOT BE DISTURBED OTHER THAN TO STRIP VEGETATION. FILL AND GRADING OPERATIONS SHOULD BE PERFORMED WITH A MINIMUM DISTURBANCE TO THE SURFICIAL SOILS. IN THIS REGARD, IT IS RECOMMENDED THAT TRACK-MOUNTED EQUIPMENT BE USED ON SITE.
 - TEST THE SUBGRADE FOR COMPACTION AT A FREQUENCY OF NOT LESS THAN ONE TEST PER 10,000 SQUARE FEET.
 - PLACE FILL MATERIAL, AS REQUIRED. THE FILL SHOULD CONSIST OF CLEAN, FINE SAND WITH LESS THAN 10 PERCENT SOIL FINES. PLACE FILL IN UNIFORM 10 TO 12 INCH LOOSE LIFTS AND COMPACT EACH LIFT TO A MINIMUM DENSITY OF 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY.

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FAX (904)794-1768
quote@matengineer.com

MAI
ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL #64006 CA#25162

REVISIONS

NO.	DATE	DESCRIPTION
1	08/17/23	REVISION PER CITY PERMITS
2	04/12/2023	REVISION PER CITY AND MAD BAJ
3	04/18/2023	REVISION PER CITY COMMENTS
4		
5		

GENERAL NOTES

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

SHEET TITLE

DSGN BY: **QHM**
DWG BY: **GMG**
CHK BY: **QHM**
DATE: 8/10/2023
JOB No.: 1369
SHEET No.: 2

BEARINGS BASED ON NORTH AMERICAN DATUM OF 1983 (NAD 1983) (2011) (EPOCH 2010.0000).

**BOUNDARY & TOPOGRAPHIC SURVEY OF:
1609 SOUTH ORANGE AVENUE
GREEN COVE SPRINGS, FLORIDA 32043**

THIS SPACE INTENTIONALLY LEFT BLANK THIS SPACE INTENTIONALLY LEFT BLANK

(904) 998-9733
www.landmarktitle.com

PROPERTY ADDRESS: 1609 SOUTH ORANGE AVENUE, GREEN COVE SPRINGS, FLORIDA 32043

LEGAL DESCRIPTION:

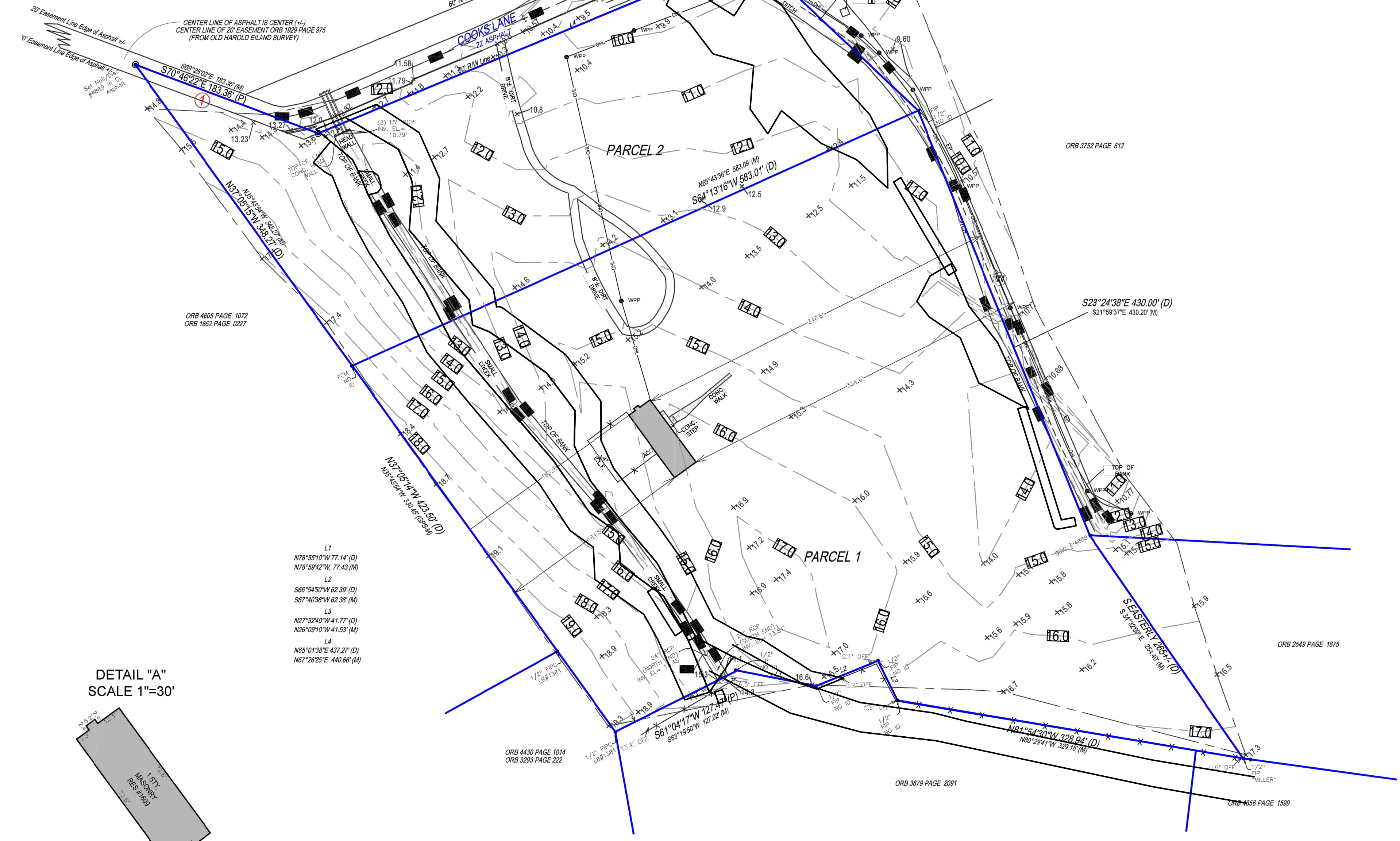
PARCEL 1
PART OF SECTIONS 29 AND 30, BLOCK 1, CLINCH ESTATES A/K/A PART OF LOTS 1 AND 2, BLOCK 1, BAYARD TRACT, AND PART OF BLOCK 3, SOUTH GREEN COVE SPRINGS, AS MORE PARTICULARLY DESCRIBED IN O. R. BOOK 330 PAGES 62 AND 63, AND O. R. BOOK 417 PAGE 451, EXCEPT THOSE PARTS DESCRIBED IN O. R. BOOK 403 PAGES 28 TO 36, O. R. BOOK 511 PAGE 397, O. R. BOOK 528 PAGE 137 AND 139, O. R. BOOK 549 PAGE 346, O. R. BOOK 653 PAGE 510, AND O. R. BOOK 1052 PAGE 51, PUBLIC RECORDS OF CLAY COUNTY, FLORIDA.

PARCEL 2
PORTION OF LOTS 1 AND 2, BLOCK 1, BAYARD TRACT, CLAY COUNTY, FLORIDA, ACCORDING TO MAP BY CHARLES E. SMITH RECORDED IN THE PUBLIC RECORDS OF SAID COUNTY IN DEED BOOK "J", PAGES 273 AND 274 (SAID LOT 1, BLOCK 1, IS ALSO KNOWN AS SECTION 29, BLOCK 1, CLINCH ESTATE, ACCORDING TO MAP BY GOULD T. BUTLER RECORDED IN PAID RECORDS IN PLAT BOOK 1, PAGES 31, 32, 33 AND 34, THE WEST 1/2 OF SAID LOT 2, BLOCK 1, IS ALSO KNOWN AS SECTION 30, BLOCK 1 OF SAID CLINCH ESTATE) ALL IN THE G. I. F. CLARK GRANT, SECTION 38, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CLAY COUNTY, FLORIDA; SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHWEST CORNER OF SAID LOT 1, BLOCK 1, BAYARD TRACT; THENCE ON THE WEST LINE OF SAID LOT 1 AND ON THE CENTERLINE OF PALM AVENUE RUN, NORTH 24 DEGREES 21 MINUTES 05 SECONDS WEST 47.0 FEET THENCE NORTH 61 DEGREES 51 MINUTES 10 SECONDS EAST 1,099.34 FEET; THENCE NORTH 37 DEGREES 05 MINUTES 14 SECONDS WEST 423.50 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 37 DEGREES 05 MINUTES 14 SECONDS WEST 348.27 FEET; THENCE SOUTH 70 DEGREES 46 MINUTES 22 SECONDS EAST 183.36 FEET; THENCE NORTH 65 DEGREES 01 MINUTE 38 SECONDS EAST 437.27 FEET; THENCE SOUTH 48 DEGREES 05 MINUTES 50 SECONDS EAST 222.34 FEET; THENCE SOUTH 64 DEGREES 13 MINUTES 16 SECONDS WEST 583.01 FEET TO THE POINT OF BEGINNING.

MORE PARTICULARLY DESCRIBED AS:
BEGIN AT A 4" SQUARE CONCRETE MONUMENT AT THE SW CORNER OF SAID PARCEL 2 LANDS AS DESCRIBED ABOVE AND RUN THENCE (BEARINGS AND DISTANCE ARE NORTH AMERICAN DATUM OF 1983-2011-EPOCH 2010.0000) N35°43'54"W, 348.27' TO A NAIL AND DISC #4889 IN THE CENTERLINE OF COOK ROAD, A 60 FOOT WIDE PUBLIC R/W TRANSITIONING INTO A 20 FOOT WIDE EASEMENT AS PER OFFICIAL RECORDS BOOK (ORB) 1929 PAGE 0975 SAID CLAY COUNTY PUBLIC RECORDS; RUN THENCE S69°25'02"E, 183.36' (DEED S70°46'22"E, 183.36') TO A 1/2" IRON ROD #4889 ON THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID COOK LANE; RUN THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE N67°26'25"E, 440.66' (DEED N65°01'38"E, 437.27') TO A 1/2" IRON PIPE "MEM" #2933; RUN THENCE S46°38'42"E, 215.00' (DEED S48°05'50"E, 222.34') TO A 1/2" IRON PIPE-NO NUMBER IS ATTACHED AT THE EASTERNMOST CORNER OF SAID PARCEL 2 AND THE NORTHERNMOST CORNER OF SAID PARCEL 1 ABOVE; RUN THENCE S21°59'37"E, 430.20' (DEED S23°24'38"E, 430.00') ALONG THE EAST LINE OF SAID PARCEL 1 AND THE WEST LINE OF THOSE LANDS DESCRIBED IN ORB 3752, PAGE 612; SAID CLAY COUNTY PUBLIC RECORDS TO A 1/2" IRON ROD #4889 AT THE NW CORNER OF THOSE LANDS DESCRIBED IN ORB 2549, PAGE 1875; SAID CLAY COUNTY PUBLIC RECORDS; THENCE CONTINUING ALONG THE EAST LINE OF SAID PARCEL 1 AND THE WEST LINE OF SAID ORB 2549 PAGE 1875 LANDS, RUN THENCE S34°32'09"E, 254.40' (DEED SOUTHEREASTERLY 265' +/-) TO A 1/2" IRON PIPE "MILLER" AT THE SE CORNER OF SAID PARCEL 1 AND THE SW CORNER OF SAID ORB 2549 PAGE 1875 LANDS; RUN THENCE N80°29'41"W, 329.18' (DEED N81°54'30"W, 328.94') ALONG THE SOUTH LINE OF SAID PARCEL 1 AND THE NORTHERLY LINE OF ORB 4356 PAGE 1599 AND THEN ORB 3879 PAGE 2091 LANDS TO A 1/2" IRON PIPE; RUN THENCE THE FOLLOWING COURSES AND DISTANCES ALONG SAID DIVIDING LINE BETWEEN SAID PARCEL 1 AND THE NORTHERLY LINE OF SAID ORB 3879 PAGE 2091 LANDS: N26°09'10"W, 41.53' (DEED N27°32'40"W, 41.77') TO A 1/2" IRON PIPE- NO NUMBER ATTACHED; S67°40'38"W, (DEED S66°54'50"W, 62.39') TO A 1/2" IRON PIPE - NO NUMBER ATTACHED; N78°55'10"W, 77.14' TO A 1/2" IRON PIPE - NO NUMBER ATTACHED; S63°19'50"W, 127.02' (DEED S61°04'17", 127.47') TO A 1/2" IRON PIPE #1381 AT THE NW CORNER OF SAID ORB 3879 PAGE 2091 LANDS AND THE SOUTHWESTERLY CORNER OF SAID PARCEL 1; RUN THENCE N35°43'54"W, 330.45' (DEED N37°05'14"W, 423.50') ALONG THE WESTERLY LINE OF SAID PARCEL 1 TO THE POINT OF BEGINNING. CONTAINING 8.9141 ACRES, MORE OR LESS

GENERAL SURVEYOR NOTES:

- Legal Description has been furnished or by confirmed the Client or His/her Agents.
- The Surveyor hereon is not responsible for easements of record other than those shown on a Plat if applicable, or in a Title Commitment provided at the time of order. Any condition that might represent an unrecorded easement is shown hereon and marked as a Point of Interest. (POI) Above-Ground evidences of Utilities may or may not represent an unrecorded easement.
- Measurements shown hereon are in US Standard feet and decimals thereof.
- TYPE OF SURVEY: Florida Boundary with Above-Ground Improvements shown.
- STATED PURPOSE OF THIS SURVEY: Mortgage, Purchase, Sale, Permits, Planning.
- Main Building and Ancillary Structure measurements are to the exterior of those buildings, so may not be adequate for Engineer or Architectural additions. Design Professionals should make their own measurements for attachments to Buildings shown hereon.
- This survey does not show any underground improvements, foundations, or utilities, etc. No underground investigation of any feature including Septic Tank has been performed.
- Any underground Septic or Well feature shown has been uncovered by the seller or his Agents.
- All ABOVE-GROUND evidences of Utility Easements lie within their Respective Easements unless noted.
- This Survey is not intended to Reflect or Determine Ownership.
- Construct Improvements to Iron Markers as described only. Wood Laths and Wire Flags ARE NOT Property Corners.
- This survey is COPYRIGHTED and is not intended for, nor Insured for multiple uses by multiple parties. Other than a Lender who assumes a Mortgage Note for a Certifyee hereon, use is restricted to Certifyees hereon for the Purpose listed in Note #5 above. It is illegal to copy or alter this survey drawing without permission.
- Streets shown hereon are Centered in RW provided unless otherwise noted and dimensioned.
- Water shorelines shown on this drawing are current for date shown this is NOT a "Mean High Water Survey" as per Chapter 177.39 F.A.C. or any other relevant Local, State, or Federal rule.
- State Plane Coordinates shown, if any, are based on the North American Datum (NAD) of 1983, Florida East Zone (941)-(2011)-(epoch 2010.0000)
- Elevations, if shown, are based on the North American Vertical Datum (NAVD) 1988.
- All dimensions hereon reflect the Deed/Plat call AND the corresponding field measured value. Calculated values are shown if reference irons are set.
- Electronic (PDF) files are valid with Chapter 5J-17.032 (3) F.A.C and FS 0425.025 conforming Electronic (PDF) Seal attached. As per rules listed, the electronic signature file name/number is present on the invoice presented to the client or his/her agents. Hard sealed copies of the drawing are stored at the Surveyor's office and will be furnished on request (gratis) to certifyees hereon for 60 days from date of issuance. Hard copies will be furnished to said Certifyees for an Archival Fee after 60 days.
- Symbols hereon may differ in scale from the Legend and Abbreviations/Symbols list hereon for clarity.
- Pursuant to F.S. 558.0035, no individual employee or Agent may be held personally liable for Negligence.
- This drawing reflects information gathered, analyzed, presented and preserved solely by River City Surveying, LLC. Third Party references, Business Cards etc. attached do not infer or create liability in any form.
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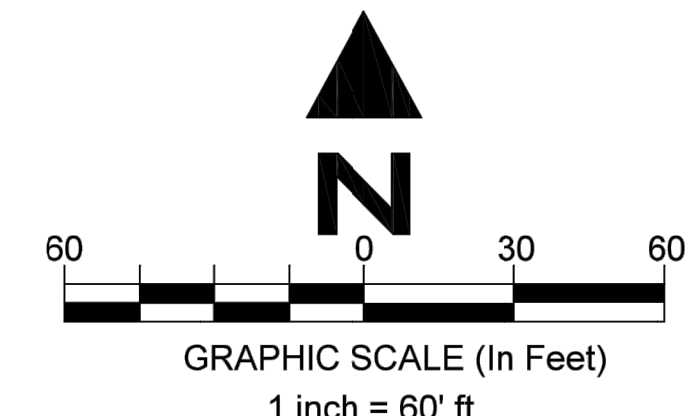


- L1 N78°59'10\"/>

DETAIL "A"
SCALE 1"=30'

SURVEYOR'S LEGEND

- AC = Air Conditioner
- BLDG = Building
- BRL = Building Restriction Line
- CM = Concrete Monument
- C/P = Covered Porch
- CONC = Concrete
- D.B. = Deed Book
- D.&A.E. = Drainage & Access Easement
- EC = Edge of Concrete
- EP = Edge of Asphalt/Pavement
- ESMT = Easement
- FT. = Feet
- F.I.P. = Found Iron Pipe (Size Delineated)
- F.I.R. = Found Iron Rod (Size Delineated)
- LS = Licensed Surveyor
- now = now or formerly (owned by)
- OHL = Overhead Wire/Line
- ORB = Official Records Book
- ORV = Official Record Volume
- PC = Point of Curvature
- PCPt = Permanent Control Point
- Pg = Page
- PI = Point of Intersection
- PK = Parker- Kalon or Mag Nail
- POB = Point of Beginning
- POC = Point of commencement
- POI = Point of interest
- PRC = Point of Reverse Curvature
- MF = Metal Fence
- VF = Wood Fence
- CLF = Chain Link Fence
- RES. = Residence
- Δ = Delta or Central Angle
- RAD = Radius
- CH = Chord Bearing Distance
- L = Arc Length
- ID = Identification
- (P) = Plat Call
- (M) = Field Measured Value
- (C) = Calculated Value
- (D) = Deed Call
- IR = Iron Pipe
- IP = Iron Rod
- LSB = Licensed Survey Business
- LS = Licensed Surveyor
- RLS = Registered Licensed Surveyor
- PLS = Professional Licensed Surveyor
- PSM = Professional Licensed Mapper
- CCEC = Clay County Electric Cooperative
- COJ = City of Jacksonville
- JEA = Jacksonville Electric Authority
- FCM = Found Concrete Monument
- F.A.C. = Florida Administrative Code
- F = Face Side of Wood Fence
- FPLE = Florida Power & Light Easement
- P = Past Side of Wood Fence
- POI = Point Of Interest
- PRC = Point of Reverse Curvature
- PRM = Permanent Reference Monument
- PT = Point Of Tangency
- RBL = Reference Bearing Line
- PVC = PVC/Plastic Fence
- EL. = Elevation
- RCP = Reinforced Concrete Pipe
- CL = Centerline
- INV. = Invert
- EL. = Elevation
- R/W = Right -Of -Way Line
- SQ = Square
- STY = Story
- S = Section
- T = Township
- R = Range
- PF = Pool Filter/Machinery on Pad
- AC = Air Conditioner/ Heat Pump on Pad
- WPP = Wood Power Pole
- GA = Guy Anchor (If - Dimension to Ground Entry Point - Underground Extent not Determined)
- WM = Water Meter
- FD = Fire Hydrant
- SS = Sanitary Sewer Manhole
- SD = Stormwater Drainage Manhole
- JEA = JEA Manhole
- W = Well
- SIRC 1/2" 4889



SURVEYORS CERTIFICATION:
REPRODUCTIONS OF THIS SKETCH ARE NOT VALID UNLESS SEALED WITH FLORIDA PSM EMBOSSED SEAL. THE SKETCH OF SURVEY DEPICTED HEREON CONFORMS TO THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA BOARD OF LAND SURVEYORS IN ACCORDANCE WITH CHAPTER 5J-17.050-17.053, PURSUANT TO CHAPTER 472, FLORIDA STATUTES, AND WAS DONE UNDER MY DIRECT SUPERVISION.

Timothy L. Blackmon
State of Florida Professional Surveyor and Mapper
License Number 4889
RIVER CITY SURVEYING & MAPPING | LB#8484

POINTS OF INTEREST:
① ASPHALT STREET IN EASEMENT ALONG NORTH LINE IN THIS AREA

RIVER CITY SURVEYING & MAPPING
LB#8484
904-487-9054 | F. 904-998-8736
7220 FINANCIAL WAY | JACKSONVILLE, FL 32256

DATE SIGNED: 08/17/2022
FIELD WORK DATE: 08/01/2022
REVISION DATE(S): 08/17/2022
SURVEY NUMBER: 051722.1

CERTIFIED TO:
**FIDELITY NATIONAL TITLE INSURANCE COMPANY
BARWICK BANKING COMPANY, ISAOA ATIMA
LANDMARK TITLE**

PAGE 1 OF 1

2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
PHONE (904)794-1760
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quoc@matengineer.com

MAI
ENGINEERING SERVICES, INC.

LICENSED ENGINEER
QUOC H. MAI
FL #64006 CA#25162

REVISIONS

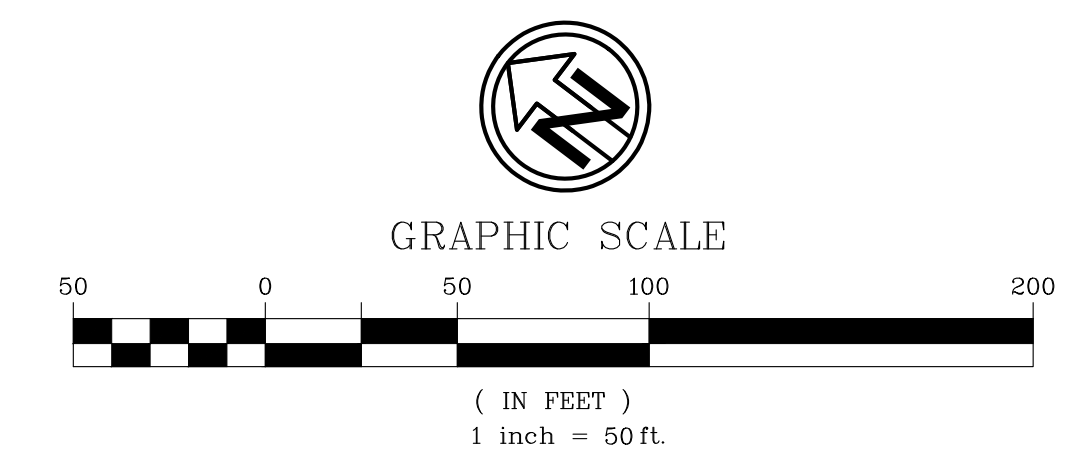
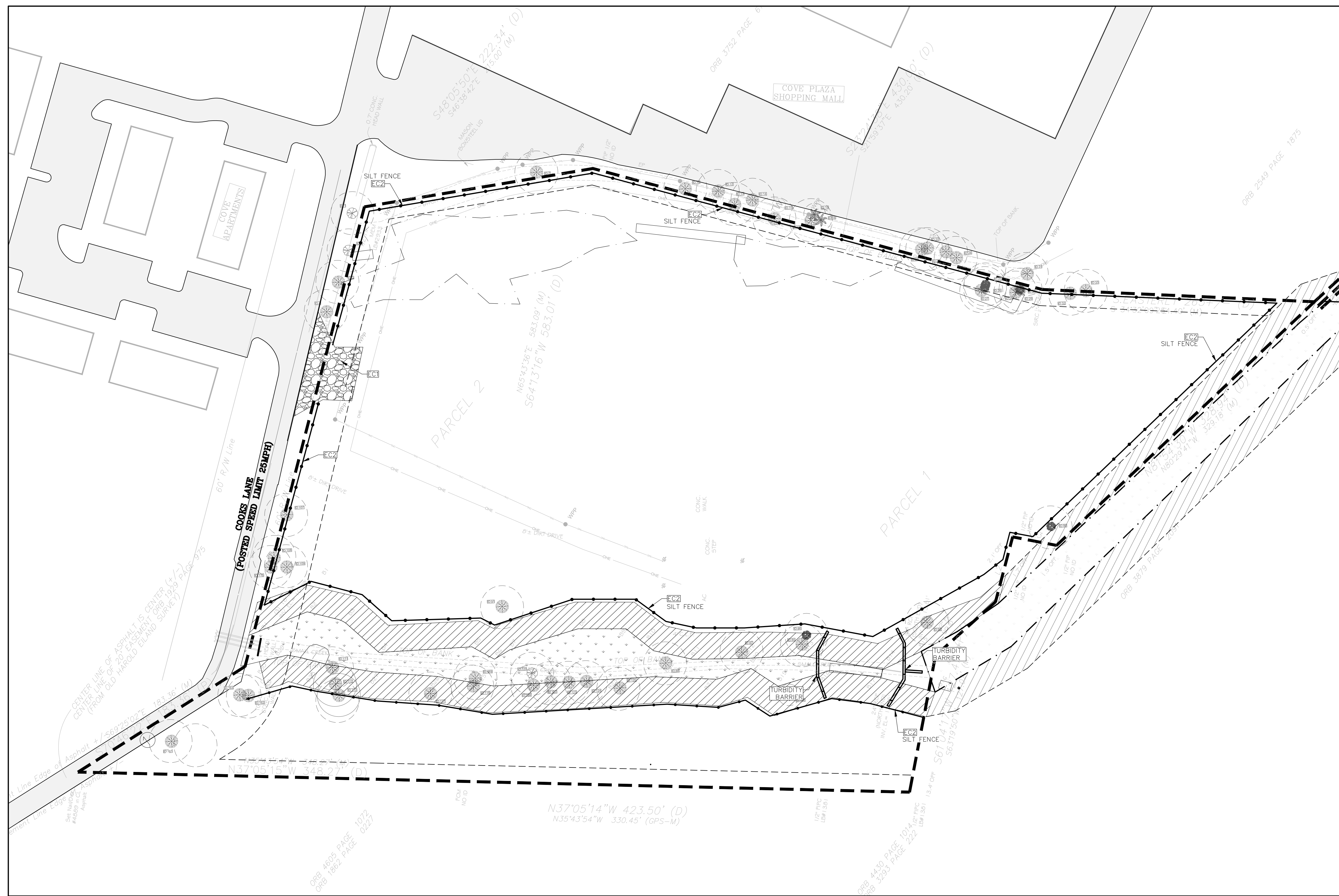
DATE	BY	DESCRIPTION
08/17/22	TBL	REVISION PER CITY SURVEY
04/16/2022	TBL	REVISION PER CITY AND WAD DAI
04/16/2022	TBL	REVISION PER CITY COMMENTS

TOPO SURVEY

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA

PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY: QHM
DWG BY: GMG
CHK BY: QHM
DATE: 8/10/2023
JOB No.: 1369
SHEET No.: 4



EROSION CONTROL DETAILS

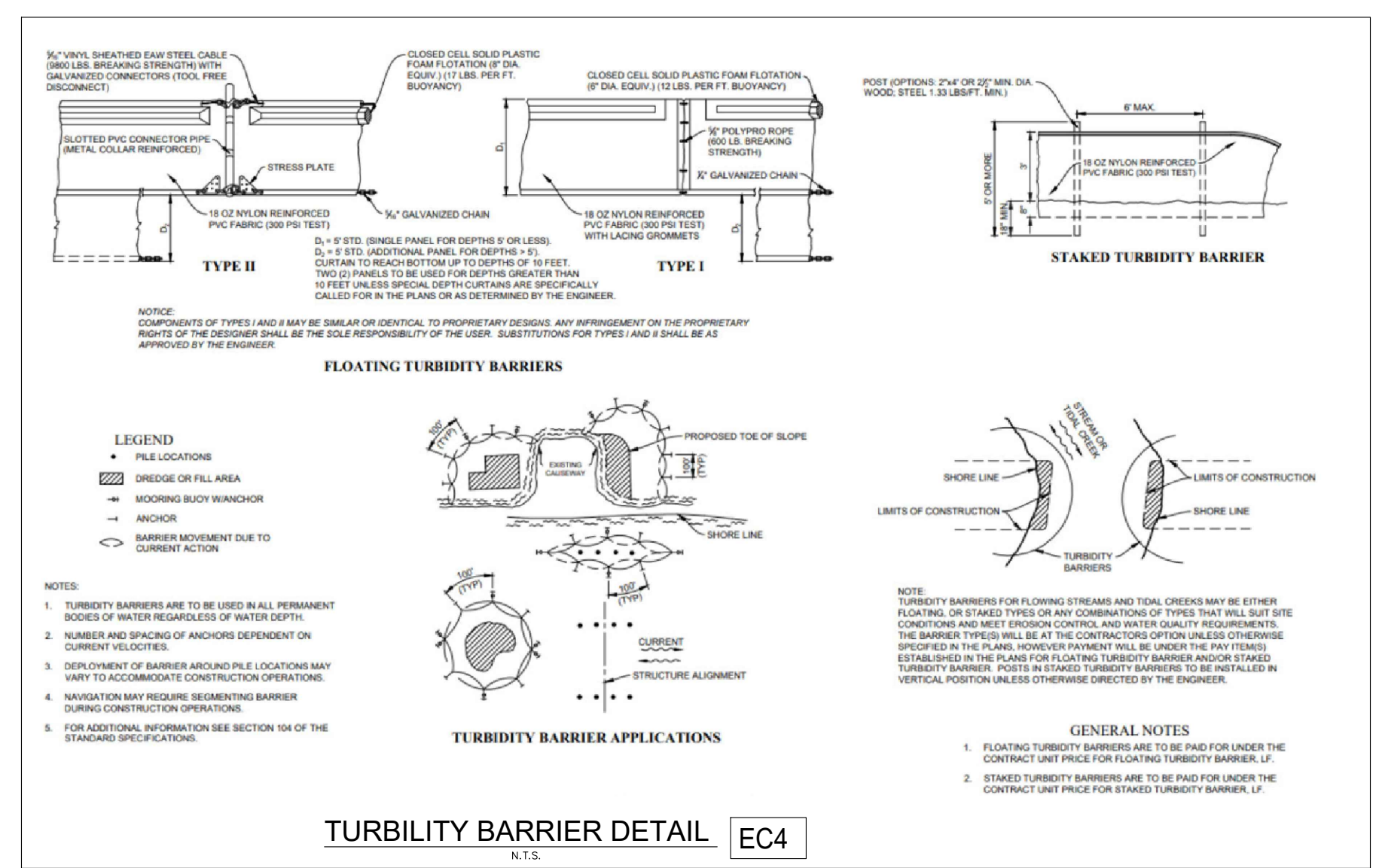
- EC1 STABILIZED CONSTRUCTION ENTRANCE
- EC2 TYPE III SILT FENCE
- EC3 WATTLE INLET PROTECTION
- EC4 TURBIDITY BARRIER

LEGEND

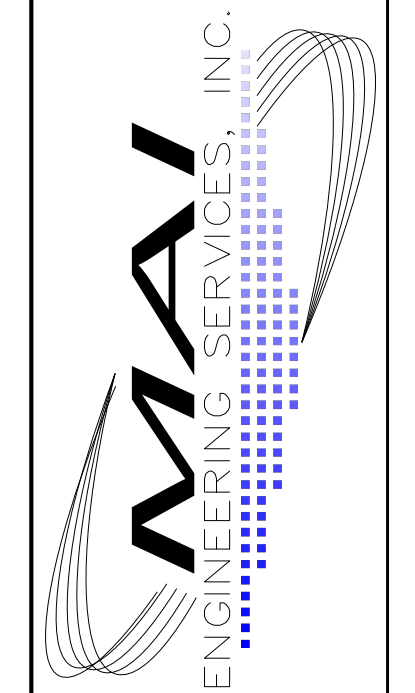
- PROPERTY LINE
- ROADWAY CENTERLINE
- DRAINAGE EASEMENT
- ▨ PROPOSED PAVEMENT
- ▨ PROPOSED CONCRETE
- ▨ PROPOSED GRAVEL
- └└└ TURBIDITY BARRIER
- SILT FENCE

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION CONTROL WITHIN BEST MANAGEMENT PRACTICES FOR THE DURATION OF THE PROJECT UNTIL SUCH TIME AS THE PROJECT HAS BEEN CERTIFIED AS COMPLETE.
2. THE CONTRACTOR SHALL SEED & MULCH OR SOD ALL OPEN SPACE AREAS TO BE GRASSED IMMEDIATELY FOLLOWING FINAL GRADING AND COMPLETION OF ALL UNDERGROUND UTILITIES.
3. SILT FENCES SHALL BE INSTALLED ALONG LIMITS OF CONSTRUCTION.
4. SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRED IMMEDIATELY IF DAMAGED.
5. ALL SIDE SLOPES OF STORM WATER MANAGEMENT AREAS SHALL BE SODDED UPON COMPLETION OF FINAL GRADING.
6. ALL INLETS SHALL BE PROTECTED FROM COLLECTION OF ERODED MATERIALS BY INSTALLATION OF TEMPORARY FILTER FABRIC AND/OR HAYBALES.
7. FLOATING TURBIDITY BARRIERS SHALL BE INSTALLED WITHIN ALL WATER BODIES DOWNSTREAM OF CONSTRUCTION ACTIVITIES WHERE PROTECTION AGAINST TURBID WATERS DISCHARGE MAY OCCUR.



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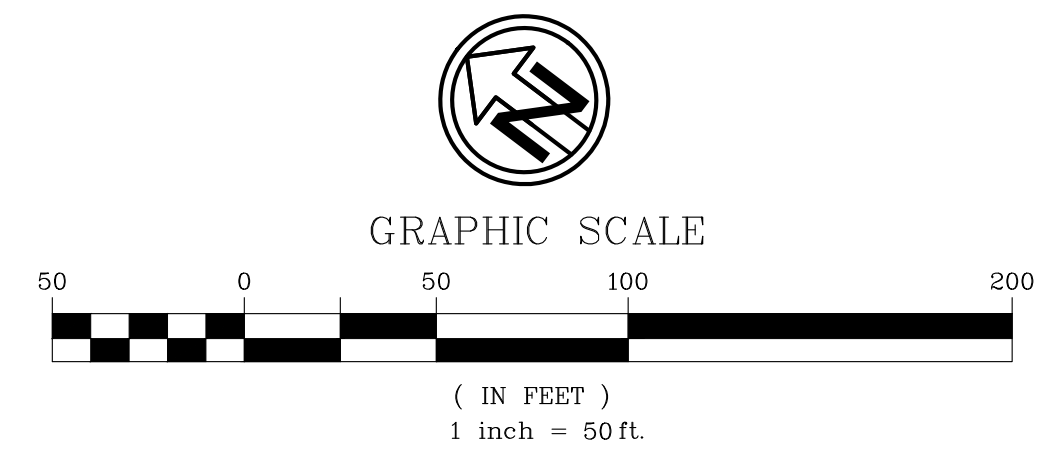


LICENSED ENGINEER
QUOC H. MAI
FL #64006 CA#25162

REVISIONS	DATE	BY	DESCRIPTION
1	04/12/2023	QHM	REVISION PER CITY COMMENT
2	04/12/2023	QHM	REVISION PER CITY COMMENT
3	04/12/2023	QHM	REVISION PER CITY COMMENT

EROSION CONTROL PLAN
RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DESIGN BY: QHM
DWG BY: GMG
CHK BY: QHM
DATE: 8/10/2023
JOB No.: 1369
SHEET No.: 5



DEMOLITION NOTES

- D02 PRESERVED WETLANDS.
- D03 TO BE REMOVED.
- D06 EXISTING DITCHES ARE TO BE FULLY CLEARED AND DEMOLISHED UNTIL SOLID SOILS REACHED. FILL DITCH WITH SUITABLE MATERIAL, AND COMPACT TO 95% DENSITY IN MAXIMUM 12" LIFTS.
- D07 100' X 50' GRAVEL CONSTRUCTION ENTRANCE.

LEGEND

- SILT FENCE
- DOUBLE ROW SILT FENCE
- ✕-XX GEOTECH BORING LOCATION
- NGWL NATURAL GROUND WATER LEVEL
- SHGLW SEASONAL HIGH GROUND WATER LEVEL

GENERAL NOTES

1. FOR DEMO/PRESERVED TREES AND TREE PROTECTION SEE LANDSCAPE PLAN SHEET.
2. ALL DISCHARGE POINTS SHALL RECEIVE RIP RAP AND/OR TURBIDITY BARRIERS TO PREVENT OFFSIDE EROSION.
3. ALL ROAD CUTS MUST BE RESTORED BY MILLING AND RESURFACING A MINIMUM OF 25 FEET FROM EACH SIDE OF CUT.
4. EXISTING CONCRETE/ASPHALT PAVEMENT AREA: 4,288.52 SF, TO BE REMOVED
5. WETLAND IMPACT AND ANALYSIS FOR MITIGATION, PLEASE SEE THE ENVIRONMENTAL CONSULTANT REPORT.

