



SITE PLAN REVIEW COMMITTEE MEETING ZEPHYRHILLS, FLORIDA

**Tuesday, May 16, 2023
9:30 AM**

**Zephyrhills
City Hall**

**Council
Chambers**

Call to Order –

The city will maintain a quorum in the Council Chambers but will host a GoTo meeting to allow the public/applicants to attend virtually. Please use the following information to access the meeting.

Site Plan Review Committee
May 16, 2023, 9:30 – 11:30 AM (America/New_York)

Please join my meeting from your computer, tablet or smartphone.
<https://meet.goto.com/386408365>

You can also dial in using your phone.

Access Code:

386-408-365

United States:

[+1 \(408\) 650-3123](tel:+14086503123)

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1. PLANNING ITEMS

1.1 SPR-64-23 Re-review of Take 5 Oil Change at the Market at Zephyrhills

1. SPR-64-23 Re-review of Take 5 permit set

1.2 SPR-63-23 Calumet Townhomes – CR 54 .3 miles east of 12th St.

1. SPR-63-23 Calumet TH Construction civil plan April 21 2023

ADJOURN

*** PLEASE NOTE: This is a Public Meeting. Should any interested party seek to appeal any decision made by the Council with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceeding is made, which record includes the testimony and evidence upon which the appeal is to be based. F.S. 286.0105. If you are a person with a disability which requires reasonable accommodation in order to participate in this meeting, please contact the City Clerk at 813/780-0000 at least 48 hours prior to the public hearing. A.D.A. and F.S. 286.26.**

STAFF REPORT

To:

From:

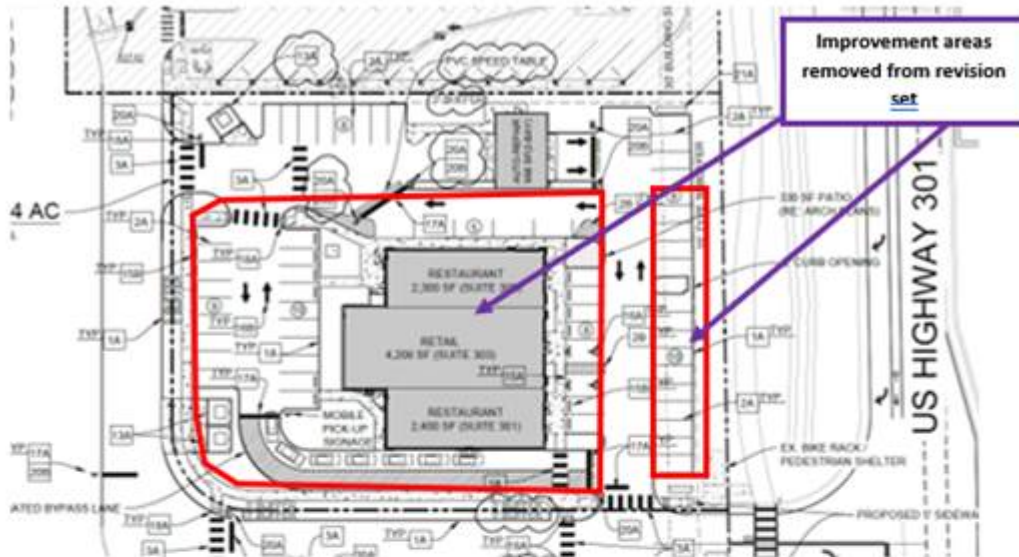
RE: SPR-64-23 Re-review of Take 5 Oil Change at the Market at Zephyrhills

Date: May 16, 2023

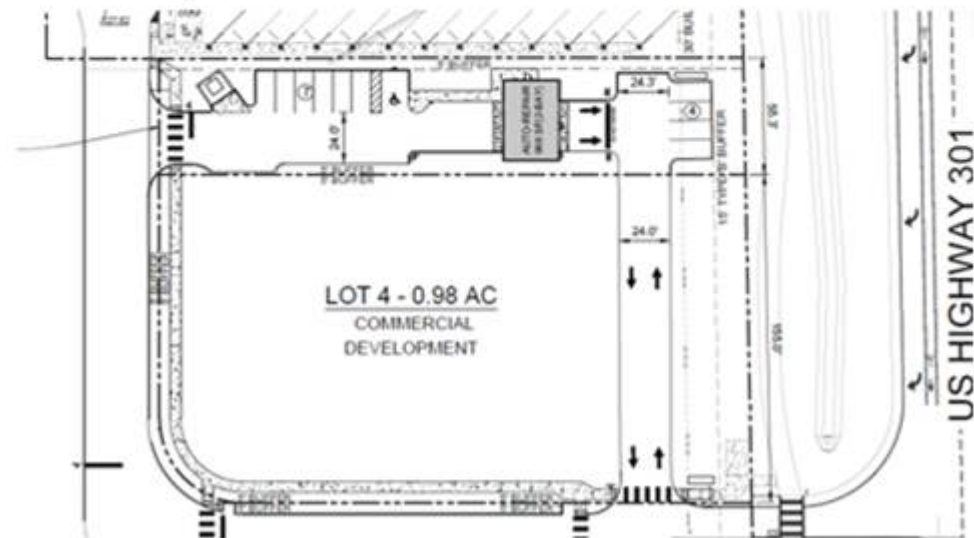
I. BACKGROUND & INFORMATION

Please see visual below:

Current Approved LDP Plan



Revised set that was just submitted



II. DATA & ANALYSIS

III. RECOMMENDATION

Approval

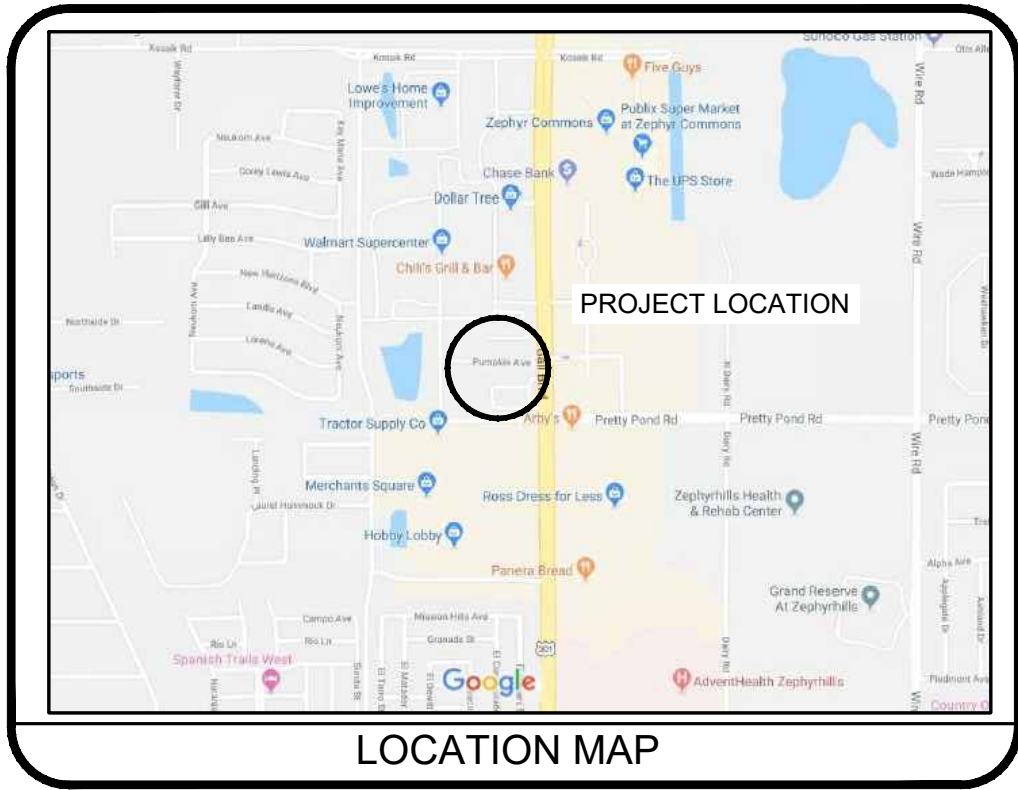
SITE DEVELOPMENT PLANS
FOR
MARKET AT ZEPHYRHILLS
US 301 AT PRETTY POND ROAD
ZEPHYRHILLS, FL
TRACT 64

NOTE: CONTRACTOR SHALL COMPLY WITH OSHA'S STANDARDS 29 CFR PART 1926, SUBPART CC FOR VERTICAL AND HORIZONTAL CLEARANCES TO THE OVERHEAD DISTRIBUTION AND TRANSMISSION POWER LINES.

PROJECT DATA	
PROPERTY LOCATION: NW CORNER OF PRETTY POND ROAD AND GALL BLVD SIZE: 8.42 ACRES	
PARCEL ID: 34-25-21-0010-04900-0000; 34-25-21-0010-05000-0010; 34-25-21-0010-06300-0010; 34-25-21-0010-06400-0000	
PROPERTY ZONING: C-2 COMMUNITY COMMERCIAL	
BUILDING SETBACK REQUIREMENTS: FRONT: 30 FT SIDE: 0 FT REAR: 20 FT	
BUILDING BUFFER REQUIREMENTS: FRONT: 15' INTERNAL: 5' SIDE (PRETTY POND RD): 10'	
MAXIMUM BUILDING HEIGHT: FRONT: ALLOWED 30 FT	
PROPOSED 30 FT	
LOT BREAKDOWN: LOT 3: (0.35 ACRES)	
BUILDING BREAKDOWN: 1,053 SF 2-BAY AUTO REPAIR (3 SPACES PER BAY)	
BUILDING REQUIRED:	
TOTAL REQUIRED: (2-BAY X 3 SPACES) 6	
PROVIDED: 11	
F.A.R.: 0.07 IMPERVIOUS AREA: 10,229 SF I.S.R.: 0.67 PERVIOUS AREA: 5,017 SF P.S.R.: 0.33	
MASTER DRAINAGE PERMIT#:	43042696.003
ALLOWABLE IMPERVIOUS AREA:	43042696.005
FEMA FLOOD ZONE DESIGNATION:	85% X & AE

AGENCY AND UTILITY CONTACTS

CITY PLANNING DEPARTMENT: 5335 8th STREET ZEPHYRHILLS, FL 33542 PHONE: (813) 780-0006 CONTACT: TODD VANDE BERG, DIR. EMAIL:	CITY BUILDING DEPARTMENT: 5335 8th STREET ZEPHYRHILLS, FL 33542 PHONE: (813) 780-0020 CONTACT: BILL BURGESS, BLDG. OFFICIAL EMAIL:
CITY UTILITIES DEPARTMENT: 39825 ALSTON AVENUE ZEPHYRHILLS, FL 33542 CONTACT: JOHN BOSTIC PHONE: (813) 780-0029 EMAIL:	CITY FIRE DEPARTMENT: FIRE STATION No. 1 6907 DAIRY ROAD ZEPHYRHILLS, FL 33542 CONTACT: DANIEL SPILLMAN, FIRE CHIEF PHONE: (813) 780-0041 EMAIL:



CONTACT LIST

OWNER/DEVELOPER: WLN ZEPHYRHILLS, LLC
CONTACT: KEVIN FRAZIER
3715 NORTHSIDE PARKWAY NW
BUILDING 400, SUITE 515
ATLANTA, GA 30327
PHONE: (404) 228-4364
EMAIL:

ENGINEER: COMMERCIAL SITE SOLUTIONS, INC.
CONTACT: SCOTT STANNARD, PE
21764 STATE ROAD 54
LUTZ, FL 33549
PHONE: (813) 885-2032
EMAIL: sstannard@css-eng.com

DRAWING LIST

COVER SHEET	C-1.0
EXISTING CONDITIONS	C-2.0
DEMOLITION & EROSION CONTROL PLAN PHASE I	C-3.0
EROSION CONTROL PLAN PHASE II	C-3.1
SWPP PLAN	C-3.2
EROSION CONTROL DETAILS	C-4.0, 4.1, 4.2
SITE PLAN	C-5.0
DIMENSION PLAN	C-5.1
TRUCK TURNING PLAN	C-5.2
SITE DETAILS	C-6.0, 6.1
GRADING PLAN	C-7.0
GRADING PROFILES & DETAILS	C-8.0, 8.1
UTILITY PLAN	C-9.0
UTILITY DETAILS	C-9.1, 9.2
LANDSCAPE PLAN	L-1.0
LANDSCAPE DETAILS	L-2.0
IRRIGATION PLANS	I-1.0
IRRIGATION DETAILS	I-1.1, 1.2

GENERAL NOTES:

1. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS AND FIELD CONDITIONS WHEN POSSIBLE, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF THE CLEARANCES ARE LESS THAN SPECIFIED ON THE PLANS OR 12", WHICHEVER IS LESS, CONTACT COMMERCIAL SITE SOLUTIONS, INC. (813-885-2032) AND OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. THE CONTRACTOR SHALL INCLUDE IN HIS CONTRACT PRICE THE REMOVAL AND DISPOSAL OF ANY EXCESS TOPSOIL HE DETERMINES IS NOT REQUIRED TO PERFORM THE FINAL GRADING AND LANDSCAPING OPERATION.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL REQUIRED/NECESSARY SHEETING, SHORING, AND SPECIAL EXCAVATION MEASURES REQUIRED ON THE PROJECT TO MEET OSHA, FEDERAL, STATE AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THE DRAWINGS. OWNER AND COMMERCIAL SITE SOLUTIONS, INC. ACCEPT NO RESPONSIBILITY FOR THE DESIGN TO INSTALL SAID ITEMS.
4. CALL FLORIDA ONE CALL: UTILITY LOCATOR SERVICE 72 HOURS IN ADVANCE OF DIGGING AT 1-800-432-4770.
5. ALL WORK SHALL CONFORM TO THE CITY OF ZEPHYRHILLS STANDARDS AND SPECIFICATIONS.
6. ALL CURB/HANDICAP RAMP DESIGNS SHALL CONFORM TO ADA OR THE CITY OF ZEPHYRHILLS STANDARDS, WHICHEVER IS MORE RESTRICTIVE.
7. PRE-CAST DRAINAGE AND SANITARY SEWER STRUCTURES HAVE BEEN SPECIFIED ON THE PLANS. OWNER AND COMMERCIAL SITE SOLUTIONS, INC., HOWEVER, ASSUME NO RESPONSIBILITY FOR THESE STRUCTURES AS FIELD CONDITIONS DURING CONSTRUCTION OFTEN DICTATE MINOR ELEVATION ADJUSTMENTS. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY AND EXPENSE FOR MODIFYING THESE STRUCTURES TO ACCOMMODATE THESE FIELD ADJUSTMENTS.
8. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE DAILY RECORD KEEPING OF THE AS-BUILT CONDITION OF ALL OF THE UNDERGROUND UTILITIES, CONSTRUCTION STAKEOUT ASSOCIATED WITH THE PROJECT, PREPARATION OF THE NECESSARY/REQUIRED AS-BUILT WATER AND SEWER PLANS TO BE SUBMITTED TO THE CITY OF ZEPHYRHILLS AND/OR THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, AND ALL OTHER INFORMATION REQUIRED IN CONNECTION WITH OBTAINING PERMITS TO OPERATE AND RELEASE OF BONDS.
9. ALL WATER LINE AND SEWER LINE INSTALLATION SHALL CONFORM TO THE STANDARDS AND DETAILS OF THE CITY OF ZEPHYRHILLS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION CONSTRUCTION PERMIT.
10. A COPY OF THE FINANCIAL RESPONSIBILITY FORM AND THE STORM WATER POLLUTION PREVENTION PLAN MUST BE KEPT ON THE WORK SITE AND SHOWN UPON REQUEST.
11. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ALL MATERIAL AND LABOR ASSOCIATED WITH THE TESTING OF THE WATER AND SEWER LINES REQUIRED BY THE CITY OF ZEPHYRHILLS PUBLIC WORKS DEPARTMENT AND/OR FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
12. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY DE-WATERING NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS, INCLUDING PERMITTING PRICE.
13. SEDIMENT CONTROL MEASURES MUST BE INSPECTED AND MAINTAINED REGULARLY TO INSURE THAT THE INTENDED PURPOSES ARE ACCOMPLISHED.
14. ALL DRAINAGE STRUCTURES MUST MEET FDOT AND THE CITY OF ZEPHYRHILLS STANDARD SPECIFICATIONS.
15. ALL SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE PROVIDED SITE WORK SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL WITHIN RIGHT OF WAY. THIS IS TO BE DONE IN ACCORDANCE WITH M.U.T.C.D.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR RAZING AND REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. (BY OTHERS)
17. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS. (BY OTHERS)
18. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
19. ANY/ALL CONSTRUCTION WITHIN STATE HIGHWAY DEPARTMENT RIGHT-OF-WAY SHALL BE COORDINATED WITH THE HIGHWAY DEPARTMENT RESIDENT MAINTENANCE ENGINEER.
20. ALL SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE SPECIFICATIONS OF THE RELEVANT UTILITY COMPANY OR REGULATORY AUTHORITY, AND THE SPECIFICATIONS FOR THE CONSTRUCTION OF THE EXISTING IMPROVEMENTS WHICH ARE BEING ALTERED OR REPLACED. CONTRACTOR SHALL CONTACT THE ENGINEER FOR SPECIFICATION SECTIONS FOR ITEMS SUCH AS LANDSCAPING AND IRRIGATION THAT ARE AFFECTED BY THE WORK BUT NOT COMPLETELY DETAILED OR SPECIFIED ON THESE PLANS.

WARRANTY/DISCLAIMER:
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

SAFETY NOTICE TO CONTRACTOR:
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.

ENGINEER:



Commercial Site Solutions, Inc.
FL C.O.A.# 27575
ENGINEERING • LANDSCAPE ARCHITECTS
402 EAST 1ST AVENUE 21764 STATE ROAD 54
EASLEY, SC 29640 LUTZ, FL 33549
864-855-5200 813-885-2032

CAUTION

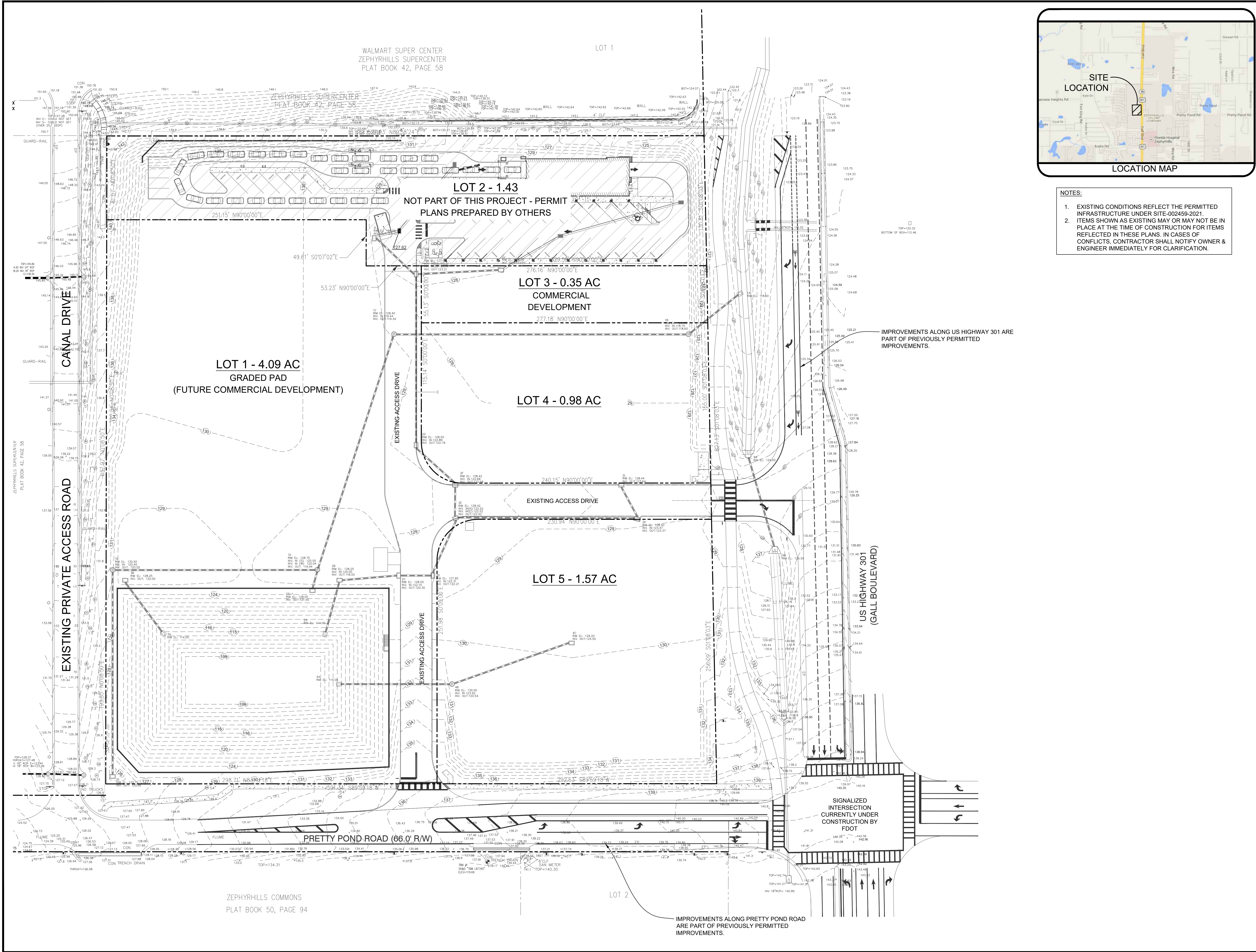


THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND CROWN DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN CORRESPOND TO THE ACTUAL UTILITIES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS CLOSELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

OWNER/DEVELOPER:

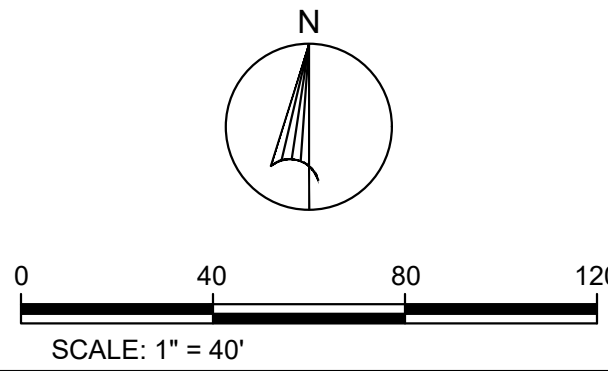


WLN ZEPHYRHILLS, LLC
3715 NORTHSIDE PKWY NW
BUILDING 400, SUITE 515
ATLANTA, GA 30327
PH: (404) 228-4364
CONTACT: KEVIN FRAZIER



- NOTES:
- EXISTING CONDITIONS REFLECT THE PERMITTED INFRASTRUCTURE UNDER SITE-002459-2021.
 - ITEMS SHOWN AS EXISTING MAY OR MAY NOT BE IN PLACE AT THE TIME OF CONSTRUCTION FOR ITEMS REFLECTED IN THESE PLANS. IN CASES OF CONFLICTS, CONTRACTOR SHALL NOTIFY OWNER & ENGINEER IMMEDIATELY FOR CLARIFICATION.

Issued:	Date:
A CITY OF ZEPHYRHILLS	04/20/23
B	
C	
D	
Revisions:	
1	
2	
3	
4	
5	
6	



Scott K. Stannard, P.E.

FL P.E. No. 50565 SEAL

This item has been digitally signed and sealed by Scott K. Stannard, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Site Engineering • Landscape Architects

Commercial Site Solutions, Inc.
C.O.A NO. 27575

21764 State Road 54
Lutz, FL 33549
(813) 885-2032
www.css-eng.com

WDG Real Estate Partners

WLN ZEPHYRHILLS, LLC

3715 NORTHSIDE PKWY NW
BUILDING 400, SUITE 515
ATLANTA, GA 30327
PH: (404) 228-4364
CONTACT: KEVIN FRAZIER

Client Name:

TAKE 5 OIL CHANGE

US HIGHWAY 301
AT PRETTY POND
ZEPHYRHILLS, FL
PH: 404-754-6934
CONTACT: PHILLIP MORRISSEY

Project Name & Location:

EXISTING CONDITIONS DRAWING

Drawing Name:

Date:	04/20/23	Drawing No. C-2.0
Revised:	XXX	
Drawn:	GSS	
Checked:	SKS	

DEVELOPER/OWNER:
WLN ZEPHYRHILLS, LLC
3715 NORTHSIDE PKWY NW
BLD 400 SUITE 515
ATLANTA, GA 30327
404-228-4364

OWNER/AUTHORIZED AGENT:

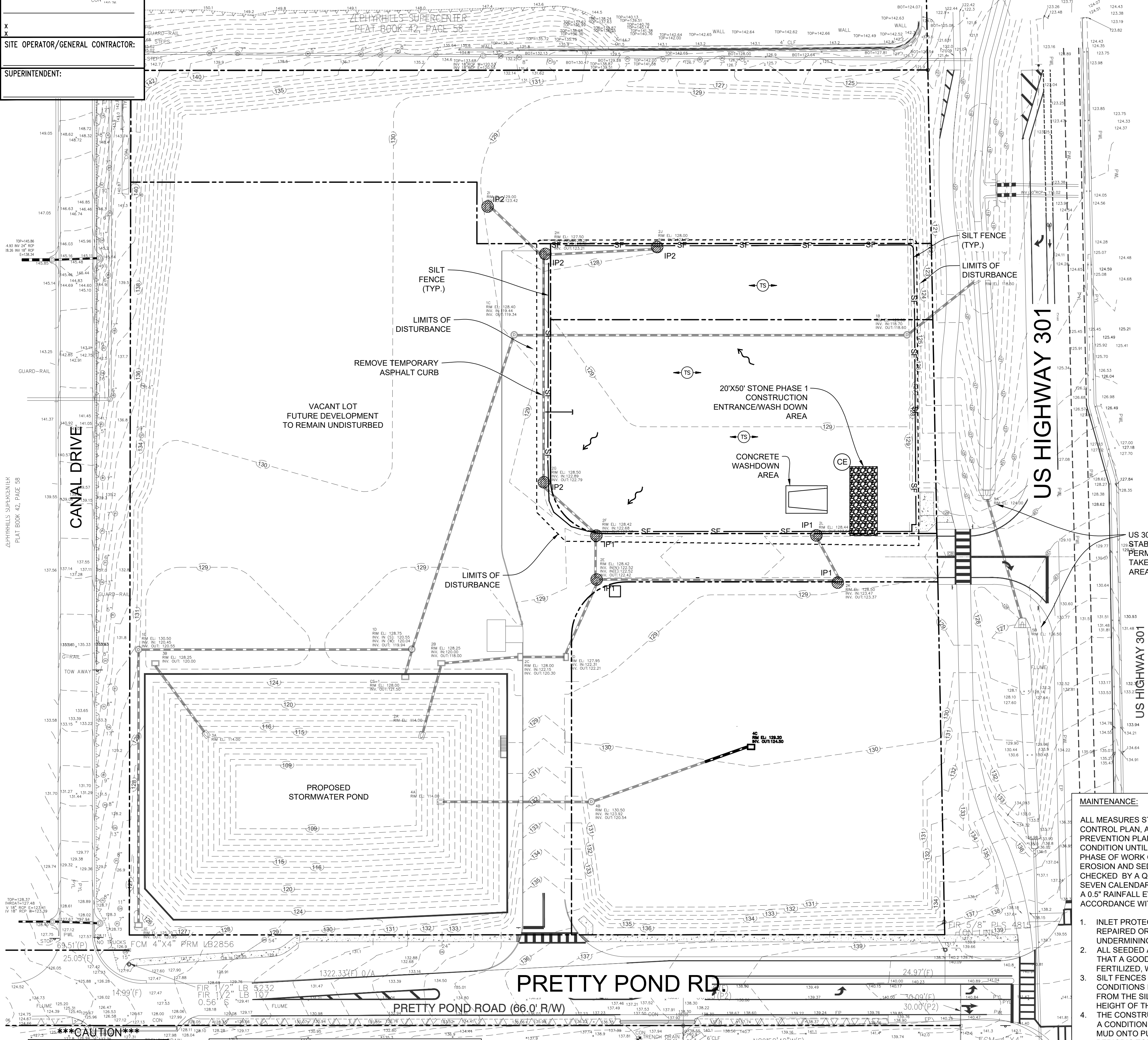
SITE OPERATOR/GENERAL CONTRACTOR:

SUPERINTENDENT:

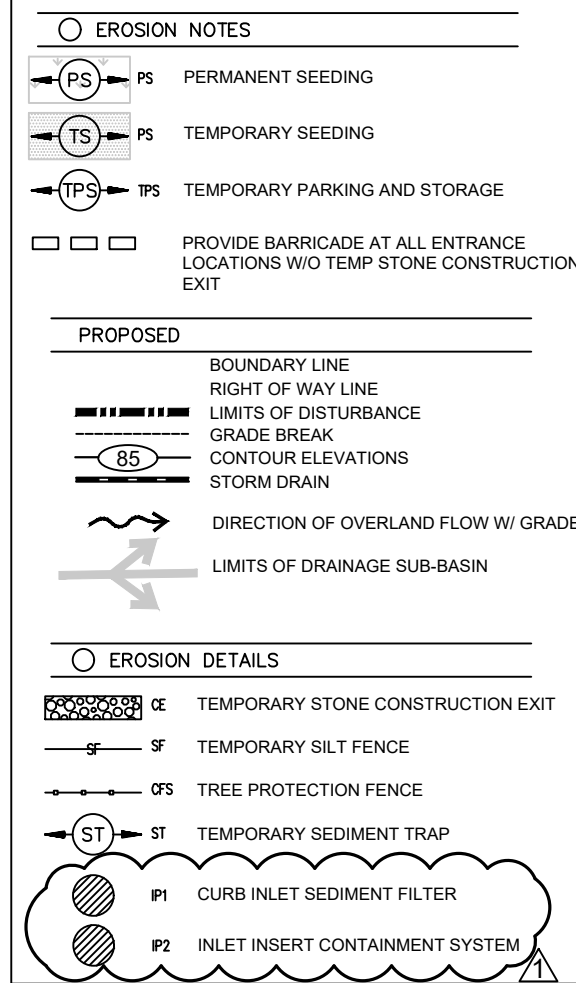
INSTALL TREE BARRICADES TO THE FULLEST EXTENT OF THE DRIP LINE OF ALL TREES AS POSSIBLE AND/OR TO THE MAXIMUM LIMIT OF IMPROVEMENTS AS POSSIBLE (OF COURSE REALIZING THAT THE TREE BARRICADES MAY BE BACKED OFF THE IMPROVEMENTS BY 6" TO 2 FEET MAXIMUM TO INSTALL TREE BARRICADES (SPECIFICALLY SILT FENCING MATERIAL) BY TRENCHING WITHIN THE DRIP LINE OF THE EXISTING TREES.

WALMART SUPER CENTER
ZEPHYRHILLS SUPERCENTER
PLAT BOOK 42, PAGE 58

LOT 1



LEGEND



ACREAGE SUMMARY

in ACRES

TOTAL AREA OF PAVEMENT	0.39 AC±
TOTAL AREA ROOFED	0.02 AC±
TOTAL AREA SEEDED	0.04 AC±
TOTAL AREA SODDED	0.09 AC±
TOTAL DISTURBED	1.39 AC±

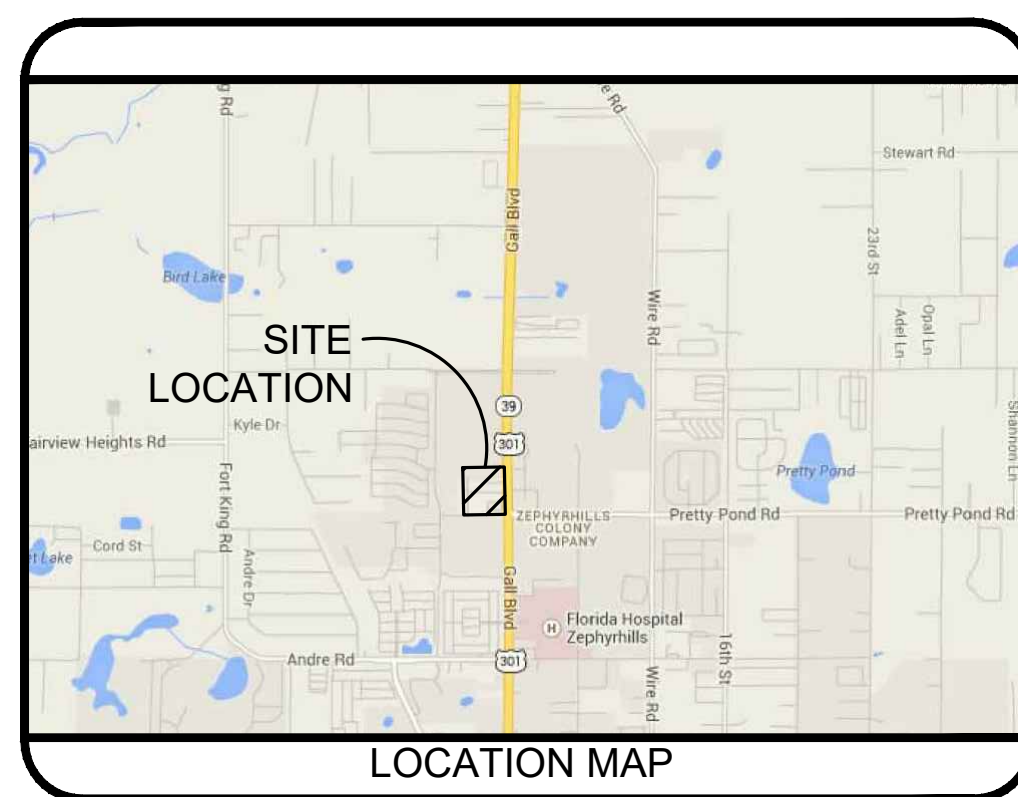
SEQUENCE OF CONSTRUCTION - PHASE 1:

1. INSTALL SILT AND CONSTRUCTION FENCES ON THE SITE.
2. INSTALL INLET PROTECTION ON EXISTING STORM INLETS AS SHOWN ON THIS PLAN AND THE DETAIL SHEETS.
3. INSTALL NEW STORM LINES PER GRADING PLANS. ONCE NEW LINES ARE IN PLACE AND OPERATIONAL, REMOVE EXISTING LINES AS SHOWN.
4. BEGIN GRADING ACTIVITIES ON SITE.
5. INSTALL REMAINING STORM LINES, INLETS AND INLET PROTECTION AS APPROPRIATE DURING GRADING ACTIVITIES.
6. REFER TO PHASE 2 PLAN AND CONSTRUCTION SEQUENCE.

MAINTENANCE:

ALL MEASURES STATED ON THIS EROSION AND SEDIMENTATION CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
2. ALL SEED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASIN OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
7. ALL SLOPES 3:1 AND STEEPER SHALL RECEIVE EROSION CONTROL BLANKET PER SPECS.



GENERAL EROSION NOTES:

A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THESE CONSTRUCTION PLANS, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN SPECIFICATIONS, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE FLORIDA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THIS SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS, PERMITS FOR ANY CONSTRUCTION ACTIVITIES IN WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.

F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

G. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLotation BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

J. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

K. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS OR AS REQUIRED BY THE PERMIT.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS, REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

P. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

R. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE FIELD-LOCATED AND NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.

U. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

SITE SOIL IS COMPRISED OF:

- POMPAHO FINE SAND
- ARREDONDO FINE SAND, 0 TO 5% SLOPES
- KENDRICK FINE SAND, 0 TO 5% SLOPES

NOTE: THE CONTRACTOR SHALL PROVIDE THE CITY OF ZEPHYRHILLS AND THE CONSULTING ENGINEER WITH A MINIMUM OF 72 HOURS ADVANCE NOTICE TO THE START OF CONSTRUCTION ACTIVITY. ACTIVITY IS DEFINED, BUT NOT NECESSARILY LIMITED TO INSTALLATION OF STONE CONSTRUCTION DRIVE, SILT FENCE, CLEARING AND GRUBBING, STRIPPING TOPSOIL, GRADING, AND INSTALLATION OF ANY UTILITY OR ROAD WORK. SITE INSPECTIONS BY THE CEC AS REQUIRED CAN THEN BE ARRANGED.

Issued: Date:

A CITY OF ZEPHYRHILLS 04/20/23

B

C

D

Revisions:

1

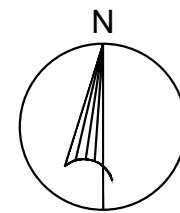
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6



0 40 80 120
SCALE: 1" = 40'

Scott K. Stannard, P.E.

FL P.E. No. 50565 SEAL

This item has been digitally signed and sealed by Scott K. Stannard, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Site Engineering • Landscape Architects

Commercial Site Solutions, Inc.
C.O.A NO. 27575

21764 State Road 54
Lutz, FL 33549
(813) 885-2032
www.css-eng.com

WDG
Real Estate Partners

WLN
ZEPHYRHILLS,
LLC

3715 NORTHSIDE PKWY NW
BUILDING 400, SUITE 515
ATLANTA, GA 30327
PH: (404) 228-4364
CONTACT: KEVIN FRAZIER

Client Name:

TAKE 5 OIL
CHANGE

US HIGHWAY 301
AT PRETTY POND
ZEPHYRHILLS, FL
PH: 404-754-6934
CONTACT: PHILLIP MORRISSEY

Project Name & Location:

DEMO & EROSION
CONTROL PLAN
PHASE I

Drawing Name:

Date: 04/20/23

Revised: XXX

Drawn: GSS

Checked: SKS

Drawing No.

C-3.0

THE LOCATION OF THE SILT FENCE AND CONSTRUCTION/TREE PROTECTION FENCING ON THE DRAWINGS IS FOR GRAPHICAL PURPOSES ONLY. THE CONTRACTOR IS TO ENSURE THAT THE SILT FENCE AND CONSTRUCTION/TREE PROTECTION FENCING ENCOMPASSES THE ENTIRE WORK AREA.

THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE CITY OF ZEPHYRHILLS AND FDP INSPECTORS SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION. INSPECTION SCHEDULE MUST BE CARRIED OUT IN ACCORDANCE WITH JURISDICTIONAL REQUIREMENTS.

LOT 2

DEVELOPER/OWNER:
WLN ZEPHYRHILLS, LLC
3715 NORTHSIDE PKWY NW
BLD 400 SUITE 515
ATLANTA, GA 30327
404-228-4364

OWNER/AUTHORIZED AGENT:

SITE OPERATOR/GENERAL CONTRACTOR:

SUPERINTENDENT:

INSTALL TREE BARRICADES TO THE FULLEST EXTENT OF THE DRIP LINE OF ALL TREES AS POSSIBLE AND/OR TO THE MAXIMUM LIMIT OF IMPROVEMENTS AS POSSIBLE (OF COURSE REALIZING THAT THE TREE BARRICADES MAY BE BACKED OFF THE IMPROVEMENTS BY 6" TO 2 FEET MAXIMUM TO INSTALL TREE BARRICADES (SPECIFICALLY SILT FENCING MATERIAL) BY TRENCHING WITHIN THE DRIP LINE OF THE EXISTING TREES.

WALMART SUPER CENTER
ZEPHYRHILLS SUPERCENTER
PLAT BOOK 42, PAGE 58

LOT 1

ZEPHYRHILLS SUPERCENTER
PLAT BOOK 42, PAGE 58

NOT PART OF THIS PROJECT
CAR WASH SITE CONSTRUCTION BY OTHERS
SHOWN FOR REF. ONLY

LIMITS OF
DISTURBANCE

SILT
FENCE
(TYP.)

VACANT LOT
FUTURE DEVELOPMENT
(GRASSED)

LIMITS OF
DISTURBANCE

PROPOSED
STORMWATER POND

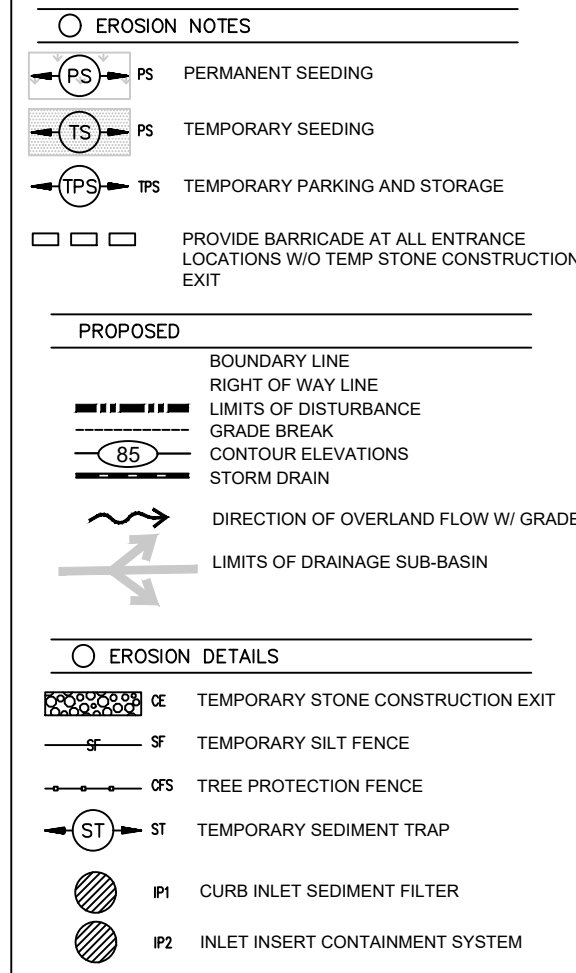
PRETTY POND RD.

PRETTY POND ROAD (66.0' R/W)

US HIGHWAY 301

LOT 2

LEGEND



ACREAGE SUMMARY

in ACRES

TOTAL AREA OF PAVEMENT	0.39 AC±
TOTAL AREA ROOFED	0.02 AC±
TOTAL AREA SEEDDED	0.04 AC±
TOTAL AREA SODDED	0.09 AC±
TOTAL DISTURBED	1.39 AC±

US 301 ROW DISTURBED AREAS ARE TO BE STABILIZED BY OWNER UNDER ORIGINALLY PERMITTED PROJECT. CONTRACTOR(S) SHALL TAKE PRAVATIONS NECESSARY TO PROTECT THIS AREA FROM SEDIMENT OR DISTURBANCE.

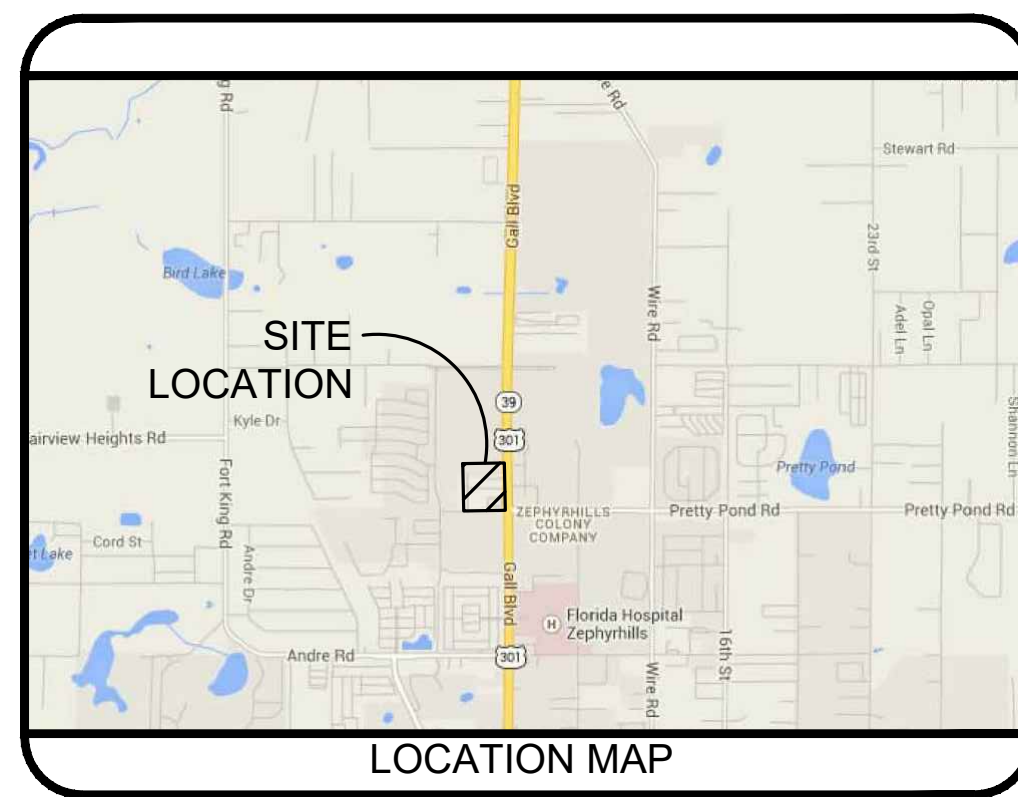
SEQUENCE OF CONSTRUCTION - PHASE 2:

1. MAINTAIN ALL BMP'S. CHECK ALL SILT FENCES AND REPAIR AS NECESSARY. ASSURE ANY ERODED AREAS ARE STABILIZED.
2. CONTINUE GRADING SITE.
3. BEGIN CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
4. TEMPORARILY SEED DENUEDED AREAS AS NECESSARY.
5. INSTALL UTILITIES & INTEGRAL CURBING ON SITE.
6. PREPARE SITE FOR PAVING AND PAVE THE SITE.
7. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
8. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF STABILIZED).

MAINTENANCE:

ALL MEASURES STATED ON THIS EROSION AND SEDIMENTATION CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
2. ALL SEED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASIN OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
7. ALL SLOPES 3:1 AND STEEPER SHALL RECEIVE EROSION CONTROL BLANKET PER SPECS.



GENERAL EROSION NOTES:

A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THESE CONSTRUCTION ACTIVITY WATERSHEDS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.

B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE FLORIDA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THIS SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY DRAINING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.

F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

G. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLotation BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

J. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

K. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS OCCURRED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDDED. AREAS SHALL BE SEEDDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS OR AS REQUIRED BY THE PERMIT.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS OCCURRED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDDED. AREAS SHALL BE SEEDDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS, REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

P. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

R. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE FIELD-LOCATED AND NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.

U. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

SITE SOIL IS COMPRISED OF:

- POMPAHO FINE SAND
- ARREDONDO FINE SAND, 0 TO 5% SLOPES
- KENDRICK FINE SAND, 0 TO 5% SLOPES

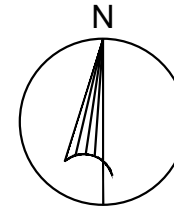
NOTE: THE CONTRACTOR SHALL PROVIDE THE CITY OF ZEPHYRHILLS AND THE CONSULTING ENGINEER WITH A MINIMUM OF 72 HOURS ADVANCE NOTICE TO THE START OF CONSTRUCTION ACTIVITY. ACTIVITY IS DEFINED, BUT NOT NECESSARILY LIMITED TO INSTALLATION OF STONE CONSTRUCTION DRIVE, SILT FENCE, CLEARING AND GRUBBING, STRIPPING TOPSOIL, GRADING, AND INSTALLATION OF ANY UTILITY OR ROAD WORK. SITE INSPECTIONS BY THE CEC AS REQUIRED CAN THEN BE ARRANGED.

Issued: Date:

A	CITY OF ZEPHYRHILLS	04/20/23
B		
C		
D		

Revisions:

1		
2		
3		
4		
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6		



0 40 80 120
SCALE: 1" = 40'

Scott K. Stannard, P.E.

FL P.E. No. 50565 SEAL

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CHANGE

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PH: 404-754-6934
CONTACT: PHILLIP MORRISSEY

Project Name & Location:

EROSION
CONTROL
PLAN PHASE II

Drawing Name:

Date: 04/20/23

Revised: XXX

Drawn: GSS

Checked: SKS

Drawing No.

C-3.1

GENERAL NOTES:

A. PROJECT OFFICE WALL SWPPP POSTINGS:
THE FOLLOWING ITEMS MUST BE POSTED TOGETHER IN A SINGLE, ORGANIZED LOCATION ON A WALL INSIDE THE PROJECT OFFICE: 1) SWPPP SITE MAPS (ALL PHASES), 2) SWPPP DETAIL SHEETS, 3) MAP SHOWING LOCATION OF OFFSITE IMPORT OR EXPORT FACILITY (IF APPLICABLE) 4) REVISIONS TO DETAILS, SITE MAPS, OR SWPPP RELATED RFIS, 5) SITE SWPPP BINDER, 6) SWCT PLACARD, 7) CURRENT OWNER/OPERATOR STORMWATER COMPLIANCE TRAINING CERTIFICATES FOR SUPERINTENDENT(S) AND COMPLIANCE OFFICER(S), 6) CERTIFICATION AND/OR TRAINING CERTIFICATES REQUIRED TO PERFORM INSPECTIONS BY THE APPLICABLE CONSTRUCTION GENERAL PERMIT OR AUTHORITY HAVING JURISDICTION.

B. PERMITTED PROJECT AREA:
FOR PURPOSES OF THIS SWPPP AND ASSOCIATED STORMWATER PERMIT, PERMITTED PROJECT AREA IS DEFINED AS ANY AND ALL AREAS WITHIN THE PROJECT LIMITS OF DISTURBANCE, AS SHOWN ON THE SWPPP SITE MAPS AND IDENTIFIED IN THE NOTICE OF INTENT TO THE AGENCY. ALL GROUND-DISTURBING AND CONSTRUCTION RELATED ACTIVITIES (MATERIAL STORAGE, DUMPSTERS, PARKING AREA, PROJECT OFFICE TRAILER, ETC.) MUST BE INCLUDED WITHIN THE PERMITTED PROJECT AREA LIMITS OF DISTURBANCE.

ALL AREAS OUTSIDE THE PERMITTED PROJECT AREA (I.E. LIMITS OF DISTURBANCE)ACQUIRED FOR USE BY THE GC OR SUBCONTRACTOR OF THE GC (BORROW SOURCE, DISPOSAL AREAS, ETC.) MUST BE MANAGED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAW UNDER THE STATE OF FLORIDA GENERAL NPDES PERMIT. THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT ALL SUCH AREAS ARE CURRENTLY PERMITTED FOR THE INTENDED USE AND MAKING COPIES OF SAID PERMITS AVAILABLE TO THE AUTHORITY HAVING JURISDICTION UPON REQUEST.

C. SPECIAL PROJECT AREAS:
THERE ARE NO SPECIAL PROJECTS LOCATED BEYOND THE OWNER PERMITTED PROJECT AREA REQUIRING INSPECTION AND MAINTENANCE ASSOCIATED WITH THIS CONSTRUCTION PROJECT.

D. NON-STORMWATER DISCHARGES:
THE FLORIDA GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES PROHIBITS MOST NON-STORMWATER DISCHARGES DURING THE CONSTRUCTION PHASE. ALLOWABLE NON-STORMWATER DISCHARGES THAT OCCUR DURING CONSTRUCTION ON THIS PROJECT ARE INCLUDED IN THE PART IV.A.3 OF THE GENERAL PERMIT
HTTP://WWW.DEP.STATE.FL.US/WATERS/STORMWATER/NPDES/DOCS/CGP.PDF

BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS MUST BE IMPLEMENTED FOR THE GENERAL PERMIT ALLOWABLE DISCHARGES FOR THE DURATION OF THE PERMIT. THE TECHNIQUES DESCRIBED IN THIS SWPPP FOCUS ON PROVIDING CONTROL OF POLLUTANT DISCHARGES WITH PRACTICAL APPROACHES THAT UTILIZE READILY AVAILABLE EXPERTISE MATERIAL, AND EQUIPMENT.

NON-STORMWATER COMPONENTS OF THE SITE DISCHARGES MUST BE UNCONTAMINATED NON-TURBID WATER. ALL NON-STORMWATER DISCHARGES MUST BE ROUTED TO A STORMWATER CONTROL PRIOR TO DISCHARGE. WATER USED FOR CONSTRUCTION WHICH DISCHARGES FROM THE SITE MUST ORIGINATE FROM A PUBLIC WATER SUPPLY OR PRIVATE WELL APPROVED BY THE STATE HEALTH DEPARTMENT. WATER USED FOR CONSTRUCTION THAT DOES NOT ORIGINATE FROM AN APPROVED PUBLIC SUPPLY MUST NOT DISCHARGE FROM THE SITE. IT CAN BE RETAINED IN RETENTION PONDS UNTIL IT INFILTRATES OR EVAPORATES. WHEN NON-STORMWATER IS DISCHARGED FROM THE SITE, IT MUST BE DONE IN A MANNER SUCH THAT IT DOES NOT CAUSE EROSION OF THE SOIL DURING DISCHARGE.

E. POWER WASHING:
PROCESS WATER SUCH AS POWER WASHING WATER AND CONCRETE CUTTING EFFLUENT AMONG OTHERS, MUST BE COLLECTED FOR TREATMENT AND DISPOSAL. IT MUST NOT BE FLUSHED INTO THE SITE STORM DRAIN SYSTEM OR DISCHARGED OFF-SITE.

F. DISCHARGE POINTS:
ALL DISCHARGE POINTS MUST BE INSPECTED TO DETERMINE WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING DISCHARGE OR SEDIMENT FROM THE SITE AND/OR IMPACTS TO RECEIVING WATERS. SEDIMENT ACCUMULATION DOWN-GRADIENT OF DISCHARGE LOCATIONS SHALL BE REPORTED AS A SEDIMENT DISCHARGE AND THE POTENTIAL UPSTREAM CAUSE SHALL BE INVESTIGATED TO PREVENT FUTURE OCCURRENCE. CONTACT THE OWNER/OPERATOR AND AUTHORITY HAVING JURISDICTION TO DETERMINE APPROPRIATE ACTION FOR CLEANUP OF DISCHARGED SEDIMENT THAT MAY BE OUTSIDE OF THE LIMITS OF DISTURBANCE. SEE SAMPLING AND MONITORING PLAN IF APPLICABLE.

HAZARDOUS MATERIAL MANAGEMENT & SPILL REPORTING:

ANY HAZARDOUS OR POTENTIALLY HAZARDOUS MATERIAL THAT IS BROUGHT ONTO THE CONSTRUCTION SITE SHALL BE HANDLED PROPERLY TO REDUCE THE POTENTIAL FOR STORMWATER POLLUTION. ALL MATERIALS USED ON THIS CONSTRUCTION SITE SHALL BE PROPERLY STORED, HANDLED, DISPENSED, AND DISPOSED OF FOLLOWING ALL APPLICABLE LABEL DIRECTIONS. FLAMMABLE AND COMBUSTIBLE LIQUIDS SHALL BE STORED AND HANDLED ACCORDING TO APPLICABLE REGULATIONS AND, AT A MINIMUM, ACCORDING TO 29 CFR 1926.152. ONLY APPROVED CONTAINERS AND PORTABLE TANKS SHALL BE USED FOR STORAGE AND HANDLING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS.

MATERIAL SAFETY DATA SHEET (MSDS) INFORMATION SHALL BE KEPT ON SITE FOR ANY AND ALL APPLICABLE MATERIALS. HOWEVER, MSDS MAY ALSO ACCESSED VIA TELEPHONE OR OTHER ELECTRONIC MEANS OR APPARATUS.

IN EVENT OF AN ACCIDENTAL SPILL, IMMEDIATE ACTION SHALL BE TAKEN BY THE GC TO CONTAIN AND REMOVE THE SPILLED MATERIAL. THE SPILL SHALL BE REPORTED TO THE APPROPRIATE AGENCIES IN THE REQUIRED TIME FRAMES, AS REQUIRED UNDER THE PROVISIONS OF THE CLEAN WATER ACT, ANY SPILL OR DISCHARGE ENTERING WATER OF THE UNITED STATES SHALL BE PROPERLY REPORTED.

ALL HAZARDOUS MATERIALS, INCLUDING CONTAMINATED SOIL AND LIQUID CONCRETE WASTE SHALL BE DISPOSED OF BY THE CONTRACTOR IN THE MANNER SPECIFIED BY FEDERAL, STATE, AND LOCAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS.

THE GC SHALL PREPARE A WRITTEN RECORD OF ANY SPILL AND ASSOCIATED CLEAN-UP ACTIVITIES OR PETROLEUM PRODUCTS OR HAZARDOUS MATERIALS IN EXCESS OF REPORTABLE QUANTITIES AS DEFINED BY THE EPA OR THE STATE OR LOCAL AGENCY REGULATIONS. SHALL BE IMMEDIATELY REPORTED TO THE EPS NATIONAL RESPONSE CENTER (1-800-424-8802) AND TO THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) THROUGH THE STATE WATCH OFFICE AT 1-800-320-0519.

THE STATE REPORTABLE QUANTITY FOR PETROLEUM PRODUCTS IS: 25 GALLONS OR GREATER PER FDEP PETROLEUM CONTAMINATION SITE CLEANUP CRITERIA.
HTTP://WWW.DEP.STATE.FL.US/OER/REPORTABLE_INCIDENT.HTM

THE DISCHARGE SHALL BE REPORTED WITHIN 1 WEEK OF DISCOVERY. HOWEVER, DISCHARGE OF REPORTABLE QUANTITIES ONTO SURFACE OF LANDS OR SURFACE OF WATERS SHALL BE REPORTED TO THE STATE WATCH OFFICE OR FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION WEBSITE, BUREAU OF EMERGENCY RESPONSE, AS SOON AS POSSIBLE BY NO LATER THAN 24 HOURS AFTER OCCURRENCE.

THE REPORTABLE QUANTITY FOR HAZARDOUS MATERIALS CAN BE FOUND IN 40 CFR 302 AND ON THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION WEBSITE AT
HTTP://WWW.DEP.STATE.FL.US/WATERS/STORMWATER/NPDES/DOCS/INDGUIDE/APP_H_INDGUIDE.PDF

TO MINIMIZE THE POTENTIAL FOR A SPILL OF PETROLEUM PRODUCT OR HAZARDOUS MATERIALS TO COME IN CONTACT WITH STORMWATER, THE FOLLOWING STEPS SHALL BE IMPLEMENTED:

1. ALL MATERIAL WITH HAZARDOUS PROPERTIES, SUCH AS PESTICIDE, PETROLEUM PRODUCTS, FERTILIZERS, SOAPS, DETERGENTS, CONSTRUCTION CHEMICAL, ACIDS, BASES, PAINTS, PAINT SOLVENTS, ADDITIVE FOR SOIL STABILIZATION, CONCRETE, CURING COMPOUNDS, AND ADDITIVES, ETC., SHALL BE STORED IN A SECURE LOCATION, UNDER COVER, AND IN APPROPRIATE, TIGHTLY SEALED CONTAINERS WHEN NOT IN USE.

2. THE MINIMUM PRACTICAL QUANTITY OF ALL SUCH MATERIALS SHALL BE KEPT ON THE JOB SITE AND SCHEDULED FOR DELIVERY AS CLOSE TO TIME OF USE AS PRACTICAL.

3. A SPILL CONTROL AND CONTAINMENT KIT (CONTAINING FOR EXAMPLE, ABSORBENT MATERIAL, SUCH AS KITTY LITTER OR SAWDUST, ACID, BASE, NEUTRALIZING AGENT, BROOM, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, PLASTIC AND METAL TRASH CONTAINERS, ETC.) SHALL BE PROVIDED AT THE CONSTRUCTION SITE AND ITS LOCATION(S) SHALL BE IDENTIFIED WITH LEGIBLE SIGNAGE AND SHOWN ON THE SITE MAPS.

A. THE SPILL CONTROL AND CONTAINMENT KIT SUPPLIES SHALL BE OF SUFFICIENT QUANTITIES AND APPROPRIATE CONTENT TO CONTAIN A SPILL FROM THE LARGEST PIECE OF EQUIPMENT AND FROM THE LARGEST ANTICIPATED QUANTITIES OF PRODUCTS STORED ON THE SITE AT ANY GIVEN TIME.
B. CONTENTS SHALL BE INSPECTED DAILY DURING THE DAILY STORMWATER INSPECTION.

4. ALL PRODUCTS SHALL BE STORED IN AND USED FROM THE ORIGINAL CONTAINER WITH THE ORIGINAL PRODUCT LABEL. CONTAINERS MUST BE STORED IN A MANNER TO PROTECT THEM FROM THE ELEMENTS AND INCIDENTAL DAMAGE.

5. ALL PRODUCTS SHALL BE USED IN STRICT ACCORDANCE WITH THE INSTRUCTIONS ON THE PRODUCT LABELS.

6. THE DISPOSAL OF EXCESS OR USED PRODUCTS SHALL BE IN STRICT COMPLIANCE WITH INSTRUCTIONS ON THE PRODUCT LABELS AND REGULATIONS.

EROSION & SEDIMENT CONTROL NOTES:

A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING ("SITE MAP"), THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN SITE/CIVIL SPECIFICATIONS, PLUS THE NPDES, CITY OF ZEPHYRHILLS, AND STATE STORMWATER PERMITS AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.

F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

G. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

J. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

K. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS OR AS REQUIRED BY THE PERMIT.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

P. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

R. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE FIELD-LOCATED AND NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.

U. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

SWPPP IMPLEMENTATION SEQUENCE

NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREA, CONSTRUCTION TRAILER, TEMPORARY PARKING, CONSTRUCTION MATERIAL LAYDOWN AREA, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASON'S AREA, FUEL AND MATERIAL STORAGE AREA/CONTAINERS, SOLID WASTER CONTAINERS, ETC., THE SITE OPERATOR/GC SHALL IMMEDIATELY DENOTE THEM ON THE SITE MAPS AS POSTED AT THE JOB SITE AND NOTE ANY CHANGES IN LOCATION AS THEY MAY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION, NOTE ALL AREAS WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

NOTE: DOWN SLOPE PROTECTIVE MEASURES MUST ALWAYS BE IN PLACE BEFORE SOIL IS DISTURBED. ACTIVITIES ARE PRESENT IN THE ORDER OF SEQUENCE IN WHICH THEY ARE REQUIRED TO BE COMPLETED.

PHASE 1

SEQUENCE OF CONSTRUCTION:

1. INSTALL SILT AND CONSTRUCTION FENCES ON THE SITE.
2. INSTALL INLET PROTECTION ON EXISTING STORM INLETS AS SHOWN ON THIS PLAN AND THE DETAIL SHEETS.
3. INSTALL NEW STORM LINES PER GRADING PLANS. ONCE NEW LINES ARE IN PLACE AND OPERATIONAL, REMOVE EXISTING LINES AS SHOWN.
4. BEGIN GRADING ACTIVITIES ON SITE.
5. INSTALL REMAINING STORM LINES, INLETS AND INLET PROTECTION AS APPROPRIATE DURING GRADING ACTIVITIES.
6. REFER TO PHASE 2 PLAN AND CONSTRUCTION SEQUENCE.

PHASE 2

SEQUENCE OF CONSTRUCTION (CONT.):

1. MAINTAIN ALL BMP'S. CHECK ALL SILT FENCES AND REPAIR AS NECESSARY. ASSURE ANY ERODED AREAS ARE STABILIZED.
2. CONTINUE GRADING SITE.
3. BEGIN CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
4. TEMPORARILY SEED DENUDEED AREAS AS NECESSARY.
5. INSTALL UTILITIES & INTEGRAL CURBING ONSITE.
6. PREPARE SITE FOR PAVING AND PAVE THE SITE.
7. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
8. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF STABILIZED).

EROSION CONTROL NOTES:

THE EROSION AND TURBIDITY CONTROL MEASURES SHOWN HEREON ARE THE MINIMUM REQUIRED FOR REGULATORY AGENCY PLAN APPROVAL. ADDITIONAL CONTROL AND MEASURES MAY BE REQUIRED DUE TO REGULATORY AGENCY RULES, CONSTRUCTION SEQUENCING AND/OR WEATHER CONDITIONS. ANY ADDITIONAL MEASURES DEEMED NECESSARY BY THE REGULATORY AGENCIES OR BY THE SITE CONTRACTOR BEFORE OR DURING CONSTRUCTION SHALL BE IMPLEMENTED AND MAINTAINED.

THE APPROPRIATE TURBIDITY AND EROSION CONTROL METHODOLOGIES SELECTED BY THE SITE CONTRACTOR FOR THE PROJECT SHOULD BE MADE FOLLOWING REVIEW OF THE PLANS AND PROJECT SITE SPECIFIC FACTORS AND AFTER CONSULTATIONS AS NEEDED WITH THE PROJECT ENGINEER AND REGULATORY AGENCIES. SEVERAL FACTORS TO CONSIDER ARE DURATION OF CONSTRUCTION ACTIVITIES, DEPTH OF CUT AND SEPARATION DISTANCE FOR PONDS, TRENCHES, AND UTILITY LINES, CLAY CONTENT IN EXCAVATED MATERIALS, FILL HEIGHT RELATIVE TO NATURAL GRADE AND LENGTH AND STEEPNESS OF THE PROPOSED SLOPES, GROUND WATER LEVELS, TIME OF YEAR RELATIVE TO THE RAINY SEASON, PROXIMITY TO WETLANDS, WATER BODIES OR OFFSITE PROPERTIES, EXISTING TOPOGRAPHY AND DIRECTIONS OF SURFACE FLOW.

THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL MAY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE. WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHOULD GENERALLY BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORMWATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES, AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.

THE SITE CONTRACTOR IS RESPONSIBLE FOR HAVING THEIR DEWATERING PLAN AND TURBIDITY CONTROL PLAN APPROVED BY THE APPLICABLE REGULATORY AGENCIES, PRIOR TO CONSTRUCTION, . AS NECESSARY, REFER TO THE SITE PERMIT CONDITIONS FOR AGENCIES REQUIRING SUCH REVIEW, APPROVAL AND/OR SEPARATE. WHERE PUMPS ARE TO BE USED TO REMOVE WATER FROM CONSTRUCTION AREAS, THE WATER SHALL BE TREATED PRIOR TO DISCHARGE TO WETLANDS. TREATMENT METHODS INCLUDE, FOR EXAMPLE, TURBID WATER BEING PUMPED INTO GRASSED SWALES OR APPROPRIATE UPLAND VEGETATED AREAS (OTHER THAN UPLAND PRESERVATION AREAS AND WETLAND BUFFERS), SEDIMENT BASINS, OR CONFINED BY AN APPROPRIATE ENCLOSURE SUCH AS TURBIDITY BARRIERS OR LOW BERMS, AND KEPT CONFINED UNTIL TURBIDITY LEVELS MEET STATE WATER QUALITY STANDARDS.

SILT SCREENS SHALL BE INSTALLED PRIOR TO LAND CLEARING TO PROTECT WATER QUALITY AND TO IDENTIFY AREAS TO BE PROTECTED FROM CLEARING ACTIVITIES AND MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL ALL SOIL IS STABILIZED. FLOATING TURBIDITY BARRIERS SHALL BE IN PLACE IN OPEN WATER SYSTEMS PRIOR TO INSTALLATION OF EARTHWORK AND MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL ALL SOIL IS STABILIZED. THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER QUALITY THROUGHOUT THE DURATION OF THE PROJECT.

THE SITE CONTRACTOR SHALL SCHEDULE THEIR OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATION, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SO SCHEDULED AND PERFORMED SUCH THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER. GRADING OPERATIONS SHALL BE SO SCHEDULED AND PERFORMED THAT PERMANENT EROSION CONTROL MEASURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT. EXPOSED SOILS SHOULD BE STABILIZED AS SOON AS POSSIBLE, ESPECIALLY SLOPES LEADING TO WETLANDS. STABILIZATION METHODS INCLUDE SOLID SOD, SEEDING AND MULCHING OR HYDROMULCHING TO PROVIDE A TEMPORARY OR PERMANENT GRASS COVER MULCH BLANKETS. SCRAPED AREAS MAY BE CONTROLLED OR CONTAINED BY THE USE OF BUSH BARRIERS, DIVERSION SWALES, INTERCEPTOR DITCHES OR LOW BERMS. FLOW SHOULD BE DIRECTED TOWARD AREAS WHERE SEDIMENTS CAN SUFFICIENTLY SETTLE OUT. SPREADER SWALES MAY HELP DISSIPATE CLOUDY WATER PRIOR TO CONTACT WITH WETLANDS.

WATER DERIVED FROM VARIOUS DEWATERING METHODS SHOULD BE PASSED THROUGH SUFFICIENTLY WIDE AREAS OF EXISTING UPLAND VEGETATION TO FILTER OUT EXCESS TURBIDITY. IF THIS IS NOT SUFFICIENT, THE WATER SHALL BE RETAINED IN PREVIOUSLY CONSTRUCTED PERMANENT STORMWATER PONDS OR ELSE RETAINED ON TEMPORARY SEDIMENT BASINS UNTIL THE CLARITY IS SUITABLE TO ALLOW FOR ITS DISCHARGE. HOWEVER, SUCH SITUATIONS SHOULD BE MONITORED CLOSELY TO PRECLUDE BERM FAILURE IS WATER LEVELS RISE TOO HIGH.

IF THE ABOVE CONTROLS REMAIN INEFFECTIVE IN PRECLUDING RELEASE OF TURBID WATER, ESPECIALLY DURING POND OR UTILITY LINE DE-WATERING, THEN THE CONTRACTOR MAY BE COMPELLED TO USE A VERTICAL DEWATERING SYSTEM SUCH AS WELL POINTS OR SOCK DRAINS TO WITHDRAW GROUNDWATER WHICH MAY ALREADY BE CLEAR ENOUGH TO ALLOW FOR DIRECT DISCHARGE TO WETLANDS.

ENERGY DISSIPATERS (SUCH AS RIP-RIP, A GRAVEL BED, ETC.) SHALL BE INSTALLED AT THE DISCHARGE POINT OF PIPES OR SWALES IF SCOURING IS OBSERVED. ATTEMPT TO INSTALL ROADWAY CURB AND GUTTERS AS SOON AS POSSIBLE TO REDUCE THE SURFACE AREA FOR EROSION TO OCCUR. IMPLEMENT STORM DRAIN INLET PROTECTION TO LIMIT SEDIMENTATION WITH THE PERMANENT SYSTEM. PERFORM INSPECTIONS AND PERIODIC CLEANING OF SEDIMENTS WHICH WASH OUT INTO THE STREETS UNTIL ALL SOIL IS STABILIZED. VEHICLE OR EQUIPMENT WASHDOWN AREAS WILL BE SUFFICIENTLY REMOVED FROM WETLANDS OR OFF-SITE AREAS. FUGITIVE DUST CONTROLS (PRIMARILY BY USING WATER SPRAY TRUCKS) SHALL BE EMPLOYED AS NEEDED TO CONTROL WINDBORNE EMISSIONS.

NO CLAY MATERIAL SHALL BE LEFT EXPOSED IN ANY STORMWATER STORAGE FACILITY. IF CLAY OR SANDY-CLAYS ARE ENCOUNTERED DURING STORMWATER STORAGE EXCAVATION, THE SITE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY BEFORE PROCEEDING WITH FURTHER EXCAVATION. IF THE ENGINEER HAS DETERMINED THAT SUCH SOILS ARE NON-CONFORMING AND MUST BE EXCAVATED TO MEET PERMIT AND DESIGN CONDITIONS, EXCAVATION MAY PROCEED AFTER OBTAINING WRITTEN AUTHORIZATION FROM THE APPROPRIATE LOCAL REGULATORY AUTHORITY. IF SAID SOILS ARE LEFT EXPOSED AT THE PERMITTED AND DESIGNED DEPTH, THE SITE CONTRACTOR SHALL OVER-EXCAVATE THE POND BOTTOM AND SIDE SLOPES BY A MINIMUM OF 12 INCHES AND BACKFILL WITH CLEAN SANDS TO HELP PREVENT SUSPENSION OF FINE PARTICLES IN THE WATER COLUMN.