HATCH LEGEND	
PRESERVED WETLANDS	[Hatch pattern]
IMPACTED WETLANDS	[Hatch pattern]
TO BE REMOVED	[Hatch pattern]
UPLAND BUFFER	[Hatch pattern]
ISOLATED WETLAND	[Hatch pattern]
UPLAND CUT DITCH IMPACT	[Hatch pattern]
WETLAND REMAIN	[Hatch pattern]
OUTFALL IMPACT	[Hatch pattern]
100 YR FLOOD PLAIN	[Hatch pattern]

SUMMARY TABLE	
PROJECT AREA	± 8.92 AC.
WETLAND IMPACT	± 0.40 AC.
OUTFALL IMPACT	± 0.01 AC.
WETLAND REMAINING	± 0.34 AC.
ISOLATED	< 0.50-ACRE ±0.02 AC.
UPLAND BUFFER	± 8.92 AC.
UPLAND CUT DITCH IMPACT	± 8.92 AC.

Total existing Impervious Area

Match Ryan

ID#	TYPE	DBH (IN)	REPLACE CREDIT
5	LIVE OAK	48.0	48.0
6	LIVE OAK	38.0	38.0
11	LAUREL OAK	15.0	5.0
17	LAUREL OAK	20.0	6.67
34	LAUREL OAK	16.0	5.33
35	LAUREL OAK	14.0	4.67
36	LAUREL OAK	14.0	4.67
37	LAUREL OAK	26.0	8.67
38	LAUREL OAK	15.0	5.0
39	LAUREL OAK	24.0	8.0
40	RED MAPLE	16.0	5.33
41	LAUREL OAK	14.0	4.67
42	LIVE OAK	64.0	64.0
43	CABBAGE PALM	13.0	4.33
44	AMERICAN ELM	15.0	5.00
45	RED MAPLE	22.0	7.33
46	LIVE OAK	38.0	38.0
47	CABBAGE PALM	13.0	4.33
48	CABBAGE PALM	13.0	4.33
49	SOUTHERN MAGNOLIA	13.0	4.33
50	LIVE OAK	23.0	7.67
51	LIVE OAK	16.0	5.33
52	LIVE OAK	25.0	8.33
53	SWEETGUM	15.0	5.0
54	SOUTHERN MAGNOLIA	17.0	5.67
55	LIVE OAK	15.0	5.0
56	LAUREL OAK	12.0	4.0
57	LAUREL OAK	16.0	5.33
58	LIVE OAK	15.0	5.0
59	WATER OAK	14.0	4.67
60	LAUREL OAK	31.0	10.33
61	SWEETGUM	13.0	4.33
62	SWEETGUM	31.0	10.33
63	LIVE OAK	31.0	10.33
64	LIVE OAK	63.0	63.0
65	LIVE OAK	28.0	28.0
66	LIVE OAK	47.0	47.0
67	LIVE OAK	45.0	45.0
68	CABBAGE PALM	13.0	4.33
69	CABBAGE PALM	12.0	4.0
70	LAUREL OAK	14.0	4.67
71	RED MAPLE	23.0	7.67
74	AMERICAN ELM	13.0	4.33
75	LAUREL OAK	24.0	8.0
76	RED MAPLE	15.0	5.0
77	LAUREL OAK	24.0	8.0

ID#	TYPE	DBH (IN)	REPLACE CREDIT
78	AMERICAN ELM	15.0	5
83	LIVE OAK	20.0	20.0
84	LIVE OAK	56.0	56.0
89	LIVE OAK	56.0	56.0
90	LIVE OAK	28.0	28.0
92	LIVE OAK	37.0	37.0
93	CABBAGE PALM	13.0	4.33
94	CABBAGE PALM	12.0	4
95	CABBAGE PALM	12.0	4
96	LAUREL OAK	13.0	4.33
97	CABBAGE PALM	12.0	4
98	CABBAGE PALM	13.0	4.33
99	CABBAGE PALM	13.0	4.33
100	CABBAGE PALM	14.0	4.67
101	CABBAGE PALM	12.0	4
102	LIVE OAK	19.0	19.0
103	LIVE OAK	27.0	27.0
104	LIVE OAK	23.0	23.0
105	CABBAGE PALM	12.0	4
106	LIVE OAK	25.0	25.0
116	LAUREL OAK	16.0	5.33
126	LAUREL OAK	18.0	6
127	LAUREL OAK	13.0	4.33
128	LAUREL OAK	12.0	4
129	SOUTHERN MAGNOLIA	14.0	4.67
130	LIVE OAK	45.0	45.0
134	LIVE OAK	22.0	7.33
135	LIVE OAK	38.0	38.0
136	LIVE OAK	28.0	28.0
137	LAUREL OAK	14.0	4.67
138	LAUREL OAK	21.0	7
139	LAUREL OAK	14.0	4.67
140	LAUREL OAK	18.0	6
141	LAUREL OAK	22.0	7.33
142	LAUREL OAK	14.0	4.67
149	LAUREL OAK	18.0	6
152	LAUREL OAK	14.0	4.67
153	LAUREL OAK	21.0	7
154	LAUREL OAK	28.0	9.33
155	LAUREL OAK	27.0	9
156	LAUREL OAK	14.0	4.67
8	LAUREL OAK	15.0	5.0
9	LAUREL OAK	13.0	4.33
20	LIVE OAK	25.0	25.0
133	LIVE OAK	15.0	15.0

ID#	TYPE	DBH (IN)	REPLACE CREDIT
132	LIVE OAK	34.0	34.0
133	LAUREL OAK	29.0	9.67
142	LAUREL OAK	15.0	5
143	LAUREL OAK	16.0	5.33
144	LIVE OAK	24.0	24.0
145	LAUREL OAK	13.0	4.33
146	LAUREL OAK	14.0	4.67
148	LAUREL OAK	26.0	8.67
150	LAUREL OAK	17.0	5.67
151	LAUREL OAK	30.0	10
164	LIVE OAK	48.0	48.0
167	LAUREL OAK	13.0	4.33
168	LAUREL OAK	12.0	4
169	LAUREL OAK	15.0	5
180	LAUREL OAK	14.0	4.67
114	LIVE OAK	16.0	16.0
115	LAUREL OAK	18.0	6
81	CABBAGE PALM	13.0	4.33
118	2328		1,497.32

NOTES:

1) PER CITY ORDINANCE SECTION 113-279 (a), TREE REPLACEMENT REQUIRED FOR ALL REMOVED TREES. REPLACE TOTAL INCHES FOR LIVE OAKS TREES, REPLACE ONE THIRD FOR ALL OTHER TREES THAT ARE 12 INCH DBH.

TOTAL TREE INCHES OF REMOVED TREES ARE: 2,328 INCHES
TOTAL OF REPLACEMENT CREDIT INCHES REQUIRED: 1,497 INCHES

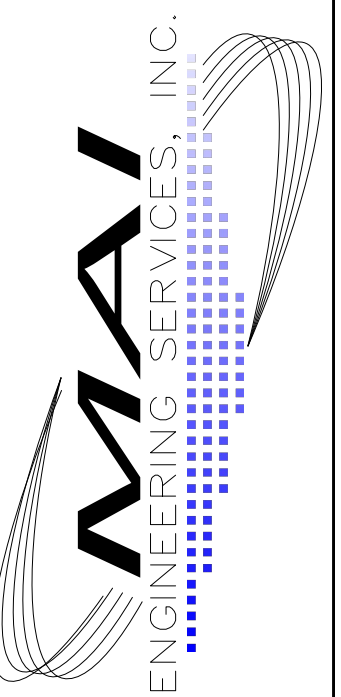
2) SAVED TREES PER CITY ORDINANCE SECTION 113-279 (b), TREES ARE PRESERVED SHALL RECEIVE CREDIT AGAINST THE LANDSCAPE REQUIREMENTS ACCORDING TO THE FOLLOWING SCHEDULE:

TREES 12 TO 18 INCH DBH: LIVE OAK, ONE INCH CREDIT, OTHERS 50%
TREES 19 TO 30 INCH DBH: LIVE OAK, 1.25 INCH CREDIT, OTHERS 75%
TREES ABOVE 30 INCH DBH: LIVE OAK, 1.5 INCH CREDIT, OTHER 100%

TOTAL TREE INCHES OF SAVED TREES: 1,166 INCH
TOTAL SAVED TREES CREDIT INCHES: 1,519.75 INCH

ID#	TYPE	DBH	TREEMFRT
1	SWEETGUM	12.0	12.0
2	SWEETGUM	15.0	15.0
3	LAUREL OAK	20.0	20.0
4	LIVE OAK	28.0	37.5
7	LIVE OAK	17.0	17.0
10	LAUREL OAK	12.0	12.0
12	LAUREL OAK	16.0	16.0
13	LAUREL OAK	16.0	16.0
14	LAUREL OAK	15.0	15.0
15	LAUREL OAK	14.0	14.0
16	LAUREL OAK	20.0	25.0
18	CABBAGE PALM	17.0	17.0
19	CABBAGE PALM	12.0	12.0
21	LAUREL OAK	17.0	17.0
22	LAUREL OAK	14.0	14.0
23	LAUREL OAK	27.0	55.5
24	LAUREL OAK	14.0	14.0
25	RED MAPLE	17.0	17.0
26	RED MAPLE	13.0	13.0
27	LIVE OAK	19.0	23.75
28	LAUREL OAK	23.0	28.75
29	RED MAPLE	13.0	13.0
30	LAUREL OAK	16.0	16.0
31	LAUREL OAK	25.0	31.25
32	LAUREL OAK	13.0	13.0
33	LAUREL OAK	15.0	15.0
72	CABBAGE PALM	16.0	16.0
73	CABBAGE PALM	13.0	13.0
79	RED MAPLE	33.0	49.5
80	RED MAPLE	33.0	28.75
82	LAUREL OAK	23.0	28.75
85	LAUREL OAK	16.0	16.0
86	RED MAPLE	14.0	14.0
87	LAUREL OAK	13.0	13.0
88	LAUREL OAK	27.0	33.75
91	LIVE OAK	30.0	30
107	LIVE OAK	80.0	120
108	LIVE OAK	27.0	33.75
109	LAUREL OAK	19.0	23.75
110	LAUREL OAK	24.0	30.0
111	LIVE OAK	17.0	17.0
112	LAUREL OAK	31.0	49.5
113	LIVE OAK	24.0	30.0
117	LIVE OAK	48.0	72.0
118	LAUREL OAK	23.0	28.75
119	LAUREL OAK	13.0	13.0
123	LIVE OAK	13.0	13.0
124	LIVE OAK	26.0	32.5
125	LAUREL OAK	20.0	25.0
161	LAUREL OAK	14.0	14.0
162	LIVE OAK	16.0	16.0
163	LIVE OAK	14.0	14.0
165	CABBAGE PALM	13.0	13.0
TOTAL		47	1,166

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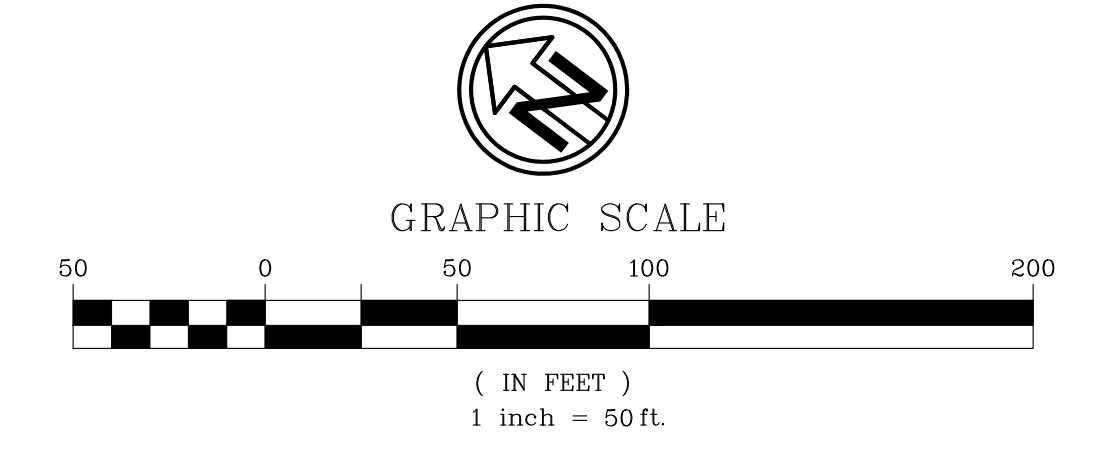
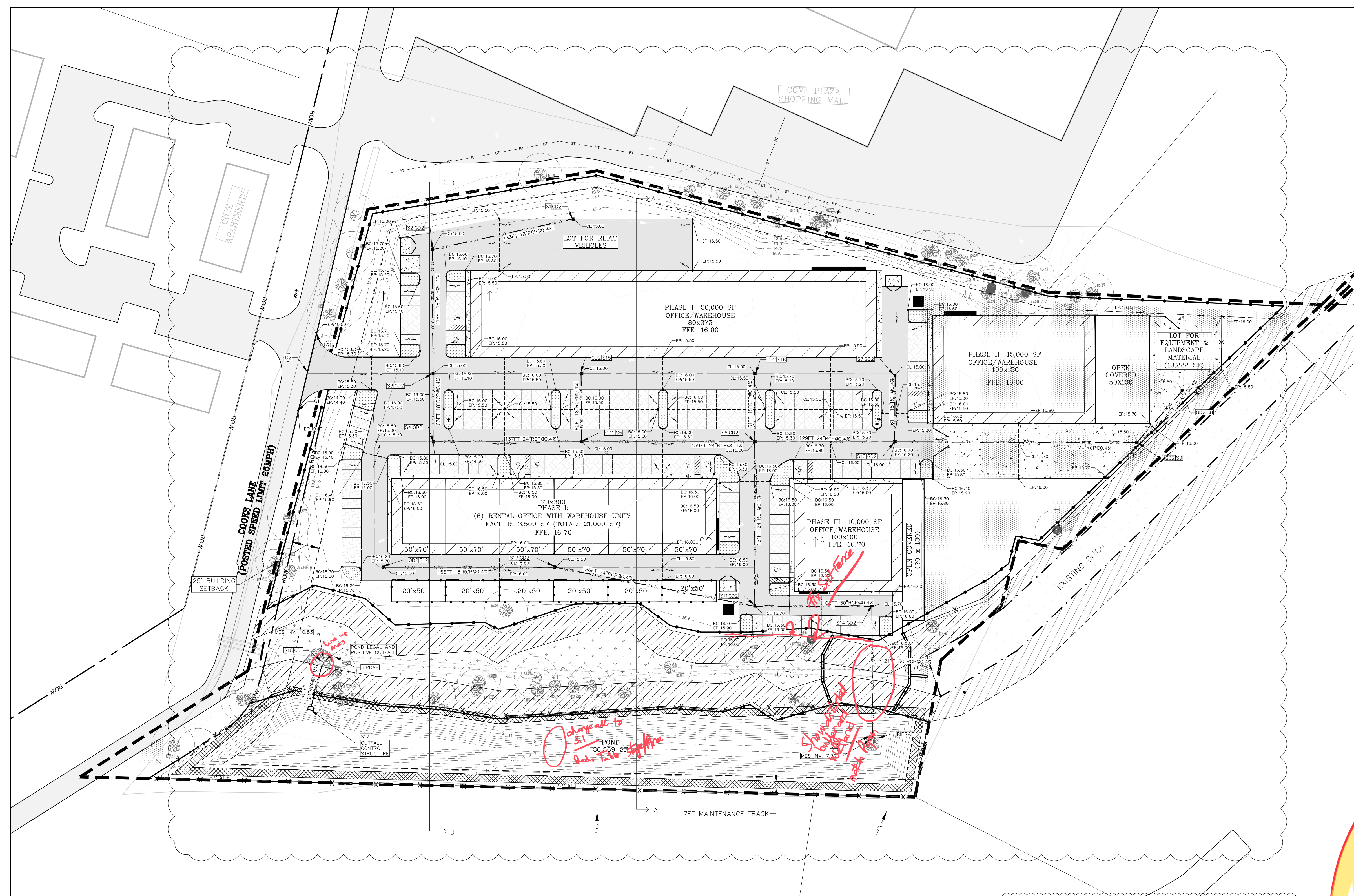


LICENSED ENGINEER
QUOC H. MAI
FL #64006 CA#25162

REVISIONS	DATE	BY	DESCRIPTION
1	04/12/2023	QHM	REVISION PER CITY ORDINANCE
2	04/12/2023	QHM	REVISION PER CITY COMMENTS
3	04/12/2023	QHM	REVISION PER CITY COMMENTS

DEMOLITION PLAN
RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR
RIVER OAKS OUTDOOR, LLC

SHEET TITLE
DESIGN BY: QHM
DRAWN BY: QMG
CHECK BY: QHM
DATE: 8/10/2023
JOB No.: 1369
SHEET No.: 6



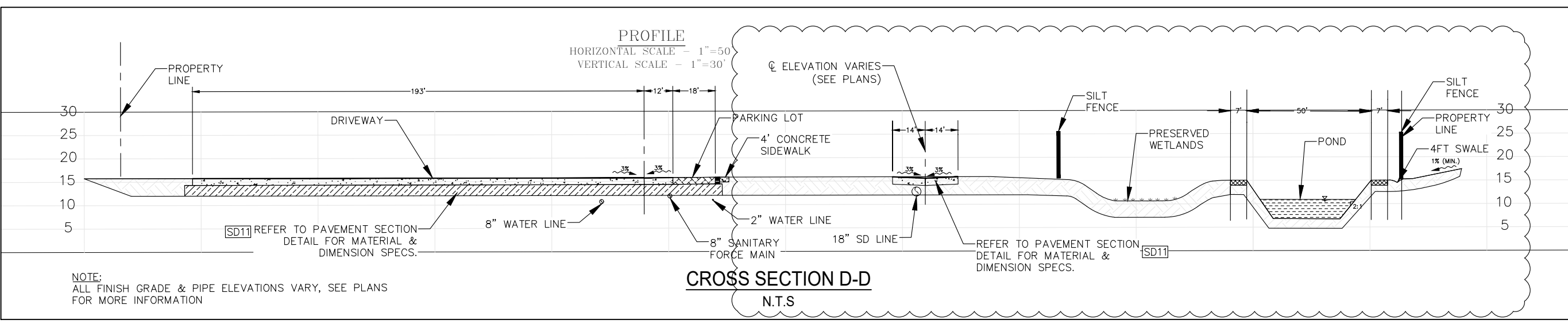
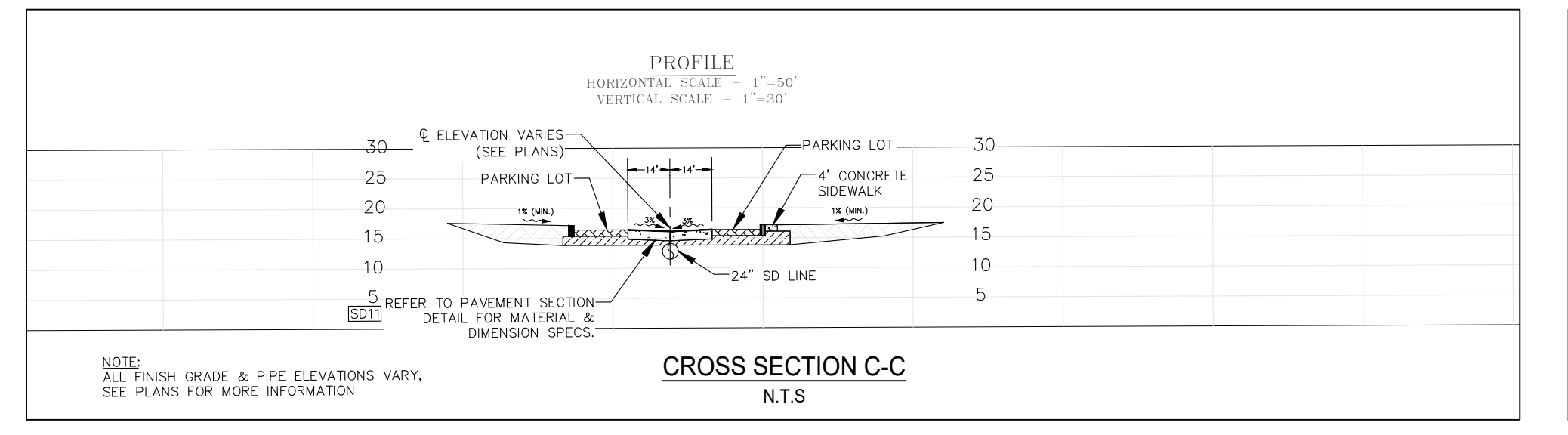
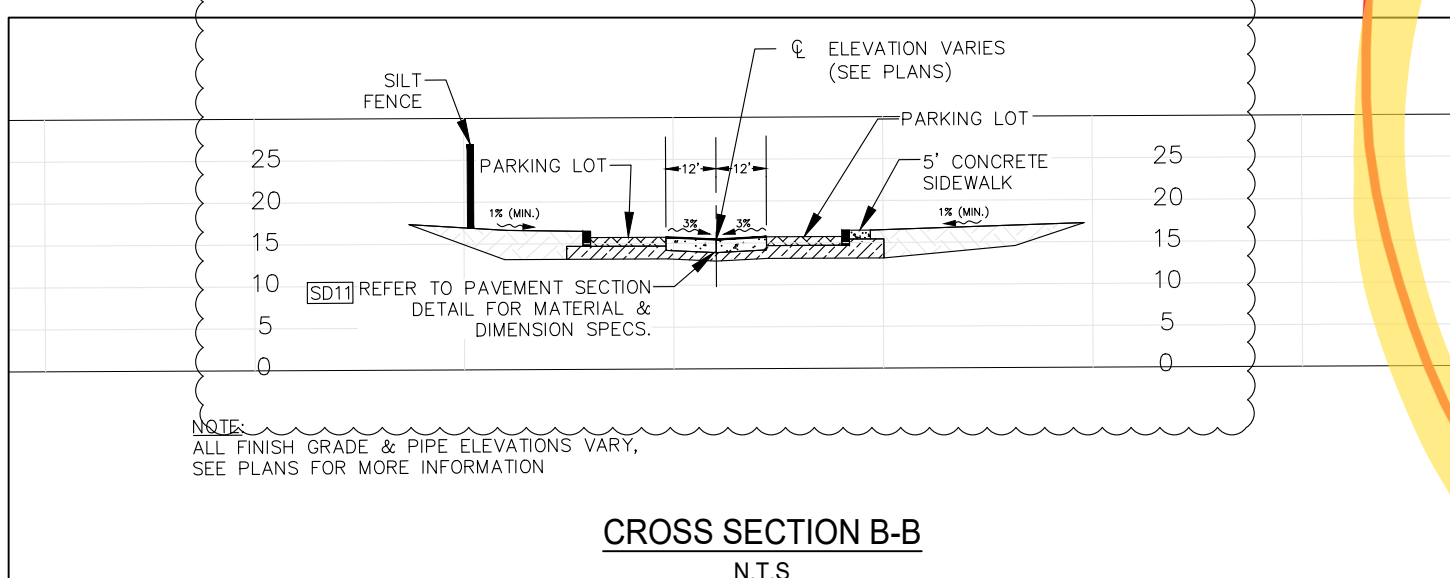
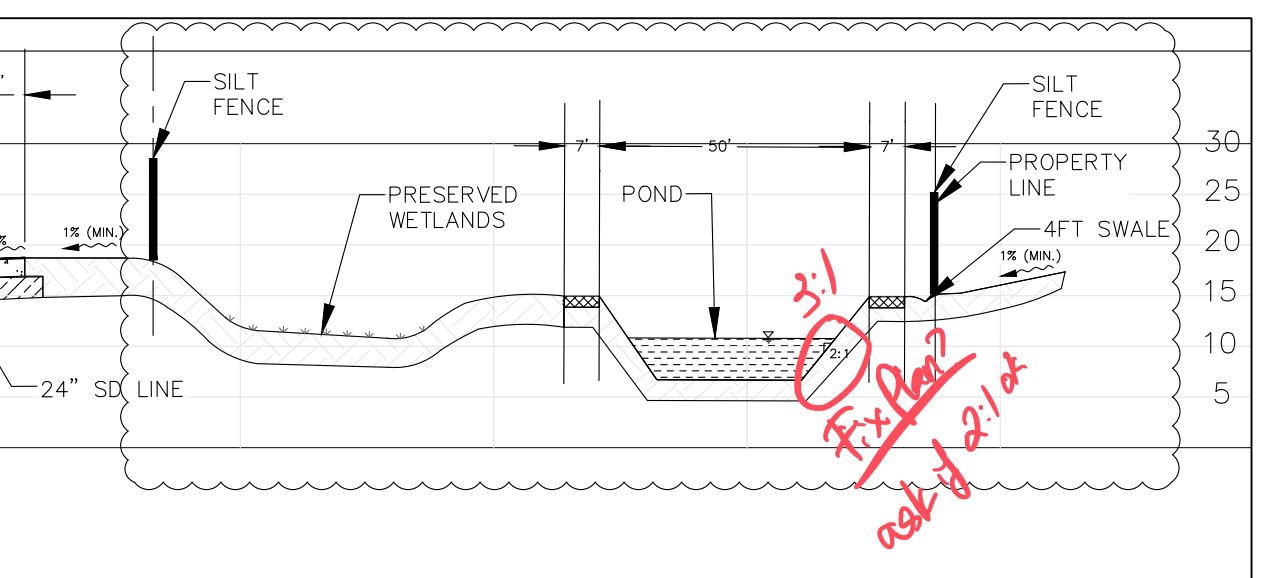
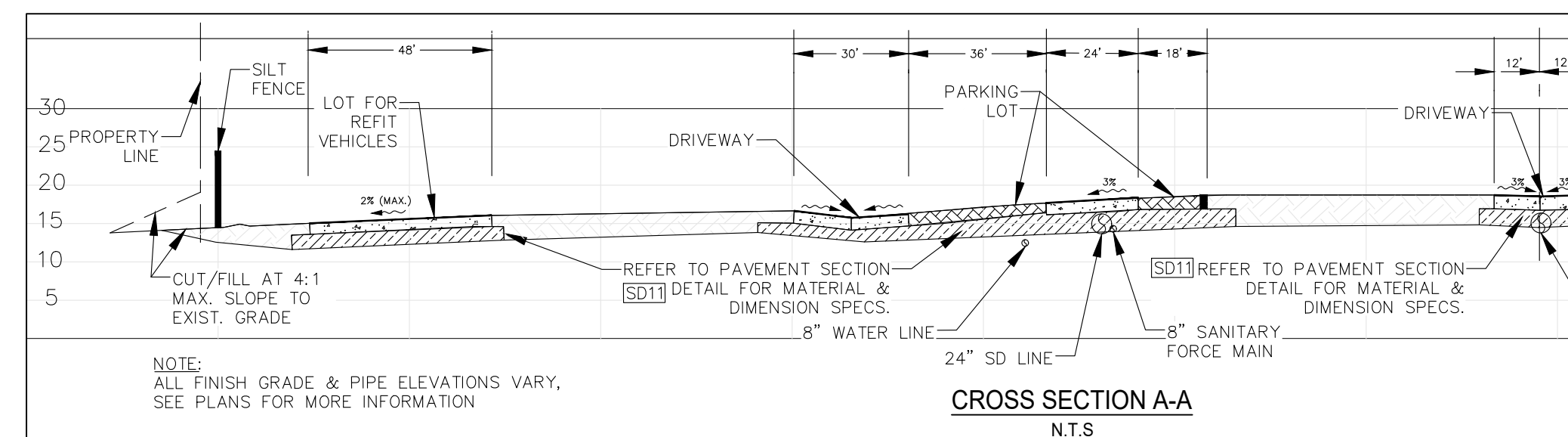
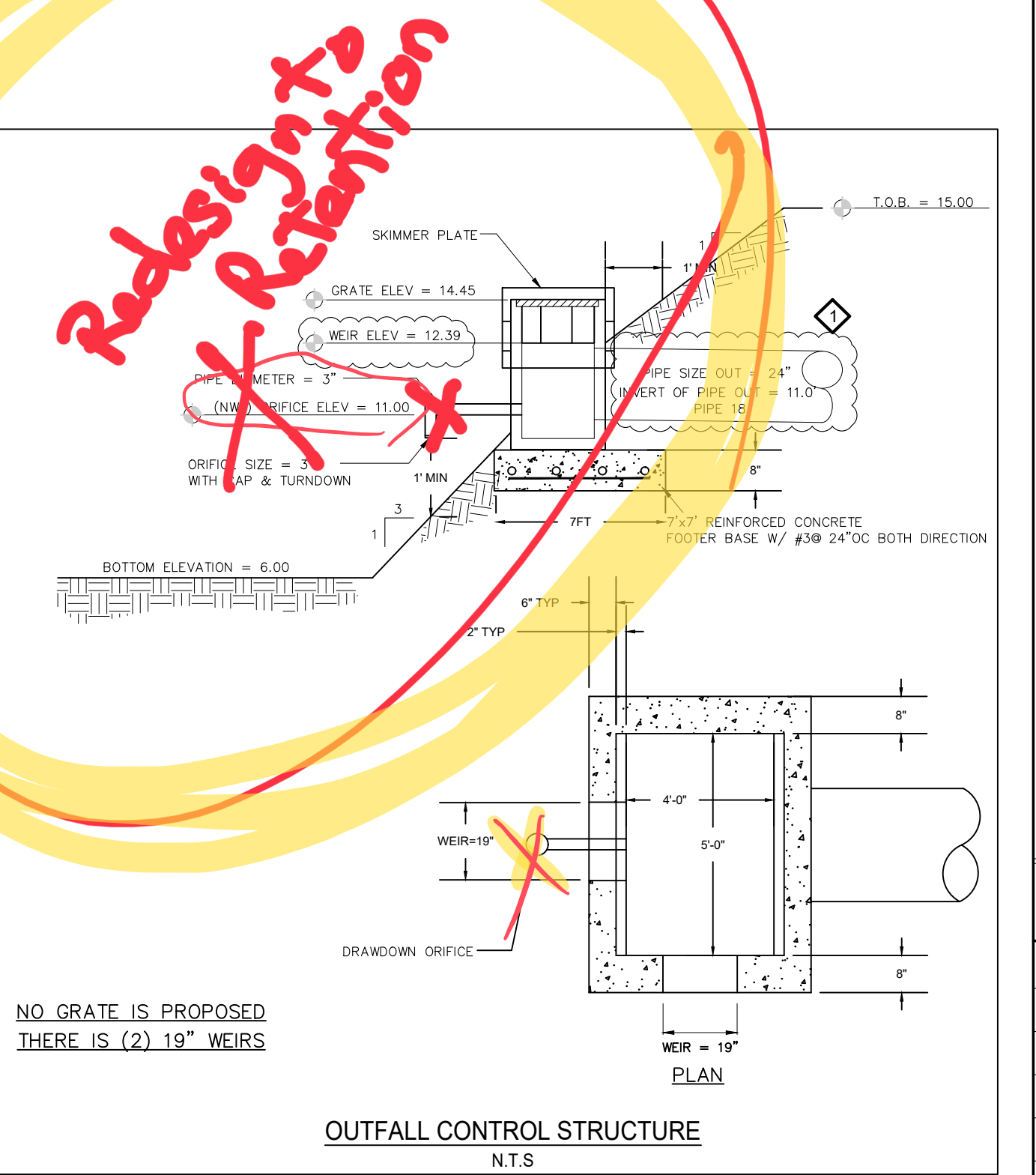
- GRADING DETAILS**
- G01 MITERED END SECTION
 - G02 PRECAST TYPE "C" INLET
 - FLOW ARROW
- GRADING NOTES**
- G1 MATCH EXISTING ASPHALT
 - G2 CONNECT TO ACCESS ROAD (TO BE DESIGNED AND PERMITTED WITH SEPARATE PLAN SET)

- SIDEWALK & ADA ACCESS NOTES**
- REQUIREMENTS ALONG ADA ACCESSIBLE ROUTES
1. CROSS SLOPES SHALL NOT EXCEED 2%
 2. RUNNING SLOPES SHALL NOT EXCEED 5%
 3. SLOPES BETWEEN 5% & 8.33% SHALL MEET THE RAMP REQUIREMENTS OF ADA DIRECTION.
 4. ACCESSIBLE PARKING AND ACCESS ANGLES SHALL NOT EXCEED 2% IN ANY DIRECTION.
 5. INTERSECTING SIDEWALKS SHALL NOT EXCEED 2% IN ANY DIRECTION.
 6. ANY SLOPE GREATER THAN 8.33% SHALL NOT BE PART OF AN ACCESSIBLE ROUTE.

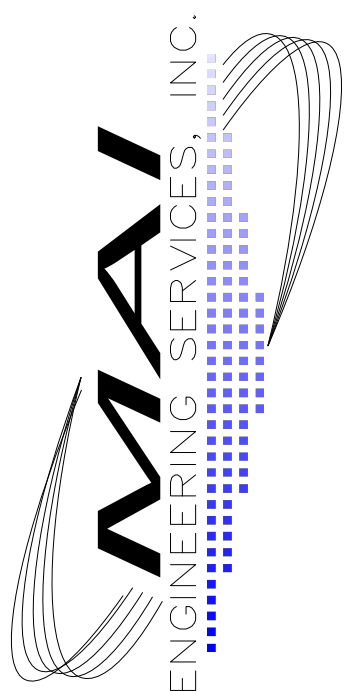
STRUCTURE TABLE			
STRUCTURE	TYPE	RM	INV. IN / INV. OUT
S1	INLET	15.00	12.50 (W)
S2	INLET	15.00	11.97 (E) / 11.87 (S)
S3	INLET	15.00	11.40 (N) / 11.30 (S)
S4	INLET	15.00	11.05 (N) / 10.95 (E)
S5	INLET	15.00	10.40 (W) / 10.30 (E)
S6	INLET	15.00	12.25 (N) / 9.57 (S)
S7	INLET	15.00	12.25 (N) / 12.50 (S)
S8	INLET	15.00	13.00 (W)
S9	INLET	15.50	12.74 (E) / 12.64 (W)
S10	INLET	15.00	12.25 (N) / 11.65 (W)
S11	INLET	15.50	11.53(W) / 8.96 (N)
S12	INLET	15.50	13.00 (E)
S13	INLET	15.50	12.38 (W) / 12.28 (E)
S14	INLET	15.00	8.43 (N) / 8.33 (S)
S15	INLET	15.50	12.50 (W)
S16	INLET	15.50	12.50 (W)
POND CONTROL STRUCTURE		14.95	12.73 / 11.50

POND AREA TABLE		
ELEVATION	AREA (SF)	
15	36,570	<i>calculation 30.570</i>
14	32,365	
13	28,393	
12	24,233	
11	20,305	<i>change all to 3:1</i>
10	17,737	<i>Redesign table Area</i>
9	15,210	<i>Fix Erial</i>
8	12,725	
7	10,280	
6	7,875	

STORM STAGES SUMMARY	
STORM EVENT	POND STAGES
ANNUAL	13.37
5YR24HR	13.74
25YR24HR	14.40



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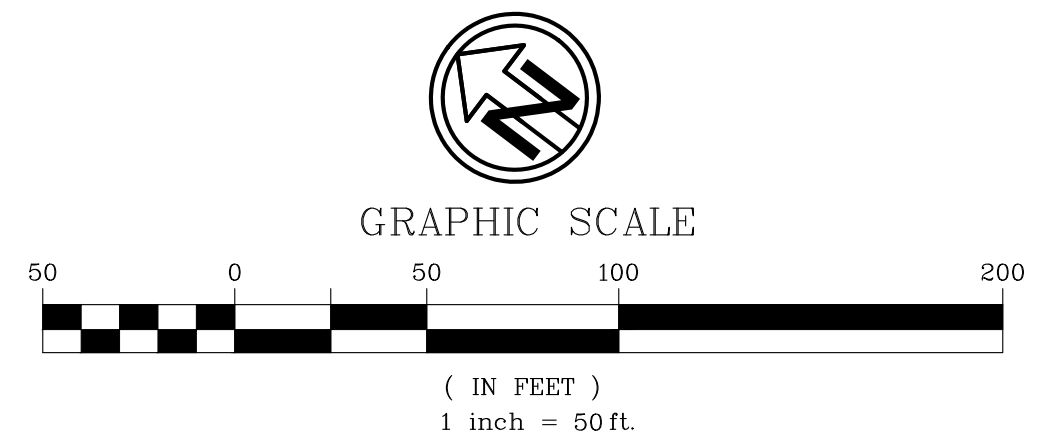
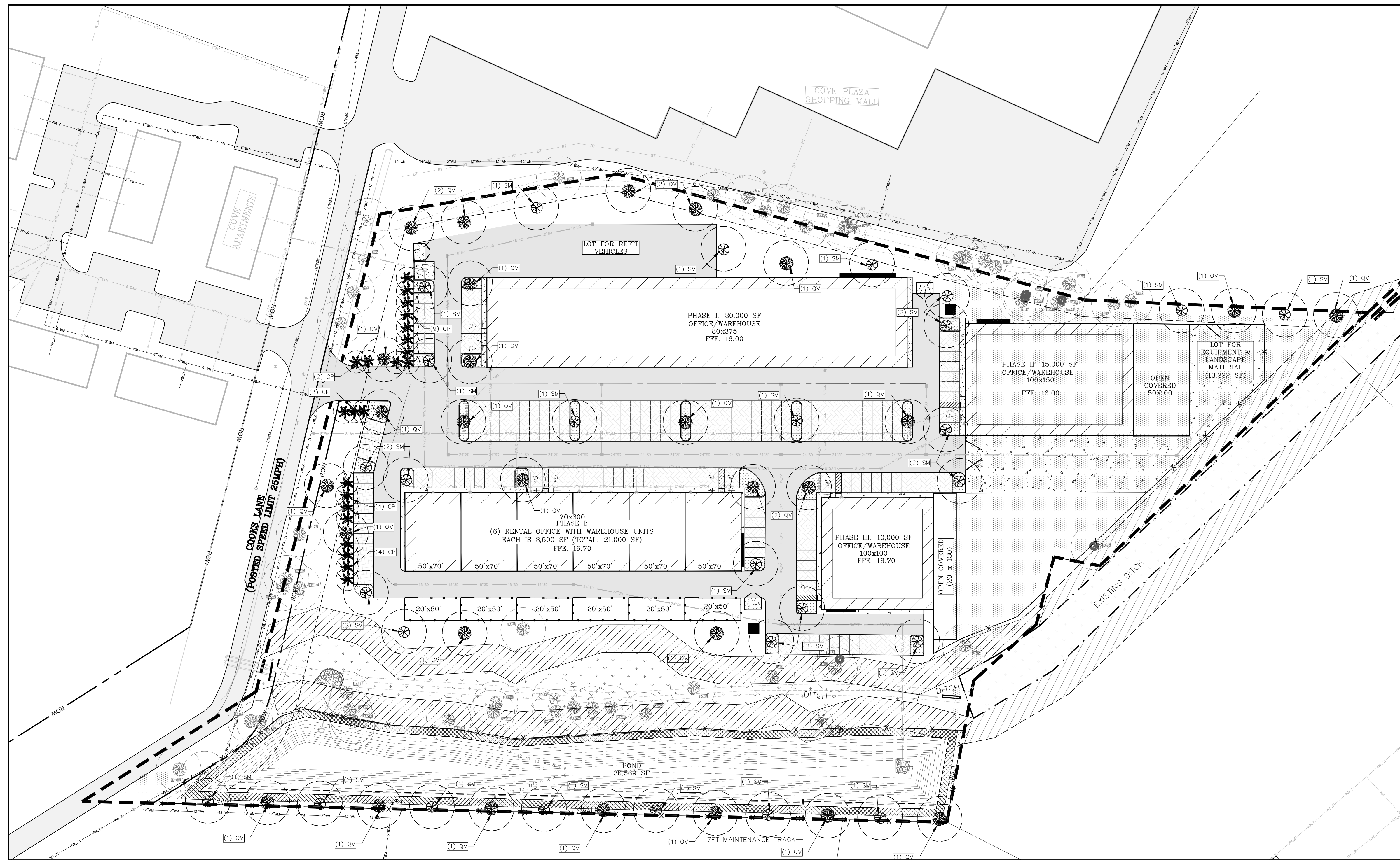


LICENSED ENGINEER
QUOC H. MAI
FL #64006 CA#28162

REVISIONS	DATE	DESCRIPTION
1	10/17/23	REVISION FOR CITY REVIEW
2	04/24/2023	REVISION FOR CITY AND ROAD BUI
3	04/26/2023	REVISION FOR CITY COMMENTS

GRADING PLAN
RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR RIVER OAKS OUTDOOR, LLC

DESIGN BY: QHM
DWG BY: GMG
CHK BY: QHM
DATE: 8/10/2023
JOB No.: 1369
SHEET No.: 8



GENERAL LANDSCAPE NOTES

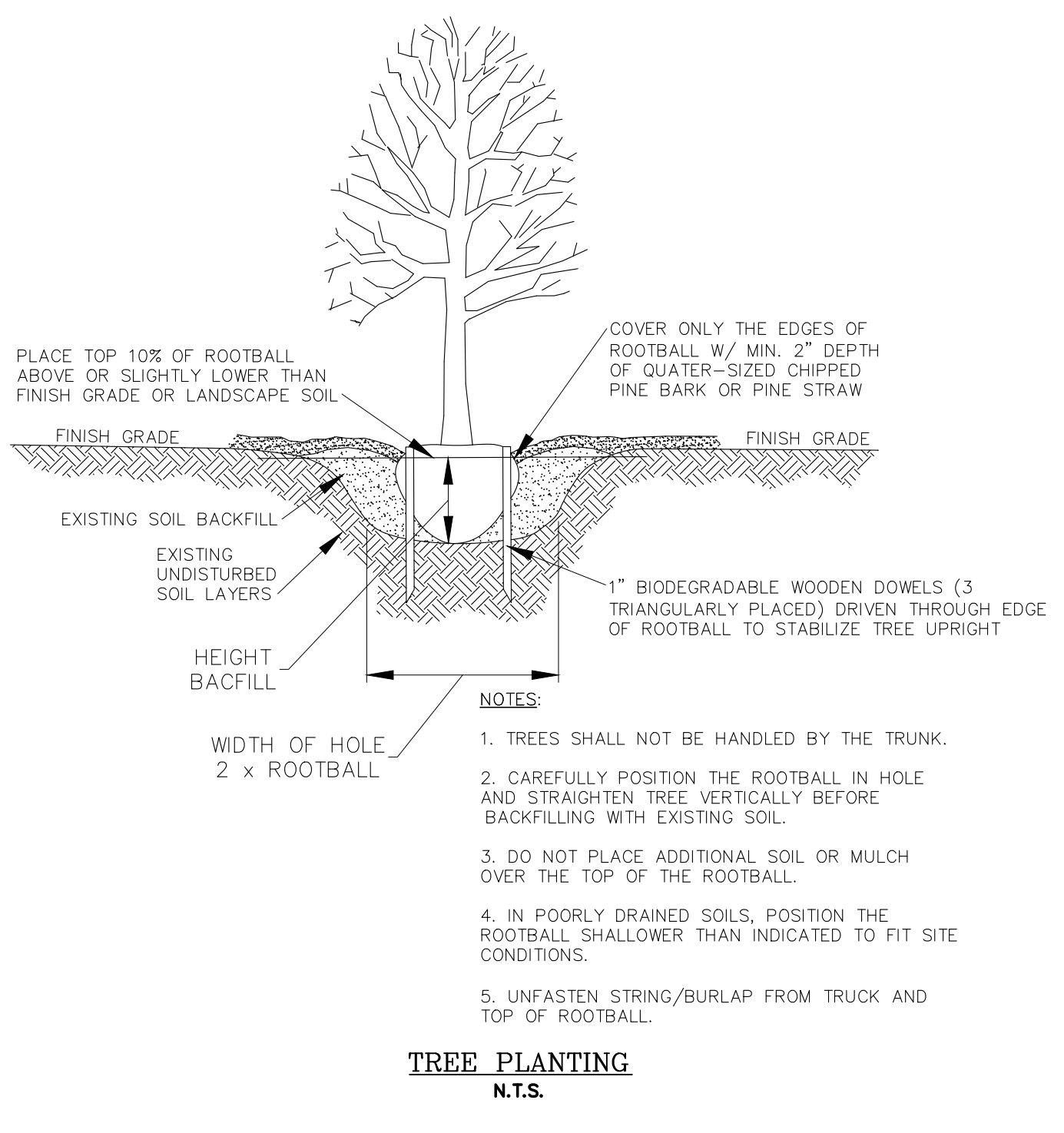
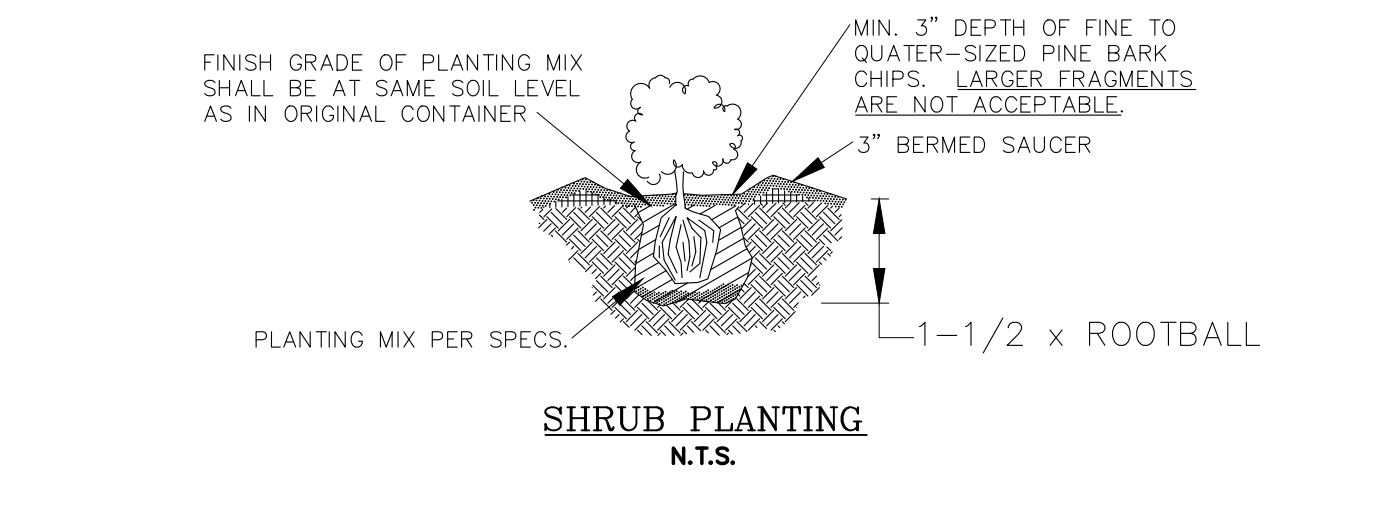
- THIS LANDSCAPE PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE CLAY COUNTY LDC.
- LOCATE ALL UTILITIES AND SITE LIGHTING CONDUITS BEFORE LANDSCAPE CONSTRUCTION BEGINS.
- NOTIFY LANDSCAPE ARCHITECT OR DESIGNATED REPRESENTATIVE OF ANY LAYOUT DISCREPANCIES PRIOR TO ANY PLANTING. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO THE OUTSIDE EDGE OF THE SAUCER OR LANDSCAPE ISLAND (SEE PLANTING DETAILS).
- WEEDS ARE TO BE ADEQUATELY AND PROPERLY TREATED AND REMOVED PRIOR TO LANDSCAPE INSTALLATION. ALL SOIL AMENDMENTS SHOULD BE CERTIFIED AS WEED-FREE FROM THE SUPPLIER.
- ALL TREES AND SHRUBS ARE TO BE POSITIONED VERTICALLY REGARDLESS OF THE SLOPE OF THE GROUND IN WHICH THEY ARE PLANTED. BERMS ARE TO BE CONSTRUCTED AT RIGHT ANGLES TO THE TREE OR SHRUB OR IN A MANNER IN WHICH THEY WILL MOST EFFECTIVELY SERVE THE PURPOSE OF RETAINING WATER AT THE BASE OF THE PLANT.
- FERTILIZE ALL PLANTS AT THE TIME OF PLANTING WITH TIME RELEASE FERTILIZER. A QUALITY COMPOST / LEAF DEBRIS FROM A RELIABLE SOURCE IS RECOMMENDED IN ALL PLANTING AREAS.
- MULCH ALL LANDSCAPE AREAS WITH 3" OF PINE STRAW MULCH UNLESS SPECIFIED OTHERWISE.
- PLANT MATERIAL SHALL CONFORM TO THE STANDARDS FOR GRADE #1 OR BETTER AS GIVEN IN THE LATEST "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II", FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES OR TO THE STANDARDS AS GIVEN IN THE LATEST "AMERICAN AGRICULTURE AND CONSUMER SERVICES OR TO THE STANDARDS AS GIVEN IN THE LATEST "AMERICAN NATIONAL STANDARDS INSTITUTE".
- PLANT SIZE IS TO TAKE PRECEDENCE OVER CONTAINER SIZE.
- PRUNE ALL EXISTING SAVED TREES ON SITE TO A HEIGHT OF 15' ABOVE GRADE, AND REMOVE ALL DEAD WOOD. PRUNE TREES ACCORDING TO THE PRUNING GUIDELINES BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE, 1995 EDITION. IF ARBORIST BELIEVES A LIMB SHOULD NOT BE REMOVED THE ARBORIST SHALL CONTACT THE LANDSCAPE ARCHITECT. REMOVE ALL DEBRIS FROM THE SITE TO AN APPROVED OFF-SITE LOCATION. FOLLOW THE "AMERICAN NATIONAL STANDARDS FOR TREE CARE OPERATIONS" AND ANSI Z133.1 GUIDELINES.
- ALL TREES MUST MEET MINIMUM 2" CALIPER SIZE, AND SHRUB LINE PLANT HEIGHT (8" MIN.).
- ALL DISTURBED AREAS MUST BE STABILIZED BY MEANS OF MULCH, SEEDING, OR SOO AS CALLED OUT ON THIS PLAN. IF DISTURBED AREA IS OUTSIDE OF THE LIMITS OF THIS PLAN, AREAS MUST BE STABILIZED WITH EXISTING MATERIAL OR BETTER. I.E. SEEDING OR SOOED.
- LANDSCAPE MATERIAL IS TO BE MAINTAINED BY THE LANDSCAPE CONTRACTOR (INCLUDING MOWING, PRUNING, AND WEEDING). THE LANDSCAPE CONTRACTOR MUST PROVIDE: (A) A WARRANTY ON ALL TREES AND PALMS FOR A PERIOD OF (1) ONE YEAR, (B) A WARRANTY ON ALL SHRUBS AND GROUND COVERS FOR A PERIOD OF (1) ONE YEAR. (C) GUIDELINES FOR PROPER MAINTENANCE.
- ALL LANDSCAPE AREAS SHALL BE PROVIDED WITH AN IRRIGATION SYSTEM THAT SUPPLIES HOSE BIBS LOCATED WITHIN 75' OF ANY LANDSCAPED AREAS. IF AUTOMATIC SYSTEM IS INSTALLED (OPTIONAL) SYSTEM SHALL BE WATER EFFICIENT AND SHALL ACHIEVE 100% COVERAGE. NOTE THAT SUCH A SYSTEM SHALL ALSO SEPARATELY IRRIGATE TURF VS. SHRUBS. A RAIN SENSOR SHALL BE INSTALLED WITH SUCH A SYSTEM.
- MINIMUM OF 10 FEET SEPARATION SHALL BE MAINTAINED BETWEEN TREES AND OVERHEAD UTILITIES AND MINIMUM OF 5 FEET SEPARATION TO UNDERGROUND LINES.
- WHEN ANY ROOT OF EXISTING TREES ARE ENCOUNTERED DURING CONSTRUCTION, THE ROOTS MUST BE CUT OFF EVENLY WITH SHARP CLEAN PRUNING TOOL.
- ANY PROPOSED TREE LOCATED BETWEEN THE BUILDING AND RIGHT OF WAY SHALL BE A MINIMUM OF FOUR INCHES IN CALIPER AT THE TIME OF PLANTING.
- SHRUBS/HEDGES SHALL BE A MINIMUM OF 30 INCHES IN HEIGHT WITHIN ONE YEAR OF PLANTING AND A MINIMUM OF 30 INCHES ON CENTER.
- QUYING, PROPPING AND STAKING SHALL BE PROVIDED PER 14-2-94(1)(4)(b).
- UPLAND BUFFER WILL REMAIN NATURAL AND UNDISTURBED AND WILL BE FULLY RESTORED IF IMPACTED.
- NO TREE OR SHRUB SHALL BE PLANTED IN SUCH A MANNER THAT AT THE TIME OF PLANTING THE BASE OF THE TREE IS WITHIN THREE FEET OF ANY PUBLIC SIDEWALK OR BIWAY FOR SMALL TREES OR FIVE FEET FOR LARGE TREES.
- LANDSCAPING MUST BE INCORPORATED AT A MINIMUM DEPTH OF 36 INCHES AROUND THE BASE OF ALL GROUND SIGNS TO INCLUDE LOW GROWING SHRUBS AND GROUND COVER AND/OR FLOWERING ANNUAL TO PROMOTE COLOR.

LANDSCAPE CALCULATION:

INTERIOR TREE REQUIREMENT: 1 TREE FOR EVERY 1,000SF, FOR FIRST 100,000 (7 TREES), THEN 1 TREE FOR EVERY 4,000SF FOR THE REMAINING TREES. SHALL BE 50% CANOPY AND 50% UNDERSTORY TREES.
 PROJECT INTERIOR AREA = 342,102SF REQUIRED TOTAL = 90 TREES, 50% (45 TREES SHALL BE CANOPY)
 REQUIRED CANOPY TREES = 45 TREES, PROVIDED = 26 CANOPY TREES

PROJECT TOTAL SAVED TREES: 55 TREES, 1,419.75 CREDIT INCHES (SEE TABLE BELOW)
 PROJECT TOTAL PROPOSED NEW TREES: 78 TREES, 400 INCHES DBH (SEE PLANTED TABLE BELOW)
 PROJECT TOTAL PROVIDED TREES: 133 TREES, 1,819.75 INCHES DBH (EXCEED REQUIRED 90 TREES)

TOTAL OF REMOVED TREE REPLACEMENT INCHES REQUIRED: 1,497 INCHES (SEE TABLE BELOW)
 TOTAL PROVIDED TREES: 400 INCHES (SEE PLANTED TABLE BELOW)
 TOTAL REMAINING REMOVED TREE INCHES FOR MITIGATION: 1,097 INCHES TO BE PAID TO CITY TREE MITIGATION FUND.



LANDSCAPE PLANTING SCHEDULE

KEY	QTY	SYMBOL	BOTANICAL/COMMON NAME	SPECIFICATION	NATIVE
PALM	22 (176 INCH)		Cabbage Palm Sabal Palmetto	12'-14" h x 5' spd, 8'0D	Native/Florida Friendly
OAK	28 (112 INCH)		Quercus virginiana (Southern Live Oak)	4" Cal., 10'-12" h x 5' spd, 45 gal. matched heights	Native/Florida Friendly
MAGNOLIA	28 (112 INCH)		(Southern Magnolia)	4" Cal., 10'-12" h x 5' spd, 45 gal. matched heights	Native/Florida Friendly

- ADDITIONAL LANDSCAPE NOTES:
- a. VEGETATION THAT EXCEEDS TWENTY-FIVE (25) FEET IN HEIGHT AT MATURITY SHOULD NOT BE PLANTED CLOSER THAN FIFTEEN (15) FEET OF THE VERTICAL PLANE OF AN EXISTING POWER LINE, EXCLUDING SERVICE WIRES.
 - b. BALLED AND BURLAPPED STRAPPING WIRE, AND ANY SYNTHETIC MATERIAL SHALL BE REMOVED PRIOR TO FINAL INSPECTION. WIRE BASKETS SHOULD BE CUT AWAY FROM TOP ONE-THIRD OF ROOT BALL.
 - c. NON-CANOPY TREES SHALL NOT BE PLANTED CLOSER THAN 10 FEET FROM OTHER TREES AND CANOPY TREES NO CLOSER THAN 20-30 FEET, DEPENDING ON SPECIES.
 - d. PLANT MATERIAL SHALL CONFORM TO THE STANDARDS FOR GRADE #1 OR BETTER AS GIVEN IN THE LATEST "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II", FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES OR TO THE STANDARDS AS GIVEN IN THE LATEST "AMERICAN AGRICULTURE AND CONSUMER SERVICES OR TO THE STANDARDS AS GIVEN IN THE LATEST "AMERICAN NATIONAL STANDARDS INSTITUTE".
 - e. PINE BARK OR PINE STRAW MULCH SHALL BE PROVIDED A MINIMUM OF TWO TO THREE INCHES IN DEPTH AROUND ALL NEWLY PLANTED LANDSCAPING.
 - f. A MULCH RING FOR ALL NEWLY PLANTED TREES SHALL BE PROVIDED AT LEAST FIVE (5) FEET IN DIAMETER AND NOT CLOSER THAN SIX (6) INCHES FROM THE TREE TRUNK.
 - g. IRRIGATION WILL BE PROVIDED WITH AN AUTOMATIC IRRIGATION SYSTEM.
 - h. TREES SHALL HAVE A MINIMUM HEIGHT OF (8) EIGHT TO (10) FEET AND (2) TWO INCHES OF CALIPER.
 - i. SHRUB LINES ARE TO BE PLANTED AT THE REQUIRED MINIMUM HEIGHT, NOT BY CONTAINER SIZE.
 - j. SOIL IN TREE ISLANDS SHALL HAVE AT LEAST 12" OF SUITABLE SOIL FOR TREE PLANTINGS, AND BE VOID OF ANY CONSTRUCTION DEBRIS OR UNSUITABLE MATERIALS.
 - k. TREES SHALL NOT BE PLANTED CLOSER THAN 7.5' FROM THE CENTERLINE OF UNDERGROUND UTILITIES.

REMOVED TREES TABLE

ID#	TYPE	DBH (IN)	REPLACE CREDIT
5	LIVE OAK	48.0	48.0
6	LIVE OAK	38.0	38.0
11	LAUREL OAK	15.0	5.0
137	LAUREL OAK	20.0	6.67
34	LAUREL OAK	16.0	5.33
35	LAUREL OAK	14.0	4.67
36	LAUREL OAK	14.0	4.67
37	LAUREL OAK	26.0	8.67
38	LAUREL OAK	15.0	5.0
39	LAUREL OAK	24.0	8.0
40	RED MAPLE	16.0	5.33
41	LAUREL OAK	14.0	4.67
42	LIVE OAK	45.0	45.0
43	CABBAGE PALM	13.0	4.33
44	AMERICAN ELM	15.0	5.0
45	RED MAPLE	22.0	7.33
46	LIVE OAK	38.0	38.0
47	CABBAGE PALM	13.0	4.33
48	CABBAGE PALM	13.0	4.33
49	SOUTHERN MAGNOLIA	13.0	4.33
50	LIVE OAK	23.0	23.0
51	LIVE OAK	16.0	16.0
52	LIVE OAK	25.0	25.0
53	SWEETGUM	15.0	5.0
54	SOUTHERN MAGNOLIA	17.0	5.67
55	LIVE OAK	15.0	15.0
56	LAUREL OAK	12.0	4.0
57	LAUREL OAK	16.0	5.33
58	LIVE OAK	15.0	15.0
59	WATER OAK	14.0	4.67
60	LAUREL OAK	13.0	4.33
61	SWEETGUM	13.0	4.33
62	SWEETGUM	13.0	4.33
63	LIVE OAK	23.0	23.0
64	LIVE OAK	49.0	49.0
65	LIVE OAK	28.0	28.0
66	LIVE OAK	47.0	47.0
67	LIVE OAK	45.0	45.0
68	CABBAGE PALM	12.0	4.0
69	CABBAGE PALM	12.0	4.0
70	LAUREL OAK	14.0	4.67
71	RED MAPLE	23.0	7.67
74	AMERICAN ELM	13.0	4.33
75	LAUREL OAK	24.0	8.0
76	RED MAPLE	15.0	5.0
77	LAUREL OAK	24.0	8.0

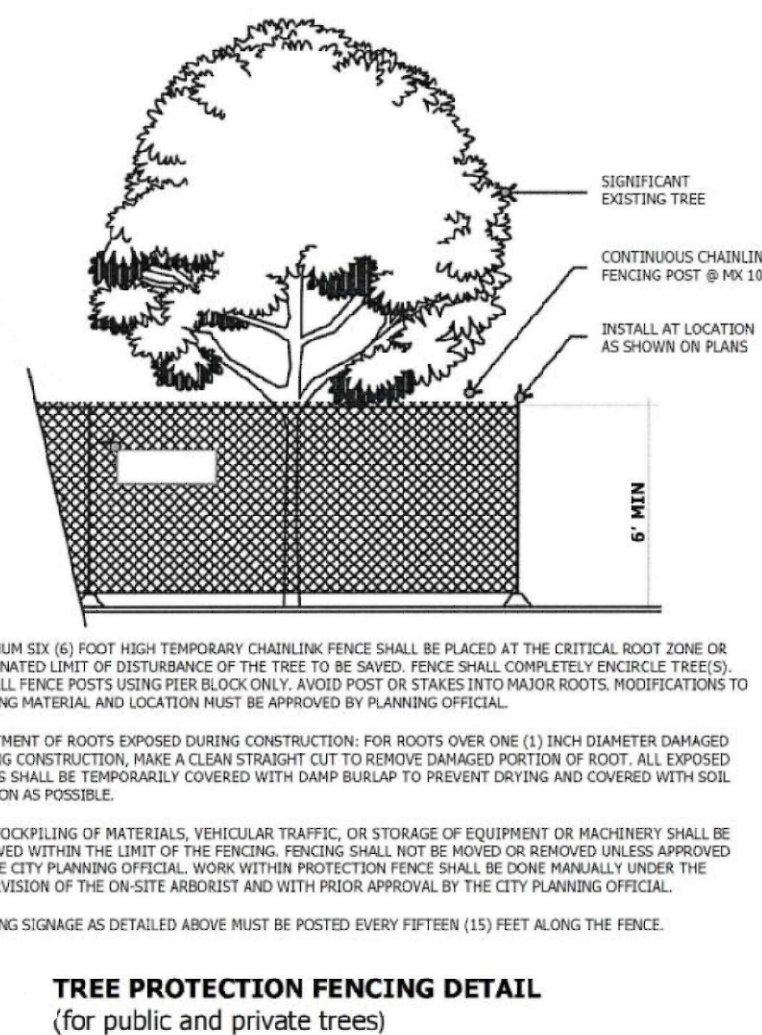
REMOVED TREES TABLE

ID#	TYPE	DBH (IN)	REPLACE CREDIT
78	AMERICAN ELM	15.0	5.0
83	LIVE OAK	20.0	20.0
84	LIVE OAK	54.0	54.0
89	LIVE OAK	56.0	56.0
90	LIVE OAK	28.0	28.0
92	LIVE OAK	37.0	37.0
93	CABBAGE PALM	12.0	4.0
94	CABBAGE PALM	12.0	4.0
95	CABBAGE PALM	12.0	4.0
96	CABBAGE PALM	13.0	4.33
97	CABBAGE PALM	13.0	4.33
98	CABBAGE PALM	13.0	4.33
99	CABBAGE PALM	13.0	4.33
100	CABBAGE PALM	14.0	4.67
101	CABBAGE PALM	13.0	4.33
102	LIVE OAK	19.0	19.0
103	LIVE OAK	27.0	27.0
104	LIVE OAK	23.0	23.0
105	CABBAGE PALM	12.0	4.0
106	LIVE OAK	25.0	25.0
116	LAUREL OAK	16.0	5.33
126	LAUREL OAK	18.0	6.0
127	LAUREL OAK	13.0	4.33
128	LAUREL OAK	12.0	4.0
129	SOUTHERN MAGNOLIA	14.0	4.67
130	LIVE OAK	45.0	45.0
131	LIVE OAK	22.0	22.0
132	LAUREL OAK	16.0	5.33
133	LAUREL OAK	21.0	7.0
134	LAUREL OAK	14.0	4.67
135	LAUREL OAK	14.0	4.67
136	LAUREL OAK	14.0	4.67
137	LAUREL OAK	14.0	4.67
138	LAUREL OAK	21.0	7.0
139	LAUREL OAK	14.0	4.67
140	LAUREL OAK	18.0	6.0
141	LAUREL OAK	22.0	7.33
142	LAUREL OAK	14.0	4.67
143	LAUREL OAK	14.0	4.67
144	LAUREL OAK	18.0	6.0
145	LAUREL OAK	14.0	4.67
146	LAUREL OAK	14.0	4.67
147	LAUREL OAK	14.0	4.67
148	LAUREL OAK	26.0	8.67
149	LAUREL OAK	17.0	5.67
150	LAUREL OAK	30.0	30.0
164	LIVE OAK	48.0	48.0
157	LAUREL OAK	13.0	4.33
158	LAUREL OAK	12.0	4.0
159	LAUREL OAK	15.0	5.0
160	LAUREL OAK	14.0	4.67
114	LIVE OAK	16.0	16.0
115	LAUREL OAK	18.0	6.0
81	CABBAGE PALM	13.0	4.33
TOTAL		118	2328

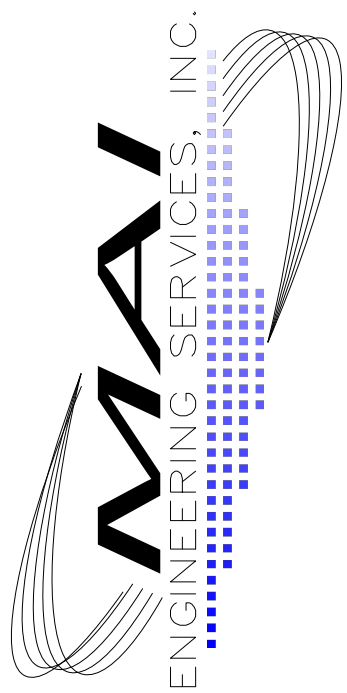
SAVED TREES TABLE

ID#	TYPE	DBH (IN)	REPLACE CREDIT
1	SWEETGUM	12.0	12.0
2	SWEETGUM	15.0	15.0
3	LAUREL OAK	26.0	26.0
4	LIVE OAK	28.0	37.5
7	LIVE OAK	17.0	17.0
10	LAUREL OAK	12.0	12.0
12	LAUREL OAK	16.0	16.0
13	LAUREL OAK	16.0	16.0
14	LAUREL OAK	15.0	15.0
15	LAUREL OAK	14.0	14.0
16	LAUREL OAK	20.0	25.0
18	CABBAGE PALM	17.0	17.0
19	CABBAGE PALM	12.0	12.0
21	LAUREL OAK	17.0	17.0
22	LIVE OAK	24.0	24.0
23	LAUREL OAK	13.0	4.33
24	LAUREL OAK	14.0	4.67
25	RED MAPLE	17.0	17.0
26	RED MAPLE	13.0	13.0
27	LIVE OAK	19.0	23.75
28	LAUREL OAK	23.0	28.75
29	RED MAPLE	13.0	13.0
30	LAUREL OAK	16.0	16.0
31	LAUREL OAK	25.0	31.25
32	LAUREL OAK	13.0	13.0
33	LAUREL OAK	15.0	15.0
72	CABBAGE PALM	16.0	16.0
73	CABBAGE PALM	13.0	13.0
79	RED MAPLE	33.0	49.5
80	RED MAPLE	23.0	28.75
82	LAUREL OAK	23.0	28.75
85	LAUREL OAK	16.0	16.0
86	RED MAPLE	14.0	14.0
87	LAUREL OAK	13.0	13.0
88	LAUREL OAK	27.0	33.75
89	LAUREL OAK	26.0	32.5
107	LIVE OAK	80.0	120.0
108	LIVE OAK	27.0	33.75
109	LAUREL OAK	23.0	28.75
110	LAUREL OAK	24.0	30.0
111	LIVE OAK	37.0	55.5
112	LAUREL OAK	33.0	49.5
113	LIVE OAK	24.0	30.0
117	LIVE OAK	48.0	72.0
118	LAUREL OAK	23.0	28.75
119	LIVE OAK	13.0	13.0
120	LIVE OAK	13.0	13.0
121	SOUTHERN MAGNOLIA	16.0	16.0
122	LIVE OAK	26.0	32.5
123	LIVE OAK	26.0	32.5
124	LIVE OAK	26.0	32.5
125	LAUREL OAK	26.0	32.5
126	LAUREL OAK	14.0	14.0
162	LIVE OAK	16.0	16.0
163	LIVE OAK	24.0	30.0
165	CABBAGE PALM	13.0	13.0
TOTAL		55	1,166

- NOTES:
- PER CITY ORDINANCE SECTION 113-279 (a), TREE REPLACEMENT REQUIRED FOR ALL REMOVED TREES. REPLACE TOTAL INCHES FOR LIVE OAKS TREES. REPLACE ONE THIRD FOR ALL OTHER TREES THAT ARE 12 INCH DBH.
 - SAVED TREES PER CITY ORDINANCE SECTION 113-279 (b), TREES ARE PRESERVED SHALL RECEIVE CREDIT AGAINST THE LANDSCAPE REQUIREMENTS ACCORDING TO THE FOLLOWING SCHEDULE: TREES 12 TO 18 INCH DBH: LIVE OAK, ONE INCH CREDIT; OTHERS 50% TREES 19 TO 30 INCH DBH: LIVE OAK, 1.25 INCH CREDIT; OTHERS 75% TREES ABOVE 30 INCH DBH: LIVE OAK, 1.5 INCH CREDIT; OTHER 100%
- TOTAL TREE INCHES OF REMOVED TREES ARE: 2,328 INCHES
 TOTAL OF REPLACEMENT CREDIT INCHES REQUIRED: 1,497 INCHES
- TOTAL TREE INCHES OF SAVED TREES ARE: 1,166 INCH
 TOTAL SAVED TREES CREDIT INCHES: 1,519.75 INCH



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LICENSED ENGINEER
 QUOC H. MAI
 FL #64006 CA#25162

REVISIONS

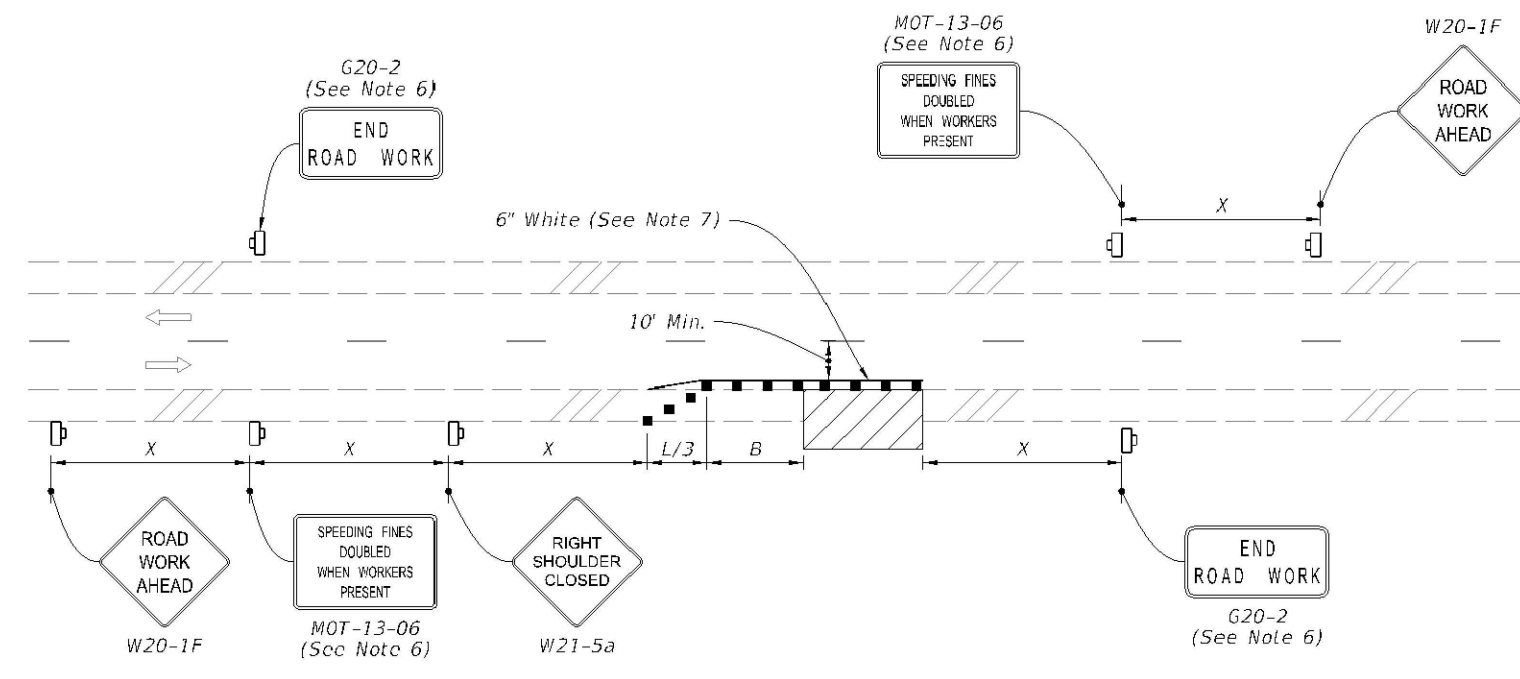
NO.	DATE	DESCRIPTION
1	04/10/2023	REVISION PER CITY AND BAI
2	04/10/2023	REVISION PER CITY COMMENTS

LANDSCAPE PLAN
 RIVER OAKS INDUSTRIAL PARK
 GREEN COVE SPRINGS, FLORIDA
 PREPARED FOR
 RIVER OAKS OUTDOOR, LLC

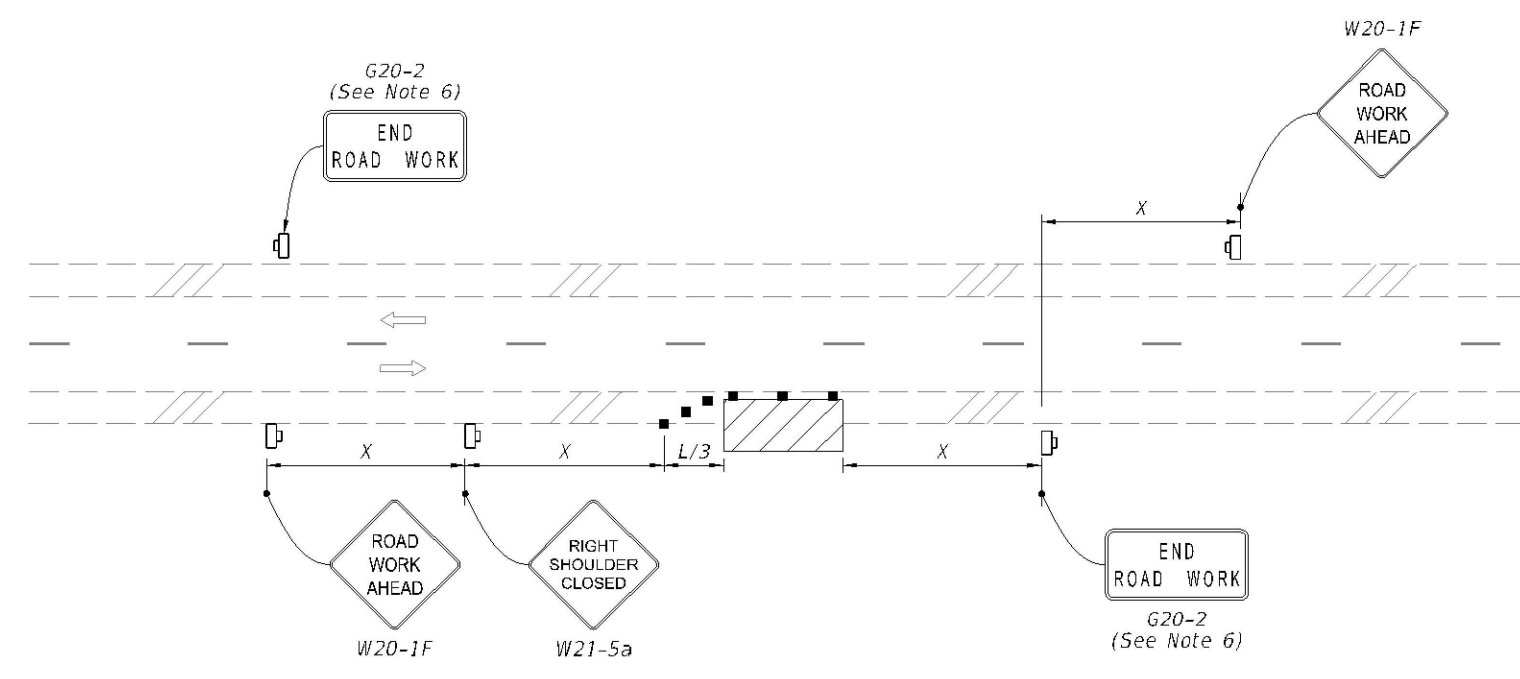
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 DWG BY: **GMG**
 CHK BY: **QHM**
 DATE: 8/10/2023
 JOB No.: 1369
 SHEET No.: 10

- NOTE:**
- This Index applies to Two-Lane, Two-Way and Multilane Roadways, including Medians of divided roadways, with work on the shoulder.
 - L = Taper Length
X = Work Zone Sign Spacing
B = Buffer Length
See Index 102-600 for "L", "X", "B", and channelizing device spacing values.
 - Where work activities are between 2' and 15' from the edge of traveled way, the Engineer may omit signs and channelizing devices for work operations 60 minutes or less.
 - When four or more work vehicles enter the through traffic lanes in a one hour period (excluding establishing and terminating the work area), use a flagger or lane closure to accommodate work vehicle ingress and egress.
 - For work less than 2' from the traveled way and work zone speed is greater than 45 MPH, use a lane closure.
 - The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" Signs (G20-2) along with the associated work zone sign spacing distances may be omitted when the work operation is in place for 24 hours or less.
 - Temporary pavement markings may be omitted when the work operation is in place for 3 days or less.
 - Omit "Shoulder Closed" signs (W21-5a) along with associated work zone sign spacing distances for work on the median.
 - When there is no paved shoulder, the "Worker" sign (W21-1) may be used instead of the "Shoulder Closed" sign (W21-5a).