DISCHARGES WHICH EXCEED 29 N.T.U.'S OVER THE BACKGROUND LEVELS ARE IN VIOLATION OF STATE WATER QUALITY STANDARDS. DISCHARGES OF WATER QUANTITIES WHICH AFFECT OFFSITE PROPERTIES OR MAY DAMAGE UPLAND WETLANDS ARE ALSO PROHIBITED BY REGULATING AGENCIES. WATER DISCHARGE VELOCITIES FROM IMPOUNDED AREAS AND TEMPORARY SEDIMENT BASINS SHALL BE RESTRICTED TO AVOID SCOURING IN RECEIVING AREAS. IF WATER CLARITY DOES NOT REDUCE TO STATE STANDARDS RAPIDLY ENOUGH IN HOLDING PONDS, IT MAY BE POSSIBLE TO USE CHEMICAL AGENTS SUCH AS ALUM TO FLOCCULATE OR COAGULATE THE SEDIMENT PARTICLES.

ONGOING INSPECTIONS AND PERIODIC MAINTENANCE BY THE SITE CONTRACTOR SHALL OCCUR THROUGHOUT CONSTRUCTION AS NECESSARY TO INSURE THE ABOVE METHODS ARE WORKING SUITABLY. THIS MAY BE NEEDED DAILY. IF CONDITIONS SO WARRANT, SITE CONTRACTORS ARE ENCOURAGED TO OBTAIN AND THOROUGHLY REVIEW THE FLORIDA DEVELOPMENT MANUAL, A GUIDE TO SOUND LAND AND WATER MANAGEMENT, WHICH WAS DEVELOPED BY THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION IN 1988. THIS PROVIDES FAIRLY IN DEPTH DISCUSSIONS OF RECOMMENDED TECHNIQUES AND ALSO PROVIDES DETAILED DESIGN AND TECHNICAL STANDARDS.

MAINTENANCE:

ALL MEASURES STATED ON THIS EROSION AND SEDIMENTATION CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.

2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RE-SEEDED AS NEEDED.

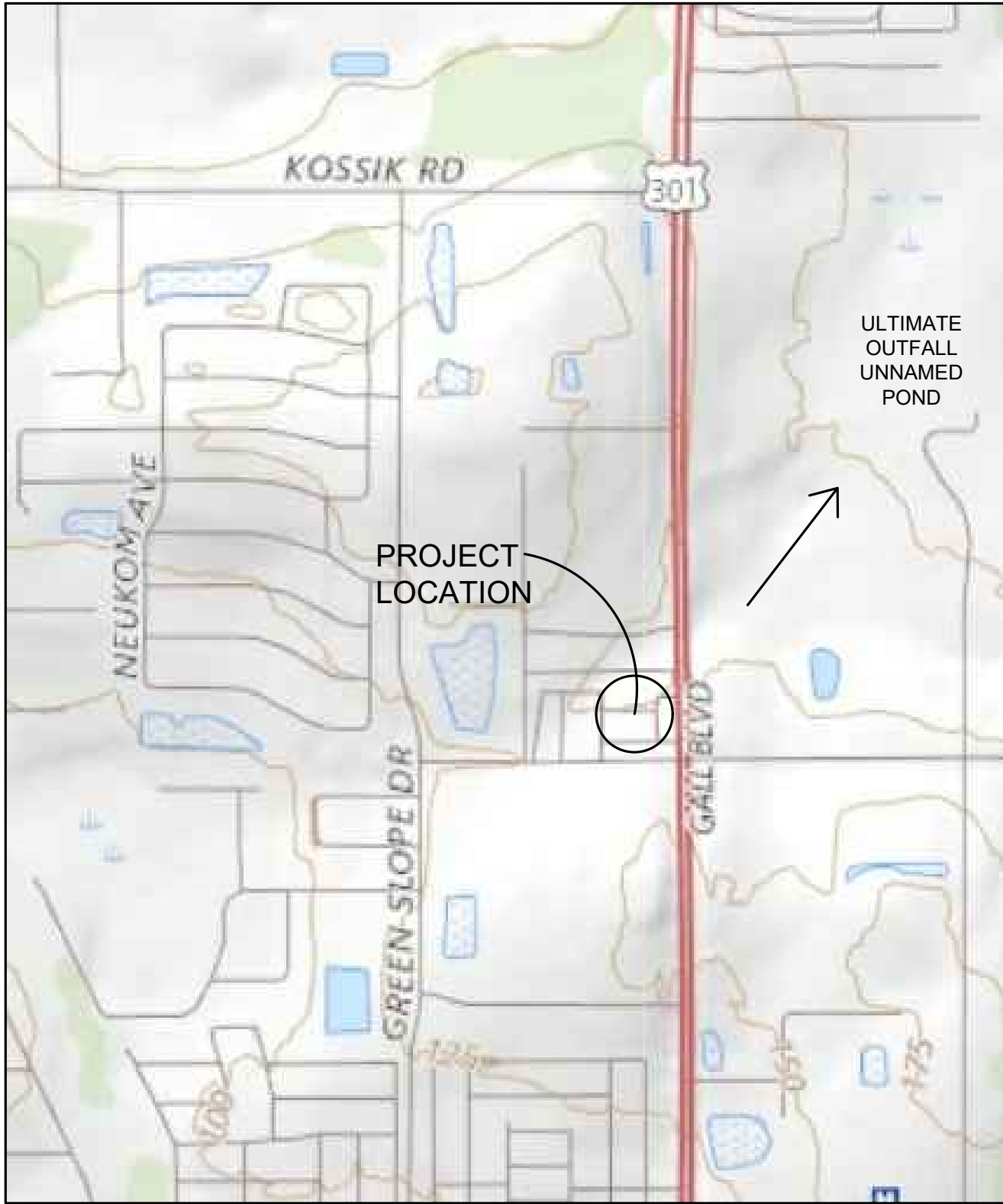
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.

4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

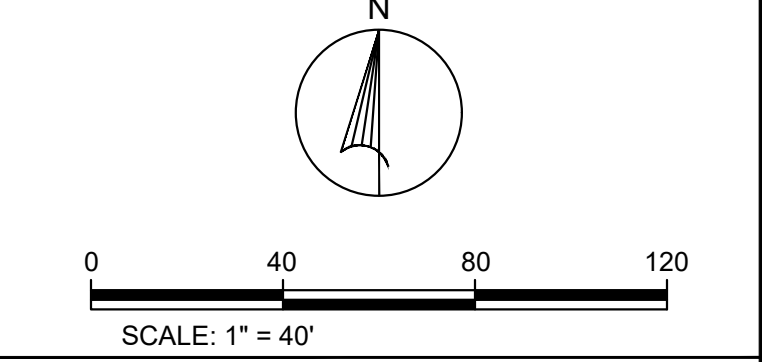
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE), THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

6. ON-GOING MAINTENANCE WILL BE REQUIRED OF THE OPERATOR AND PERMITTED FOR THE DURATION OF THE CONSTRUCTION PERIOD. THIS INCLUDES, BUT MAY NOT BE LIMITED TO, REMOVAL OF SILT AND SEDIMENT FOR SILT/SEDIMENT FENCES, INLET PROTECTION DEVICES, REPLACEMENT OF STONE ON CONSTRUCTION ENTRANCE, AND PERIODIC MAINTENANCE OF ANY OTHER INSTALLED BMP DEVICES.

7. ALL SLOPES 3:1 AND STEEPER SHALL RECEIVE EROSION CONTROL BLANKET PER SPECIFICATIONS.



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Scott K. Stannard, P.E.
FL P.E. No. 50565 SEAL
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SWPPP	
Drawing Name:	
Date:	04/20/23
Revised:	XXX
Drawn:	GSS
Checked:	SKS
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Construction Specifications

Materials

1. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester, or polyethylene yarn. It shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0°F. to 120°F. (-17°C. to 49°C.).
2. The stakes for a silt fence shall be 1 x 2 inches (2.5 x 5 cm) wood (preferred), or equivalent metal with a minimum length of 3 feet (90 cm).
3. Wire fence reinforcement for silt fences using standard-strength filter cloth shall be a minimum of 36 inches (90 cm) in height, shall be a minimum of 14 gauge, and shall have a maximum mesh spacing of 6 inches (15 cm).

Sheetflow Application: Silt Fence

This sediment barrier uses standard-strength or extra-strength synthetic filter fabrics. It is designed for situations in which only sheet or overland flows are expected (see Figures 4.4a and 4.4b):

1. The height of a silt fence shall not exceed 36 inches (90 cm). Higher fences may impound volumes of water sufficient to cause failure of the structure.
2. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced as described in Item 8 below.
3. Posts shall be spaced a maximum of 10 feet (3 m) apart at the barrier location and driven securely into the ground a minimum of 12 inches (30 cm). When extra-strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet (1.8 m).
4. A trench shall be excavated approximately 4 inches (10 cm) wide and 4 inches (10 cm) deep along the line of posts and upslope from the barrier.
5. When standard-strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy-duty wire staples at least 1 inch (25 mm) long, tie wires, or hog rings. The wire shall extend into the trench a minimum of 2 inches (5 cm) and shall not extend more than 36 inches (90 cm) above the original ground surface.
6. The standard-strength filter fabric shall be stapled or wired to the fence, and 8 inches (20 cm) of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches (90 cm) above the original ground surface.
7. When extra-strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In this case, the filter fabric is stapled or wired directly to the posts with all other provisions of Item 6 applying.
8. When attaching 2 silt fences together, place the end post of the second fence inside the end post of the first fence. Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the filter fabric. Drive both posts into the ground and bury the flap (see Figure 4.4b).
9. The trench shall be backfilled and the soil compacted over the filter fabric.
10. The most effective application consists of a double row of silt fences spaced a minimum of 3 feet apart, so that if the first row collapses it will not fall on the second row. Wire or synthetic mesh may be used to reinforce the first row (see Figure 4.4c).
11. When used to control sediments from a steep slope, silt fences should be placed away from the toe of the slope for increased holding capacity (see Figure 4.4d).
12. Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

Maintenance

1. Silt fences shall be inspected within 24 hours after each ½-inch rainfall event and at least once a week. Any required repairs shall be made immediately.
2. Should the fabric on a silt fence decompose or become ineffective before the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.
3. Sediment deposits should be removed when deposits reach approximately one-half the height of the barrier.
4. Any sediment deposits remaining in place after the silt fence is no longer required shall be dressed to conform with the existing grade, prepared, and seeded.

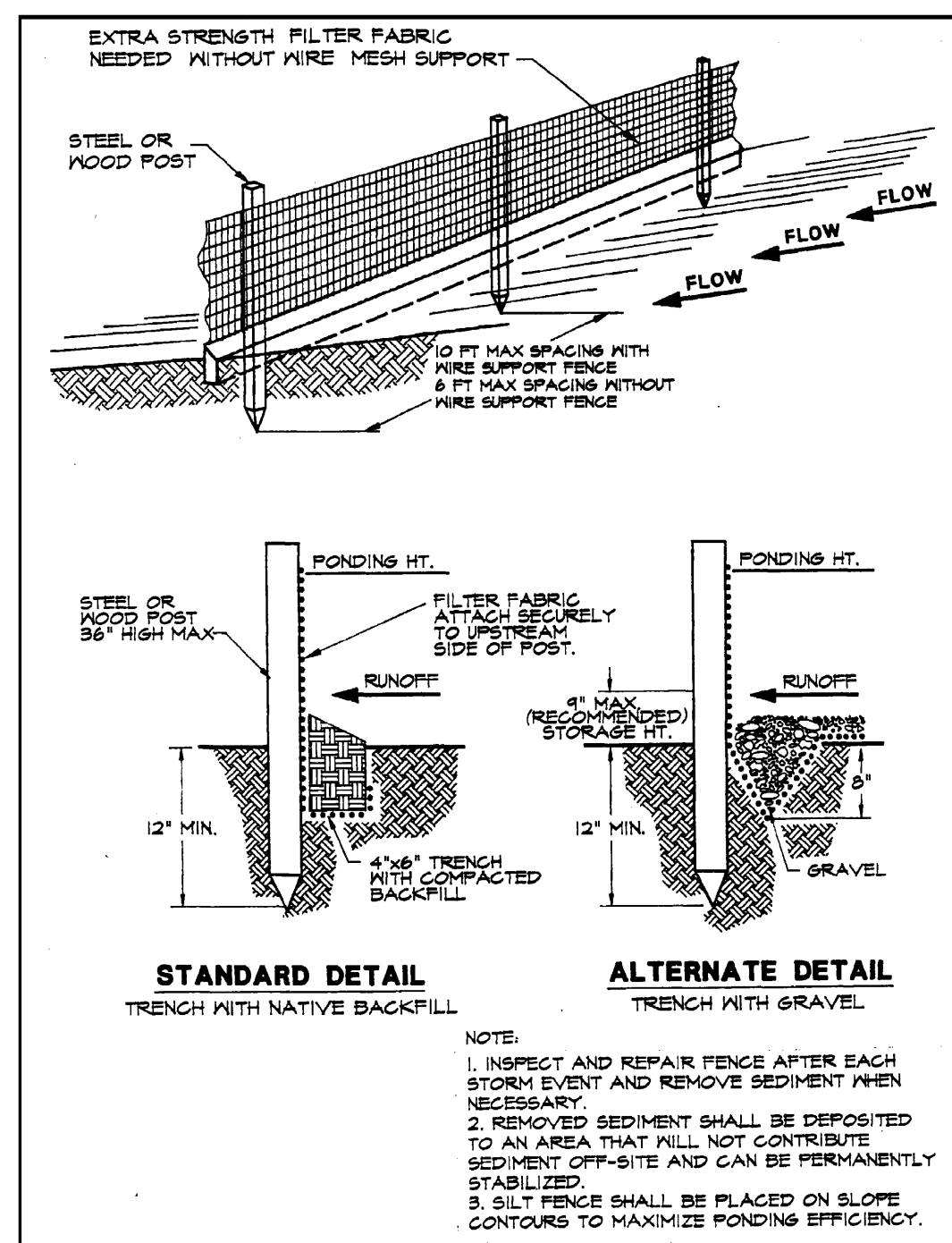


Figure 4.4a. Silt Fence

Source: Erosion Draw

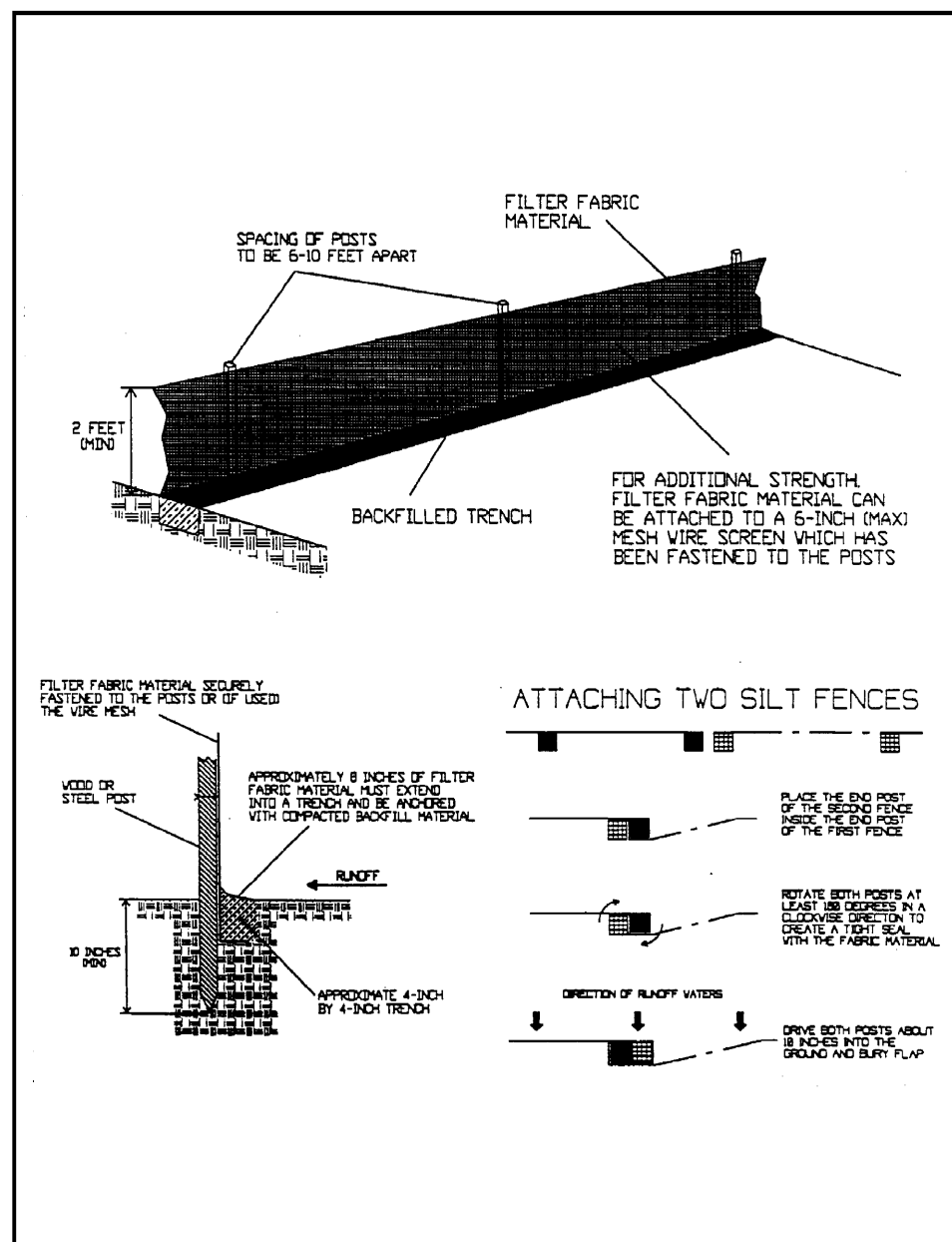
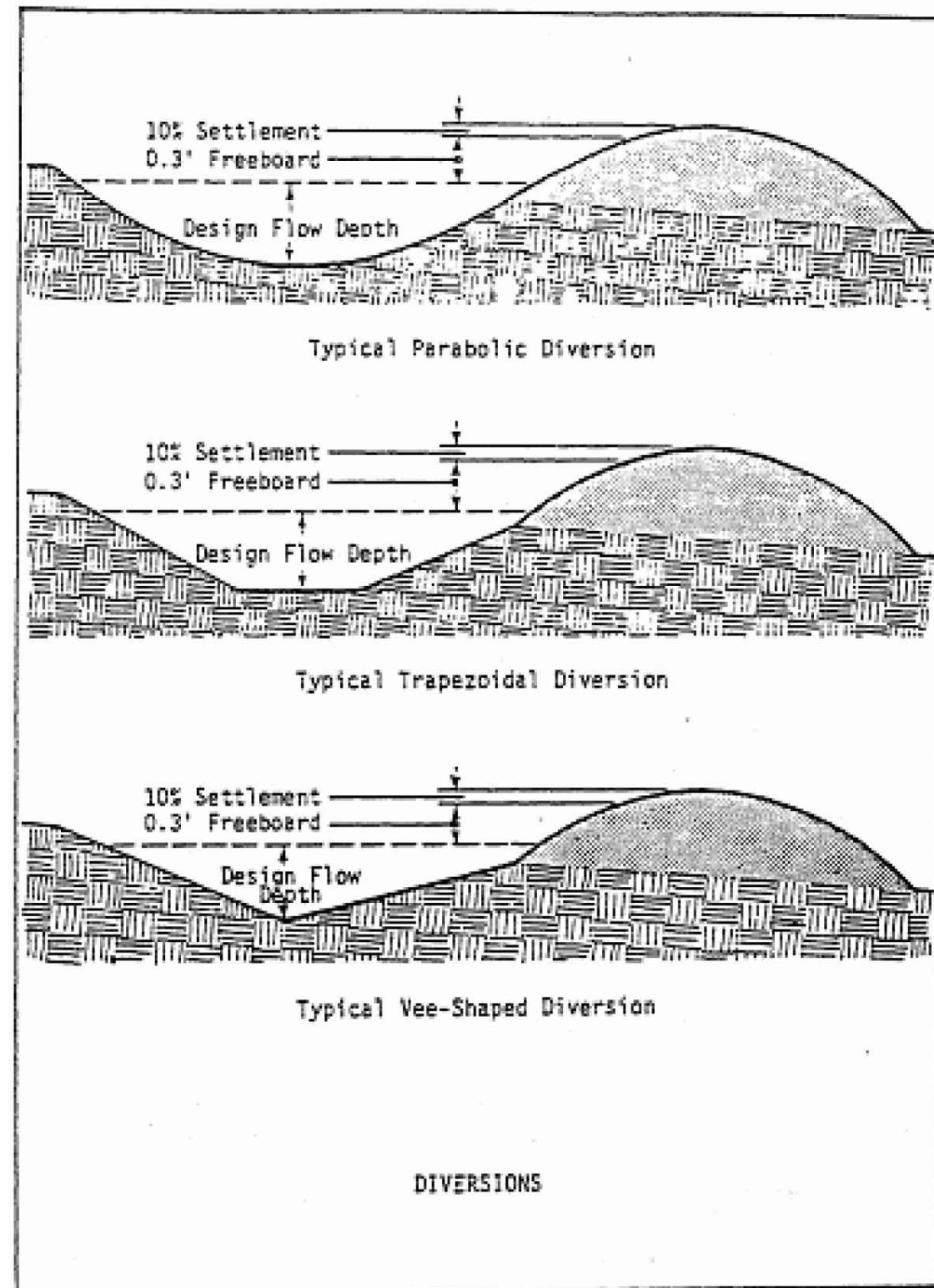


Figure 4.4b. Installing a Filter Fabric Silt Fence

Source: HydroDynamics, Inc.



Source: V& SWCC

Plate 1.18a

Construction Specifications

1. All trees, brush, stumps, debris, and other obstructions shall be removed and disposed of so as not to interfere with the proper functioning of the diversion.
 2. The diversion shall be excavated or shaped to line, grade, and crosssection as required to meet the criteria specified herein, free of irregularities which will impede flow.
 3. Fills shall be compacted as needed to prevent unequal settlement that would cause damage in the complete diversion.
 4. All earth removed and not needed in construction shall be spread or disposed of so that it will not interfere with the functioning of the diversion.
 5. Permanent stabilization of disturbed areas shall be done in accordance with the applicable standard and specification contained in this handbook. Permanent stabilization techniques include PERMANENT SEEDING (ES BMP 1.66) and SODDING. (ES BMP 1.67).
- Maintenance
Before final stabilization, the diversion should be inspected after every rainfall. Sediment shall be removed from the ditchline and repairs made as necessary. Seeded areas which fail to establish a vegetative cover shall be reseeded as necessary.

4.3 Stabilized Construction Exit



Conditions Where Practice Applies

Wherever traffic will be leaving a construction site and moving directly onto a public road or other paved area.

Design Criteria

Aggregate Size

If stone is utilized, FDOT No. 1 Coarse Aggregate, 1½ to 3½ inch (4 to 9 cm) stone is suggested. Wood chips may be used for single-family residential construction, provided that they can be prevented from floating away during a storm event. Manufactured products also are available to prevent or reduce the amount of sediment tracked onto

Dimensions

If stone is used, then the aggregate layer must be at least 6 inches (15 cm) thick. It must extend the **FULL WIDTH** of the vehicular ingress and egress area. The length of the entrance must be at least 50 feet (20 m). The exit should widen at its connection to the roadway to accommodate the turning radius of large trucks (see Figure 4.3a).

Washing

If conditions on the site are such that most of the mud is not removed by the vehicles traveling over the stone, then the vehicle tires must be washed before entering a public road. Wash water must be carried away from the entrance to a settling area to remove sediment (see Figure 4.3b). A wash rack may also be used to make washing more convenient and effective (see Figure 4.3c).

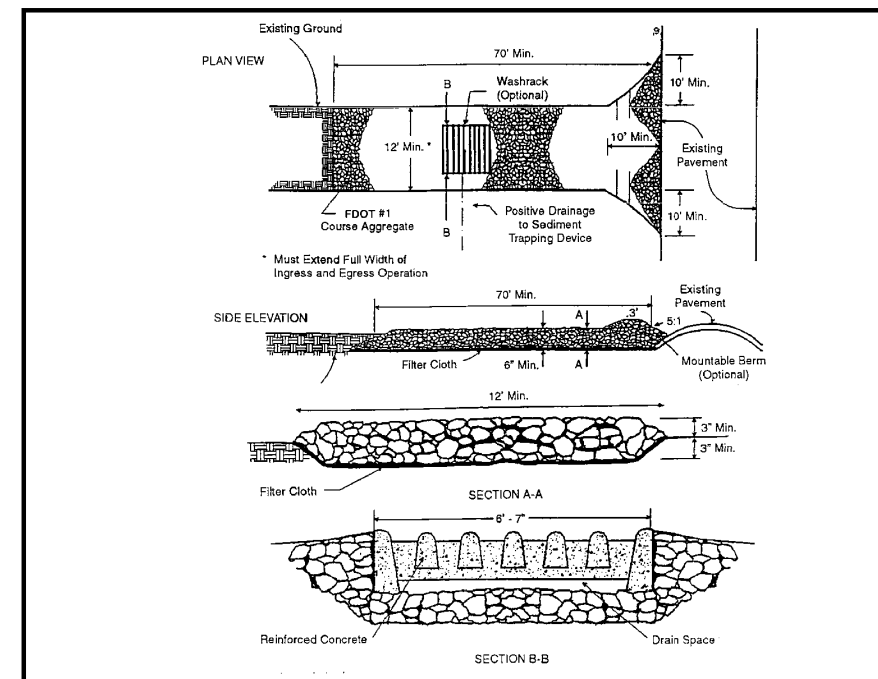


Figure 4.3c. Construction Entrance with Wash Rack

Source: 1993 Maryland Standards for Soil Erosion and Sediment Control

Location

The entrance should be located to provide for maximum utility by all construction vehicles.

Construction Specifications

The entrance area should be cleared of all vegetation, roots, and other objectionable material. A geotextile should be laid down to improve stability and simplify maintenance when gravel is used. The gravel shall then be placed over the geotextile to the specified dimensions.

Maintenance

The stabilized construction exit shall be maintained in a condition that will prevent the tracking or flow of mud onto public rights of way. This may require periodic maintenance as conditions demand, and the repair and/or cleanout of any structures used to trap sediments. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately. Look for signs of trucks and trailer equipment "cutting corners" where the construction exit meets the roadway. Sweep the paved road as needed.

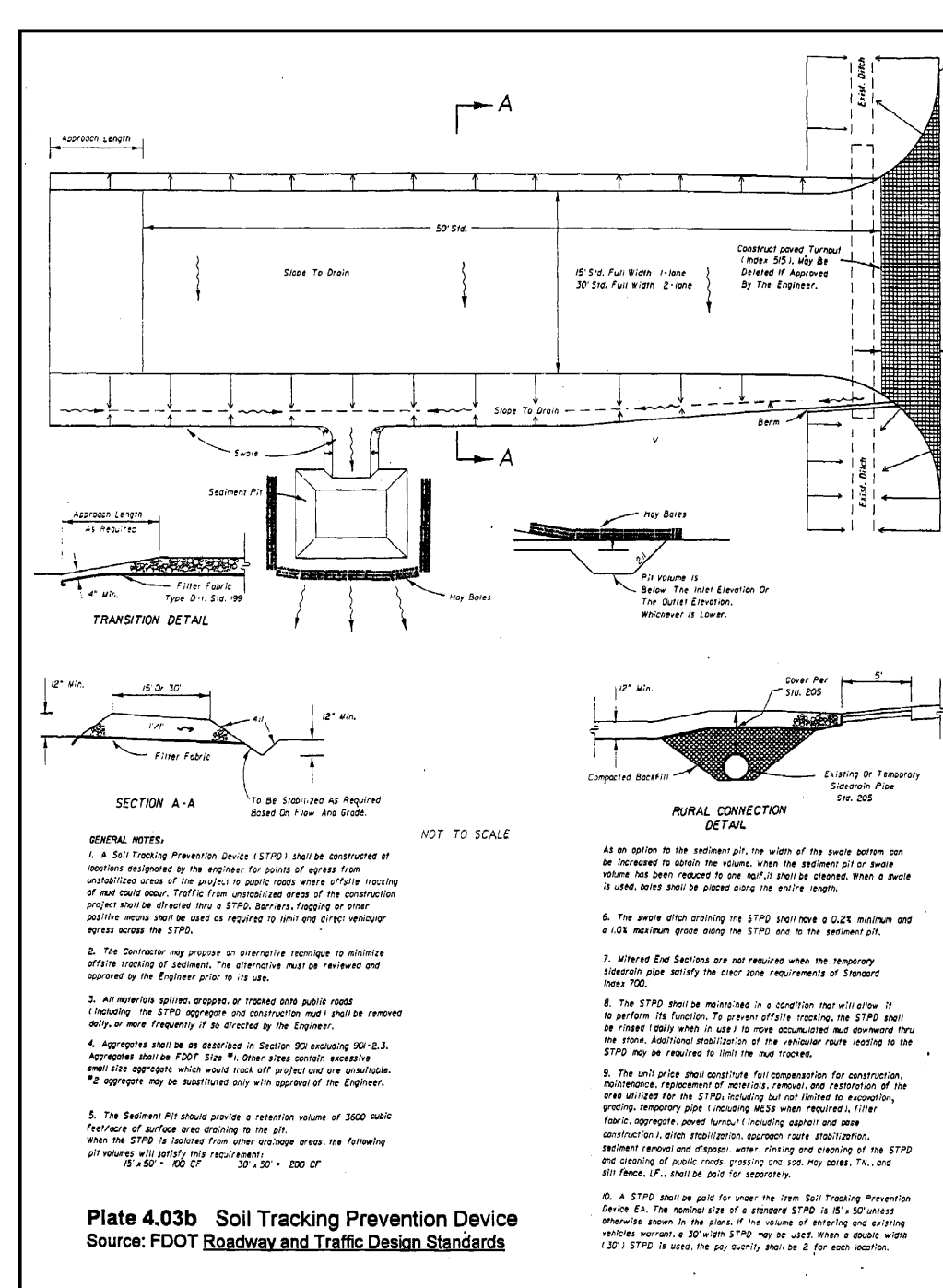


Figure 4.3b. Soil Tracking Prevention Device

Source: FDOT Roadway and Traffic Design Standards

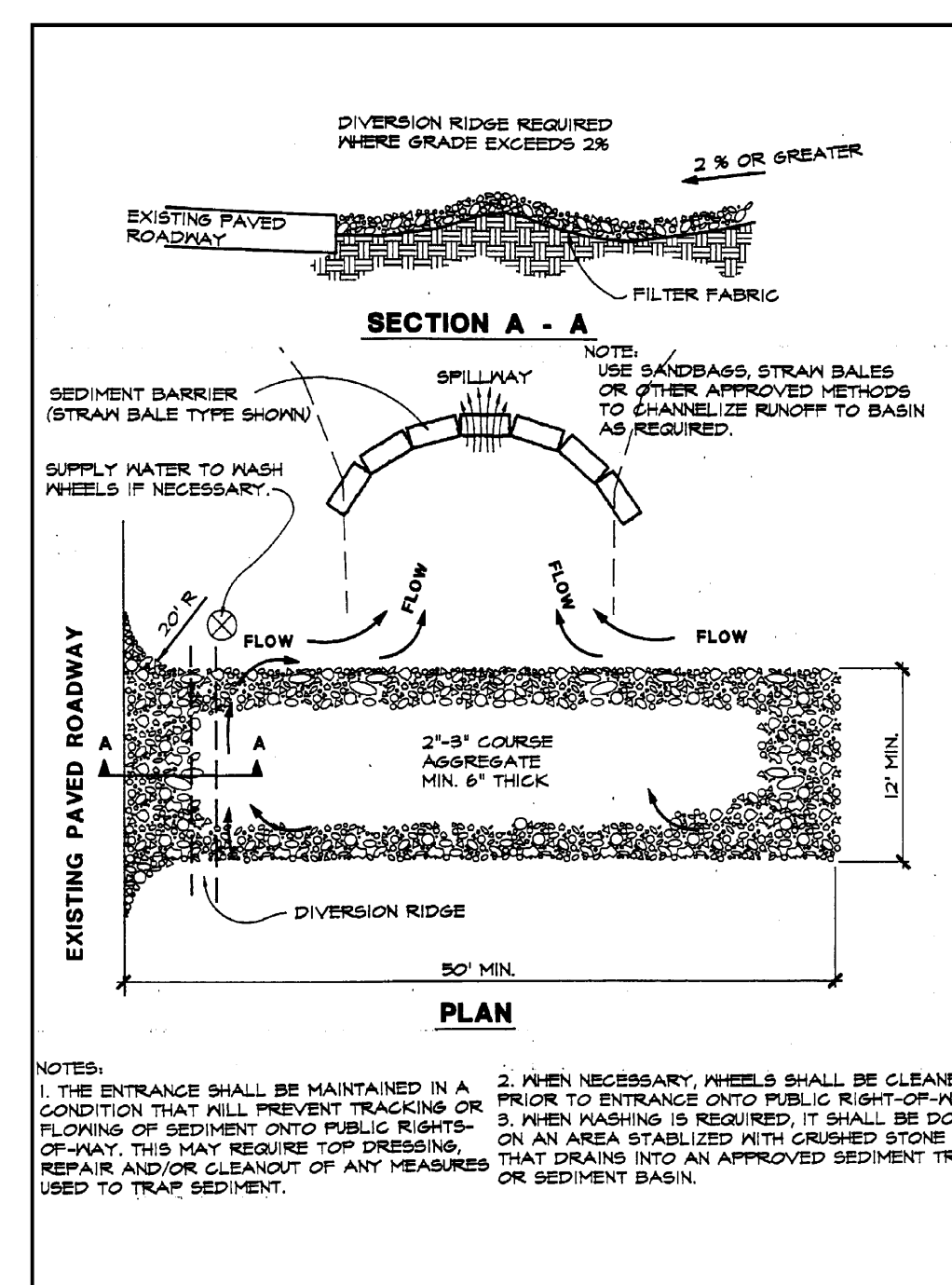


Figure 4.3a. Temporary Gravel Construction Entrance

Source: Erosion Draw

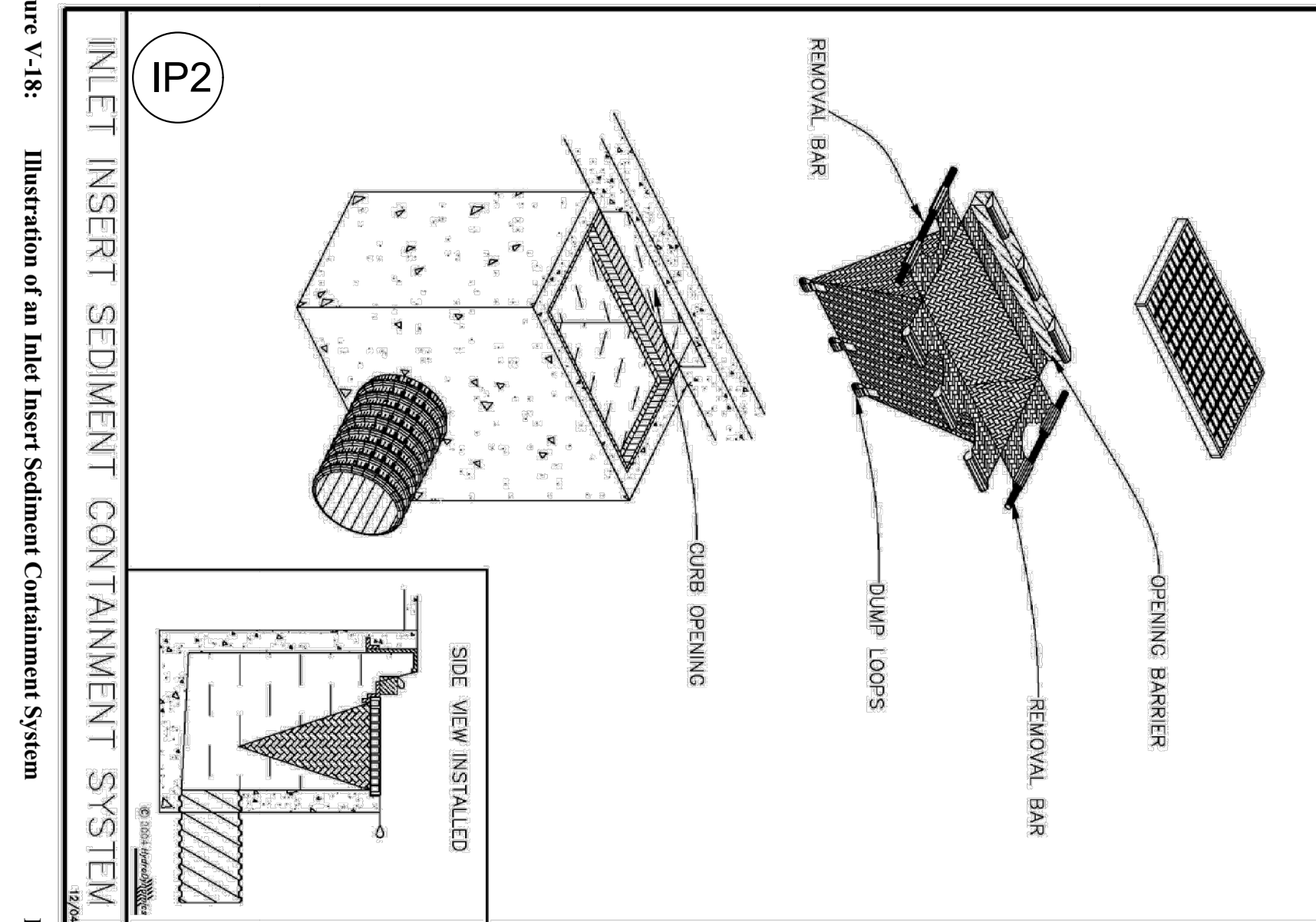


Figure V-18:

Illustration of an Inlet Insert Sediment Containment System

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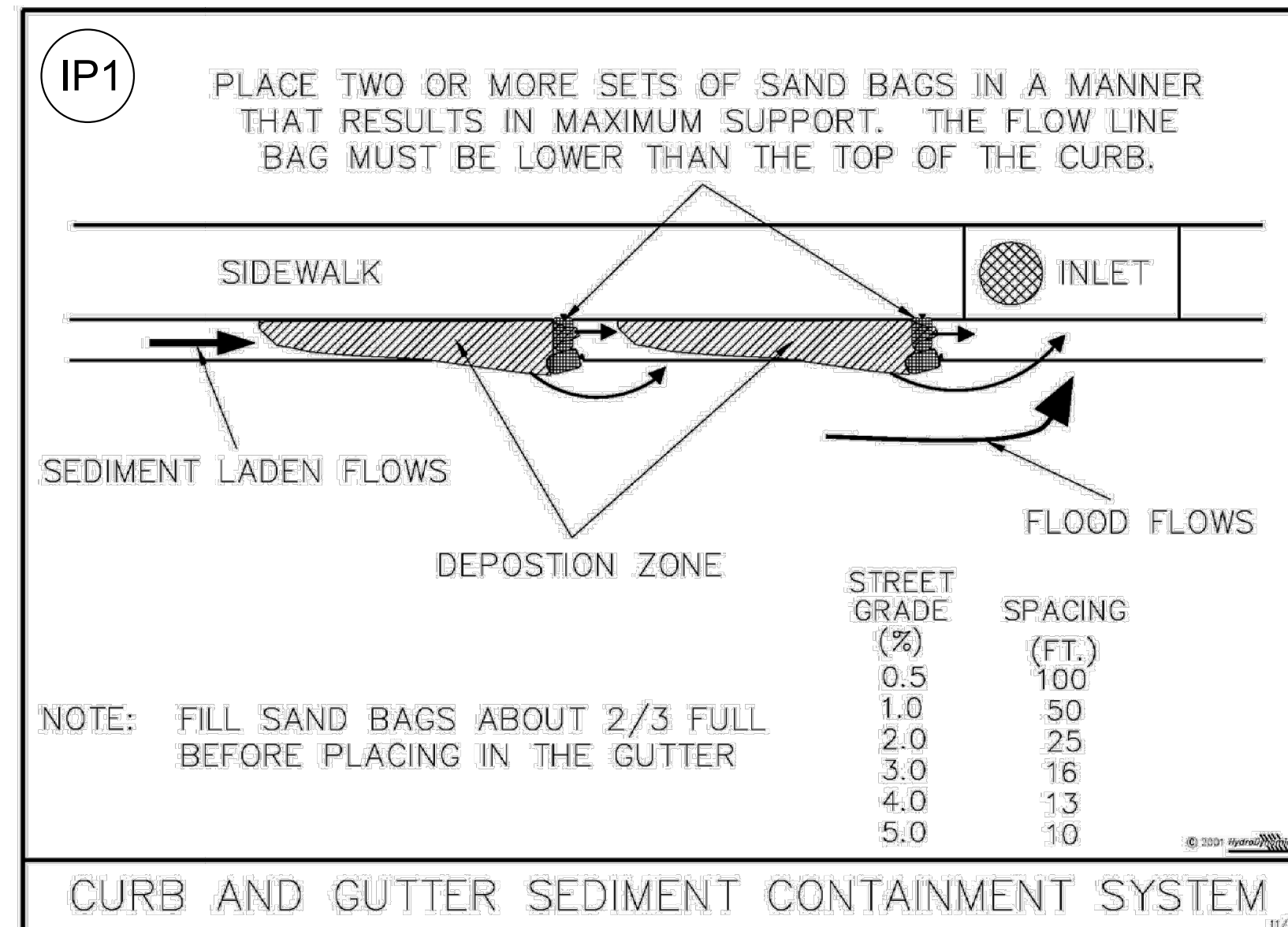
V-42

Figure V-19:

Illustration of a Curb and Gutter Sediment Containment System

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V-40



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A CITY OF ZEPHYRHILLS 04/20/23

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Scott K. Stannard, P.E.

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EROSION CONTROL
DETAILS

Drawing Name:

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Checked: SKS

Drawing No.

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7.6 Sodding

Conditions Where Practice Applies

1. Disturbed areas that require immediate vegetative covers, or where sodding is preferred to other means of grass establishment.
2. The following locations are particularly suited to stabilization with sod:
 - a. Slopes and buffer strips
 - b. Waterways and swales, especially around drop inlets.
 - c. Residential or commercial lawns where quick use or aesthetics are factors.

Specifications

Soil Preparation

1. Prior to soil preparation, areas to be sodded shall be brought to final grade in accordance with the approved plan. These operations should leave as much topsoil as possible or replace the topsoil to a depth of 4 inches (10 cm) (see Figure 7.6a).
2. Soil tests should be carried out to determine the exact requirements for lime. They may be conducted by the state Soil Testing Laboratory at the University of Florida or a reputable commercial laboratory. Information on state soil tests is available from county Cooperative Extension agents. When a soil test is not carried out, pulverized agricultural limestone may be added at a rate of 100 pounds per 1,000 square feet (2 tons/acre).
3. Before sod is laid, the soil surface shall be clear of trash, debris, roots, branches, stones, and clods more than 2 inches (5 cm) in length or diameter. Sod shall not be applied to gravel or other non-soil surfaces.
4. Any irregularities in the soil surface resulting from topsoil or other operations shall be filled or leveled to prevent the formation of depressions or water pockets.
5. Areas to be topsoiled and the topsoil used shall fulfill the requirements of TOPSOILING (in this chapter). No sod shall be spread on soil that has been treated with soil sterilants until enough time has elapsed to permit the dissipation of toxic materials.

Sod Quality

1. Sod should be free of weeds and undesirable coarse weedy grasses. If possible, Certified or Approved turfgrass sod should be used.
2. Sod shall be machine cut at a uniform soil thickness of ¾ inch (20 mm), plus or minus ¼ inch (6 mm), at the time of cutting. This thickness shall exclude shoot growth and thatch.
3. Pieces of sod shall be cut to the supplier's standard width and length, with a maximum allowable deviation in any dimension of 5%. Torn or uneven pads are not acceptable.
4. Standard-size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended from a firm grasp on one end of the section.
5. Sod shall not be cut or laid in excessively wet or dry weather.
6. Sod shall be harvested, delivered, and installed within 36 hours.

Installation

Solid Sodding

1. Irrigate areas to be sodded with a minimum of ½ inch (13 mm) of water, unless recent rains have provided an equivalent amount of moisture (see Figure 7.6b).
2. The first row of sod shall be laid in a straight line, with subsequent rows placed parallel to and butting tightly against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Care shall be exercised to ensure that the sod is not stretched or overlapped and that all joints are butted tightly to prevent voids that would dry out the roots.
3. On slopes of 3:1 or greater, or wherever erosion may be a problem, sod shall be laid with staggered joints and secured by pegging or other approved methods. Sod shall be installed with the length perpendicular to the slope (on the contour). Begin laying sod at the bottom of the slope and work uphill. On very steep slopes, the use of ladders facilitates the work and prevents damage to the sod.
4. Surface water flow cannot always be diverted from the face of the slope, but a capping strip of heavy jute or erosion netting, properly secured, along the crown of the slope provides extra protection against the lifting and undercutting of sod. The same technique is used to fortify sod in water-carrying channels and other critical areas. Use wire staples to anchor heavy jute or erosion netting in channels.
5. As the sodding of clearly defined areas is completed, sod shall be rolled or tamped to provide firm contact between roots and soil.
6. After rolling, sod shall be irrigated deeply enough that the underside of the sod pad and the soil 4 inches (10 cm) below the sod are thoroughly wet.
7. During the first week, in the absence of adequate rainfall, watering shall be performed as often as necessary to maintain moist soil to a depth of at least 4 inches (10 cm).
8. The first moving shall not be attempted until the sod is firmly rooted, usually after 2 to 3 weeks. Not more than one-third of the grass leaf should be removed at any one cutting.
9. Two to 4 weeks after sod is laid, fertilize at an application rate of 300 pounds per acre or 6.7 pounds per 1,000 square feet with 15-0-15 or 15-2-15 slow release.

Spot Sodding

1. Spot sodding is the planting of plugs or blocks, a minimum of 4 inches (10 cm) in diameter or square, of sod at measured intervals. The plugs or blocks should be placed 1 foot (30 cm) apart.
2. Sod spots in a row should be placed alternately and not directly opposite sod spots in adjacent rows.
3. Fit the plugs or blocks tightly into the prepared holes and tamp them firmly into place.
4. Irrigate deeply enough that the underside of the sod spot and the soil 4 inches (10 cm) below the sod are thoroughly wet.

Strip Sodding

1. Areas to be strip sodded should be fertilized, limed, prepared, and smoothed as in solid sodding.
2. Lay the strips end to end in rows 1 to 1½ feet (30 to 45 cm) apart, with the strips a minimum of 2 to 4 inches (5 to 10 cm) wide.

3. Roll or tamp the strips thoroughly to create firm contact between roots and soil.
4. Irrigate deeply enough that the underside of the strips and the soil 4 inches (10 cm) below the strips are wet.

Sodded Swales and Waterways

1. Care should be taken to prepare the soil adequately in accordance with this specification. The sod type shall consist of plant materials able to withstand the designed velocity (see STORMWATER CONVEYANCE CHANNEL) (in Chapter 6).
2. Sod strips in swales and waterways shall be laid perpendicular to the direction of flow. Care should be taken to butt the ends of the strips tightly.
3. After rolling or tamping, sod shall be pegged or stapled to resist washout during the establishment period. Chicken wire, jute, or other netting may be pegged over the sod for extra protection in critical areas.
4. All other specifications for this practice shall be adhered to when sodding a swale or waterway.

Maintaining Established Sod

1. After the first week, sod shall be watered as necessary to maintain adequate moisture in the root zone and prevent dormancy.
2. Apply lime and fertilizer under a regular program based on soil tests and on the use and general appearance of the vegetative cover. In the absence of a soil test, apply 1 to 2 tons per acre (45 to 90 pounds/1,000 square feet) (2.24 to 4.48 t/ha) of finely ground agricultural limestone every 3 years. Apply 300 pounds per acre (6.7 pounds/1,000 square feet) of 15-0-15 or 15-2-15 slow-release fertilizer in the spring and fall.
3. Mow to control weeds, improve the appearance of the vegetative cover, and reduce fire hazard, as necessary. In general, the coarser the leaf texture of the grass, the higher it should be cut. Continuous, close mowing results in a loss of vigor and reduced stand. No more than one-third of the grass leaf should be removed in any mowing.

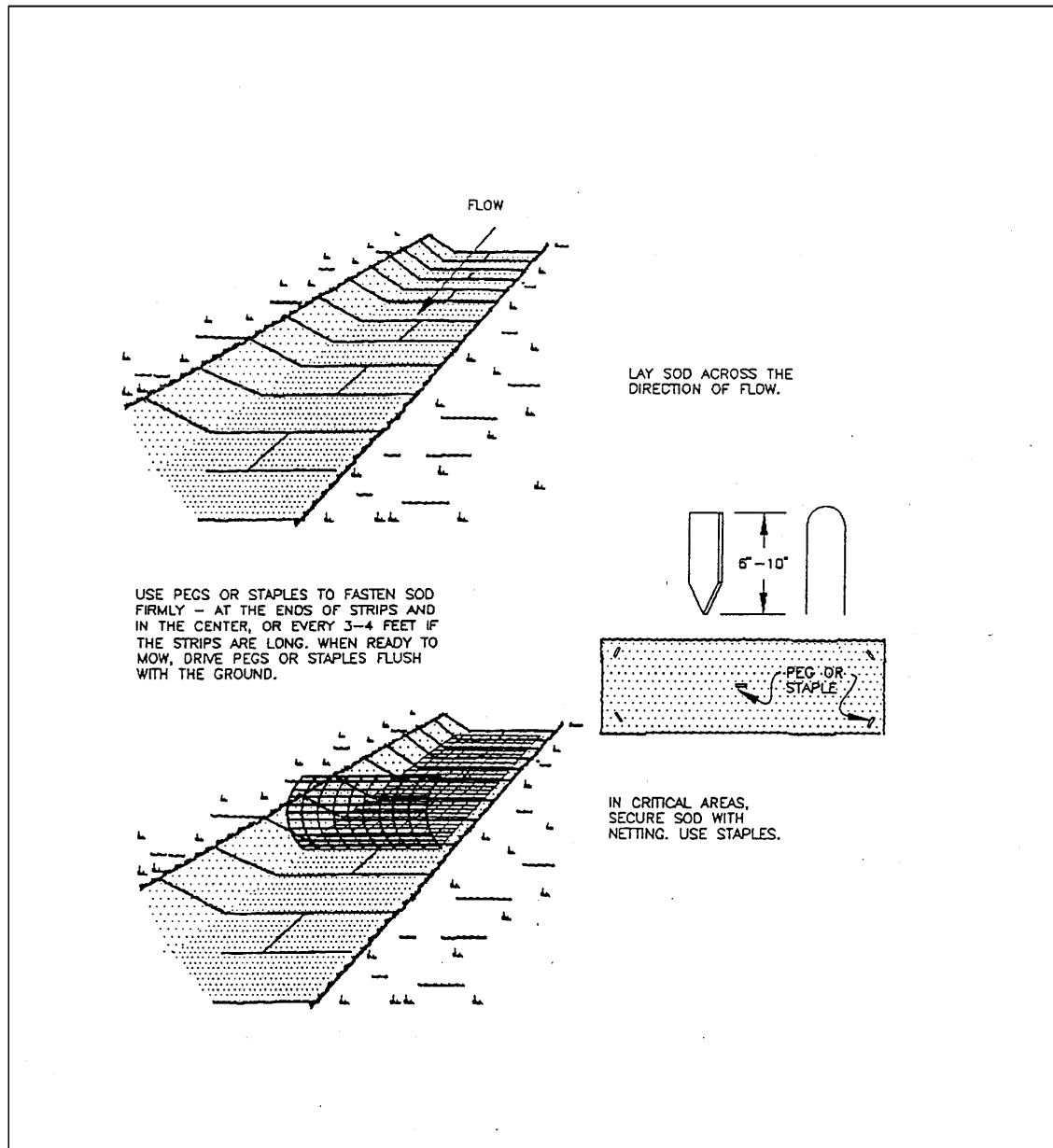


Figure 7.6b. Sodding Swales and Waterways

Source: Virginia DSWC

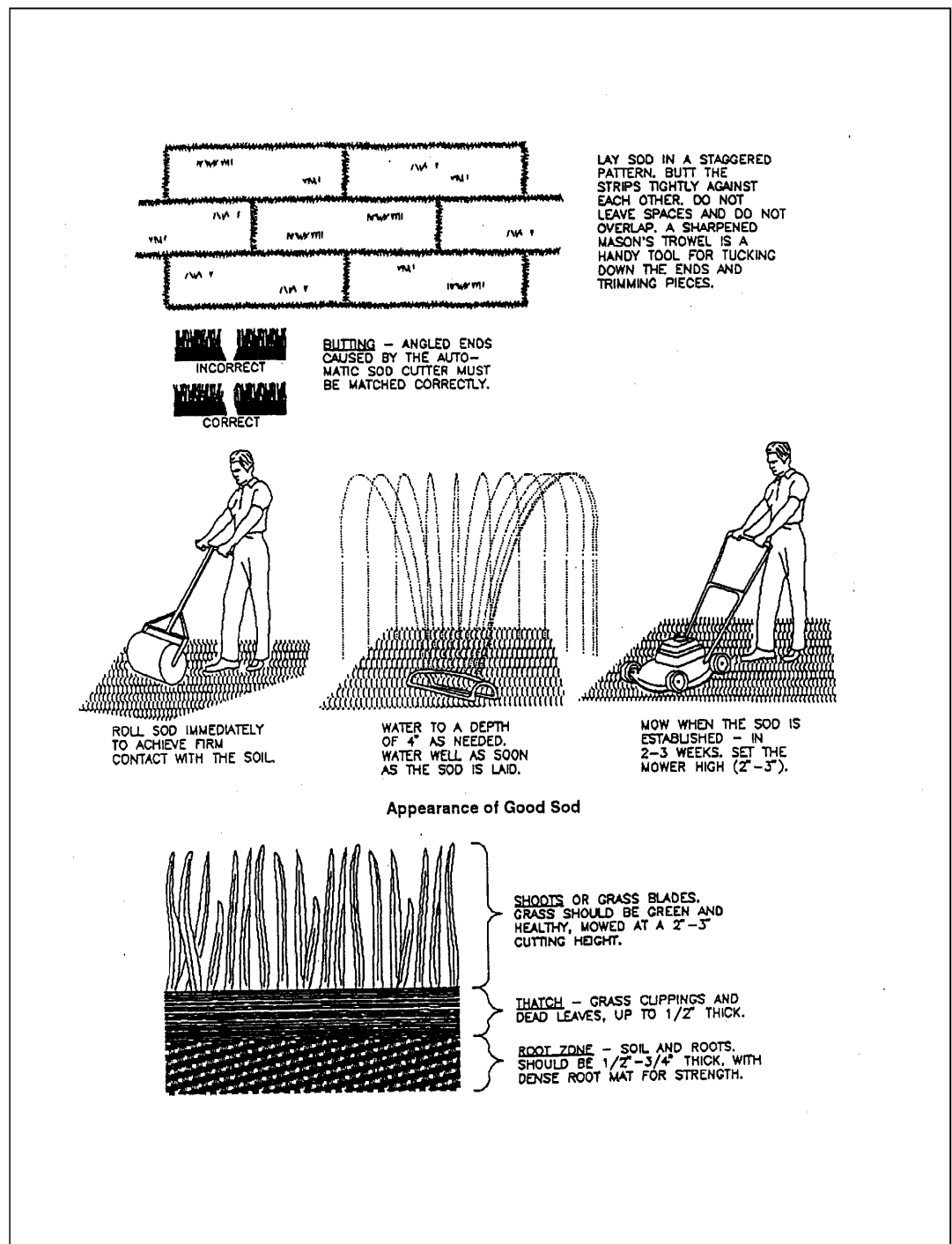


Figure 7.6a. Sodding

Source: Virginia DSWC

7.4 Temporary Seeding

Conditions Where Practice Applies

Where exposed soil surfaces are not to be lime graded for periods of 7 days or more. Such areas include denuded areas, soil stockpiles, berms, dams, the sides of sediment basins, and temporary road banks.

Specifications

Prior to seeding, install necessary erosion control practices such as berms, waterways, and basins.

Plant Selection

Select plants appropriate to the season, region, and site conditions. Consult with your local Agricultural Extension agent, county; FDEP, water management district, or FDOT office, or see Table 1.65a of the Florida Development Manual.

Seedbed Preparation

To control erosion on bare soil surfaces, plants must be able to germinate and grow. Seedbed preparation is essential. A soil test should be taken to determine liming and fertilization requirements. In the absence of a soil test, the following guidelines apply:

1. **Liming** – Where soils are known to be highly acid (pH 6.0 and lower), lime should be applied at the rate of 2 tons of pulverized agricultural limestone per acre.
2. **Fertilizer** – Shall be applied as 217.5 pounds per acre (5 pounds/1,000 square feet) (504 kg/ha) of 50% slow-release 10-20-20 or equivalent. Lime and fertilizer shall be incorporated into the top 2 to 4 inches (5 to 10 cm) of the soil. If quick-release nitrogen is used, apply 2 to 3 weeks after seed has sprouted.
3. **Surface Roughening** – If the area has been recently loosened or disturbed, no further roughening is required. When the area is compacted, crusted, or hardened, the soil surface shall be loosened by discing, raking, harrowing, or other acceptable means (see SURFACE ROUGHENING [in this chapter]).
4. **Tracking** – Tracking with bulldozer cleats is most effective on sandy soils. This practice often causes the undue compaction of the soil surface, especially in clayey soils, and does not aid plant growth as effectively as other methods of surface roughening.

Seeding

Seed shall be evenly applied with a cyclone seeder, drill, cultipacker-seeder, or hydroseeder. Small grains shall be planted no more than 1 inch deep. Grasses and legumes shall be planted no more than ¼ inch (6 mm) deep.

Mulching

1. **Mulch** should usually be applied to reduce damage from water runoff or wind erosion, and to improve moisture conditions for seedlings. Mulching without seeding should be considered for very short-term protection. The use of mulch is a judgment decision based on the time of seeding and conditions of individual sites. When used, mulch shall be applied according to MULCHING (in this chapter).
2. Seedlings made on slopes in excess of 3:1, or on adverse soil conditions, or during excessively hot or dry weather, shall be mulched according to MULCHING (in this chapter).
3. Seedlings made during optimum spring and summer seeding dates, with favorable soil and site conditions, may not require mulch.

Reseeding

Areas that fail to establish enough vegetative cover to prevent rill erosion will be filled in with proper topsoil and reseeded as soon as they are identified.

SEED TYPES		Table 3 SEED APPLICATION RATES (KILOGRAMS PER HECTARE)			
		ZONE 1 (NORTH OF INTERSTATE 4)			
		COASTAL		INLAND	
Permanent Grasses	Unfilled bermuda	6.8 kg	6.8 kg	4.5 kg	6.8 kg
	Argentine/Pennsola bahi	-	-	13.6 kg	13.6 kg
Temporary Grasses	Brown-top millet	9 kg	-	9 kg	-
	Annual ryegrass	-	9 kg	-	9 kg

Note: Bahiá 1.814 kg - 3.628 kg per 93 sq m; bermuda 1.814 kg - 3.628 kg per 93 sq m. When seeding centipede grass, use approximately 5 kg of seed per hectare. Centipede may be seeded from April to September throughout Florida.

SEED TYPES		Table 3 SEED APPLICATION RATES (KILOGRAMS PER HECTARE)			
		ZONE 2 (SOUTH OF INTERSTATE 4)			
		COASTAL		INLAND	
Permanent Grasses	Unfilled bermuda	6.8 kg	6.8 kg	4.5 kg	6.8 kg
	Argentine/Pennsola bahi	-	-	13.6 kg	13.6 kg
Temporary Grasses	Brown-top millet	9 kg	-	9 kg	-
	Annual ryegrass	-	9 kg	-	9 kg

Note: Bahiá 1.814 kg - 3.628 kg per 93 sq m; bermuda 1.814 kg - 3.628 kg per 93 sq m. When seeding centipede grass, use approximately 5 kg of seed per hectare. Centipede may be seeded from April to September throughout Florida.

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7.5 Permanent Seeding

Conditions Where Practice Applies

1. Disturbed areas where permanent, long-lived vegetative cover is needed to stabilize the soil.
2. Rough-graded areas that will not be brought to final grade for a year or more.

Specifications

Selection of Plant Materials

1. The selection of plant materials is based on climate, topography, soils, land use, and planting season. To determine which plant materials are best adapted to a specific site, see Tables 1.66b and 1.66c of the Florida Development Manual, which describe plant characteristics and list recommended varieties.
2. Table 1.66a of the Florida Development Manual lists appropriate seeding mixtures for various site conditions in Florida. These mixtures are designed for general use and are known to perform well on the sites described. Adhere to these mixtures whenever feasible. Check Tables 1.66b and 1.66c for recommended varieties.

Seedbed Requirements

Vegetation should not be established on slopes that are unsuitable because of inappropriate soil texture, poor internal structure or internal drainage, a high volume of overland flow, or excessive steepness, until measures have been taken to correct these problems.

To maintain a good stand of vegetation, the soil must meet certain minimum requirements as a growth medium. The existing soil must meet the following criteria:

1. Enough fine-grained material to maintain adequate moisture and nutrient supply.
2. Sufficient pore space to permit root penetration. A bulk density of 1.2 to 1.5 indicates that sufficient pore space is present. A fine granular or crumb-like structure is also favorable.
3. Sufficient depth to provide an adequate root zone. The depth to rock or impermeable layers such as hardpans shall be 12 inches (30 cm) or more, except on slopes steeper than 2:1, where the addition of soil is not feasible.
4. A favorable pH range for plant growth. If the soil is so acid that a pH range of 6.0 to 7.0 cannot be attained by the addition of pH-modifying materials, then the soil is unsuitable for plant roots.
5. Freedom from toxic amounts of materials harmful to plant growth.
6. Freedom from excessive quantities of roots, branches, large stones, large clods of earth, or trash of any kind. Clods and stones may be left on slopes steeper than 3:1 if they are to be hydroseeded.

If any of the above criteria cannot be met—i.e., if the existing soil is too coarse, dense, shallow, acid, or contaminated to foster vegetation—then topsoil should be applied in accordance with TOPSOILING (in this chapter). The necessary mechanical erosion and sediment control practices will be installed prior to seeding. Grading will be carried out according to the approved plan. Surfaces will be roughened in accordance with SURFACE ROUGHENING (in this chapter).

Soil Conditioners

To modify the texture, structure, or drainage characteristics of a soil, the following materials may be added to the soil:

1. Peat shall be sphagnum moss peat, hyprum moss peat, reed-sedge peat, or peat humus, from freshwater sources. Peat shall be shredded and conditioned in storage piles for at least 6 months after excavation.
2. Sand shall be clean and free of toxic materials.
3. Vermiculite shall be horizontal grade and free of toxic substances.
4. Composted manure shall be stable or cattle manure not containing undue amounts of straw or other bedding materials or toxic chemicals. Phosphorus shall be limited to soil test recommendations.
5. Thoroughly rotted sawdust shall be 6 pounds of nitrogen added to each cubic yard (3.5 kg/m³) and shall be free of stones, sticks, and toxic substances.
6. Where local ordinances permit, treated sewage sludge may be used in accordance with local, state, and federal regulations. The use of treated sewage sludge shall be limited to soil test recommendations.

Lime and Fertilizer

Lime and fertilizer needs should be determined by soil tests. Soil tests may be performed by the Cooperative Extension Service Soil Testing Laboratory at the University of Florida, or by a reputable commercial laboratory. Information on the state's Soil Testing Laboratory is available from county extension agents. Under unusual conditions where it is not possible to obtain a soil test, the following soil amendments will be applied:

LIME: 2 tons per acre finely ground agricultural or dolomitic limestone (90 pounds per 1,000 square feet) (4.48 t/ha)

FERTILIZER: Mixed grasses and legumes: 150 pounds per acre of 5-25-10 (3.5 pounds per 1,000 square feet)

Legume stands only: 150 pounds per acre of 5-20-10 (3.5 pounds per 1,000 square feet)

Grass stands only: 870 pounds per acre of 5-5-10 (1.12 t/ha) and 57 pounds of 38-0-0 in spring (1.3 pounds per 1,000 square feet)

220 pounds per acre of 10-5-10 and 57 pounds of 38-0-0 in fall (1.3 pounds per 1,000 square feet)

Other fertilizer formulations may be used, provided they supply the same amounts and proportions of plant nutrients.

Lime and fertilizer shall be incorporated into the top 4 to 6 inches (10 to 15 cm) of the soil by discing or other means. When applying lime and fertilizer with a hydroseeder, apply to a rough, loose surface.

Seeding

1. Certified seed should be used for all permanent seeding whenever possible.
2. Legume seed should be inoculated with the inoculant appropriate to the species. The seed of lespedezas, crown vetch, and clovers should be scarified to promote uniform germination.
3. Apply seed uniformly with a cyclone seeder, drill, cultipacker-seeder, or hydroseeder on a firm, friable seedbed. The maximum seeding depth should be ¼ inch.
4. During hydroseeding, to avoid seed damage, it is recommended that if a machinery breakdown of 30 minutes to 2 hours occurs, 50% more seed be added to the tank, based on the proportion of the slurry remaining in the tank. Beyond 2 hours, a full rate of new seed may be necessary. Often hydroseeding contractors prefer not to apply lime in their rigs, as it is abrasive. In inaccessible areas, lime may have to be applied in pelletized or liquid form, separately. The rates of wood fiber should be at least 2,000 pounds per acre (2.24 t/ha). Surface roughening is particularly important when hydroseeding, as a roughened slope provides some natural coverage of lime, fertilizer, and seed.
5. Legume inoculants should be used by the date indicated on the container. When dry seeding, use 4 times the manufacturer's

Mulching

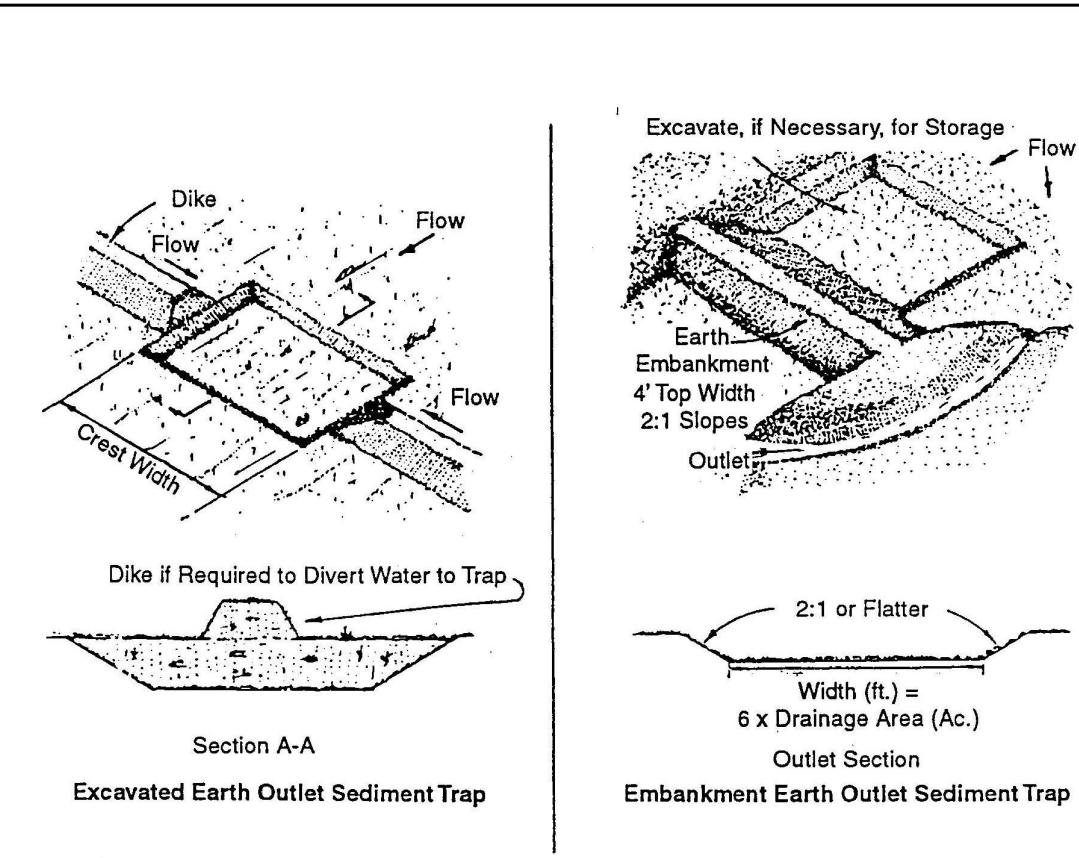
All permanent seeding must be mulched immediately upon the completion of seed application (refer to the extended discussion in MULCHING below).

Maintenance of New Seedlings

1. **Irrigation** – New seedlings should be supplied with adequate moisture. Supply water as needed, especially late in the season, in abnormally hot or dry weather, or on adverse sites. Water application rates should be controlled to prevent runoff. Inadequate amounts of water may be more harmful than no water.
2. **Reseeding** – Inspect seeded areas for failure and make necessary repairs and reseeding within the same season, if possible:
 - a. If vegetative cover is inadequate to prevent rill erosion, overseed and fertilize in accordance with soil test results.
 - b. If a stand has less than 40% cover, re-evaluate the choice of plant materials and quantities of lime and fertilizer. Re-establish the stand following seedbed preparation and seeding recommendations, omitting lime and fertilizer in the absence of soil test results. NOTE: If vegetation has failed to grow, the soil must be tested to determine if acidity or nutrient imbalances are responsible.
3. **Fertilization** – Seedlings should be fertilized 1 year after planting to ensure proper stand density:
 - a. To established all-grass stands, apply 300 pounds per acre of 15-0-15 or 15-2-15 slow release (6.7 pounds per 1,000 square feet) between August 15 and November 15 (the first fall following seeding).
 - b. To legume-and-grass stands or pure legume stands, apply 150 pounds per acre of 0-20-20 (3.5 pounds per 1,000 square feet) in early May, or between August 15 and October 15.

GENERALLY, A STAND OF VEGETATION IS NOT DETERMINED TO BE FULLY ESTABLISHED UNTIL SOIL COVER HAS BEEN MAINTAINED FOR 1 FULL YEAR FROM PLANTING. DISTURBED AREAS THAT ARE TO BE STABILIZED WITH PERMANENT VEGETATION MUST BE SEEDED OR PLANTED WITHIN 15 DAYS AFTER FINAL GRADE IS REACHED, UNLESS TEMPORARY STABILIZATION IS APPLIED.

SEDIMENT TRAP



Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material, or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
4. The structure shall be inspected after each rain and repairs made as needed.
5. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
6. The structure shall be removed and area stabilized when the drainage area has been properly stabilized.
7. All cut and fill slopes shall be 2:1 or flatter.
8. Outlet crest elevation shall be at least one foot below the top of the embankment.

Plate 4.25a Earth Outlet Sediment Trap

Source: NRCS

Construction Specifications

1. The area under the embankment shall be cleared, grubbed, and stripped of any vegetation and root mat. To facilitate cleanup, the pool area should be cleared.
2. Fill material for the embankment shall be free of roots or other woody vegetation, organic material, large stones, and other objectionable material. The embankment should be compacted in 8 inch (20 cm) layers by traversing with construction equipment.
3. The earthen embankment shall be seeded with temporary or permanent vegetation (see Sections 6.65 and 6.66) within 15 days of construction.
4. Construction operations shall be carried out so that erosion and water pollution are minimized.
5. The structure shall be removed and the area stabilized when the upslope drainage area has been stabilized.

Maintenance

1. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to 1/2 the design volume of the trap. Sediment removed from the basin shall be deposited in a suitable area and in such a manner that it will not erode.
2. The structure should be checked regularly to insure that it is structurally sound and has not been damaged by erosion or construction equipment. The height of the outlet should be checked to ensure that its center is at least one foot (30 cm) below the top of the embankment.