- SYMBOLS:**
- Work Area
 - Channelizing Device (See Index 102-600)
 - Work Zone Sign
 - Lane Identification and Direction of Traffic

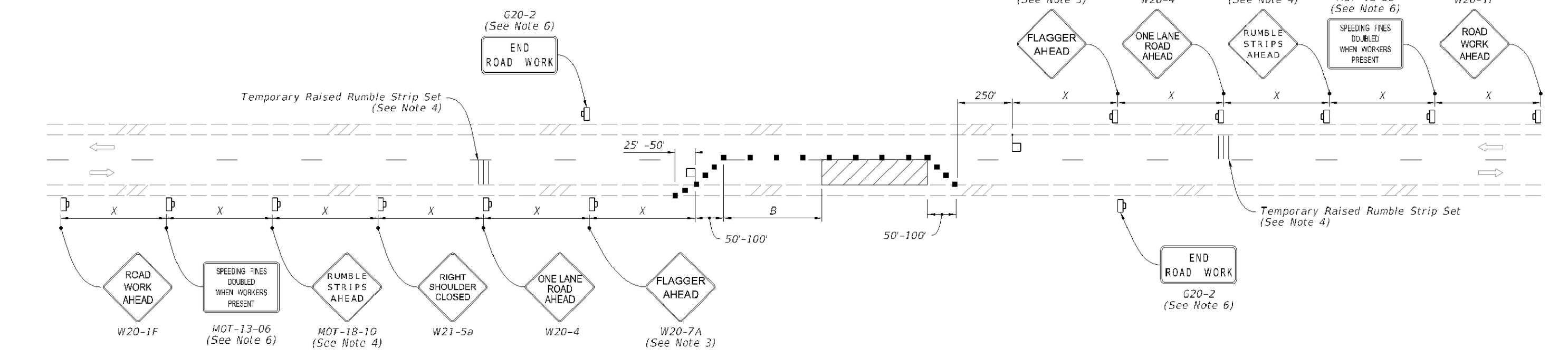


TWO-LANE ROADWAY
SHOULDER WORK LESS THAN 2' FROM THE TRAVELED WAY
WITH WORK ZONE SPEED OF 45 MPH OR LESS



TWO-LANE ROADWAY
SHOULDER WORK BETWEEN 2' AND 15' FROM THE TRAVELED WAY

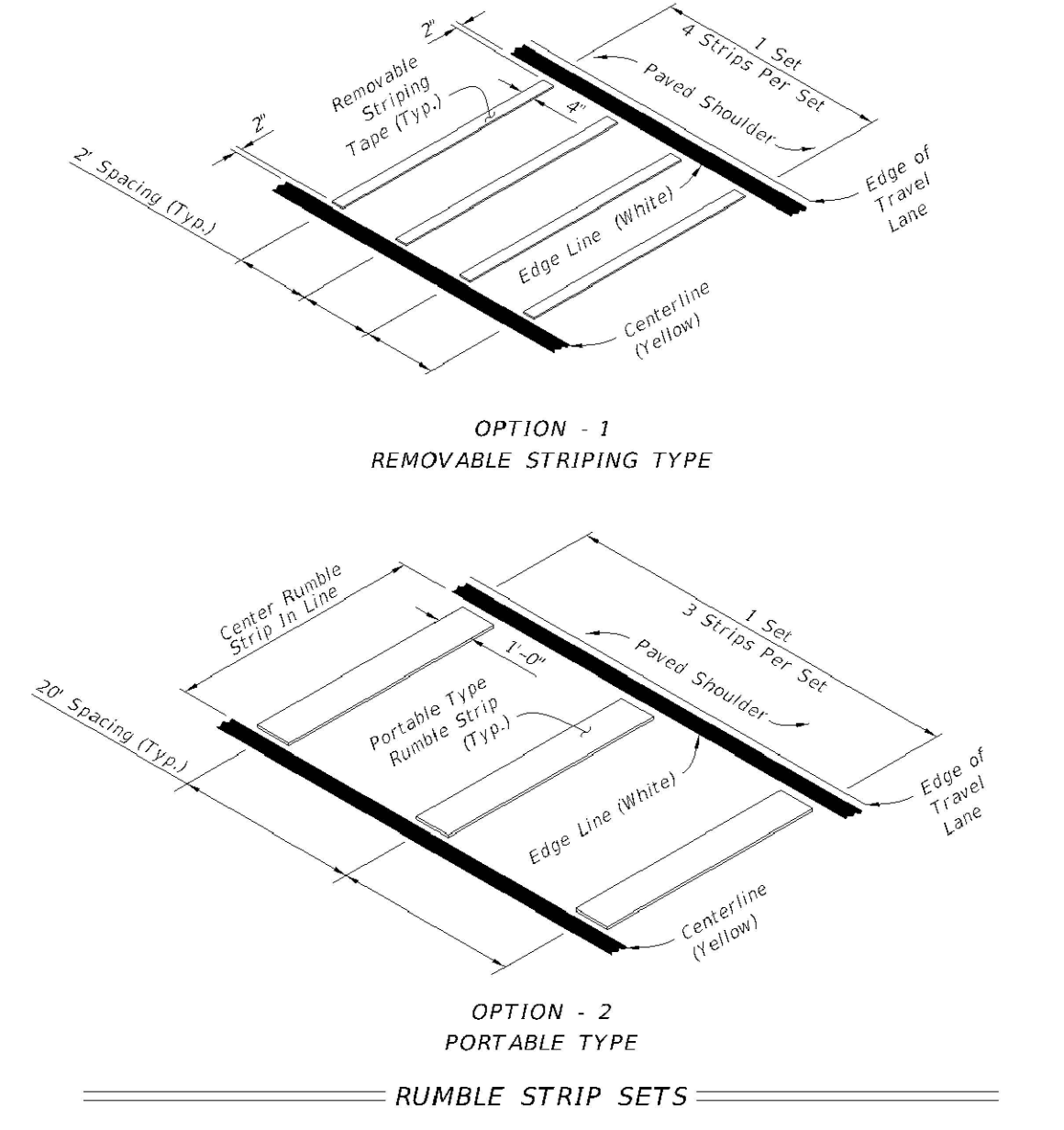
LAST REVISION 11/01/21	DESCRIPTION:	FDOT FY 2023-24 STANDARD PLANS	TWO-LANE AND MULTILANE, WORK ON SHOULDER	INDEX 102-602	SHEET 1 of 2
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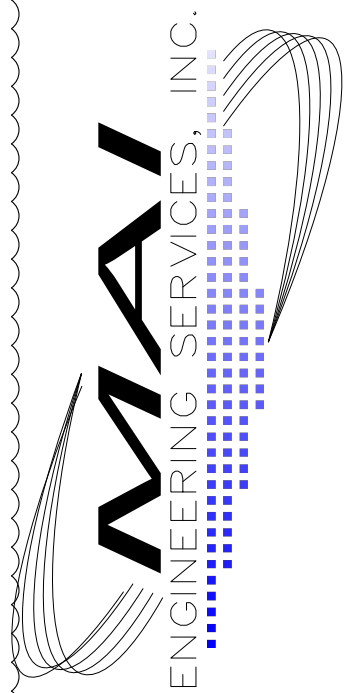
- NOTES:**
- This Index applies to Two-Lane, Two-Way Roadways with work within the traveled way.
 - L = Taper Length
B = Buffer Length
X = Work Zone Sign Spacing
See Index 102-600 for "L", "B", "X" and channelizing device spacing values.
 - Optionally, use "Flagger Ahead" sign with symbol (W20-7) instead of "Flagger Ahead" sign with text (W20-7A).
 - Use temporary raised rumble strips when the existing posted speed is 55 mph or greater and the work duration is greater than 60 minutes. If temporary raised rumble strips are not used, omit "Rumble Strips Ahead" signs (MOT-18-10) and associated work zone sign spacing.
 - Additional one-way control may be provided by the following means:
 - Flag-carrying vehicle
 - Official vehicle
 - Pilot vehicles
 - Traffic signals
 - The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" signs (G20-2), along with associated work zone sign spacing, may be omitted when the work operation will be in place for 24 hours or less.
 - Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specification Sections 102, 990 and the APL vendor drawings.
 - Railroad Crossings:
 - If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 2.
 - If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.

- SYMBOLS:**
- Work Area
 - Channelizing Device (See Index 102-600)
 - Work Zone Sign
 - Flagger
 - Lane Identification and Direction of Traffic

LAST REVISION 11/01/21	DESCRIPTION:	FDOT FY 2023-24 STANDARD PLANS	TWO-LANE, TWO-WAY WORK WITHIN THE TRAVEL WAY	INDEX 102-603	SHEET 1 of 2
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quoc@matengineer.com

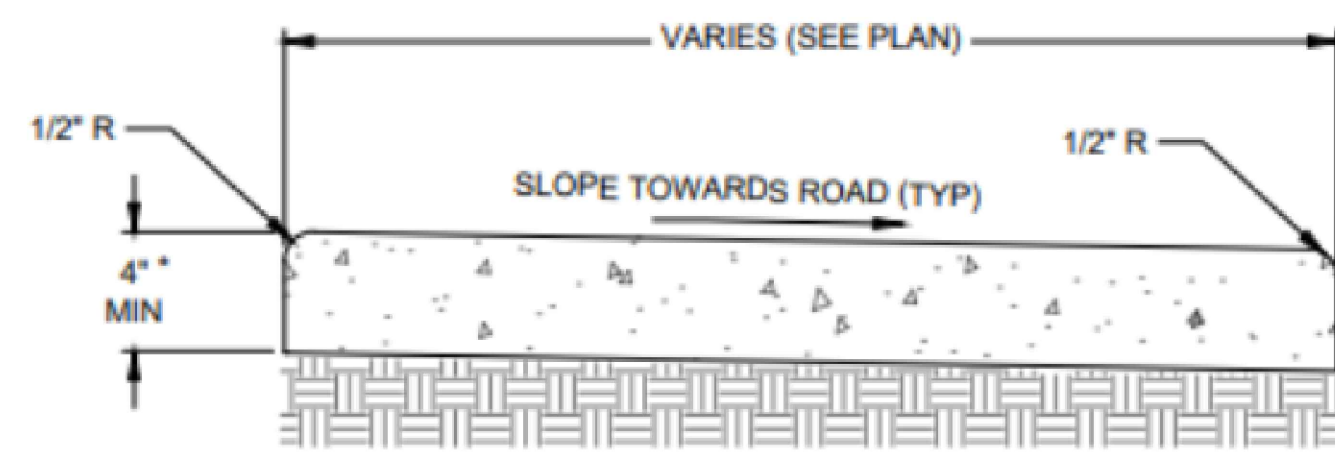


LICENSED ENGINEER
QUOC H. MAI
FL #64006 CA#25162

REVISIONS	DATE	DESCRIPTION
1	08/17/2023	REVISION PER CITY ADOPTED
2	04/18/2023	REVISION PER CITY ADOPTED
3	04/18/2023	REVISION PER CITY COMMENTS

MOT INDEX
RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR
RIVER OAKS OUTDOOR, LLC

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	8/10/2023
JOB No.:	1369
SHEET No.:	11

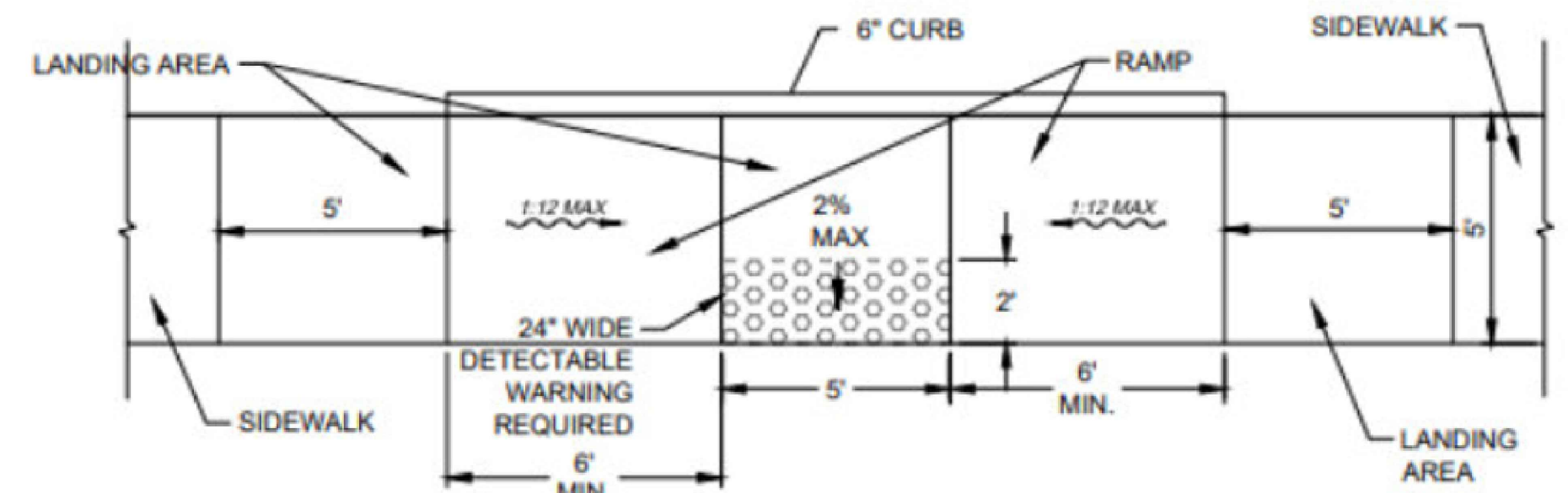
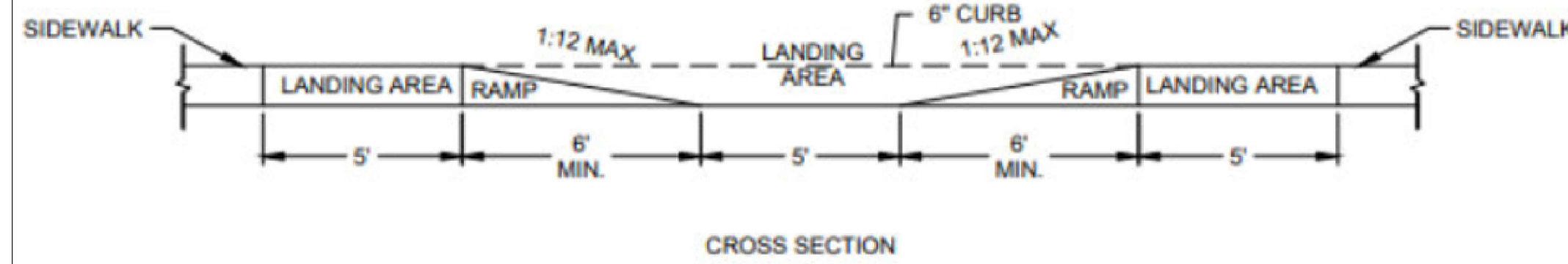


NOTES:

1. DISTANCE BETWEEN SCORE LINE NOT TO EXCEED 5' IN LONGITUDINAL & TRAVERSE DIRECTION IN SIDEWALK.
2. SIDEWALK IS TO BE CONCRETE WITH A MINIMUM STRENGTH OF 3,000 PSI.
3. MAX 2% CROSS SLOPE PER ADA.

* SIDEWALK SHALL BE 6" THICK AT DRIVEWAY.

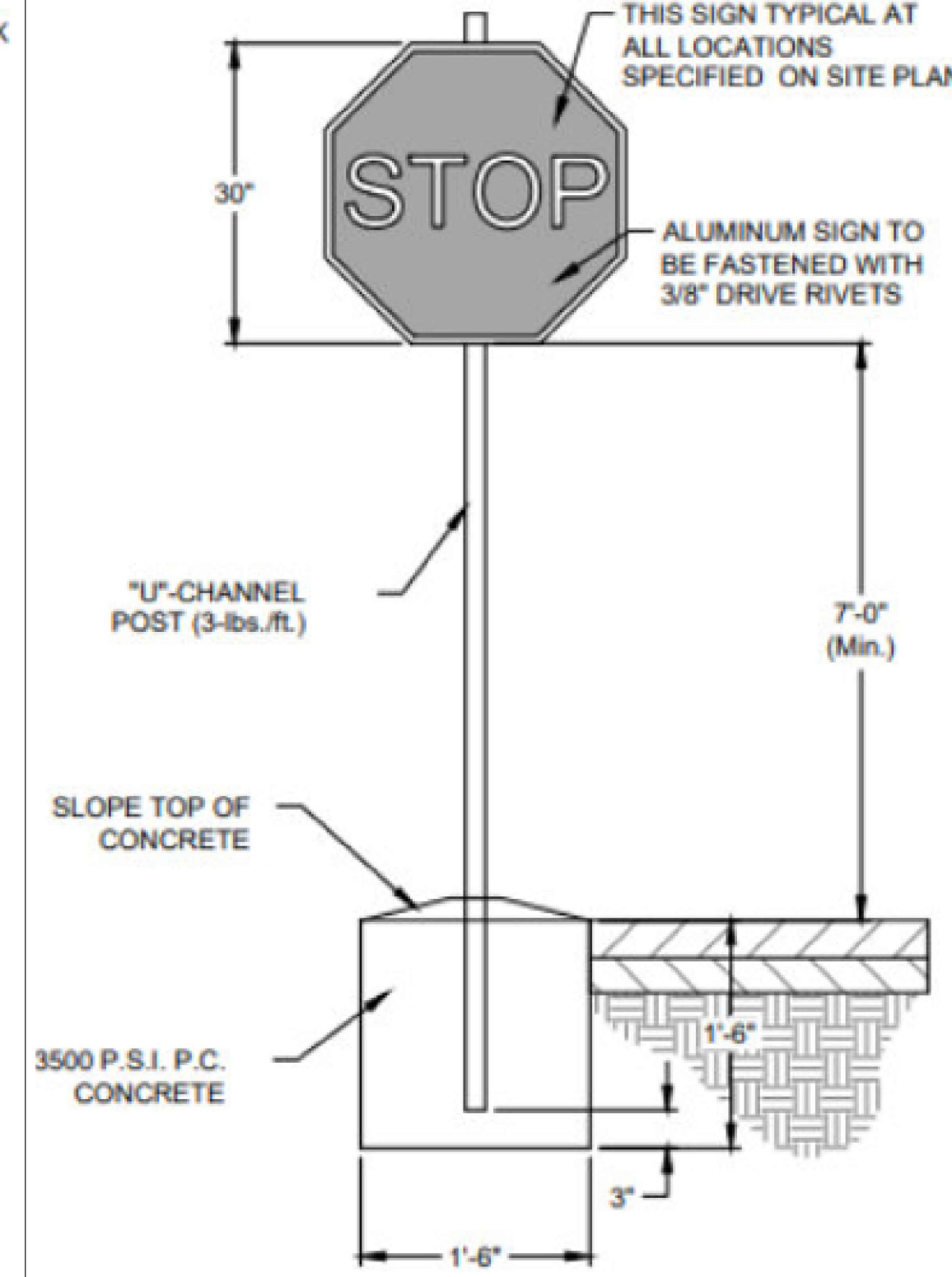
CONCRETE SIDEWALK DETAIL SD1
N.T.S.



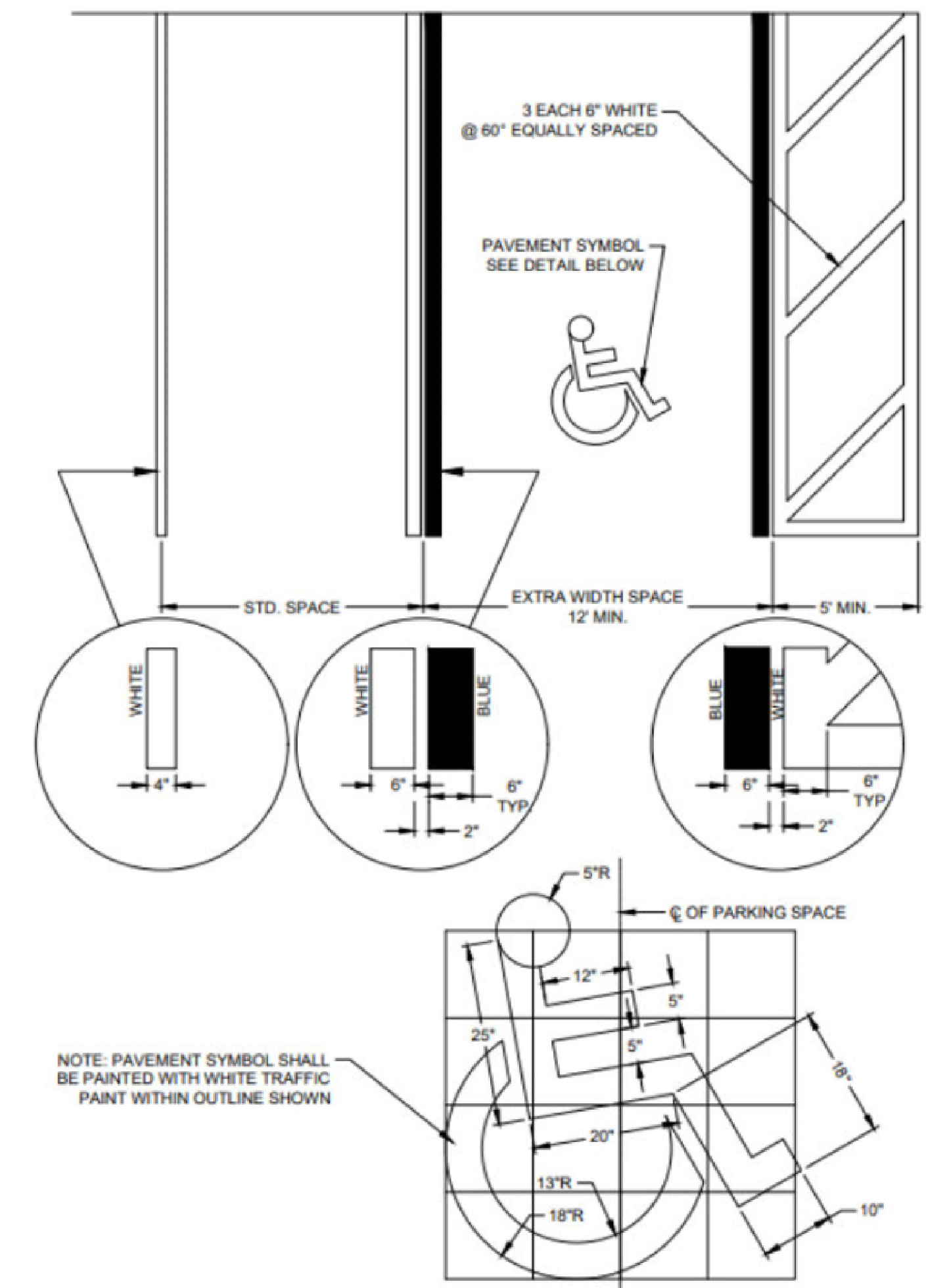
NOTES:

1. THE SURFACE OF RAMP SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE ROUGHER THAN THE SURROUNDING SIDEWALK.
2. RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 8% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP.
3. CONSTRUCT PER A.D.A. STANDARDS.
4. DETECTABLE WARNING SURFACE SHALL BE "SAFETY YELLOW" COMPOSITE MATERIAL ANCHORED IN THE RAMP. WARNING SURFACE SHALL BE SET INTO THE CONCRETE AND BE FLUSH WITH CONCRETE SURFACE ALONG ALL FOUR SIDES.
5. DETECTABLE WARNING SURFACE TO BE CAST IN PLACE COMPOSITE TACTILE BY ADA SOLUTIONS, INC. OR CAST IN PLACE DETECTABLE WARNING PANEL BY ARMORCAST.
6. DETECTABLE WARNING AREA SHALL CONFORM TO FDOT STANDARD INDEX 522-002 AND 28 CFR PART 36 APPENDIX A, LATEST REVISION.

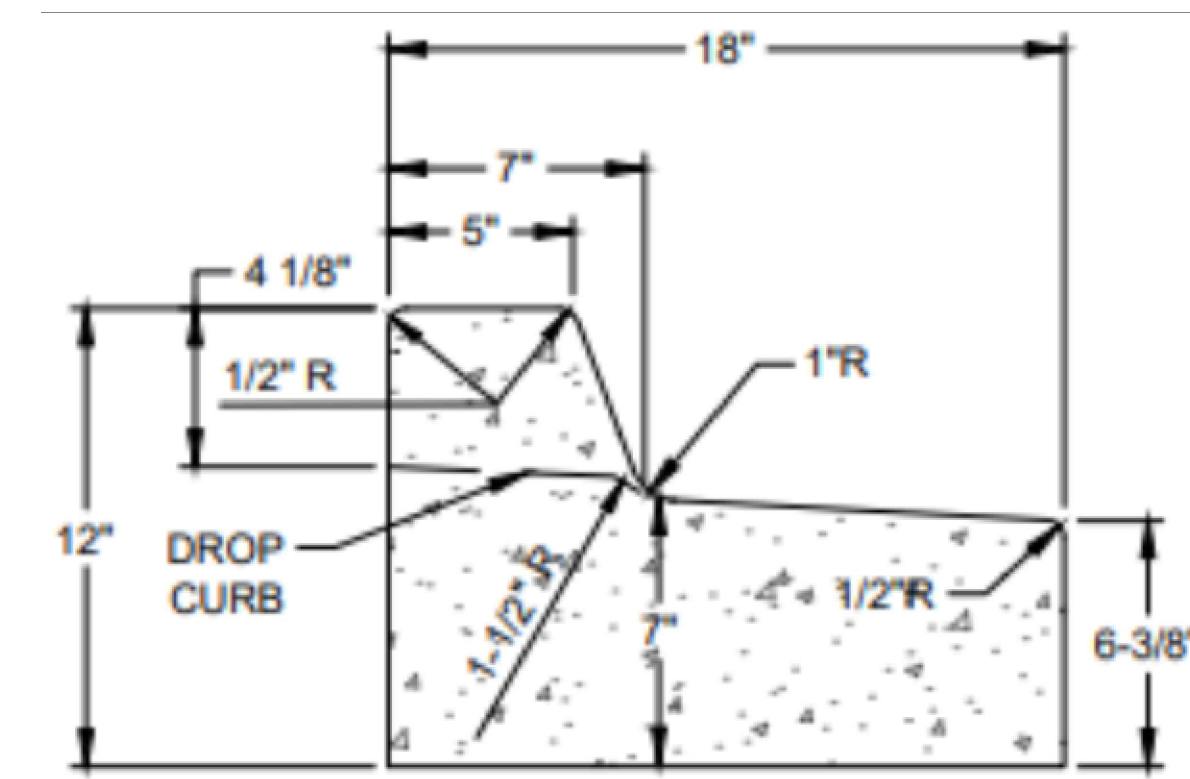
WHEELCHAIR RAMP IN SIDEWALK SD7
N.T.S.



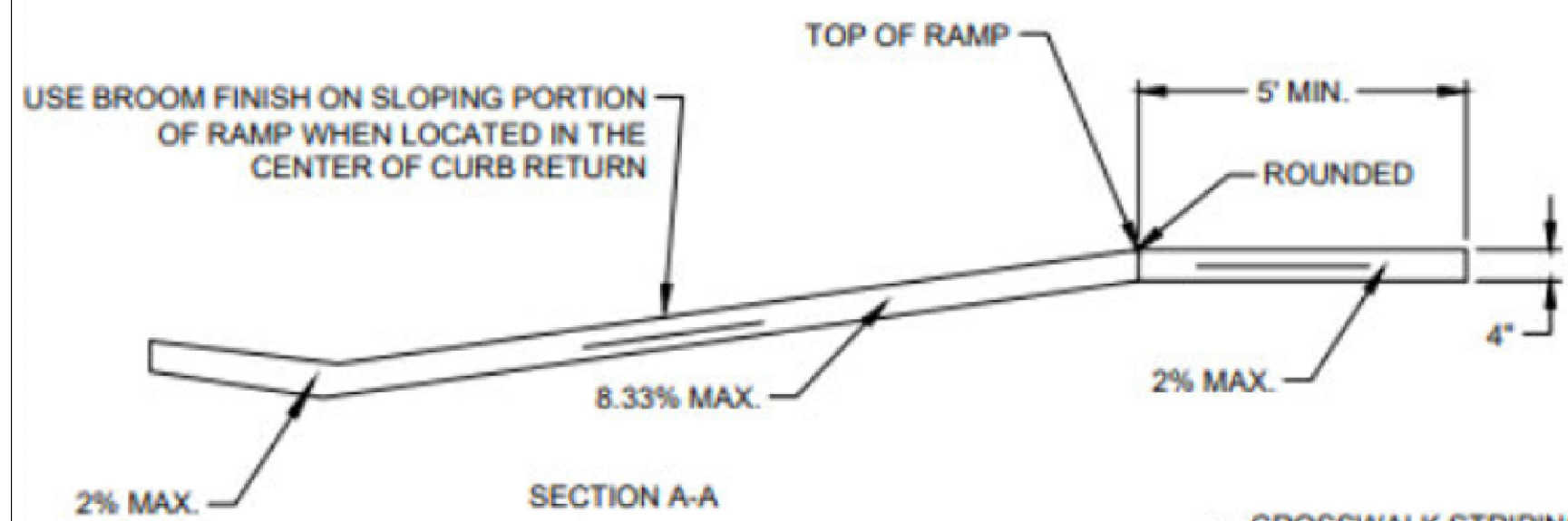
STOP SIGN SD8
N.T.S.



PARKING PAINT STRIPPING SD10
N.T.S.



18" STANDARD CURB & GUTTER DETAIL (REVERSE PITCH) SD4
N.T.S.