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7.7 Mulching

Conditions Where Practice Applies

1. Areas that have been permanently seeded should be mulched immediately after seeding.
2. Areas that cannot be seeded because of the season should be mulched to temporarily protect the soil surface. An organic mulch (not wood fiber alone) shall be used, and the area should then be seeded as soon as feasible in spring.
3. Mulch shall be used together with plantings of trees, shrubs, or certain ground covers that do not provide adequate soil stabilization by themselves.
4. Mulch shall be used in conjunction with the temporary seeding operations specified in **TEMPORARY SEEDING** (in this chapter).
5. Mulches used in areas of concentrated flows or frequent inundation shall be properly anchored to prevent them from floating away.

Specifications

Types of Mulches

1. **Organic Mulches** – Organic mulches may be used in any area where mulch is required, subject to the restrictions noted in **Table 7.1**. Select mulch material based on site requirements, the availability of materials, and the availability of labor and equipment. The table lists the most commonly used organic mulches. Other materials, such as peanut hulls and cotton burs, may also be used.

Mulch materials shall be spread uniformly, by hand or machine. When spreading straw by hand, divide the area to be mulched into approximately 1,000-square-foot sections and place 70 to 90 pounds (1½ to 2 bales) (30 to 40 kg) of straw in each section, to facilitate uniform distribution.
2. **Nets, Mats, and Blankets** – Nets may be used alone on level areas, on slopes no steeper than 3:1, and in waterways, as specified in **STORMWATER CONVEYANCE CHANNEL** (in Chapter 6). When mulching is done in late fall or during June, July, or August, or where soil is highly erodible, net should only be used in conjunction with an organic mulch such as straw. When net and organic mulch are used together, the net should be installed over the mulch, except when the mulch is wood fiber. Wood fiber may be sprayed on top of the installed net. Excelsior binders are protective mulches and may be used alone on erodible soils and during all times of year.

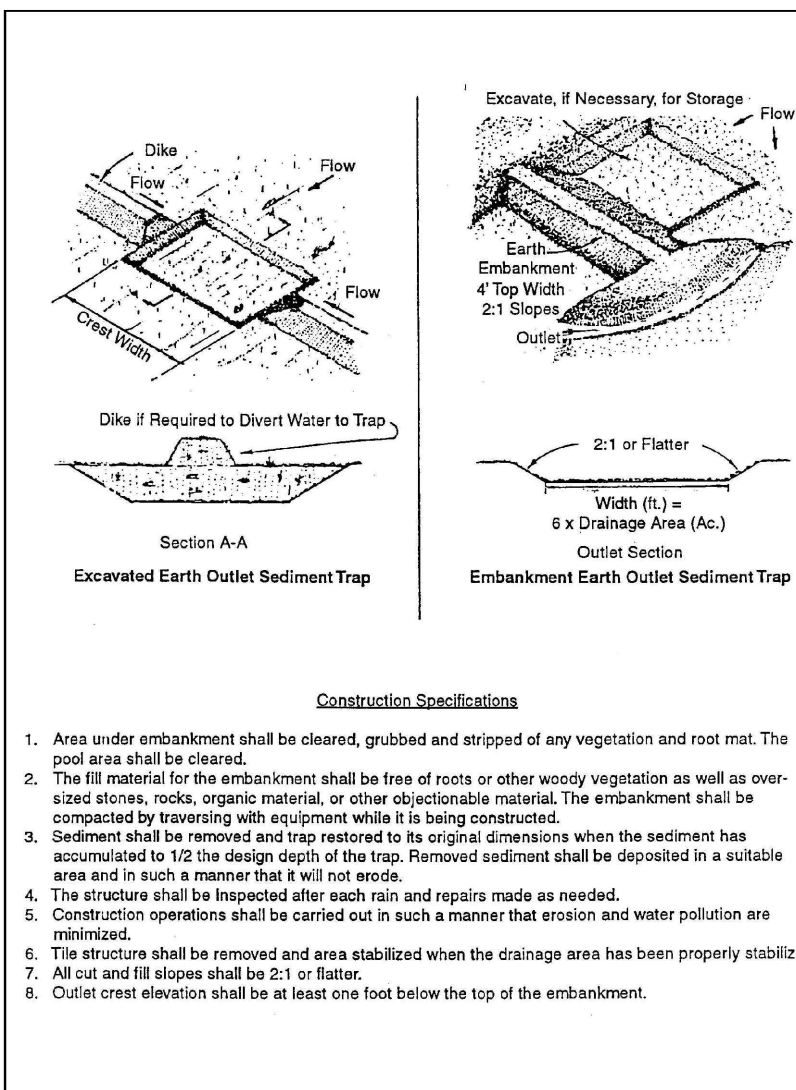
Jute net shall be heavy, uniform cloth woven of single jute yarn, which if 36 to 48 inches (90 to 120 cm) wide shall weigh an average of 1.2 pounds per linear yard (0.6 kg/m). Other products designed to control erosion shall conform to the manufacturer's specifications and should be applied in accordance with the manufacturer's instructions, provided that the instructions are at least as stringent as this specification. Examples of these products include Erosionet, Holdgro, Weedchek, and Curlex. (NOTE: The use of trade names does not constitute a product endorsement by FDEP). In no case shall these products cover less than 30% of the soil surface.

Table 7.1. Organic Mulch Materials and Application Rates

Mulches	Rate Per Acre	Rate Per 1,000 Square Feet	Notes
Straw	1.5 – 2 tons	70 – 90 pounds.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Wood Fibers	0.5 – 1.0 tons	25 – 50 pounds.	Fibers 1.5 inch minimum length. Do not use alone in winter or during hot, dry weather. Apply as slurry.
Corn Stalks	4 – 6 tons	185 – 275 pounds.	Cut or shredded in 4 to 6 inch lengths. Air dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood Chips	4 – 6 tons	185 – 275 pounds.	Free of coarse matter. Air dried. Treat with 12 pounds nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower or chip handler, or by hand.
Shredded Bark Chips	50 – 70 cubic yards	1 – 2 cubic yards.	Free of coarse matter. Air dried. Do not use in fine turf areas. Apply with mulch blower or chip handler, or by hand.

Source: Virginia SWCC

3. **Chemical Mulches** – Chemical mulches may be used alone only in the following situations:
 - a. Where no other mulching material is available.
 - b. In conjunction with temporary seeding when mulch is not required for that practice.
 - c. From May 1 to June 15 and September 15 to October 15, provided that they are used on areas with slopes no steeper than 4:1 that have been roughened in accordance with **SURFACE ROUGHENING** (in this chapter).



Outlet

The outlets shall be designed, constructed and maintained so that sediment does not leave the trap and that erosion of the outlet does not occur. A trap may have several different outlets with each outlet conveying part of the flow based on the criteria below. The combined outlet capacity shall be sufficient for the drainage area. For example, a 12 foot (3.6 m) earth outlet, adequate for 2 acres (0.8 ha), and a 12 inch (30 cm) pipe outlet, adequate for 1 acre (0.4 ha), could be used for a three acre (1.2 ha) drainage area.

There are four types of outlets for sediment traps. Each sediment trap is named according to the type of outlet that it has. Each type has different design criteria and will be discussed separately.

1. **An Earth Outlet Sediment Trap** consists of a basin formed by excavation and/or an embankment. The trap has a discharge point over or cut into natural ground. The outlet width (feet) shall be equal to 6 times the drainage area (acres). If an embankment is used the outlet crest shall be at least one foot (30 cm) below the top of the embankment. The outlet shall be free of any restriction to flow. The earthen embankment shall be seeded with temporary or permanent vegetation (see Sections 6.65 and 6.66) within 15 days of construction. (See Plate 4.25a)
2. **A Pipe Outlet Sediment Trap** consists of a basin formed by an embankment, or an excavation and an embankment. The outlet for the trap is through a perforated riser and a pipe through the embankment. The outlet pipe and riser shall be made of corrugated metal. The riser diameter shall be of the same or larger diameter than the pipe. The top of the embankment shall be at least 1.5 feet (45 cm) above the crest of the riser. At least the top 2/3 of the riser shall be perforated with 1/2 inch (13 mm) diameter holes spaced 8 inches (20 cm) vertically and 10-12 inches (25-30 cm) horizontally. All pipe connections shall be watertight. (See Plate 4.25b). Select pipe diameter from the following table:

Minimum Pipe Diameter in inches (cm)	Maximum Drainage Area in acres (ha)
12 (30 cm)	1 (0.4 ha)
18 (45 cm)	2 (0.8 ha)
21 (53 cm)	3 (1.2 ha)
24 (60 cm)	4 (1.6 ha)
30 (75 cm)	5 (2.0 ha)

3. **A Stone Outlet Sediment Trap** consists of a basin formed by an embankment or excavation and an embankment. The outlet for the sediment trap shall consist of a crushed stone section of the embankment located at the low point in the basin. The minimum length of the outlet shall be 6 feet times the acreage of the drainage area (4.5 m times hectares). The crest of the outlet must be at least 1 foot (30 cm) below the top of the embankment, to insure that the flow will travel over the stone and not the embankment. The outlet shall be constructed of FOOT No. 1 size crushed stone. (See Plate 4.25c) A very temporary alternate trap can be constructed from straw bales with a stone outlet. (See Plate 4.25d) Straw bales shall be installed per Section 4.05 STRAW BALE BARRIER (ES BMP 1.05).

Installation

Prior to mulching, the following activities should be carried out:

1. As required, shape and grade the waterway, channel, slope, or other area to be protected.
2. Remove all rocks, clods, or debris larger than 2 inches in diameter that will prevent contact between the net and the soil surface.
3. Lime and fertilizer should be incorporated and the surface roughened as needed. Seed should be applied prior to mulching, except in the following cases:
 - a. Where seed is to be applied as part of a hydroseeder slurry containing wood fiber mulch.
 - b. Where seed is to be applied following a straw mulch spread during the winter months.
 - c. Where a hydroseeder slurry is applied over straw.

Mulch Anchoring

Straw mulch must be anchored immediately after spreading to prevent windblow. The other organic mulches listed in Table 7.1 do not require anchoring. The following methods of anchoring straw may be used:

1. **Mulch Anchoring Tool** – A tractor-drawn implement is used to punch mulch into the soil surface. This method provides maximum erosion control with straw. It is limited to use on slopes no steeper than 3:1, where equipment can operate safely. Machinery shall be operated on the contour.
2. **Liquid Mulch Binders** – The application of liquid mulch binders and tackifiers should be heaviest at the edges of areas and at the crests of ridges and banks, to prevent windblow. Binders should be applied uniformly over the rest of the area. They may be applied after mulch is spread or may be sprayed into the mulch as it is being blown onto the soil. Applying straw and binder together is the most effective method. Chemical binders such as Petrosel, Terratack, Road Oyl, and Aerospray may be used as recommended by the manufacturer to anchor mulch. These are expensive and therefore are usually used in small areas or in residential areas where asphalt may be a problem. (NOTE: The use of trade names does not constitute a product endorsement by FDEP.)
3. **Mulch Nets** – Lightweight plastic, cotton, or paper nets may be stapled over the mulch. The nets shall be secured by stakes, staples, or pins according to the manufacturer's recommendations (see Figure 7.7a for details).
4. **Peg and Twine** – Because it is labor intensive, this method is feasible only in small areas where other methods cannot be used. Drive 8 to 10 inch (20 to 25 cm) wooden pegs to within 3 inches (8 cm) of the soil surface every 4 feet (1.2 m) in all directions. Stakes may be driven before or after straw is spread. Secure mulch by stretching twine between pegs in a criss-cross-within-a-square pattern. Turn twine 2 or more times around each peg.

Laying Nets, Mats, and Blankets

Nets, mats, and blankets should be installed according to the manufacturer's instructions, provided that these are at least as stringent as the following general recommendations (see Figure 7.7b):

1. Start laying the net from the top of the channel or the top of the slope and unroll downgrade.
2. Allow the net to lie loosely on the soil—DO NOT STRETCH.
3. To secure the net, the upslope ends should be buried in a slot or trench no less than 6 inches (15 cm) deep. Tamp earth firmly over the net. Staple the net every 12 inches (30 cm) across the top end. The edges shall be stapled every 3 feet (90 cm). Where 2 strips of net are laid side by side, the adjacent edges shall be overlapped 3 inches (8 cm) and stapled together. Staples shall be placed down the center of net strips at 3 foot (90 cm) intervals. DO NOT STRETCH the net when applying staples.
4. To join strips, insert a new roll of net in the trench, as with the upslope ends of the net. Overlap the end of the previous roll 18 inches (45 cm), turn under 6 inches (15 cm), and staple across the end of the roll just below the anchor slot and at the end of the turned-under net every 12 inches (30 cm) (see Figures 7.7g and 7.7h).
5. At the bottom of slopes, lead the net out onto a level area before anchoring. Turn the ends under 6 inches (15 cm), and staple across the ends every 12 inches (30 cm).
6. On highly erodible soils and on slopes steeper than 4:1, erosion check slots should be made every 15 feet (4.5 m). Insert a fold of net into a 6 inch (15 cm) trench and tamp firmly. Staple at 12 inch (30 cm) intervals across the downstream portion of the net.
7. After installation, stapling, and seeding, the net should be rolled to ensure firm contact between the net and soil.

Maintenance

All mulches should be inspected periodically, particularly after rainstorms, to check for rill erosion. Where erosion is observed, additional mulch should be applied. The net should be inspected after rainstorms for dislocation or failure. If washouts or breakage occur, reinstall the net as necessary after repairing damage to the slope. Inspections should take place until the grass is firmly established. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface. Repair as needed.

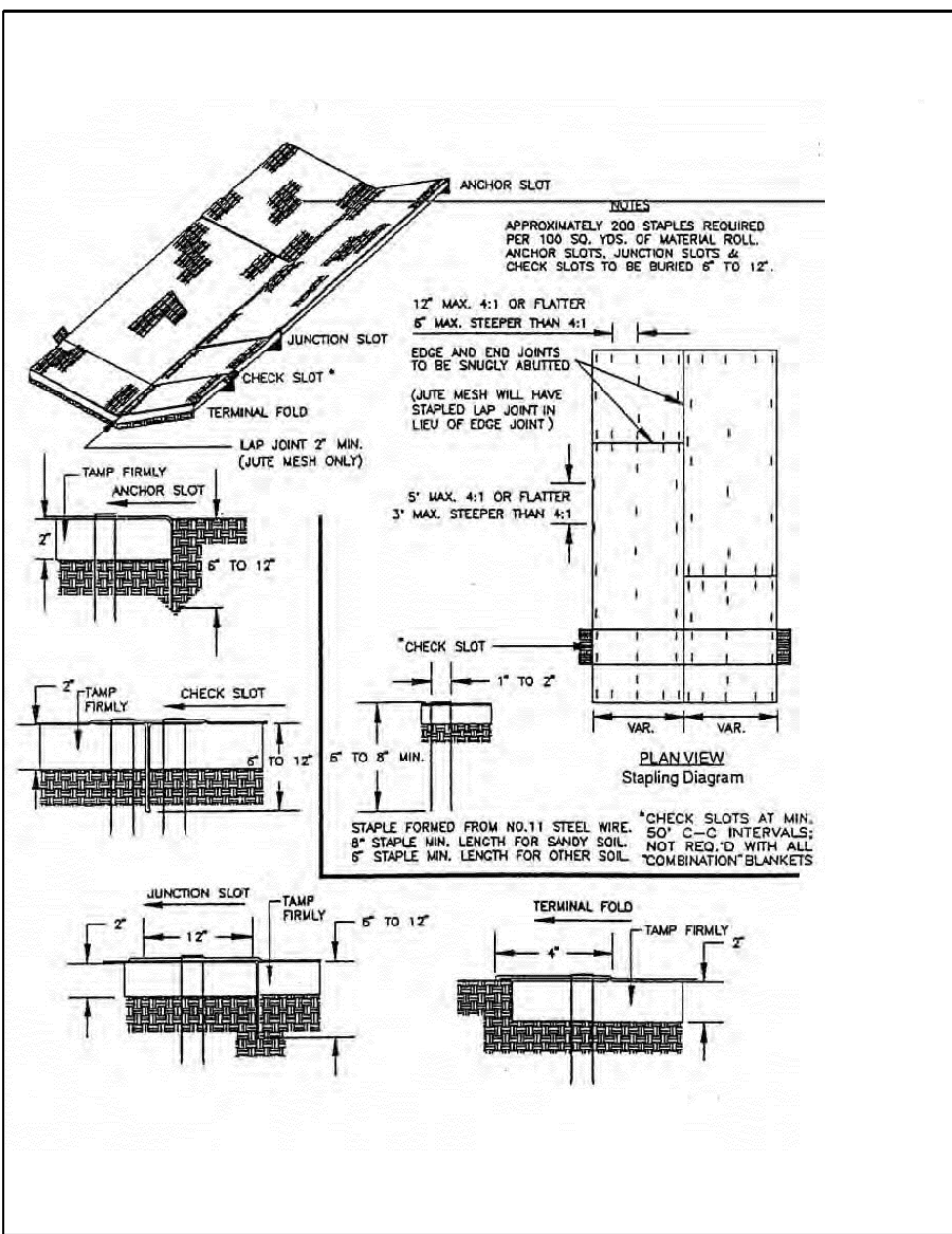


Figure 7.7b. Typical Treatment 1 – Soil Stabilization Blanket Installation Guide

Source: Virginia DOT

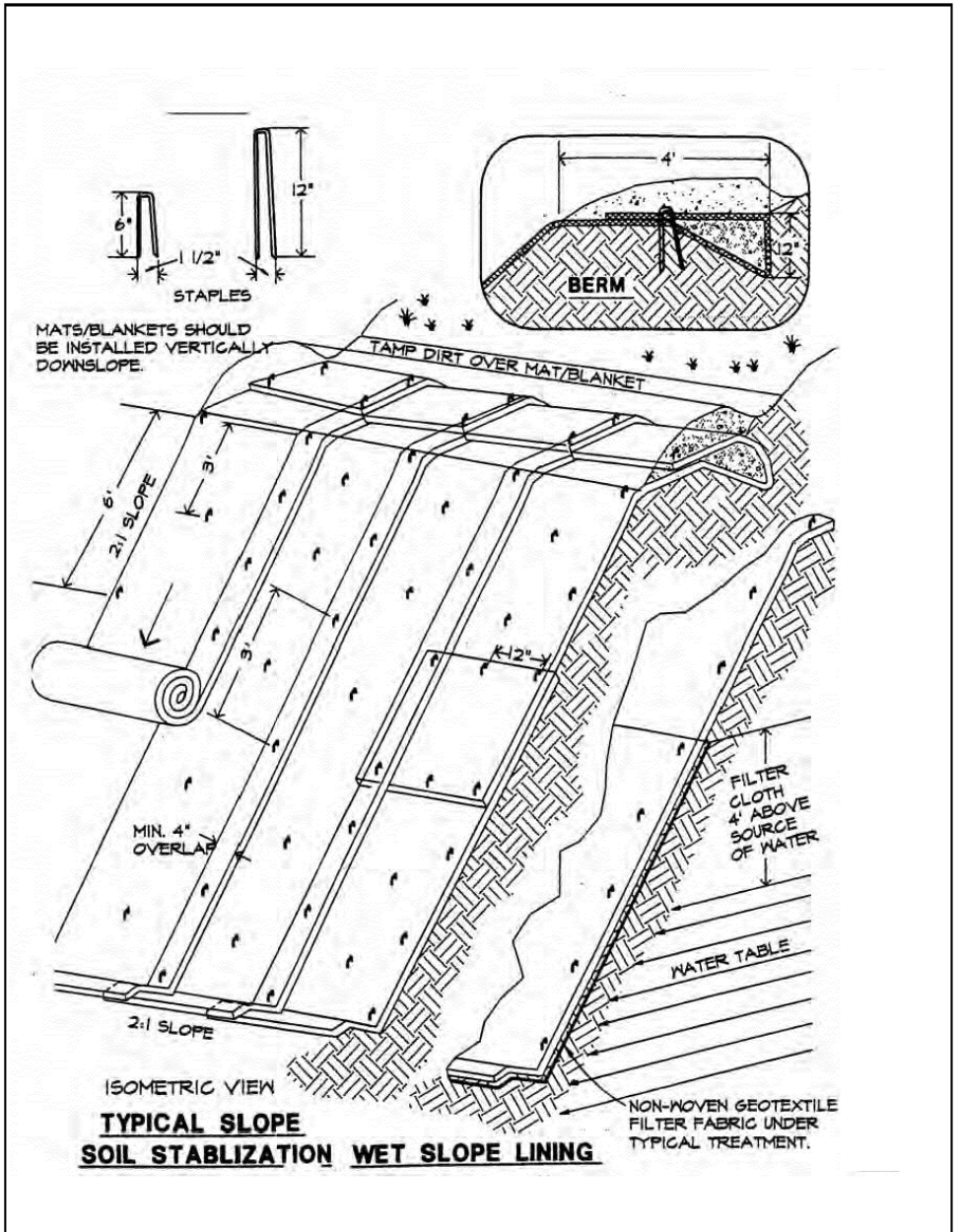


Figure 7.7c. Erosion Blankets and Turf Reinforcement Mats – Slope Installation

Source: Erosion Draw

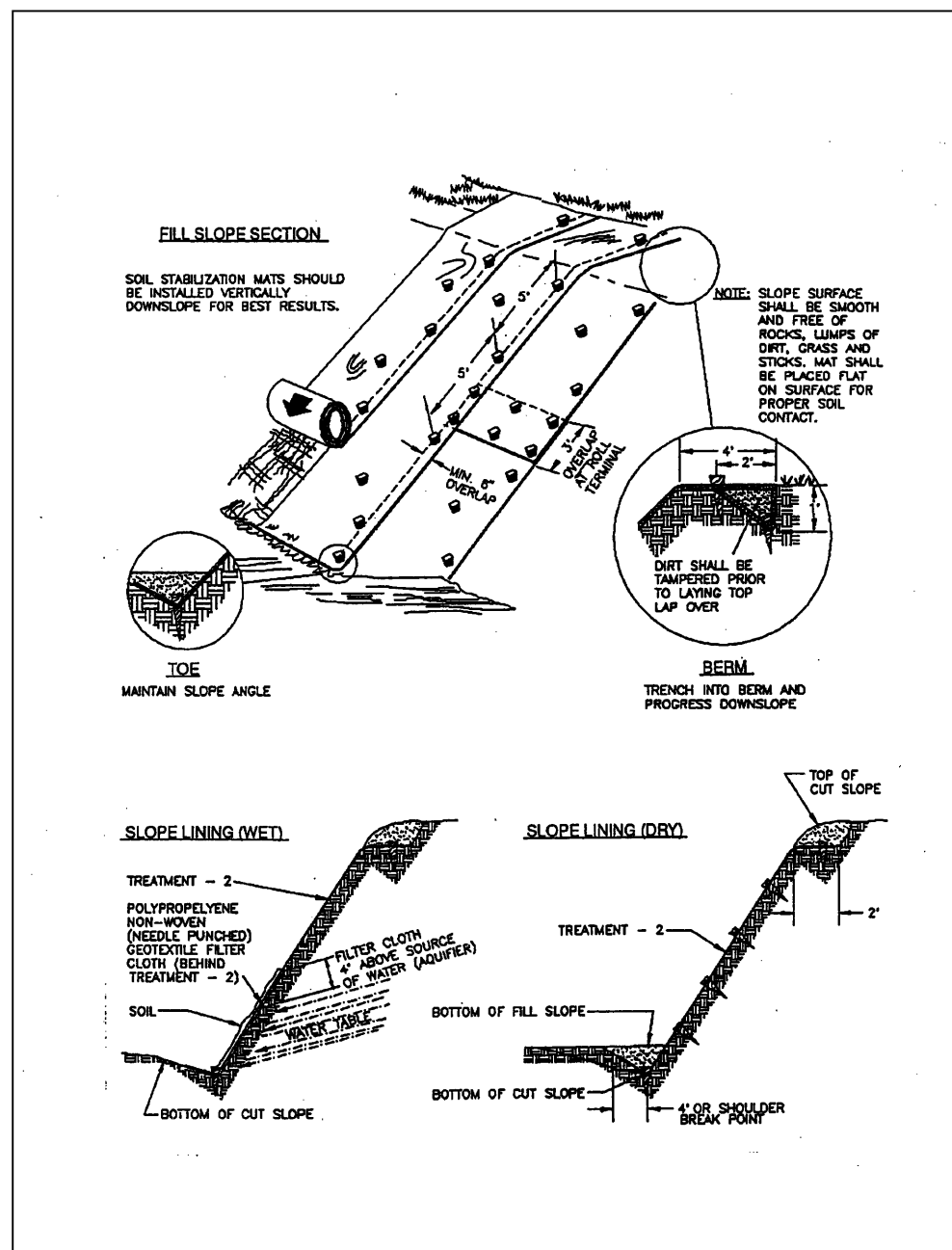


Figure 7.7d. Typical Treatment 2 – Soil Stabilization Matting Slope Installation

Source: Virginia DOT

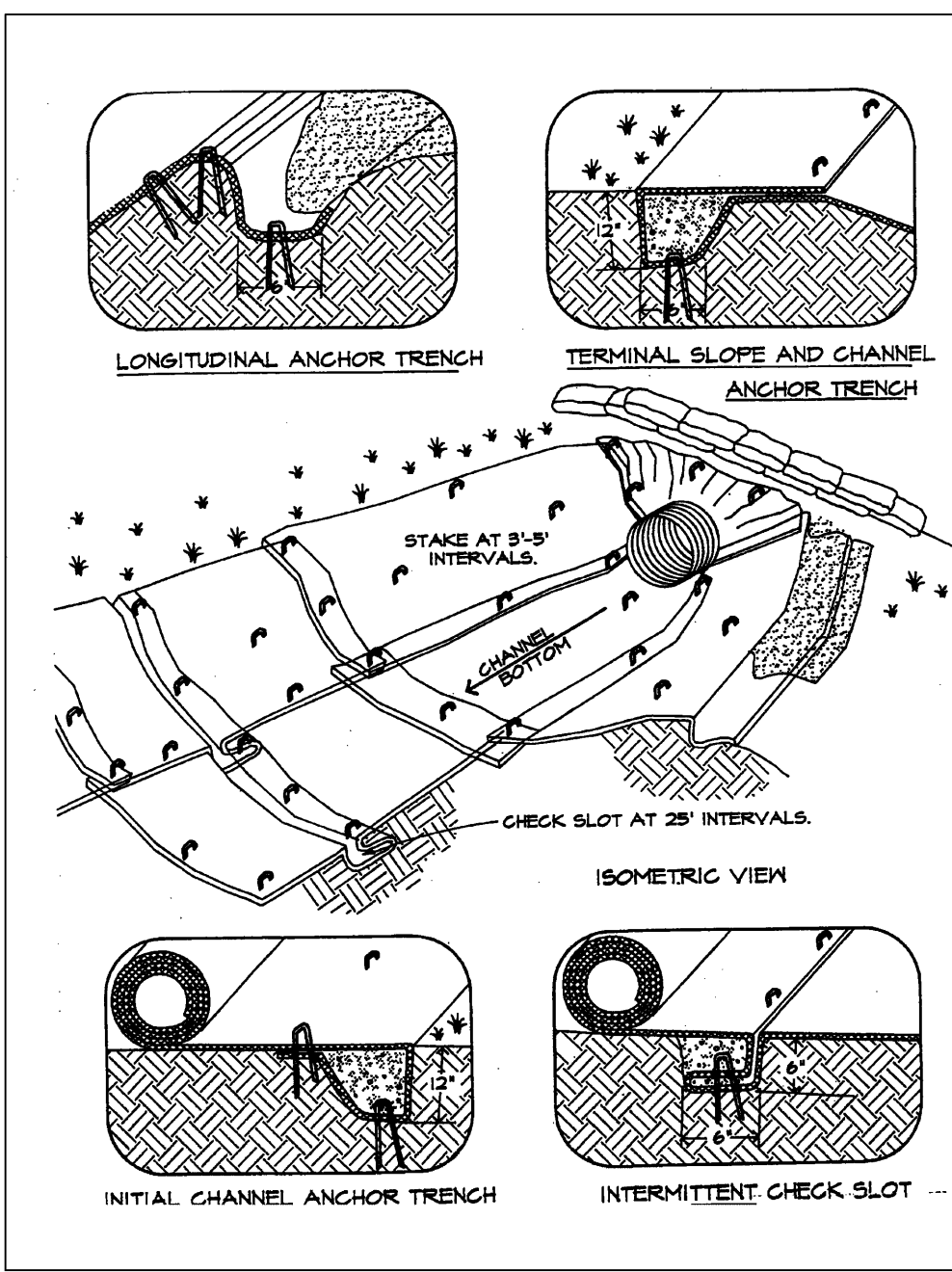


Figure 7.7e. Erosion Blankets and Turf Reinforcement Mats – Channel Installation

Source: Erosion Draw

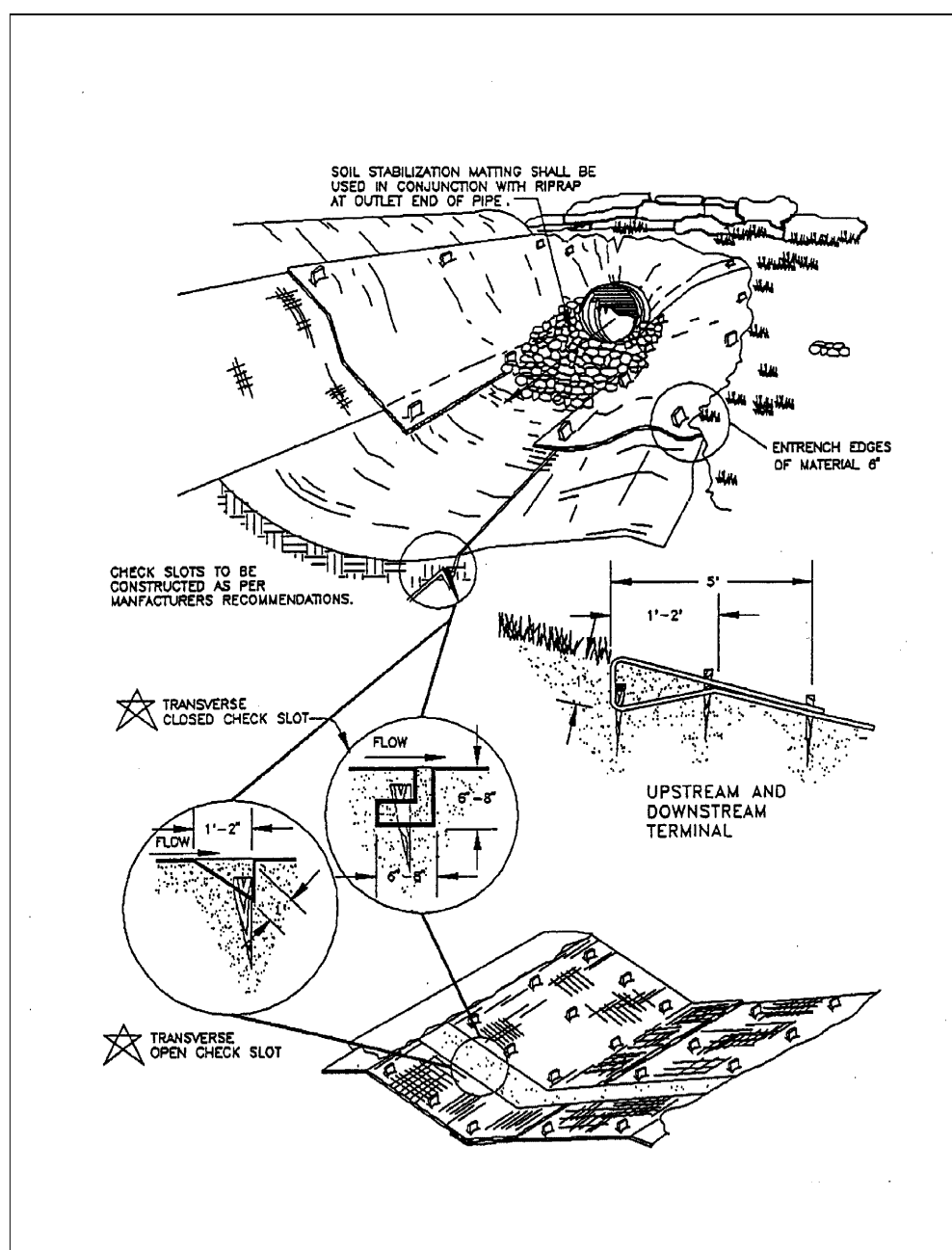


Figure 7.7f. Typical Treatment 2 – Soil Stabilization Matting Installation

Source: Virginia DOT

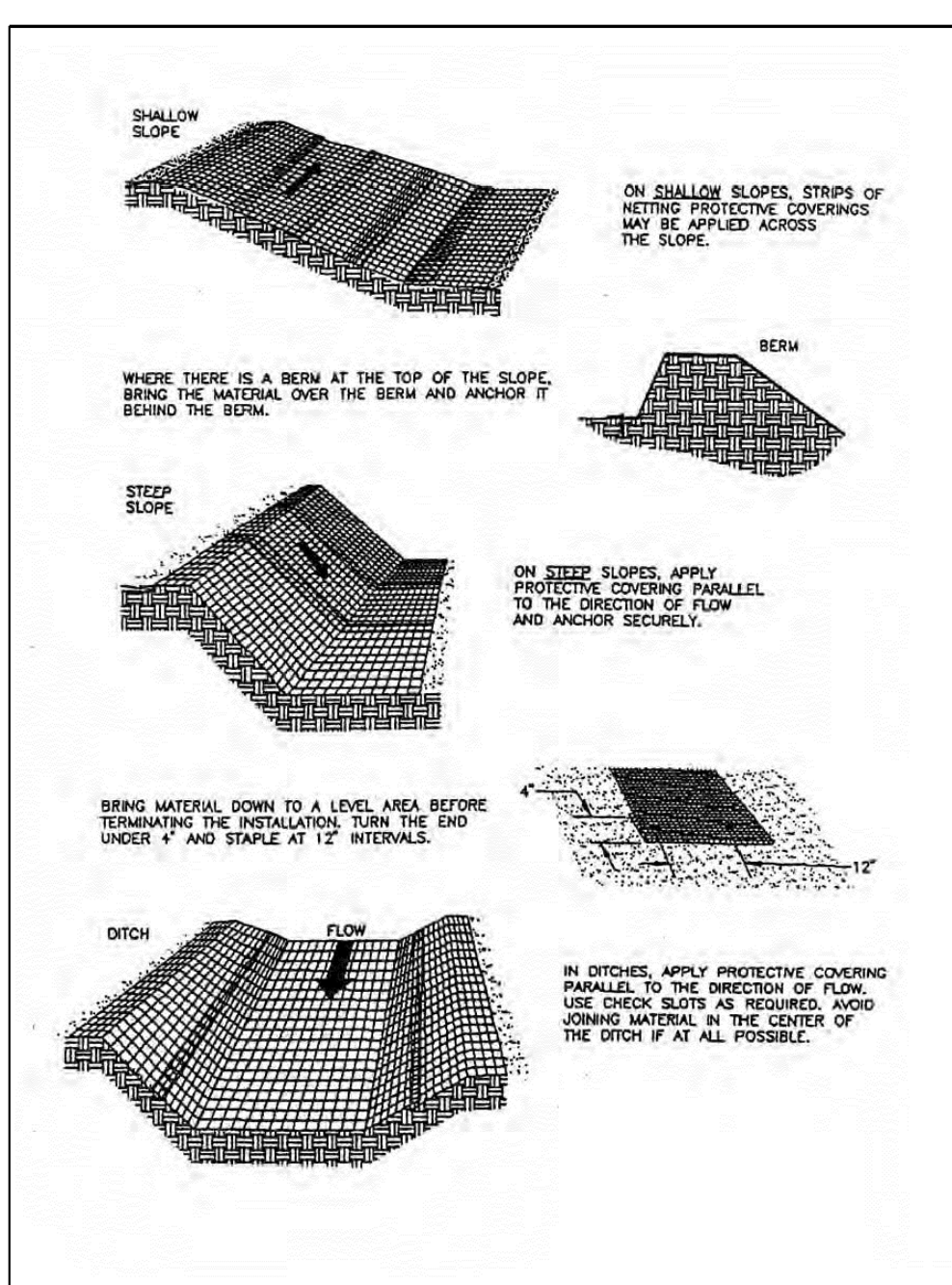


Figure 7.7a. Typical Orientation of Treatment 1 – Soil Stabilization Blanket

Source: Adapted from Ludlow Products Brochure

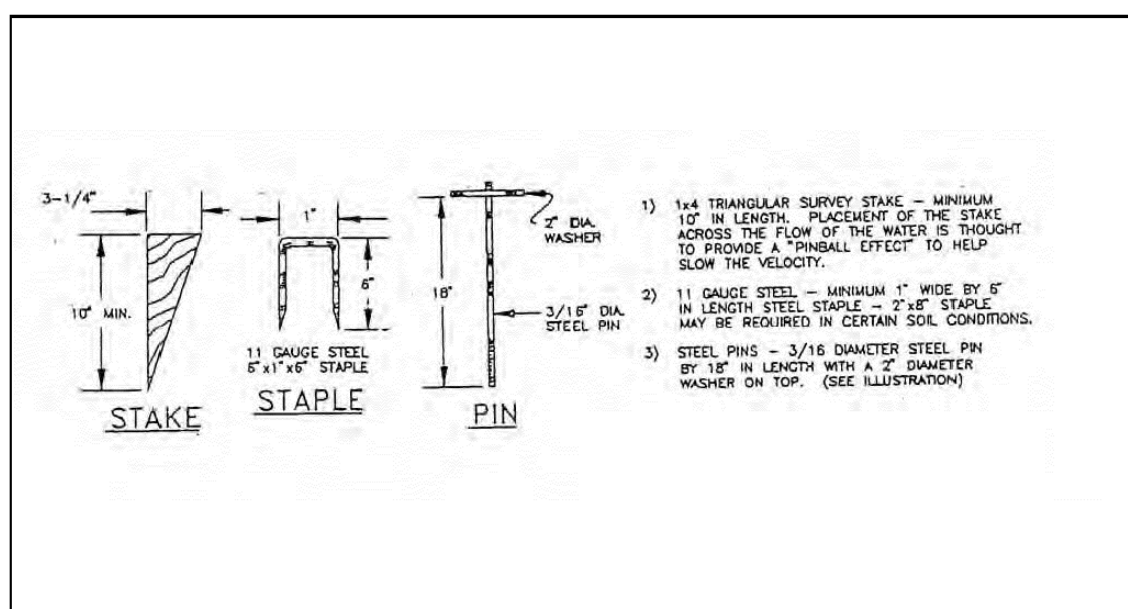


Figure 7.7g. Stakes, Staples, and Pins for the Installation of Soil Stabilization Matting

Source: Product Literature from Greenstreak, Inc.

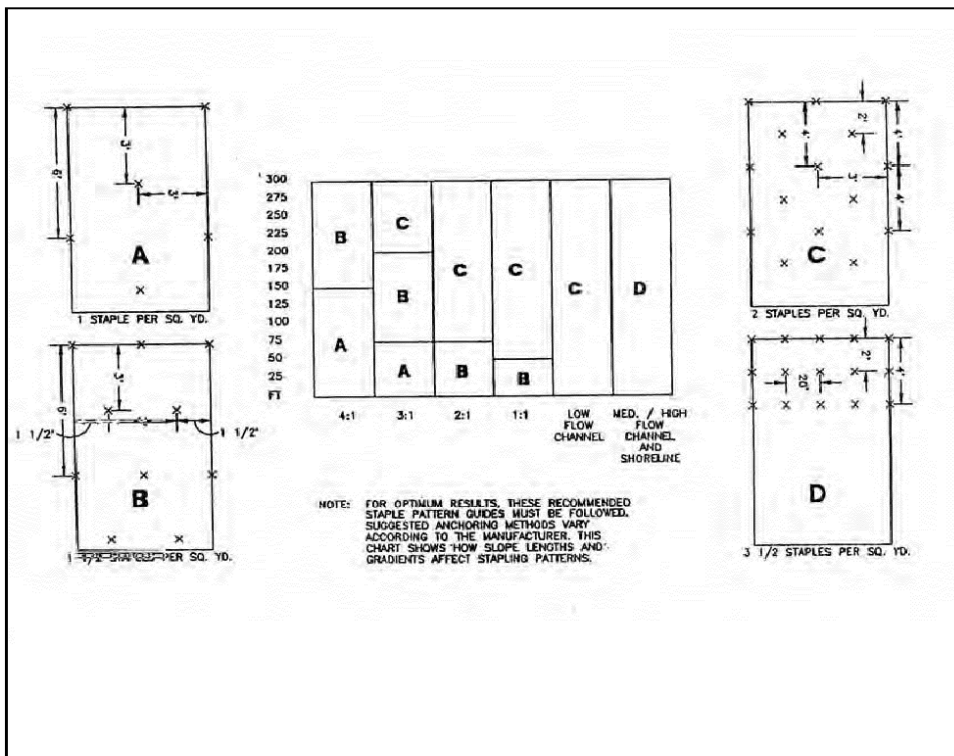


Figure 7.7h. General Staple Pattern Guide and Recommendation for Treatment 2 – Soil Stabilization Matting

Source: Product Literature from North American Green

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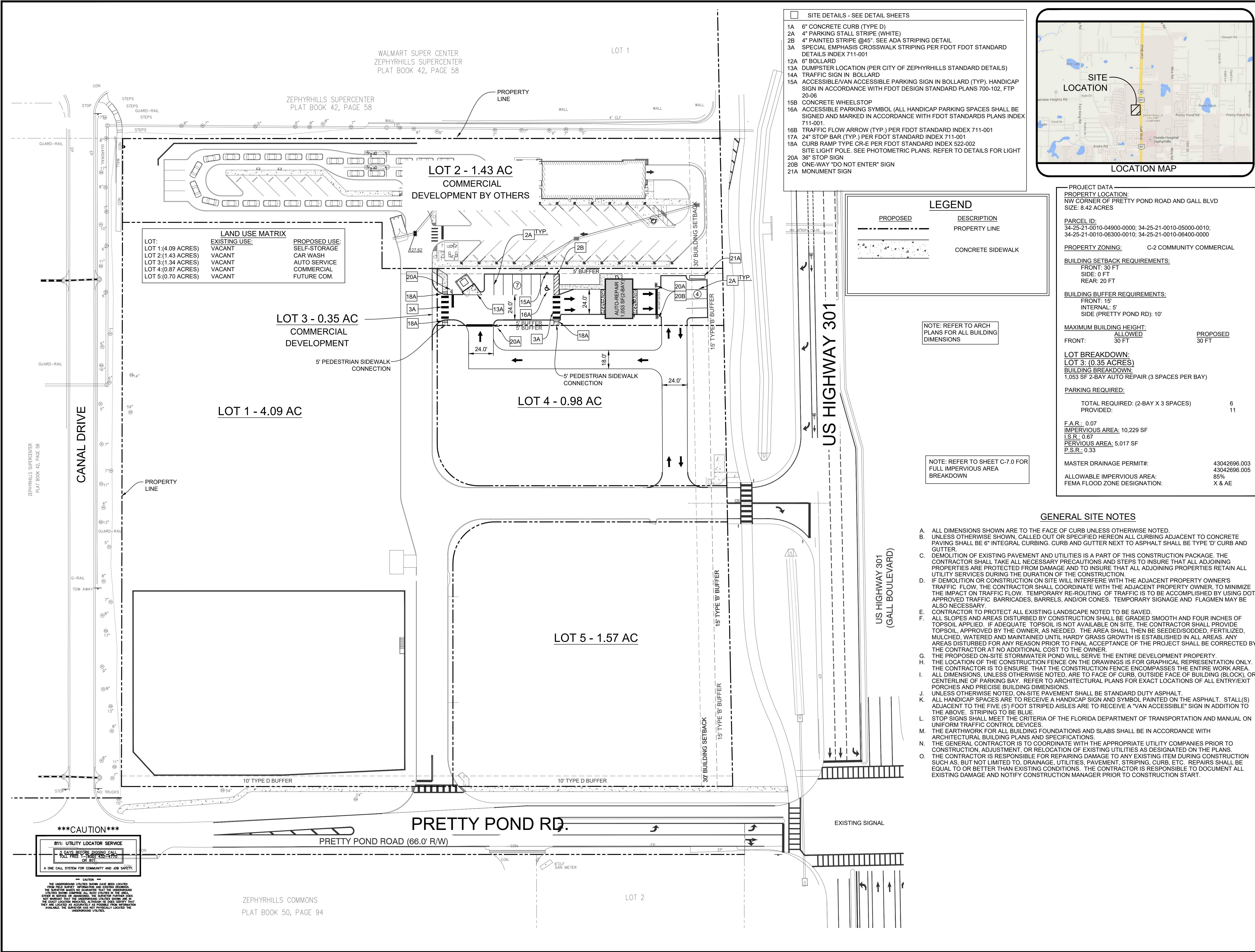
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SCALE: 1" = 40'

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CONTACT: PHILLIP MORRISSEY

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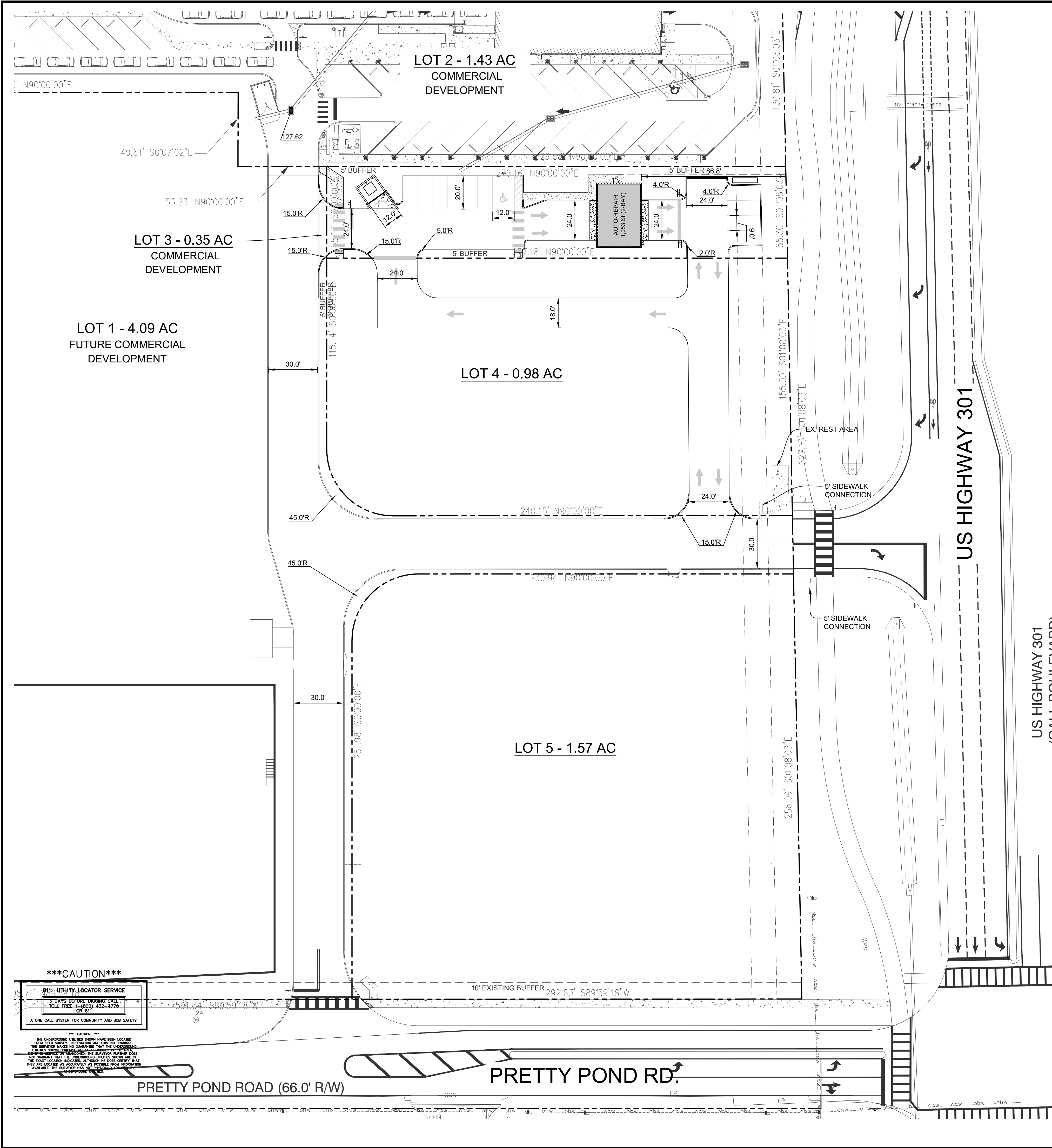
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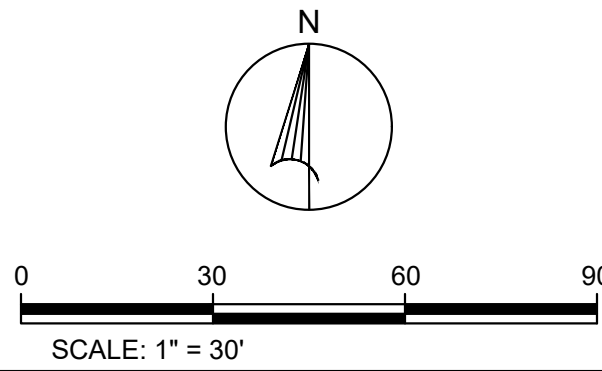
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PROPERTY ZONING: C-2 COMMUNITY COMMERCIAL	
BUILDING SETBACK REQUIREMENTS: FRONT: 30 FT SIDE: 0 FT REAR: 20 FT	
BUILDING BUFFER REQUIREMENTS: FRONT: 15' INTERNAL: 5' SIDE (PRETTY POND RD): 10'	
MAXIMUM BUILDING HEIGHT: ALLOWED 30 FT PROPOSED 30 FT	
LOT BREAKDOWN: LOT 3: (0.35 ACRES) BUILDING BREAKDOWN: 1,053 SF 2-BAY AUTO REPAIR (3 SPACES PER BAY)	
PARKING REQUIRED: TOTAL REQUIRED: (2-BAY X 3 SPACES) 6 PROVIDED: 11	
F.A.R.: 0.07 IMPERVIOUS AREA: 10,229 SF I.S.R.: 0.67 PERVIOUS AREA: 5,017 SF P.S.R.: 0.33	
MASTER DRAINAGE PERMIT#: 43042696.003 ALLOWABLE IMPERVIOUS AREA: 43042696.005 FEMA FLOOD ZONE DESIGNATION: 85% X & AE	

NOTE: REFER TO ARCH PLANS FOR ALL BUILDING DIMENSIONS AS WELL AS BUILDING SIDEWALKS AND BUILDING PLANTER DIMENSIONS.

GENERAL SITE NOTES

- ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON ALL CURBING ADJACENT TO CONCRETE PAVING SHALL BE 6" INTEGRAL CURBING. CURB AND GUTTER NEXT TO ASPHALT SHALL BE TYPE 'D' CURB AND GUTTER.
- DEMOLITION OF EXISTING PAVEMENT AND UTILITIES IS A PART OF THIS CONSTRUCTION PACKAGE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS AND STEPS TO INSURE THAT ALL ADJOINING PROPERTIES ARE PROTECTED FROM DAMAGE AND TO INSURE THAT ALL ADJOINING PROPERTIES RETAIN ALL UTILITY SERVICES DURING THE DURATION OF THE CONSTRUCTION.
- IF DEMOLITION OR CONSTRUCTION ON SITE WILL INTERFERE WITH THE ADJACENT PROPERTY OWNERS' TRAFFIC FLOW, THE CONTRACTOR SHALL COORDINATE WITH THE ADJACENT PROPERTY OWNER, TO MINIMIZE THE IMPACT ON TRAFFIC FLOW. TEMPORARY RE-ROUTING OF TRAFFIC IS TO BE ACCOMPLISHED BY USING DOT APPROVED TRAFFIC BARRICADES, BARRELS, AND/OR CONES. TEMPORARY SIGNAGE AND FLAGMEN MAY BE ALSO NECESSARY.
- CONTRACTOR TO PROTECT ALL EXISTING LANDSCAPE NOTED TO BE SAVED.
- ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED/SODDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE PROPOSED ON-SITE STORMWATER POND WILL SERVE THE ENTIRE DEVELOPMENT PROPERTY.
- THE LOCATION OF THE CONSTRUCTION FENCE ON THE DRAWINGS IS FOR GRAPHICAL REPRESENTATION ONLY. THE CONTRACTOR IS TO ENSURE THAT THE CONSTRUCTION FENCE ENCOMPASSES THE ENTIRE WORK AREA.
- ALL DIMENSIONS, UNLESS OTHERWISE NOTED, ARE TO FACE OF CURB, OUTSIDE FACE OF BUILDING (BLOCK), OR CENTERLINE OF PARKING BAY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF ALL ENTRY/EXIT PORCHES AND PRECISE BUILDING DIMENSIONS.
- UNLESS OTHERWISE NOTED, ON-SITE PAVEMENT SHALL BE STANDARD DUTY ASPHALT.
- ALL HANDICAP SPACES ARE TO RECEIVE A HANDICAP SIGN AND SYMBOL PAINTED ON THE ASPHALT. STALL(S) ADJACENT TO THE FIVE (5') FOOT STRIPED AISLES ARE TO RECEIVE A "VAN ACCESSIBLE" SIGN IN ADDITION TO THE ABOVE. STRIPING TO BE BLUE.
- STOP SIGNS SHALL MEET THE CRITERIA OF THE FLORIDA DEPARTMENT OF TRANSPORTATION AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL BUILDING PLANS AND SPECIFICATIONS.
- THE GENERAL CONTRACTOR IS TO COORDINATE WITH THE APPROPRIATE UTILITY COMPANIES PRIOR TO CONSTRUCTION, ADJUSTMENT, OR RELOCATION OF EXISTING UTILITIES AS DESIGNATED ON THE PLANS.
- THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING DAMAGE TO ANY EXISTING ITEM DURING CONSTRUCTION SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS. THE CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND NOTIFY CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.

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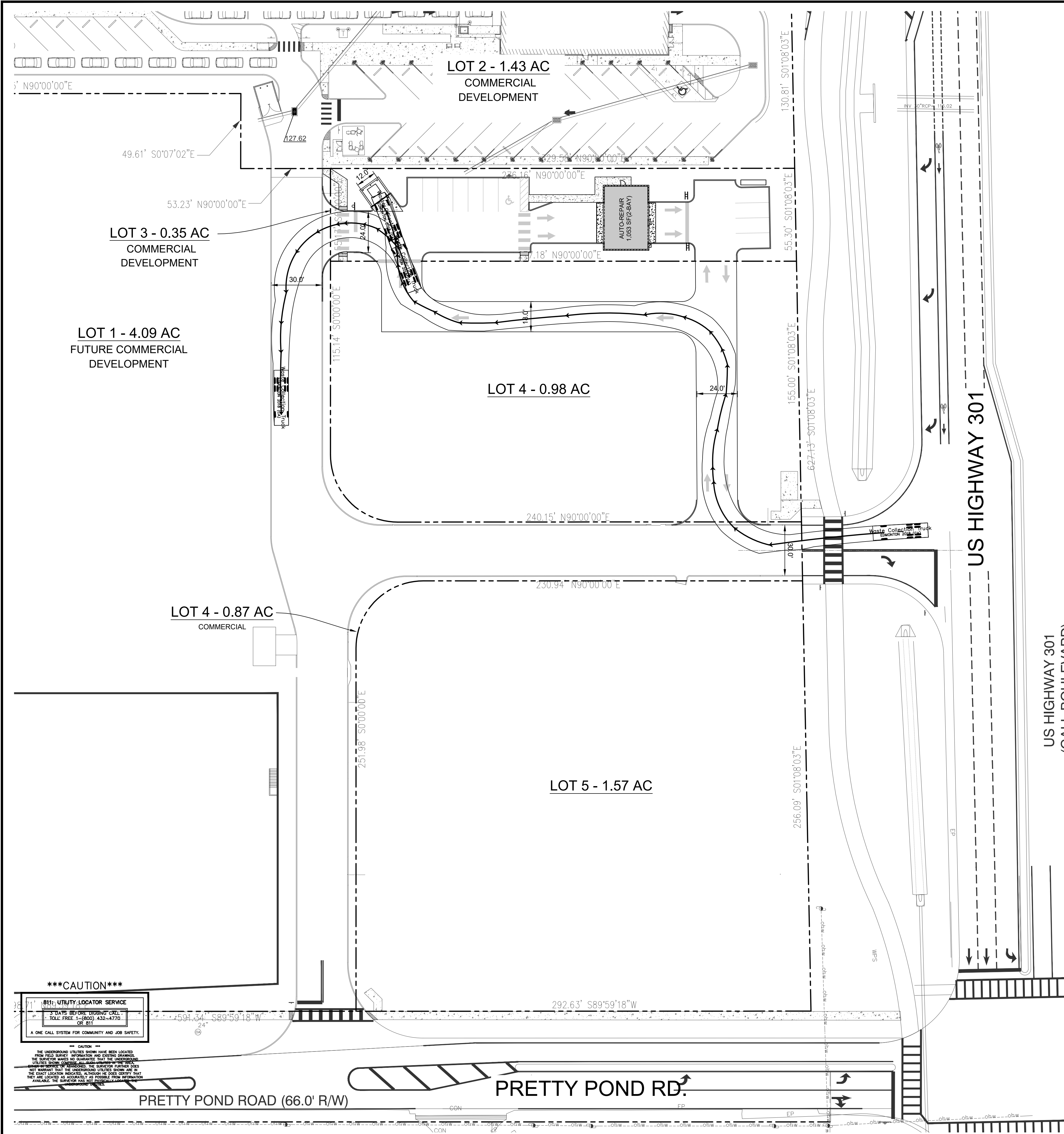
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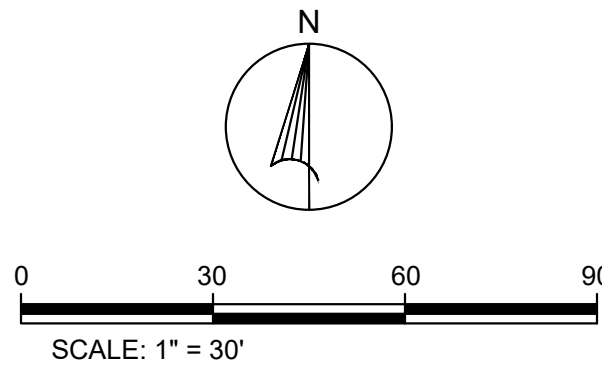
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DIMENSION PLAN	
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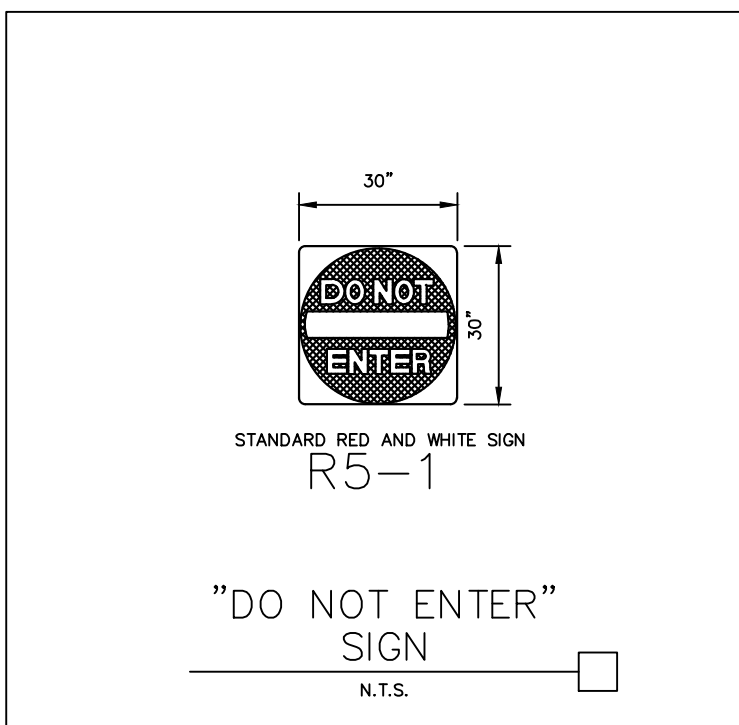
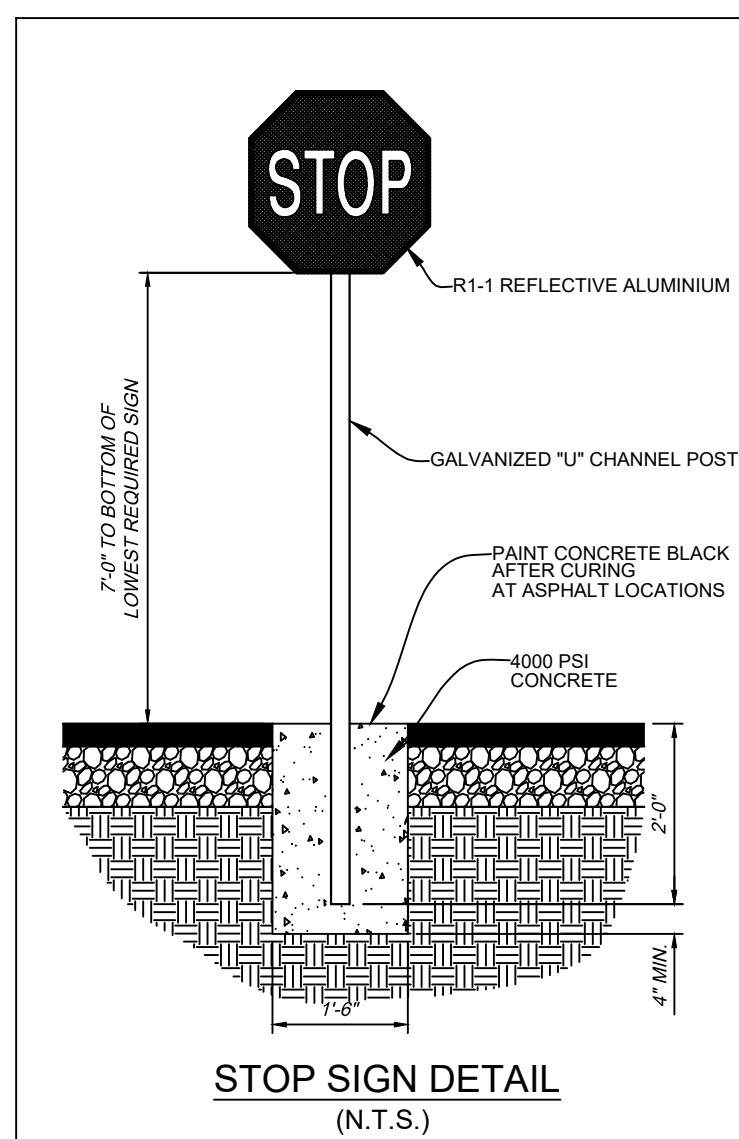
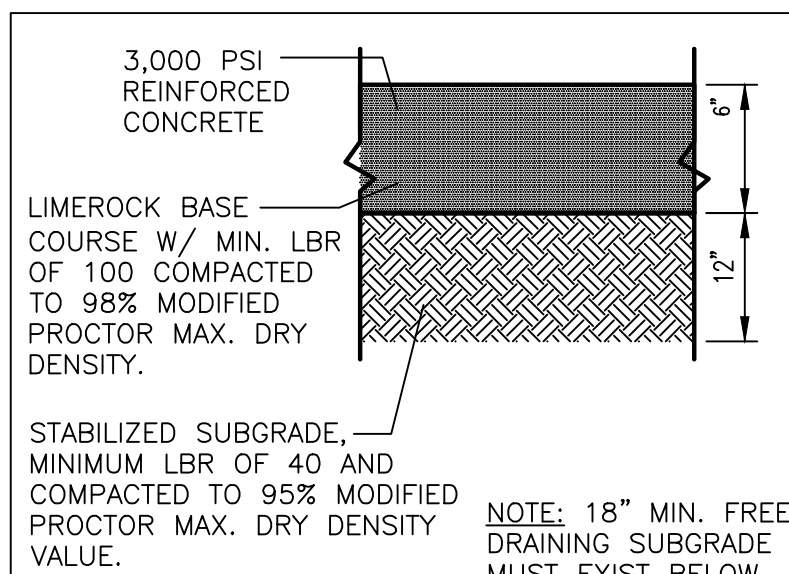
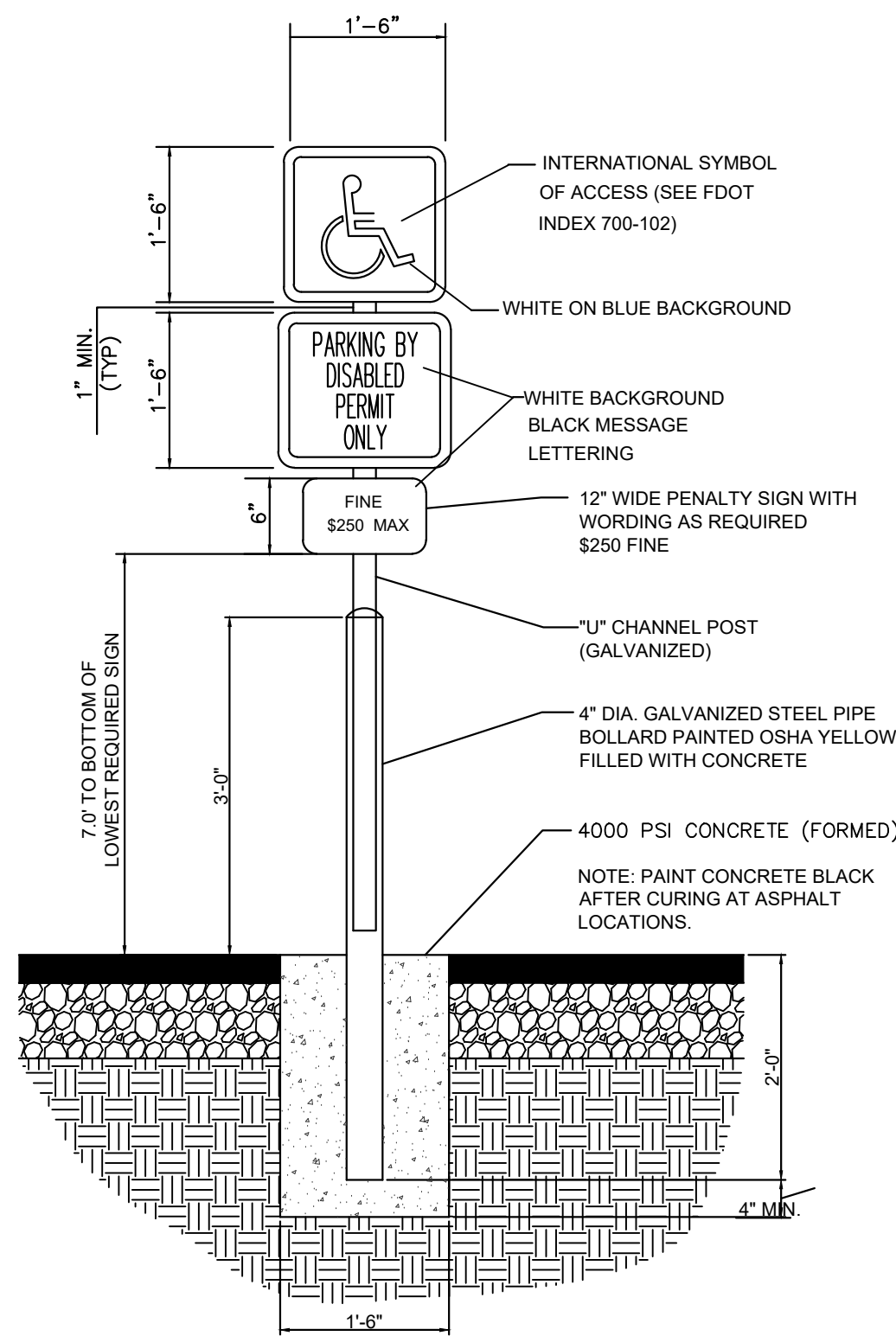
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LAST REVISION: 11/01/21 DESCRIPTION:	INDEX: 711-001 SHEET: 11 of 13

LAST REVISION: 11/01/21 DESCRIPTION:	INDEX: 711-001 SHEET: 9 of 13

LAST REVISION: 11/01/21 DESCRIPTION:	INDEX: 522-002 SHEET: 4 of 7

GENERAL NOTES: - Cross Slopes and Grades: - Sidewalk, ramp, and landing slopes (i.e. 0.02, 0.05, and 1:12) shown in this index are maximums. With approval of the Engineer, provide the minimum feasible slope where the requirements cannot be met. - Landings must have cross-slopes less than or equal to 0.02 in any direction. - Maintain a single longitudinal slope along each side of the curb ramp. Ramp slopes are not required to exceed 1:5 feet in length. - Joints permitted at the location of Slope Breaks. Otherwise locate joints in accordance with Index 522-001. No joints are permitted within the ramp portion of the Curb Ramp. - Curb, Curb and Gutter, and/or Sidewalk: - Refer to Index 522-001 for concrete thickness and sidewalk details. - Remove any existing curb, curb and gutter, or sidewalk to the nearest joint beyond the curb transition or to the extent that the remaining section is less than 5 feet long. - Width of Curb Ramp is 4'-0" minimum. Match sidewalk or Shared Use Path width as shown in the Plans. - Curb Ramp Alpha-Identification: - Sidewalk, curb, ramp alpha-identifications (e.g. CR-A) are provided for reference purposes in the Plans. - Alpha-identifications CR-I and CR-J are intentionally omitted. - Detectable Warnings: - Install detectable warnings in accordance with Specification 527. - Place detectable warnings across the full width of the ramp or landing, to a minimum depth of 2 feet measured perpendicular to the curb line and no greater than 3 feet from the back of the curb or edge of pavement. - If detectable warnings are shown in the Plans on slopes greater than 5%, align the truncated domes with the centerline of the ramp; otherwise, the truncated domes are not required to be aligned.	
LAST REVISION: 11/01/21 DESCRIPTION:	INDEX: 522-002 SHEET: 1 of 7

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Commercial Site Solutions, Inc.
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ZEPHYRHILLS, LLC

3715 NORTHSIDE PKWY NW
BUILDING 400, SUITE 515
ATLANTA, GA 30327
PH: (404) 228-4364
CONTACT: KEVIN FRAZIER

Client Name:

TAKE 5 OIL CHANGE

US HIGHWAY 301
AT PRETTY POND
ZEPHYRHILLS, FL
PH: 404-754-6934
CONTACT: PHILLIP MORRISSEY

Project Name & Location:

Drawing Name:

Date: 04/20/23

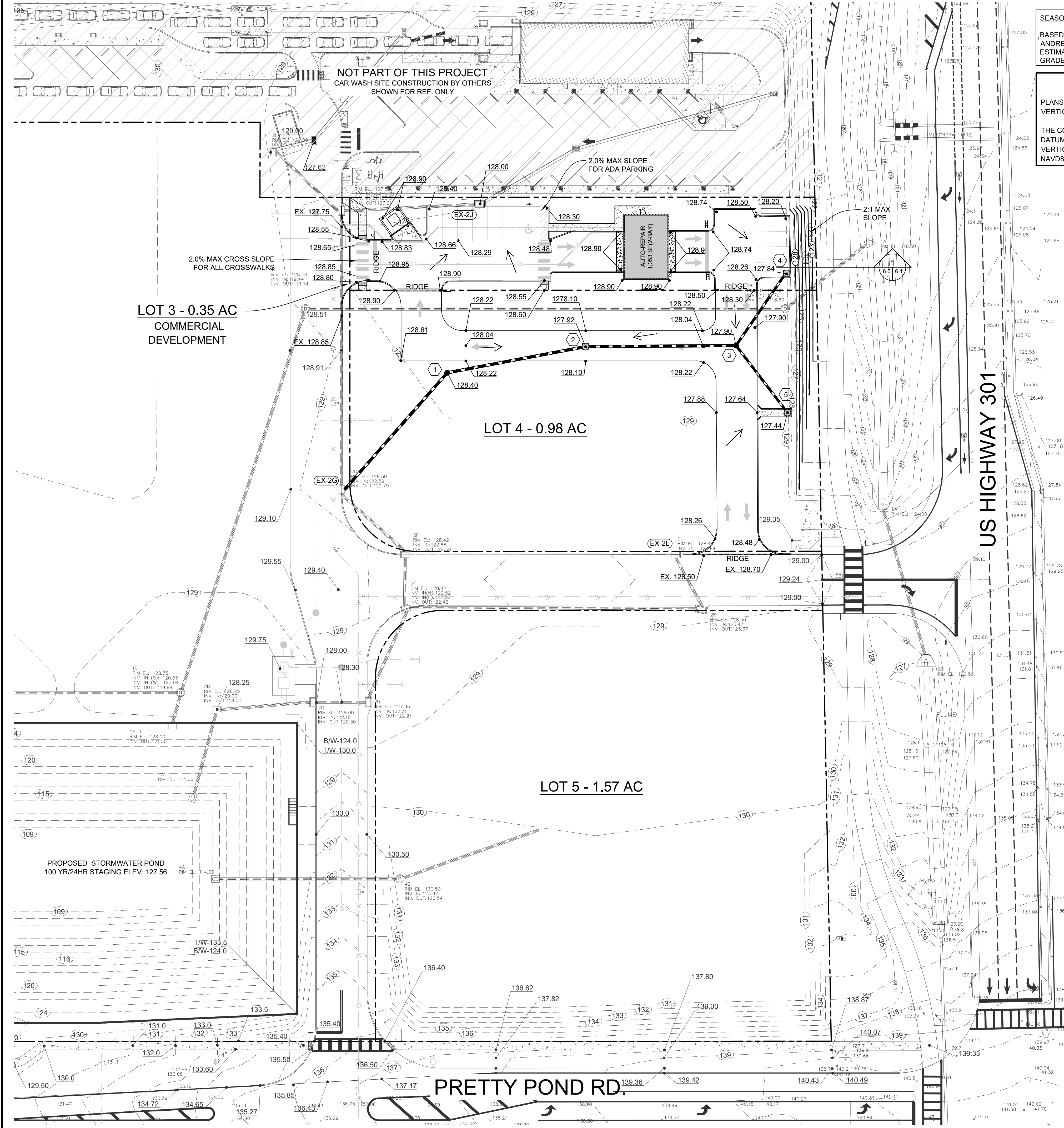
Revised: XXX

Drawn: GSS

Checked: SKS

Drawing No.

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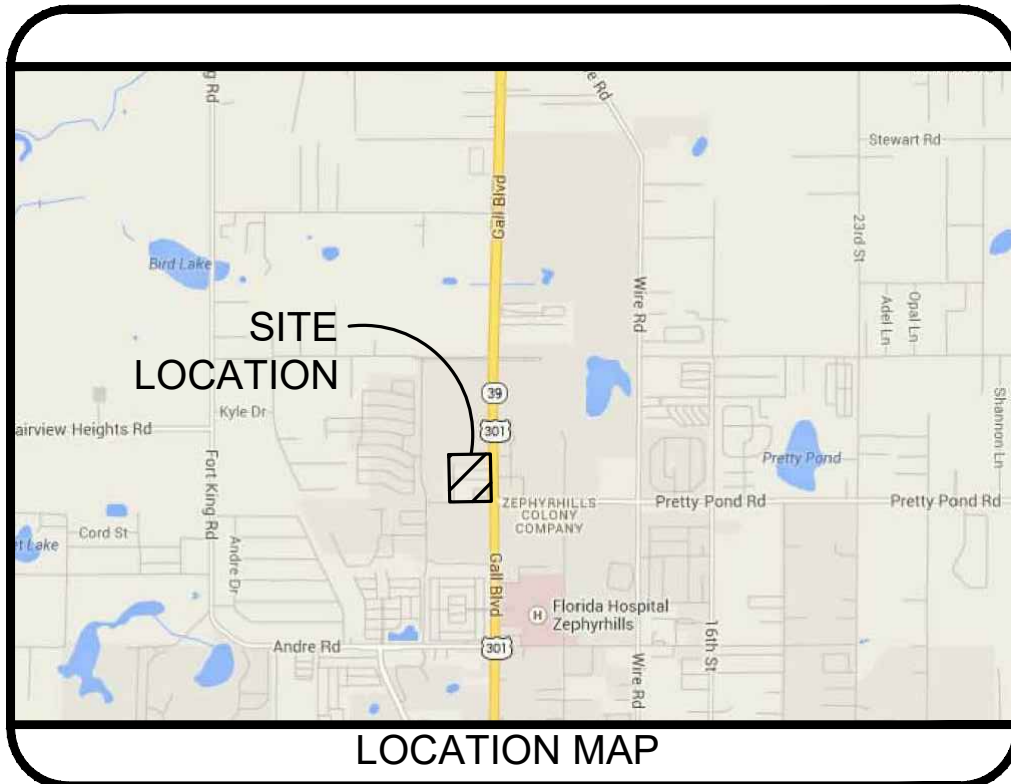
SEASONAL HIGH-WATER TABLE:

BASED ON THE GEOTECHNICAL EXPLORATION REPORT BY ANDREYEV ENGINEERING, INC., DATED JULY 10, 2019, THE ESTIMATED SHWT IS GREATER THAN 8.0' BELOW EXISTING GRADE.

VERTICAL DATUM CONVERSION

PLANS ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD1988).

THE CONVERSION FROM THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD1988) TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD1929) IS: ELEVATION IN NAVD88 PLUS 0.89 FEET.



GENERAL SITE GRADING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
3. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
4. PRECAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION.
5. STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED: TYPE 1: RCP, CLASS III PER ASTM C-76, WITH FLEXIBLE PLASTIC BITUMEN GASKETS AT JOINTS, UNLESS OTHERWISE NOTED
6. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
7. EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT INTERVALS.
8. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT INTERVALS.
9. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
10. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WERTIGHT.
11. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
12. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
13. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
14. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
15. TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY GEOPPOINT SURVEYING, INC. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
16. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STAKED SOD TO ALL SLOPES 3:1 OR STEEPER. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH STATE SPECIFICATIONS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED.
17. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
18. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
19. CATCH BASINS, MANHOLES, FRAMES, GRATES, SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR CONSTRUCTION AND THE CITY OF ZEPHYRHILLS REQUIREMENTS.
20. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR THE EXACT NUMBER, SIZE AND LOCATION OF ANY ROOF DRAINS.
21. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS AND FIELD LOCATIONS WHEN POSSIBLE, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES BY DIGGING TEST PITS BY HAND AT ALL CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED ON THE PLAN OR TWELVE INCHES (12"), WHICHEVER IS LESS, CONTACT THE DESIGN ENGINEER AND THE OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
22. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, BRACING, AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF ALL WORK INDICATED ON THESE DRAWINGS. THE OWNER AND THE DESIGN ENGINEER ACCEPT NO RESPONSIBILITY FOR THE DESIGNS TO INSTALL SAID ITEMS.
23. PRECAST DRAINAGE STRUCTURES HAVE BEEN SPECIFIED ON THE PLANS. THE OWNER AND THE ENGINEER, HOWEVER, ASSUME NO RESPONSIBILITY FOR THESE STRUCTURES, AS FIELD CONDITIONS OFTEN DICTATE MINOR ELEVATION ADJUSTMENTS. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY AND EXPENSE FOR MODIFYING THE PRECAST STRUCTURES TO ACCOMMODATE FIELD REVISIONS.
24. ALL SLOPES 3:1 AND STEEPER ARE TO RECEIVE STAKED SOD.
25. ALL GRADING OPERATIONS, EXCAVATIONS, FILL, COMPACTION TESTING AND BACKFILL SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL BE DESIGNATED BY AND PAID FOR BY THE OWNER.
26. NO FILL SHALL BE PLACED PRIOR TO APPROVAL OF THE SUBGRADE BY THE GEOTECHNICAL ENGINEER.
27. COMPACTION SHALL BE DONE IN ACCORDANCE WITH ALDI'S REQUIREMENTS AND THE ON-SITE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS INCURRED FOR INSPECTION AND TESTING OF SOILS DUE TO FAILURE TO COMPLY WITH THE MINIMUM REQUIREMENTS OF THE SOILS REPORT.
29. ALL GRADING OPERATIONS SHALL BE STAKED BY A LICENSED LAND SURVEYOR PROVIDED BY THE CONTRACTOR AND APPROVED BY THE OWNER.
30. UPON COMPLETION OF THE GRADING, THE GEOTECHNICAL ENGINEER SHALL PROVIDE OWNER WITH A LETTER INDICATING THAT THE SITE AND BUILDING PAD WERE PREPARED IN DIRECT CONFORMANCE WITH THE RECOMMENDATIONS AND CONCLUSIONS IN THE SOILS REPORT.
31. CROSS-SLOPE THROUGH STRIPED AREA LEADING TO PUBLIC SIDEWALK SHALL NOT EXCEED 2.0%.
32. NO EXPOSED FOOTINGS SHALL BE ALLOWED.

CAUTION

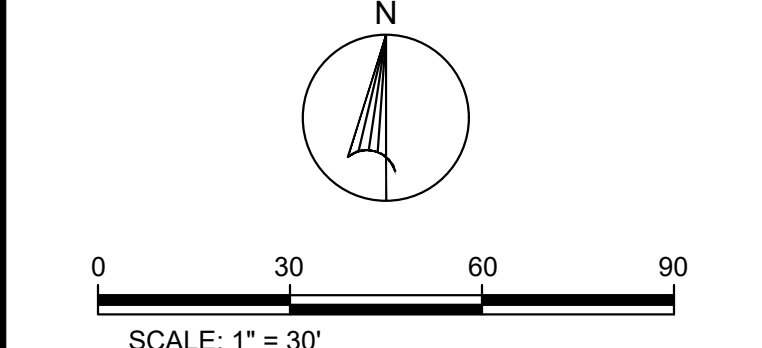
811: UTILITY LOCATOR SERVICE
3 DAYS BEFORE DIGGING CALL
TOLL FREE 1-(800) 432-4770
OR 811
A ONE CALL SYSTEM FOR COMMUNITY AND JOB SAFETY.

CAUTION
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR HAS NO GUARANTEE THAT THE INFORMATION UTILITIES SHOWN CORRESPOND TO THE ACTUAL UTILITIES. THE USER IN SERVICE OF REMOVED THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE INFORMATION UTILITIES SHOWN ARE THE EXACT LOCATION INDICATED. ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATE AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

STORM DRAIN STRUCTURE TABLE		
STR.	TYPE	RIM/THROAT ELEV
EX-2G	FDOT TYPE C INLET	128.50
1	MANHOLE	128.40
2	FDOT TYPE C INLET	127.92
3	MANHOLE	127.90
4	FDOT TYPE C INLET	127.84
5	FDOT TYPE C INLET	127.44

STORMDRAIN SCHEDULE						
STRUCTURES	SIZE	LENGTH	TYPE	SLOPE	IE DOWN	IE UP
EX-2G TO 1	18"	92'	CPP	0.20%	122.88	123.07
1 TO 2	18"	79'	CPP	0.50%	123.17	123.57
2 TO 3	18"	87'	CPP	0.20%	123.67	124.11
3 TO 4	15"	48'	CPP	0.20%	124.60	124.84
3 TO 5	15"	46'	CPP	0.20%	124.21	124.44

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CONTACT: PHILLIP MORRISSEY

Project Name & Location:

GRADING PLAN

Drawing Name:

Date: 04/20/23

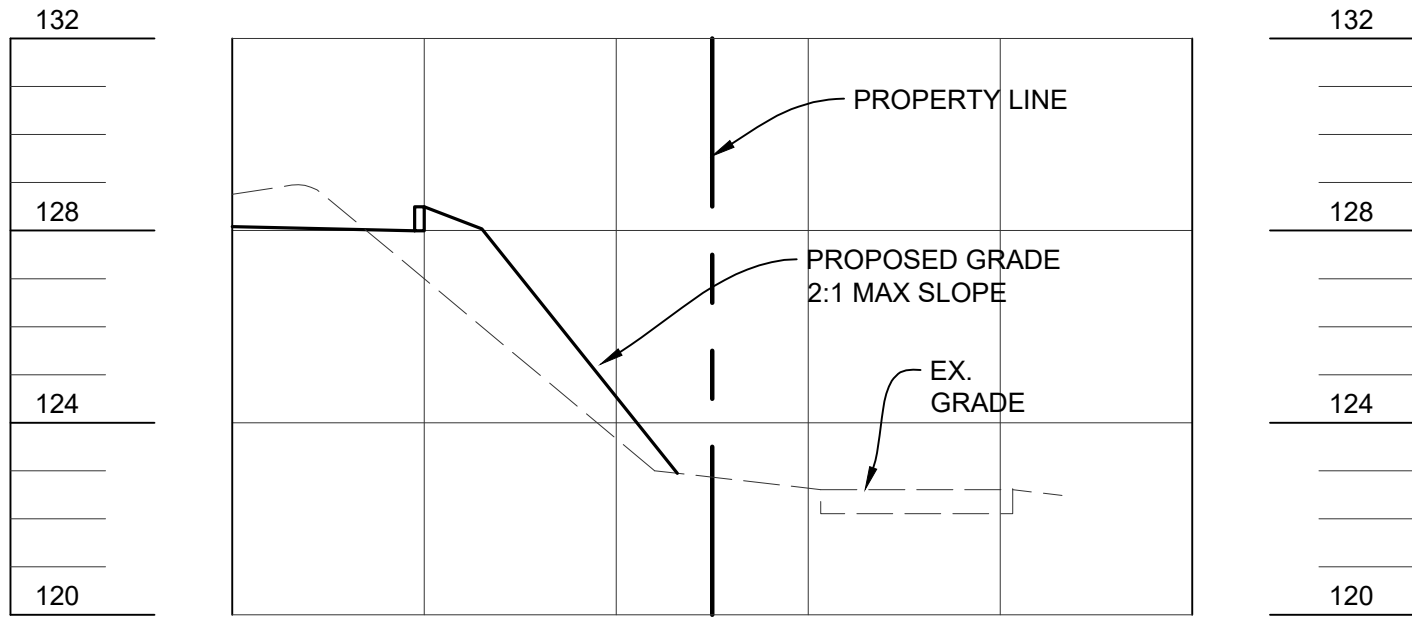
Revised: XXX

Drawn: GSS

Checked: SKS

Drawing No.

C-7.0



SECTION 3
SCALE: VERT. 1"=4' HORZ. 1"=10'

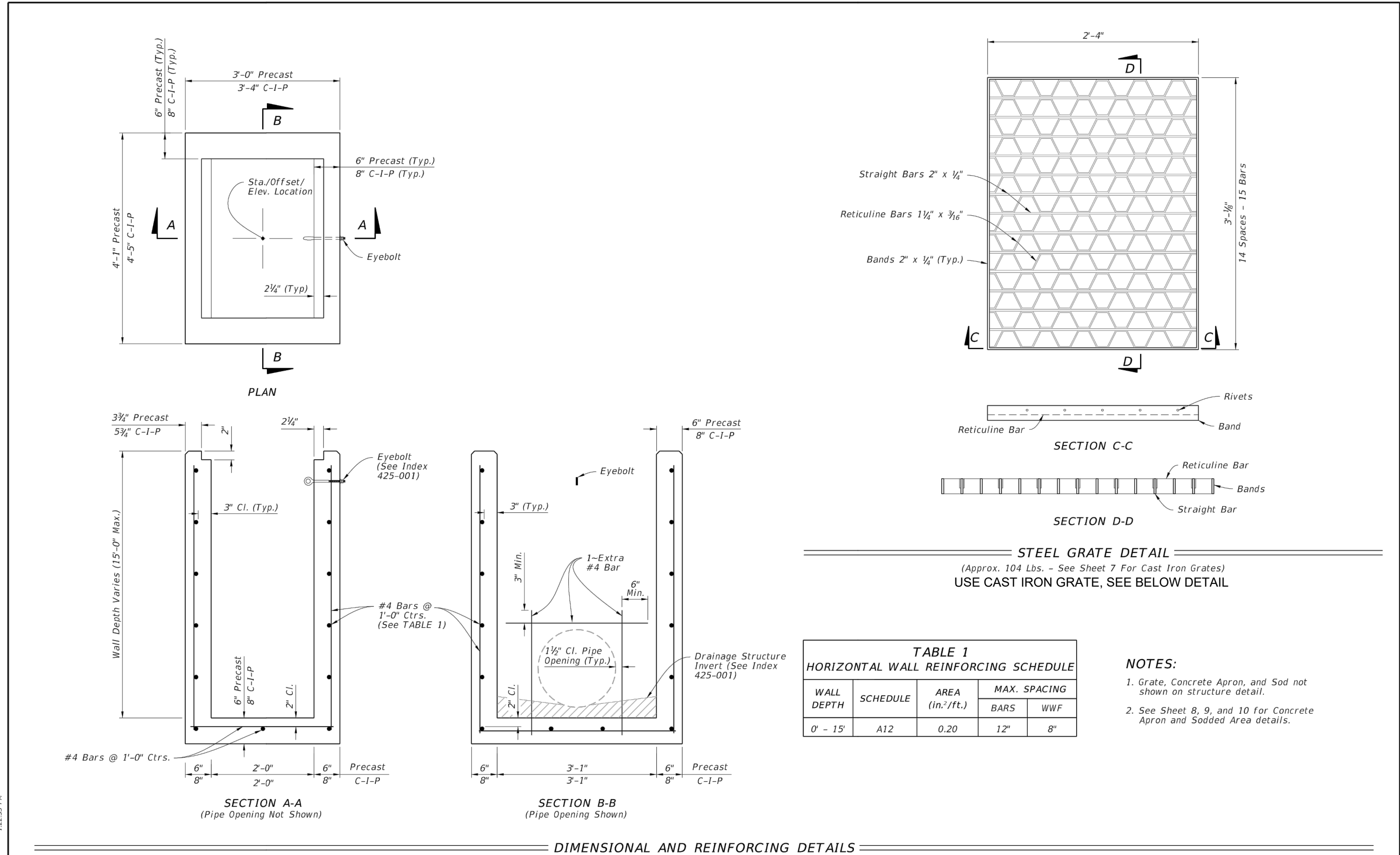
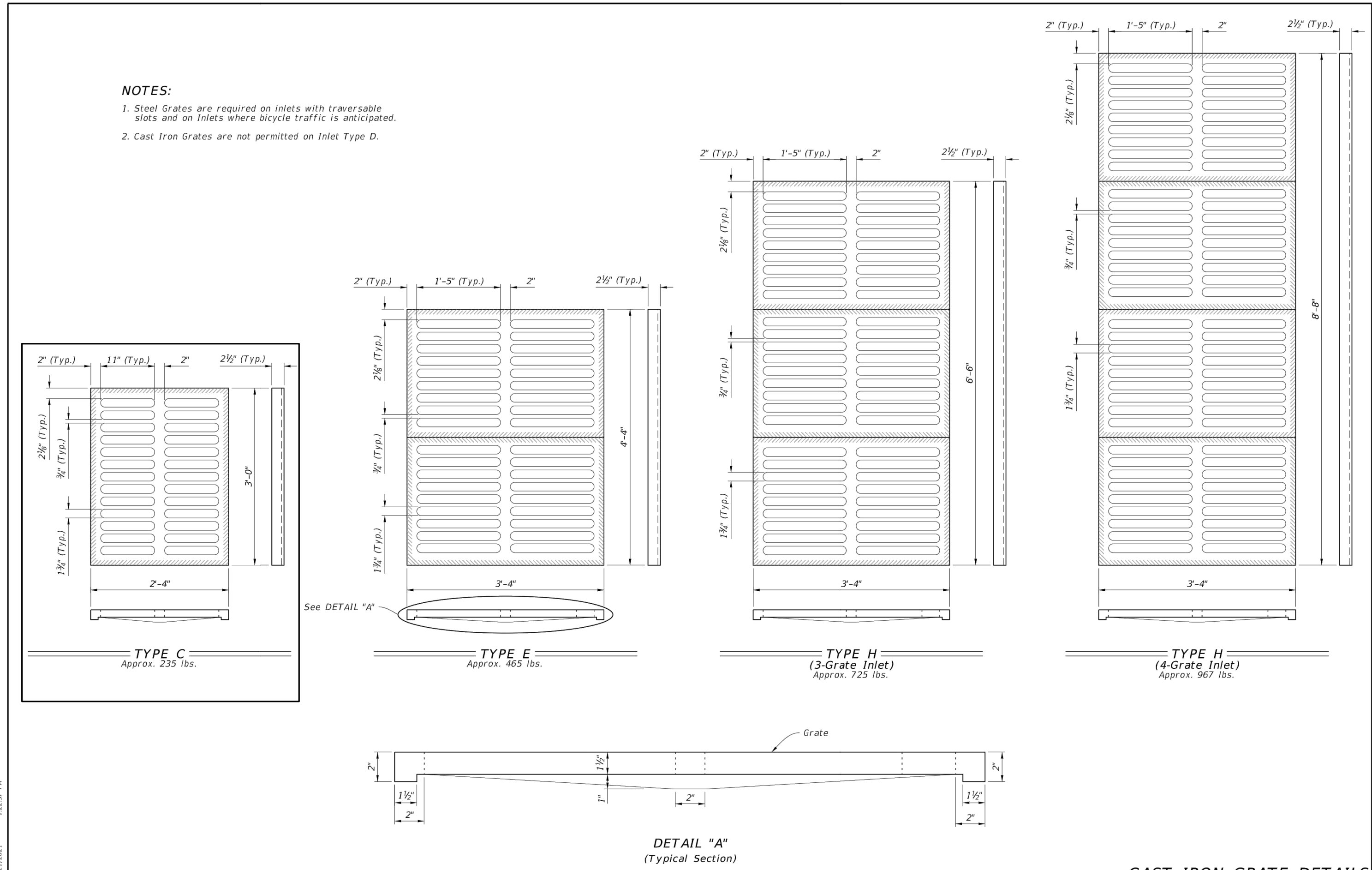


TABLE 1 HORIZONTAL WALL REINFORCING SCHEDULE				
WALL DEPTH	SCHEDULE	AREA (in. ² /ft.)	MAX. SPACING	
			BAR	W/F
0' - 15'	A12	0.20	12"	8"

- NOTES:
1. Grate, Concrete Apron, and Sod not shown on structure detail.
 2. See Sheet 8, 9, and 10 for Concrete Apron and Sodded Area details.

TYPE C - DIMENSIONAL, REINFORCING, AND STEEL GRATE DETAILS

LAST REVISION 11/01/20	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	DITCH BOTTOM INLET TYPE C, D, E, AND H	INDEX 425-052	SHEET 2 of 14
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CAST IRON GRATE DETAILS

LAST REVISION 11/01/20	DESCRIPTION:	FDOT FY 2022-23 STANDARD PLANS	DITCH BOTTOM INLET TYPE C, D, E, AND H	INDEX 425-052	SHEET 7 of 14
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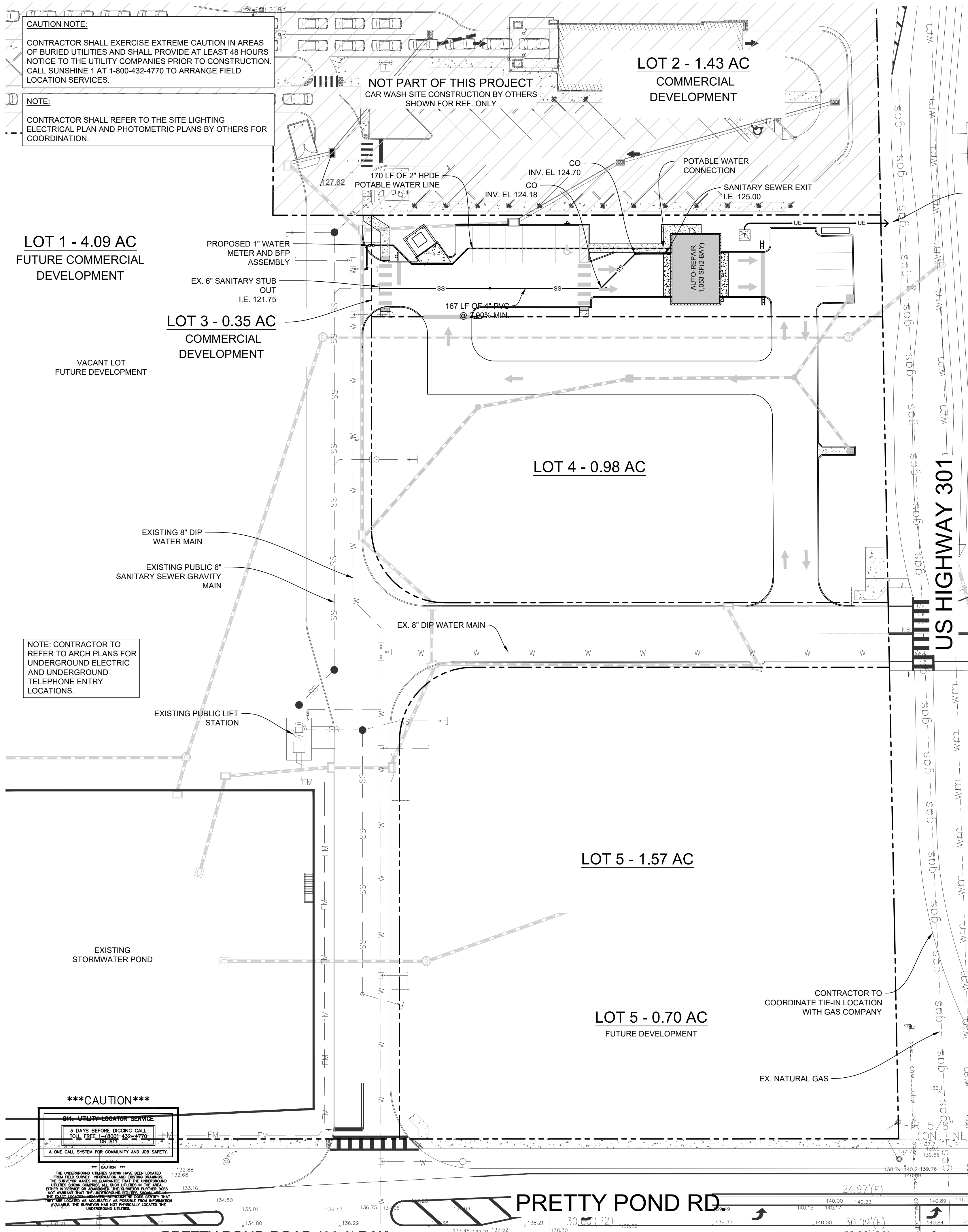
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Project Name & Location:
GRADING PROFILES & DETAILS
Drawing Name:
Date: 04/20/23
Revised: XXX
Drawn: GSS
Checked: SKS
Drawing No.
C-8.0



AGENCY AND UTILITY CONTACTS

WATER AND SEWER:
CITY OF ZEPHYRHILLS
5335 8TH STREET
ZEPHYRHILLS, FL 33542
CONTACT: JOHN BOSTIC
PHONE: (813) 780-0008

GAS
TECO PEOPLES GAS
1400 CHANNELSIDE DR
TAMPA, FL 33605
CONTACT: JACK EVERIDGE
PHONE: (813) 309-5966

FIRE DEPARTMENT:
PASCO COUNTY FIRE RESCUE
4111 LAND O' LAKES BLVD #208
LAND O' LAKES, FL 34639
PHONE: 813-9292750

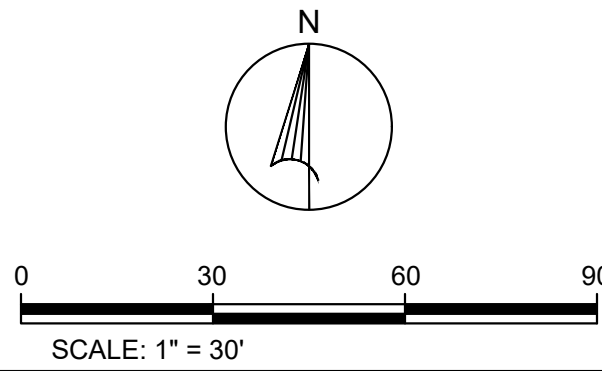
POWER:
DUKE ENERGY
2501 25TH ST N
ST. PETERSBURG, FL 33713
CONTACT: MEGAN VONSTETINA
PHONE: 717-893-9394



UTILITY NOTES

1. ALL SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE STATE OF FLORIDA AND THE CITY OF ZEPHYRHILLS.
2. WATER LINES SHALL BE INSTALLED WITH A MINIMUM OF 36" OF COVER UNLESS OTHERWISE NOTED. ALL WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF ZEPHYRHILLS.
3. VALVES SHALL BE RESILIENT SEAT GATE VALVES, DIRECT BURY WITH A VALVE BOX (AWWA C509).
4. 6" WATER LINE ON-SITE SHALL BE C900 RATED PVC. ALL SERVICE LINES LESS THAN 3" IN DIAMETER SHALL BE PE.
5. SEWER LINES (INCLUDING LATERALS) SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 PER ASTM D-3034.
6. SEWER CLEANOUTS SHALL BE IN ACCORDANCE WITH THE CITY OF ZEPHYRHILLS DETAILS AND SPECIFICATIONS.
7. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT UTILITY EXIT POINTS, EXIT PORCHES, ETC.
8. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS AND FIELD LOCATIONS WHEN POSSIBLE, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED ON THE PLAN OR 12", WHICHEVER IS LESS, CONTACT THE DESIGN ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
9. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND/OR FINAL CONNECTION OF SERVICES.
10. A MINIMUM OF 10 FEET HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN WATER AND SEWER LINES. THE VERTICAL SEPARATION IS TO BE A MINIMUM OF 18".
11. REFER TO THE PHOTOMETRIC AND ARCHITECTURAL PLANS FOR SITE LIGHTING ELECTRICAL DESIGN AND LAYOUT.
12. ALL SITEWORK SHALL MEET OR EXCEED THE THE CITY OF ZEPHYRHILLS AND STANDARDS AND THE SITEWORK SPECIFICATIONS.
13. CONTRACTOR TO PROVIDE ALL TRENCHING, BACKFILLING, & INSTALL ALL ELECTRICAL CONDUITS TO UTILITY COMPANY SPECIFICATIONS.
14. LOCATION OF SITE UTILITIES SHALL BE VERIFIED BY GENERAL CONTRACTOR & THE PROPER UTILITY COMPANY PROVIDING SERVICE.
15. GENERAL CONTRACTOR SHALL PROVIDE 2' x 2' x 6" THICK CONCRETE APRON AT ALL CLEANOUTS OUTSIDE OF BUILDING.
16. GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
17. ELECTRICAL SERVICE TO PAD MOUNTED TRANSFORMER SHALL BE RUN UNDERGROUND, FROM ROAD RIGHT-OF-WAY TO BUILDING.
18. ASSOCIATED MATERIALS AND COST BY GENERAL CONTRACTOR.
19. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINE SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
20. RESTRAINED JOINTS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
21. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
22. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
23. GENERAL CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.

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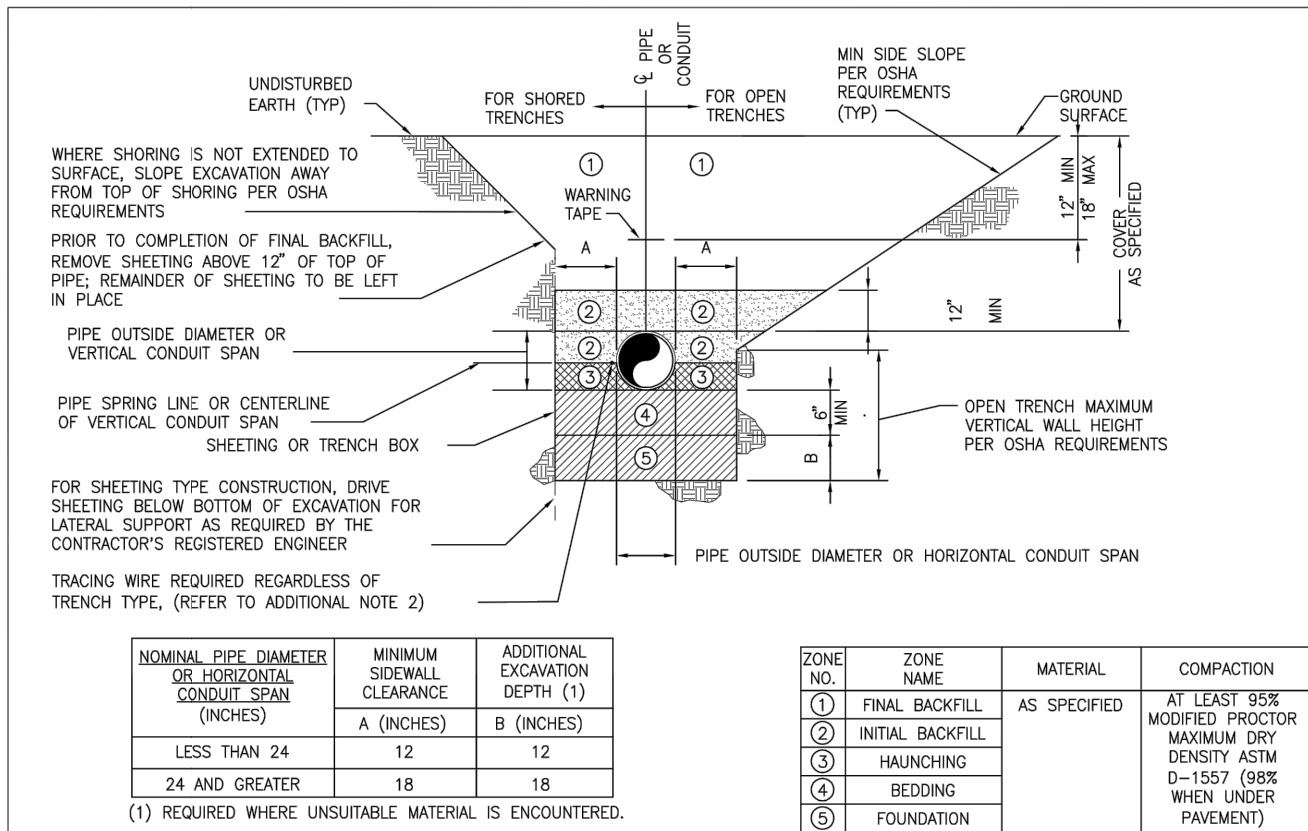
Revised: XXX

Drawn: GSS

Checked: SKS

Drawing No.

C-9.0



- TRENCH ZONE NOTES:**
- FINAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT, REFER TO ADDITIONAL NOTE 3.
 - INITIAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT; ALL LIFTS SHALL BE COMPACTED BY HAND TAMPING OR AN APPROVED METHOD OF MECHANICAL TAMPING, REFER TO ADDITIONAL NOTE 5.
 - HAUNCHING SHALL BE IN COMPLETELY DETAILED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT; ALL LIFTS SHALL BE COMPACTED BY HAND TAMPING. HAUNCHING SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF THE PIPE.
 - BEDDING SHALL BE INSTALLED IN COMPLETELY DETAILED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT, AND SHALL BE COMPACTED BY HAND OR MECHANICAL TAMPING, PROPERLY SHAPED BELL HOLES SHALL BE EXCAVATED IN THE BEDDING TO PERMIT ASSEMBLY OF THE PIPE. REFER TO ADDITIONAL NOTE 3.
 - NATIVE, UNDISTURBED MATERIAL IN COMPLETELY DETAILED TRENCHES MEETING THE COMPACTION AND MATERIAL REQUIREMENTS FOR COMPACTED BEDDING MATERIAL NEED NOT BE REPLACED OR REMOVED EXCEPT FOR SHAPING OF THE BELL HOLES, AND WHERE REFILL IS REQUIRED. FOUNDATION SHALL BE REQUIRED WHERE UNSUITABLE MATERIAL IS ENCOUNTERED. FOUNDATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS FOR BEDDING, REFER TO ADDITIONAL NOTE 3.
- ADDITIONAL NOTES:**
- FOR TRENCHES IN VEHICULAR TRAFFIC AREAS OR BENEATH SURFACE IMPROVEMENTS (EG. SLABS, ASPHALT, ETC.) SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL COMPACTION REQUIREMENTS. SEE DRAWINGS FOR SURFACE IMPROVEMENT AND /OR RESTORATION DETAILS WHERE APPLICABLE.
 - TRACING WIRE SHALL BE INSTALLED ON THE SIDE OF THE PIPE AND ATTACHED TO THE PIPE EVERY 10' W/ A NYLON WIRE TIE. IF THE WIRE IS DAMAGED OR NEEDS TO BE EXTENDED A 3M WATERPROOF U.S. SPAC SHALL BE INSTALLED TO REPAIR THE WIRE. THE END OF THE TRACING WIRE SHALL BE BROUGHT UP IN EVERY VALVE BOX ON THE LINE AND AT THE HYDRANT VALVES. THERE SHALL BE A MINIMUM COIL OF 3' LEFT UNDER THE VALVE BOX COVER. THE WIRE SHALL BE TIED TO EVERY CONDUIT.
 - ALTERNATIVE LIFT THICKNESSES, NOT EXCEEDING 12 INCHES LOOSE MEASUREMENT, ARE ACCEPTABLE IN TRENCH ZONES 1, 2, 4, AND 5 PROVIDED 1) THE LIFT THICKNESS DOES NOT EXCEED THE MAXIMUM VALUE RECOMMENDED IN WRITING BY THE APPLICABLE PIPE MANUFACTURER AND 2) FIELD TEST RESULTS CONFIRM THAT THE SPECIFIED COMPACTION REQUIREMENTS ARE BEING MET.

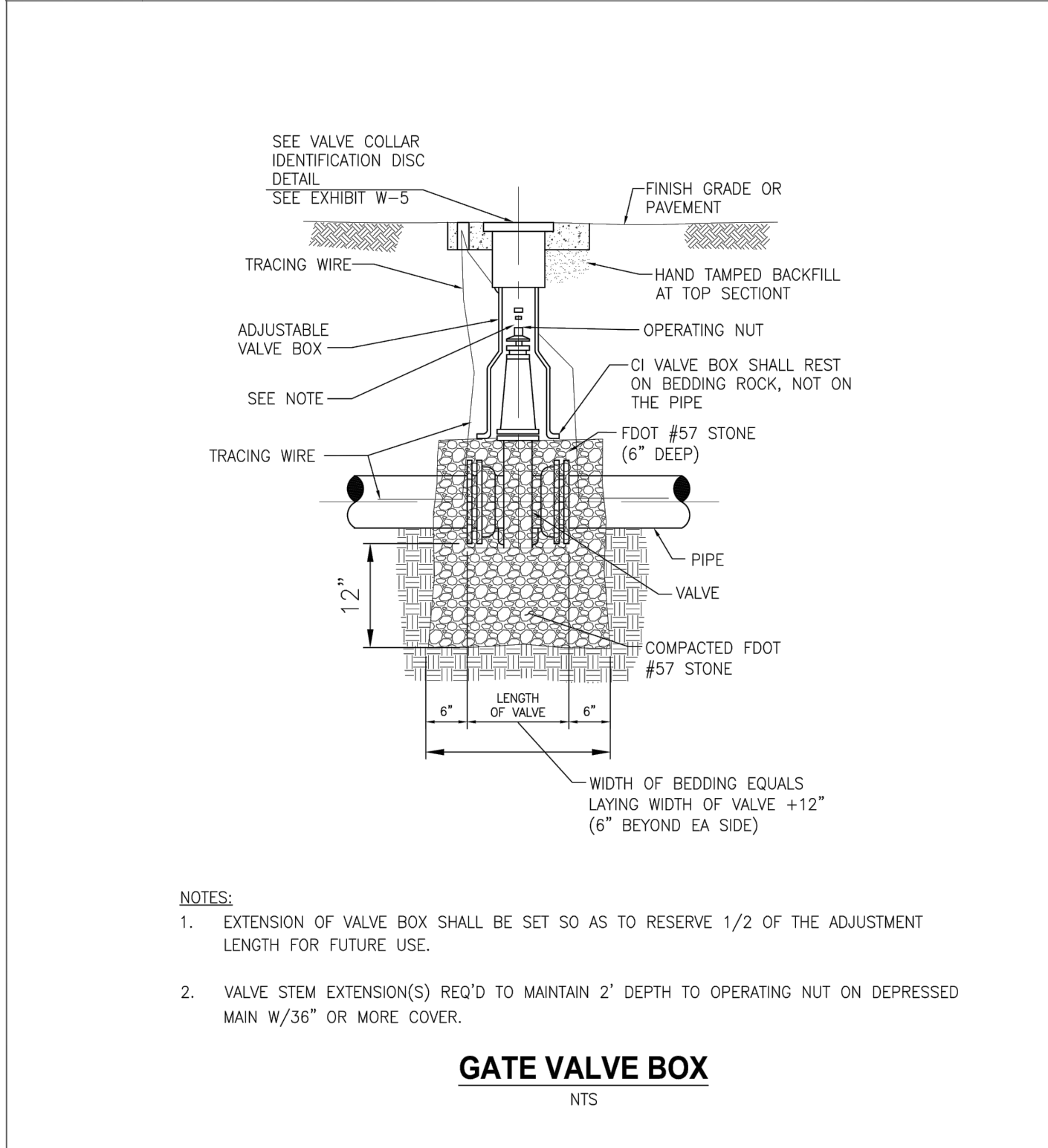
TYPICAL UTILITY TRENCH DETAIL
NTS



CITY OF ZEPHYRHILLS
STANDARD DETAILS
CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
39825 ALSTON AVENUE ZEPHYRHILLS, FLORIDA 33542
PHONE (813)780-0029 FAX (813)780-0613

DECEMBER 2015

G-3



- NOTES:**
- EXTENSION OF VALVE BOX SHALL BE SET SO AS TO RESERVE 1/2 OF THE ADJUSTMENT LENGTH FOR FUTURE USE.
 - VALVE STEM EXTENSION(S) REQ'D TO MAINTAIN 2' DEPTH TO OPERATING NUT ON DEPRESSED MAIN W/36" OR MORE COVER.

GATE VALVE BOX
NTS



CITY OF ZEPHYRHILLS
STANDARD DETAILS
CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
39825 ALSTON AVENUE ZEPHYRHILLS, FLORIDA 33542
PHONE (813)780-0029 FAX (813)780-0613

NOVEMBER 2021

W-3

RESTRAINED JOINT SCHEDULE											
PIPE SIZE	FITTING						VALVE, DEAD END OR REDUCER				
	90° BEND	45° BEND	45° BEND (VERT)	22 1/2° BEND	22 1/2° BEND (VERT)	11 1/4° BEND	11 1/4° BEND (VERT)	TEE (BRANCH)	TEE (BRANCH)	TEE (BRANCH)	TEE (BRANCH)
6"	37	16	45	8	14	4	7	107	107	107	107
6"	29	12	34	6	11	3	6	82	82	82	82
4"	17	8	16	4	8	2	4	38	38	38	38

- NOTES:**
- RESTRAINED LENGTHS ARE IN FEET AND ARE FOR POLYETHYLENE WRAPPED DUCTILE IRON PIPE UNLESS OTHERWISE NOTED.
 - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING RESTRAINED JOINTS.
 - THE SCHEDULE SHOWN IS FOR THE FOLLOWING SERVICE CONDITIONS 150 PSIG TEST PRESSURE, POORLY GRADED COARSE SAND, 36 INCHES COVER, TYPE 3 TRENCH CONDITIONS; AND 1.5 SAFETY FACTOR.
 - RESTRAINED LENGTHS SHOWN IN TABLE ARE IN FEET AND ARE MINIMUM LENGTHS REQUIRED IN EACH DIRECTION FROM FITTINGS OR VALVES.
 - ALL PIPE SHALL BE RESTRAINED TO THE NEXT JOINT BEYOND THE RESTRAINED LENGTH GIVEN.
 - RESTRAINED LENGTH FOR REDUCERS SHALL BE BASED ON THE SIZE OF THE LARGEST END OF THE REDUCER.
 - CONTRACTOR SHALL HAVE FLORIDA LICENSED PROFESSIONAL ENGINEER VERIFY ALL THE RESTRAINED LENGTHS SHOWN IN THE TABLE ABOVE ARE ADEQUATE FOR ALL VARYING SOIL CONDITIONS ON THE PROJECT. THE CONTRACTOR'S ENGINEER SHALL PROVIDE A SIGNED AND SEALED STATEMENT THAT ALL PIPING WAS INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TABLE ABOVE OR IN ACCORDANCE WITH THE FINDINGS OF THE CONTRACTOR'S PROFESSIONAL ENGINEER, WHOEVER ARE MORE STRINGENT. CONTRACTOR'S COST FOR MEETING THESE REQUIREMENTS SHALL BE INCLUDED IN THEIR BID.
 - FOR CONNECTION OF PIPING TO EXISTING PIPING, WHEN THE REQUIRED RESTRAINED JOINT PIPE LENGTHS TO PREVENT PIPE MOVEMENT CANNOT BE ATTAINED IN ACCORDANCE WITH RESTRAINED JOINT SCHEDULE, THE CONTRACTOR SHALL PROVIDE A SIGNED AND SEALED STATEMENT THAT ALL PIPING WAS INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TABLE ABOVE OR IN ACCORDANCE WITH THE FINDINGS OF THE CONTRACTOR'S PROFESSIONAL ENGINEER, WHOEVER ARE MORE STRINGENT. CONTRACTOR'S COST FOR MEETING THESE REQUIREMENTS SHALL BE INCLUDED IN THEIR BID.
 - WHERE HOD CONNECTS TO PUSH-ON JOINT PIPING, THIS CONNECTION SHALL BE TREATED AS DEAD END W/ RESPECT TO THE RESTRAINED JOINT SCHEDULE.

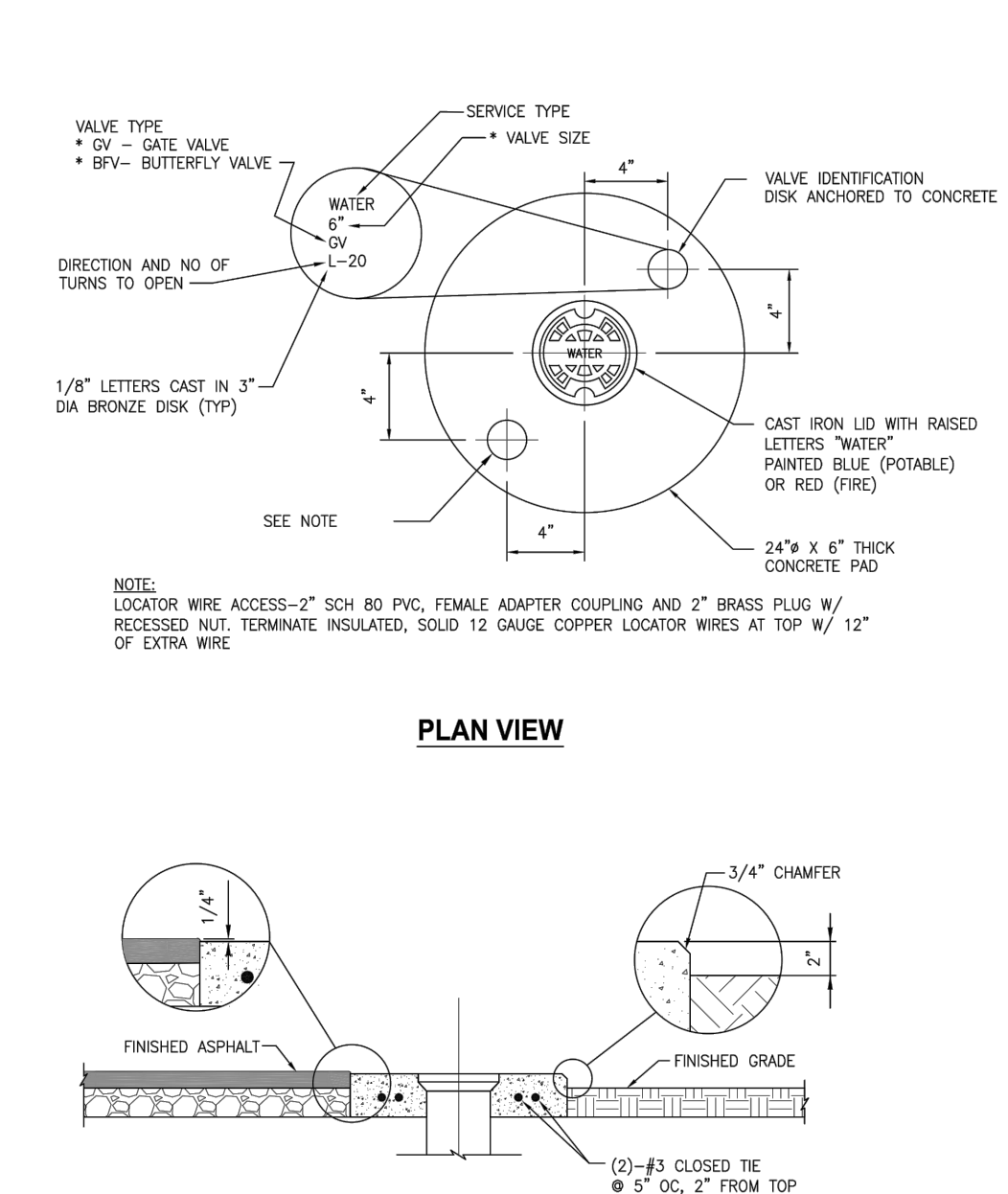
RESTRAINED JOINT SCHEDULE
NTS



CITY OF ZEPHYRHILLS
STANDARD DETAILS
CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
39825 ALSTON AVENUE ZEPHYRHILLS, FLORIDA 33542
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DECEMBER 2015

G-6



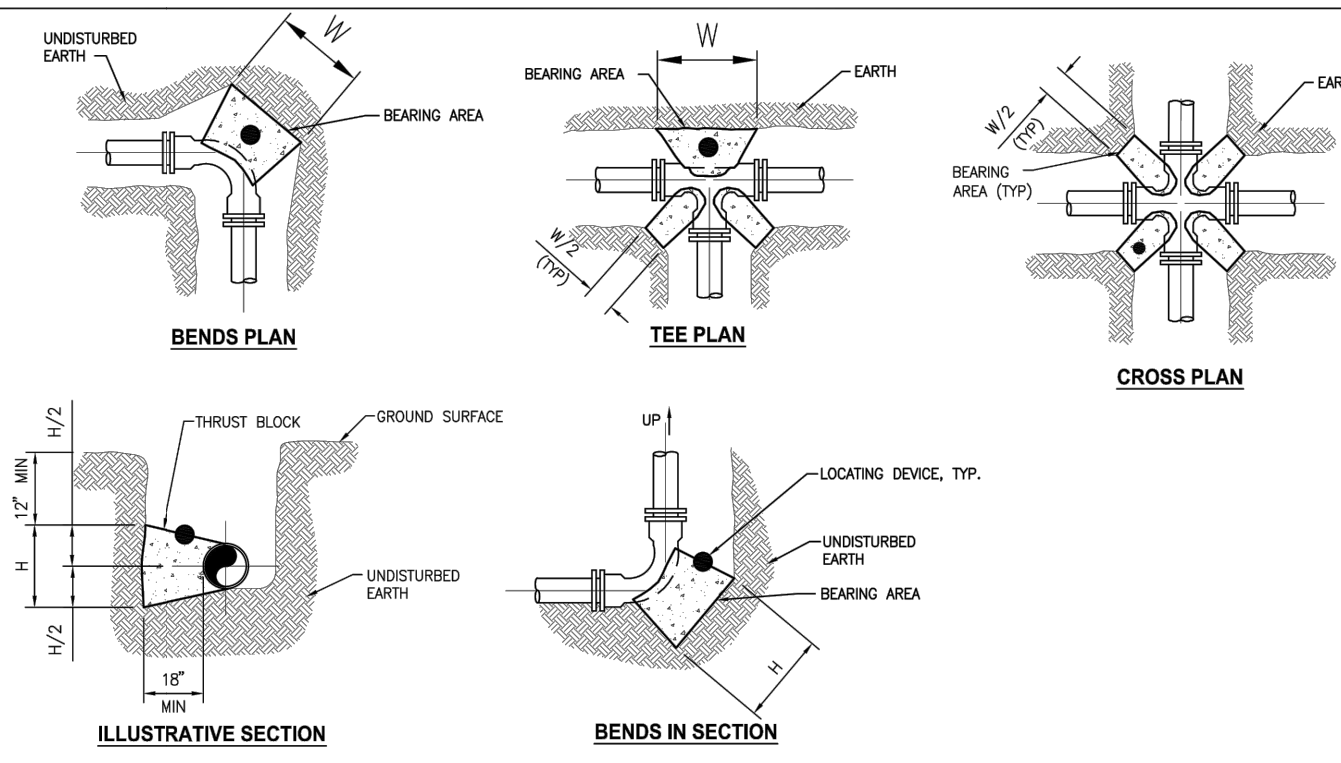
VALVE COLLAR AND IDENTIFICATION DISK
NTS



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NOVEMBER 2021

W-5



REACTION BLOCK BEARING AREA DIMENSIONS						
FITTING	11 1/4° BEND	22 1/2° BEND	45° BEND	90° BEND	TEE/CROSS/ PLUGS/CAPS	
SIZE (in)	H x W (in)	H x W (in)	H x W (in)	H x W (in)	H x W (in)	
4	11x11	15x15	20x20	28x28	23x23	
6	16x16	21x21	28x28	40x40	33x33	
8	20x20	27x27	36x36	50x50	44x44	
10	24x24	32x32	42x42	60x60	53x53	
12	28x28	36x36	48x48	70x70	63x63	
14	32x32	40x40	54x54	80x80	73x73	
16	36x36	45x45	60x60	90x90	83x83	
18	40x40	50x50	66x66	100x100	93x93	
24	50x50	72x72	108x108	144x144	129x129	

- REACTION BLOCK NOTES:**
- BASED ON 150 PSI PRESSURE & 1500 PSF SOIL BEARING VALUE, 2.0 SAFETY FACTOR, WATER TABLE BELOW THE THRUST BLOCK, VERTICAL BLOCK FACE, AND A MINIMUM THICKNESS OF 18 INCHES.
 - BEARING AREAS FOR PLUGS SHALL BE THE SAME AS FOR TEES.
 - FORM REACTION BLOCKS TO KEEP CONCRETE CLEAR OF JOINTS AND BOLTS.
 - REQUIRED REACTION BLOCK BEARING AREA SHALL BE PLACED AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE ALL LOOSE MATERIAL AND EXTEND REACTION BLOCK TO UNDISTURBED MATERIAL.
 - PLACE PRESSURE TREATED WOOD BOARDS IN FRONT OF PLUG, AT TEE, CROSS OR END OF PIPE BEFORE POURING CONCRETE REACTION BLOCK.
 - BACKFILL SHALL CONSIST ENTIRELY OF CLEAN SAND AND ROCK FRAGMENTS, ANY MUCK ENCOUNTERED SHALL BE REPLACED WITH BACKFILL COMPACTED TO 95% MOISTURE PROCTOR MAXIMUM DRY DENSITY, ASTM D1557.
 - NOT USED.
 - CONTRACTOR SHALL HAVE FLORIDA LICENSED PROFESSIONAL ENGINEER VERIFY ALL THE REACTION BLOCK SIZES SHOWN IN THE TABLE ABOVE ARE ADEQUATE FOR ALL VARYING SOIL CONDITIONS ON THE PROJECT. THE CONTRACTOR'S ENGINEER SHALL PROVIDE A SIGNED AND SEALED STATEMENT THAT ALL REACTION BLOCKS WERE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TABLE ABOVE OR IN ACCORDANCE WITH THE FINDINGS OF THE CONTRACTOR'S PROFESSIONAL ENGINEER, WHOEVER ARE MORE STRINGENT. CONTRACTOR'S COST FOR MEETING THESE REQUIREMENTS SHALL BE INCLUDED IN THEIR BID.

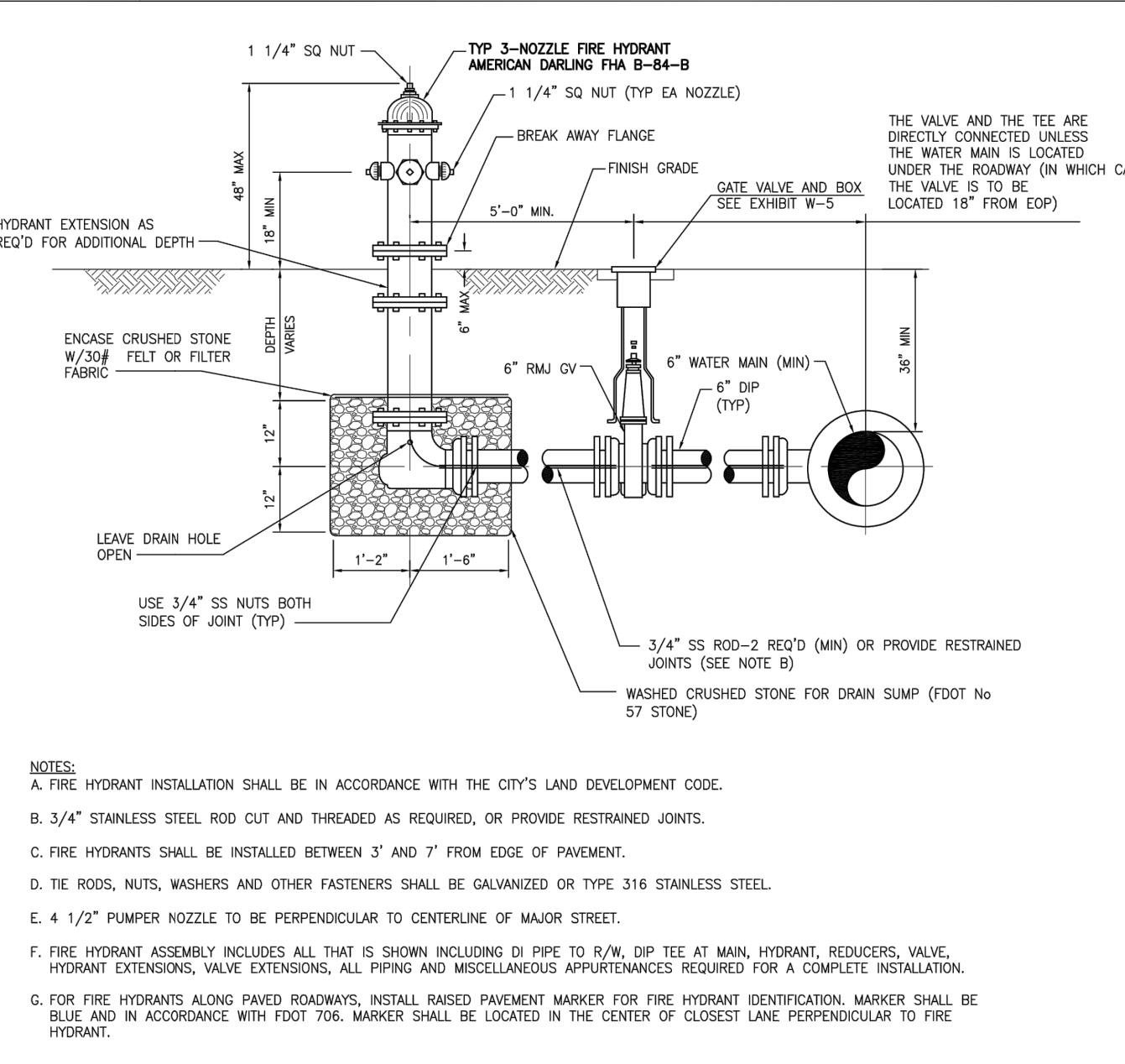
TYPICAL REACTION BLOCK (THRUST BLOCK) DETAILS
NTS



CITY OF ZEPHYRHILLS
STANDARD DETAILS
CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
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G-6A



- NOTES:**
- FIRE HYDRANT INSTALLATION SHALL BE IN ACCORDANCE WITH THE CITY'S LAND DEVELOPMENT CODE.
 - 3/4" STAINLESS STEEL ROD CUT AND THREADED AS REQUIRED, OR PROVIDE RESTRAINED JOINTS.
 - FIRE HYDRANTS SHALL BE INSTALLED BETWEEN 3' AND 7' FROM EDGE OF PAVEMENT.
 - THE RODS, NUTS, WASHERS AND OTHER FASTENERS SHALL BE GALVANIZED OR TYPE 316 STAINLESS STEEL.
 - 4 1/2" PUMPER NOZZLE TO BE PERPENDICULAR TO CENTERLINE OF MAJOR STREET.
 - FIRE HYDRANT ASSEMBLY INCLUDES ALL THAT IS SHOWN INCLUDING DI PIPE TO R/W, DI TEE AT MAIN, HYDRANT, REDUCERS, VALVE, HYDRANT EXTENSIONS, VALVE EXTENSIONS, ALL PIPING AND MISCELLANEOUS APPURTENANCES REQUIRED FOR A COMPLETE INSTALLATION.
 - FOR FIRE HYDRANTS ALONG PAVED ROADWAYS, INSTALL RAISED PAVEMENT MARKER FOR FIRE HYDRANT IDENTIFICATION. MARKER SHALL BE BLUE AND IN ACCORDANCE WITH FDOT 706. MARKER SHALL BE LOCATED IN THE CENTER OF CLOSEST LANE PERPENDICULAR TO FIRE HYDRANT.

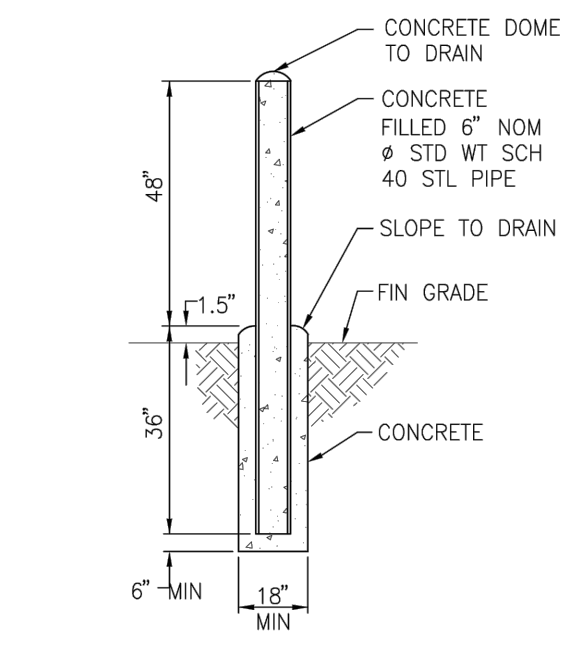
FIRE HYDRANT DETAIL
NTS



CITY OF ZEPHYRHILLS
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CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
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NOVEMBER 2021

W-10



- NOTES:**
- ACTUAL INSTALLATION LOCATION OF EACH BOLLARD SHALL BE AS SHOWN ON THE DRAWINGS OR AS DIRECTED IN THE FIELD.
 - PAIN ALL PIPING MATERIALS IN ACCORDANCE WITH SSPC STANDARDS. COLOR TO BE CHOSEN BY THE CITY.

BOLLARD CONCRETE FILLED
NTS



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G-10

Issued:	Date:
A CITY OF ZEPHYRHILLS	04/20/23
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Revisions:	
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Scott K. Stannard, P.E.

FL P.E. No. 50565 SEAL

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WLN
ZEPHYRHILLS, LLC
3715 NORTHSIDE PKWY NW
BUILDING 400, SUITE 515
ATLANTA, GA 30327
PH: (404) 228-4364
CONTACT: KEVIN FRAZIER

Client Name:

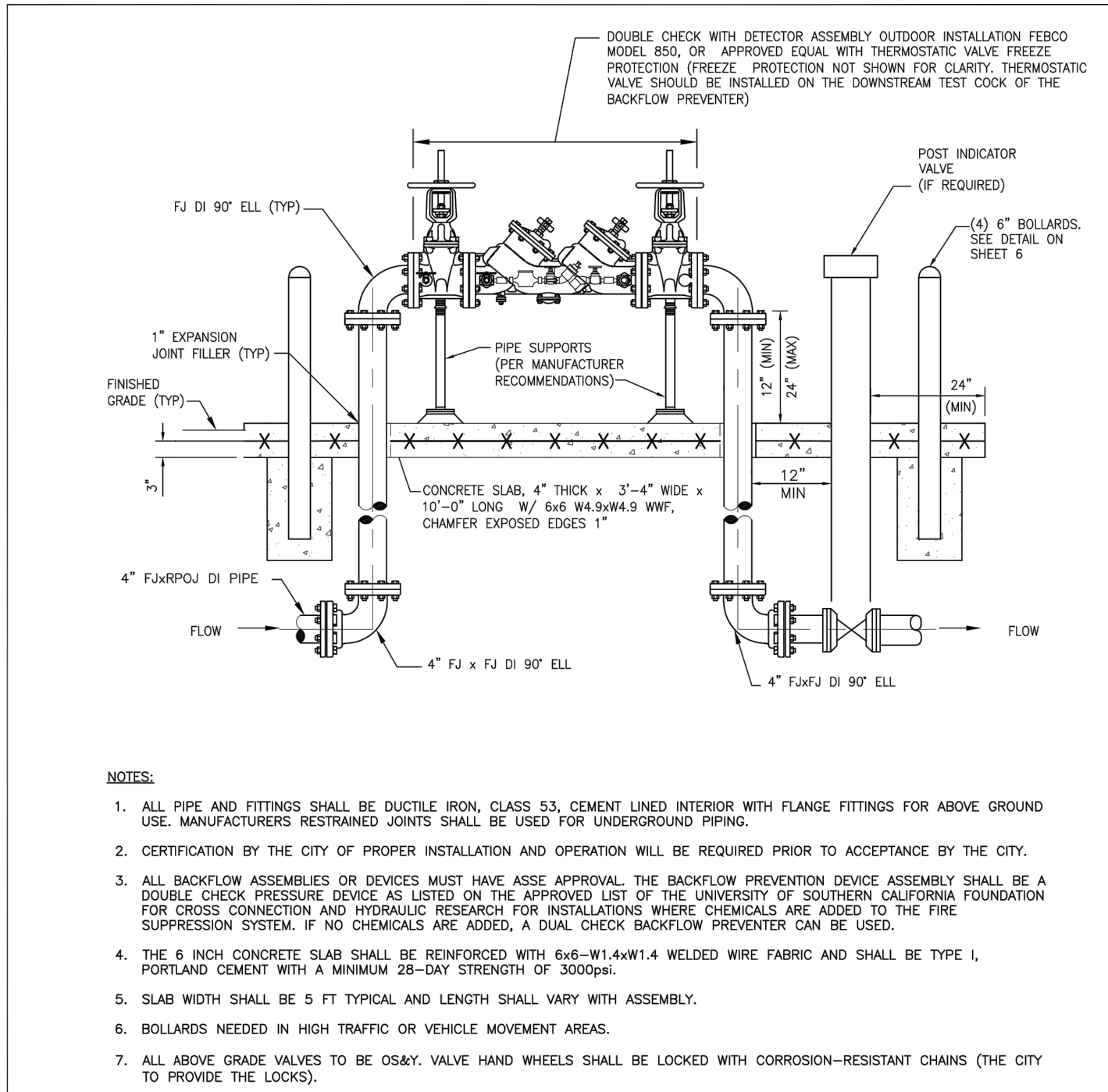
TAKE 5 OIL CHANGE

US HIGHWAY 301
AT PRETTY POND
ZEPHYRHILLS, FL
PH: 404-754-6934
CONTACT: PHILLIP MORRISSEY

Project Name & Location:

UTILITY DETAILS

Drawing Name:	Drawing No.
Date: 04/20/23	C-10.0
Revised: XXX	
Drawn: GSS	
Checked: SKS	



BACKFLOW PREVENTION ASSEMBLY (FOR FIRE SERVICE ONLY)
NTS



**CITY OF ZEPHYRHILLS
STANDARD DETAILS**
CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
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NOVEMBER 2021
W-12

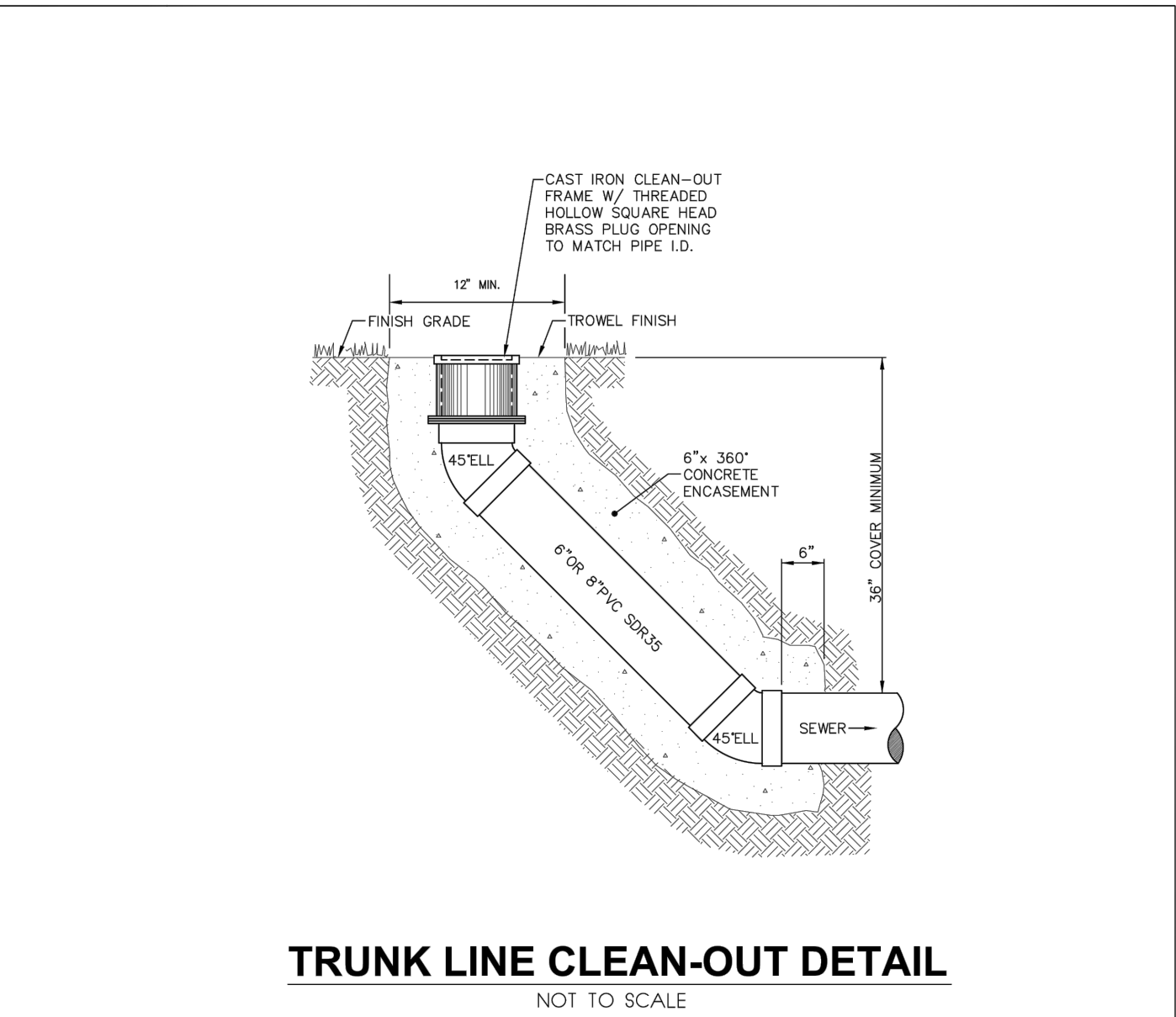
- GENERAL NOTES:**
- A MASTER METER ASSEMBLY SHALL BE DIRECTLY ACCESSIBLE BY BOOM TRUCK OFF A COMMON BASE ROW, OR BY AN INTERIOR ROAD THAT IS NOT BLOCKED BY A WALL OR GATE. THE ACCESS ROAD SHALL BE 12 FT WIDE (MIN.) AND PAVED (CONCRETE OR ASPHALT)
 - ALL ABOVE GROUND PIPES AND FITTINGS SHALL BE CLASS 53 D.I.P. FOR 4 INCH AND LARGER PIPE.
 - CERTIFICATION BY THE CITY OF PROPER INSTALLATION AND OPERATION WILL BE REQUIRED PRIOR TO ACCEPTANCE BY THE CITY.
 - ALL BACKFLOW ASSEMBLIES OR DEVICES MUST HAVE ASSE APPROVAL. IN ADDITION THE BACKFLOW PREVENTION DEVICE ASSEMBLY SHALL BE A REDUCED PRESSURE DEVICE AS LISTED ON THE APPROVED LIST OF THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH.
 - THE 6 INCH CONCRETE SLAB SHALL BE REINFORCED WITH 6x6-W1.4xW1.4 WELDED WIRE FABRIC AND SHALL BE TYPE I, PORTLAND CEMENT WITH A MINIMUM 28-DAY STRENGTH OF 3000psi.
 - SLAB WIDTH AND LENGTH SHALL VARY WITH ASSEMBLY. THE TOP OF SLAB SHALL BE 2 INCHES ABOVE FINISHED GRADE.
 - THE METER ASSEMBLY & BOLLARDS SHALL BE PAINTED IN ACCORDANCE WITH SSPC STANDARDS. COLOR TO BE CHOSEN BY THE CITY.
 - IF THE METER ASSEMBLY IS LOCATED WITHIN A TRAFFIC/VEHICLE AREA (PARKING LOT, DRIVEWAY, OR WITHIN 15 FT OF EDGE OF PAVEMENT/BACK OF CURB), METERS UP TO 2 INCHES SHALL HAVE A MINIMUM OF 4 TRAFFIC BOLLARD PROTECTION POSTS, AND FOR METERS 3 INCHES & LARGER A MINIMUM OF 6 TRAFFIC BOLLARDS ARE REQUIRED.
- TEMPORARY METER NOTES:**
- THE IN-LINE VALVE IS TO REMAIN CLOSED UNTIL AFTER THE CONSTRUCTION AND ACCEPTANCE OF THE DEVELOPMENT WATER DISTRIBUTION SYSTEM.
 - THE METER ASSEMBLY IS TO BE REMOVED AFTER FINAL ACCEPTANCE OF THE WATER DISTRIBUTION SYSTEM BY THE CITY OF ZEPHYRHILLS HEALTH DEPARTMENT AND THE CITY OF ZEPHYRHILLS PLANNING DEPARTMENT.
 - ALL CONSTRUCTION MUST MEET APPLICABLE STATE AND/OR LOCAL ROADWAY/ROADSIDE DESIGN STANDARDS INCLUDING, BUT NOT LIMITED TO, CLEAR ZONE REQUIREMENTS.