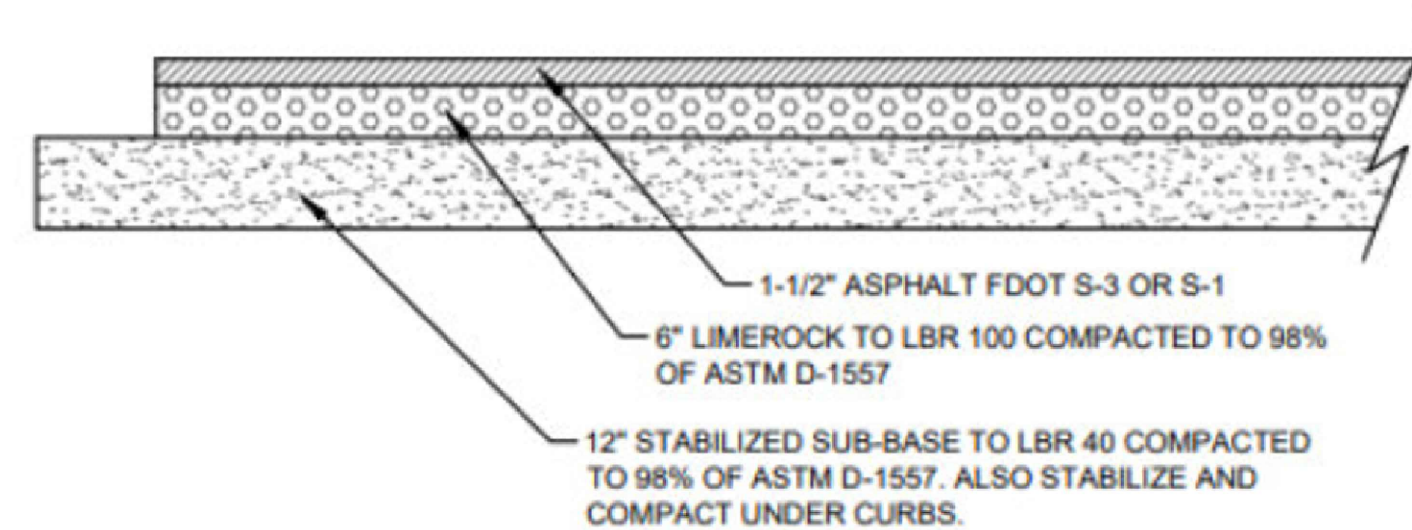


CROSSWALK STRIPING (IF SHOWN ON PLANS)
DETECTABLE WARNING (SEE NOTES 5 & 6)

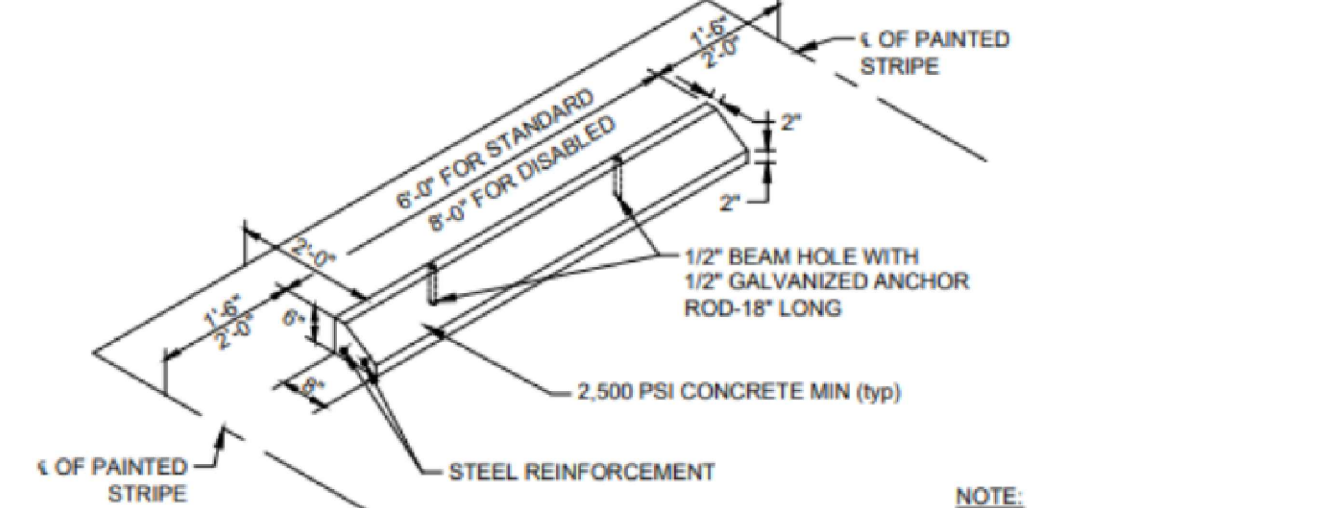
NOTES:

1. THE SURFACE OF RAMP SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE ROUGHER THAN THE SURROUNDING SIDEWALK.
2. THE BOTTOM OF THE RAMP SHALL HAVE A 1/2" LIP OF 45°.
3. RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 12% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP.
4. CONSTRUCT PER A.D.A. STANDARDS.
5. DETECTABLE WARNING SURFACE SHALL BE "SAFETY YELLOW" COMPOSITE MATERIAL ANCHORED IN THE RAMP. WARNING SURFACE SHALL BE SET INTO THE CONCRETE AND BE FLUSH WITH CONCRETE SURFACE ALONG ALL FOUR SIDES.
6. DETECTABLE WARNING SURFACE TO BE CAST IN PLACE COMPOSITE TACTILE BY ADA SOLUTIONS, INC. OR CAST IN PLACE DETECTABLE WARNING PANEL BY ARMORCAST.
7. DETECTABLE WARNING AREA SHALL CONFORM TO FDOT STANDARD INDEX 304 AND 28 CFR PART 36 APPENDIX A, LATEST REVISION.

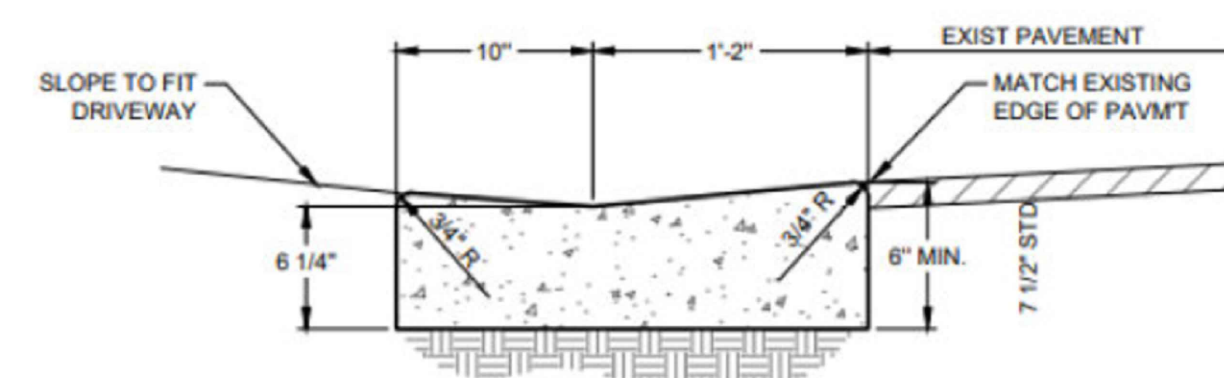
WHEELCHAIR RAMP IN SIDEWALK AT CURB RETURN SD9
N.T.S.



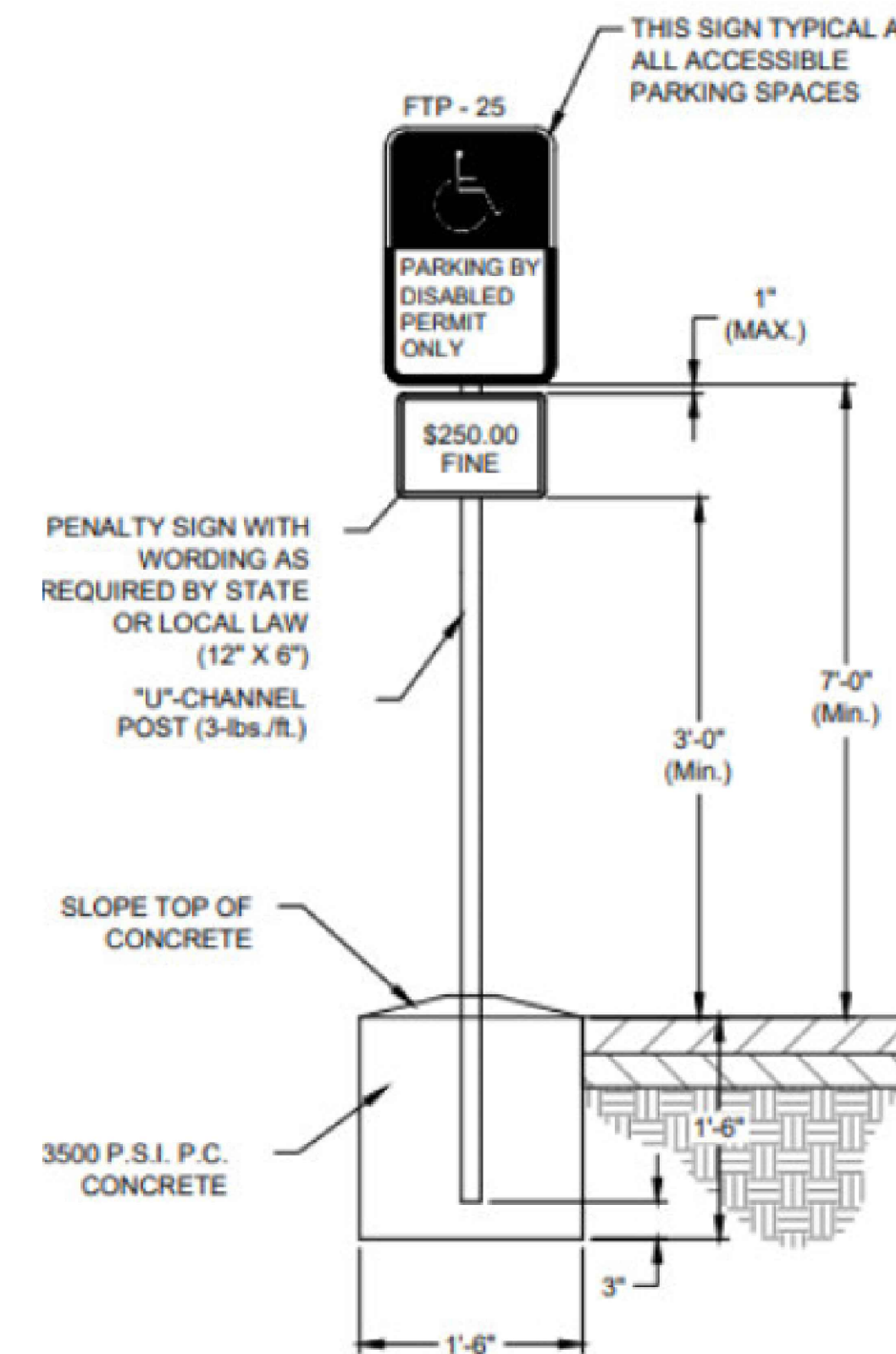
TYPICAL PAVEMENT SECTION SD11
N.T.S.



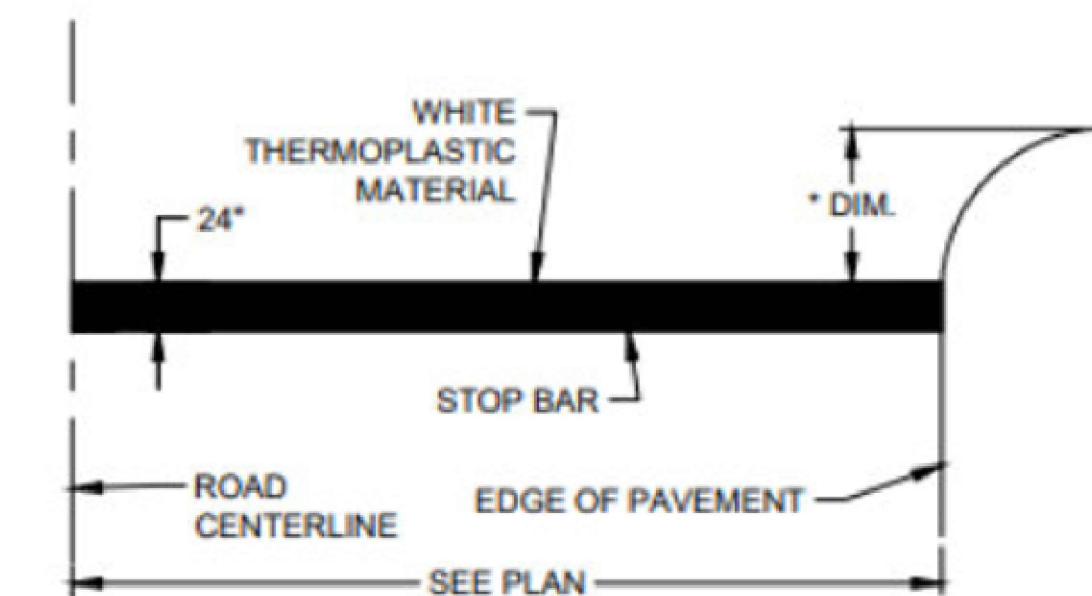
PRECAST CONCRETE WHEEL STOP SD12
N.T.S.



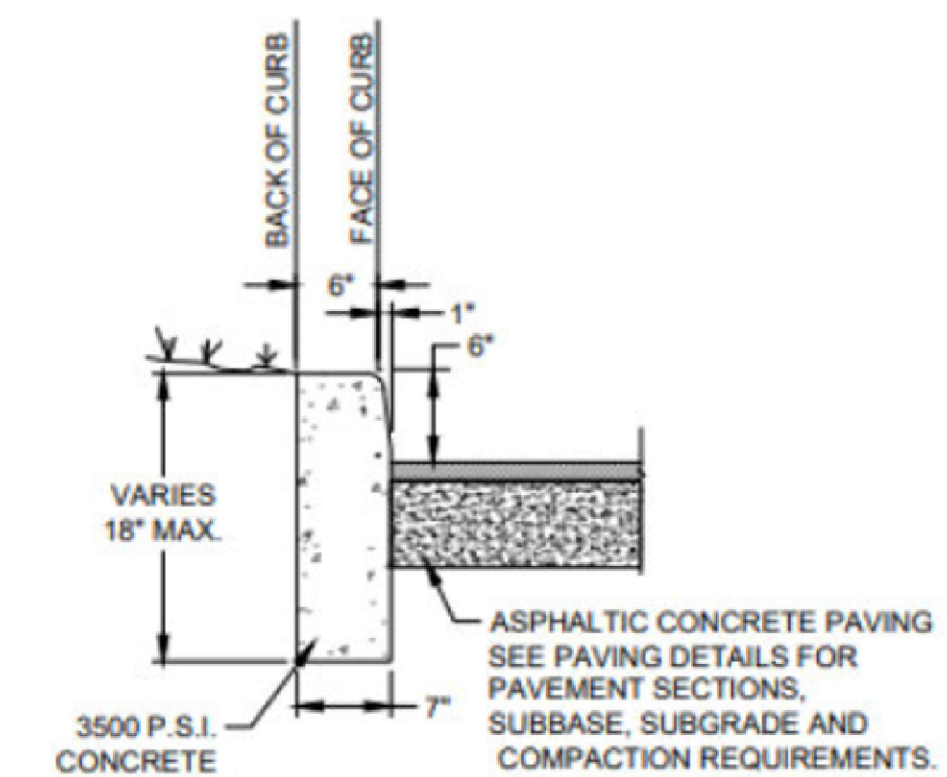
VALLEY CURB SD16
N.T.S.



ACCESSIBLE PARKING SIGN SD15
N.T.S.

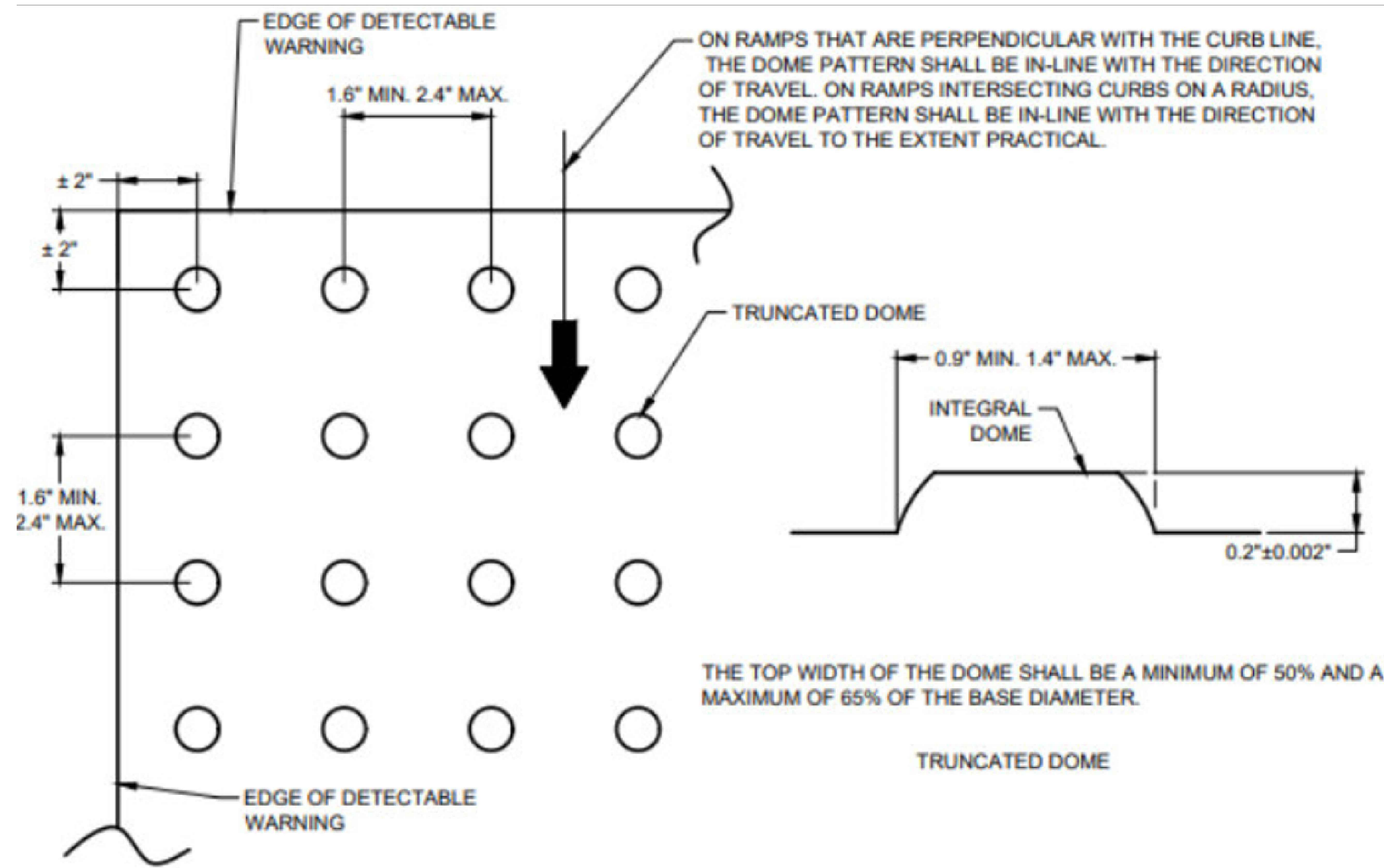


STOP BAR SD18
N.T.S.



HEADER CURB SD39
N.T.S.

REVISIONS	DATE	BY	DESCRIPTION
1	08/10/2023	QHM	REVISION PER CITY PERMIT
2	04/15/2023	QHM	REVISION PER CITY AND MAD
3	04/15/2023	QHM	REVISION PER CITY COMMENTS



BASE-TO-BASE SPACING SHALL BE 0.65" MINIMUM BETWEEN DOMES.

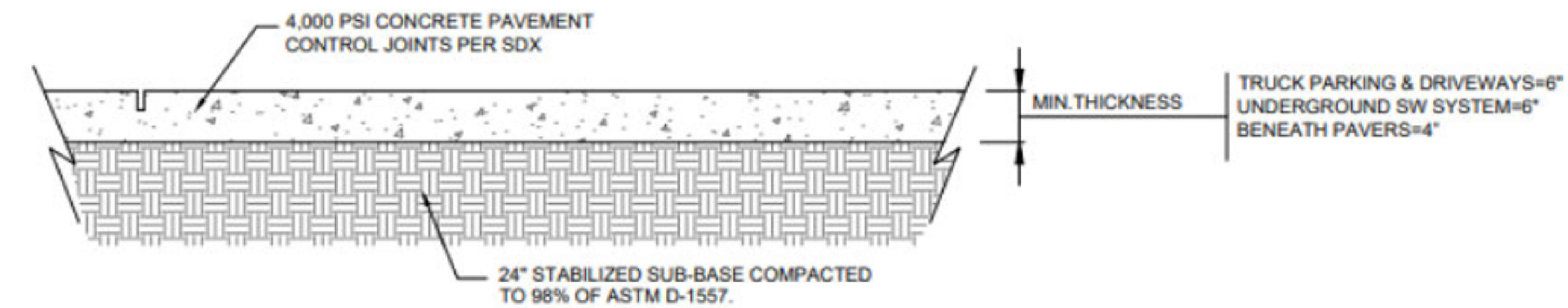
PLAN VIEW

NOTES:

1. ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24 INCHES FROM THE BACK OF CURB.
2. SEE FDOT STANDARD INDEX 522-002, LATEST EDITION FOR MORE DETAILS.
3. DETECTABLE WARNING SURFACE SHALL BE "SAFETY YELLOW" COMPOSITE MATERIAL ANCHORED IN THE RAMP. WARNING SURFACE SHALL BE SET INTO THE CONCRETE AND BE FLUSH WITH CONCRETE SURFACE ALONG ALL FOUR SIDES.
4. DETECTABLE WARNING SURFACE TO BE CAST IN PLACE COMPOSITE TACTILE BY ADA SOLUTIONS, INC. OR CAST IN PLACE DETECTABLE WARNING PANEL BY ARMORCAST.

DETECTABLE WARNING DETAIL SD26

N.T.S.



RECOMMENDED MAX. JOINT SPACINGS

PAVEMENT THICKNESS (INCHES)	RECOMMENDED MAXIMUM JOINT SPACING (FEET)
3.5 (FOR WHITETOPPING ONLY)	6
4.0	10
4.5	10
5.0	12
5.5	12
6.0	15
OVER 6.0	15

CURBS:

1. ALL CURBING SHALL BE CONSTRUCTED OF CONCRETE THAT WILL OBTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
2. ALL CONCRETE CURBS SHALL BE SPACED WITH A FULL-DEPTH, 1/2" WIDTH ISOLATION JOINT MATERIAL (UNLESS OTHERWISE NOTED) PRIOR TO PLACEMENT OF ADJACENT CONCRETE PAVEMENT.
3. THERE SHALL BE CONTROL JOINTS, EITHER TOOL OR SAW-CUT, MATCH PAVEMENT JOINTS, UNLESS OTHERWISE SPECIFIED; JOINTS SHALL BE FORMED WITHIN 12 HOUR OF PLACEMENT.
4. ALL CURB ENDS THAT DO NOT TIE INTO OTHER FACILITIES SHALL TRANSITION DOWN TO PAVEMENT GRADE IN 24 INCHES.
5. CONSTRUCTION JOINT SHALL BE TIED WITH A No.4 TIE BAR EXTENDED 6 INCHES INTO EACH CURB SECTION AND SHALL BE SPACED WITH A FULL-DEPTH 1/2" WIDTH ISOLATION JOINT MATERIAL.

GENERAL NOTES:

1. USE ACI 330 GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS.
2. USE ACI 330.1 STANDARD SPECIFICATION FOR PLAIN CONCRETE PARKING LOTS.
3. ALL CONCRETE USED IN PARKING LOT, UNLESS OTHERWISE INDICATED, SHALL HAVE A COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. PREPARE THE SUBGRADE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS FOR RIGID PAVEMENTS. SUBGRADE SOIL DENSITY TESTING MUST BE COMPLETED AND VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONCRETE PLACEMENT.
4. IMPORTED SOIL USE FOR BACK FILL SHOULD BE FREE OF HEAVY CLAY, SILTS, STONES, PLANT ROOT OR OTHER FOREIGN MATERIAL GREATER THAN 1 1/2" IN DIAMETER IN ORDER TO ACHIEVE ADEQUATE COMPACTION AROUND ANY FIXED OBJECT IN GROUND. ALTERNATE WILL BE TO USE FLOWABLE FILL.
5. CURE CONCRETE IMMEDIATELY AFTER FINISHING OPERATION IS COMPLETED BY USING ONE OF THE FOLLOWING METHODS: WATER, PIGMENTED WATER-BASED CURING COMPOUND OR VISQUEEN AND BURLAP.

COMPACTED SUBGRADE:

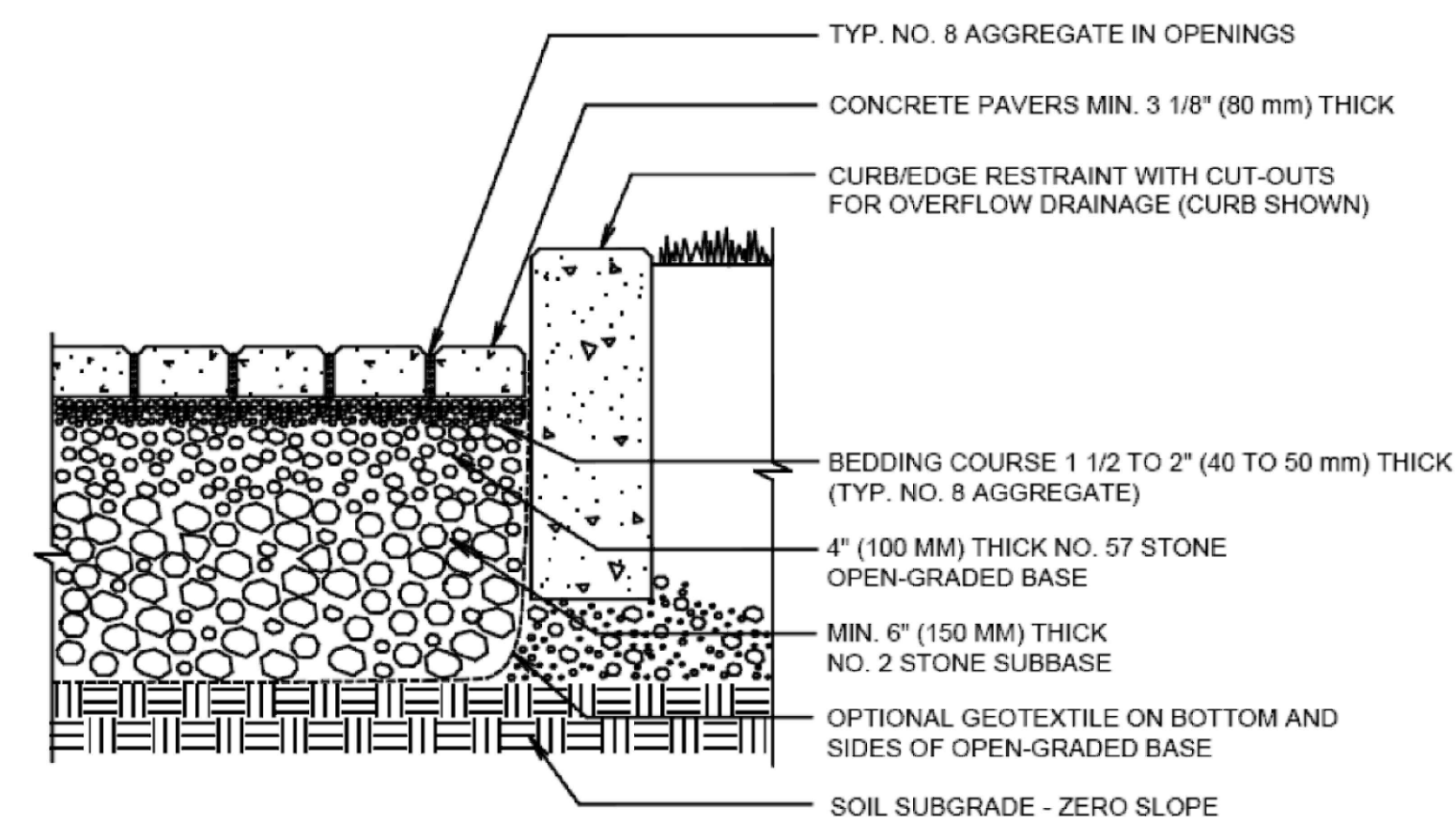
1. SUBGRADE FOR PAVEMENT AREAS SHALL BE COMPACTED TO A MINIMUM OF 98% OF MAXIMUM DRY DENSITY USING STANDARD EFFORT AS DETERMINED BY ASTM D 698 FOR A MINIMUM DEPTH OF 12 INCHES.

JOINT SPACING DETERMINATION:

1. LAYOUT CONTROL JOINT BY STARTING WITH ANY DRAINAGE INLET WITHIN THE PAVEMENT SECTION AND WORK TOWARD EDGE OF PAVEMENT.
2. KEEP ALL JOINTS CONTINUOUS.
3. CONTROL JOINTS SHALL BE FORMED OR SAWED WITHIN 12 HOURS FROM TIME OF PLACEMENT:
 - A. SIDEWALK-SPACING SHALL BE SAME AS WIDTH OF PAVEMENT AND LESS THAN 5 FEET IN LENGTH.
 - B. PAVEMENT-MAXIMUM SPACING SHALL BE 2.5 TIMES THICKNESS IN UNIT OF FEET AND LESS THAN 15 FEET IN LENGTH (E.G. D=5 INCHES, SPACING AT 12x12).

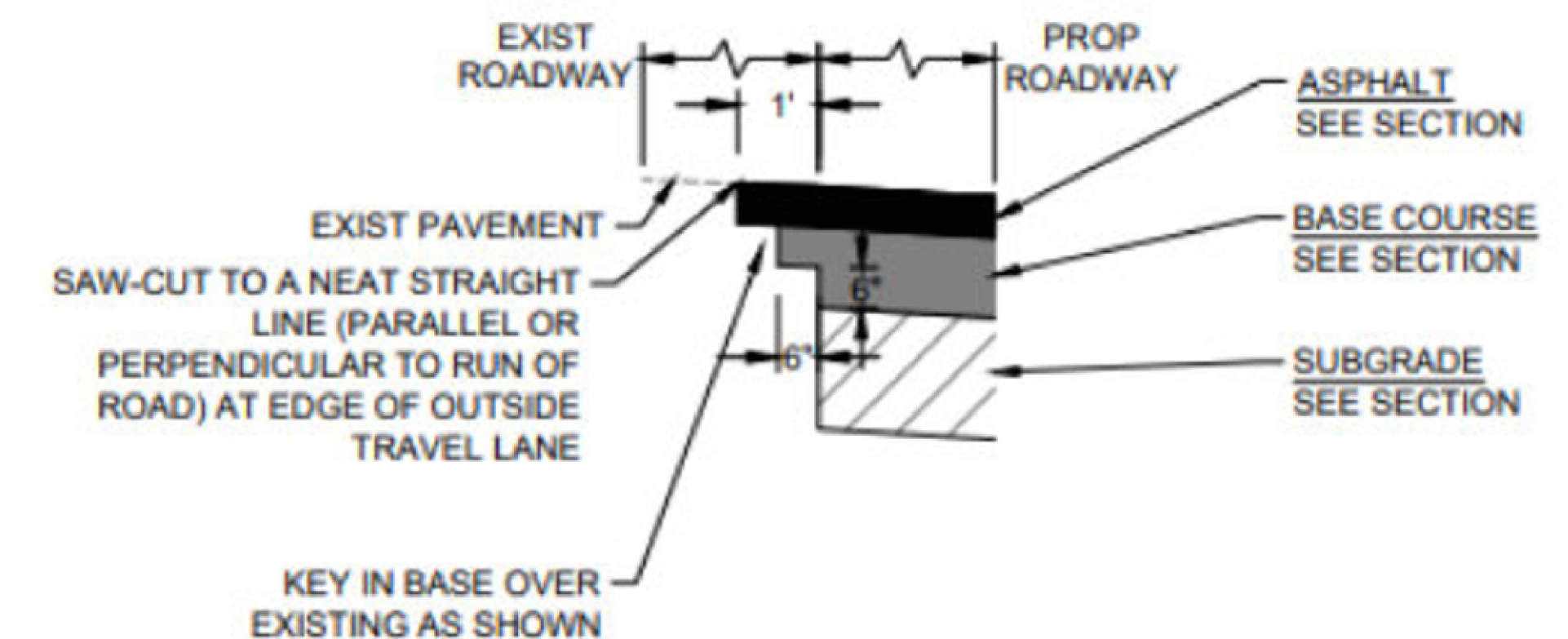
CONCRETE PAVEMENT SECTION SD36

N.T.S.



PARKING STALL PAVER DETAIL SD5

N.T.S.

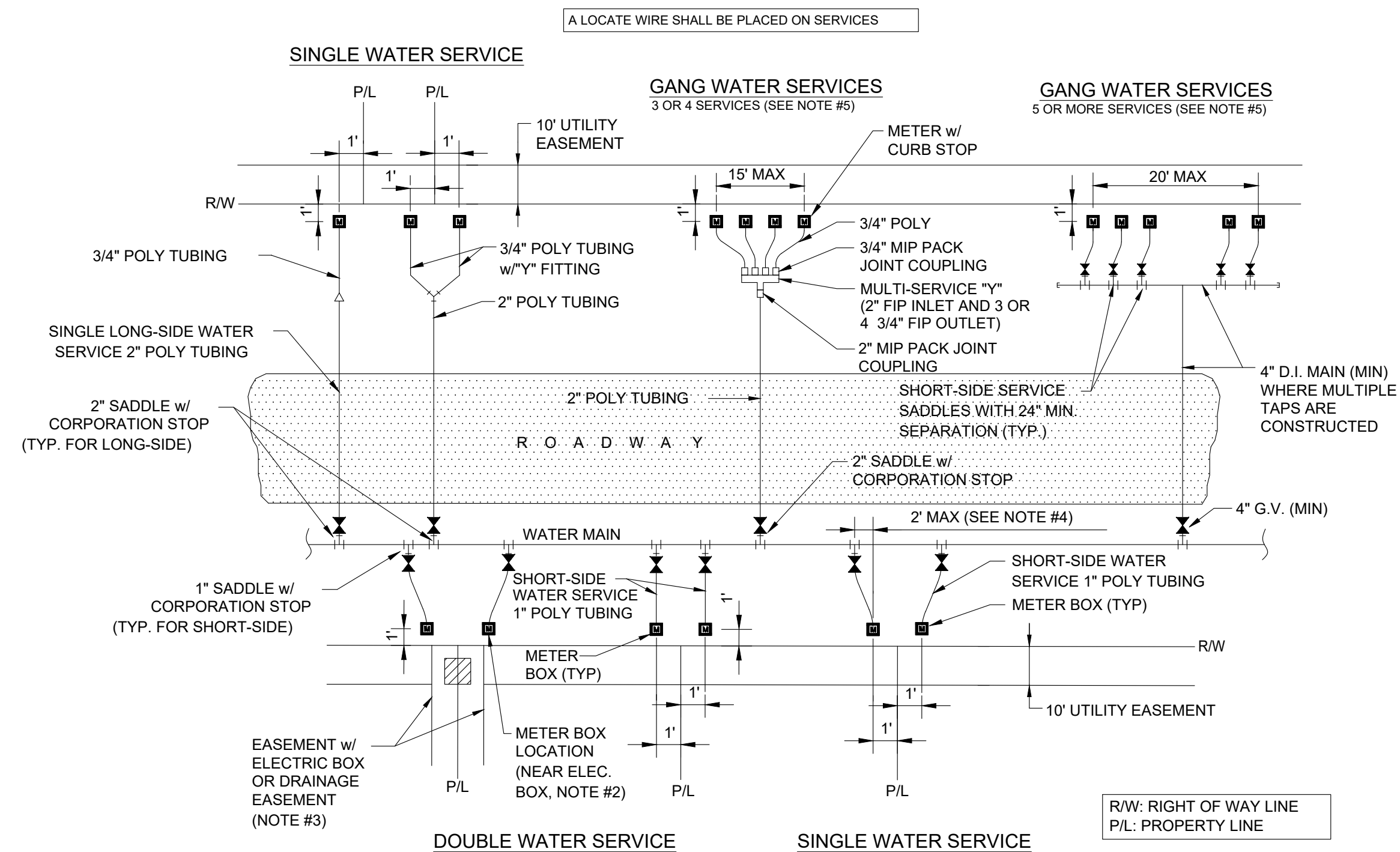


CONNECT TO EXISTING PAVEMENT SD34

N.T.S.