**GENERAL WATER METER ASSEMBLY NOTES
RESIDENTIAL OR COMMERCIAL DEVELOPMENT**
NTS



**CITY OF ZEPHYRHILLS
STANDARD DETAILS**
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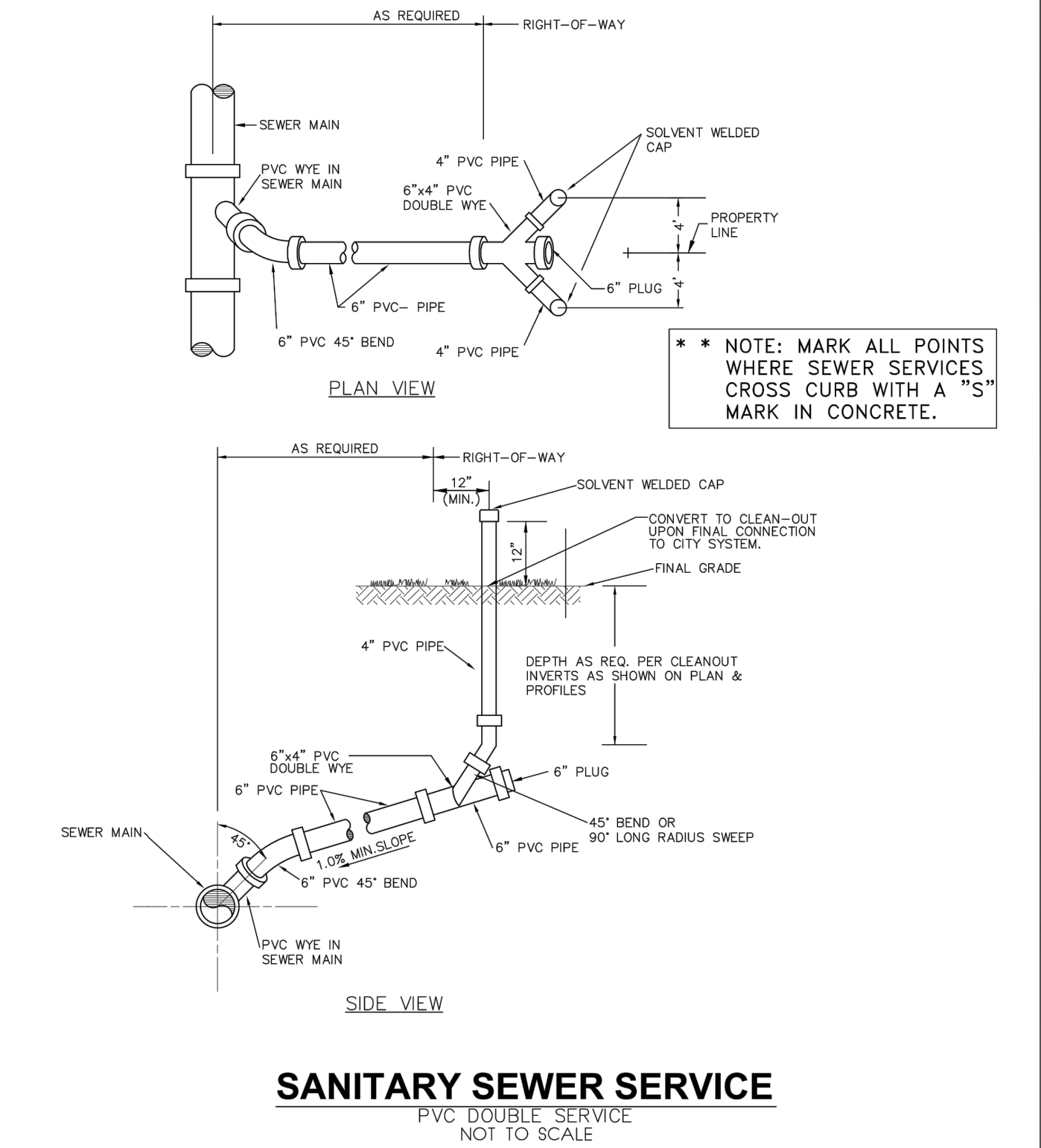


TRUNK LINE CLEAN-OUT DETAIL
NOT TO SCALE



**CITY OF ZEPHYRHILLS
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DECEMBER 2015
S-8



SANITARY SEWER SERVICE
PVC DOUBLE SERVICE
NOT TO SCALE



**CITY OF ZEPHYRHILLS
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DECEMBER 2015
S-6

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A	CITY OF ZEPHYRHILLS	04/20/23
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Scott K. Stannard, P.E.

FL P.E. No. 50565 SEAL

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**WLN
ZEPHYRHILLS,
LLC**

3715 NORTHSIDE PKWY NW
BUILDING 400, SUITE 515
ATLANTA, GA 30327
PH: (404) 228-4364
CONTACT: KEVIN FRAZIER

Client Name:

**TAKE 5 OIL
CHANGE**

US HIGHWAY 301
AT PRETTY POND
ZEPHYRHILLS, FL
PH: 404-754-6934
CONTACT: PHILLIP MORRISSEY

Project Name & Location:

**UTILITY
DETAILS**

Drawing Name:

Date: 04/20/23

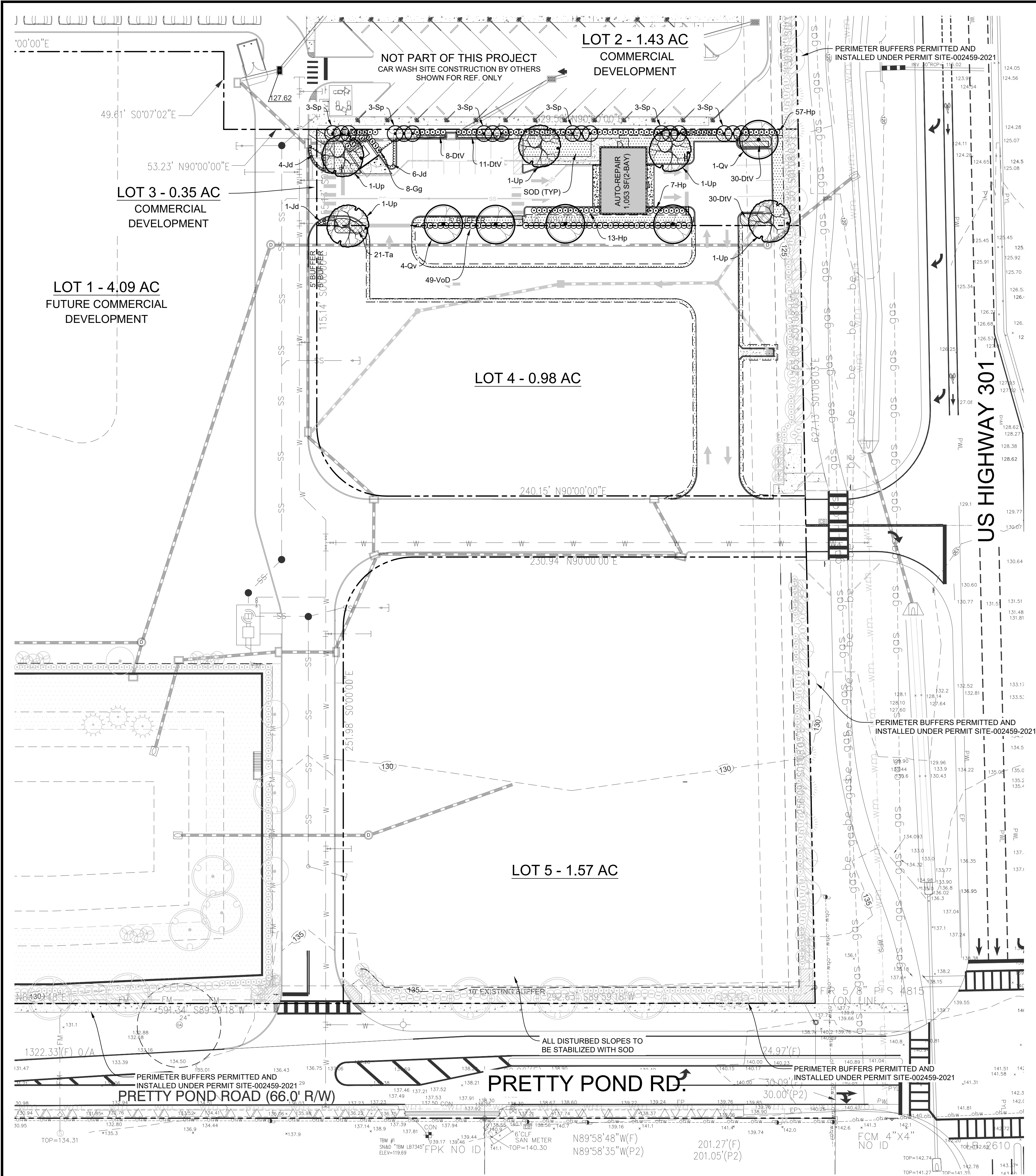
Revised: XXX

Drawn: GSS

Checked: SKS

Drawing No.

C-10.1



SITE DATA

TOT. PROPERTY AREA: ±8.56 ACRES

ZONING / FLU: C-2 (COMMUNITY COMMERCIAL) / MIXED USE

ADJACENT PROPERTY ZONING / FLU:

- NORTH: C-2 / MIXED USE
- EAST: RIGHT-OF-WAY
- SOUTH: RIGHT-OF-WAY
- WEST: C-2 / MIXED USE

PROPOSED USE: COMMERCIAL RETAIL

LANDSCAPE REQUIREMENTS

VEHICULAR USE AREA CALCULATIONS

LOT 3

VEHICULAR USE AREA = 9,176 S.F.

REQUIRED INTERIOR GREEN AREA (9,176 S.F. x 10%) = 917 S.F.

INTERIOR GREEN AREA PROVIDED = 1,563 S.F.

INTERIOR TREES REQUIRED (917 S.F. / 200 S.F.) = 4

INTERIOR TREES PROVIDED = 4

LANDSCAPE BUFFER BETWEEN LOTS

REQUIRED: 10 FT. WIDE TYPE A BUFFER WITH 1 SHADE TREE PER 50 LF OF BUFFER LENGTH AND EVERGREEN SHRUBS PLANTED 3 FT. O.C.

PROVIDED: 10 FT. SHARED BUFFER WITH 1 SHADE TREE PER 50 LF OF BUFFER LENGTH AND EVERGREEN SHRUBS PLANTED 3 FT. O.C.

NOTE:

OVERALL SITE PERIMETER BUFFERS SHOWN AS EXISTING MAY OR MAY NOT BE IN PLACE AT THE TIME OF CONSTRUCTION FOR ITEMS REFLECTED IN THESE PLANS. IN CASES OF CONFLICT, CONTRACTOR SHALL NOTIFY OWNER & ENGINEER IMMEDIATELY FOR CLARIFICATION.

MASTER PLANT LIST				
TREES / PALMS				
SYMB	No.	SCIENTIFIC NAME	COMMON NAME	SIZE REQUIREMENTS
Qv	5	Quercus virginiana 'HIGHRISE'	HIGHRISE LIVE OAK	3" CAL. - 10' MIN. HT.
Sp	15	Sabal palmetto	SABAL PALM	10' MIN. CLEAR TRUNK
Up	5	Ulmus parvifolia 'Bosque'	BOSQUE CHINESE ELM	3" CAL. - 10' MIN. HT.
SHRUBS / GROUNDCOVER				
Div	79	Daniella tasmanica 'Variegata'	VARIEGATED FLAX LILY	3 GAL. MIN., FULLY ROOTED
Gg	8	Galphimia glauca	GOLDEN THRYALLIS	3 GAL. MIN. & 18" MIN. HEIGHT
Hp	77	Hamelia patens	FIRE BUSH	3 GAL. MIN. & 18" MIN. HEIGHT
Jd	11	Juniperus davurica 'Parsonii'	PARSON'S JUNIPER	3 GAL. MIN., FULLY ROOTED
Ta	21	Trachelospermum asiaticum	ASIATIC JASMINE	3 GAL. MIN., FULLY ROOTED
VoD	49	Viburnum obovatum	WALTER'S VIBURNUM	3 GAL. MIN. & 18" MIN. HEIGHT

- SOD PERMANENT SEEDING
- SOD SHALL BE BAHIA GRASS. QUANTITY SHALL BE DETERMINED BY CONTRACTOR.
- ALL PROPOSED LANDSCAPE MATERIAL TO BE 100% IRRIGATED WITH A CENTRAL AUTOMATIC IRRIGATION SYSTEM WHICH MUST INCLUDE RAIN SENSORS AND IRRIGATION TIMERS TO CONSERVE WATER USAGE. REFER TO IRRIGATION PLANS FOR FURTHER INFORMATION.
 - IF SPECIFIED PLANTS ARE UNAVAILABLE AT THE TIME OF CONSTRUCTION, CONTRACTOR MAY REPLACE SPECIFIED PLANTS WITH PLANTS APPROVED BY LANDSCAPE ARCHITECT AND CITY STAFF. ALTERATION TO LANDSCAPE PLAN REQUIRES WRITTEN APPROVAL.
 - ALL PLANT SPECIFICATIONS ARE MINIMUM REQUIREMENTS. ALL SPECIFICATIONS MUST BE MET FOR PLANT MATERIAL TO BE ACCEPTABLE FOR INSTALLATION.
 - ALL PLANT MATERIAL SHALL BE FLORIDA No. 1 PER THE LATEST EDITION OF THE FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS.
 - MINIMUM CANE SIZE FOR MULTI-STEM TREES SHALL BE ONE (1) INCH.
 - ALL OPEN SPACE AREAS WITHIN THE PROPERTY SHALL BE SODDED UNLESS PAVED, SEEDDED AND MULCHED OR PLANTED WITH SHRUBS AND GROUNDCOVER. ALL LANDSCAPED AREAS NOT SODDED SHALL BE COVERED IN MULCH UNLESS OTHERWISE NOTED.

LANDSCAPE FABRIC / MULCH NOTE

LANDSCAPE FABRIC:
GROUNDCOVER INDUSTRIES, INC. 600 SERIES PROFESSIONAL'S CHOICE (6 oz) OR APPROVED EQUAL LANDSCAPE FABRIC SHALL BE PLACED WITHIN ALL PLANTING BEDS.

MULCH SHALL BE ORGANIC, "NO-FLOAT" MULCH WITH 3" SETTLED DEPTH MINIMUM.

*****CAUTION*****

811: UTILITY LOCATOR SERVICE

3 DAYS BEFORE DIGGING CALL TOLL FREE 1-800-432-4770 OR 811

A ONE CALL SYSTEM FOR COMMUNITY AND JOB SAFETY.

CAUTION

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY, INFORMATION, AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN CORRESPOND TO ALL UTILITIES IN THE AREA. THE SURVEYOR IS NOT RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITIES OR PERSONS OR PROPERTY THAT MAY OCCUR DUE TO THE USE OF THESE UTILITIES. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

Issued: 04/20/23

A CITY OF ZEPHYRHILLS

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Revisions:

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0 40 80 120

SCALE: 1" = 40'

Timothy W. Larson, RLA

SEAL Lic. # 6667115

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PH: (404) 228-4364

CONTACT: KEVIN FRAZIER

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TAKE 5 OIL CHANGE

US HIGHWAY 301

AT PRETTY POND

ZEPHYRHILLS, FL

PH: 404-754-6934

CONTACT: PHILLIP MORRISSEY

Project Name & Location:

LANDSCAPE PLAN

Drawing Name:

Date: 04/20/23

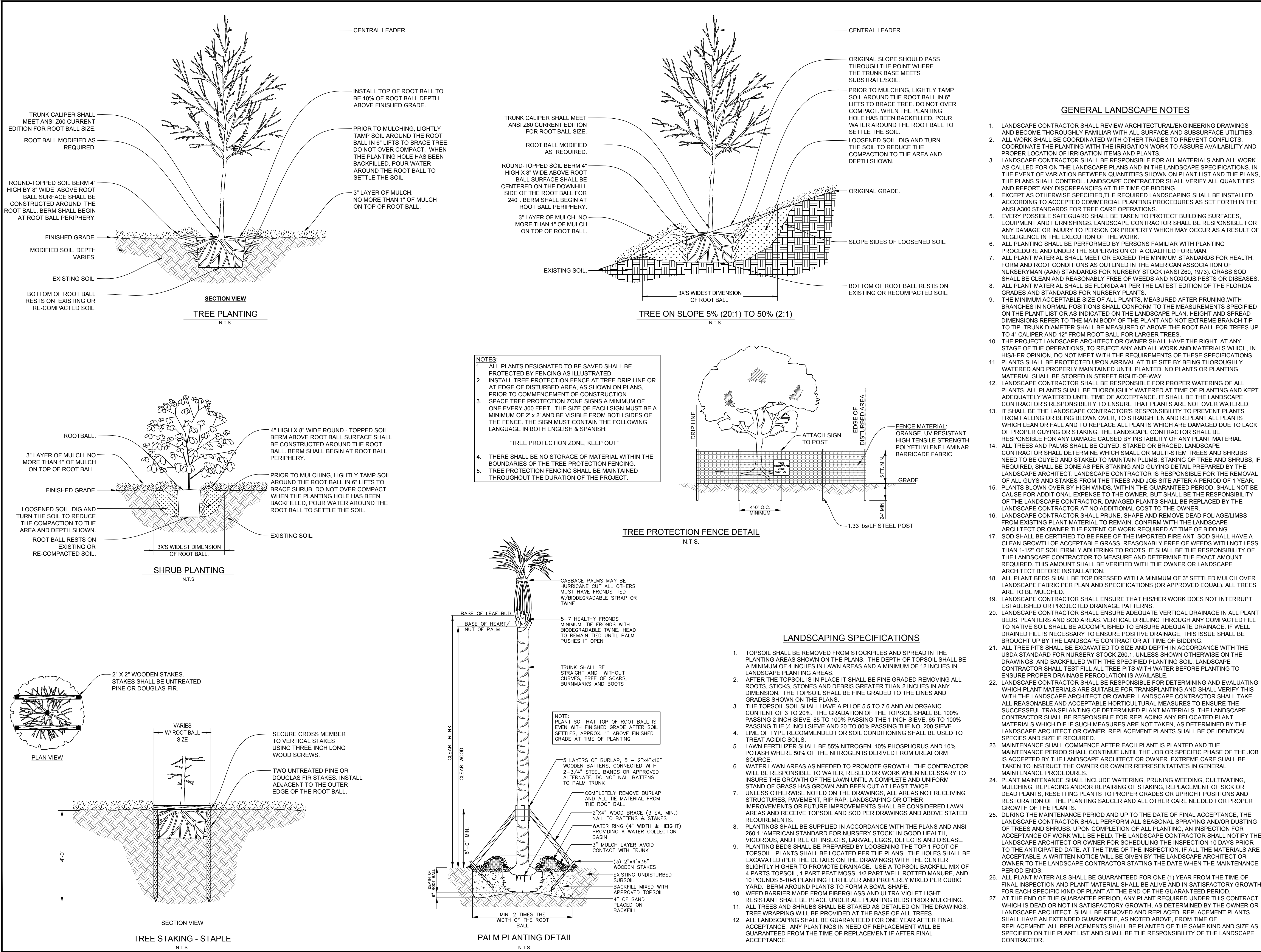
Revised: XXX

Drawn: GSS

Checked: SKS

Drawing No.

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A	SWFWMD MAJOR MOD	10/18/21
B	ISSUED FOR SITE PERMITS	11/18/21
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Revisions:		Date:
1	CITY OF ZEPHYRHILLS RESUB	01/14/21
2	CITY OF ZEPHYRHILLS RESUB	03/17/22
3	CITY OF ZEPHYRHILLS RESUB	04/25/22
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 LA 3687115 STATE OF FLORIDA Scott K. Stannard, P.E. Timothy W. Larson, RLA FL P.E. No. 50565 SEAL Lic. # 6667115 This item has been digitally signed and sealed by Scott K. Stannard, RLA for the data contained herein. All printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.		
 CSS Site Engineering • Landscape Architects Commercial Site Solutions, Inc. C.O.A NO. 27575 21764 State Road 54 Lutz, FL 33549 (813) 885-2032 www.css-eng.com		
 WDG Real Estate Partners WLN ZEPHYRHILLS, LLC 3715 NORTHSIDE PKWY NW BUILDING 400, SUITE 515 ATLANTA, GA 30327 PH: (404) 228-4364 CONTACT: KEVIN FRAZIER		
Client Name:		
MULTI-USE COMMERCIAL PRETTY POND RD US HIGHWAY 301 AT PRETTY POND ZEPHYRHILLS, FL PH: 404-754-6934 CONTACT: MR. PHILLIP MORRISSEY		
Project Name & Location:		
LANDSCAPE NOTES AND DETAILS		
Drawing Name:		Drawing No.
Date:	08/09/21	L-2.0
Revised:	XXX	
Drawn:	GSS	
Checked:	SKS	

STAFF REPORT

To:

From:

RE: SPR-63-23 Calumet Townhomes – CR 54 .3 miles east of 12th St.

Date: May 16, 2023

I. BACKGROUND & INFORMATION

Ensure consistency with Ordinance Number 1450-22 Conditions:

1. ROW dedication along CR 54 to achieve 62 feet from center line, per County requirements
2. Subject to review and approval by Pasco County, the developer shall construct a left-turn lane on CR 54
3. The developer shall improve Calumet ROW by installing a sidewalk along portion of ROW abutting the subject property AND provide ROW dedication, if required by County
4. Subject property shall provide pedestrian and vehicular access to Calumet Ave.

II. DATA & ANALYSIS

III. RECOMMENDATION

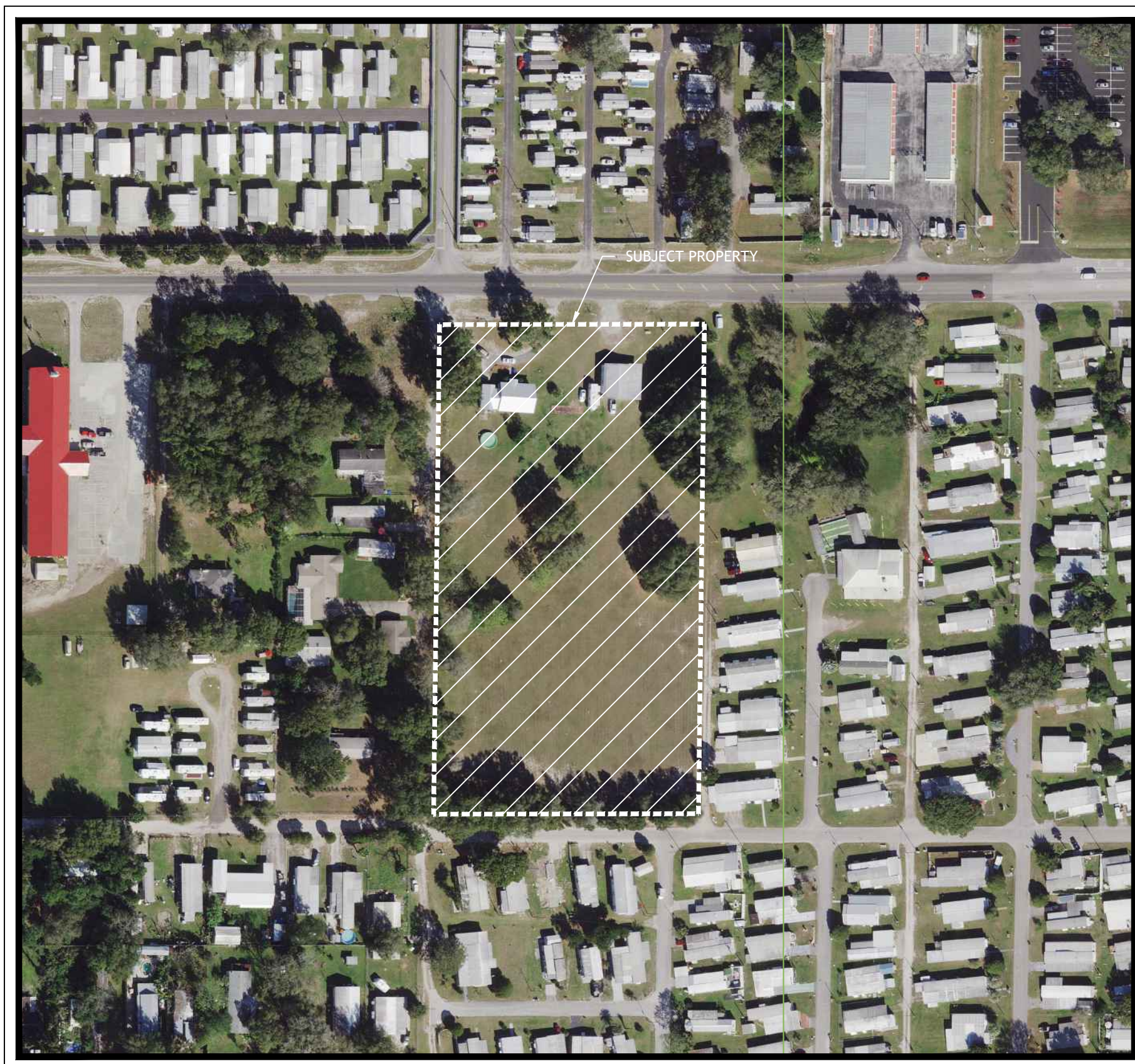
Approval

**PRELIMINARY DEVELOPMENT PLAN/
CONSTRUCTION PLAN/STORMWATER
MANAGEMENT PLANS AND REPORT
FOR
CALUMET TOWN SUBDIVISION
PASCO COUNTY, FLORIDA
SECTION 02, TOWNSHIP 26S, RANGE 21E**

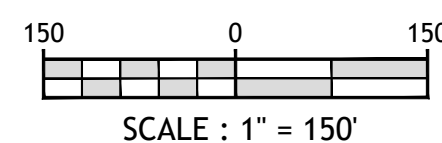
DRAWING LIST	
SHEET NO.	SHEET TITLE
C-0.0	COVER SHEET
C-1.0	CONSTRUCTION NOTES
C-2.0	DEMOLITION AND SITE PREPERATION PLAN
C-2.1	DEMOLITION DETAILS
C-2.2	SWPPP NOTES
C-3.0	PRELIMINARY PLAT
C-3.1	TRACT PLAN
C-3.2	AERIAL SITE PLAN
C-3.3	TYPICAL SECTION
C-4.0	SITE PLAN
C-4.1	SITE PLAN DETAILS
C-5.0	SIGNING AND PAVEMENT PLAN
C-5.1	SIGNING AND PAVEMENT DETAILS
C-5.2	SIGNING AND PAVEMENT DETAILS
C-6.0	GRADING PLAN
C-6.1	STORM PIPE PROFILES
C-6.2	GRADING DETAILS
C-6.3	GRADING DETAILS
C-6.4	GRADING DETAILS
C-6.5	GRADING DETAILS
C-6.6	GRADING DETAILS
C-7.0	MASTER UTILITY PLAN
C-7.1	UTILITY PLAN (SANITARY)
C-7.2	UTILITY PLAN (WATER)
C-7.3	UTILITY DETAILS
C-7.4	UTILITY DETAILS
C-7.5	UTILITY DETAILS
C-7.6	UTILITY DETAILS
C-7.7	UTILITY DETAILS
C-7.8	UTILITY DETAILS
C-7.9	PUMP STATION DETAILS
C-8.0	PLAN AND PROFILE
C-8.1	PLAN AND PROFILE

VERTICAL DATUM

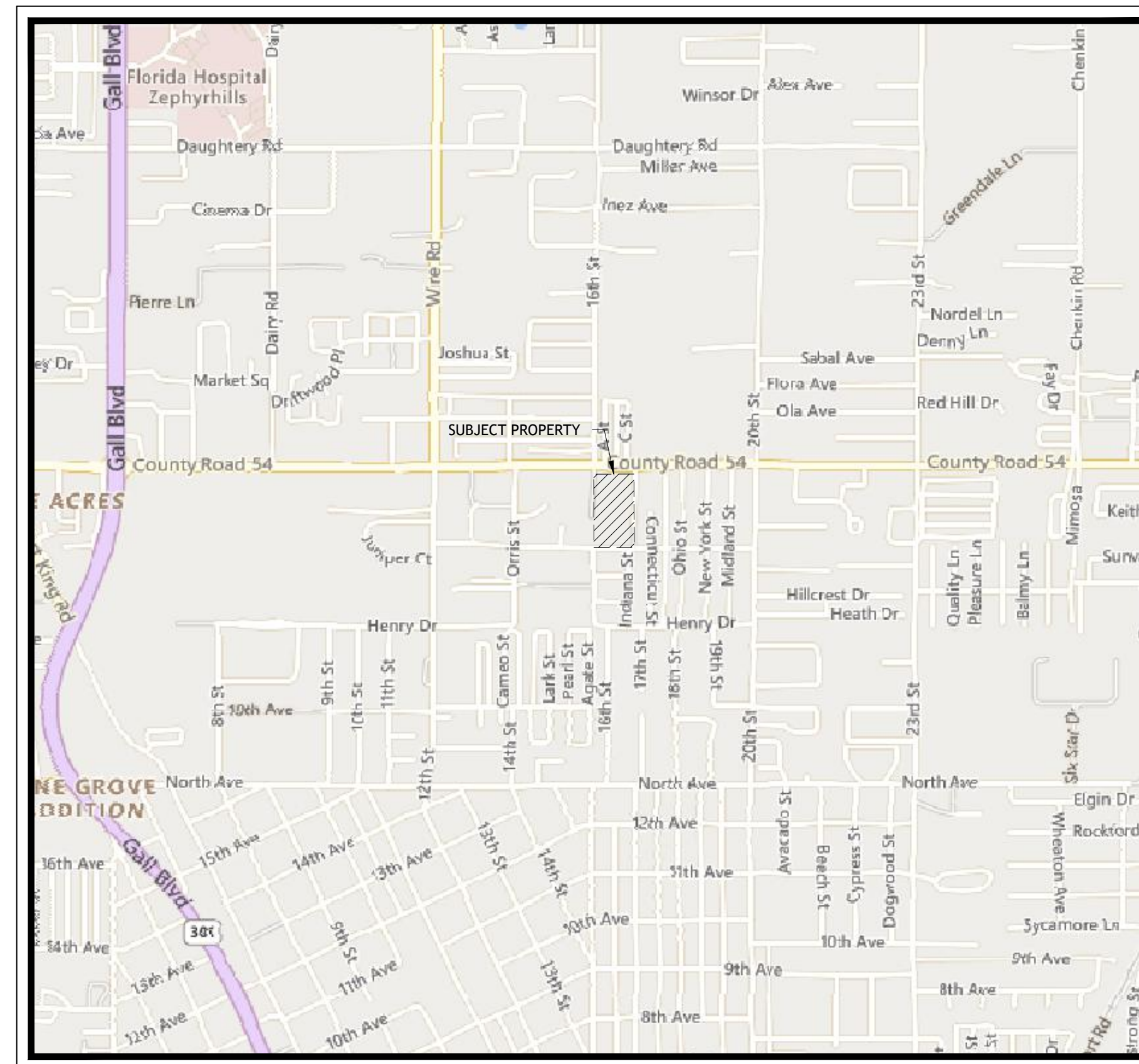
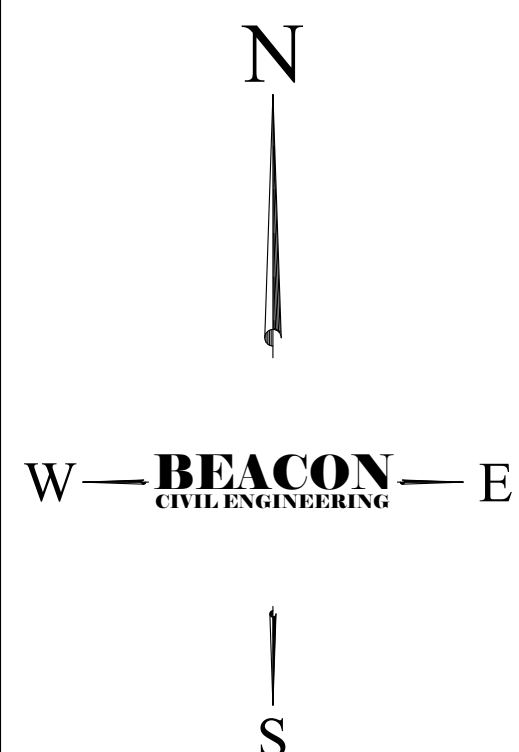
ELEVATIONS SHOWN HEREIN ARE BASED ON THE (NAVD) 88 AND SAID
ELEVATIONS ARE BASED ON BENCHMARKS RESEARCHED BY THE SURVEYOR



LOCATION MAP



SCALE : 1" = 150



VICINITY MAP

SCALE: 1" = 1000'

LEGAL DESCRIPTION

BEGIN AT THE NORTHWEST CORNER OF THE EAST 1/2 OF THE SOUTHEAST 1/4 ON THE SOUTH RIGHT-OF-WAY OF STATE ROAD 54, SECTION 2, TOWNSHIP 26 SOUTH, RANGE 21 EAST, PASCO COUNTY, FLORIDA AND RUN THENCE EAST 330.00 FEET; THENCE SOUTH 660.00 FEET; THENCE WEST 330.00 FEET; THENCE NORTH 660.00 FEET TO THE POINT OF BEGINNING.

SUBJECT TO EASEMENTS, RESTRICTIONS, AND RESERVATIONS OF RECORD.

DEVELOPMENT TEAM

DEVELOPER/OWNER

CALUMET TOWN, LLC.
8345 GUNN HIGHWAY
TAMPA, FL 33626
CONTACT: LAURIE BURCAW, P.E.
PHONE: (813) 523-7412
INFO@BEACONCIVIL.COM

ENGINEER

BEACON CIVIL ENGINEERING, LLC.
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PHONE: (813) 523-7412
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ENVIRONMENTALIST

CLEMENTI ENVIRONMENTAL CONSULTING, LLC.
620 EAST TWIGGS STREET
SUITE 206
TAMPA, FL 33602
CONTACT: ABBEY NAYLOR
PHONE: (813) 227-8901
WWW.CLEMENTI-EC.COM

SURVEYOR

ALPHA LAND SURVEYING
10024 PALERMO CIRCLE
SUITE 202
TAMPA, FL 34208
CONTACT: FRED FRANKLIN, P.S.E
PHONE: (813) 221-2144
FRANKLIN@ALSM96.COM

CALUMET TOWNS

CALUMET ROAD
ZEPHYHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

COVER SHEET

SHEET NUMBER:

C-0.0

[illegible]

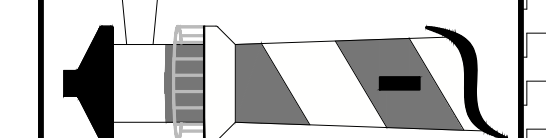
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ONE CALL OF FLORIDA
1-800-432-4770
FOR THE LOCATION OF
UNDERGROUND UTILITIES**

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN THE MAPS AND RECORDS OF THE STATE OF FLORIDA. IT IS THE RESPONSIBILITY OF THE USER OF THESE RECORDS TO VERIFY THE LOCATION OF ANY UTILITIES TO BE EXCAVATED. THE STATE OF FLORIDA DOES NOT WARRANT THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER OF THESE RECORDS SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND INSURANCE FOR ANY EXCAVATION. THE USER OF THESE RECORDS SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND INSURANCE FOR ANY EXCAVATION. THE USER OF THESE RECORDS SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND INSURANCE FOR ANY EXCAVATION.

LAURIE S. BURCAW, PE #46064

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CIVIL ENGINEERING

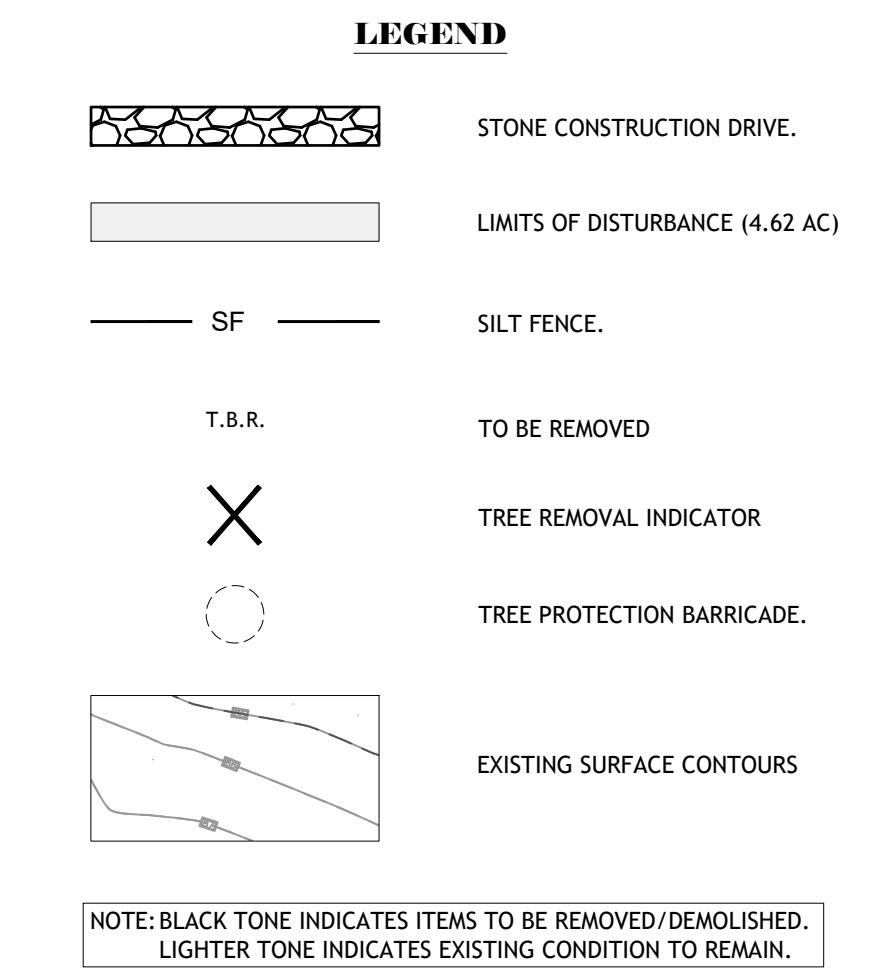
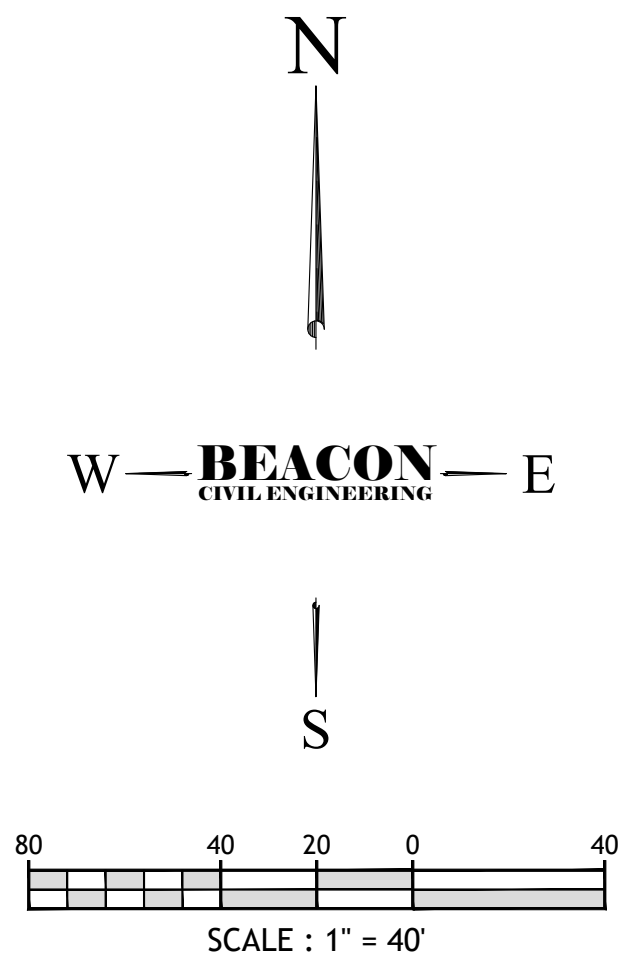
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8345 GUNN HIGHWAY
TAMPA, FL 33626





TREE MIGRATION TABLE	
TOTAL TREE INCHES ONSITE	1128
TOTAL TREE INCHES TO REMAIN	144
TOTAL INCHES TO BE REMOVED < 30"	816
TOTAL INCHES TO BE REMOVED 30" & UP	168
TOTAL INCHES TO BE REMOVED	984
PRESERVED PERCENTAGE	13%
TOTAL INCHES TO BE PLANTED ONSITE	

TREE REMOVAL TABLE		
SPECIES	# OF TREES REMOVED	INCHES REMOVED
CAMPHOR	7	86
CEDAR	4	44
OAK	48	776
PALM	3	42
PINE	1	18



LEGEND:

- (F) - AS MEASURED IN THE FIELD
- (R) - AS PER RECORD
- (C) - AS CALCULATED
- FIR - FOUND IRON REBAR
- FOR - FOUND CAPPED IRON REBAR
- SCIR - SET CAPPED IRON REBAR 1/2" LB8034
- FCM - FOUND CONCRETE MONUMENT
- SPK - SET PK NAIL
- FPKND - FOUND PK NAIL AND DISK
- SPKND - SET PK NAIL AND DISK LB8034
- OR - OFFICIAL RECORDS BOOK
- PB - PLAT BOOK
- PG - PAGE
- ROW - RIGHT OF WAY
- - SET CAPPED IRON REBAR 1/2"
- - FOUND CORNER AS NOTED
- ▲ - FOUND SECTION MARKER
- - SET PK NAIL AS NOTED
- ☼ - POWER POLE
- ☼ - LIGHT POLE
- ☼ - GUY ANCHOR
- ☼ - ELECTRIC UTILITY BOX
- ☼ - FIBER OPTIC HAND HOLE
- ☼ - CLEANOUT
- ☼ - WATER METER
- ☼ - AIR-CONDITIONING UNIT
- ☼ - TELEPHONE UTILITY BOX
- ☼ - DELINEATOR POST
- ☼ - FIRE HYDRANT
- ☼ - SIGN
- ☼ - BOLLARD
- ☼ - ABOVE GROUND STORAGE TANK
- ☼ - OVERHEAD ELECTRIC
- ☼ - WATERLINES
- ☼ - PALM TREE
- ☼ - PINE TREE
- ☼ - OAK TREE
- ☼ - CAMPHOR TREE
- ☼ - CEDAR TREE
- ☼ - MULBERRY TREE
- ☼ - ASPHALT
- ☼ - CONCRETE
- ☼ - GRAVEL
- ☼ - SPOT ELEVATION

DEMOLITION NOTES

- ALL ITEMS NOT CALLED OUT TO BE REMOVED/RELOCATED SHALL BE PROTECTED DURING ALL THE PHASES OF CONSTRUCTION UNTIL FINAL ACCEPTANCE BY THE GOVERNING JURISDICTION(S).
- CONTRACTORS SHALL COORDINATE WITH ALL UTILITY COMPANIES CONCERNING THE ABANDONMENT, RELOCATION AND/OR DEMOLITION OF UTILITIES PRIOR TO CONSTRUCTION. NO WORK IS TO BE PERFORMED ON LIVE LINES UNLESS APPROVED IN WRITING BY THE UTILITY IN ALL CASES. A REPRESENTATIVE FROM THE UTILITY SHALL BE PRESENT FOR INITIAL ABANDONMENT AND/OR LIVE CUTS. CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR UTILITIES AND SHALL PROTECT THEM AT ALL TIMES.
- THE CONTRACTOR IS FULLY AND COMPLETELY RESPONSIBLE FOR LOCATIONS, VERIFICATION, PROTECTION, STORAGE, MAINTENANCE, DEMOLITION, REMOVAL, RELOCATION OR ALTERATION OF ALL EXISTING SITE UTILITIES, SITE IMPROVEMENTS, STRUCTURES, OR CONSTRUCTION ELEMENTS AS REQUIRED TO COMPLETE THE WORK THAT ARE SHOWN ON THE PLANS AND OR THAT ARE OBSERVABLE IN THE FIELD, WHETHER CONSPICUOUSLY VISIBLE OR NOT. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING IMPROVEMENTS, UTILITIES, AND SITE CONDITIONS PRIOR TO BIDDING AND CONSTRUCTION.
- CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS WITH ALL DEMOLITION ACTIVITIES. IF ADDITIONAL REQUIREMENTS ARE REQUIRED FOR HAZARDOUS WASTE REMOVAL INCLUDING BUT NOT LIMITED TO ASBESTOS, SEPTIC DITCHES, LEAD, PCB, TCP, OR OTHER WASTE OR CONTAMINANT, IT IS THE CONTRACTORS RESPONSIBILITY TO COMPLY WITH MANDATES PRIOR TO COMMENCEMENT OF CONSTRUCTION. IT IS THE CONTRACTORS RESPONSIBILITY FOR THE PROCUREMENT OF ALL NECESSARY PERMITS.
- THE CONTRACTOR SHALL COORDINATE ALL TREE AND LANDSCAPE REMOVAL WITH THE LANDSCAPE PLANS. CONTRACTOR SHALL NOTIFY E.O.R. IF ANY DISCREPANCIES OCCUR BETWEEN THE DEMOLITION PLAN AND THE LANDSCAPE PLANS.
- SAWCUT DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD STAKE AND CONSULT ENGINEER OF RECORD PRIOR TO CONSTRUCTION, IF NECESSARY.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN. ALL REPAIRS SHALL USE NEW MATERIAL. THE REPAIRS SHALL RESTORE THE ITEM TO THE PRE-DEMOLITION CONDITION. SUCH REPAIRS SHALL BE PERFORMED AT THE CONTRACTOR'S SOLE EXPENSE.
- THE CONTRACTOR SHALL NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE UNLESS IT IS IN STRICT ACCORDANCE WITH GOVERNING JURISDICTION(S), THE PROJECT PLANS, AND SPECIFICATIONS.
- ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES SHALL BE BACKFILLED BY THE CONTRACTOR WITH APPROVED MATERIALS, AND SHALL BE SUFFICIENTLY COMPACTED TO SUPPORT NEW IMPROVEMENTS AND IN COMPLIANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT. BACKFILLING SHALL OCCUR IMMEDIATELY AFTER DEMOLITION ACTIVITIES, AND SHALL BE DONE SO AS TO PREVENT WATER ENTERING THE EXCAVATION. FINISHED SURFACES SHALL BE GRADED TO PROMOTE POSITIVE DRAINAGE.
- THE USE OF EXPLOSIVES IS PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND ALL APPLICABLE GOVERNMENTAL AUTHORITIES.
- CONTRACTOR SHALL CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. M.O.T. PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE RIGHT-OF-WAY.
- DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT OCCUR OR BE STORED OUTSIDE THE DEFINED PROJECT LIMIT LINE, WITHOUT WRITTEN PERMISSION OF THE OWNER(S) AND ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. ONCE THE DEMOLITION PHASE IS OVER, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR SAFEGUARDING THE SITE DURING DEMOLITION/CONSTRUCTION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
- THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING AND OTHER APPROPRIATE SAFETY ITEMS NECESSARY TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND CONSTRUCTION ACTIVITY.
- ALL DEMOLITION WASTE AND DEBRIS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES. THE CONTRACTOR SHALL MAINTAIN RECORDS TO PROVE PROPER DISPOSAL ACTIVITIES, TO BE PROVIDED TO THE OWNER UPON REQUEST. UNDER NO CIRCUMSTANCES SHALL DEBRIS BE BURIED ON THE SUBJECT SITE.
- THE CONTRACTOR SHALL NOT IMPACT ANY WETLANDS THROUGH CONSTRUCTION ACTIVITIES IN ANY WAY UNLESS APPROVED BY E.O.R. AND GOVERNING JURISDICTION(S).
- BEACON CIVIL ENGINEERING AND THE E.O.R. IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SAFE AND SYSTEMATIC MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS TO ENSURE PUBLIC AND CONTRACTOR SAFETY.
- THE DEMOLITION PLAN IS INTENDED TO IDENTIFY THE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED, RELOCATED, OR MADE AWARE OF. THE DEMOLITION PLAN DOES NOT PROVIDE DIRECTION AS TO THE MEANS AND METHODS USED TO ACCOMPLISH THAT WORK. ALL MEANS AND METHODS UTILIZED ARE TO BE IN STRICT ACCORDANCE WITH ALL STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
- ALL WELLS TO BE ABANDONED BY A FLORIDA LICENSED WATER WELL CONTRACTOR IN ACCORDANCE WITH RULE 40D-3.531 (2) F.A.C.

UNDERGROUND UTILITIES NOTE

THE UNDERGROUND UTILITIES SHOWN WITHIN THE PLAN SET PROVIDED BY BEACON CIVIL ENGINEERING HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. BEACON CIVIL ENGINEERING MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE OF ALL SUCH UTILITIES IN THE AREA. BEACON CIVIL ENGINEERING FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN WITHIN THE PLAN SET ARE IN THE EXACT LOCATION INDICATED. HOWEVER, BEACON CIVIL ENGINEERING DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

ENVIRONMENTAL NOTE

THE SUBJECT PLAN SET PRODUCED BY BEACON CIVIL ENGINEERING DO NOT DEPICT ENVIRONMENTAL CONDITIONS OR AN ASSURANCE REGARDING THE PRESENCE OR ABSENCE OF ENVIRONMENTALLY IMPACTED SITE CONDITIONS. BEACON CIVIL ENGINEERING IS NOT RESPONSIBLE FOR EXPLORATION, TESTING, FINDINGS OR OTHER ENVIRONMENTAL SERVICES RELATED TO, BUT NOT LIMITED TO, THE DETERMINATION OF THE POTENTIAL FOR CHEMICAL, TOXIC, RADIOACTIVE OR OTHER TYPE OF CONTAMINANTS AFFECTING THE PROPERTY FOR THE SUBJECT PROJECT. IF ANY ENVIRONMENTAL CONTAMINATION OR WASTE IS DISCOVERED, THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LAWS AND REGULATIONS.

ISSUED FOR PERMITTING

DESIGNED BY: LB DRAWN BY: CB ISSUE DATE: 3/31/23

CHECKED BY: AH APPROVED BY: LB JOB NO.: 22-548

NO. BY DATE REVISION DESCRIPTION

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THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY BEACON CIVIL ENGINEERING. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO IDENTIFY, LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

BEACON CIVIL ENGINEERING

LAURIE S. BURCAW, PE #46064

BEACON CIVIL ENGINEERING

LAND DEVELOPMENT ENGINEERS 8345 GUNN HIGHWAY TAMPA, FL 33626

CALUMET TOWNS

CALUMET ROAD ZEPHYRHILLS, PASCO COUNTY, FLORIDA 33542

SHEET NAME: DEMOLITION AND SITE PREPERATION PLAN

SHEET NUMBER: C-2.0

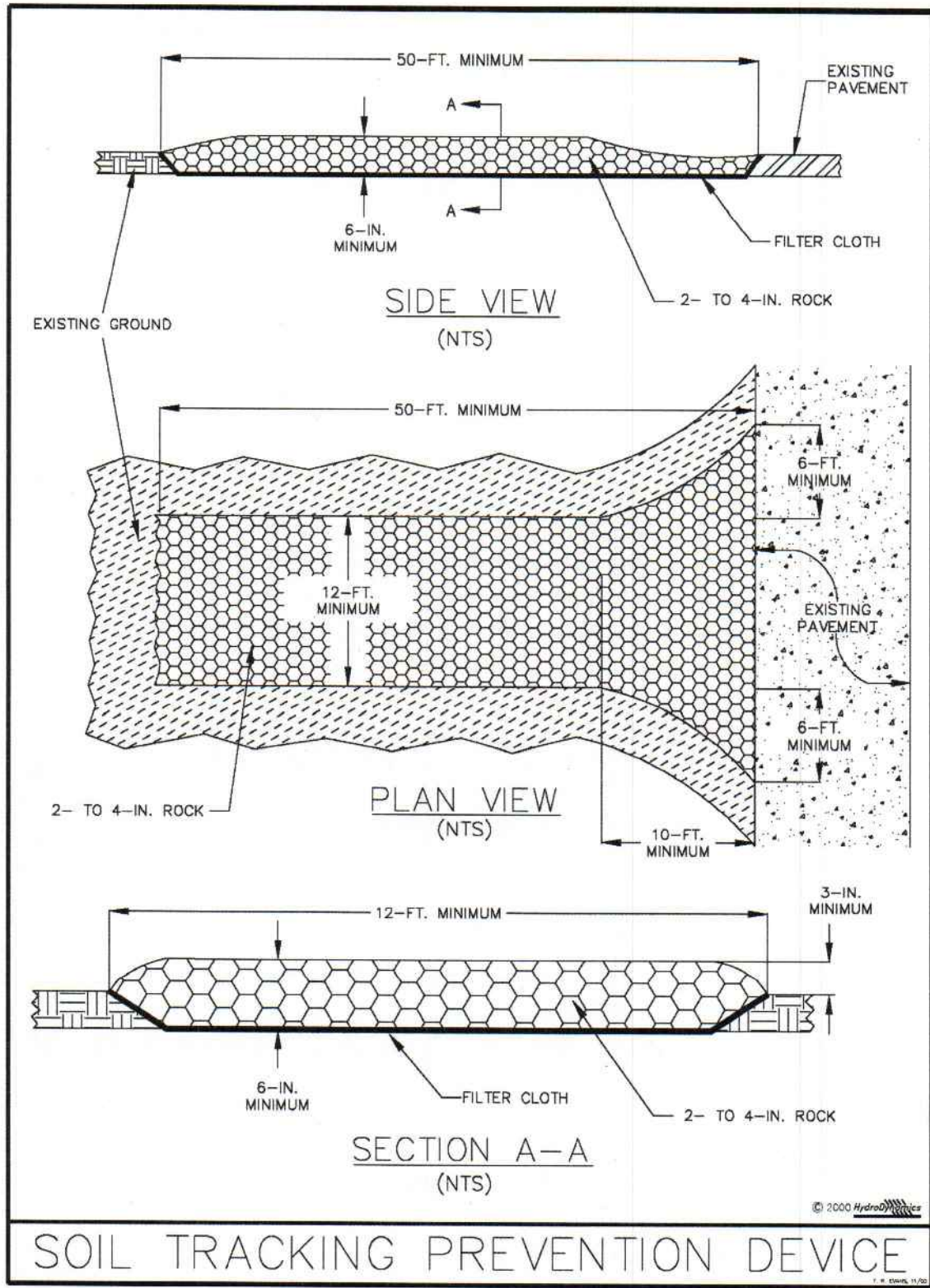
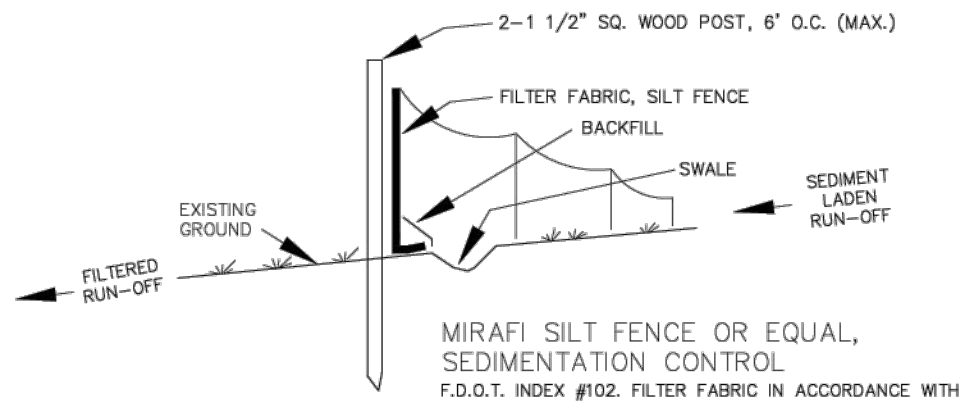


Figure V-52: Illustration of a Soil Tracking Prevention Device

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V-31



NOTES:

1. TEMPORARY EROSION CONTROL STRUCTURE TO BE UTILIZED DURING CONSTRUCTION AT AREAS DESIGNATED BY ENGINEER OR AREAS ON-SITE WHERE UNSTABILIZED GRADES MAY CAUSE EROSION PROBLEMS. EROSION CONTROL STRUCTURE MAY BE REMOVED AFTER UPSLOPE AREA HAS BEEN STABILIZED BY SOD, OR COMPACTED AS DETERMINED BY CONTRACTOR.
2. CONSTRUCT STORMWATER SYSTEMS BEFORE ANY BUILDING OR ROAD CONSTRUCTION IS STARTED.
 - a.) PROTECT SYSTEM FROM SILTING AND DEBRIS BY METHODS PROVIDED IN DETAILS.
 - b.) PROTECT SWALE BOTTOM FROM SEALING BY EXCAVATING ALL SILT DEPOSITS DURING CONSTRUCTION. THIS SHALL BE DONE BEFORE SOD & SEEDING & MULCHING IS FINISHED

EROSION CONTROL STRUCTURE

NOT TO SCALE

THE FOLLOWING LIST REPRESENTS A BASIC EROSION AND SEDIMENT CONTROL PROGRAM WHICH IS TO BE IMPLEMENTED TO HELP PREVENT OFF-SITE SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROJECT.
PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT THE EARLIEST PRACTICAL TIME CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ONE OF THE FIRST CONSTRUCTION ACTIVITIES SHOULD BE THE PLACEMENT OF PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AROUND THE PERIMETER OF THE PROJECT OR THE INITIAL WORK AREA TO PROTECT THE PROJECT, ADJACENT PROPERTIES AND WATER RESOURCES.

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL THROUGHOUT THE CONSTRUCTION PHASE. TEMPORARY MEASURES SHALL NOT BE CONSTRUCTED FOR EXPEDIENCY IN LIEU OF PERMANENT MEASURES.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADEQUATELY MAINTAINED TO PERFORM THEIR INTENDED FUNCTION DURING CONSTRUCTION OF THE PROJECT.

NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

MATERIAL FROM SEDIMENT TRAPS SHALL NOT BE STOCKPILED OR DISPOSED OF IN A MANNER WHICH MAKES THEM READILY SUSCEPTIBLE TO BEING WASHED INTO ANY WATERCOURSE BY RUNOFF OR HIGH WATER.

ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIERS ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.



CITY OF ZEPHYRHILLS
STANDARD DETAILS

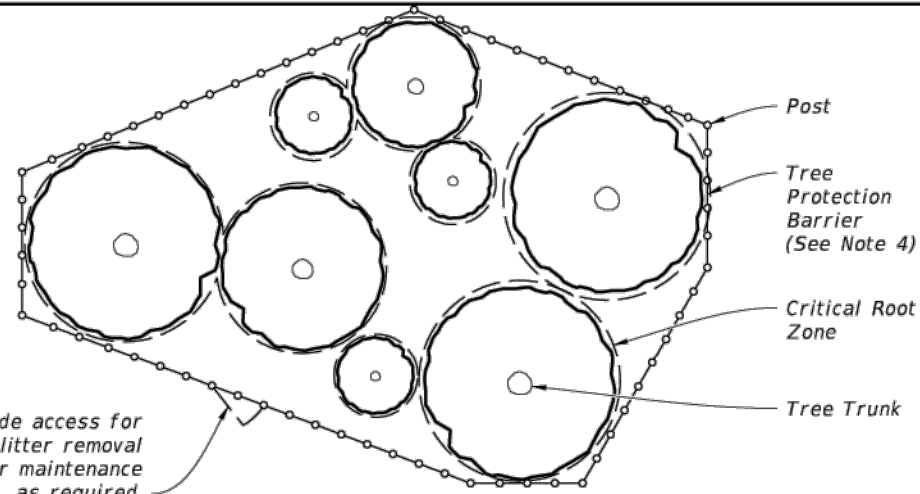
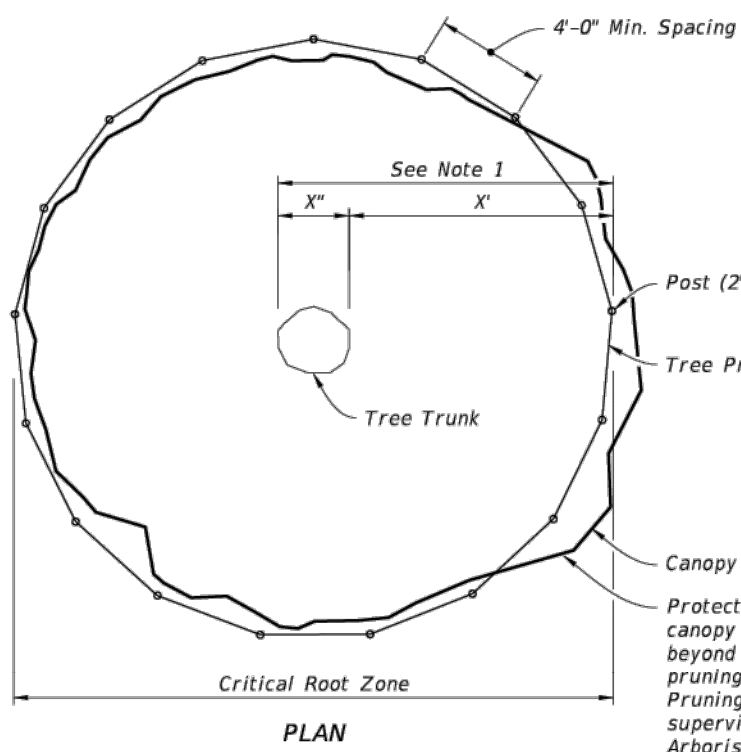
CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
39825 ALSTON AVENUE ZEPHYRHILLS, FLORIDA 33542
PHONE (813)780-0029 FAX (813)780-0613

NOVEMBER 2021

G-1

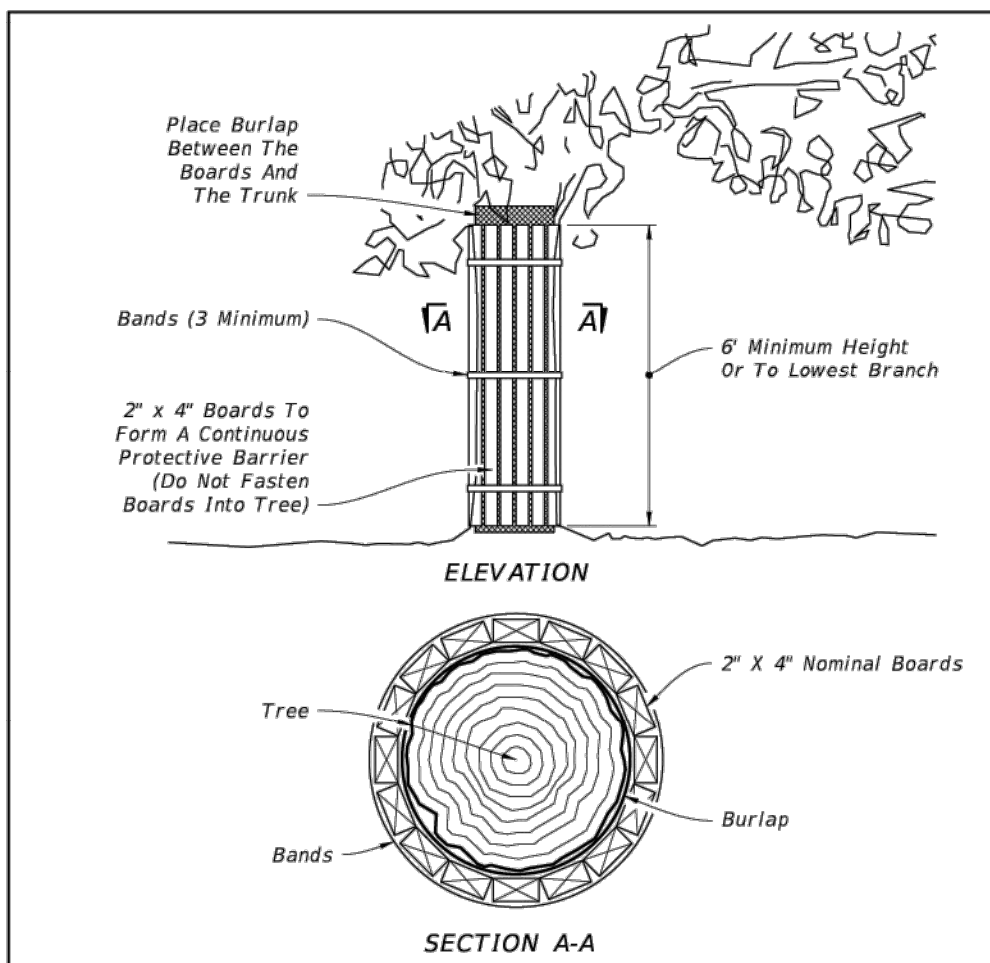
NOTES:

1. Critical Root Zone: Extends in all directions from trunk of tree to a distance equal to one foot per inch of trunk diameter at breast height.
2. Staging, storage, dumping, washing and operation of equipment is not permitted within the limits of the tree protection barrier, including during barrier installation.
3. Install all tree protection prior to commencement of construction and remove when directed by the Engineer. Maintain protection at all times.
4. For closely spaced groups of trees, place the tree protection barrier around the entire group.
5. Inspect trunk protection and tree quarterly to prevent girdling. Adjust bands to allow tree growth as needed.
6. See plans for any additional requirements or modifications within the tree protection area.
7. Place weather resistant sign every 50' along the barrier, with 6" minimum text height and provide text in English and Spanish. Sign should read "Keep Out Tree Protection Area".
8. Alternate tree protection systems approved by the Engineer may be used in lieu of the tree protection barrier detailed on this Index as long as the critical root zone is protected.
9. The Critical Root Zone may be reduced, in the field, by a certified Arborist or Landscape Architect.



PLAN

PROTECTION BARRIER FOR TREE GROUPINGS



SECTION A-A

NOTES:

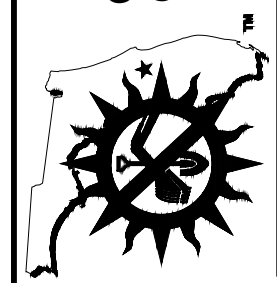
1. Trunk protection may be used when Tree Protection Barrier can not be reasonably erected, when approved by Engineer.
2. See Selective Clearing and Grubbing Plan for location of trunk protection, when applicable.
3. Adjust bands to allow tree growth (inspect quarterly to prevent girdling).

TRUNK PROTECTION

ISSUED FOR PERMITTING

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CHECKED BY:	LB	APPROVED BY:	LB	JOB NO.:	22-548
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THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE USE OF THIS INFORMATION TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

LAURIE S. BURCAW, PE #46064

BEACON
CIVIL ENGINEERING

LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
TAMPA, FL 33626

CALUMET
TOWNS

CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

DEMOLITION
DETAILS

SHEET NUMBER:

C-2.1

PROJECT NAME AND LOCATION INFORMATION:

CALUMET TOWNHOMES
ZEPHERHILLS, FLORIDA

DESCRIBE THE NATURE OF THE CONSTRUCTION ACTIVITY:

CONSTRUCT A SHOPPING CAR WASH FACILITY. STORMWATER RUN THROUGH UNDERGROUND CHANBERS BEFORE EMPTING INTO EXISTING STORMWATER SYSTEM. UNDERGROUND UTILITIES WILL BE INSTALLED THROUGHOUT THE DEVELOPMENT.

DESCRIBE THE INTENDED SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:

THE SEQUENCE OF MAJOR SOIL DISTURBANCE WILL START WITH THE CLEARING THE LAND AND EXCAVATING THE PONDS. THE INSTALLATION OF UTILITIES WILL FOLLOW AFTER THE ROAD GRADE ARE ROUGHED IN. FINAL PAD GRADES.

TOTAL AREA OF THE SITE:

4.62 AC

TOTAL AREA OF THE SITE TO BE DISTURBED:

4.62 AC

EXISTING DATA DESCRIBING THE SOIL OR QUALITY OF ANY STORMWATER DISCHARGE FROM THE SITE:

SEE GEOTECHNICAL AND DRAINAGE REPORT

EXISTING DATA DESCRIBING THE SOIL OR QUALITY OF ANY STORMWATER DISCHARGE FROM THE SITE:

SEE GEOTECHNICAL AND DRAINAGE REPORT

ESTIMATE THE DRAINAGE AREA SIZE FOR EACH DISCHARGE POINT:

0.28

LATITUDE AND LONGITUDE OF EACH DISCHARGE POINT AND IDENTIFY THE RECEIVING WATER OR M4 FOR EACH DISCHARGE POINT:

LATITUDE: N 28° 15' 06.4"
LONGITUDE: W 82° 10' 13.9"

GIVE A DETAILED DESCRIPTION OF ALL CONTROLS, BEST MANAGEMENT PRACTICES (BMPS) AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE FOR EACH ACTIVITY IDENTIFIED IN THE INTENDED SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES SECTION. PROVIDE TIME FRAMES IN WHICH THE CONTROLS WILL BE IMPLEMENTED. NOTE: ALL CONTROLS SHALL BE CONSISTENT WITH PERFORMANCE STANDARDS FOR EROSION AND SEDIMENT CONTROL AND STORMWATER TREATMENT SET FORTH IN S. 62-40.432, F.A.C., THE APPLICABLE STORMWATER OR ENVIRONMENTAL RESOURCE PERMITTING REQUIREMENTS OF THE DEPARTMENT OR A WATER MANAGEMENT DISTRICT, AND THE GUIDELINES CONTAINED IN THE FLORIDA DEVELOPMENT MANUAL: A GUIDE TO SOUND LAND AND WATER MANAGEMENT (DEP, 1988) AND ANY SUBSEQUENT AMENDMENTS.

1. PRIOR TO CLEARING, A SILT FENCE (TRENCHED 4 INCHES DEEP AND BACKED FILLED ON THE UPHILL SIDE), SHALL BE INSTALLED AROUND THE PERIMETER OF THE SITE.

2. DURING, THE CLEARING, GRUBBING, AND SITE GRADING STAGES, AREAS THAT ARE DISTURBED MORE THAN 7 DAYS SHALL BE STABILIZED RYE GRASS.

3. AFTER THE INITIAL SITE GRADING WORK, ALL PROPOSED INLETS/OUTFALLS, ONCE INSTALLED, SHALL BE PROTECTED FROM EROSION AND SEDIMENT RUNOFF USING PROPERLY INSTALLED INLET PROTECTION. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENT STABILIZATION METHODS (IF OTHER METHODS ARE UTILIZED, THIS SWPPP WILL BE MODIFIED.

4. ALL INSTALLATION SHALL BE COMMENCED AS DEPICTED ON THE ATTACHED SITE PLAN AND DETAIL SHEET.

DESCRIBE ALL TEMPORARY AND PERMANENT STABILIZATION PRACTICES. STABILIZATION PRACTICES INCLUDE TEMPORARY SEEDING, MULCHING, PERMANENT SEEDING, GEOTEXTILES, SODSTABILIZATION, VEGETATIVE BUFFER STRIPS, PROTECTION OF TREES, VEGETATIVE PRESERVATIONS, ETC.

1. TEMPORARY SEEDING SHALL BE RYE GRASS APPLIED AT THE MANUFACTURE'S RECOMMENDATION TO ANY DISTURBED AREAS THAT ARE INACTIVE MORE THAN 7 DAYS.

2. MULCHING PRACTICES AND SOD SHALL BE APPLIED TO REQUIRED AREAS.

3. FILTER FABRIC SHALL BE PLACED UNDER THE ROCK ENTRANCE/EXIT AND STORMWATER RETENTION OUTFALL.

DESCRIBE ALL STRUCTURAL CONTROLS TO BE IMPLEMENTED TO DIVERT STORMWATER FLOW FROM EXPOSED SOILS AND STRUCTURAL PRACTICES TO STORE FLOWS, RETAIN SEDIMENT ON-SITE OR IN ANY OTHER WAY LIMIT STORMWATER RUNOFF. THESE CONTROLS INCLUDE SILT FENCES, EARTH DIKES, DIVERSIONS, SWALES, SEDIMENT TRAPS, CHECK DAMS, SUBSURFACE DRAINS, PIPE SLOPE DRAINS, LEVEL SPREADERS, STORM DRAIN INLET PROTECTION, ROCK OUTLET PROTECTION, REINFORCED SOIL RETAINING SYSTEMS, GABIONS, COAGULATING AGENTS AND TEMPORARY OR PERMANENT SEDIMENT BASINS.

1. A SILT FENCE REINFORCED SHALL BE PLACED AROUND THE ENTIRE PERIMETER IN ADDITION TO A VEGETATION BARRIER THAT SHALL BE PLACED AROUND THE VEGETATIVE BUFFERS.

2. INLET(S)/OUTFALLS SHALL BE PROTECTED WITH PROPERLY INSTALLED INLET/OUTLET PROTECTION.

3. ROCK OUTLET PROTECTION LINED WITH FILTER FABRIC SHALL BE INSTALLED AT ALL FLUME OUTFALL POINTS.

DESCRIBE ALL SEDIMENT BASINS TO BE IMPLEMENTED FOR AREAS THAT WILL DISTURB 10 OR MORE ACRES AT ONE TIME. THE SEDIMENT BASINS (OR AN EQUIVALENT ALTERNATIVE) SHOULD BE ABLE TO PROVIDE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE DRAINED. TEMPORARY SEDIMENT BASINS (OR AN EQUIVALENT ALTERNATIVE) ARE RECOMMENDED FOR DRAINAGE AREAS UNDER 10 ACRES.

NO SEDIMENT BASIN ARE BEING PROPOSED. SILT FENCE IS TO BE INSTALLED AROUND THE PERIMETER OF THE SITE. THE SILT FENCE WILL PREVENT POLLUTANTS FROM EXITING THE SITE.

DESCRIBE ALL PERMANENT STORMWATER MANAGEMENT CONTROLS SUCH AS, BUT NOT LIMITED TO, DETENTION OR RETENTION SYSTEMS OR VEGETATED SWALES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS.

SEE CONSTRUCTION PLANS FOR LOCATION OF PERMANENT CONTROL STRUCTURES.

DESCRIBE IN DETAIL CONTROLS FOR THE FOLLOWING POTENTIAL POLLUTANTS:

WASTE DISPOSAL, THIS MAY INCLUDE CONSTRUCTION DEBRIS, CHEMICALS, LITTER, AND SANITARY WASTES:

ALL CONSTRUCTION MATERIALS AND DEBRIS WILL BE PLACED IN A DUMPSTER AND HAILED OFF SITE TO A LANDFILL OR OTHER PROPER DISPOSAL. THE DUMPSTER SHALL BE LOCATED AS SHOWN ON THE SITE PLAN. NO MATERIALS WILL BE BURNED ON SITE.

OFFSITE VEHICLE TRACKING FROM CONSTRUCTION ENTRANCES/EXITS:

OFFSITE VEHICLE TRACKING OF SEDIMENTS AND DUST GENERATION WILL BE MINIMIZED VIA A ROCK CONSTRUCTION ENTRANCE, DAILY STREET SWEEPING AND THE USE OF WATER TO KEEP DUST DOWN.

THE PROPER APPLICATION RATES OF ALL FERTILIZERS, HERBICIDES AND PESTICIDES USED AT THE CONSTRUCTION SITE:

FERTILIZERS AND PESTICIDES WILL BE USED AT A MINIMUM AND IN ACCORDANCE WITH THE MANUFACTURE'S SUGGESTION APPLICATION RATES. THE FERTILIZER AND PESTICIDES WILL BE STORED IN A COVERED SHED, IN THE STOCKPILE AREA, AS INDICATED ON SITE PLAN. TO BE COMPLETED BY CONTRACTOR.

THE STORAGE, APPLICATION, GENERATION AND MIGRATION OF ALL TOXIC SUBSTANCES:

A SPILL PREVENTION PLAN IS IN PLACE. A DOUBLE WALLED FUEL TANK SHALL BE PLACED ON A DRIP PAN TO CONTAIN AND PREVENT ANY LEAKS OR DRIPS FROM BEING DISCHARGED IN THE STORMWATER RUNOFF. ALL PAINTS AND OTHER CHEMICALS WILL BE STORED IN A LOCKED COVERED SHED AS INDICATED ON SITE MAP. TO BE COMPLETED BY CONTRACTOR.

OTHER:

PORT-O-LETS WILL BE PLACED AWAY FROM STORM SEWER SYSTEMS, STORM INLETS, SURFACE WATERS AND WETLANDS. SPECIFIC PLACEMENT IS DEPICTED ON THE SITE MAP. NO VEHICLE MAINTENANCE SHALL BE CONDUCTED ON-SITE TO BE COMPLETED BY CONTRACTOR.

PROVIDE A DETAILED DESCRIPTION OF THE MAINTENANCE PLAN FOR ALL STRUCTURAL AND NON-STRUCTURAL CONTROLS TO ASSURE THAT THEY REMAIN IN GOOD AND EFFECTIVE OPERATING CONDITION.

1. SILT FENCE SHALL BE INSPECTED AT LEAST WEEKLY, ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

2. MAINTENANCE SHALL BE PERFORMED ON THE ROCK ENTRANCE WHEN ANY VOIDS SPACES ARE FULL OF SEDIMENT.

3. INLETS/OUTFALLS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAIN EVENT AND ANY REQUIRED REPAIRS TO THE SILT FENCE OR FILTER FABRIC SHALL BE PERFORMED IMMEDIATELY.

4. BARE AREAS OF THE SITE THAT WERE PREVIOUSLY SEEDED SHALL BE RESEEDDED PER MANUFACTURE'S INSTRUCTIONS.

5. MULCH AND SOD THAT HAS BEEN WASHED OUT SHALL BE REPLACED IMMEDIATELY.

6. MAINTAIN ALL OTHER AREAS OF THE SITE WITH PROPER CONTROLS AS NECESSARY. TO BE COMPLETED BY CONTRACTOR.

INSPECTIONS: DESCRIBE THE INSPECTION AND INSPECTION DOCUMENTATION PROCEDURES, AS REQUIRED BY PART V.D.4. OF THE PERMIT. INSPECTIONS MUST OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.50 INCHES OR GREATER (SEE ATTACHED FORM).

QUALIFIED PERSONNEL WILL INSPECT ALL POINTS OF DISCHARGE, ALL DISTURBED AREAS OF CONSTRUCTION THAT HAVE NOT BEEN STABILIZED, CONSTRUCTED AREAS AND LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE AT LEAST ONE EVERY 7 CALENDAR DAYS OR WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT THAT IS 0.5 INCHES OR GREATER. WHERE SITES HAVE BEEN FULLY STABILIZED, SAID INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE A MONTH UNTIL THE NOTICE OF TERMINATION IS FILED.

TO BE COMPLETED BY CONTRACTOR.

IDENTIFY AND DESCRIBE ALL SOURCES OF NON-STORMWATER DISCHARGES AS ALLOWED IN PART IV.A.3. OF THE PERMIT. FLOWS FROM FIRE FIGHTING ACTIVITIES DO NOT HAVE TO BE LISTED OR DESCRIBED.

IT IS EXPECTED THAT THE FOLLOWING NON-STORMWATER DISCHARGE MAY OCCUR FROM THE SITE CONSTRUCTION PERIODS: WATER FROM WATER LINE FLUSHING, PAVEMENT WASH WATER (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED), AND UNCONTAMINATED GROUNDWATER FROM DEWATERING EXCAVATION). IF SAID DISCHARGES DO OCCUR, THEY WILL BE DIRECTED TO THE TEMPORARY SEDIMENT BASIN PRIOR TO DISCHARGE. TURBID WATER FROM THE STORMWATER POND SHALL NOT BE PUMPED DIRECTLY INTO EITHER OF THE RECEIVING WATER. ANY PUMPED WATER FROM THE STORMWATER POND SHALL BE TREATED SO AS TO NOT ALLOW A DISCHARGE OF POLLUTED STORMWATER. TREATMENT CAN INCLUDE SILT FENCE, SETTLING PONDS, THE PROPER USE OF FLOCCULATING AGENTS OR OTHER APPROPRIATE MEANS.

TO BE COMPLETED BY CONTRACTOR.

THIS SWPPP MUST CLEARLY IDENTIFY, FOR EACH MEASURE IDENTIFIED WITHIN THE SWPPP, THE CONTRACTOR(S) OR SUBCONTRACTOR(S) THAT WILL IMPLEMENT EACH MEASURE. ALL CONTRACTOR(S) AND SUBCONTRACTOR(S) IDENTIFIED IN THE SWPPP MUST SIGN THE FOLLOWING CERTIFICATION:

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER."

NAME	TITLE	COMPANY NAME, ADDRESS AND PHONE NUMBER	DATE

SITE MAP

A SITE MAP MUST BE DEVELOPED AND MUST CONTAIN, AT A MINIMUM, THE FOLLOWING INFORMATION:

- DRAINAGE PATTERNS,
- APPROXIMATE SLOPES AFTER MAJOR GRADING ACTIVITIES,
- AREAS OF SOIL DISTURBANCE,
- OUTLINE ALL AREAS THAT ARE NOT TO BE DISTURBED,
- LOCATION OF ALL MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS,
- THE LOCATION OF EXPECTED STABILIZATION PRACTICES,
- WETLANDS AND SURFACE WATERS, AND
- LOCATIONS WHERE STORMWATER MAY DISCHARGE TO A SURFACE WATER ORMS4.

STORMWATER POLLUTION PREVENTION PLAN

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

NAME (OPERATOR OR RESPONSIBLE AUTHORITY) DATE

STORMWATER POLLUTION PREVENTION PLAN INSPECTION REPORT FORM

INSPECTIONS MUST OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.50 INCHES OR GREATER

PROJECT NAME: INTERNATIONAL CAR WASH GROUP

FDEP NPDES STORMWATER IDENTIFICATION NUMBER: FLR10

LOCATION	RAIN DATA	TYPE OF CONTROL (SEE BELOW)	DATE INSTALLED/MODIFIED	CURRENT CONDITION (SEE BELOW)	CORRECTIVE ACTION/OTHER REMARKS

CONDITION CODE:
G = GOOD M = MARGINAL, NEEDS MAINTENANCE OR REPLACEMENT SOON P = POOR, NEEDS IMMEDIATE MAINTENANCE OR REPLACEMENT C = NEEDS TO BE CLEANED O = OTHER

CONTROL TYPE CODE:

1. SILT FENCE	10. STORM DRAIN INLET PROTECTION	19. REINFORCED SOIL RETAINING SYSTEM	28. TREE PROTECTION
2. EARTH DIKES	11. VEGETATIVE BUFFER STRIP	20. GABION	29. DETENTION POND
3. STRUCTURAL DIVERSION	12. VEGETATIVE PRESERVATION AREA	21. SEDIMENT BASIN	30. RETENTION POND
4. SWALE	13. RETENTION POND	22. TEMPORARY SEED / SOD	31. WASTE DISPOSAL / HOUSEKEEPING
5. SEDIMENT TRAP	14. CONSTRUCTION ENTRANCE STABILIZATION	23. PERMANENT SEED / SOD	32. DAM
6. CHECK DAM	15. PERIMETER DITCH	24. MULCH	33. SAND BAG
7. SUBSURFACE DRAIN	16. CURB AND GUTTER	25. HAY BALES	34. OTHER
8. PIPE SLOPE DRAIN	17. PAVED ROAD SURFACE	26. GEOTEXTILE	
9. LEVEL SPREADERS	18. ROCK OUTLET PROTECTION	27. RIP-RAP	

INSPECTOR INFORMATION:

NAME QUALIFICATION DATE

THE ABOVE SIGNATURE ALSO SHALL CERTIFY THAT THIS FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES IF THERE ARE NOT ANY INCIDENTS OF NON-COMPLIANCE IDENTIFIED ABOVE.

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

NAME (RESPONSIBLE AUTHORITY) DATE

ISSUED FOR PERMITTING

DESIGNED BY: LB

DRAWN BY: CB

CHECKED BY: AH

NO.

DATE

BY

ISSUE DATE: 3/31/23

JOB NO.: 22-548

REVISION DESCRIPTION

3 WORKING DAYS BEFORE YOU DIG

CALL SUNSHINE STATE ONE CALL OF FLORIDA 1-800-432-4770

UNDERGROUND UTILITIES

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE USER'S MISUSE OF THIS INFORMATION. LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

LAURIE S. BURCAW, PE #46064

BEACON CIVIL ENGINEERING

LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
TAMPA, FL 33626

CALUMET TOWNS

CALUMET ROAD
ZEPHYHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

SWPPP NOTES

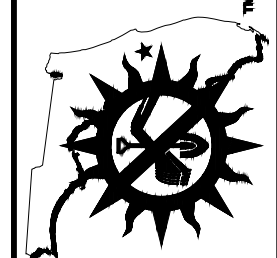
SHEET NUMBER:

C-2.2

B:\P\proj\2022\20222548 Calumet Towns\DWG\02-548_SWPPP.dwg 4/3/2023 5:21 PM Page 30 of 5



DESCRIPTION	ACERAGE	COLOR	O&M
RESEIDENTIAL	2.66		HOA
RIGHT-OF-WAY	0.72		HOA
PARK AND OPEN SPACE	0.80		HOA
DRAINAGE	0.27		HOA
PARKING AREA	0.02		HOA
LIFT STATION	0.03		
R.O.W. DEDICATION	0.12		



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**FOR THE LOCATION OF
UNDERGROUND FACILITIES**

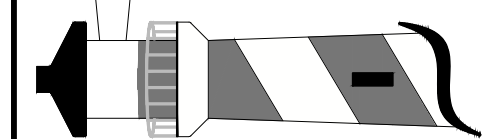
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. YOU SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ANY UTILITIES PRIOR TO ANY EXCAVATION. YOU SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE LOCATION OF ANY UTILITIES. YOU WILL LOCATE AND PROTECT ANY AND ALL UNDERGROUND UTILITIES.



LAURIE S. BURCAW, PE #46064

BLA CON
CIVIL ENGINEERING

AND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
TAMPA, FL 33626



CALUMET TOWNS

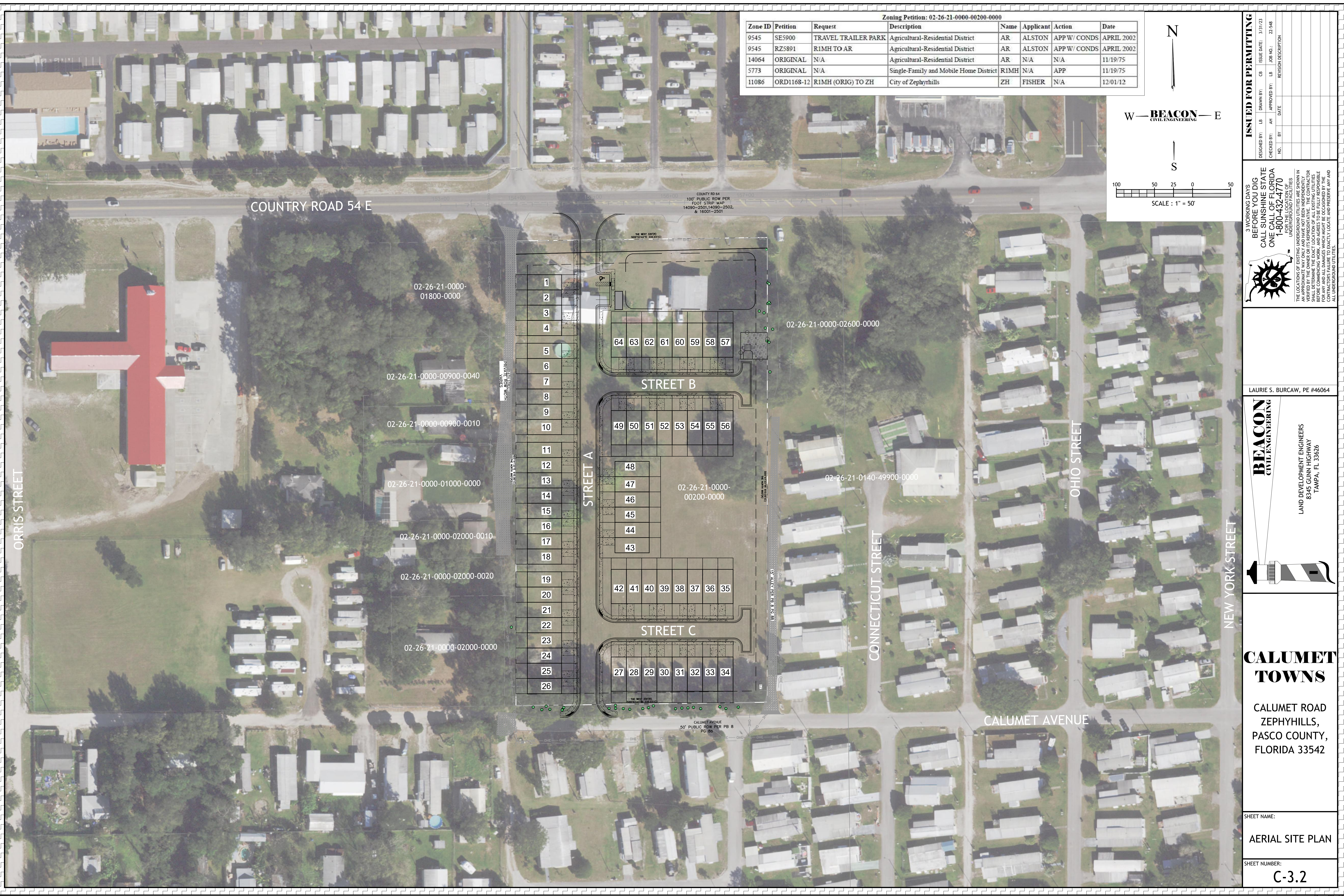
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ZEPHYHILLS,
PASCO COUNTY,
FLORIDA 33542

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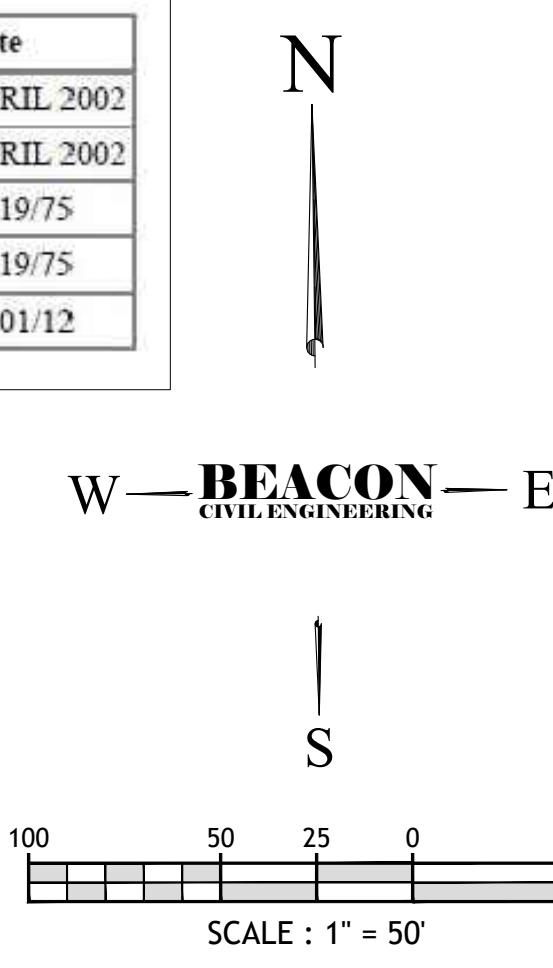
TRACT PLAN

CHEET NUMBER

C-3.1



Zoning Petition: 02-26-21-0000-00200-0000							
Zone ID	Petition	Request	Description	Name	Applicant	Action	Date
9545	SE5900	TRAVEL TRAILER PARK	Agricultural-Residential District	AR	ALSTON	APP W/ CONDS	APRIL 2002
9545	RZ5891	R1MH TO AR	Agricultural-Residential District	AR	ALSTON	APP W/ CONDS	APRIL 2002
14064	ORIGINAL	N/A	Agricultural-Residential District	AR	N/A	N/A	11/19/75
5773	ORIGINAL	N/A	Single-Family and Mobile Home District	R1MH	N/A	APP	11/19/75
11086	ORD1168-12	R1MH (ORIG) TO ZH	City of Zephyrhills	ZH	FISHER	N/A	12/01/12



ISSUED FOR PERMITTING				
DESIGNED BY:	LB	DRAWN BY:	CB	ISSUE DATE: 3/31/23
CHECKED BY:	LB	APPROVED BY:	LB	JOB NO.: 22-548
NO.	BY	DATE	REVISION DESCRIPTION	

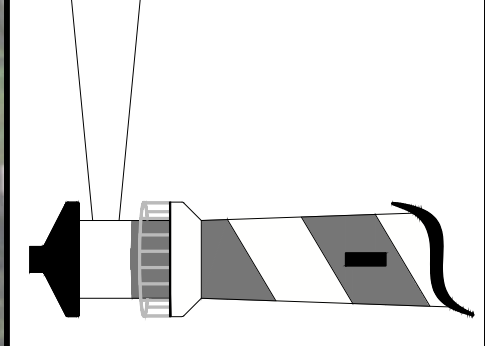
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THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. IT IS THE RESPONSIBILITY OF THE USER OF THIS PLAN TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE EXCAVATION OF EXISTING UTILITIES. LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

LAURIE S. BURCAW, PE #46064

BEACON
CIVIL ENGINEERING

LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
TAMPA, FL 33626

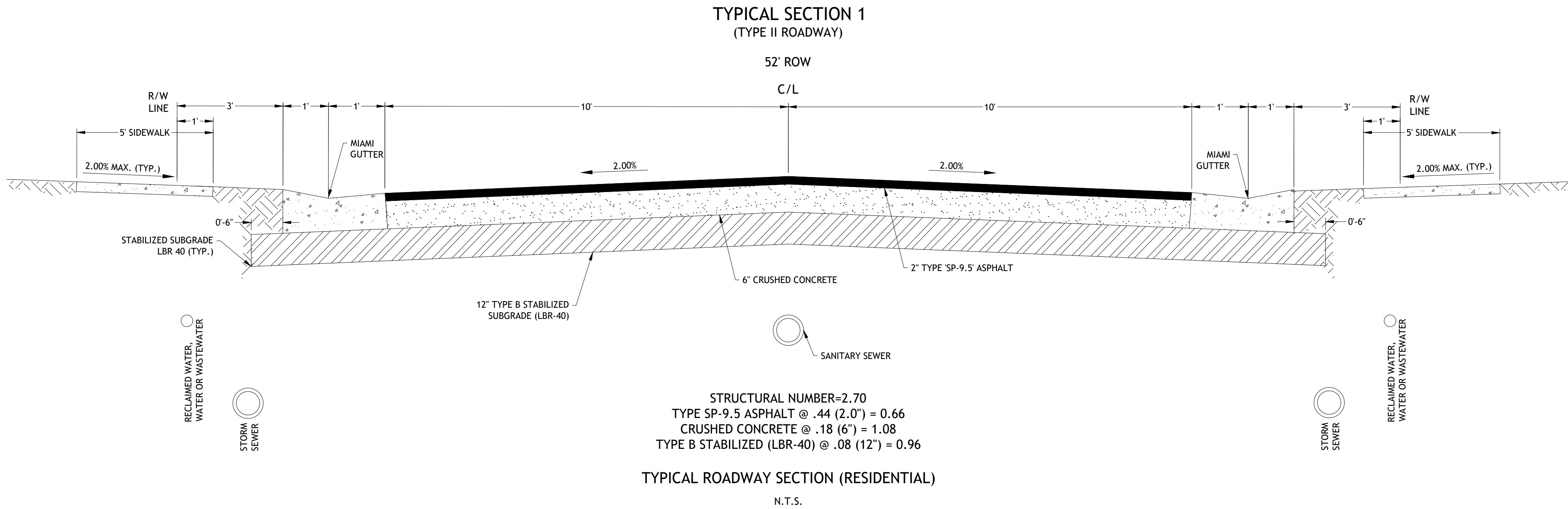


CALUMET TOWNS

CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:
AERIAL SITE PLAN

SHEET NUMBER:
C-3.2



ISSUED FOR PERMITTING

DESIGNED BY:	LB	DRAWN BY:	CB	ISSUE DATE:	3/31/23
CHECKED BY:	AH	APPROVED BY:	LB	JOB NO.:	22-548
NO.	BY	DATE	REVISION DESCRIPTION		

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CALUMET TOWNS

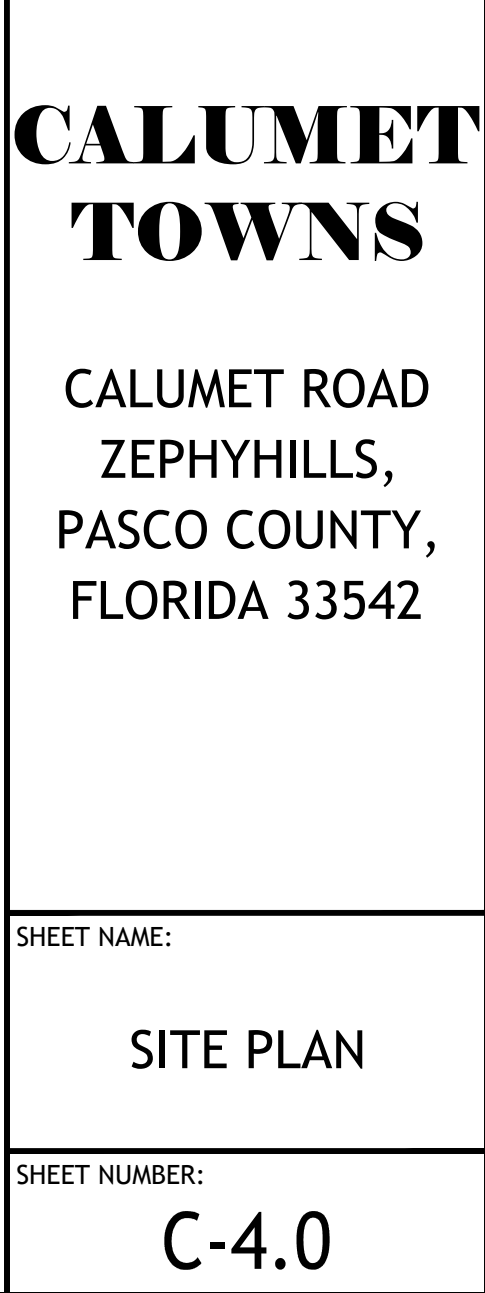
CALUMET ROAD
ZEPHYHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

TYPICAL SECTION

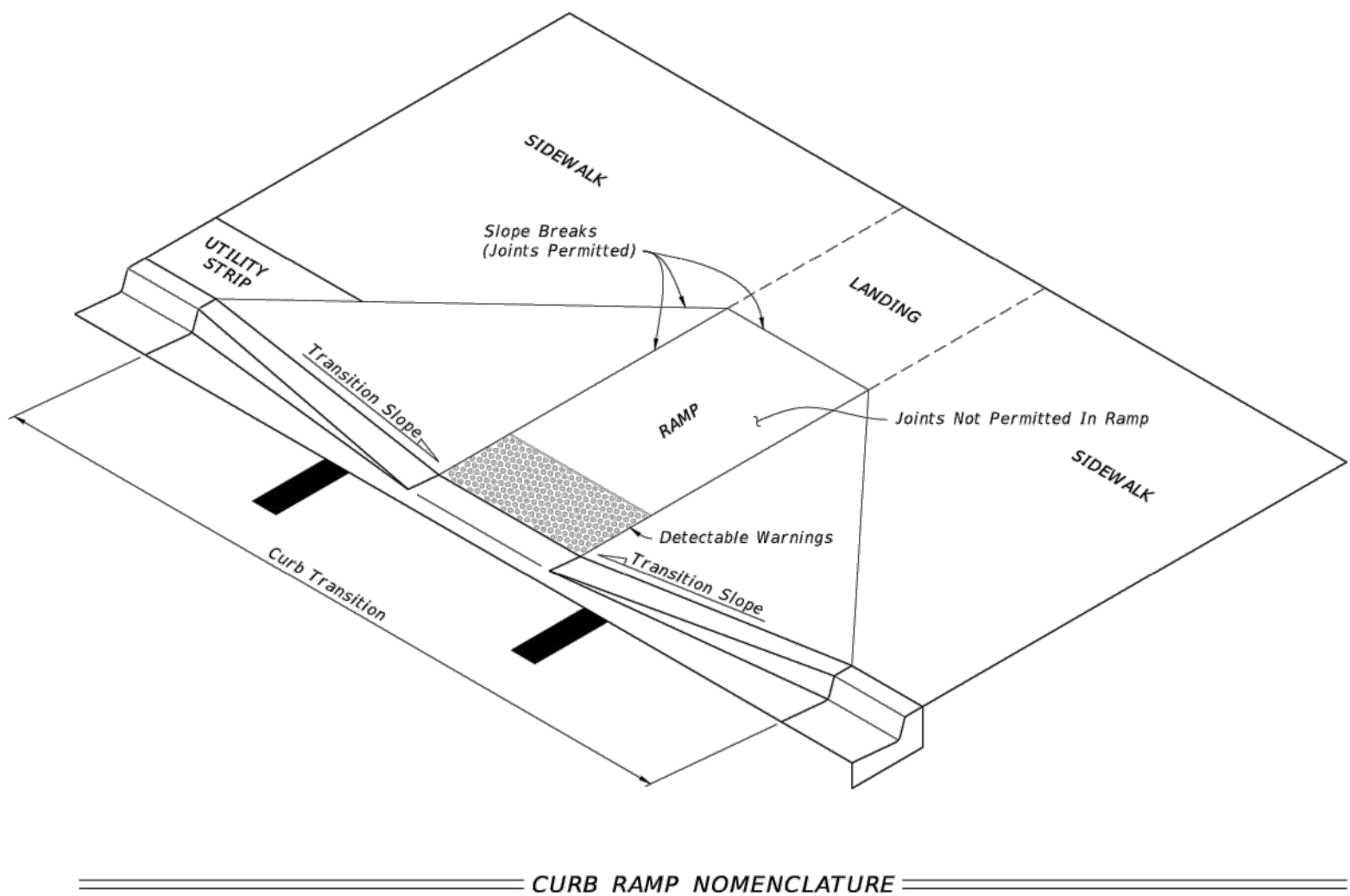
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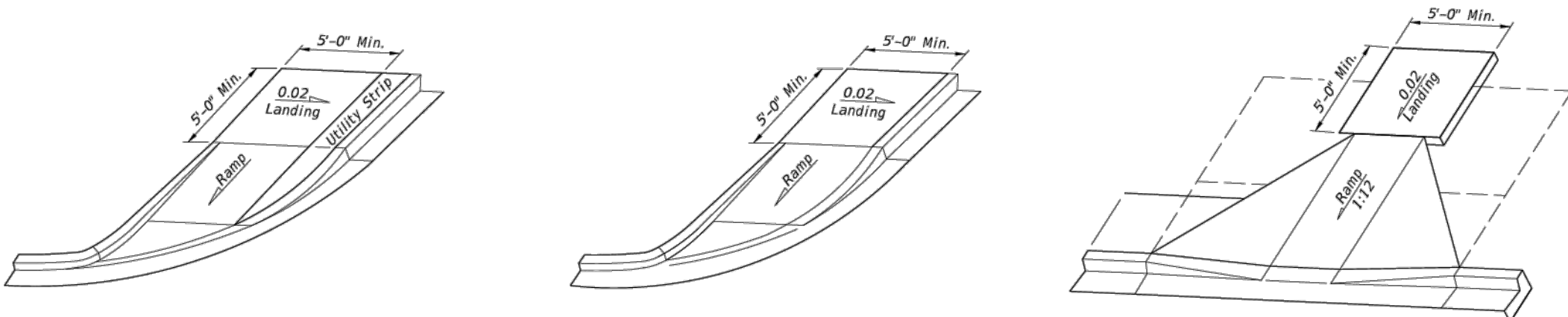


GENERAL NOTES:

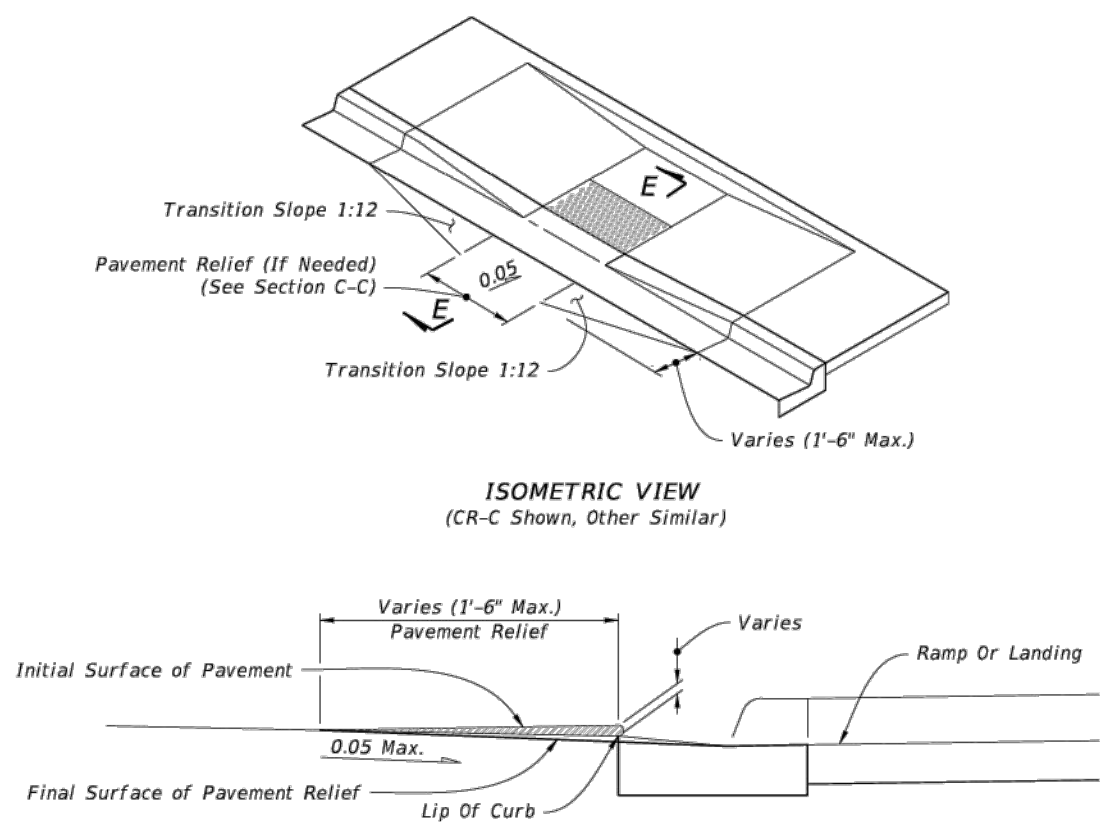
1. Cross Slopes and Grades:
- A. Sidewalk, ramp, and landing slopes (i.e. 0.02, 0.05, and 1:12) shown in this Index are maximums. With approval of the Engineer, provide the minimum feasible slope where the requirements cannot be met.
- B. Landings must have cross-slopes less than or equal to 0.02 in any direction. Ramp slopes are not required to exceed 15 feet in length.
- C. Maintain a single longitudinal slope along each side of the curb ramp. Ramp slopes are not required to exceed 15 feet in length.
- D. Joints permitted at the location of Slope Breaks. Otherwise locate joints in accordance with Index 522-001. No joints are permitted within the ramp portion of the Curb Ramp.
2. Curb, Curb and Gutter and/or Sidewalk:
- A. Refer to Index 522-001 for concrete thickness and sidewalk details.
- B. Remove any existing curb, curb and gutter, or sidewalk to the nearest joint beyond the curb transition or to the extent that no remaining section is less than 5 feet long.
- C. Width of Curb Ramp is 4'-0" minimum. Match sidewalk or Shared Use Path width as shown in the Plans.
3. Curb Ramp Alpha-Identification:
- A. Sidewalk curb ramp alpha-identifications (e.g. CR-A) are provided for reference purposes in the Plans.
- B. Alpha-identifications CR-I and CR-J are intentionally omitted.
4. Detectable Warnings:
- A. Install detectable warnings in accordance with Specification 527.
- B. Place detectable warnings across the full width of the ramp or landing, to a minimum depth of 2 feet measured perpendicular to the curb line and no greater than 5 feet from the back of the curb or edge of pavement.
- C. If detectable warnings are shown in the Plans on slopes greater than 5%, align the truncated domes with the centerline of the ramp; otherwise, the truncated domes are not required to be aligned.



LAST REVISION 11/01/21	DESCRIPTION:	FY 2023-24 STANDARD PLANS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX 522-002	SHEET 1 of 7
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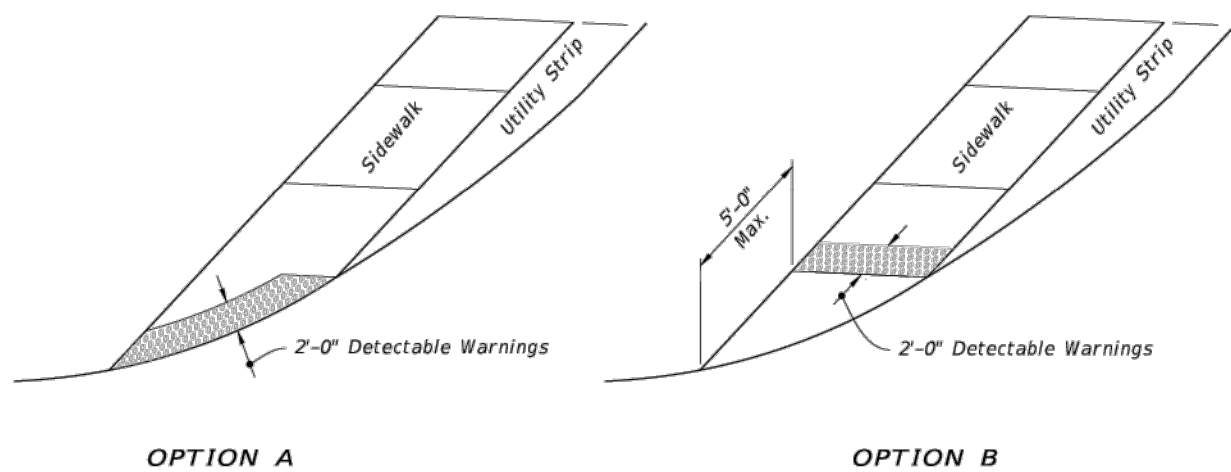
LANDINGS FOR CURB RAMPS WITHOUT SIDEWALKS
(See CR-F, CR-G & CR-K Respectively For Detectable Warning Details/Options)



NOTE: Remove Elevated Pavement By Spading And Rolling, Smooth Milling, or Grinding.

SECTION E-E

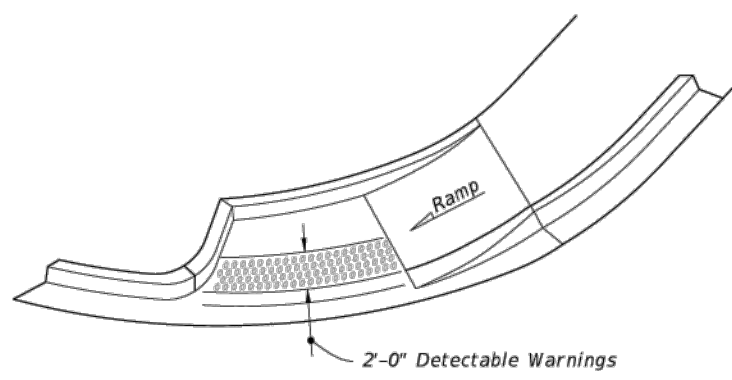
PAVEMENT RELIEF DETAILS



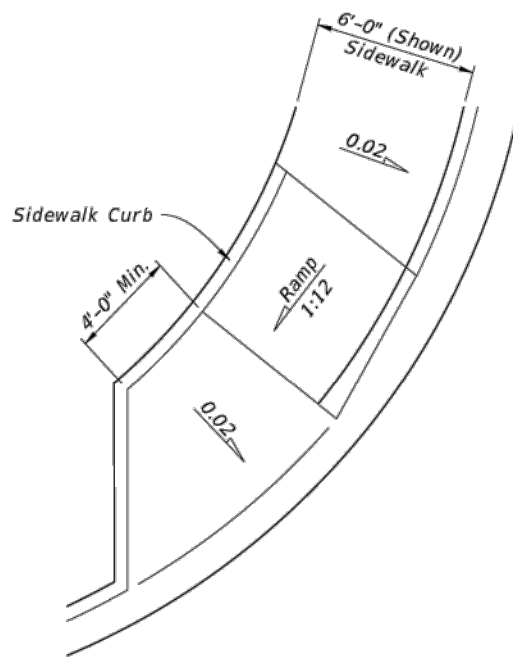
DETECTABLE WARNING ON FLUSH SHOULDER SIDEWALKS

CURB RAMPS WITHOUT SIDEWALKS AND FLUSH SHOULDER SIDEWALKS

LAST REVISION 11/01/20	DESCRIPTION:	FY 2023-24 STANDARD PLANS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX 522-002	SHEET 6 of 7
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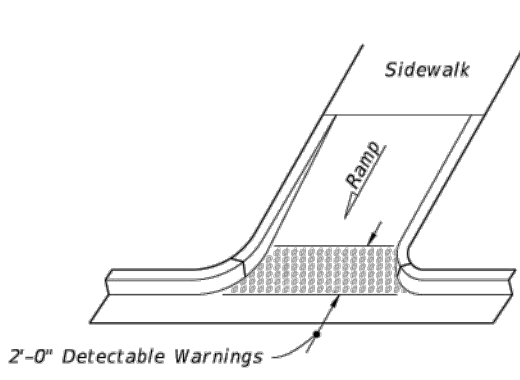


ISOMETRIC VIEW

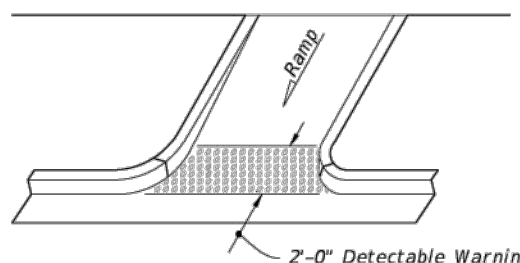


PLAN VIEW

CR-D

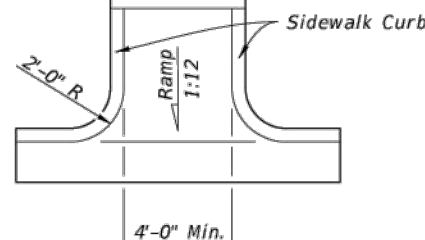


OPTION A



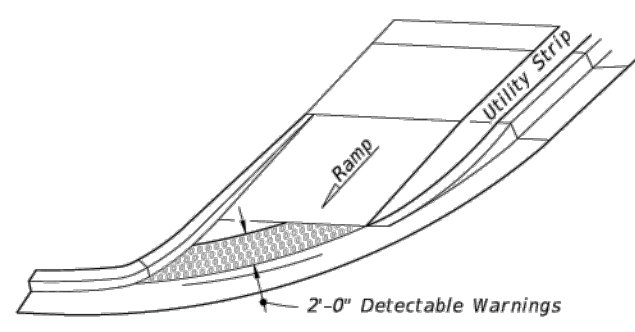
OPTION B

ISOMETRIC VIEW

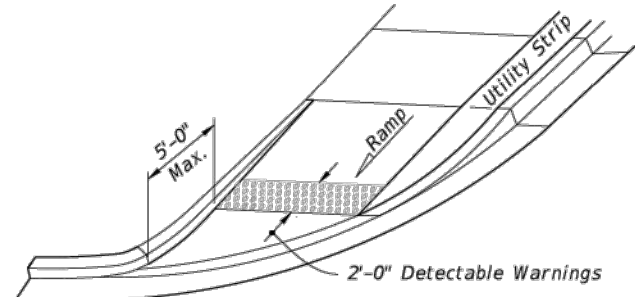


PLAN VIEW

CR-E

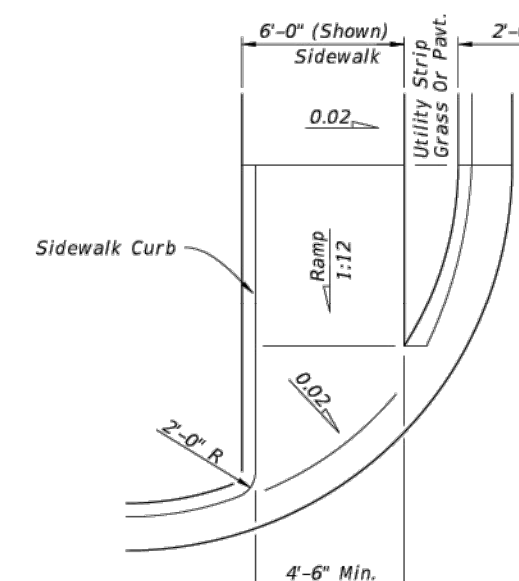


OPTION A



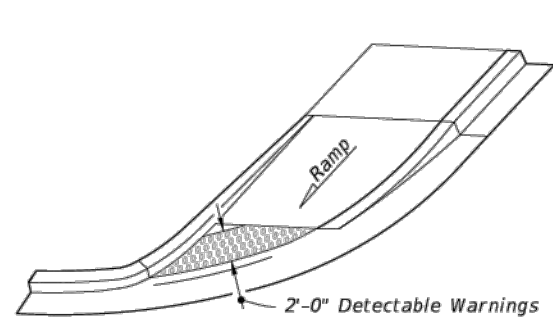
OPTION B

ISOMETRIC VIEW

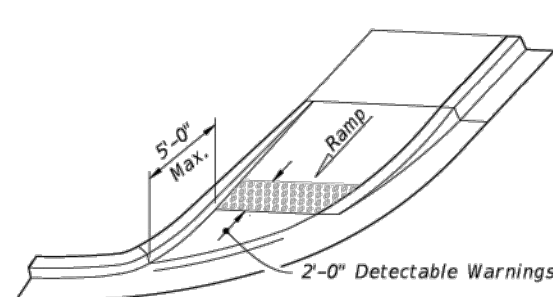


PLAN VIEW

CR-F

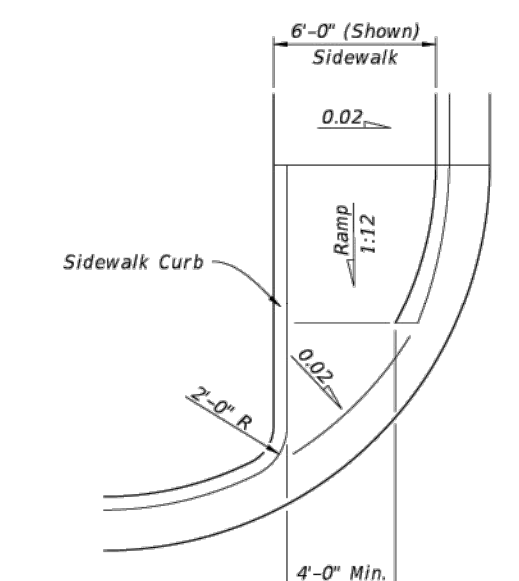


OPTION A



OPTION B

ISOMETRIC VIEW



PLAN VIEW

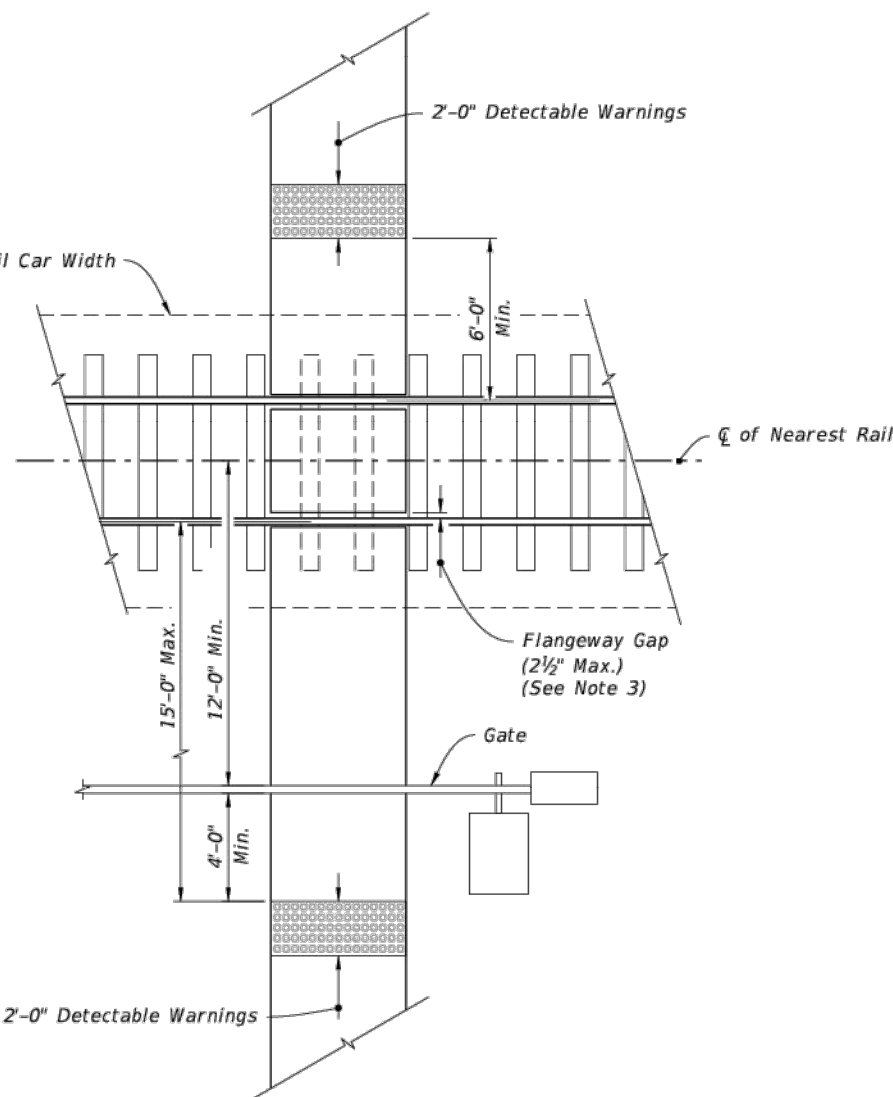
CR-G

SIDEWALK CURB RAMPS CR-D, CR-E, CR-F & CR-G

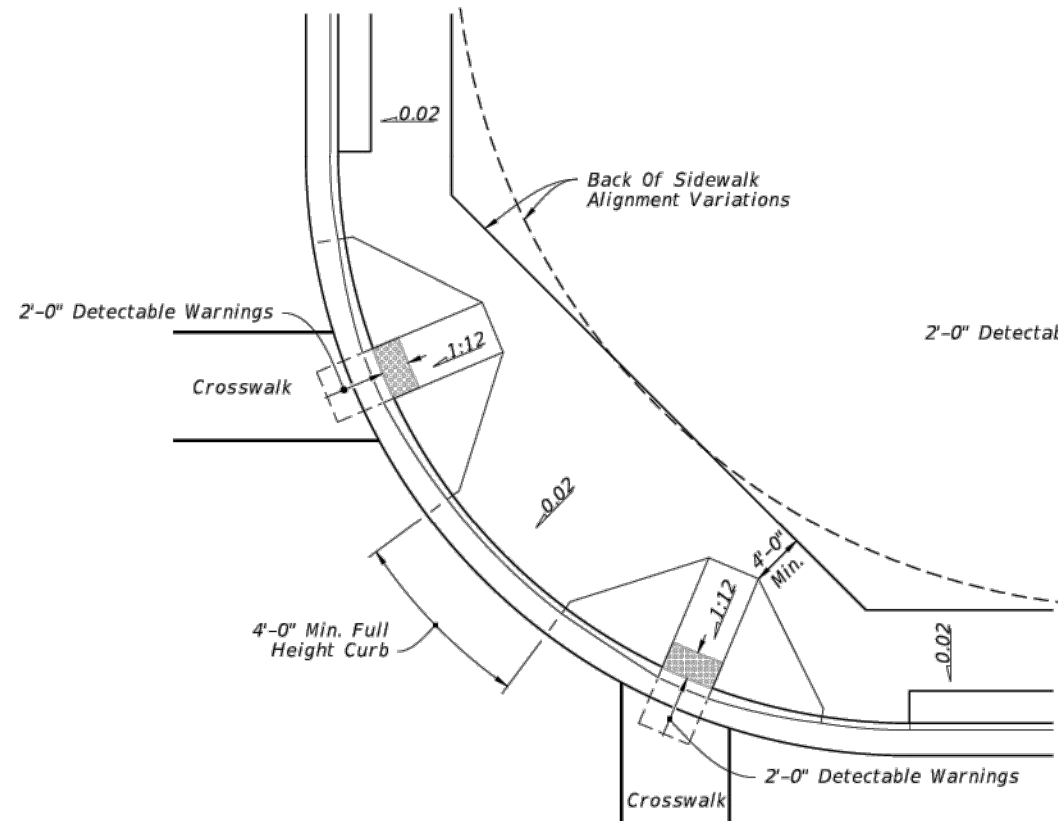
LAST REVISION 11/01/21	DESCRIPTION:	FY 2023-24 STANDARD PLANS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX 522-002	SHEET 4 of 7
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NOTES:

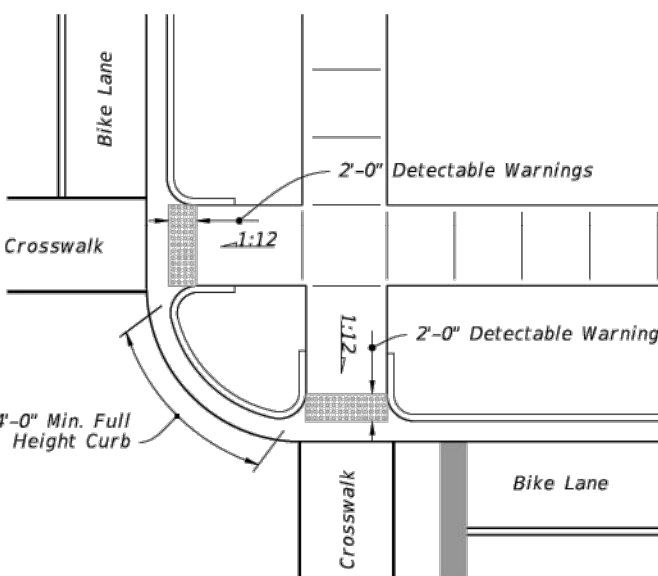
1. Where crosswalk markings are used, ramps must fall within the crosswalk limits. A clear space of 48" minimum is required at the bottom of the ramp within a marked crosswalk. If crosswalk markings are not present, a clear space of 48" minimum is required at the bottom of the ramp outside of active travel lanes.
2. Crosswalk widths and configurations vary; must conform to Index 711-001.
3. Flangeway Gap may be up to 3" for Freight-only Railways.



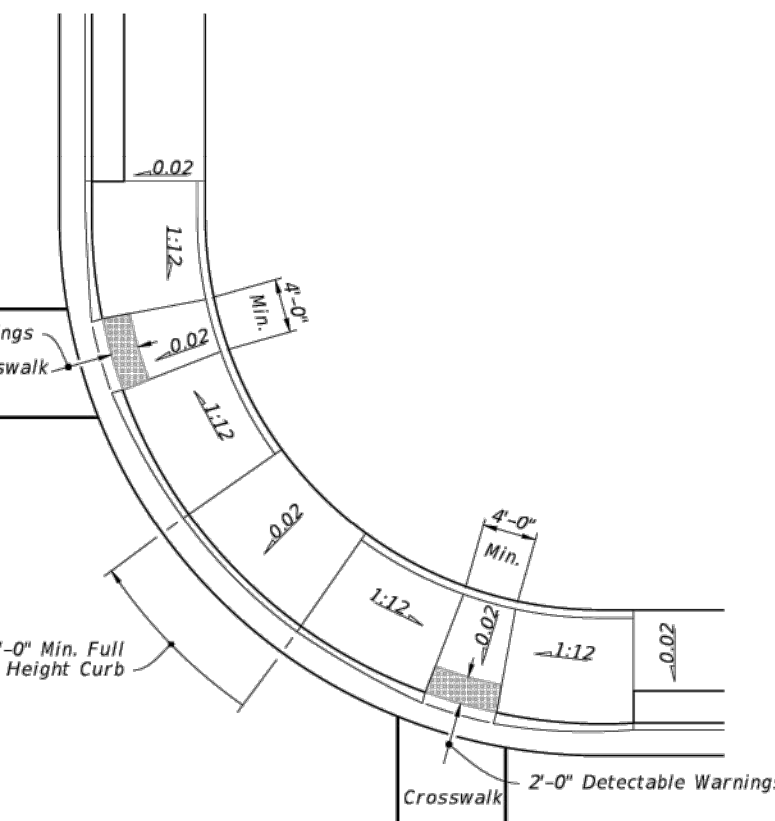
RAILROAD CROSSING



CURB RAMPS WITHIN RADIAL RETURN



CURB RAMPS OUTSIDE RADIAL RETURN



LINEAR SIDEWALK RAMPS

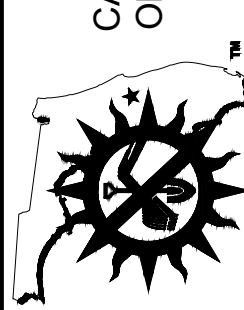
RAILROAD CROSSING AND CURB RAMPS AT CURBED RETURNS

LAST REVISION 11/01/20	DESCRIPTION:	FY 2023-24 STANDARD PLANS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX 522-002	SHEET 7 of 7
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DESIGNED BY:	CB	DRAWN BY:	LB	ISSUE DATE:	3/31/23
CHECKED BY:	LB	APPROVED BY:	LB	JOB NO.:	22-548
NO.	BY	DATE	REVISION DESCRIPTION		

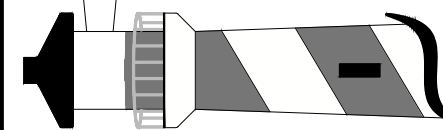
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THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY BEACON CIVIL ENGINEERING. IT IS THE RESPONSIBILITY OF THE USER TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE USER'S NEGLIGENCE, INADEQUATELY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

LAURIE S. BURCAW, PE #46064

BEACON
CIVIL ENGINEERING



CALUMET
TOWNS

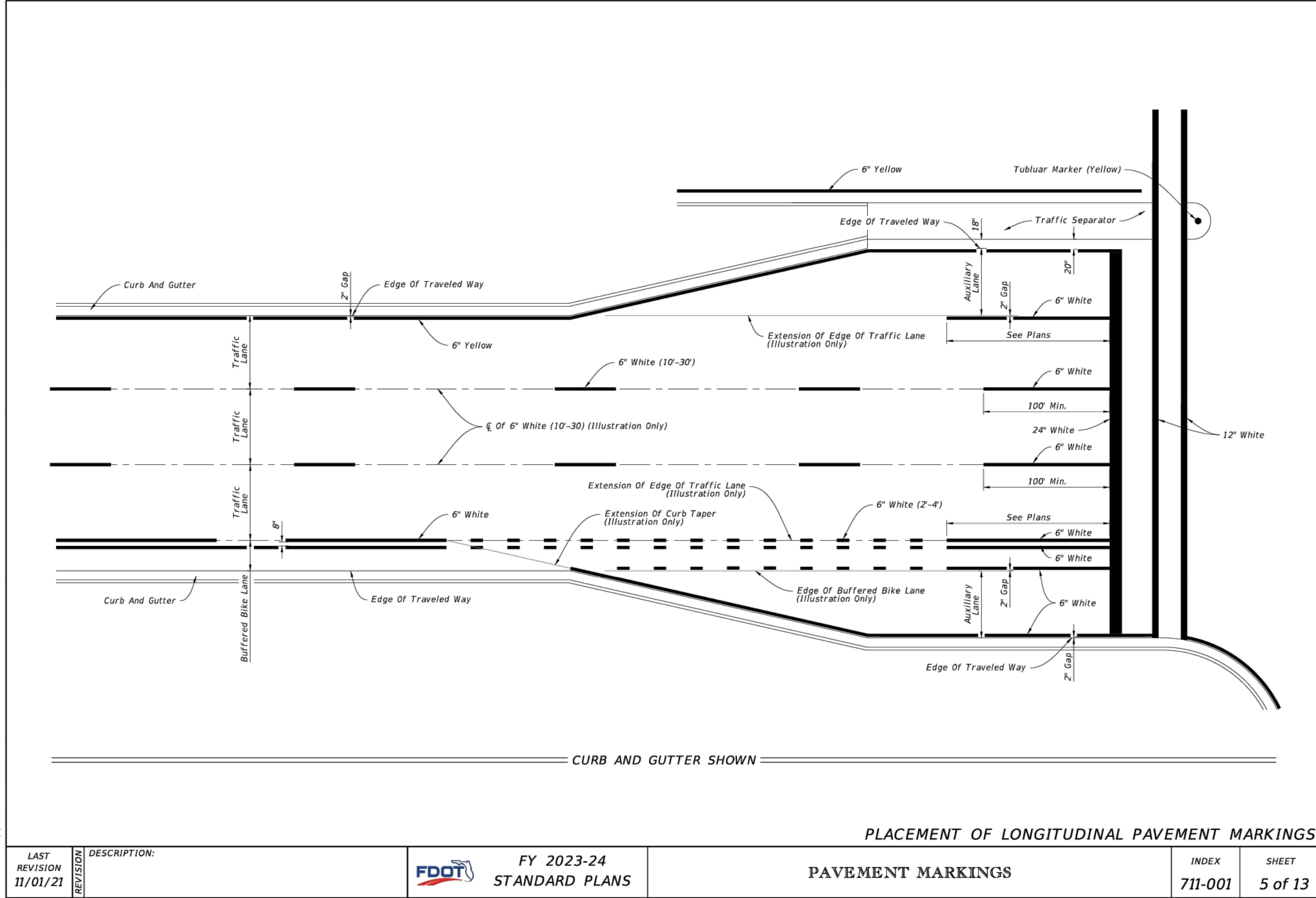
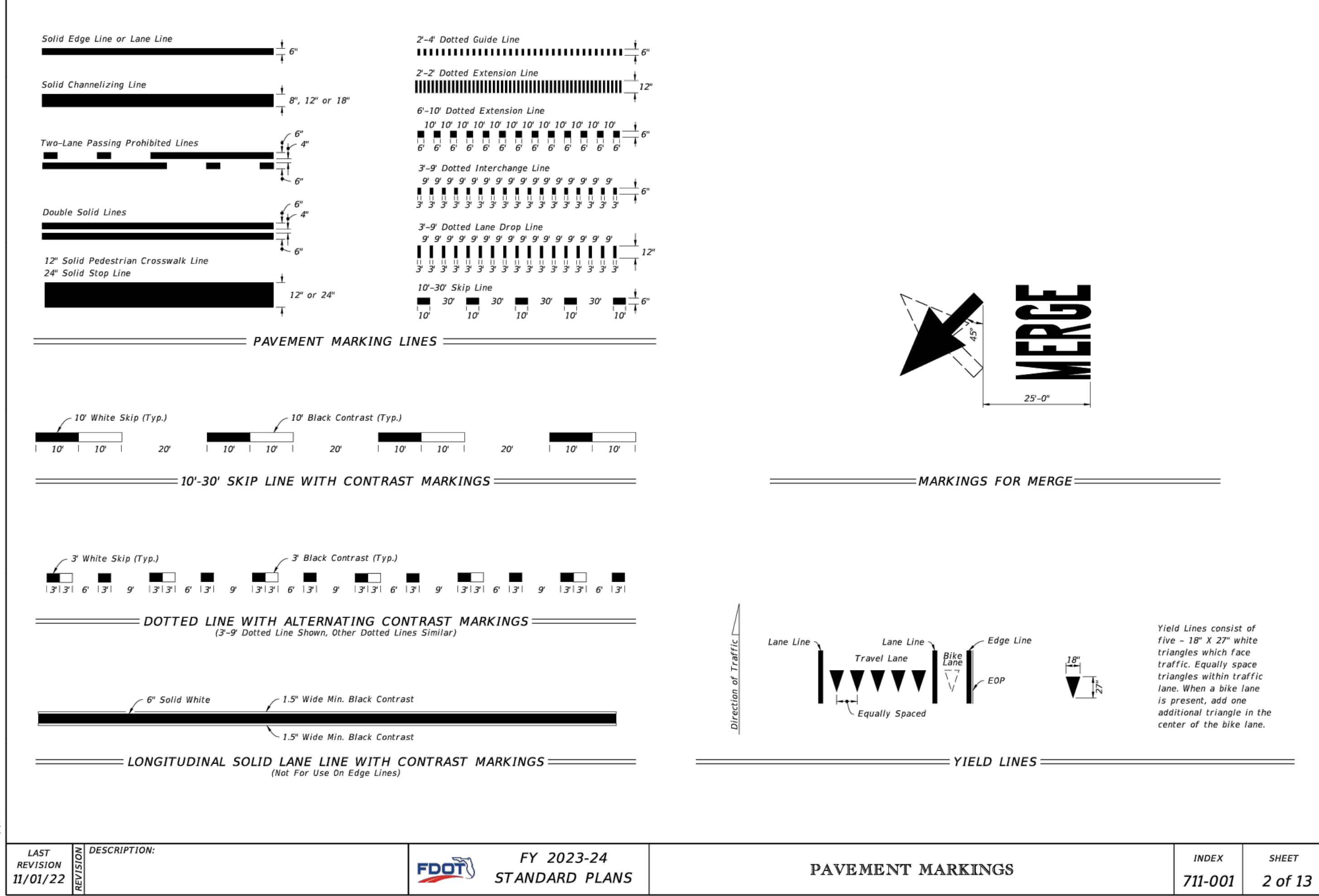
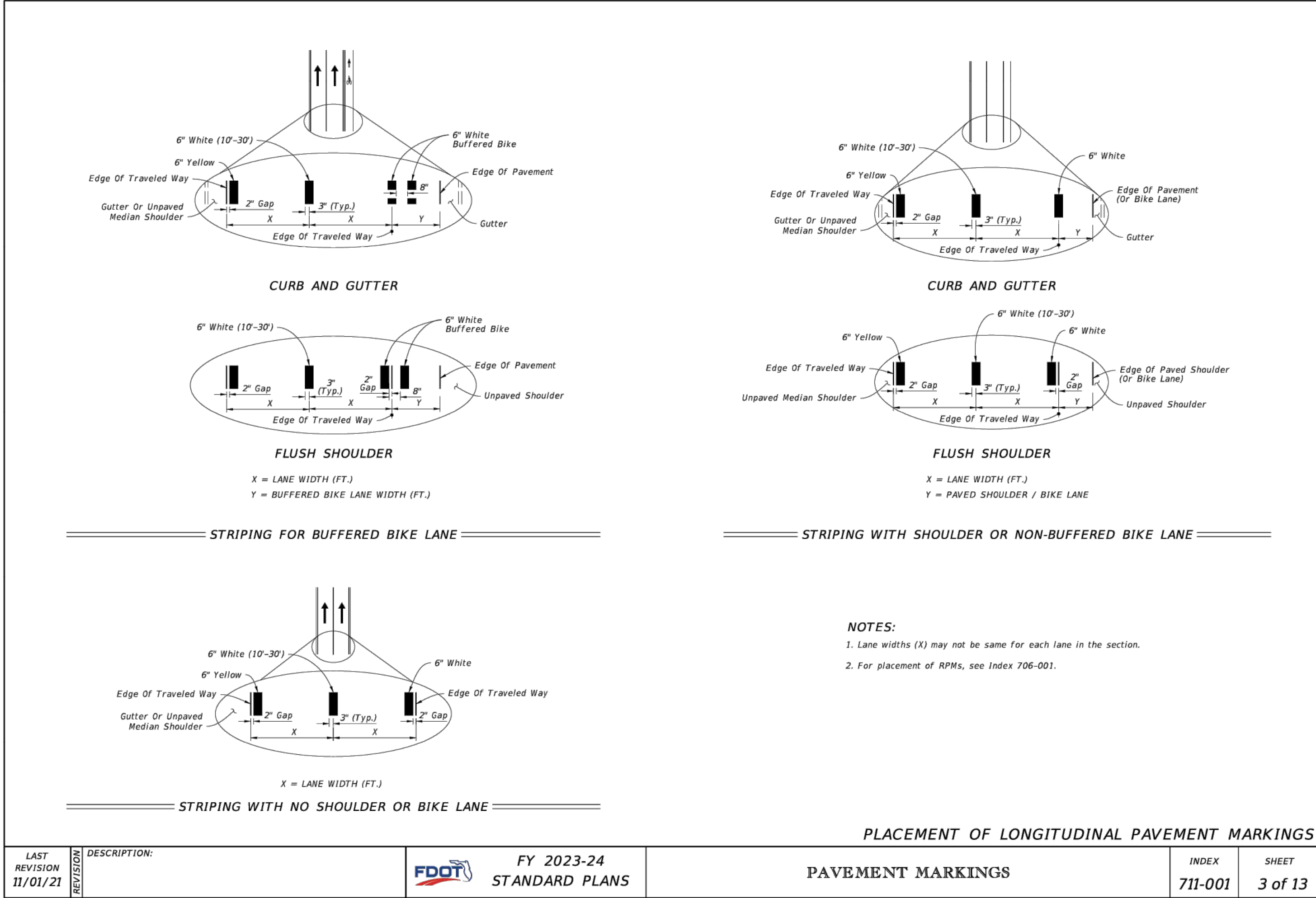
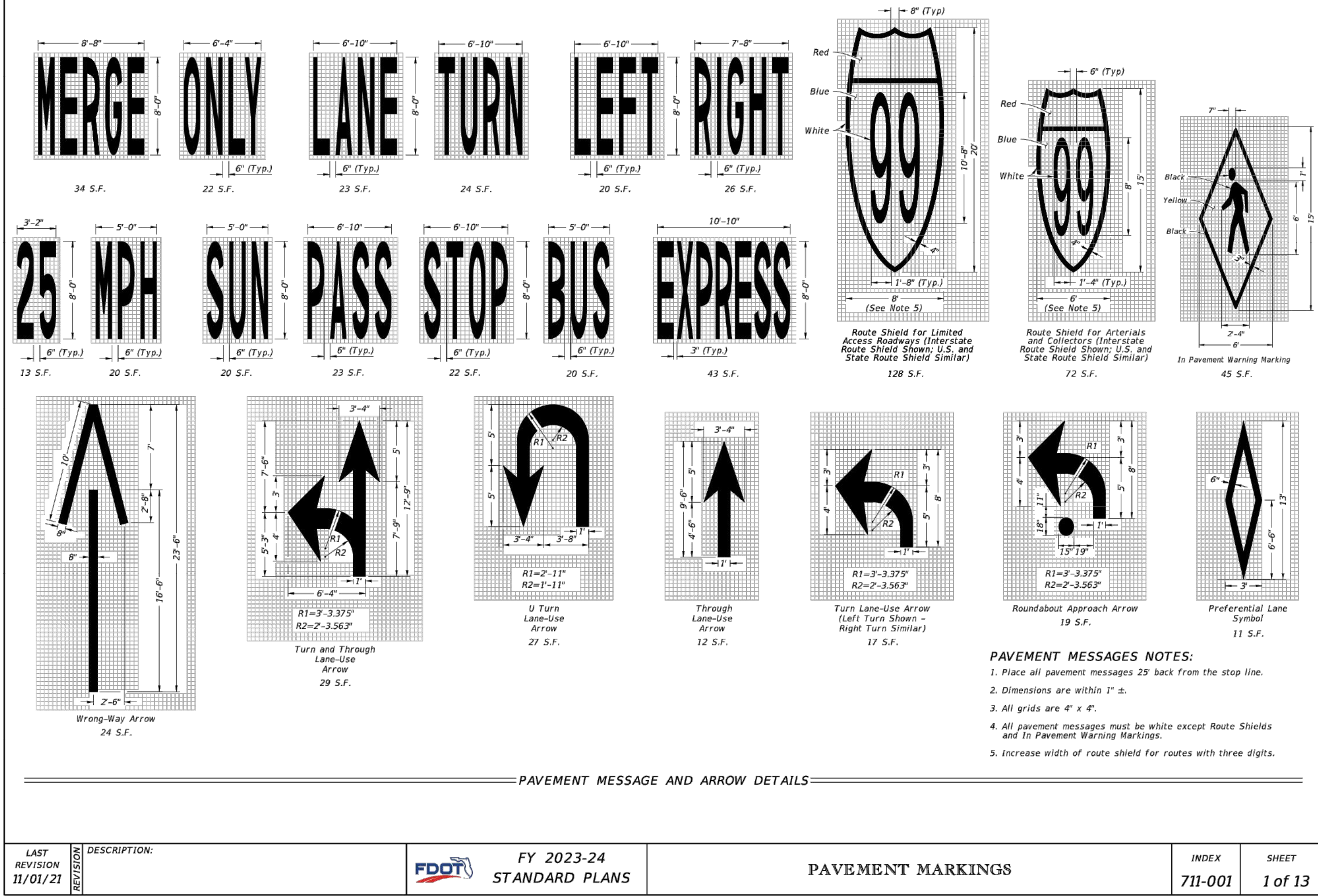
CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

SITE PLAN DETAILS

SHEET NUMBER:

C-4.1



ISSUED FOR PERMITTING

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DRAWN BY: CB
CHECKED BY: AH
NO. BY DATE

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UNDERGROUND UTILITIES
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. IT IS THE RESPONSIBILITY OF THE USER OF THESE PLANS TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE USE OF THESE PLANS. LOCATE AND PROTECT ANY AND ALL UNDERGROUND UTILITIES.