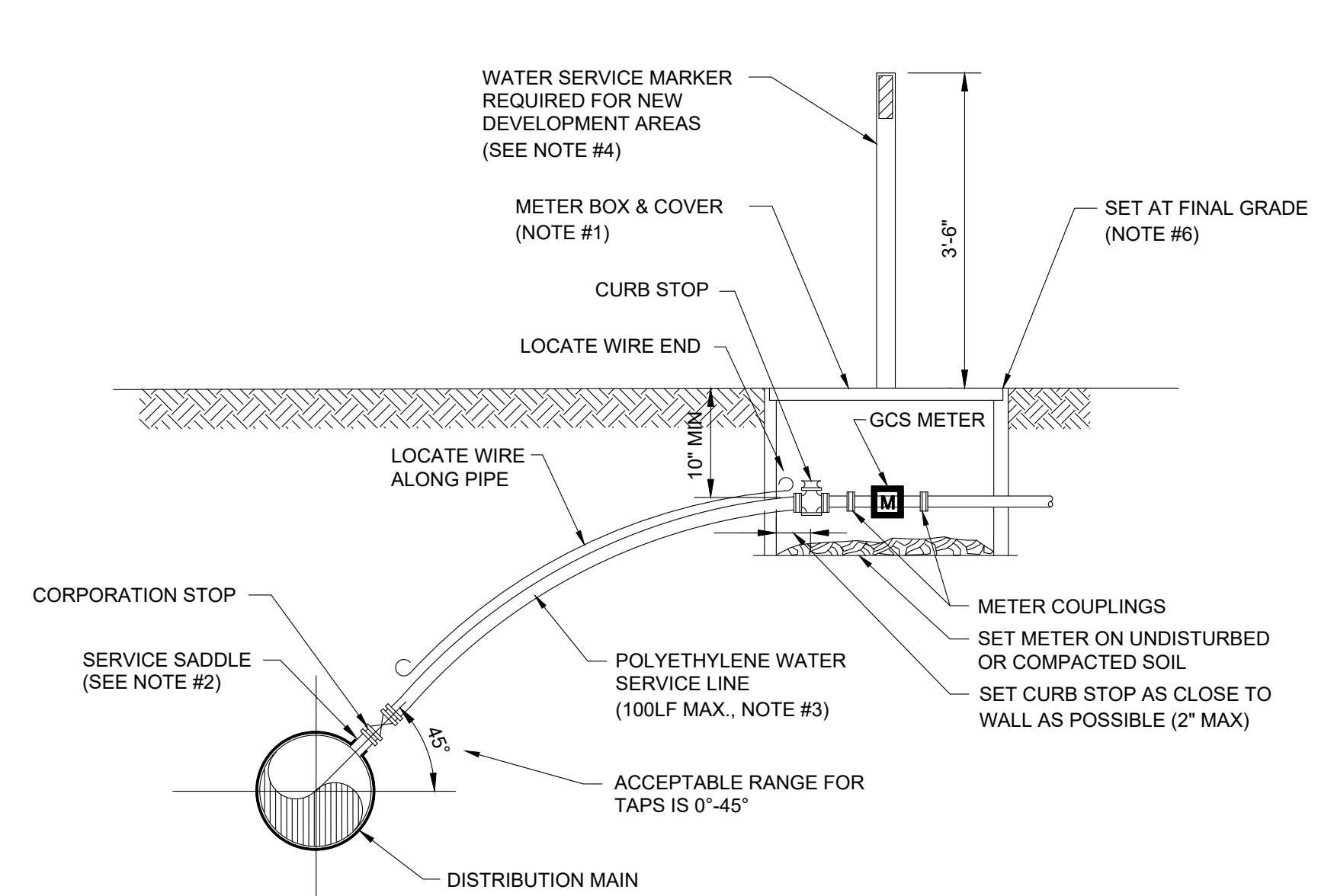
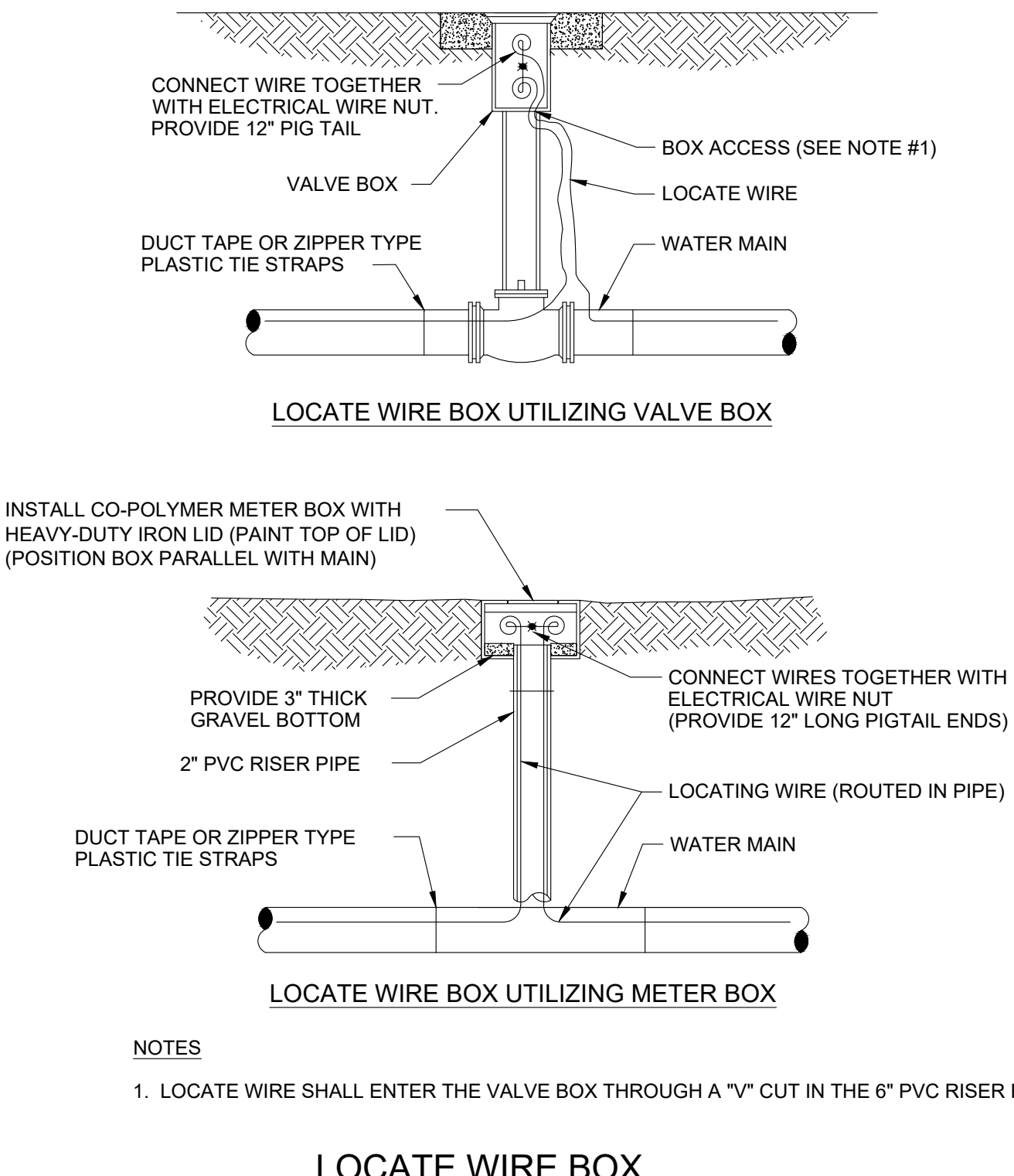
REVISIONS

NO.	DATE	DESCRIPTION
1	08/10/2023	ISSUED FOR CITY APPROVAL
2	04/12/2023	REVISION FOR CITY AND MAD DAI
3	04/19/2023	REVISION FOR CITY COMMENTS



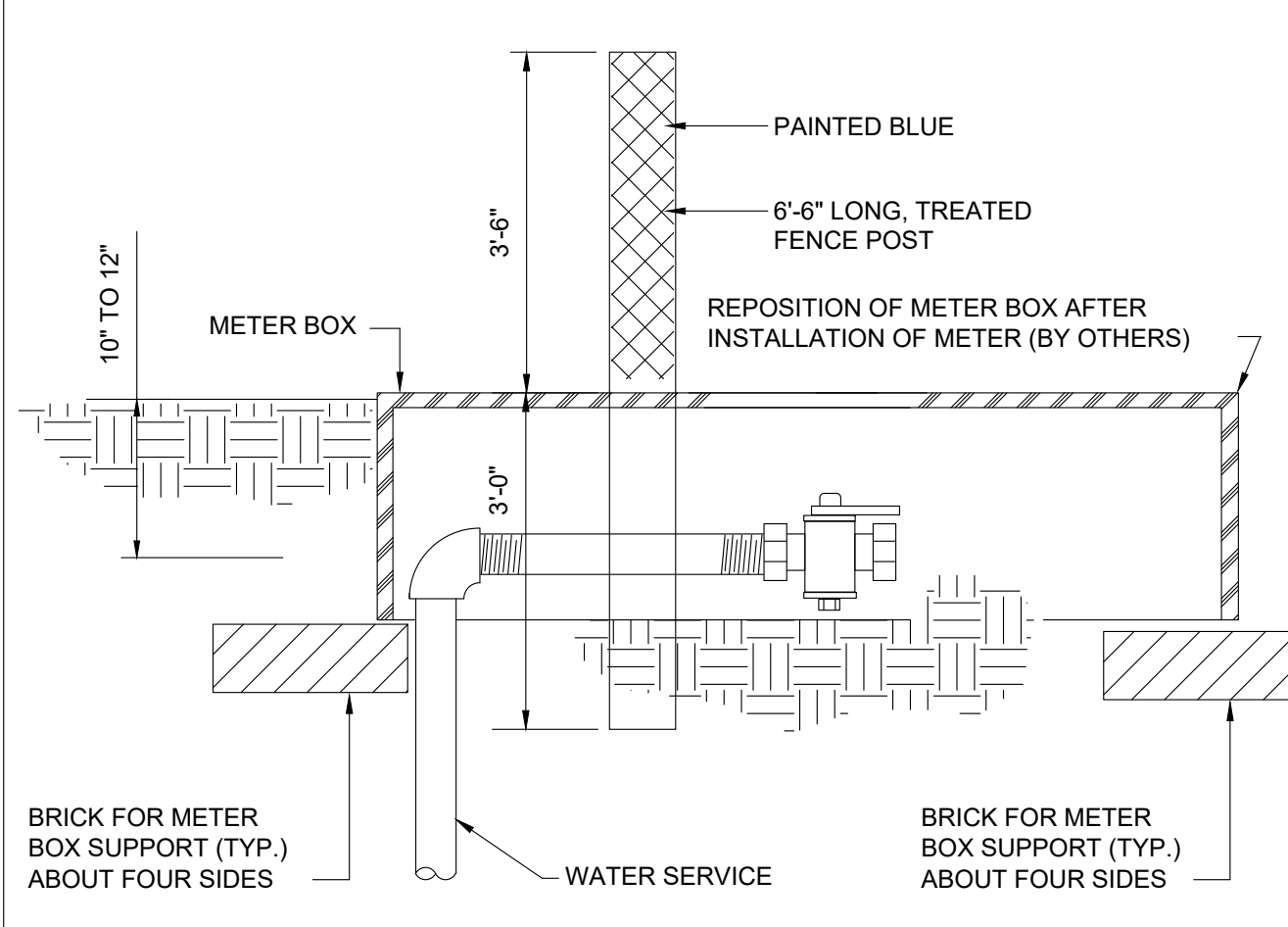
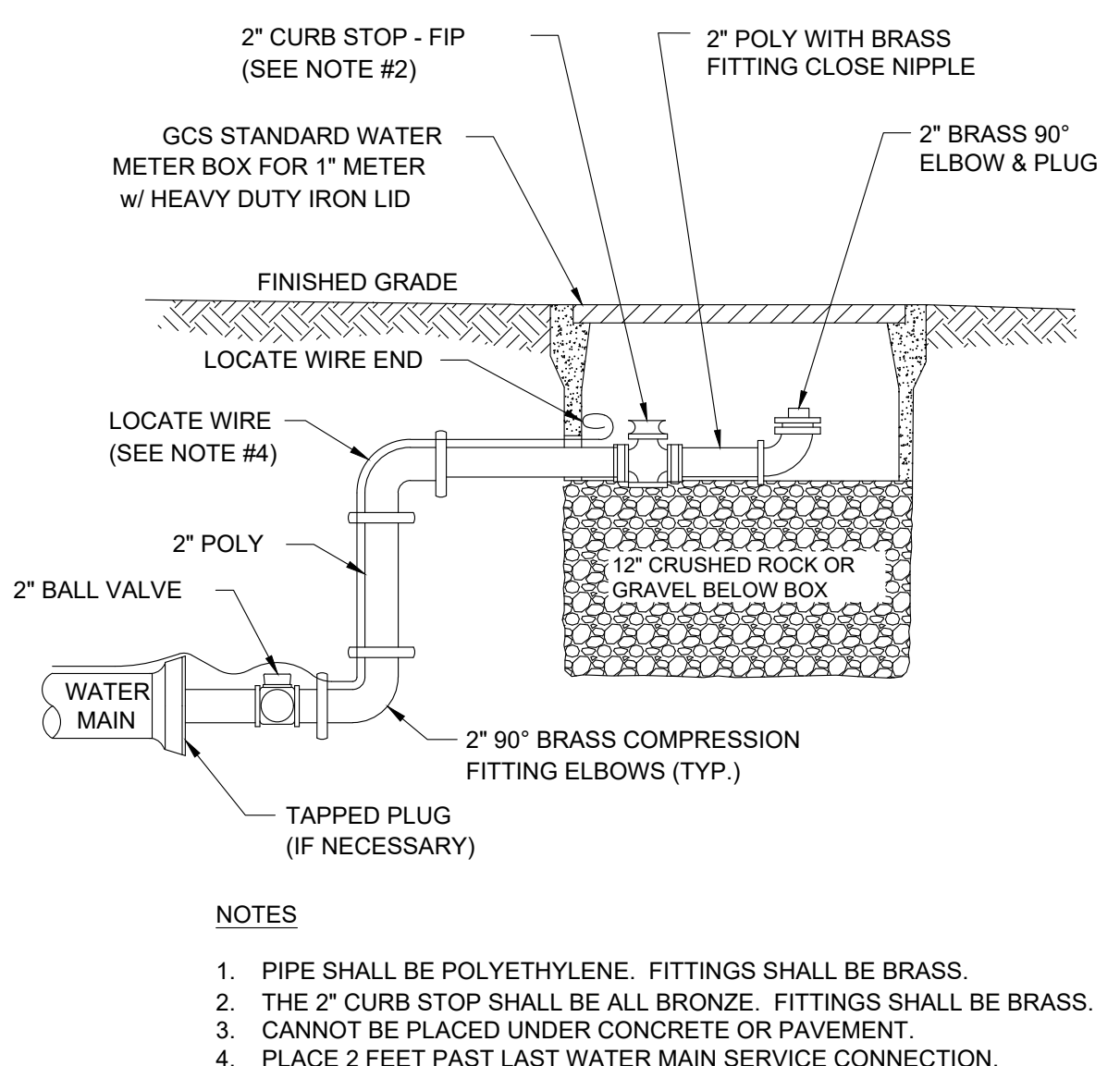
- NOTES**
1. THE SKETCHES ABOVE INDICATE TYPICAL WATER SERVICE AND METER BOX LOCATIONS. ACTUAL LOCATIONS OF BOXES MAY VARY SLIGHTLY ACCORDING TO FIELD CONDITIONS ENCOUNTERED. TYPICALLY, THE METER BOX SHALL BE LOCATED 1.0' OFF OF THE R/W LINE.
 2. UNLESS SPECIFIED OTHERWISE BY THE CITY OF GREEN COVE SPRINGS, 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 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.
 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 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.
 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 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.
 6. 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



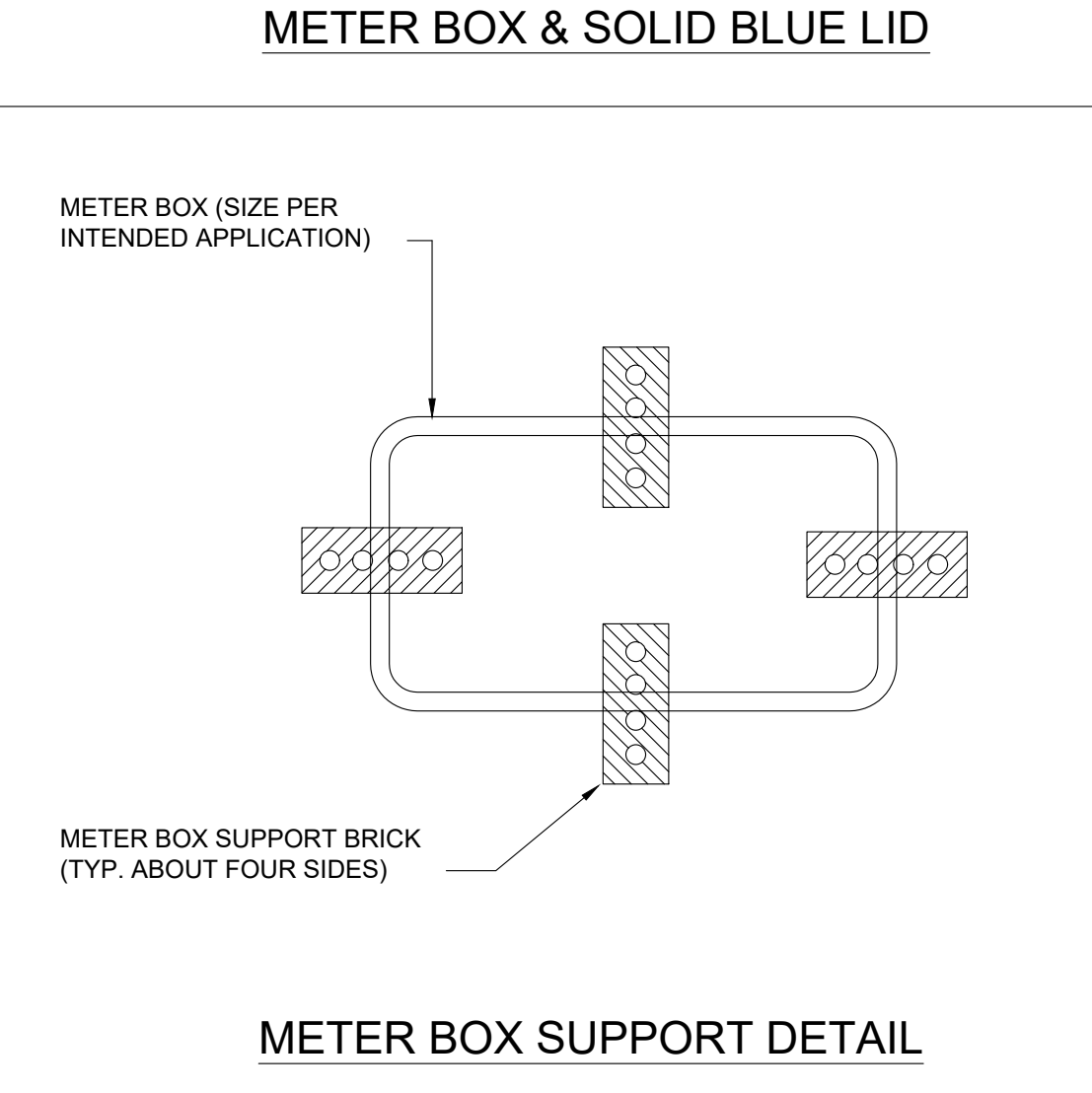
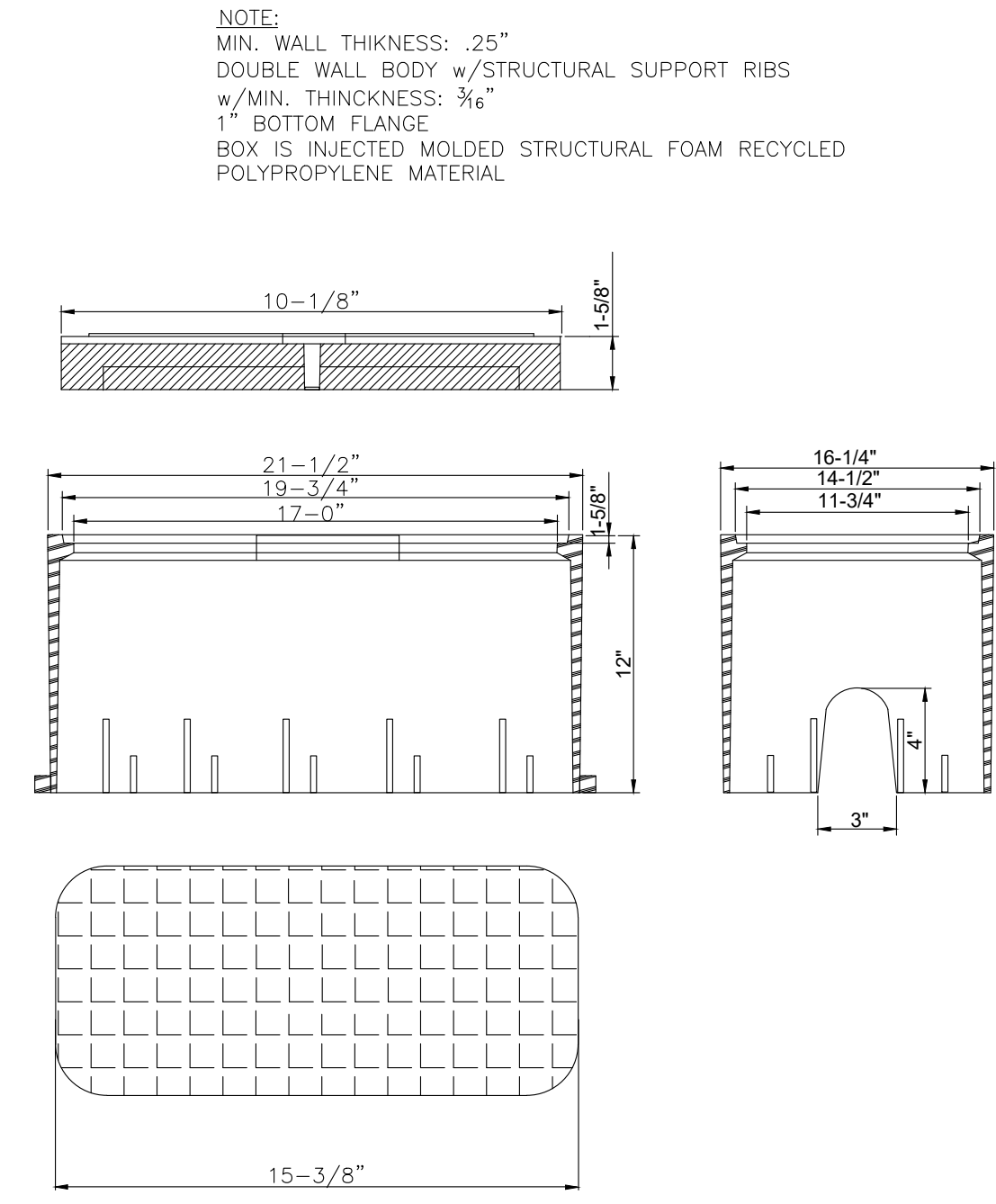
- NOTES**
1. SEE CITY OF GREEN COVE SPRINGS APPROVED MATERIALS MANUAL AND SYSTEM DETAILS FOR REQUIREMENTS.
 2. SINGLE BAND SADDLES MAYBE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED.
 3. 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 38" (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.
 4. 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.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).
 5. 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.
 6. 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).
 7. 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.



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MAI
ENGINEERING SERVICES, INC.

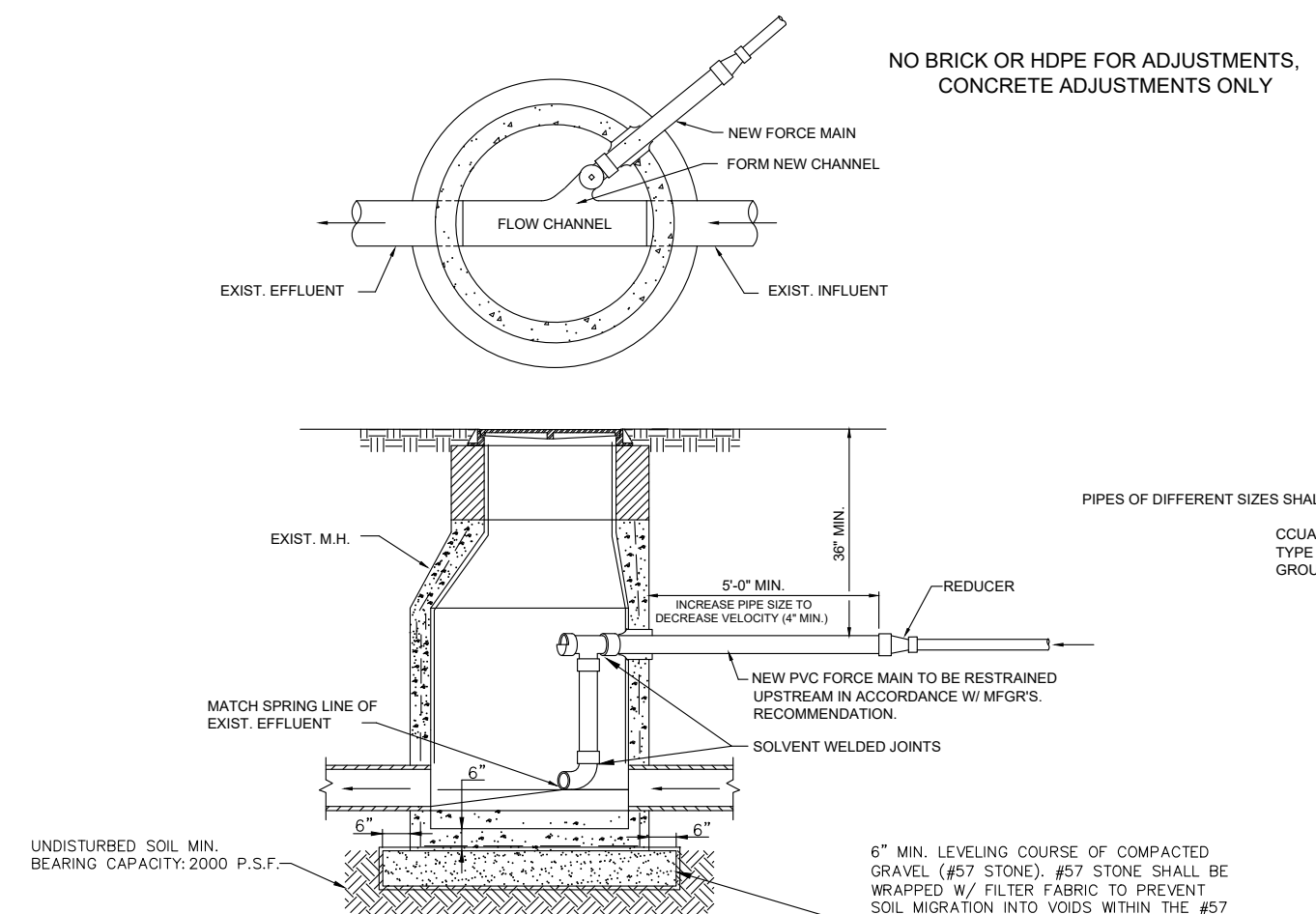
LICENSED ENGINEER
QUOC H. MAI
FL #64006 CA#25162

REVISIONS
02/17/20 REVISION PER CITY UNIVERSITY 04/12/2005 REVISION PER CITY AND MAD DAI 04/12/2005 REVISION PER CITY COMMENTS

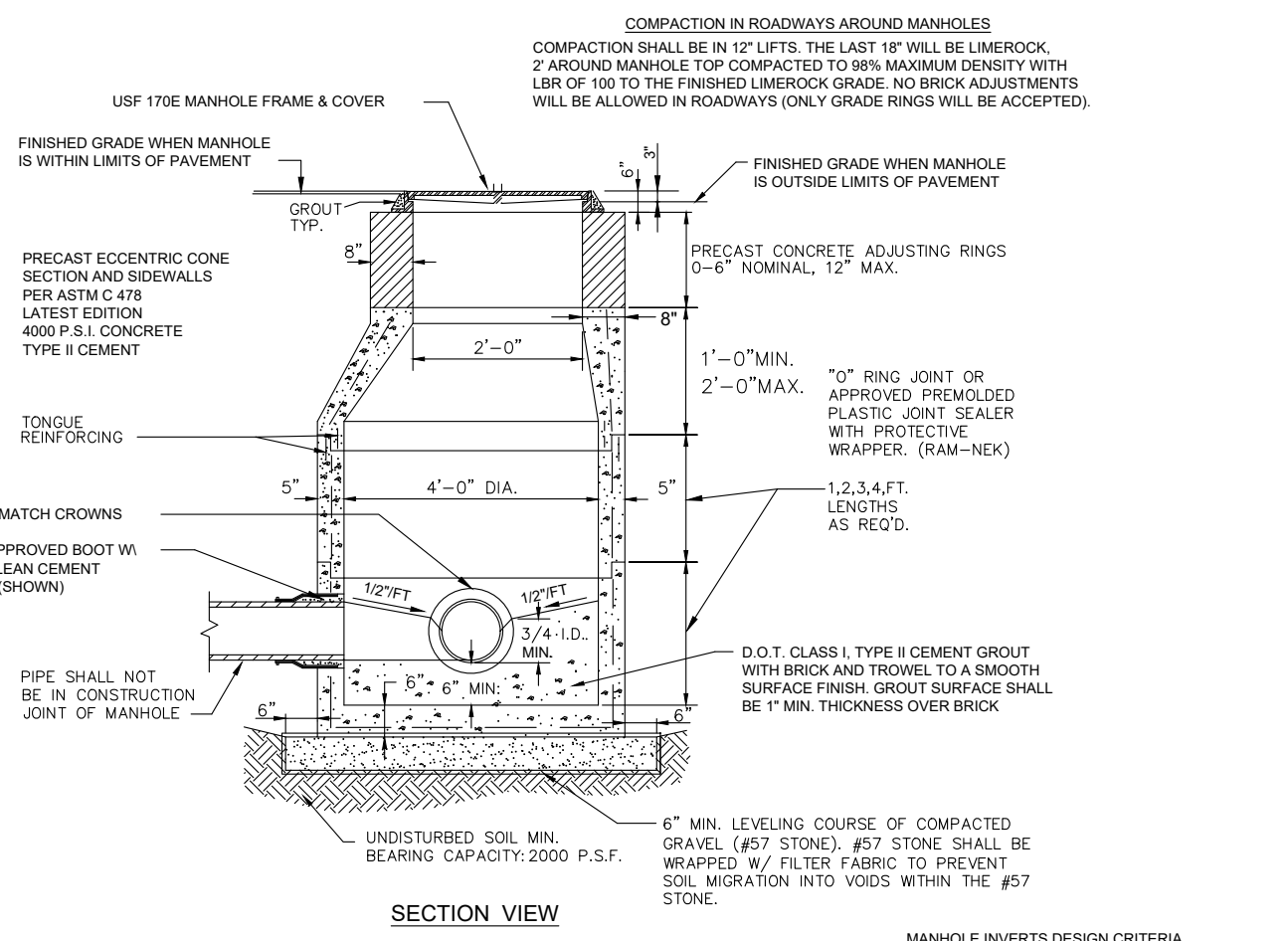
WATER SERVICE DETAILS

RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR
RIVER OAKS OUTDOOR, LLC

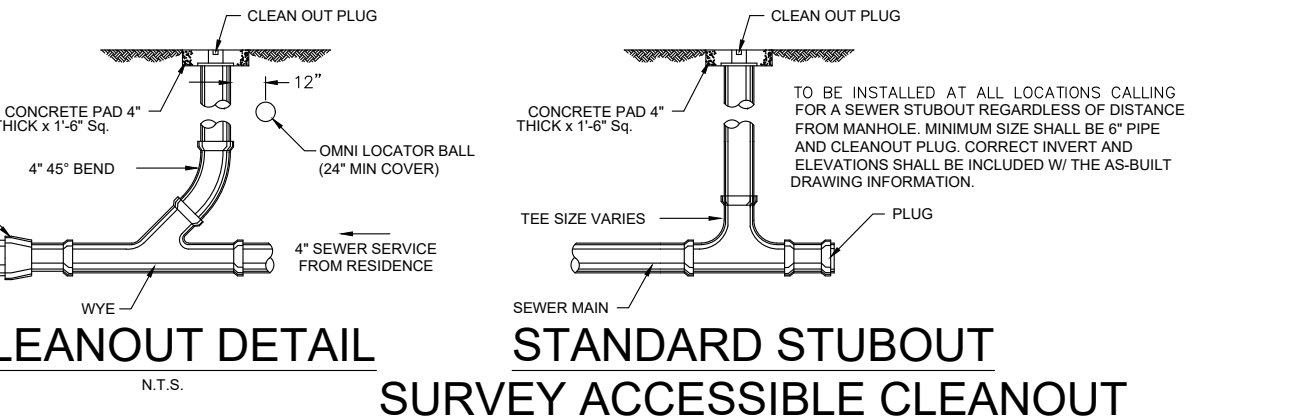
DESIGN BY:	QHM
DRAWN BY:	GMC
CHECK BY:	QHM
DATE:	8/10/2023
JOB No.:	1369
SHEET No.:	15



TYP. FORCE MAIN CONNECTION TO MANHOLE



SANITARY SEWER MANHOLE



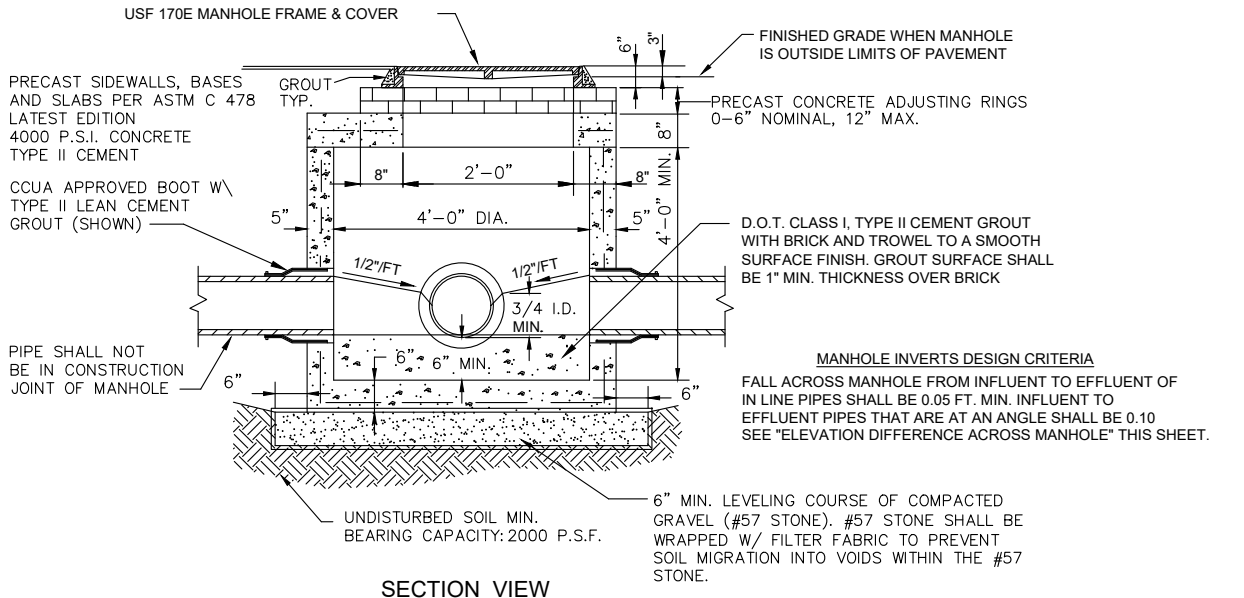
NOTE: 1. THIS MANHOLE AND THE NEXT TWO MANHOLES DOWNSTREAM (AS REQUIRED BY UTILITY) ARE TO HAVE POLYETHYLENE LINER AS MANUFACTURED BY STANDARD PRECAST CO. (AGRU SURE GRIP) OR APPROVED EQUAL.

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 "SPECTRAHEDLEY" OR APPROVED EQUAL.

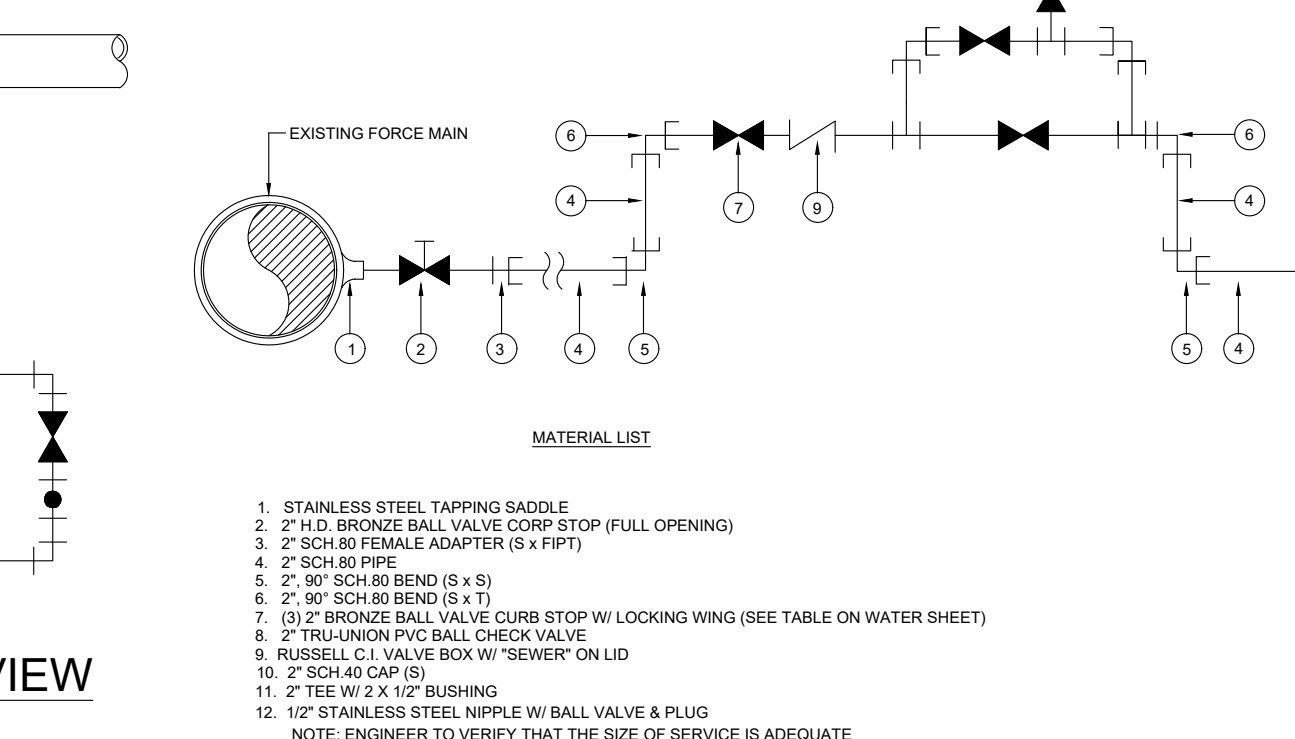
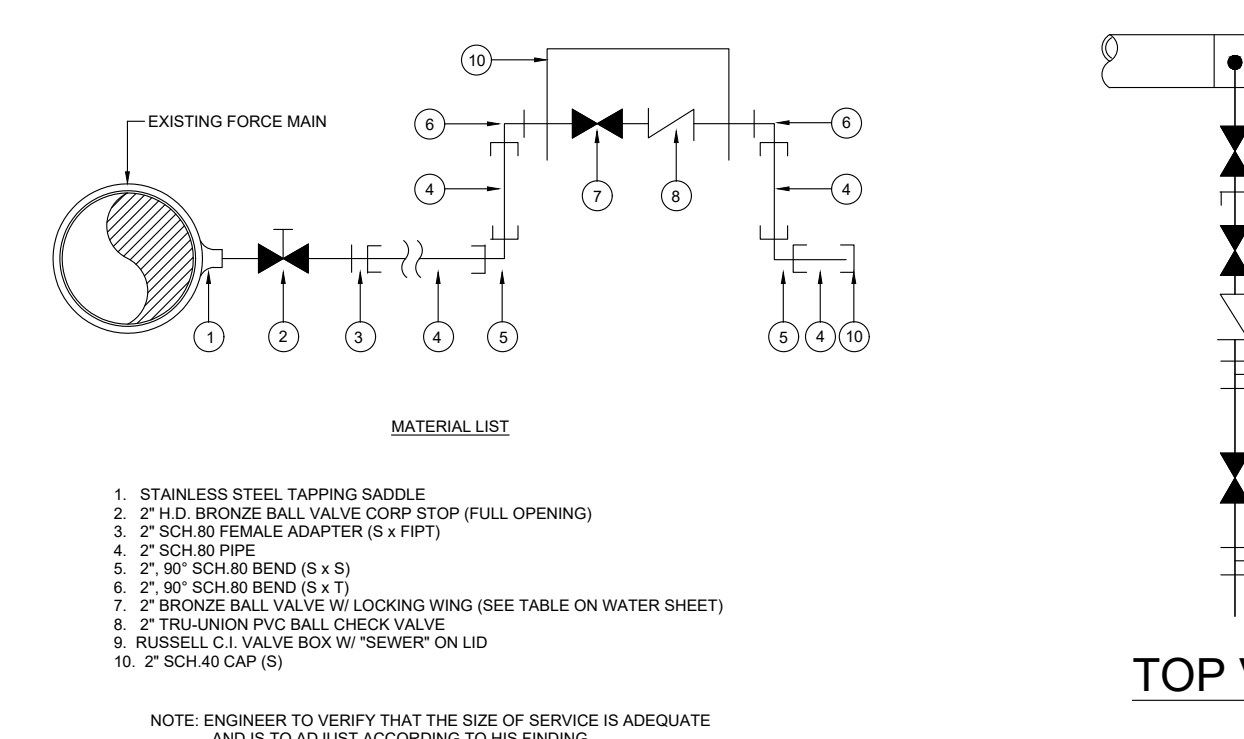
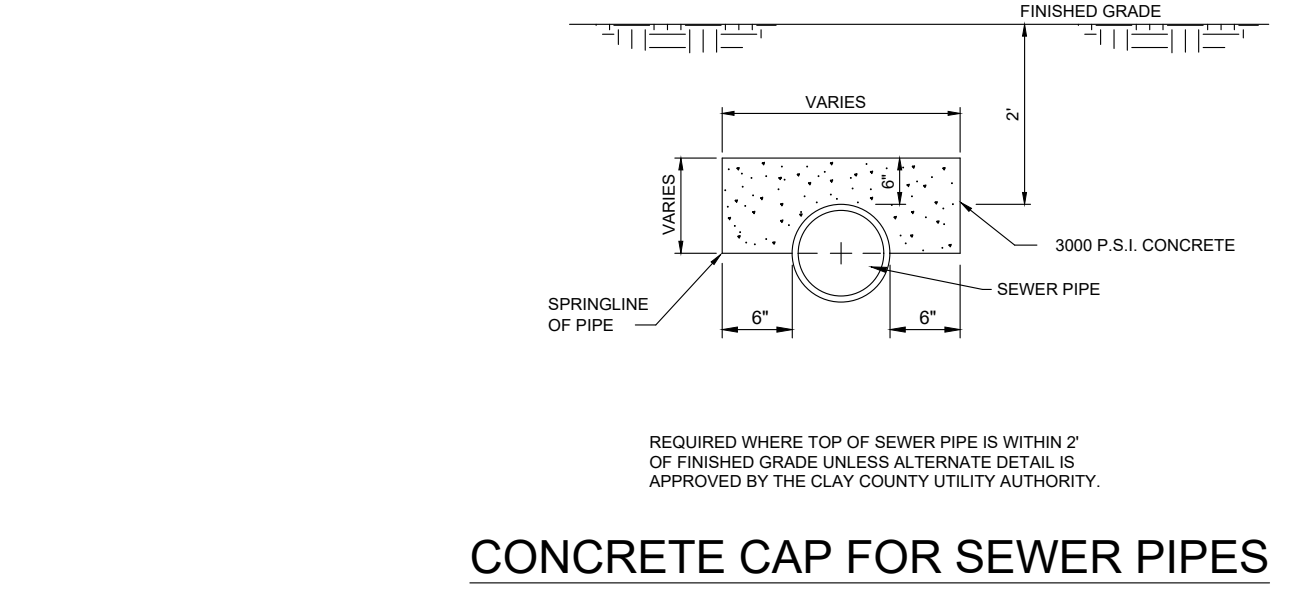
3. SIZE OF DROP PIPE CONNECTION TO MANHOLE SHALL BE DESIGNED BY THE PROJECT ENGINEER. MINIMUM SIZE SHALL BE 4" CONNECTION AND DROP PIPE SHALL BE SIZED TO REDUCE THE VELOCITY AND PREVENT "SPRASHOVER" WITHIN THE MANHOLE. 5'-0" MINIMUM DISTANCE FROM MANHOLE TO REDUCER MAY BE INCREASED TO ASSIST IN THIS VELOCITY REDUCTION.

MANHOLE INVERTS DESIGN CRITERIA

FALL ACROSS MANHOLE FROM INFLUENT TO EFFLUENT OF IN LINE PIPES SHALL BE 0.05 FT. MIN. INFLUENT TO EFFLUENT PIPES THAT ARE AT AN ANGLE SHALL BE 0.10 SEE ELEVATION DIFFERENCE ACROSS MANHOLE THIS SHEET.

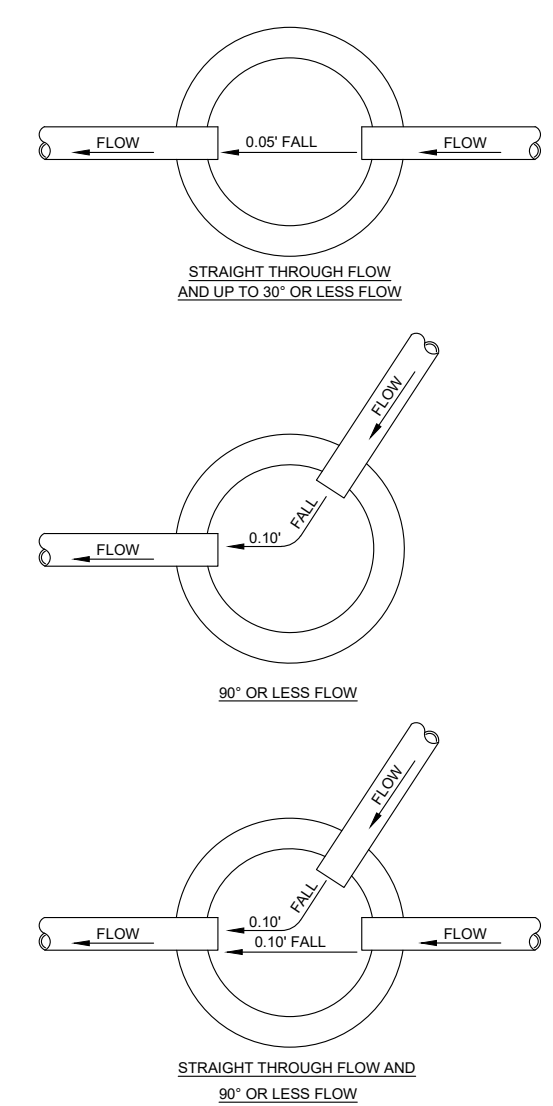


SHALLOW SANITARY SEWER MANHOLE

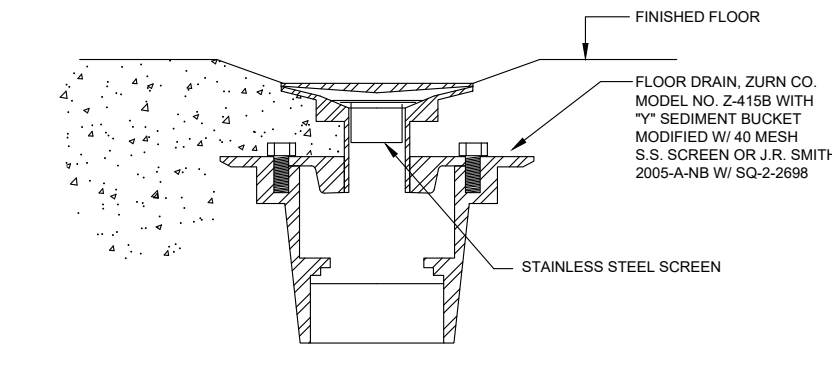


2" SEWAGE FORCE MAIN MANIFOLD SERVICE CONNECTION DETAIL FOR MEDIUM TO HIGH PRESSURE CONNECTION SYSTEMS

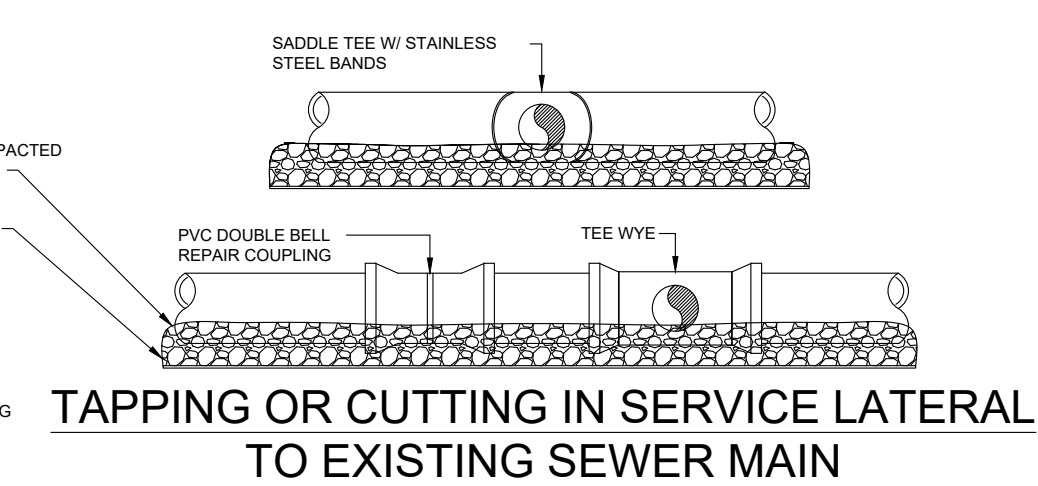
" SEWAGE FORCE MAIN MANIFOLD SERVICE CONNECTION / WITH PRESSURE GAUGE FITTING / FOR LOW PRESSURE RECEIVING SYSTEMS FOR CREATING ARTIFICIAL HEAD PRESSURE



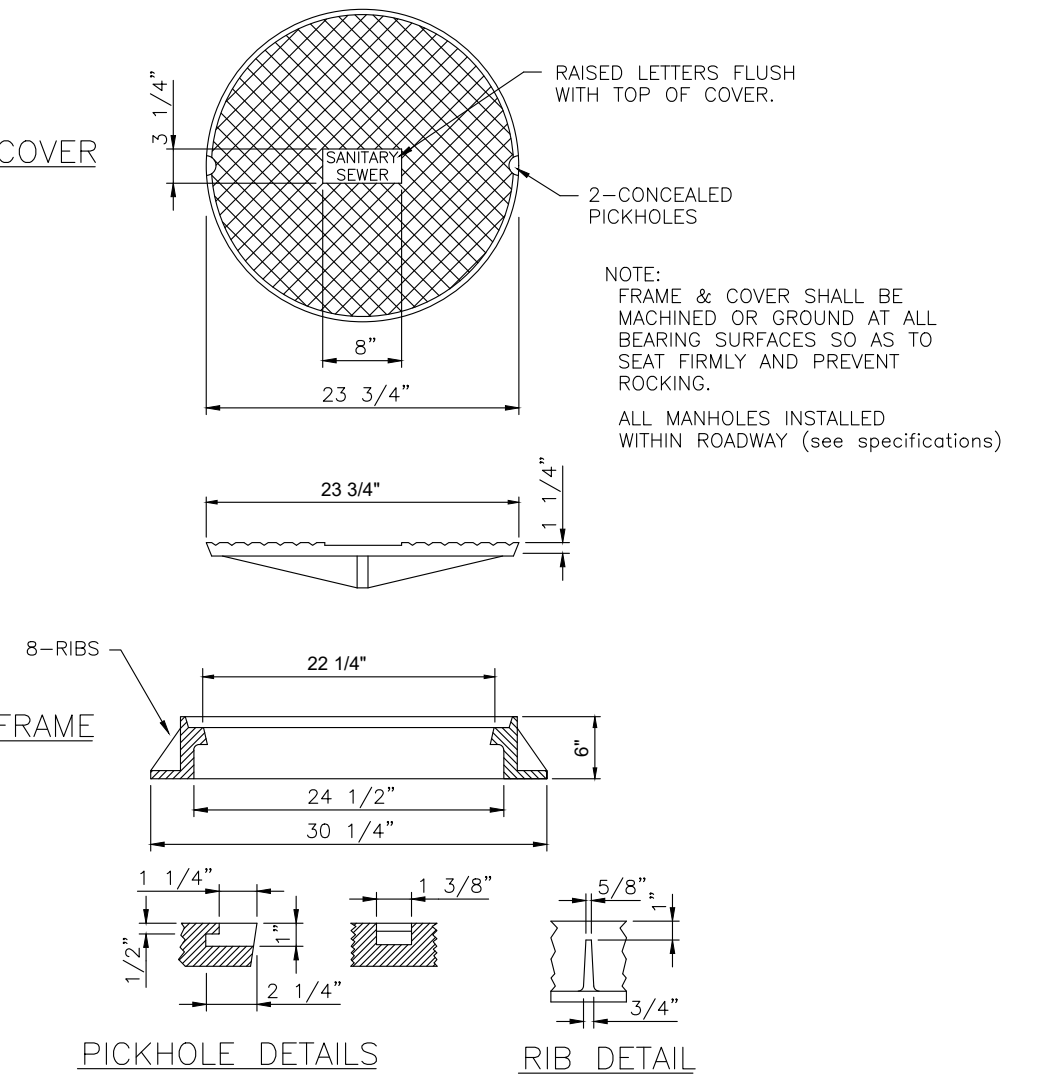
ELEVATION DIFFERENCE ACROSS MANHOLE



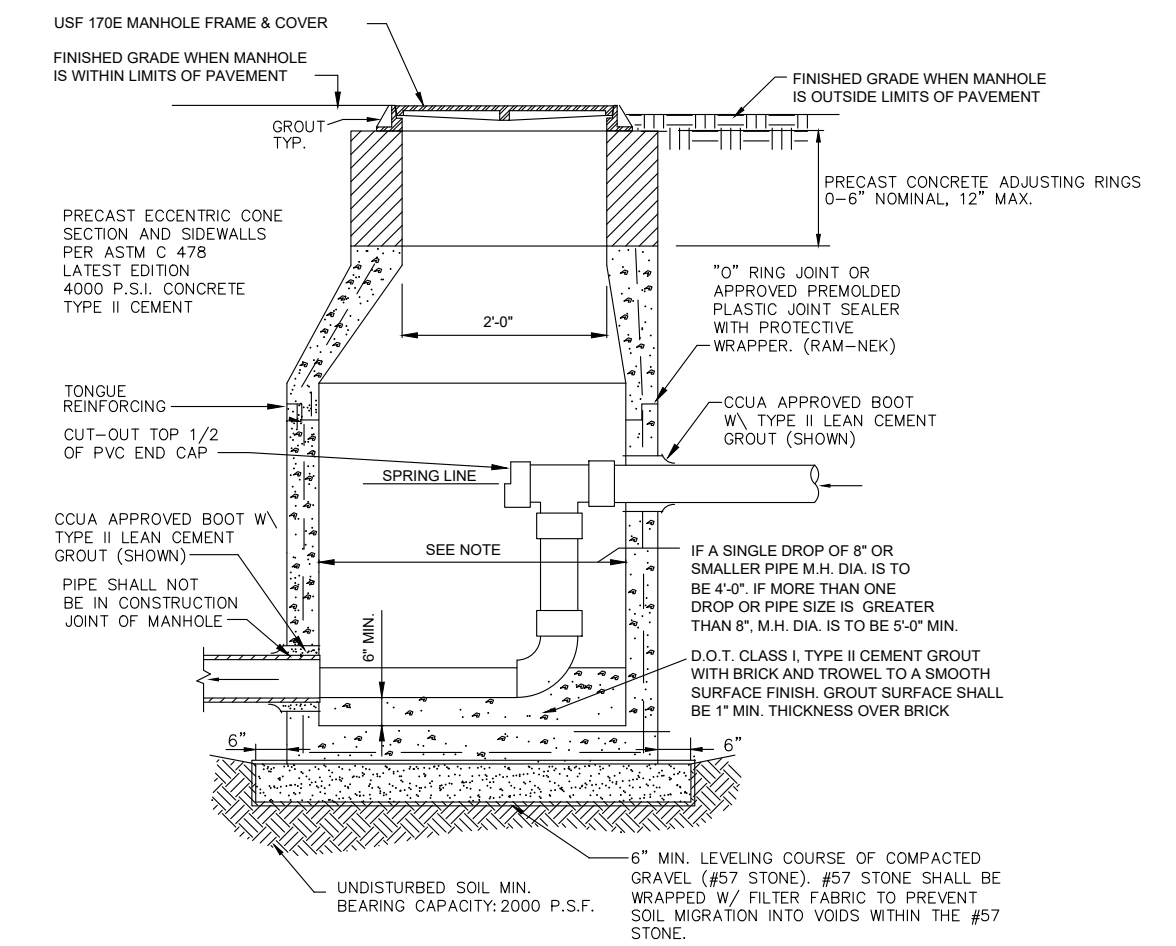
FLOOR DRAIN WITH STRAINER DETAIL



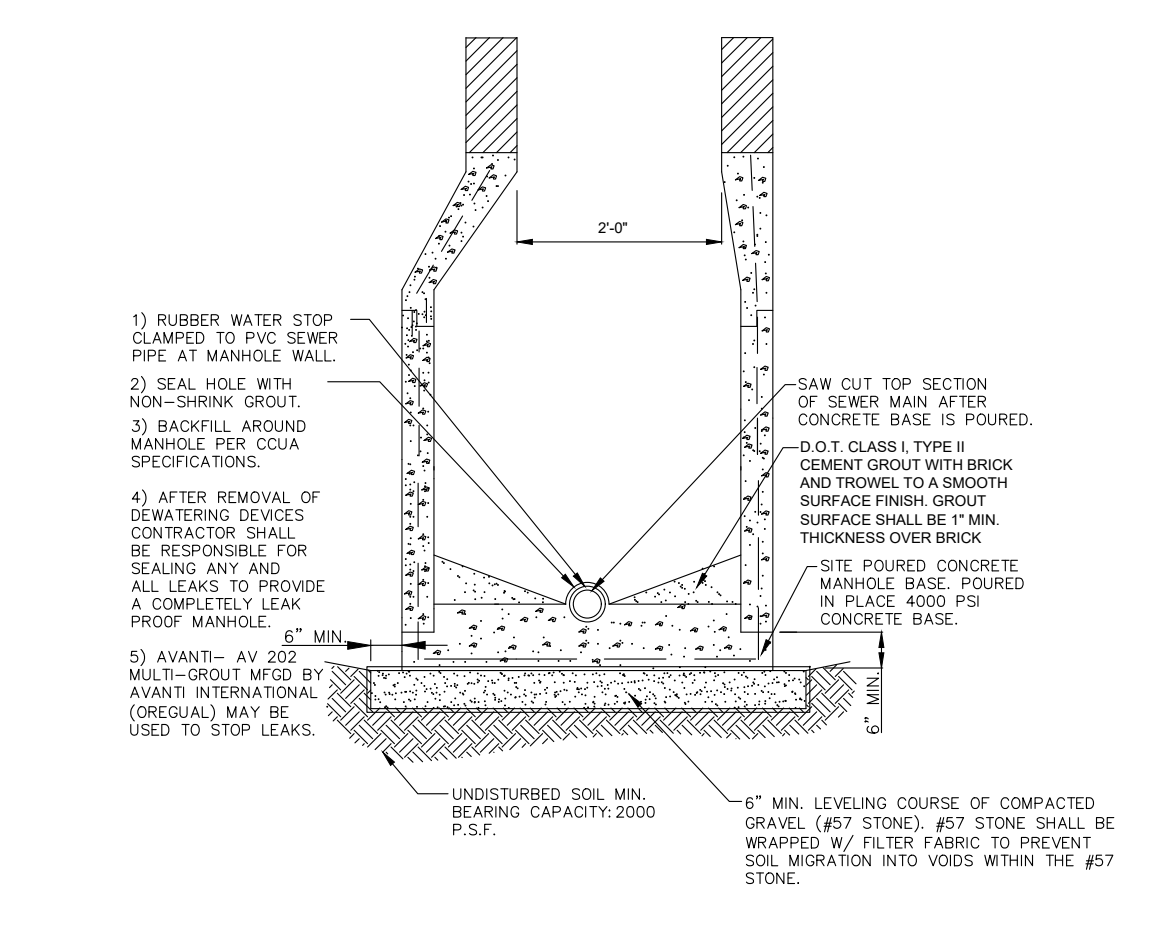
TAPPING OR CUTTING IN SERVICE LATERAL TO EXISTING SEWER MAIN



SANITARY SEWER MANHOLE FRAME & COVER S-1

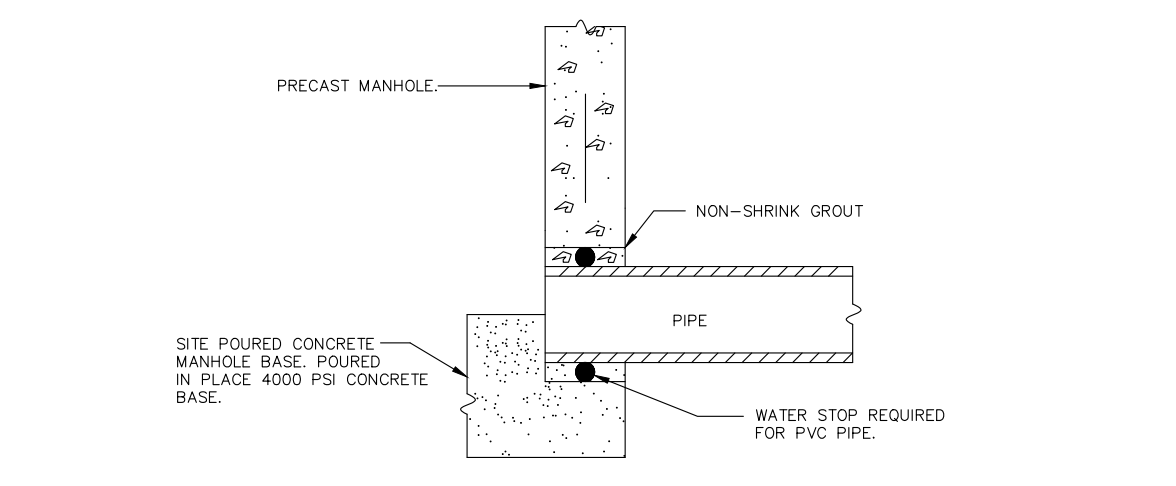


TYPICAL GRAVITY SEWER DROP PIPE CONNECTION TO MANHOLE



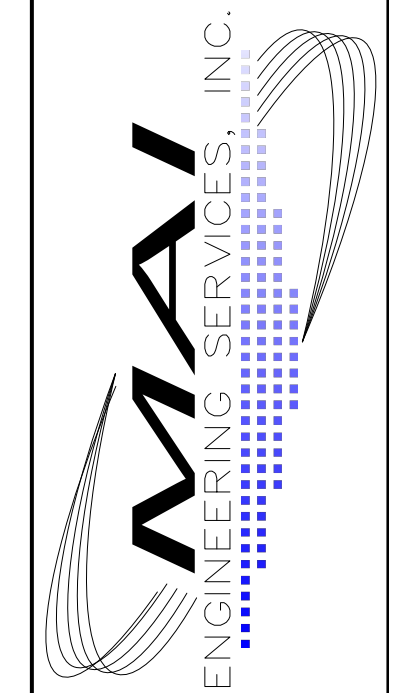
SADDLE MANHOLE DETAIL

THIS DETAIL IS ONLY TO BE USED WITH SPECIFIC APPROVAL BY CITY OF GCS.



SADDLE MANHOLE DETAIL SECTION

2510 US 1 SOUTH SUITE D
ST. AUGUSTINE, FL 32086
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FAX (904)794-1768
quoc@matengineer.com

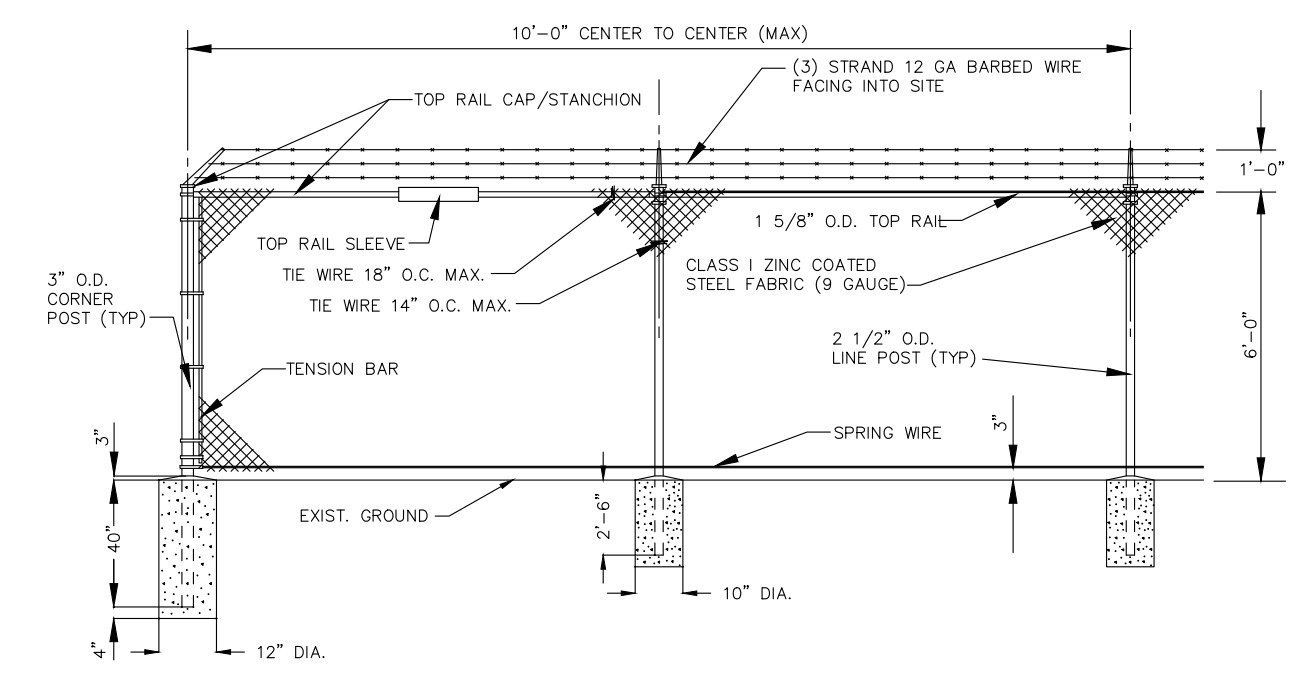


LICENSED ENGINEER
QUOC H. MAI
FL #64006 CA#25162

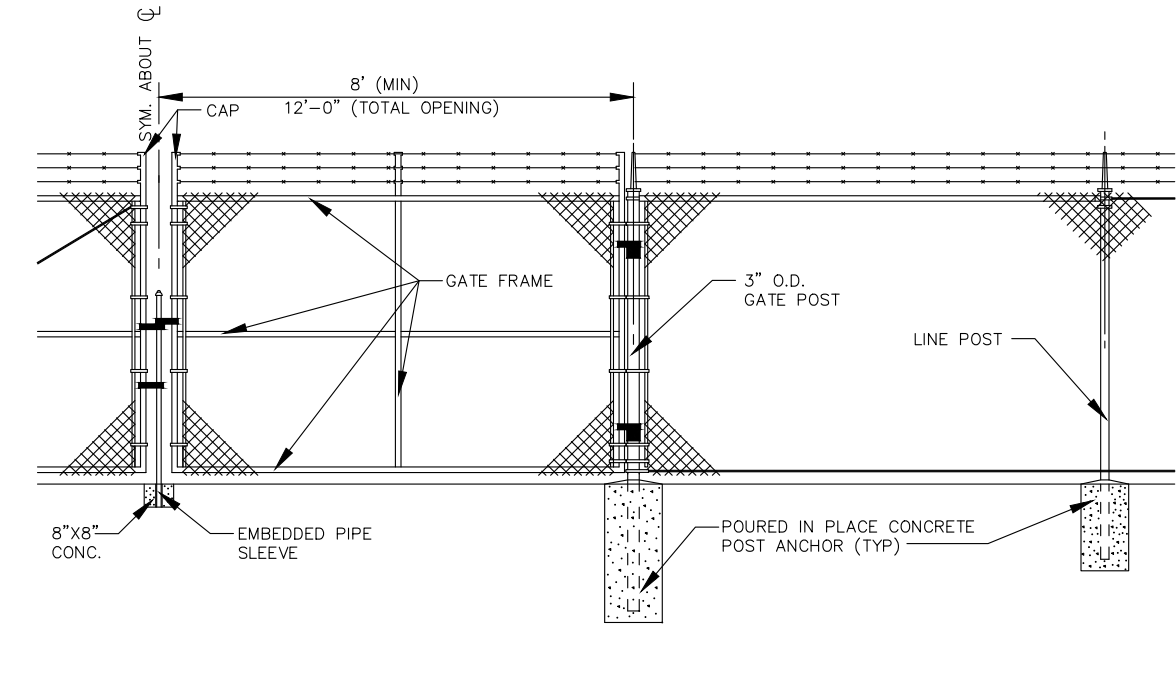
REVISIONS	DATE	BY	DESCRIPTION
1	08/17/23	AVANTI	REVISION PER CITY COMMENT
2	09/12/2023	AVANTI	REVISION PER CITY COMMENT
3	09/12/2023	AVANTI	REVISION PER CITY COMMENT

SEWER SYSTEM DETAILS
RIVER OAKS INDUSTRIAL PARK
GREEN COVE SPRINGS, FLORIDA
PREPARED FOR RIVER OAKS OUTDOOR, LLC

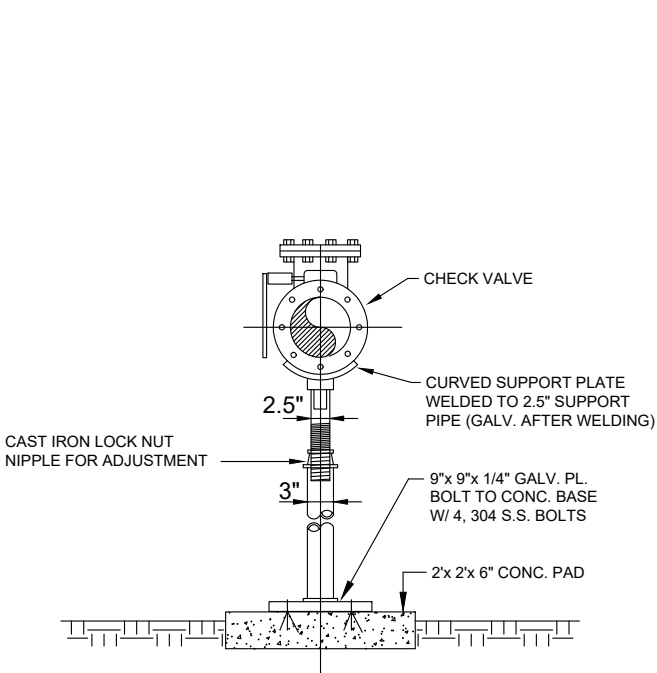
DESIGN BY:	QHM
DWG BY:	GMC
CHK BY:	QHM
DATE:	8/10/2023
JOB No.:	1369
SHEET No.:	16