LAURIE S. BURCAW, PE #46064

BEACON
CIVIL ENGINEERING
LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
TAMPA, FL 33626

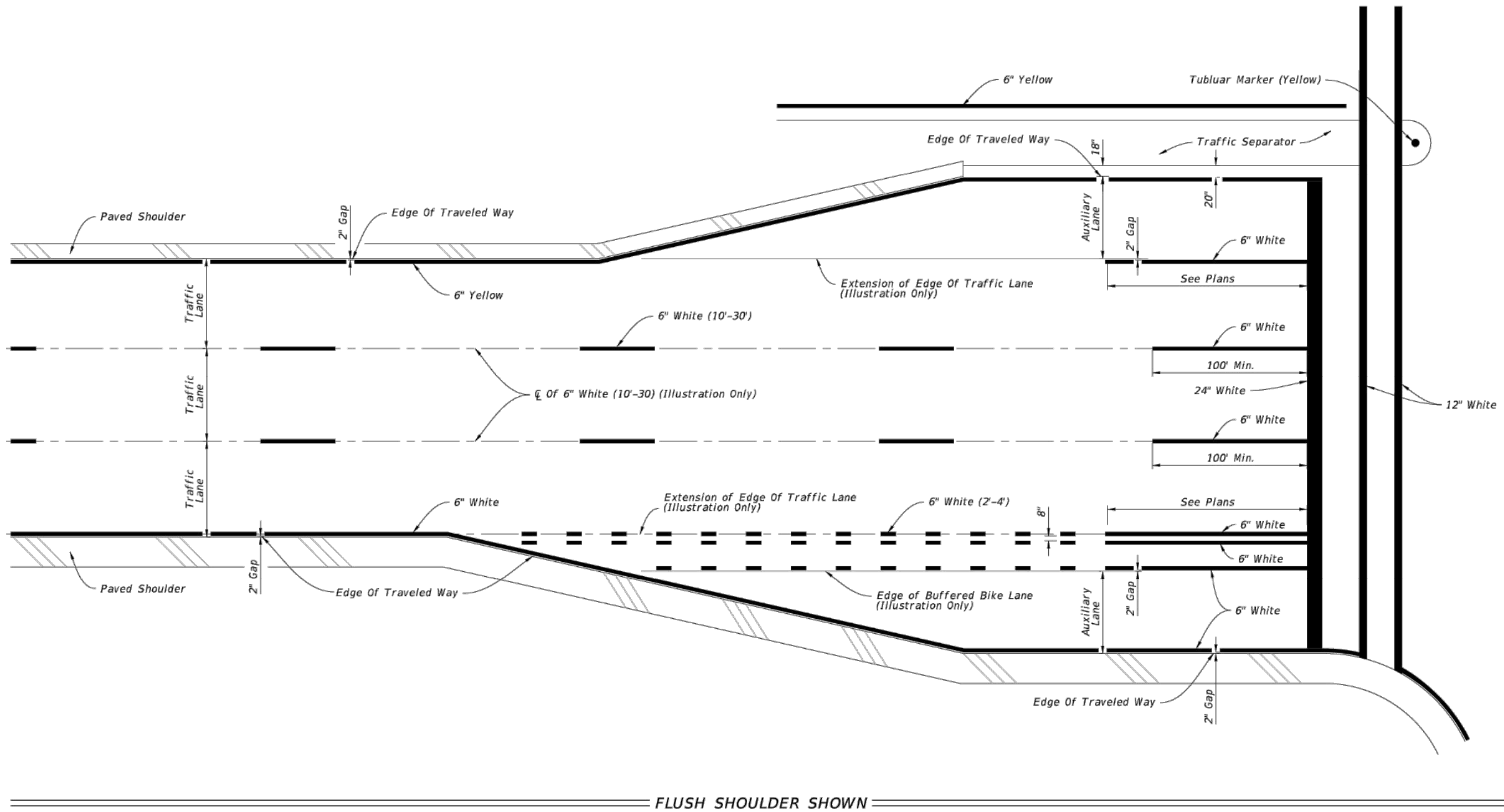
CALUMET TOWNS

CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:
SIGNING AND
PAVEMENT DETAILS

SHEET NUMBER:
C-5.1

10/7/2022 2:58:27 PM



FLUSH SHOULDER SHOWN

PLACEMENT OF LONGITUDINAL PAVEMENT MARKINGS

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24	INDEX	SHEET
11/01/21			STANDARD PLANS	711-001	6 of 13



* Increase character spacing 50%
** Reduce character spacing 20%



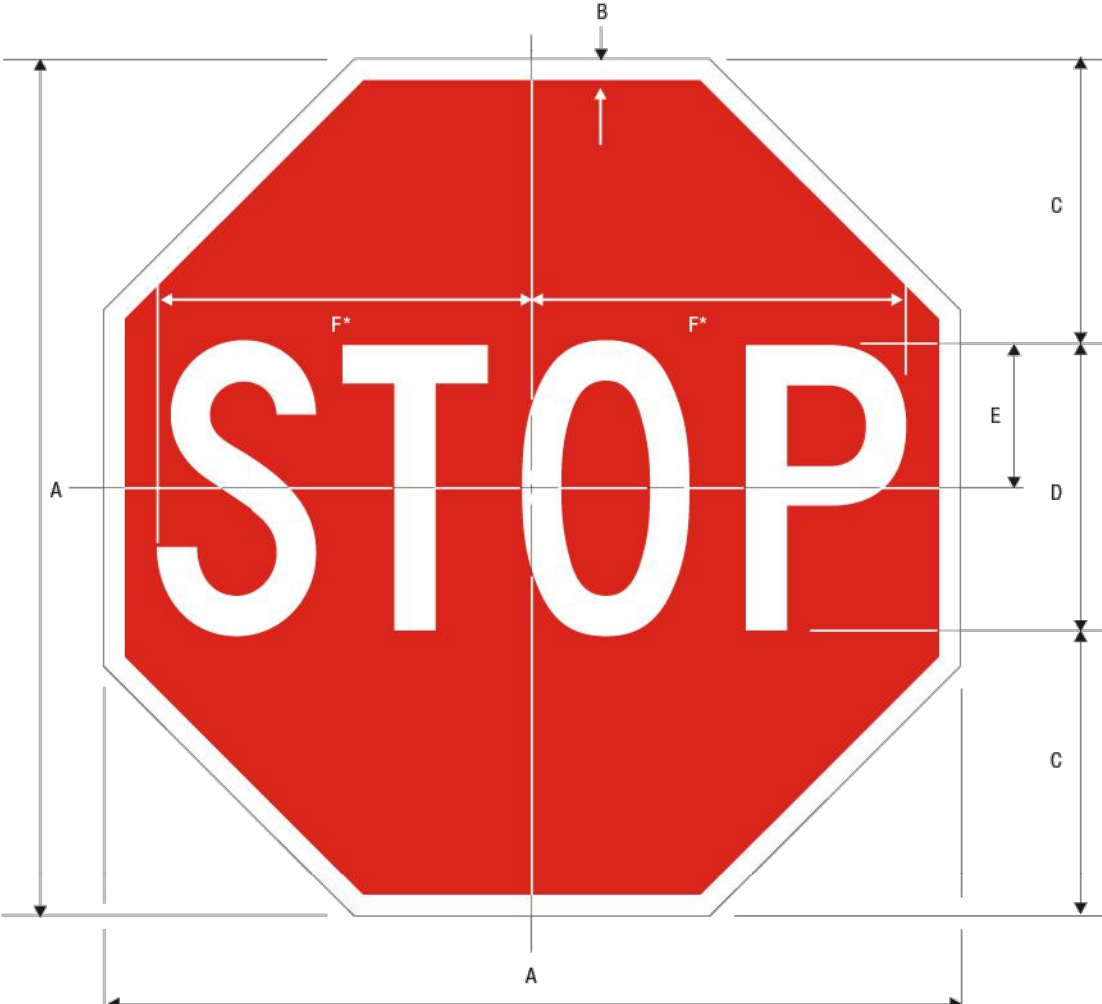
R2-1
SPEED LIMIT (ENGLISH)

*Optically space numerals about centerline

A	B	C	D	E	F	G	H	J	K	L
18	24	.375	.625	3	3 E	2	8 E	7.888	5.5	1.5
24	30	.375	.625	4	4 E	2	10 E	9.563	7.313	1.5
36	48	.625	.875	6	6 E	5	14 E	14.375	11	2.25
48	60	.75	1.25	8	8 E	6	16 E	19.125	14.625	3

COLORS: LEGEND — BLACK
BACKGROUND — WHITE (RETROREFLECTIVE)

1-10



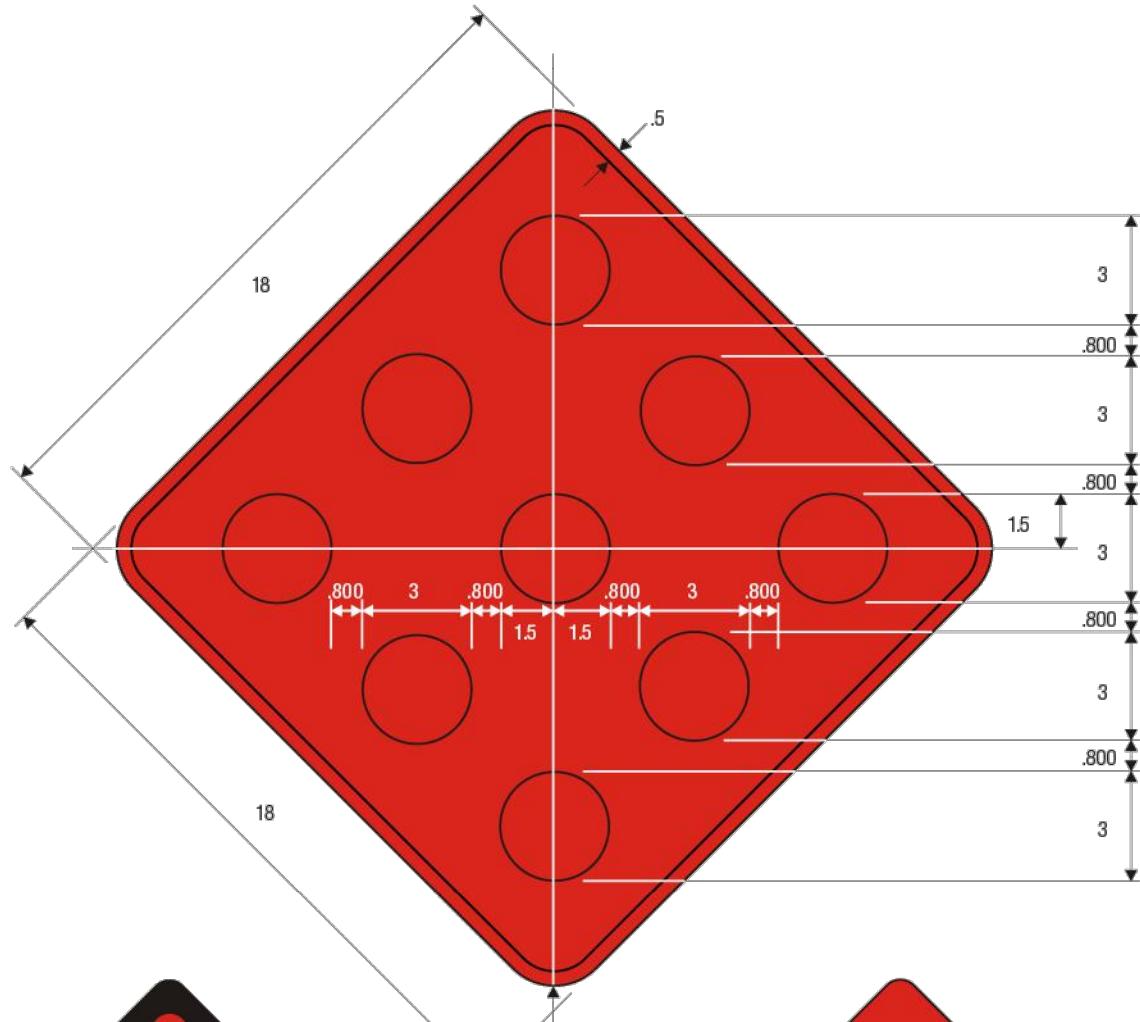
R1-1
STOP

*Reduce spacing 40%

A	B	C	D	E	F
18	.375	6	6 C	3	7.75
24	.625	8	8 C	4	10
30	.75	10	10 C	5	12.5
36	.875	12	12 C	6	15
48	1.25	16	16 C	8	20

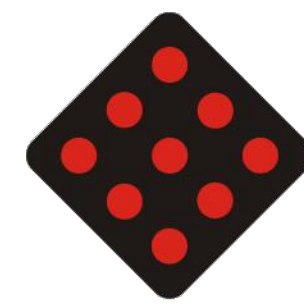
COLORS: LEGEND — WHITE (RETROREFLECTIVE)
BACKGROUND — RED (RETROREFLECTIVE)

1-1



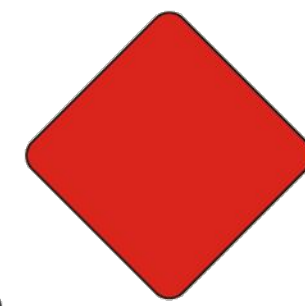
OM4-1

OM4-1 COLORS:
REFLECTORS — RED (RETROREFLECTIVE)
BACKGROUND — RED
BORDER — RED (RETROREFLECTIVE)



OM4-2

OM4-2 COLORS:
REFLECTORS — RED (RETROREFLECTIVE)
BACKGROUND — BLACK

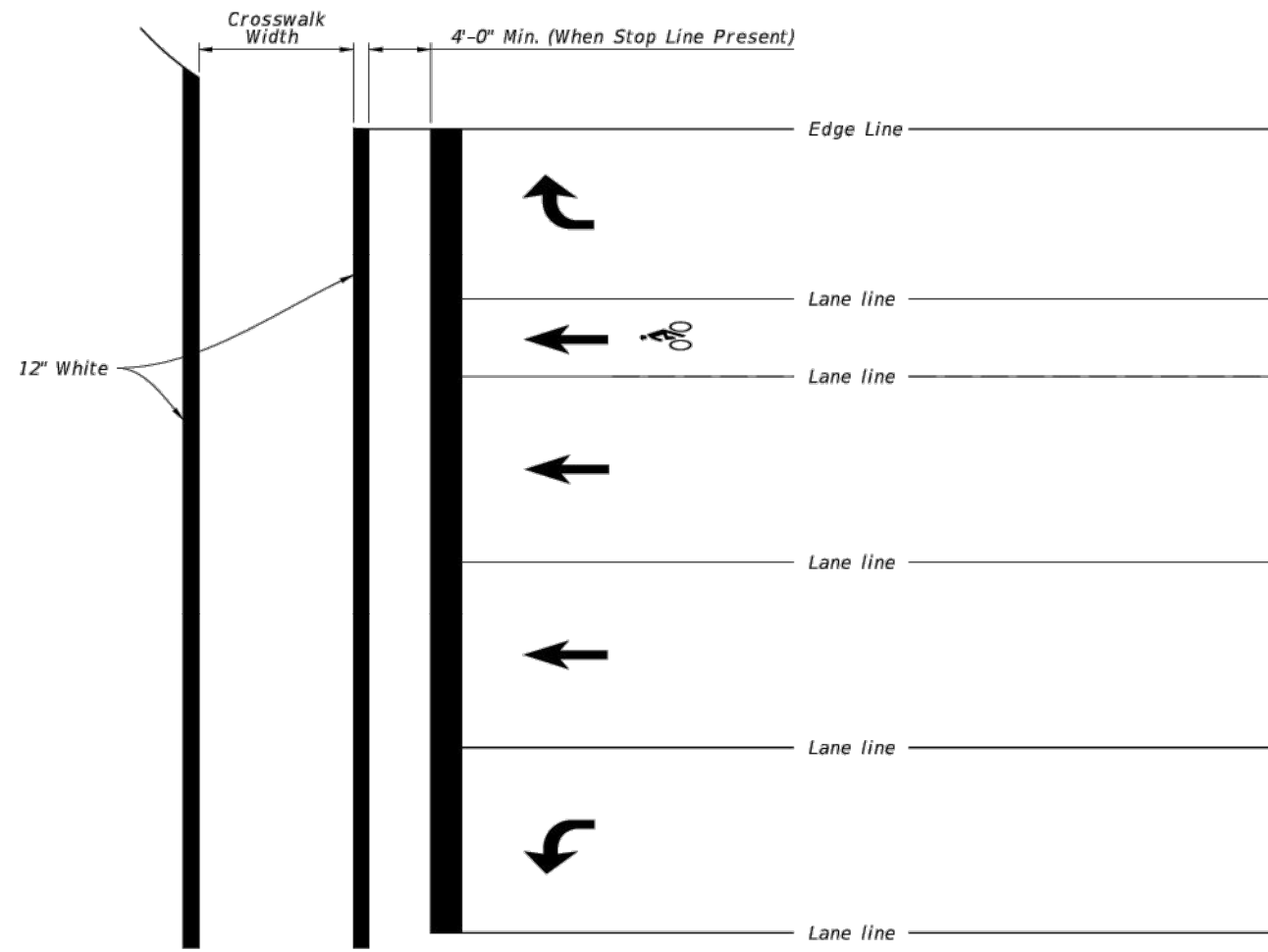


OM4-3

OM4-3 COLORS:
SIGN PANEL — RED (RETROREFLECTIVE)

11-4

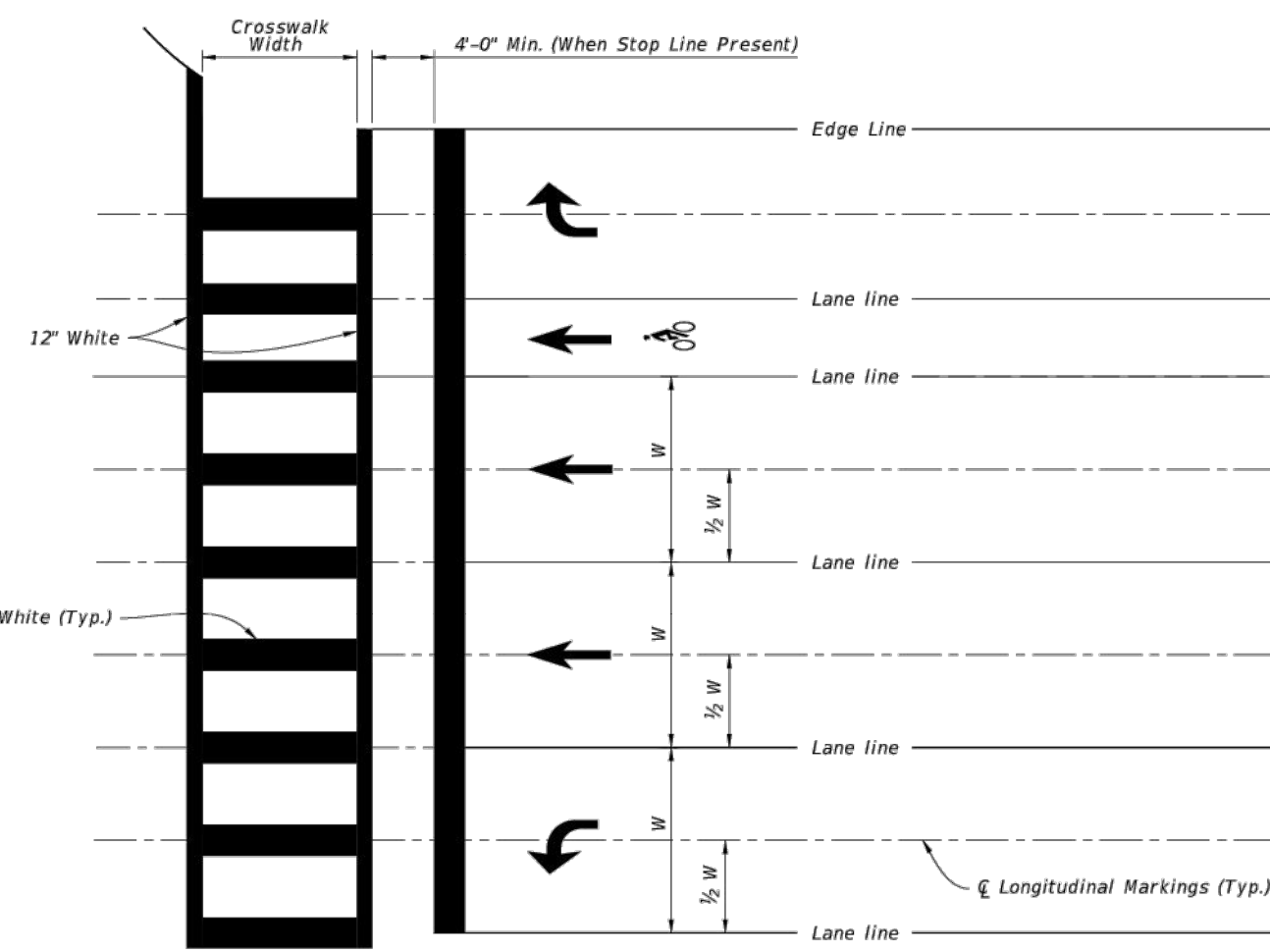
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STANDARD CROSSWALK DETAILS

NOTES:

1. For crosswalk width, exceed width of the adjacent sidewalk, but do not make width less than 6' for intersection crosswalks and 10' for midblock crosswalks. Measure width from the inside of the transverse crosswalk markings.
2. When the Special Emphasis Crosswalk is not perpendicular to the lane lines, make the longitudinal markings parallel to the lane lines.
3. Refer to Index 522-002 when Curb Ramps are present.



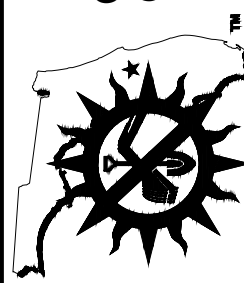
SPECIAL EMPHASIS CROSSWALK DETAILS

LAST REVISION	DESCRIPTION:	FDOT	FY 2023-24	INDEX	SHEET
11/01/21			STANDARD PLANS	711-001	9 of 13

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DESIGNED BY:	LB	DRAWN BY:	CB	ISSUE DATE:	3/31/23
CHECKED BY:	LB	APPROVED BY:	LB	JOB NO.:	22-548
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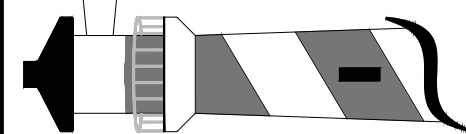
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TOWNS

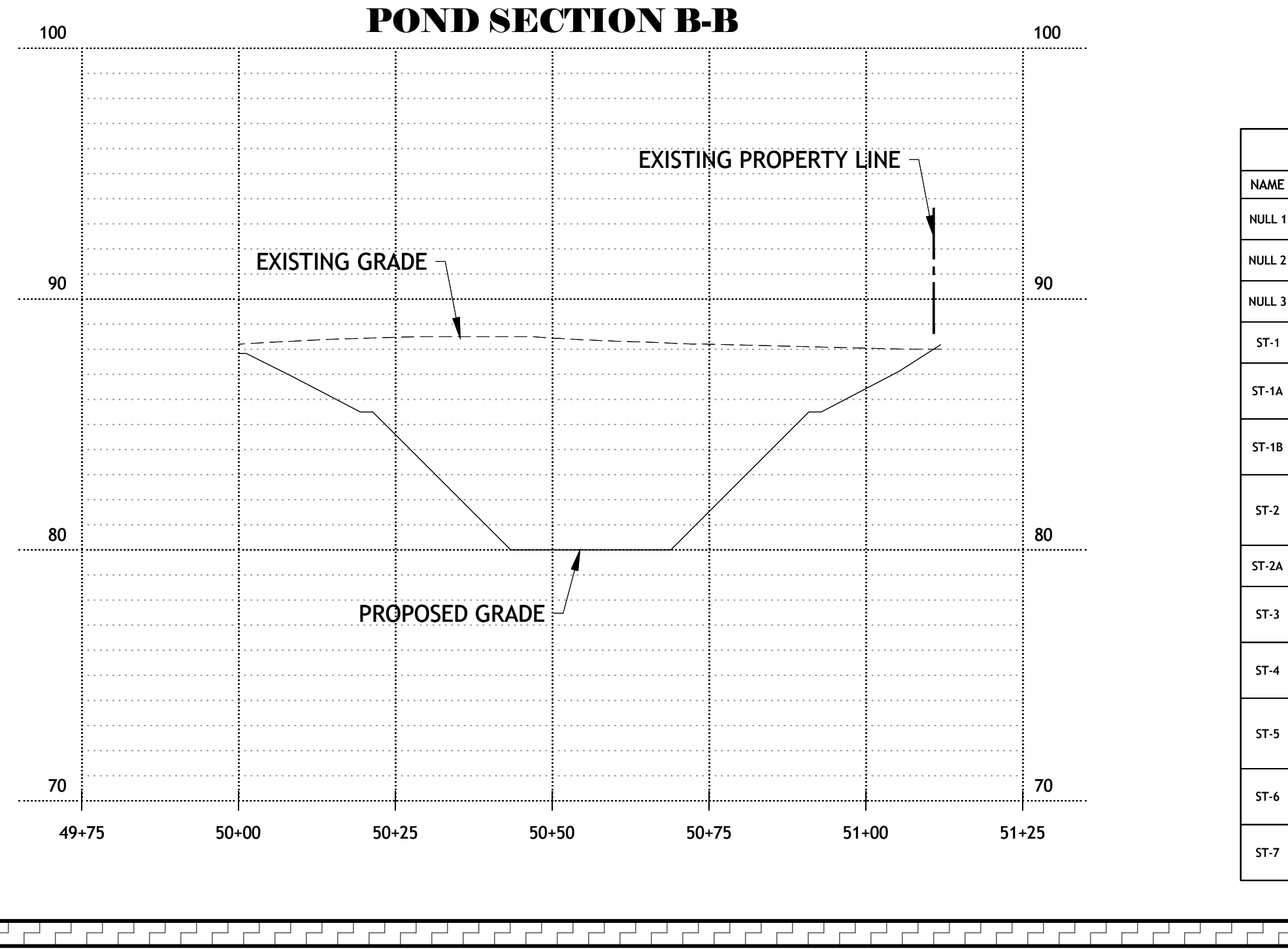
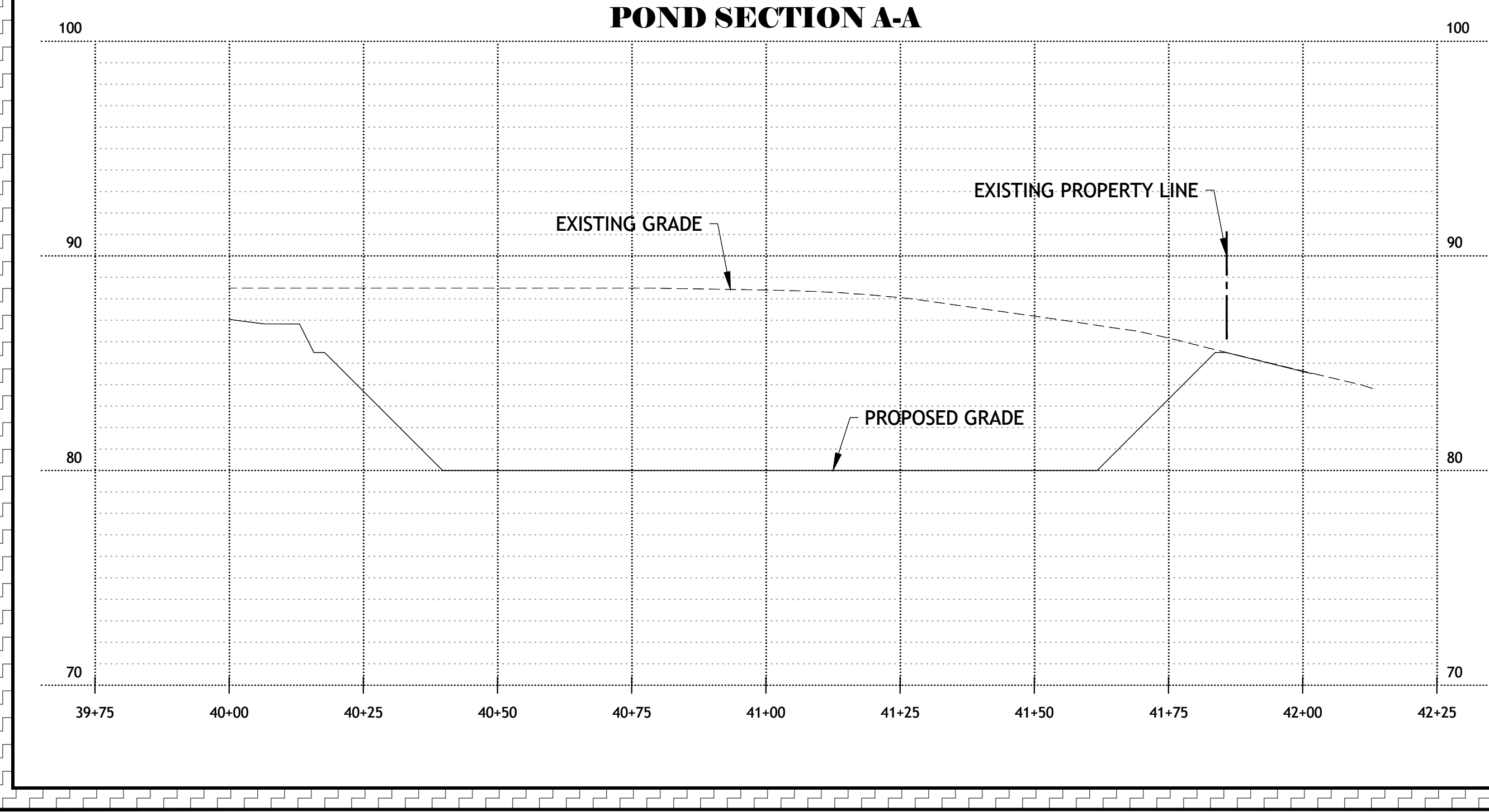
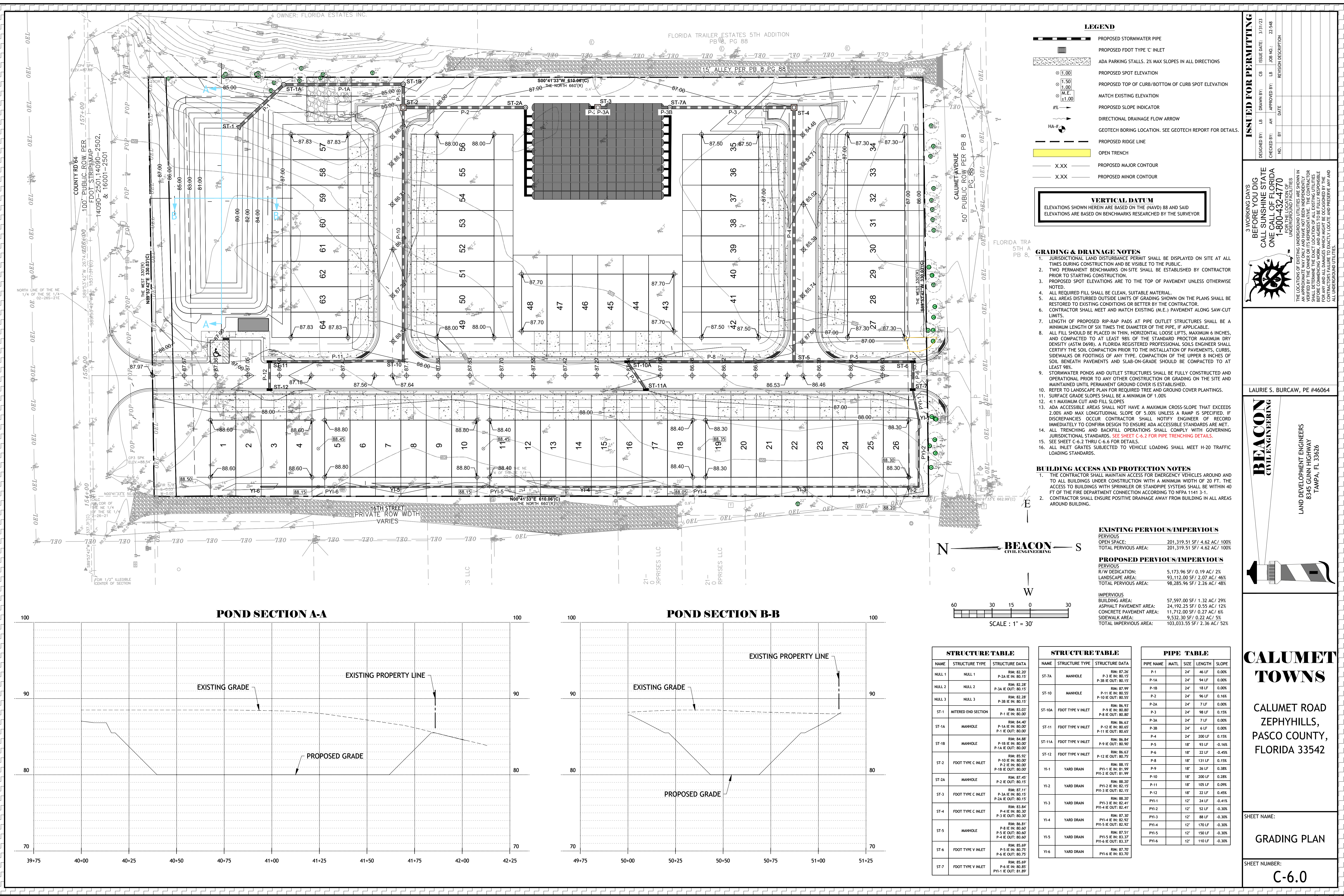
CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

SIGNING AND
PAVEMENT DETAILS

SHEET NUMBER:

C-5.2



- LEGEND**
- PROPOSED STORMWATER PIPE
 - PROPOSED FDOT TYPE 'C' INLET
 - ADA PARKING STALLS. 2% MAX SLOPES IN ALL DIRECTIONS
 - PROPOSED SPOT ELEVATION
 - PROPOSED TOP OF CURB/BOTTOM OF CURB SPOT ELEVATION
 - MATCH EXISTING ELEVATION
 - PROPOSED SLOPE INDICATOR
 - DIRECTIONAL DRAINAGE FLOW ARROW
 - GEOTECH BORING LOCATION. SEE GEOTECH REPORT FOR DETAILS.
 - PROPOSED RIDGE LINE
 - OPEN TRENCH
 - X.XX PROPOSED MAJOR CONTOUR
 - X.XXX PROPOSED MINOR CONTOUR

VERTICAL DATUM
ELEVATIONS SHOWN HEREIN ARE BASED ON THE (NAVD) 88 AND SAID ELEVATIONS ARE BASED ON BENCHMARKS RESEARCHED BY THE SURVEYOR

- GRADING & DRAINAGE NOTES**
- JURISDICTIONAL LAND DISTURBANCE PERMIT SHALL BE DISPLAYED ON SITE AT ALL TIMES DURING CONSTRUCTION AND BE VISIBLE TO THE PUBLIC.
 - TWO PERMANENT BENCHMARKS ON-SITE SHALL BE ESTABLISHED BY CONTRACTOR PRIOR TO STARTING CONSTRUCTION.
 - PROPOSED SPOT ELEVATIONS ARE TO THE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
 - ALL REQUIRED FILL SHALL BE CLEAN, SUITABLE MATERIAL.
 - ALL AREAS DISTURBED OUTSIDE LIMITS OF GRADING SHOWN ON THE PLANS SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER BY THE CONTRACTOR.
 - CONTRACTOR SHALL MEET AND MATCH EXISTING (M.E.) PAVEMENT ALONG SAW-CUT LIMITS.
 - LENGTH OF PROPOSED RIP-RAP PADS AT PIPE OUTLET STRUCTURES SHALL BE A MINIMUM LENGTH OF SIX TIMES THE DIAMETER OF THE PIPE, IF APPLICABLE.
 - ALL FILL SHOULD BE PLACED IN THIN, HORIZONTAL LOOSE LIFTS, MAXIMUM 6 INCHES, AND COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698). A FLORIDA REGISTERED PROFESSIONAL SOILS ENGINEER SHALL CERTIFY THE SOIL COMPACTION PRIOR TO THE INSTALLATION OF PAVEMENTS, CURBS, SIDEWALKS OR FOOTINGS OF ANY TYPE. COMPACTION OF THE UPPER 8 INCHES OF SOIL BENEATH PAVEMENTS AND SLAB-ON-GRADE SHOULD BE COMPACTED TO AT LEAST 98%.
 - STORMWATER PONDS AND OUTLET STRUCTURES SHALL BE FULLY CONSTRUCTED AND OPERATIONAL PRIOR TO ANY OTHER CONSTRUCTION OR GRADING ON THE SITE AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
 - REFER TO LANDSCAPE PLAN FOR REQUIRED TREE AND GROUND COVER PLANTINGS.
 - SURFACE GRADE SLOPES SHALL BE A MINIMUM OF 1.00%.
 - 4:1 MAXIMUM CUT AND FILL SLOPES
 - ADA ACCESSIBLE AREAS SHALL NOT HAVE A MAXIMUM CROSS-SLOPE THAT EXCEEDS 2.00% AND MAX LONGITUDINAL SLOPE OF 5.00% UNLESS A RAMP IS SPECIFIED. IF DISCREPANCIES OCCUR, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD IMMEDIATELY TO CONFIRM DESIGN TO ENSURE ADA ACCESSIBLE STANDARDS ARE MET.
 - ALL TRENCHING AND BACKFILL OPERATIONS SHALL COMPLY WITH GOVERNING JURISDICTIONAL STANDARDS. SEE SHEET C-6.2 FOR PIPE TRENCHING DETAILS.
 - SEE SHEET C-6.2 THRU C-6.6 FOR DETAILS.
 - ALL INLET GRATES SUBJECTED TO VEHICLE LOADING SHALL MEET H-20 TRAFFIC LOADING STANDARDS.

- BUILDING ACCESS AND PROTECTION NOTES**
- THE CONTRACTOR SHALL MAINTAIN ACCESS FOR EMERGENCY VEHICLES AROUND AND TO ALL BUILDINGS UNDER CONSTRUCTION WITH A MINIMUM WIDTH OF 20 FT. THE ACCESS TO BUILDINGS WITH SPRINKLER OR STANDPIPE SYSTEMS SHALL BE WITHIN 40 FT OF THE FIRE DEPARTMENT CONNECTION ACCORDING TO NFPA 1141-3-1.
 - CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING IN ALL AREAS AROUND BUILDING.

EXISTING PERVIOUS/IMPERVIOUS
PERVIOUS
OPEN SPACE: 201,319.51 SF/ 4.62 AC/ 100%
TOTAL PERVIOUS AREA: 201,319.51 SF/ 4.62 AC/ 100%

PROPOSED PERVIOUS/IMPERVIOUS
PERVIOUS
R/W DEDICATION: 5,173.96 SF/ 0.19 AC/ 2%
LANDSCAPE AREA: 93,112.00 SF/ 2.07 AC/ 46%
TOTAL PERVIOUS AREA: 98,285.96 SF/ 2.26 AC/ 48%

IMPERVIOUS
BUILDING AREA: 57,597.00 SF/ 1.32 AC/ 29%
ASPHALT PAVEMENT AREA: 24,192.25 SF/ 0.55 AC/ 12%
CONCRETE PAVEMENT AREA: 11,712.00 SF/ 0.27 AC/ 6%
SIDEWALK AREA: 9,532.30 SF/ 0.22 AC/ 5%
TOTAL IMPERVIOUS AREA: 103,033.55 SF/ 2.36 AC/ 52%

STRUCTURE TABLE		
NAME	STRUCTURE TYPE	STRUCTURE DATA
NULL 1	NULL 1	RIM: 82.20' P-2A IE IN: 80.15'
NULL 2	NULL 2	RIM: 82.28' P-3A IE OUT: 80.15'
NULL 3	NULL 3	RIM: 82.28' P-3B IE IN: 80.15'
ST-1	MITERED END SECTION	RIM: 83.03' P-1 IE IN: 80.00'
ST-1A	MANHOLE	RIM: 84.40' P-1A IE IN: 80.00' P-1 IE OUT: 80.00'
ST-1B	MANHOLE	RIM: 84.88' P-1B IE IN: 80.00' P-1A IE OUT: 80.00'
ST-2	FDOT TYPE C INLET	RIM: 85.92' P-10 IE IN: 80.00' P-2 IE IN: 80.00' P-1B IE OUT: 80.00'
ST-2A	MANHOLE	RIM: 87.45' P-2 IE OUT: 80.15'
ST-3	FDOT TYPE C INLET	RIM: 87.11' P-3A IE IN: 80.15' P-2A IE OUT: 80.15'
ST-4	FDOT TYPE C INLET	RIM: 83.84' P-4 IE IN: 80.30' P-3 IE OUT: 80.30'
ST-5	MANHOLE	RIM: 86.81' P-8 IE IN: 80.60' P-5 IE OUT: 80.60' P-4 IE OUT: 80.60'
ST-6	FDOT TYPE V INLET	RIM: 85.69' P-5 IE IN: 80.75' P-6 IE OUT: 81.89'
ST-7	FDOT TYPE V INLET	RIM: 85.69' P-6 IE IN: 80.85' P-1 IE OUT: 81.89'

STRUCTURE TABLE		
NAME	STRUCTURE TYPE	STRUCTURE DATA
ST-7A	MANHOLE	RIM: 87.26' P-3 IE IN: 80.15' P-3B IE OUT: 80.15'
ST-10	MANHOLE	RIM: 87.99' P-11 IE IN: 80.55' P-10 IE OUT: 80.55'
ST-10A	FDOT TYPE V INLET	RIM: 86.93' P-9 IE IN: 80.80' P-8 IE OUT: 80.80'
ST-11	FDOT TYPE V INLET	RIM: 86.63' P-12 IE IN: 80.65' P-11 IE OUT: 80.65'
ST-11A	FDOT TYPE V INLET	RIM: 86.84' P-9 IE IN: 80.90' P-9 IE OUT: 80.90'
ST-12	FDOT TYPE V INLET	RIM: 86.63' P-12 IE IN: 80.75' P-12 IE OUT: 80.75'
YI-1	YARD DRAIN	RIM: 88.15' P-11 IE IN: 81.99' P-11 IE OUT: 81.99'
YI-2	YARD DRAIN	RIM: 88.20' P-11 IE IN: 82.15' P-11 IE OUT: 82.15'
YI-3	YARD DRAIN	RIM: 88.20' P-11 IE IN: 82.41' P-11 IE OUT: 82.41'
YI-4	YARD DRAIN	RIM: 87.30' P-11 IE IN: 82.92' P-11 IE OUT: 82.92'
YI-5	YARD DRAIN	RIM: 87.51' P-11 IE IN: 83.37' P-11 IE OUT: 83.37'
YI-6	YARD DRAIN	RIM: 87.70' P-11 IE IN: 83.70' P-11 IE OUT: 83.70'

PIPE TABLE			
PIPE NAME	MATL	SIZE	LENGTH
P-1	24"	46 LF	0.00%
P-1A	24"	94 LF	0.00%
P-1B	24"	18 LF	0.00%
P-2	24"	96 LF	0.16%
P-2A	24"	7 LF	0.00%
P-3	24"	98 LF	0.15%
P-3A	24"	7 LF	0.00%
P-3B	24"	6 LF	0.00%
P-4	24"	200 LF	0.15%
P-5	18"	93 LF	-0.16%
P-6	18"	22 LF	-0.45%
P-8	18"	131 LF	0.15%
P-9	18"	26 LF	0.38%
P-10	18"	300 LF	0.28%
P-11	18"	105 LF	0.09%
P-12	18"	22 LF	0.45%
P-13	12"	24 LF	-0.41%
P-14	12"	52 LF	-0.30%
P-15	12"	88 LF	-0.30%
P-16	12"	170 LF	-0.30%
P-17	12"	150 LF	-0.30%
P-18	12"	110 LF	-0.30%

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CHECKED BY: AH APPROVED BY: LB JOB NO.: 22-548
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BEACON CIVIL ENGINEERING

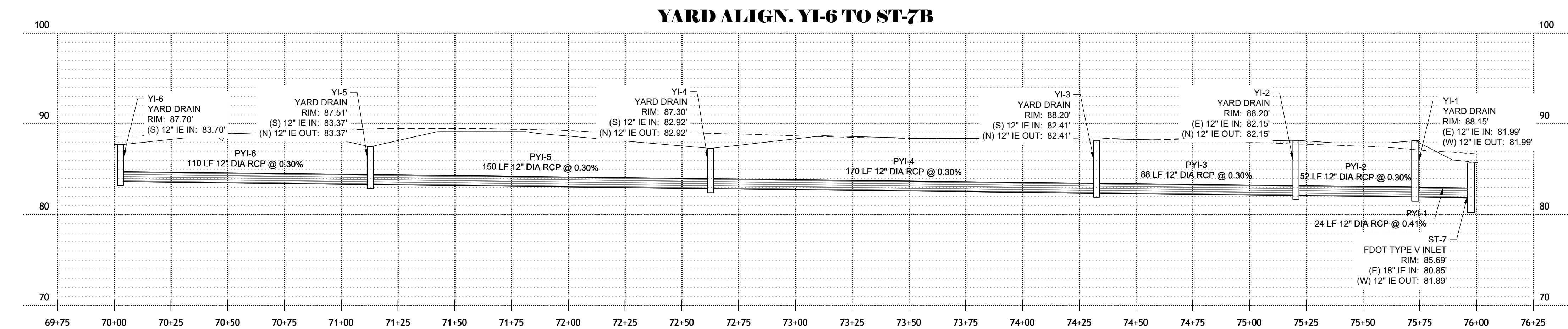
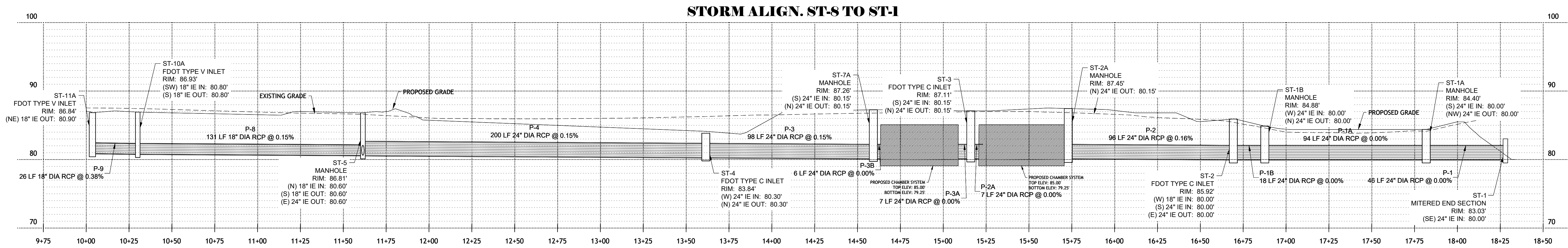
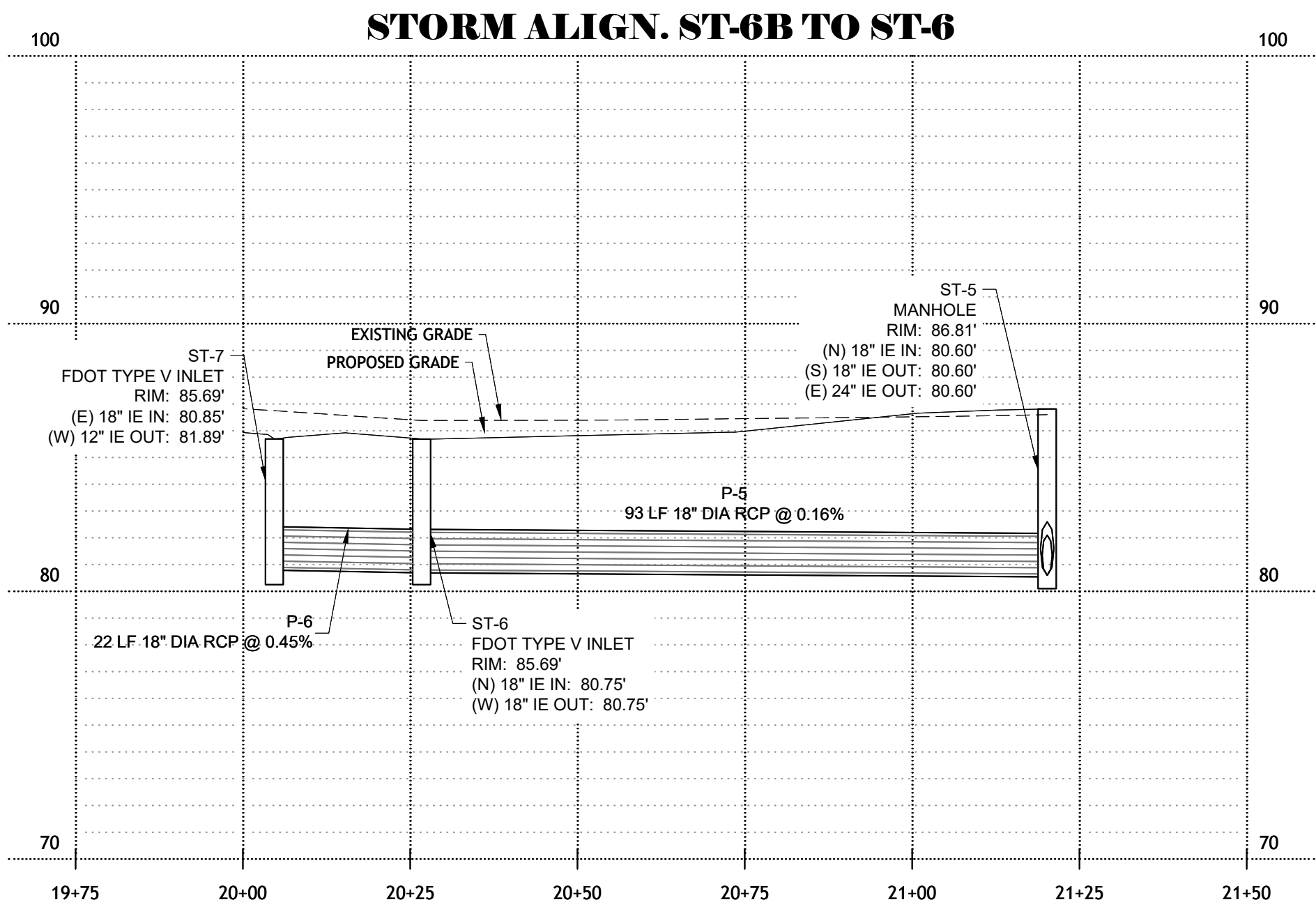
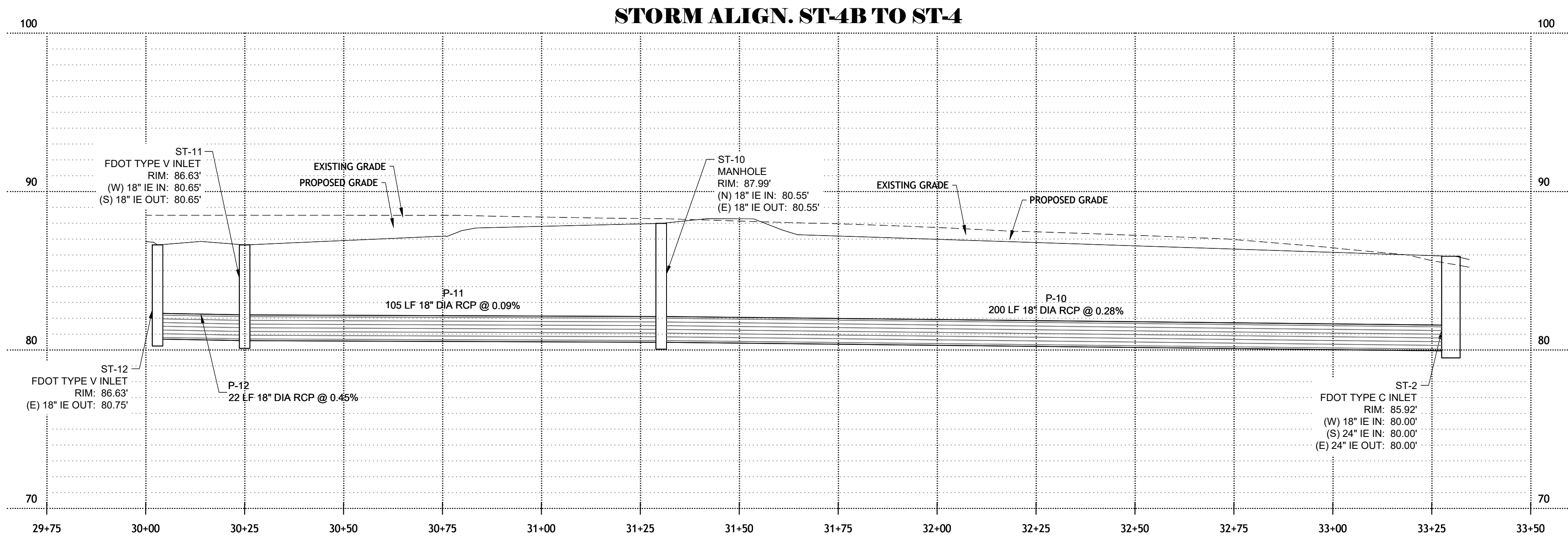
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8345 GUNN HIGHWAY
TAMPA, FL 33626

CALUMET TOWNS

CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:
GRADING PLAN

SHEET NUMBER:
C-6.0



STRUCTURE TABLE		
NAME	STRUCTURE TYPE	STRUCTURE DATA
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NULL 2	NULL 2	RIM: 82.28 P-3A IE IN: 80.15
NULL 3	NULL 3	RIM: 82.38 P-3B IE IN: 80.15
ST-1	MITERED END SECTION	RIM: 83.03 P-1 IE IN: 80.00
ST-1A	MANHOLE	RIM: 84.40 P-1A IE IN: 80.00 P-1 IE OUT: 80.00
ST-1B	MANHOLE	RIM: 84.88 P-1B IE IN: 80.00 P-1A IE OUT: 80.00
ST-2	FDOT TYPE C INLET	RIM: 85.92 P-10 IE IN: 80.00 P-2 IE OUT: 80.00
ST-2A	MANHOLE	RIM: 87.45 P-3A IE IN: 80.15 P-2A IE OUT: 80.15
ST-3	FDOT TYPE C INLET	RIM: 87.11 P-3A IE IN: 80.15 P-2A IE OUT: 80.15
ST-4	FDOT TYPE C INLET	RIM: 83.84 P-4 IE IN: 80.30 P-3 IE OUT: 80.30
ST-5	MANHOLE	RIM: 86.81 P-8 IE IN: 80.60 P-5 IE OUT: 80.60 P-4 IE OUT: 80.60
ST-6	FDOT TYPE V INLET	RIM: 85.69 P-5 IE IN: 80.75 P-6 IE OUT: 80.75
ST-7	FDOT TYPE V INLET	RIM: 85.69 P-6 IE IN: 80.85 P-1 IE OUT: 81.89

STRUCTURE TABLE		
NAME	STRUCTURE TYPE	STRUCTURE DATA
ST-7A	MANHOLE	RIM: 87.26 P-3 IE IN: 80.15 P-3B IE OUT: 80.15
ST-10	MANHOLE	RIM: 87.99 P-11 IE IN: 80.55 P-10 IE OUT: 80.55
ST-10A	FDOT TYPE V INLET	RIM: 86.93 P-9 IE IN: 80.80 P-8 IE OUT: 80.80
ST-11	FDOT TYPE V INLET	RIM: 87.99 P-9 IE IN: 80.80 P-11 IE OUT: 80.55
ST-11A	FDOT TYPE V INLET	RIM: 86.63 P-9 IE IN: 80.90 P-11 IE OUT: 80.60
ST-12	FDOT TYPE V INLET	RIM: 86.63 P-12 IE IN: 80.75 P-11 IE OUT: 80.60
YI-1	YARD DRAIN	RIM: 88.15 P-9 IE IN: 81.99 PYI-2 IE OUT: 81.99
YI-2	YARD DRAIN	RIM: 88.20 PYI-2 IE IN: 82.15 PYI-3 IE OUT: 82.15
YI-3	YARD DRAIN	RIM: 88.20 PYI-3 IE IN: 82.41 PYI-4 IE OUT: 82.41
YI-4	YARD DRAIN	RIM: 87.30 PYI-4 IE IN: 82.92 PYI-5 IE OUT: 82.92
YI-5	YARD DRAIN	RIM: 87.51 PYI-5 IE IN: 83.37 PYI-6 IE OUT: 83.37
YI-6	YARD DRAIN	RIM: 87.70 PYI-6 IE IN: 83.70

PIPE TABLE				
PIPE NAME	MATL	SIZE	LENGTH	SLOPE
P-1		24"	46 LF	0.00%
P-1A		24"	94 LF	0.00%
P-1B		24"	18 LF	0.00%
P-2		24"	96 LF	0.16%
P-2A		24"	7 LF	0.00%
P-3		24"	98 LF	0.15%
P-3A		24"	7 LF	0.00%
P-3B		24"	6 LF	0.00%
P-4		24"	200 LF	0.15%
P-5		18"	93 LF	-0.16%
P-6		18"	22 LF	-0.45%
P-8		18"	131 LF	0.15%
P-9		18"	26 LF	0.38%
P-10		18"	200 LF	0.28%
P-11		18"	105 LF	0.09%
P-12		18"	22 LF	0.45%
PYI-1		12"	24 LF	-0.41%
PYI-2		12"	52 LF	-0.30%
PYI-3		12"	88 LF	-0.30%
PYI-4		12"	170 LF	-0.30%
PYI-5		12"	150 LF	-0.30%
PYI-6		12"	110 LF	-0.30%

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CALL SUNSHINE STATE
ONE CALL OF FLORIDA
1-800-432-4770
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE USER OF THIS INFORMATION. LOCATE AND PROTECT ANY AND ALL UNDERGROUND UTILITIES.