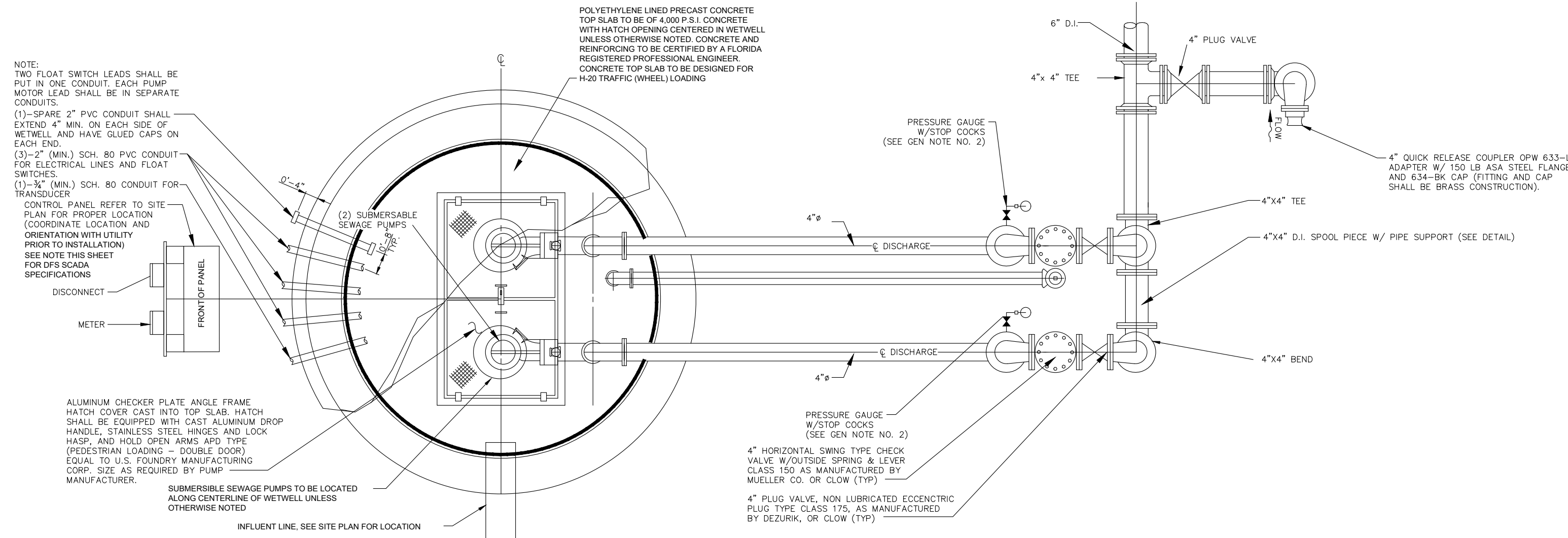
CHAIN LINK FENCE + CORNER POST DETAIL



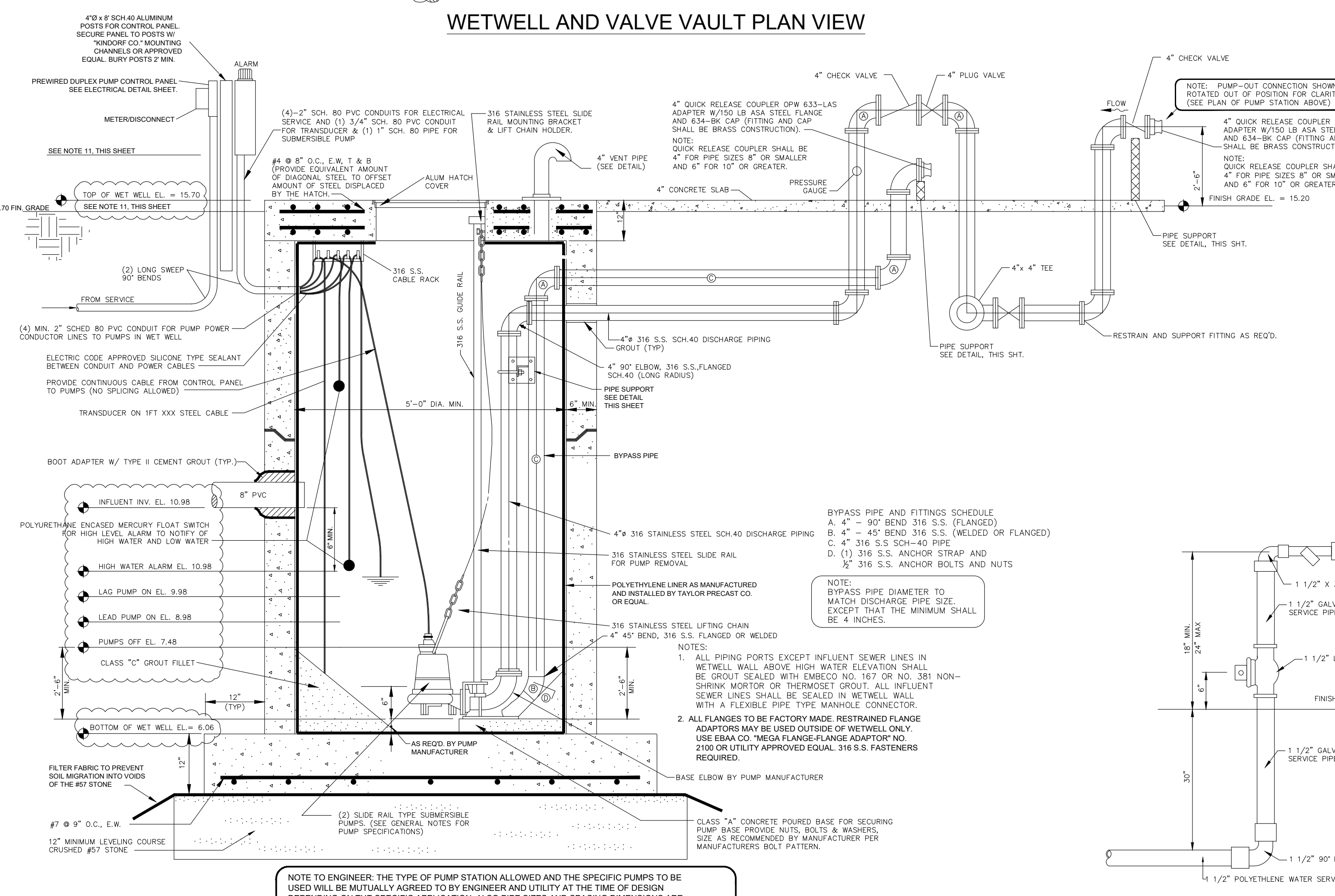
GATE DETAIL



PIPE SUPPORT DETAIL

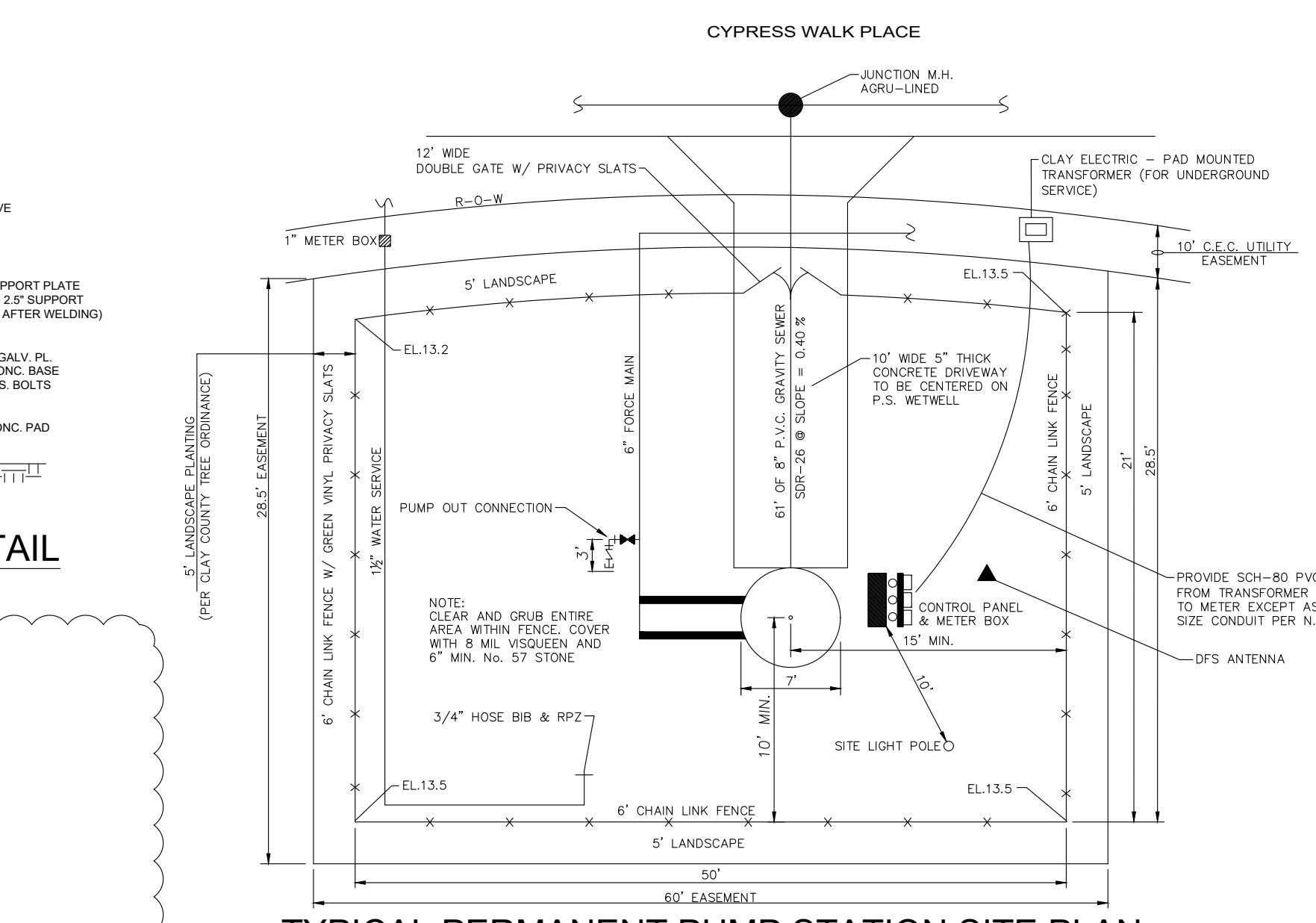


WETWELL AND VALVE VAULT PLAN VIEW

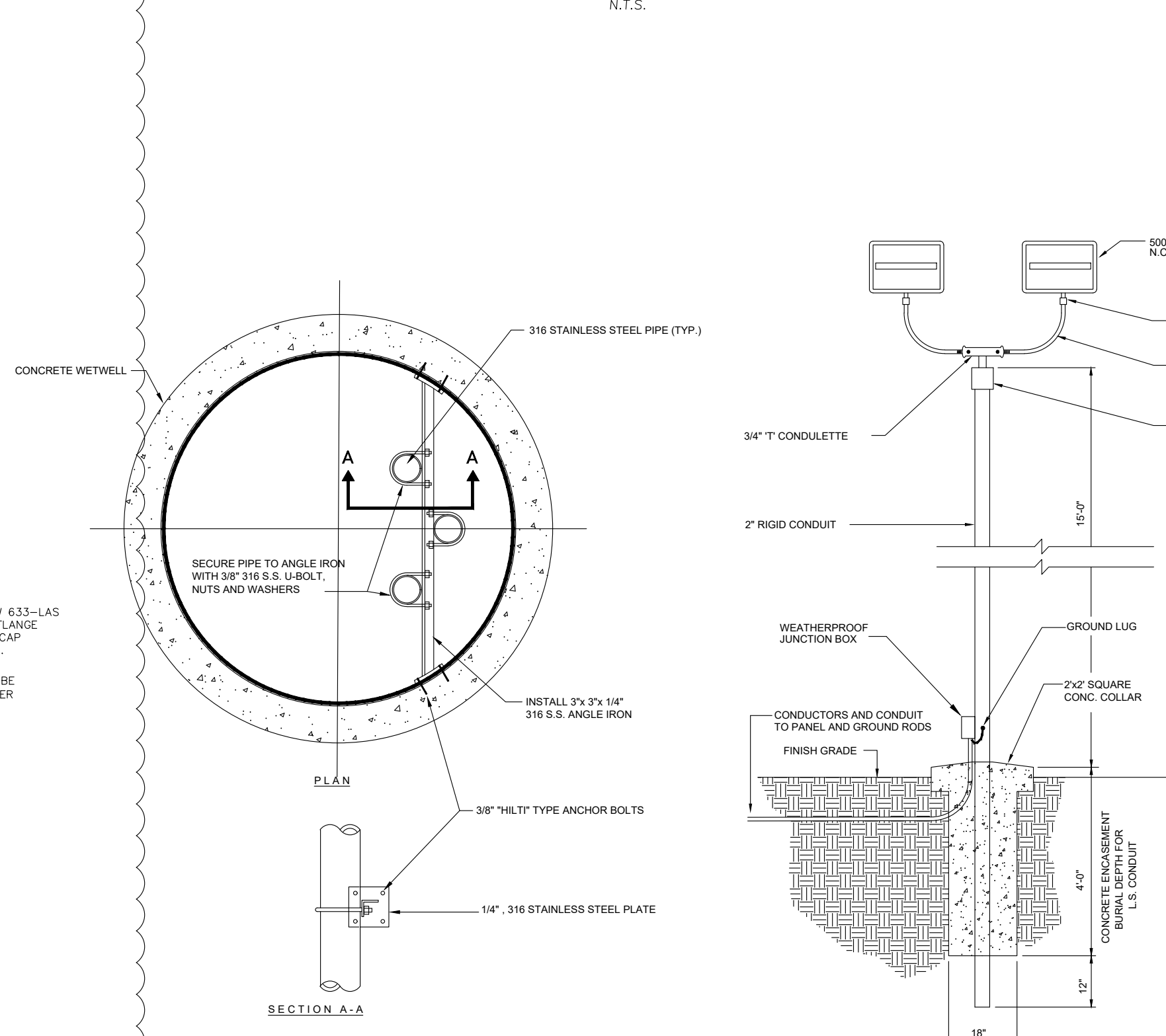


PERMANENT POLYETHYLENE LINED SUBMERSIBLE PUMP STATION WITH VALVE PIT - ELEVATION

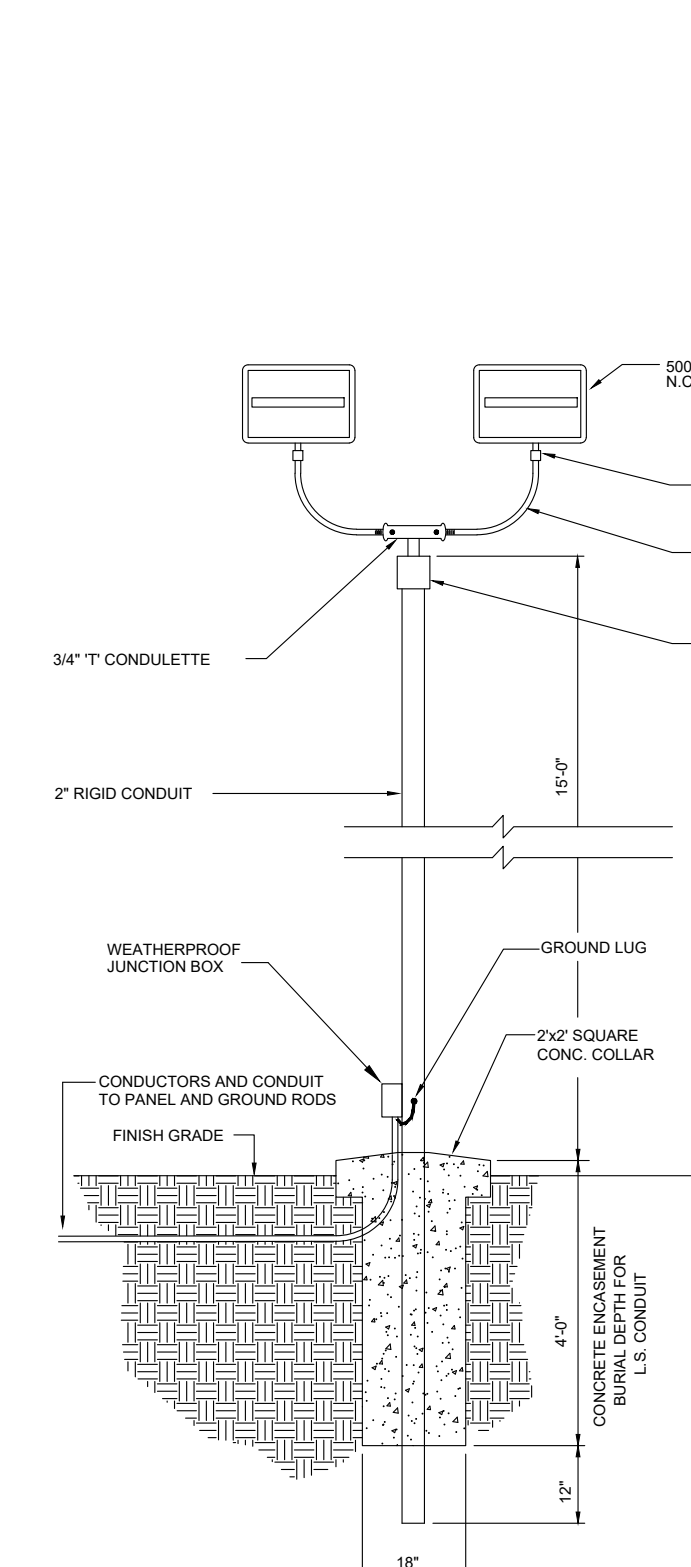
(NOTE: PIPE SIZES, WETWELL SIZES AND INSIDE DIMENSIONS OF VALVE PIT TO BE VERIFIED BY ENGINEER AND MODIFIED AS NECESSARY.)



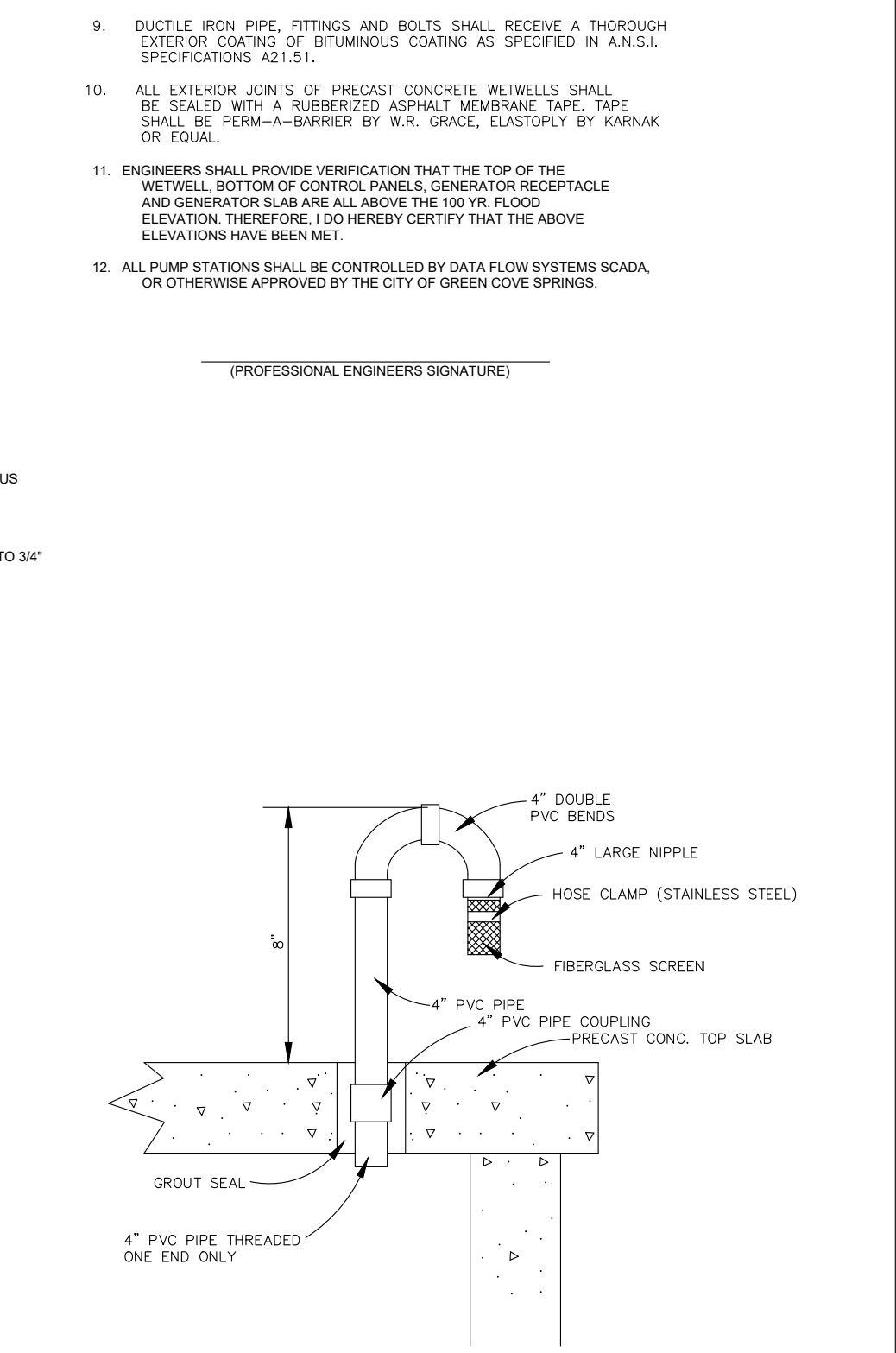
TYPICAL PERMANENT PUMP STATION SITE PLAN



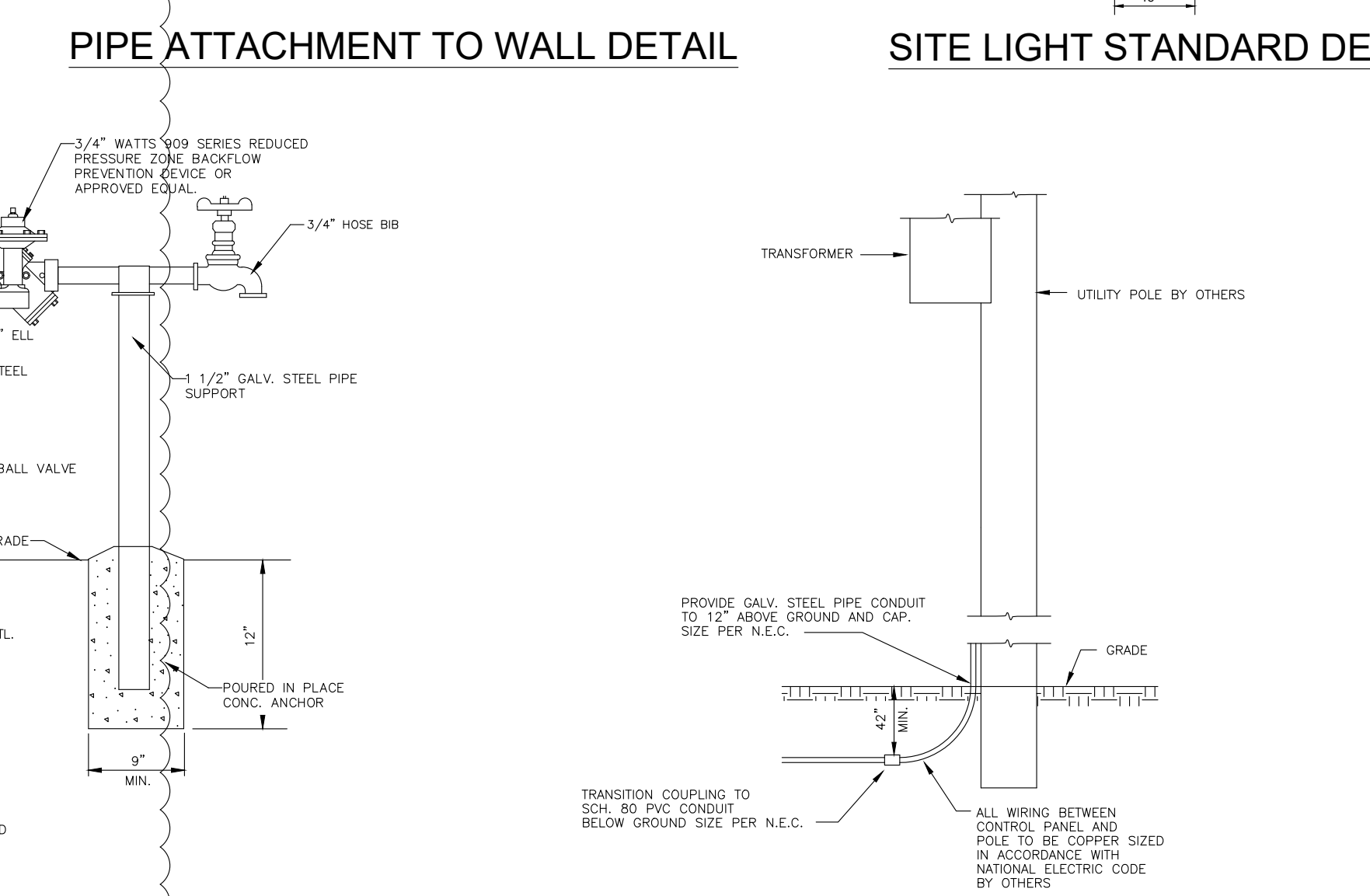
PIPE ATTACHMENT TO WALL DETAIL



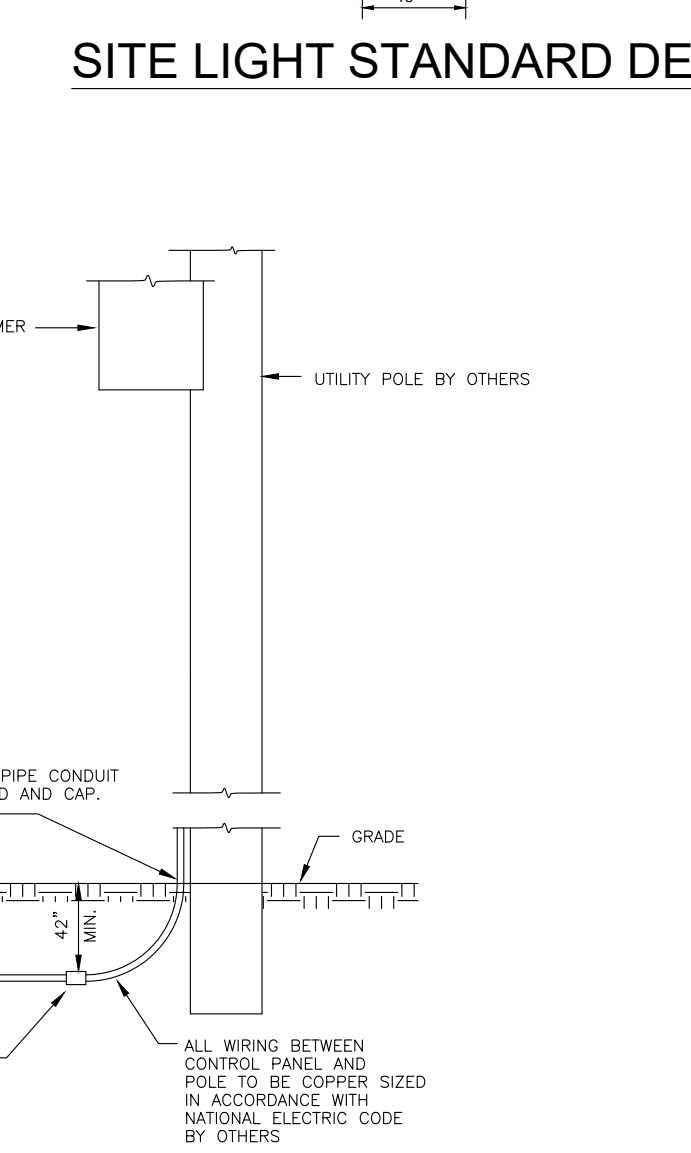
SITE LIGHT STANDARD DETAIL



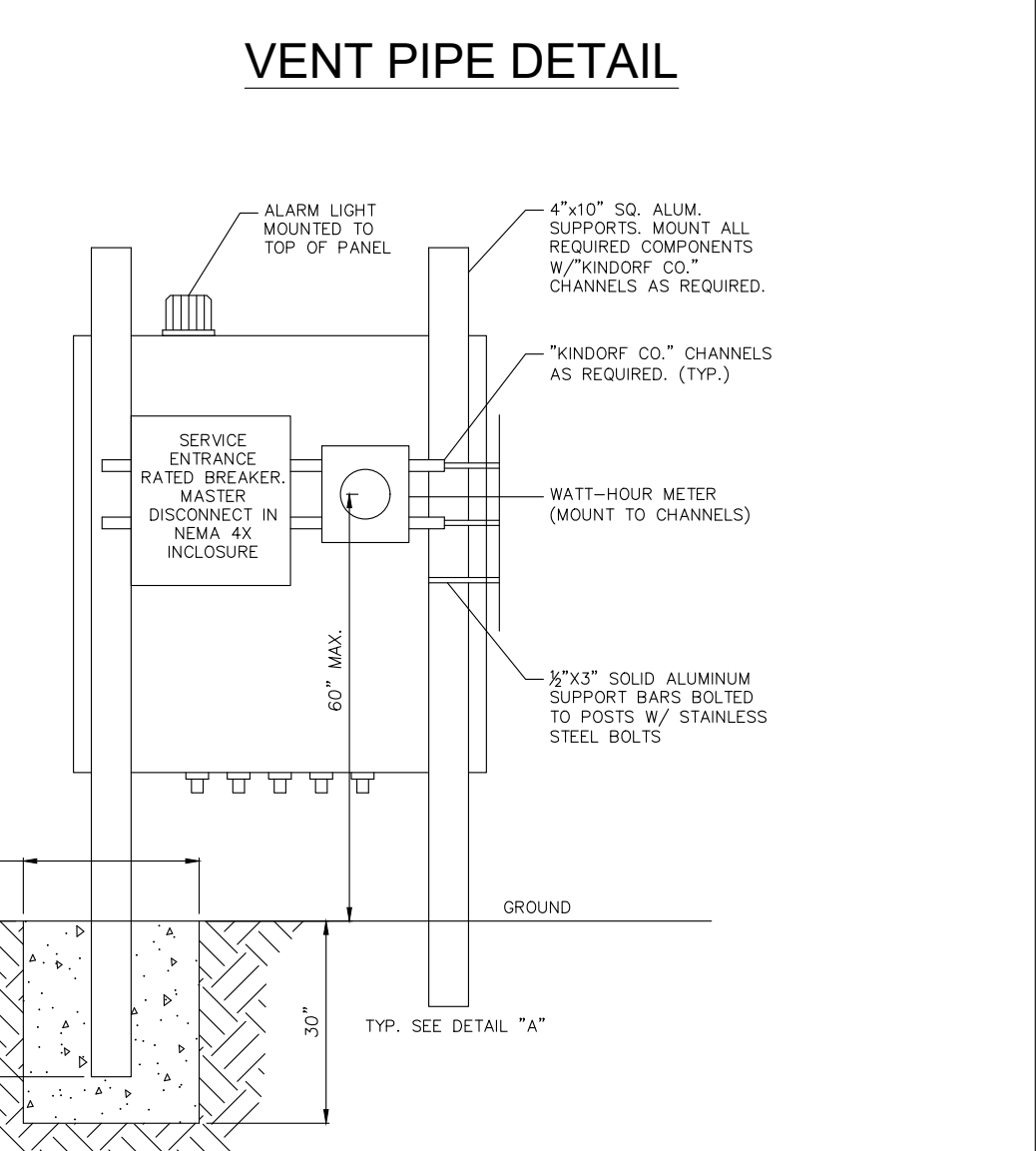
VENT PIPE DETAIL



WATER SERVICE



POWER RISER DETAIL

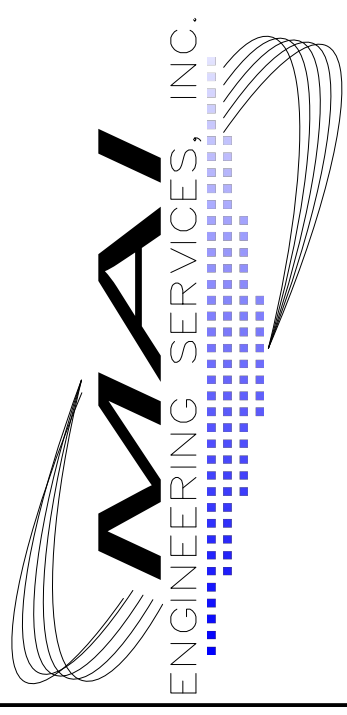


TYPICAL DISCONNECT PANEL

GENERAL NOTES:

- PUMPS: TWO (2) OR THREE (3) TOTALLY SUBMERSIBLE FLYGT (OR APPROVED SUBSTITUTE) SEWAGE PUMPS WITH INTEGRAL MOTORS. DISCHARGE CONNECTION AND ELECTRICAL REQUIREMENTS AS DETERMINED.
- GAUGES: GAUGES SHALL BE FURNISHED WHERE SHOWN MOUNTED FACE UP. GAUGES SHALL BE 4" IN DIAMETER BOURDON TUBE TYPE WITH BRASS MOVEMENTS COMPLETELY SEALED UNBREAKABLE FLEXIGLASS CRYSTAL, WITH NOT LESS THAN 30% GLYCERIN-FILLED STAINLESS STEEL CASE. EACH GAUGE SHALL HAVE A RANGE WHICH IS THE NORMAL OPERATION PRESSURE SHALL BE APPROXIMATELY AT HALF OF THE RANGE. GAUGES SHALL BE EQUIPPED WITH A SAFELY BLOW-OUT PLUG AND CAMPING SCREW. GAUGES SHALL BE MOUNTED USING 3" (NP) STEEL PIPE WITH DIAPHRAGM PROTECTORS WITH STAINLESS STEEL DIAPHRAGM AND STOP COCKS BETWEEN DISCHARGE PIPES AND GAUGES. GAUGES SHALL BE EQUAL TO THOSE MANUFACTURED BY THE LENZ COMPANY.
- FENCING: ALL PARTS FOR CONSTRUCTION OF THE FENCE AND NECESSARY TO MAKE A COMPLETE INSTALLATION SHALL BE FINISHED AND INSTALLED. FENCING SHALL COMPLY WITH ASTM A392-48T LATEST SPECIFICATION FOR ZINC COATED STEEL CHAIN LINK FENCE FABRIC AND AS DETAILED ON THE DRAWING. FITTINGS SHALL BE MALLEABLE IRON OR PRECAST CONCRETE. ALL FENCING MATERIALS SHALL BE THOROUGHLY GALVANIZED BY THE HOT-DIP METHOD.
 - PRIVACY SLATS: SLATS SHALL BE FLAT/TUBULAR IN SHAPE, THERMOPLASTIC WITH A WALL THICKNESS OF 0.030" (80.0033"). LENGTH AND WIDTH OF SLATS SHALL BE PROVIDED TO ACCOMMODATE CHAIN-LINK FENCE FABRIC AS SPECIFIED HEREIN. SLATS SHALL HAVE A HORIZONTAL LOCKING STRIP TO PROVIDE SECURE ATTACHMENT TO CHAIN-LINK FENCE FABRIC, AND PROVIDE A PRIVACY FACTOR OF 89%. THE MINIMUM WIDTH SLAT SHALL BE 1-1/8" ACCEPTABLE MANUFACTURER: PATRIARCH PRODUCTS, OR EQUAL.
 - PRIVACY SCREENING: ENVIRONMENTAL PRIVACY SCREENING SHALL BE TO 90% KNT RASCHEL, 100% POLYETHYLENE UV STABILIZED FIBER, COLOR GREEN. SCREENING SHALL BE ATTACHED TO THE FENCE FABRIC WITH SUFFICIENT TIES TO SECURE THE SCREEN. ACCEPTABLE SCREEN: PRIVACY PLUS OR EQUAL.
- ALL PRECAST REINFORCED CONCRETE PRODUCTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C478 (LATEST), WITH CLASS A CONCRETE UNLESS OTHERWISE NOTED. ALL CONCRETE AND REINFORCING SHALL BE CERTIFIED BY AN ENGINEER REGISTERED WITH THE STATE OF FLORIDA.
- ALL DISCHARGE PIPING FROM THE PUMPS THROUGH TO THE VALVE VAULT SHALL BE 3/4" GRADE, SCH-40 STAINLESS STEEL. THIS INCLUDES ALL FITTINGS WITHIN THIS PRESCRIBED LIMIT.
- ALL DISCHARGE PIPE FITTINGS 6" AND LARGER (AFTER THE VALVE VAULT) SHALL BE POLY-LINED (40 MIL THICKNESS DUCTILE IRON, ALL DISCHARGE PIPE FITTINGS 4" AND SMALLER SHALL BE EPOXY LINED OR POLY-LINED (40 MIL THICKNESS) DUCTILE IRON.
- PUMP STATION SITE SHALL BE COVERED (INSIDE OF FENCED AREA) WITH NO. 57 LIMESTONE 2" THICK WITH 8 MIL VULCANIZING BETWEEN ROCK AND GRADE. DRIVEWAY SHALL BE 5"-2500 PS CONCRETE.
- ALL DUCTILE IRON FITTINGS AND PIPE SHALL BE HOLIDAY TESTED PRIOR TO INSTALLATION.
- DUCTILE IRON PIPE, FITTINGS AND BOLTS SHALL RECEIVE A THOROUGH EXTERIOR COATING OF BITUMINOUS COATING AS SPECIFIED IN A.N.S.I. SPECIFICATIONS A21.51.
- ALL EXTERIOR JOINTS OF PRECAST CONCRETE WETWELLS SHALL BE SEALED WITH A RUBBERIZED ASPHALT MEMBRANE TAPE. TAPE SHALL BE PERM-A-BARRIER BY W.R. GRACE, ELASTOPUR BY KARNAK OR EQUAL.
- ENGINEERS SHALL PROVIDE VERIFICATION THAT THE TOP OF THE WETWELL, BOTTOM OF CONTROL PANELS, GENERATOR RECEPTACLE AND GENERATOR SHAFT ARE ALL ABOVE THE 100 YR FLOOD ELEVATION, THEREFORE, I DO HEREBY CERTIFY THAT THE ABOVE ELEVATIONS HAVE BEEN MET.
- ALL PUMP STATIONS SHALL BE CONTROLLED BY DATA FLOW SYSTEMS SCADA, OR OTHERWISE APPROVED BY THE CITY OF GREEN COVE SPRINGS.

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 FAX (904) 794-1768
 quoc@maengineer.com



LICENSED ENGINEER
 QUOC H. MAI
 FL #64006 CA#28162

REV	DATE	DESCRIPTION
1	12/17/20	ISSUED FOR CITY APPROVAL
2	04/12/2023	ISSUED FOR CITY AND ROAD BAI
3	07/26/2023	ISSUED FOR CITY COMMENTS

PUMP STATION DETAILS
 RIVER OAKS INDUSTRIAL PARK
 GREEN COVE SPRINGS, FLORIDA
 PREPARED FOR RIVER OAKS OUTDOOR, LLC

DSGN BY:	QHM
DWG BY:	GMG
CHK BY:	QHM
DATE:	8/10/2023
JOB No.:	1369
SHEET No.:	18