LAURIE S. BURCAW, PE #46064

BEACON
CIVIL ENGINEERING
LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
TAMPA, FL 33626

CALUMET TOWNS

CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

STORM PIPE
PROFILES

SHEET NUMBER:

C-6.1

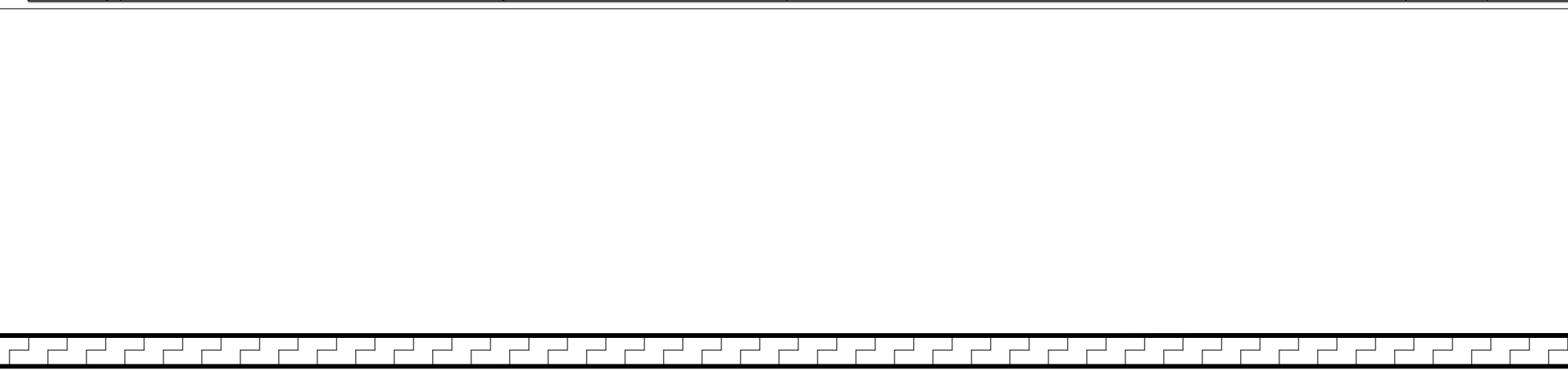
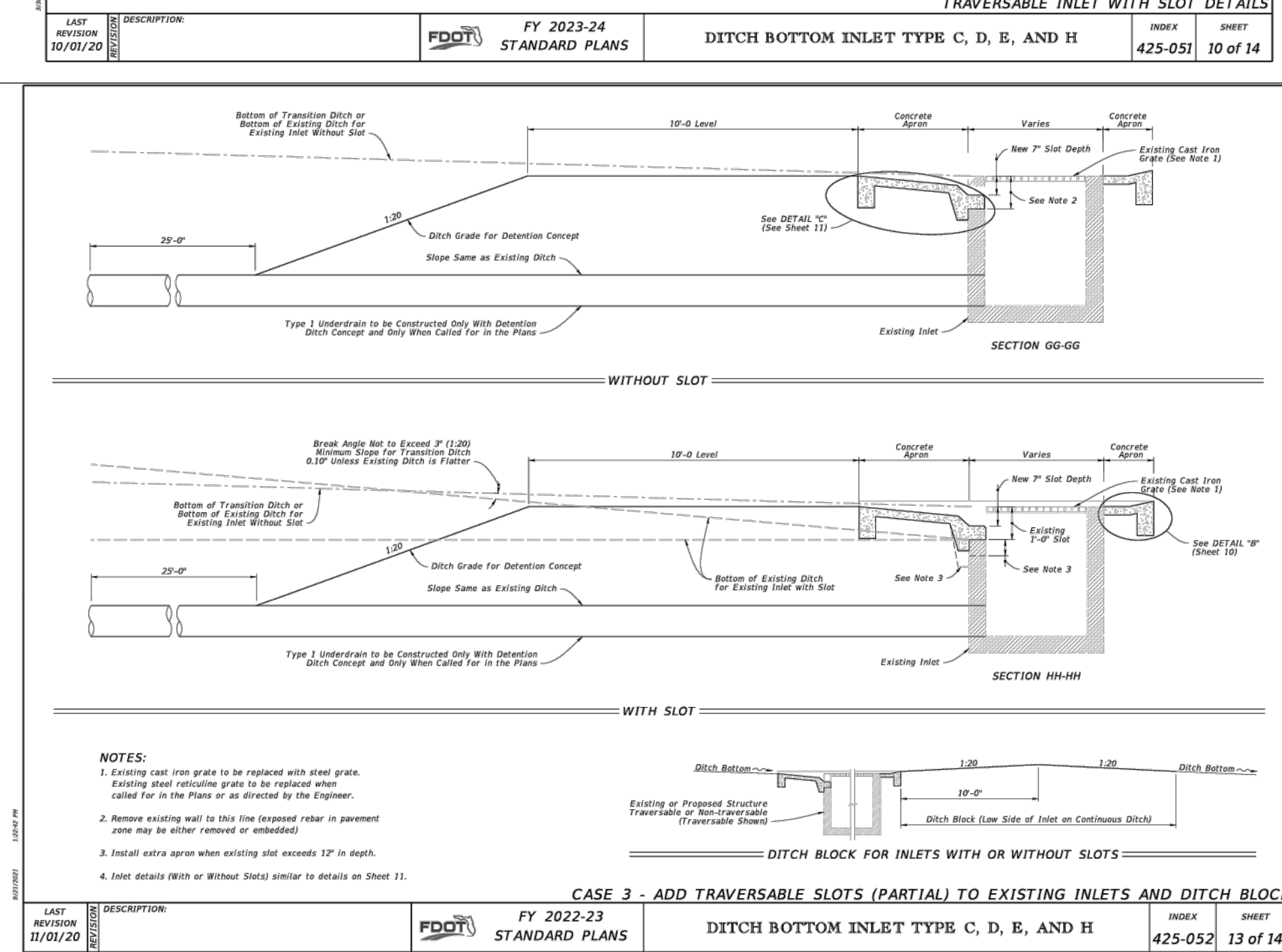
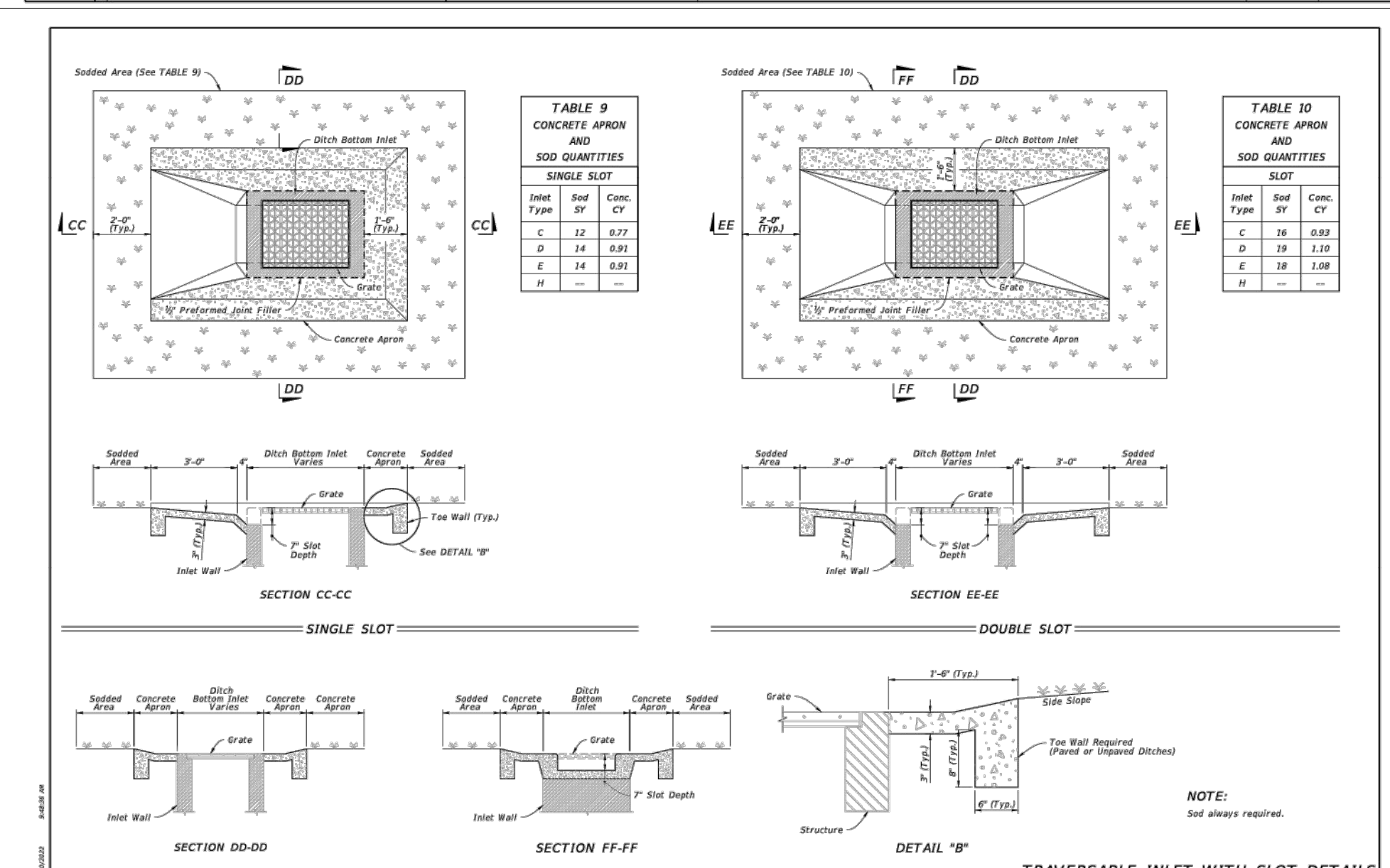
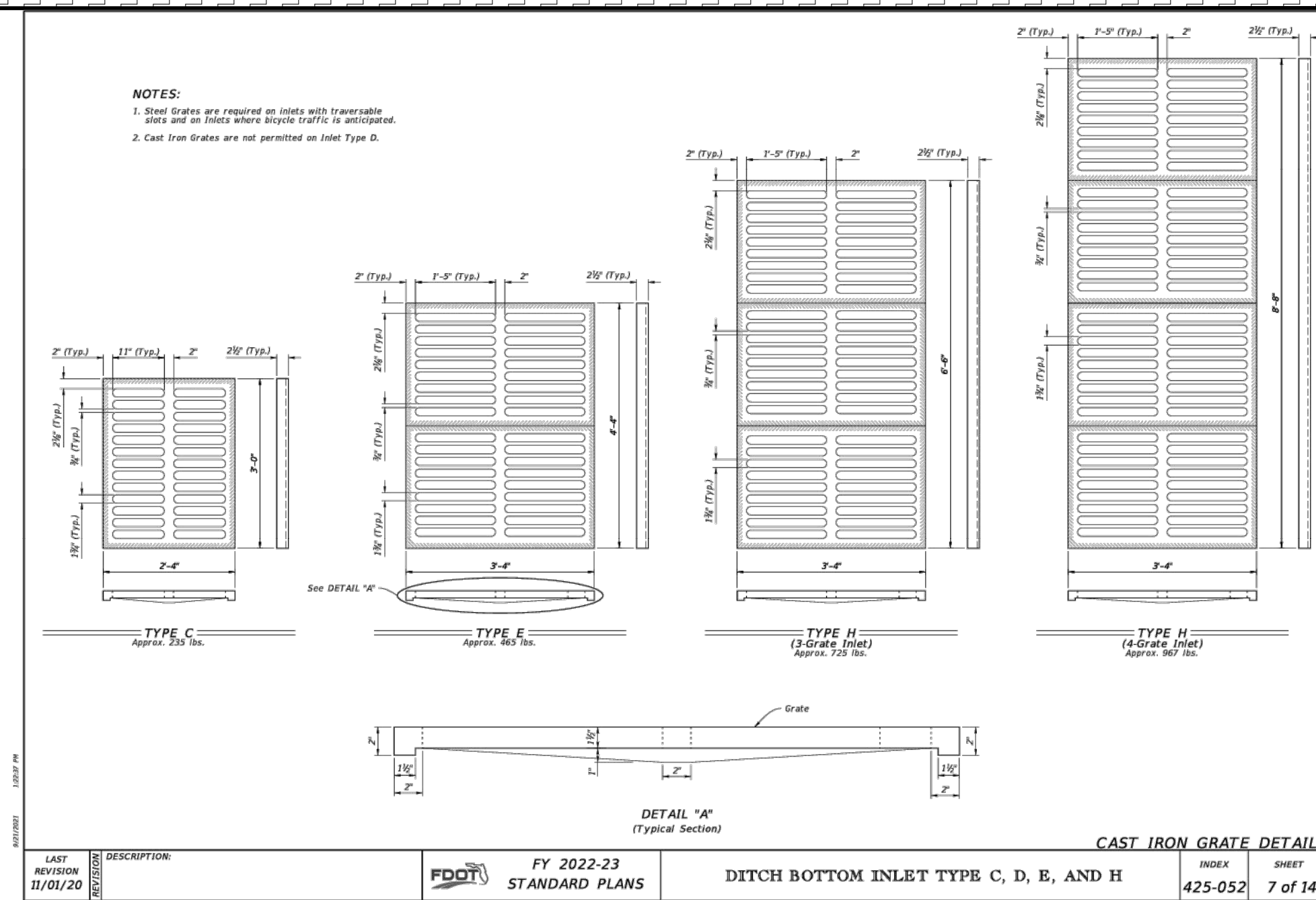
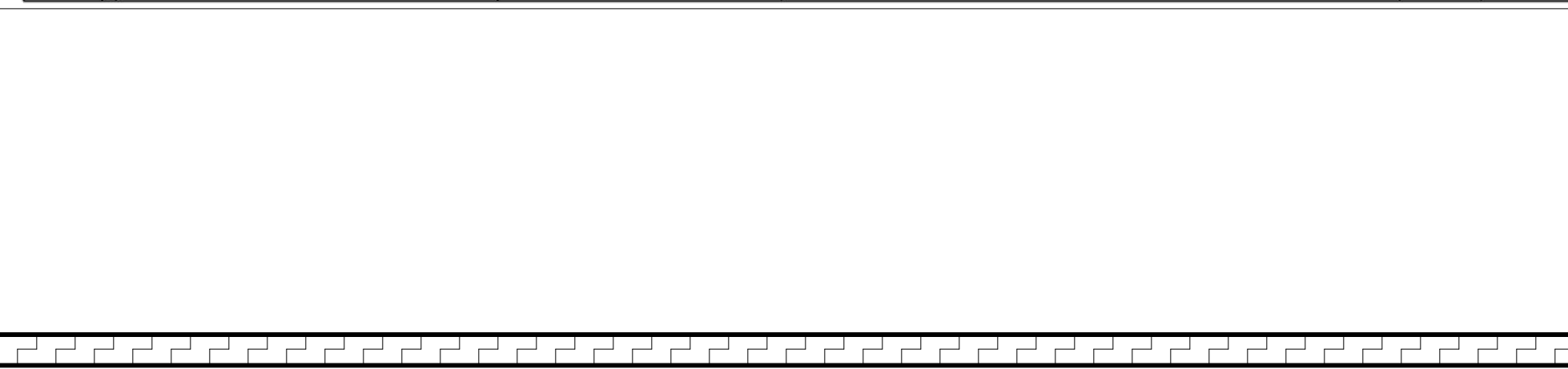
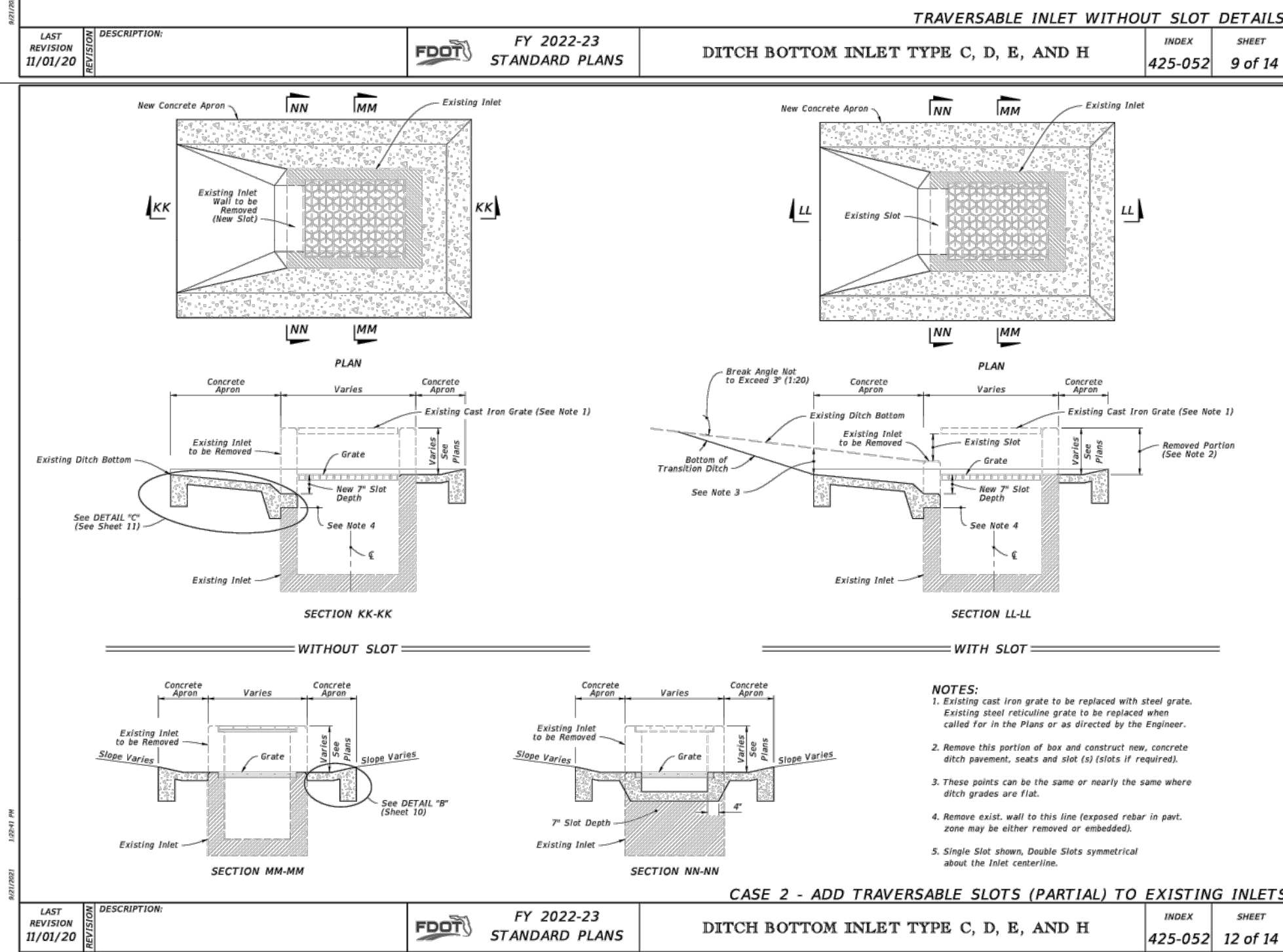
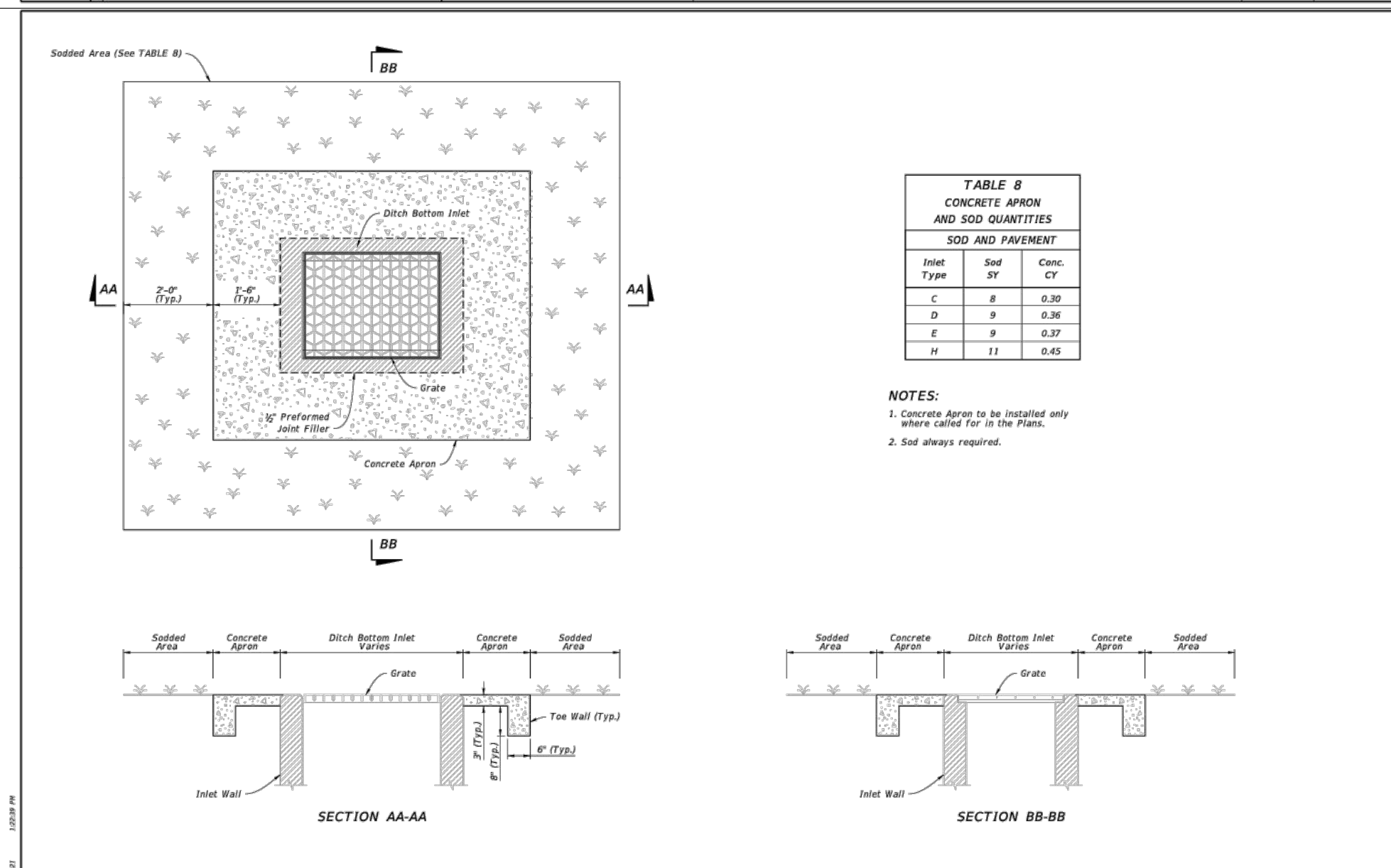
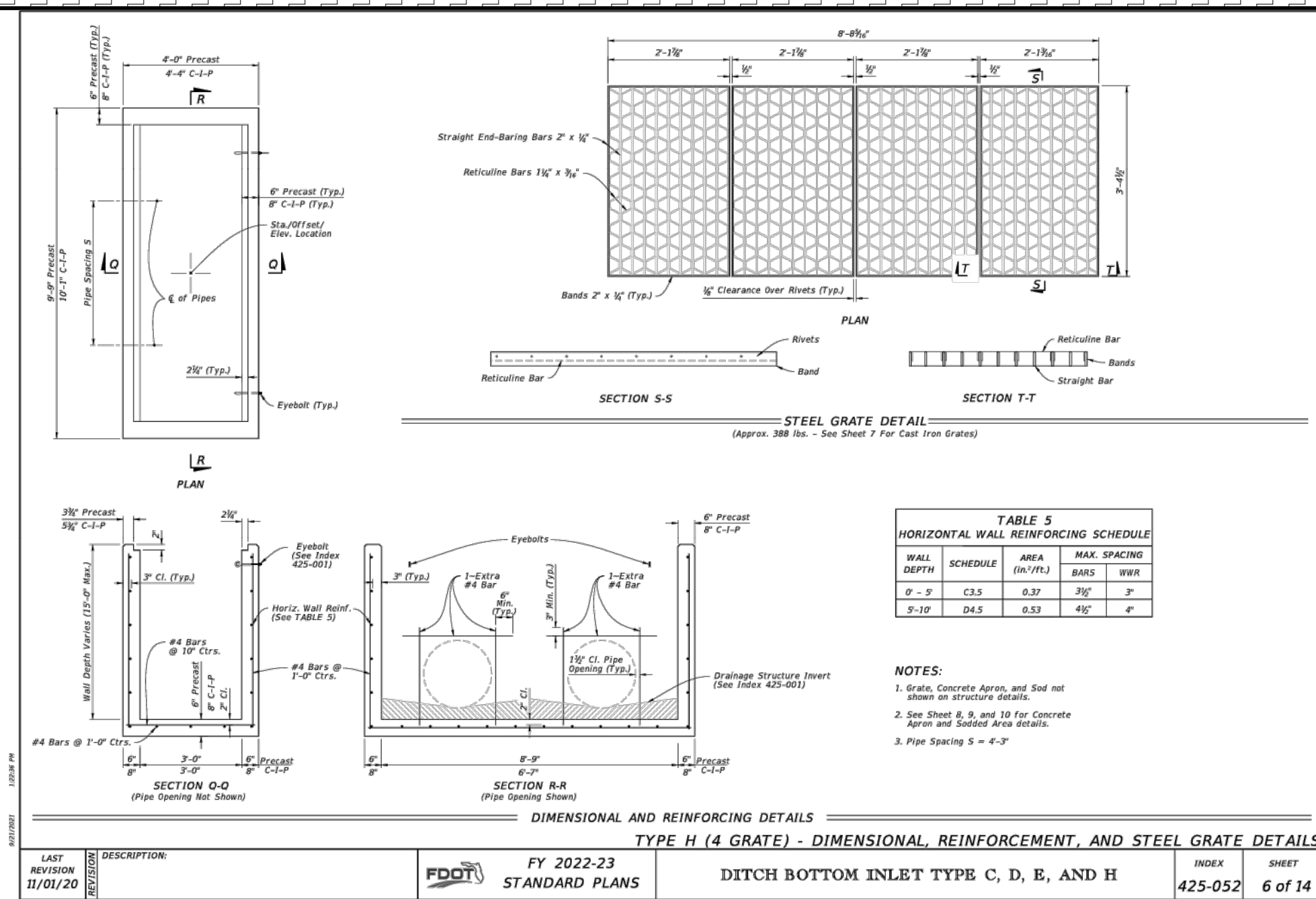
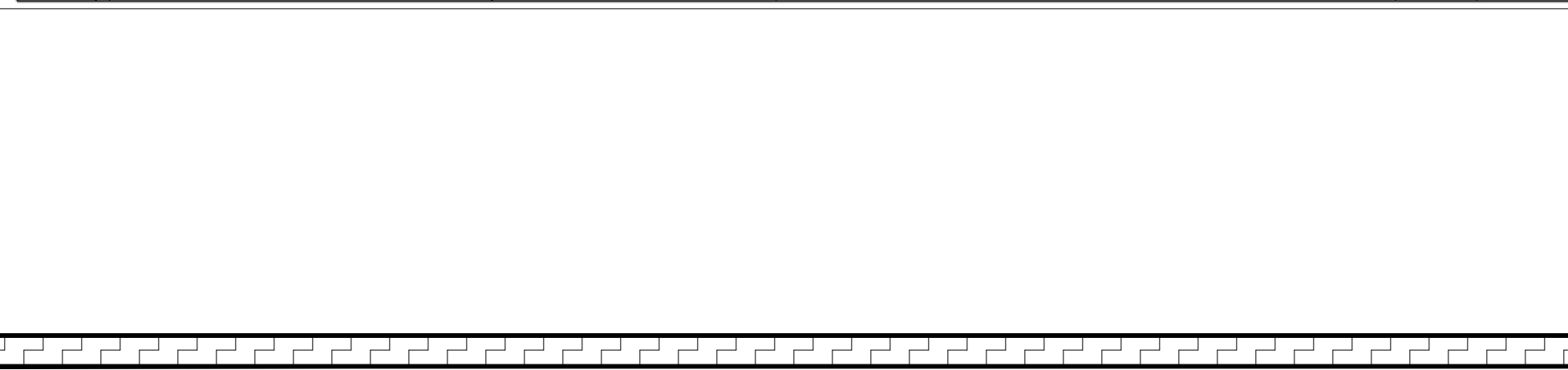
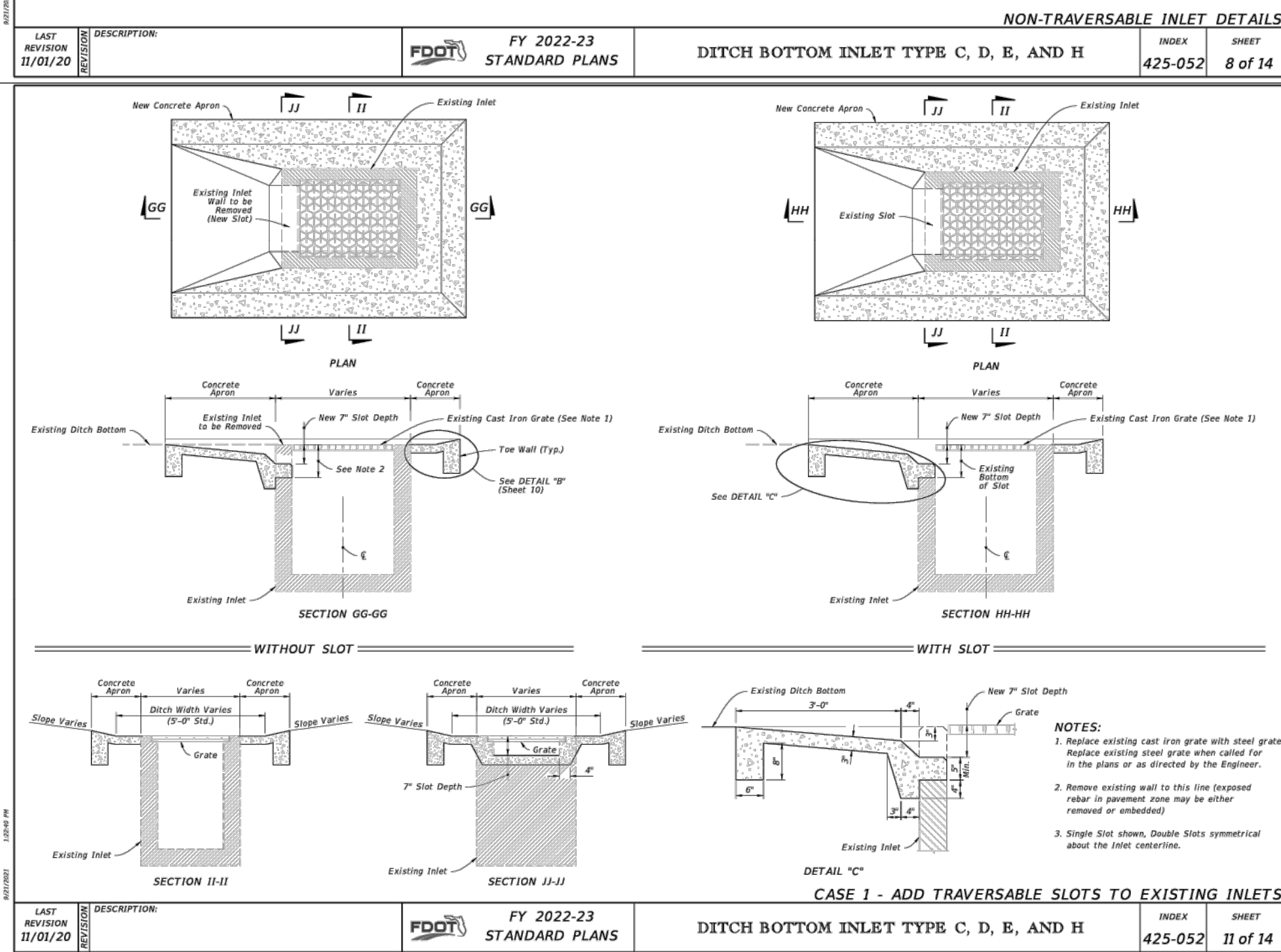
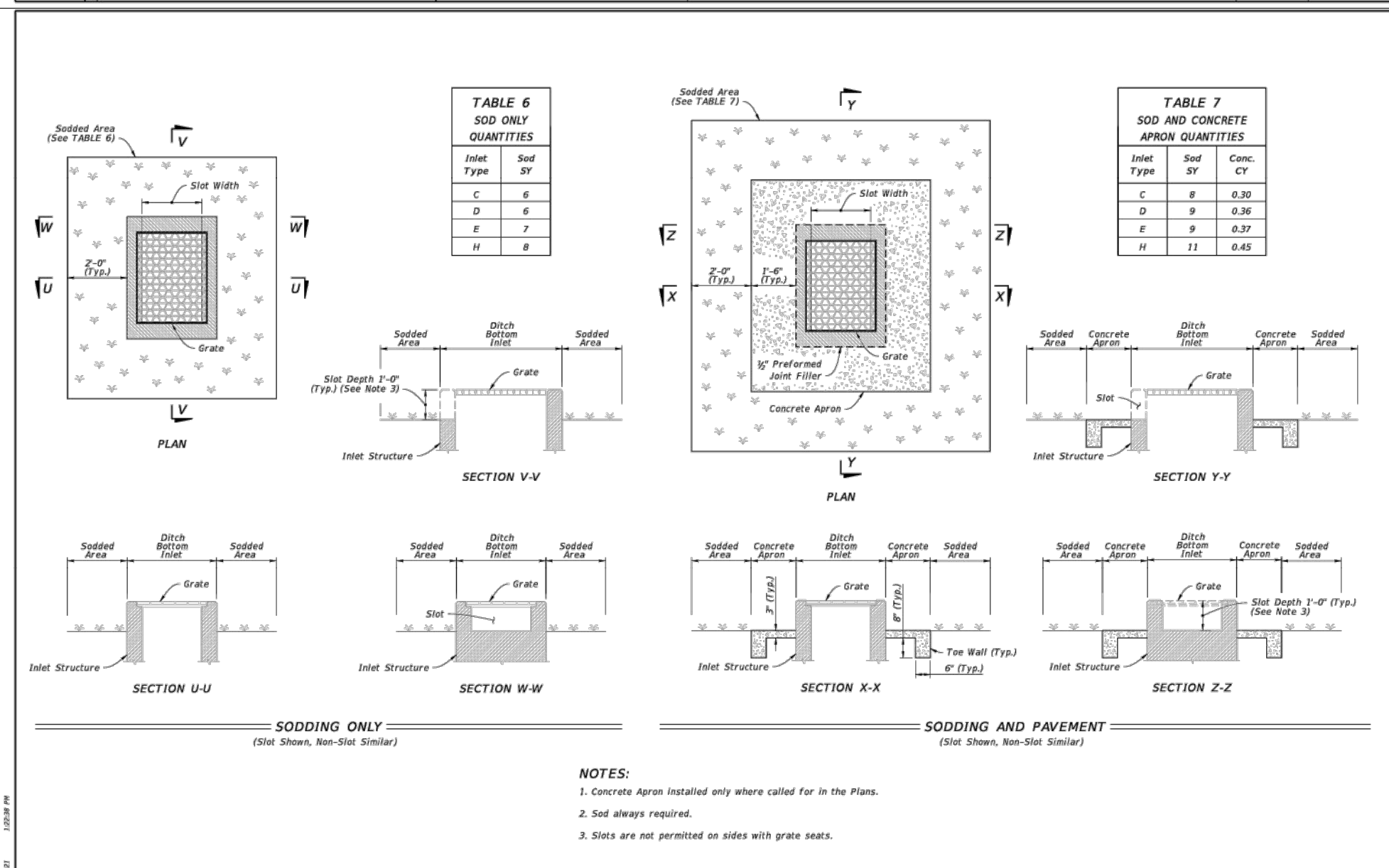
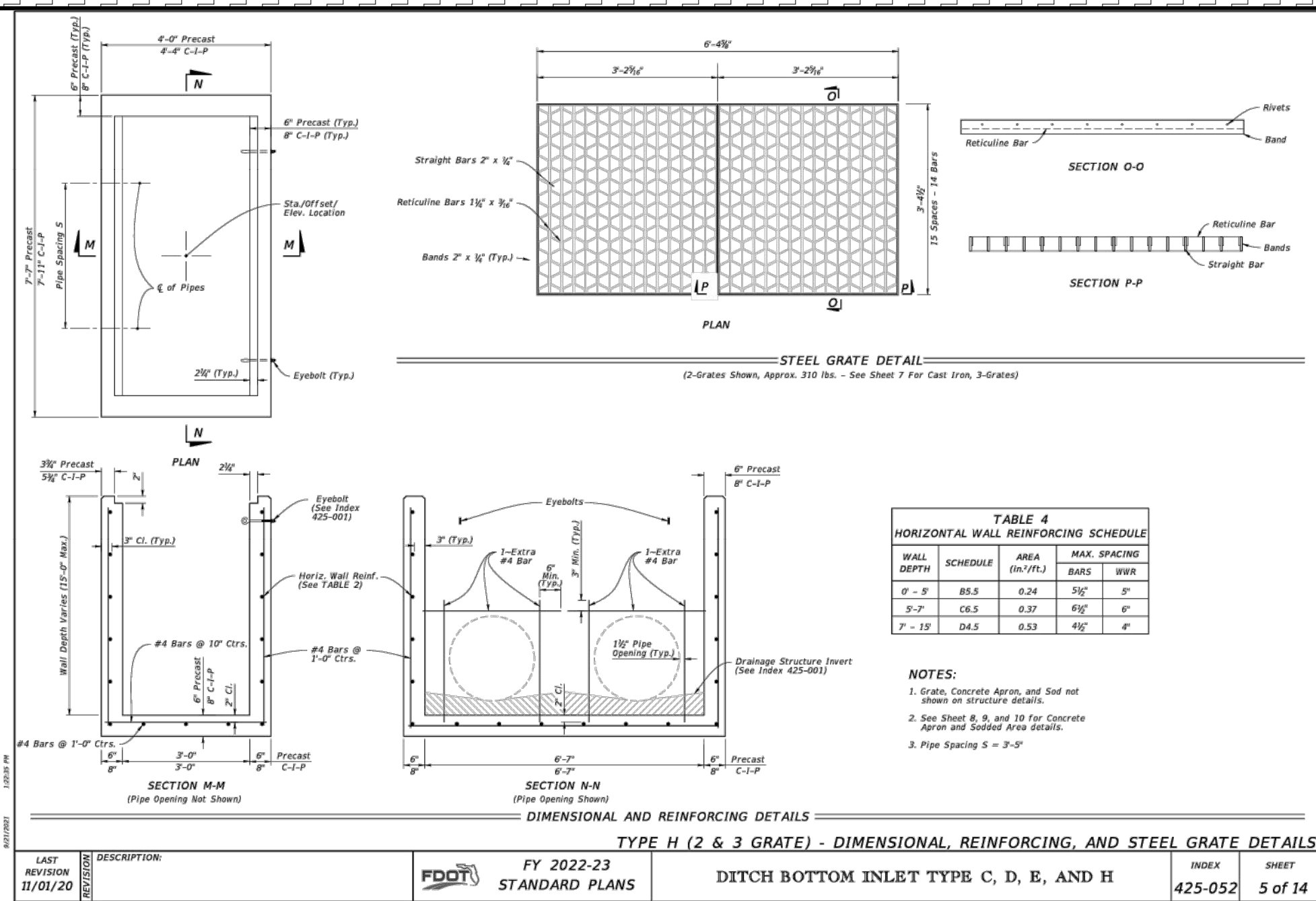
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DESIGNED BY: LB

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CHECKED BY: AH

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ISSUE DATE: 3/31/23

APPROVED BY: LB

DATE

JOB NO.: 22-548

REVISION DESCRIPTION

BEACON CIVIL ENGINEERING

LAND DEVELOPMENT ENGINEERS

8345 GUNN HIGHWAY

TAMPA, FL 33626

LAURIE S. BURCAW, PE #46064

CALUMET TOWNS

CALUMET ROAD

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FLORIDA 33542

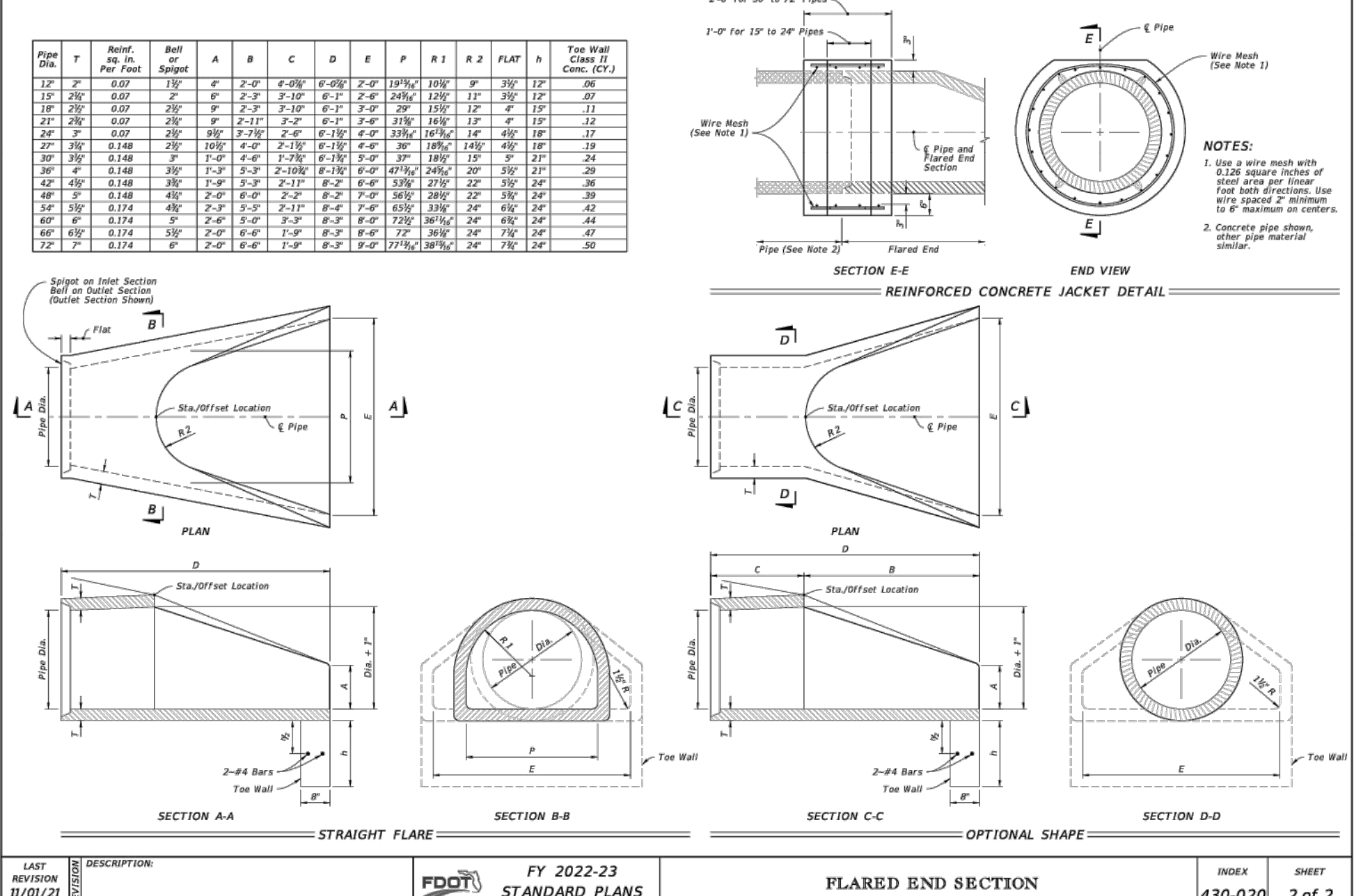
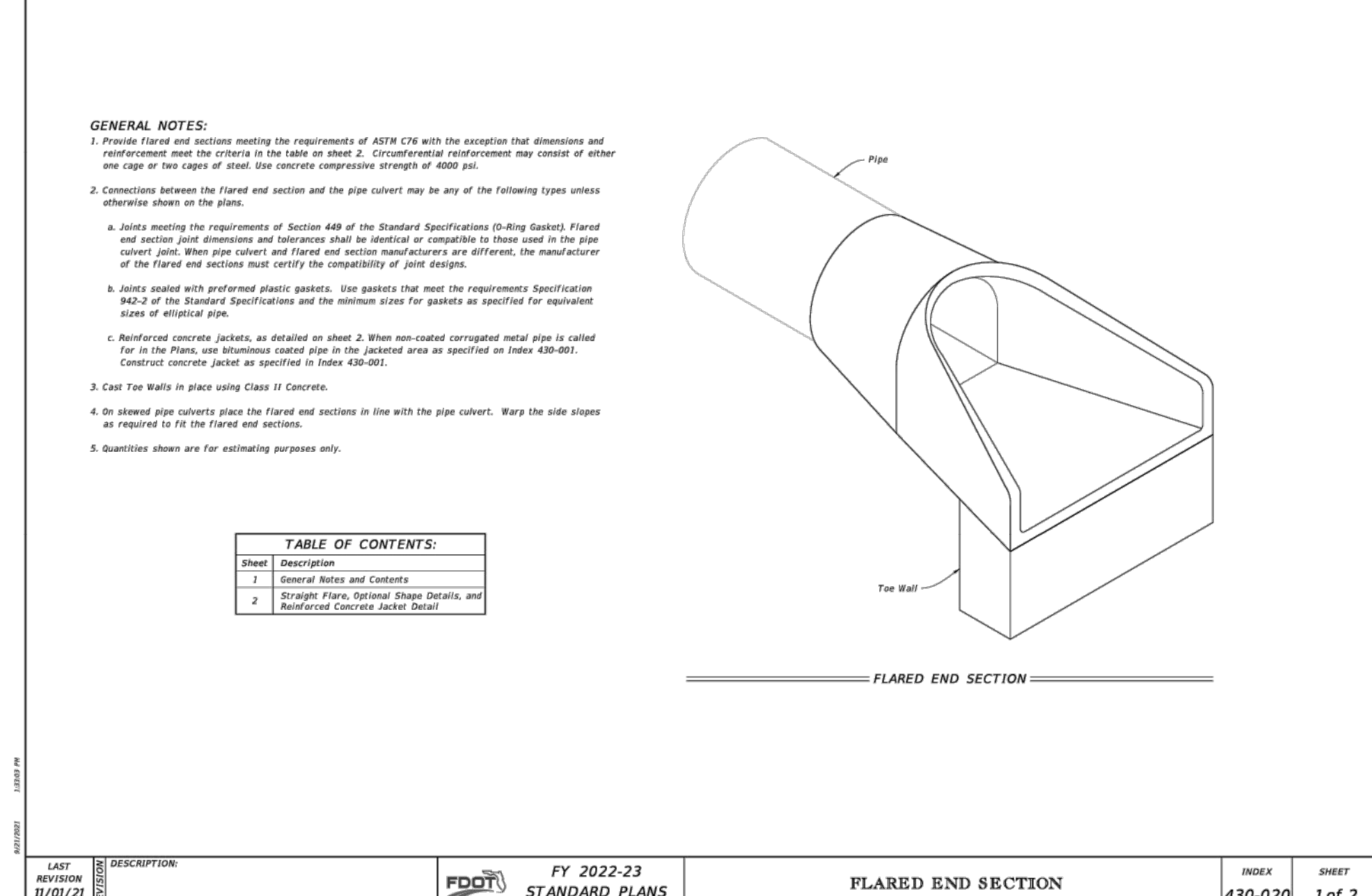
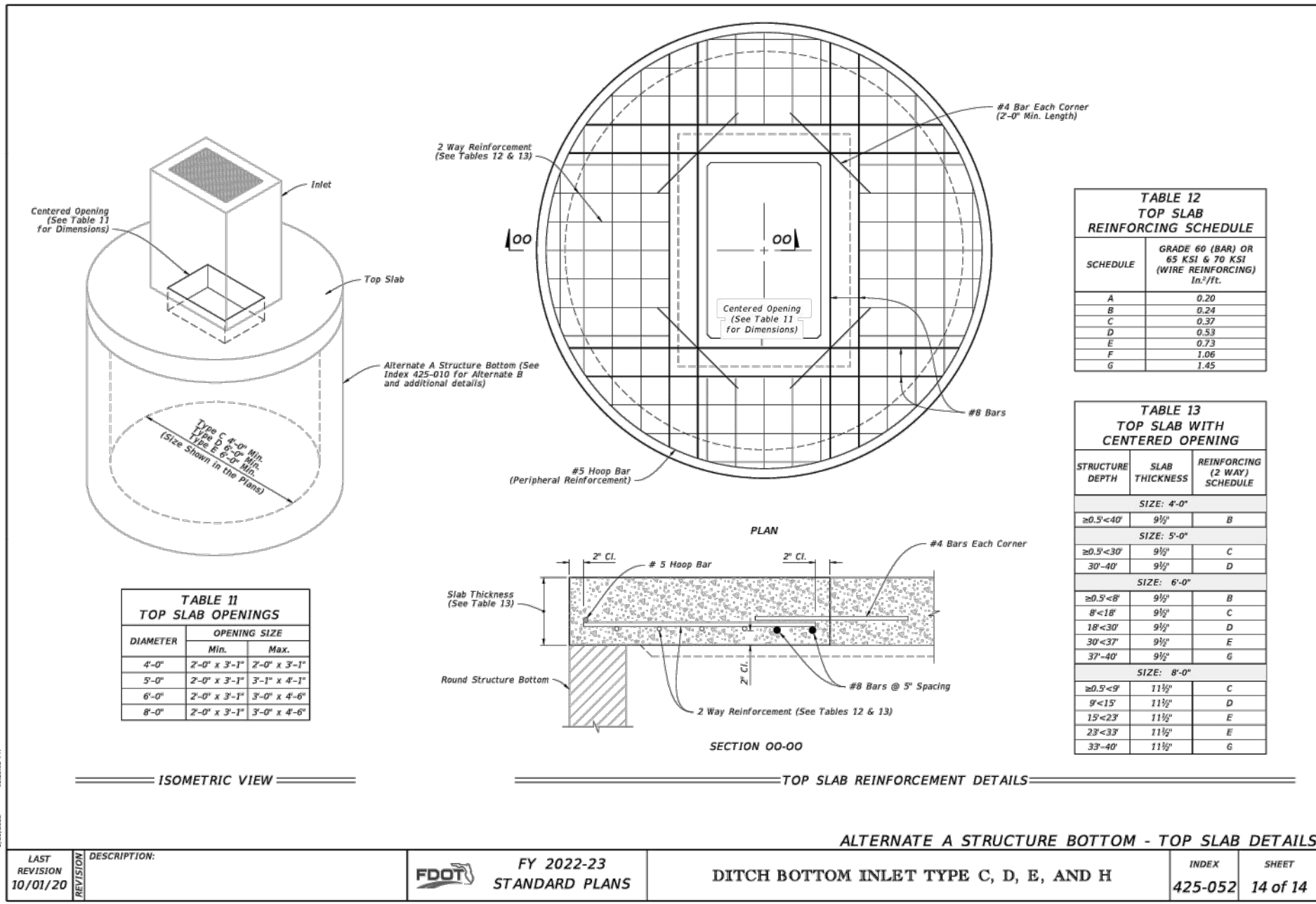
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GRADING DETAILS

SHEET NUMBER:

C-6.5

Page 45 of 51



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DESIGNED BY: LB DRAWN BY: CB ISSUE DATE: 3/31/23
CHECKED BY: AH APPROVED BY: LB JOB NO.: 22-548
NO. BY DATE REVISION DESCRIPTION

BEACON CIVIL ENGINEERING

LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
TAMPA, FL 33626

CALUMET TOWNS

CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NUMBER:
C-6.6



MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT³%, THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

- STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOTTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER Tired LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

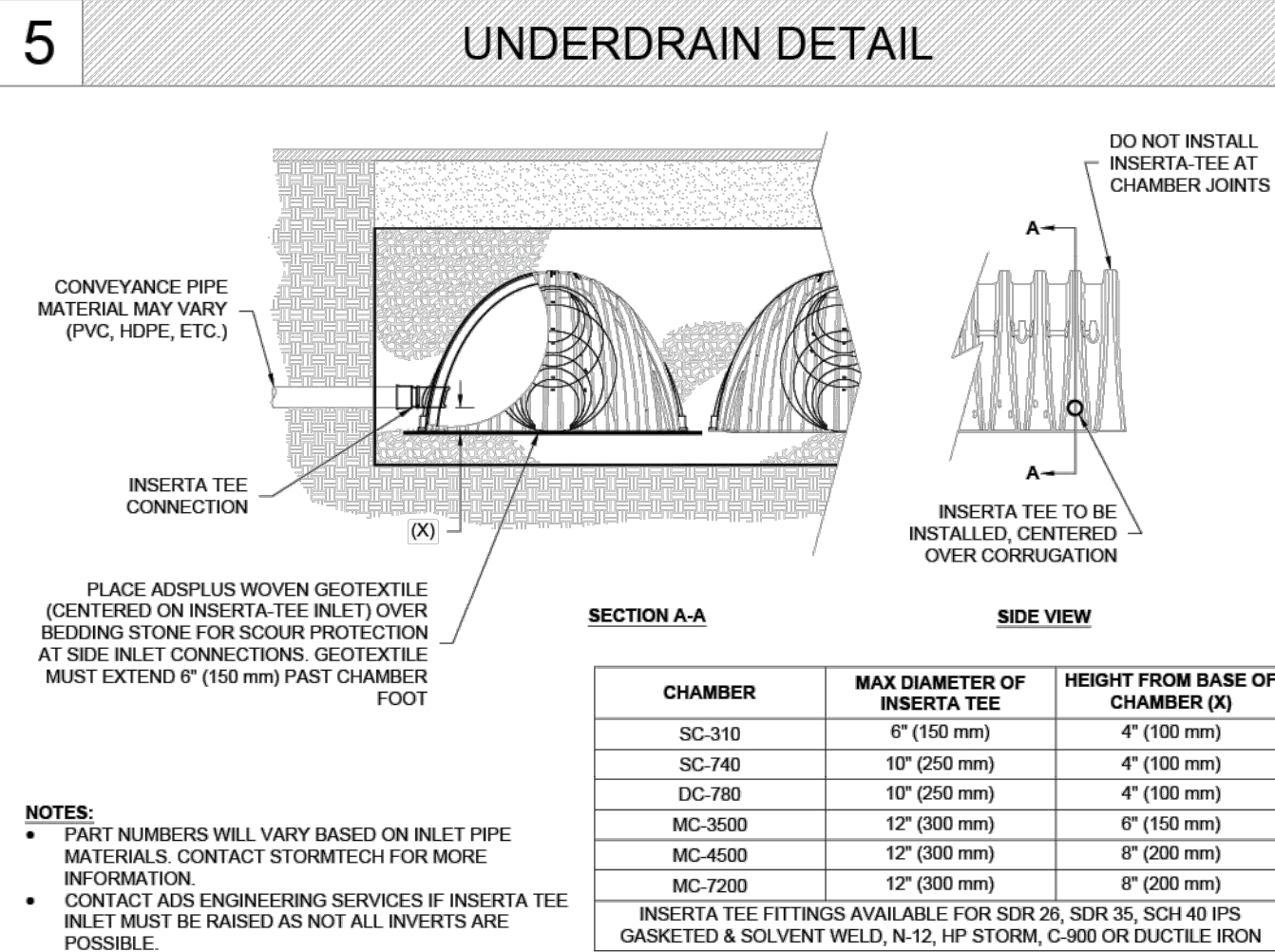
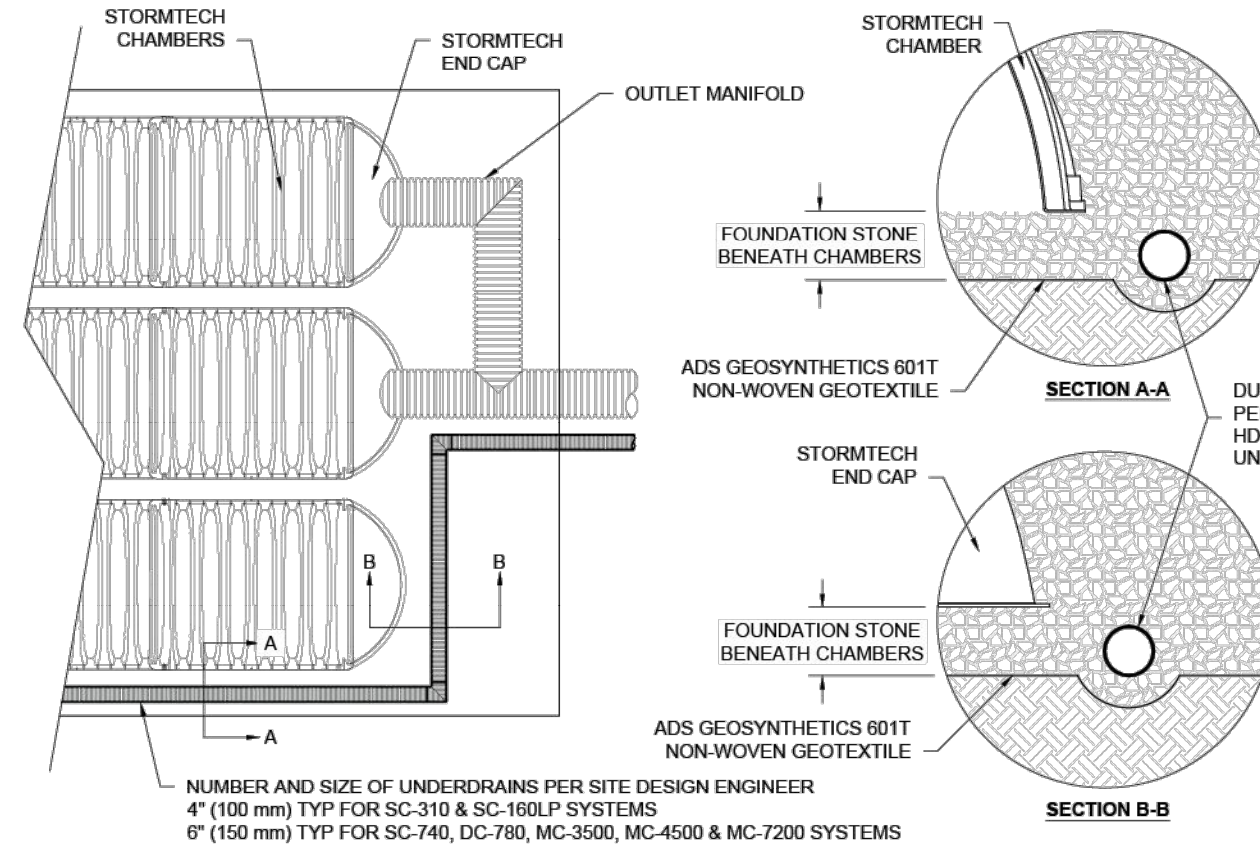
CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A.1. INSPECTION PORTS (IF PRESENT)
- A.2. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
- A.3. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
- A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
- A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
- B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
- B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
- B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS, RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION, ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACUUMING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



6 INSERTA-TEE SIDE INLET DETAIL

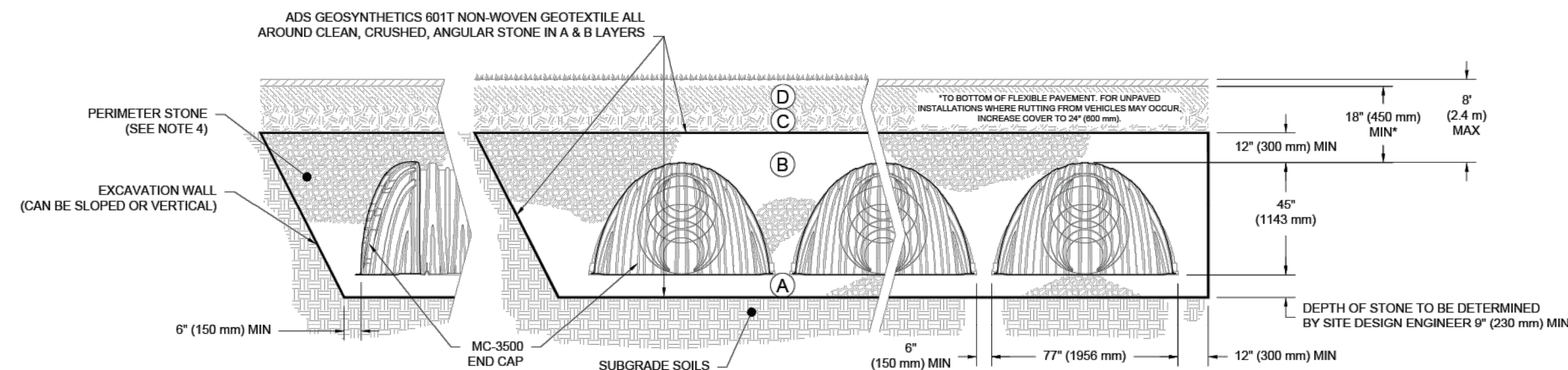
2 MC-3500 TECHNICAL SPECIFICATIONS

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (OR LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 A-1, A-2, A-3 OR AASHTO M43 ¹	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FILL (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (230 mm) MAX LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE IRRIGATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

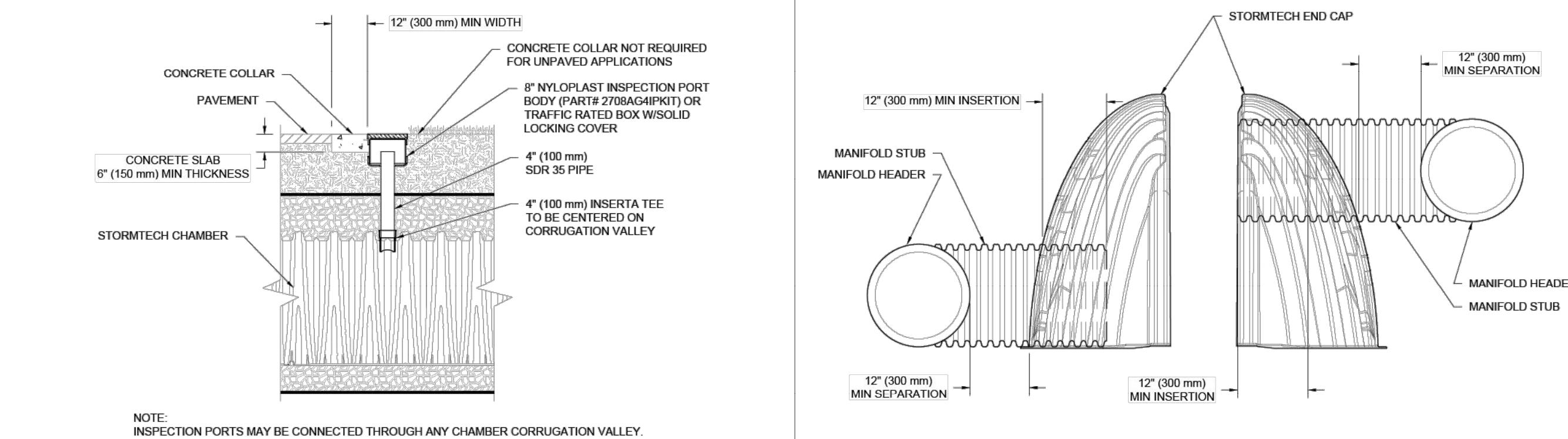


NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT³%, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

1 MC-3500 CROSS SECTION DETAIL

3 MC-3500 ISOLATOR ROW PLUS DETAIL



4 4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)

7 MC-SERIES END CAP INSERTION DETAIL

MC-3500 STANDARD DETAILS

StormTech®
Chamber System
888-892-2694 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD
HILLIARD, OH 43026



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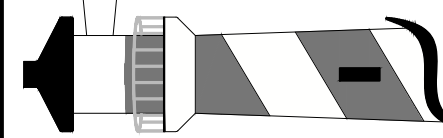


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LAURIE S. BURCAW, PE #46064

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CIVIL ENGINEERING

LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
TAMPA, FL 33626



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TOWNS

CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

STORMTECH

SHEET NUMBER:

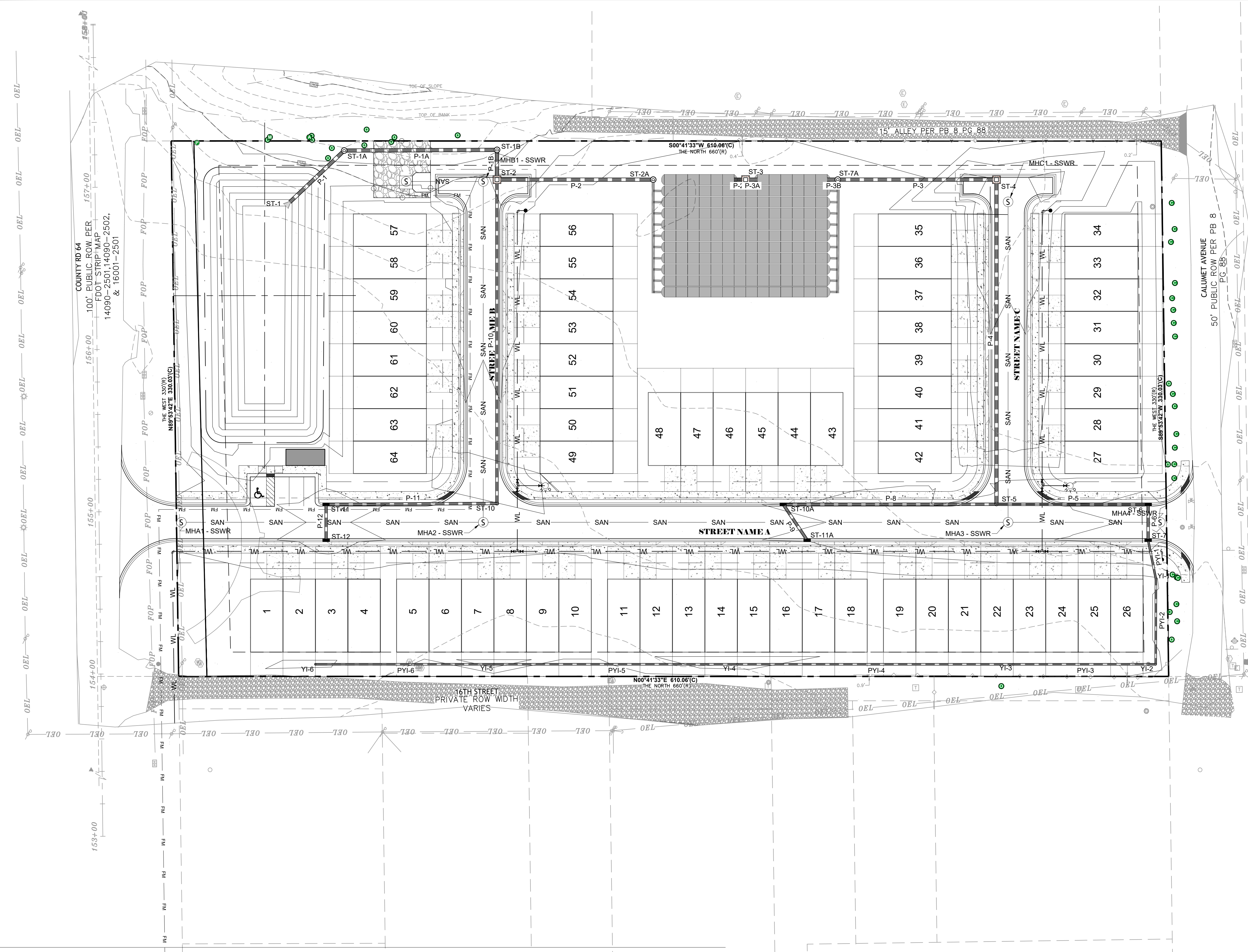
C-6.7

STRUCTURE TABLE		
NAME	STRUCTURE TYPE	STRUCTURE DATA
MHA1 - SSWR	SANITARY MANHOLE	SSP-1 IE OUT: 77.94 RIM: 87.92
MHA2 - SSWR	SANITARY MANHOLE	SSP-1 IE IN: 77.30 SSP-2 IE OUT: 77.30 SSP-4 IE OUT: 77.15 RIM: 87.64
MHA3 - SSWR	SANITARY MANHOLE	SSP-2 IE IN: 78.49 SSP-3 IE OUT: 78.49 SSP-6 IE OUT: 78.49 RIM: 86.31
MHA4 - SSWR	SANITARY MANHOLE	SSP-3 IE IN: 78.86 RIM: 86.38
MHB1 - SSWR	SANITARY MANHOLE	SSP-4 IE IN: 76.36 SSP-5 IE OUT: 76.26 RIM: 79.91
MHB2 - SSWR	SANITARY MANHOLE	SSP-5 IE IN: 76.02 RIM: 79.57
MHB3 - SSWR	SANITARY MANHOLE	SSP-6 IE IN: 76.02 RIM: 85.12

PIPE TABLE				
PIPE NAME	MATL	SIZE	LENGTH	SLOPE
SSP-1	PVC	8"	186 LF	0.40%
SSP-2	PVC	8"	323 LF	-0.40%
SSP-3	PVC	8"	94 LF	-0.40%
SSP-4	PVC	8"	210 LF	0.38%
SSP-5	PVC	8"	48 LF	0.50%
SSP-6	PVC	8"	198 LF	-0.40%

SANITARY CONNECTION TO EXISTING MANHOLE NOTES

- TAP TO DIRECTLY INTO MANHOLE SHALL BE MADE USING 10" SDR 26 PIPE
- THE CONNECTION TO THE MANHOLE SHALL INCLUDE A NEOPRENE GASKET AND STAINLESS STREET CLAMP MANHOLE WATER STOP SELECTED FROM THE APPROVED PRODUCTS LIST.
- CONTRACTOR IS TO CORE DRILL OR BUST OUT MANHOLE WALL DIRECTLY ABOVE MANHOLE TABLE.
- PROPOSED PIPE SHALL EXTEND APPROXIMATELY 1" BEYOND NEWLY CORED HOLE
- CORE HOLE SHALL BE FILLED WITH NON-SHRINK GROUT SUCH AS "PRECO PLUG" OR APPROVED EQUIVALENT. WALLS SHALL BE TOWELED SMOOTH
- A CURVED TROUGH SHALL BE FORMED IN/ON MANHOLE TABLE TO DIRECT FLOW INTO THE MAIN INVERT.
- A CITY TAP SHALL BE HELD BEFORE BACKFILLING COMMENCES. WORK MUST BE VISIBLE AND DEWATERED DURING INSPECTION
- BACKFILL SHALL BE CAREFULLY PLACED AND TAMPED AROUND THE CONNECTION SO AS TO PREVENT ANY SETTLEMENT OR MOVEMENT AND SHALL COMMENCE ONLY AFTER NON-SHRINK GROUT HAS SUFFICIENTLY HARDENED



- UTILITY NOTES**
- REFER TO MEP PLANS FOR ALL UTILITY LEADS INTO BUILDING.
 - PRIOR TO STARTING CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND THEIR LOCATIONS AND ELEVATIONS. IF ANY DISCREPANCIES OCCUR, THE CONTRACTOR SHALL ALERT ENGINEER IMMEDIATELY.
 - ALL PUBLIC UTILITIES INSPECTIONS SHALL BE SCHEDULED BY THE CONTRACTOR AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY.
 - ALL UTILITY CONDUIT MATERIAL FOR TELEPHONE, CABLE, AND ELECTRIC SHALL BE INSTALLED PER UTILITY PROVIDER SPECIFICATIONS BY THE CONTRACTOR.
 - ALL CONSTRUCTION MATERIALS MUST BE CHOSEN FROM THE APPROVED PRODUCTS LIST.
 - CONTRACTOR IS TO INSTALL UTILITIES PER THE CITY OF ZEPHYRHILLS TECHNICAL STANDARDS FOR WASTEWATER AND RECLAIMED WATER AND TECHNICAL STANDARDS FOR WATER DISTRIBUTION SYSTEMS CONSTRUCTION SPECIFIC MANUAL.
 - VERTICAL UTILITY CLEARANCES ARE TO BE MEET REQUIREMENTS SHOWN ON DETAIL G-4
 - ALL NON-METALLIC PIPE WILL BE INSTALLED WITH #8 TRACER WIRE AND WARNING TAPE
 - TAPPING SLEEVE AND SADDLE TO BE INSTALLED CONSISTENT WITH DETAIL W-2
 - OVER STORY TREES SHALL NOT BE LOCATED WITHIN 12 FT OF ANY PUBLIC UNDERGROUND OR OVERHEAD UTILITY LINE. CONTRACTOR MUST COORDINATE THE SHUTDOWN OF THE EXISTING POTABLE WATER, WITH THE CITY OF ZEPHYRHILLS
 - CONTRACTOR SHALL VERIFY LOOP DETECTORS TO AVOID UTILITY CONFLICTS PRIOR TO CONSTRUCTION, IF APPLICABLE.
 - CONTRACTOR SHALL PROTECT ALL UTILITIES OUTSIDE LIMITS OF CONSTRUCTION UNLESS OTHERWISE NOTED IN THE CONSTRUCTIONS PLANS OR SPECIFICATIONS.
 - ALL DISTURBED AREAS WITHIN THE SIDEWALK/ CURB AND GUTTER/ ROAD PAVEMENT SHALL BE RESTORED TO ITS ORIGINAL OR BETTER CONDITIONS.
 - THE LOCATION OF ALL NEWLY INSTALLED FIRE HYDRANTS SHALL BE IDENTIFIED WITH A BLUE REFLECTIVE PAVEMENT MARKER INSTALLED ON THE ROADWAY, PERPENDICULAR TO THE FIRE HYDRANT. THE REFLECTIVE MARKER WILL BE LOCATED IN THE CENTER OF THE LANE CLOSEST TO THE HYDRANT, IF APPLICABLE.
 - IF APPLICABLE, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE FLOW TESTING AND COLOR CODING OF ALL NEWLY INSTALLED FIRE HYDRANTS IN THE GOVERNING JURISDICTION(S) RIGHT OF WAY AND UTILITY EASEMENTS THAT ARE TO BE DEDICATED TO GOVERNING JURISDICTION(S) PRIOR TO THE FINAL INSPECTION OF THE PROJECT. THE CONTRACTOR SHALL REFER TO NFPA STANDARD 291 FOR FLOW TESTING AND COLOR CODING METHODS AND PROCEDURES.
 - ALL PROPOSED WATER SUPPLY AND FIRE HYDRANTS SHALL COMPLY NFPA-1, CHAPTER 18.3
 - CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD (E.O.R.) 72 HOURS IN ADVANCE OF ALL INSPECTIONS THAT REQUIRE THE E.O.R. OR E.O.R. REPRESENTATIVE'S PRESENCE.
 - PIPES ARE TO BE INSTALLED CONSISTENT WITH DETAILS G2 AND G3
 - VALVES ARE TO BE INCASED CONSISTENT WITH DETAIL G5
 - MANHOLES ARE TO BE INSTALLED CONSISTENT WITH DETAILS S1, S2 AND S3
 - SANITARY LATERALS ARE TO BE INSTALLED CONSISTENT WITH DETAILS S4, S5 AND S6
 - UTILITY LENGTHS ARE MEASURED FROM FITTING TO FITTING
 - ALL MATERIALS AND LABOR SHALL MEET THE SPECIFICATION REQUIRED BY THE CITY. ALL CONSTRUCTION PERFORMED UNDER THE INSPECTION OF THE COUNTY AND IN STRICT COMPLIANCE WITH THE STANDARDS OF THE COUNTY DESIGN STANDARDS
 - ALL NEWLY INSTALLED WATER DISTRIBUTION MAINS AND SERVICE LATERALS SHALL BE COLOR CODED BLUE
 - ALL NEWLY INSTALLED FORCE MAINS AND GRAVITY LINES SHALL BE COLOR CODED GREEN
 - FIRE HYDRANTS SHALL BE FLOW-TESTED AND COLOR CODED BASED ON FLOW RESULTS
 - PIPES TRENCHING TO BE CONSISTENT WITH DETAIL G-3
 - ALL FITTINGS ARE TO BE INSTALLED CONSISTENT WITH THE RETRAINED JOINT SCHEDULE SHOWN IN DETAIL G-6
 - PIPES TO BE CONNECTED CONSISTENT WITH DETAIL G-11.
 - GATE VALVES TO BE INCASED AND COVERED CONSISTENT WITH DETAILS W3 AND W5.
 - NEAR SIDE WATER SERVICES ARE TO BE INSTALLED PER DETAILS W-9A, W-9D AND W-9E.
 - FAR SIDE WATER SERVICES ARE TO BE INSTALLED PER DETAILS W-9, W-9A, W-9F, W-9G AND W-9H.
 - DOUBLE WATER SERVICES ARE TO BE INSTALLED PER DETAIL W-9C.
 - SINGLE WATER SERVICES ARE TO BE INSTALLED PER DETAIL W-9B.
 - WATER METERS ARE TO BE INCASED PER DETAIL W-17.
 - FIRE HYDRANTS TO BE INSTALLED PER DETAILS S-2, S-2A AND W-11.
 - WATER METERS TO BE DEMARCATED CONSISTENT WITH DETAIL W-20.
 - MANHOLES TO BE INSTALLED PER DETAIL S-1.
 - MANHOLE COVERS TO BE INSTALLED PER DETAIL S-1A.
 - SEE DETAIL S-1B FOR CHANNELING INTERNAL TO MANHOLE
 - PIPE CONNECTIONS TO BE INSTALLED PER DETAILS S-2, S-2A AND S-3.
 - SEE DETAILS S-5, S-6 AND S-7 FOR SANITARY SERVICE CONNECTION TO GRAVITY SEWER.
 - GRAVITY CLEANOUTS TO BE IN INSTALLED PER DETAILS S-8 AND S-9.
 - SANITARY SERVICE LINES TO BE DEMARCATED PER DETAIL S-20.
 - ALL GRAVITY SEWER LINES ARE TO BE DR-18 UNLESS OTHERWISE NOTED

- LEGEND**
- WL - WL - WL - PROPOSED WATER PIPE
 - FM - FM - FM - PROPOSED SANITARY SEWER PIPE
 - FM - FM - FM - PROPOSED SANITARY FORCE MAIN
 - RCWM - RCWM - RCWM - PROPOSED RECLAIMED WATER
 - PROPOSED OPEN TRENCH
 - BFP - BFP - PROPOSED WATER METER AND BACKFLOW PREVENTER
 - PROPOSED WATER VALVE
 - PROPOSED DOUBLE WATER SERVICE
 - PROPOSED SANITARY SEWER SERVICE
 - PROPOSED SANITARY SEWER CLEANOUT
 - PROPOSED SANITARY SEWER MANHOLE
 - UTILITY CROSSING INDICATOR. SEE UTILITY CROSSING TABLE, THIS SHEET, FOR DETAILS
 - PROPOSED FIRE HYDRANT ASSEMBLY
- NOTE: LIGHTER TONE INDICATES EXISTING CONDITION

ISSUED FOR PERMITTING

3 WORKING DAYS BEFORE YOU DIG

BEACON CIVIL ENGINEERING

CALL SUNSHINE STATE ONE CALL OF FLORIDA 1-800-432-4770

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO CORRECTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

DESIGNED BY: LB

DRAWN BY: CB

CHECKED BY: AH

NO. BY DATE

ISSUE DATE: 3/31/23

JOB NO.: 22-548

REVISION DESCRIPTION

LAURIE S. BURCAW, PE #46064

LAND DEVELOPMENT ENGINEERS 8345 GUNN HIGHWAY TAMPA, FL 33626

SHEET NAME:

MASTER UTILITY PLAN

SHEET NUMBER:

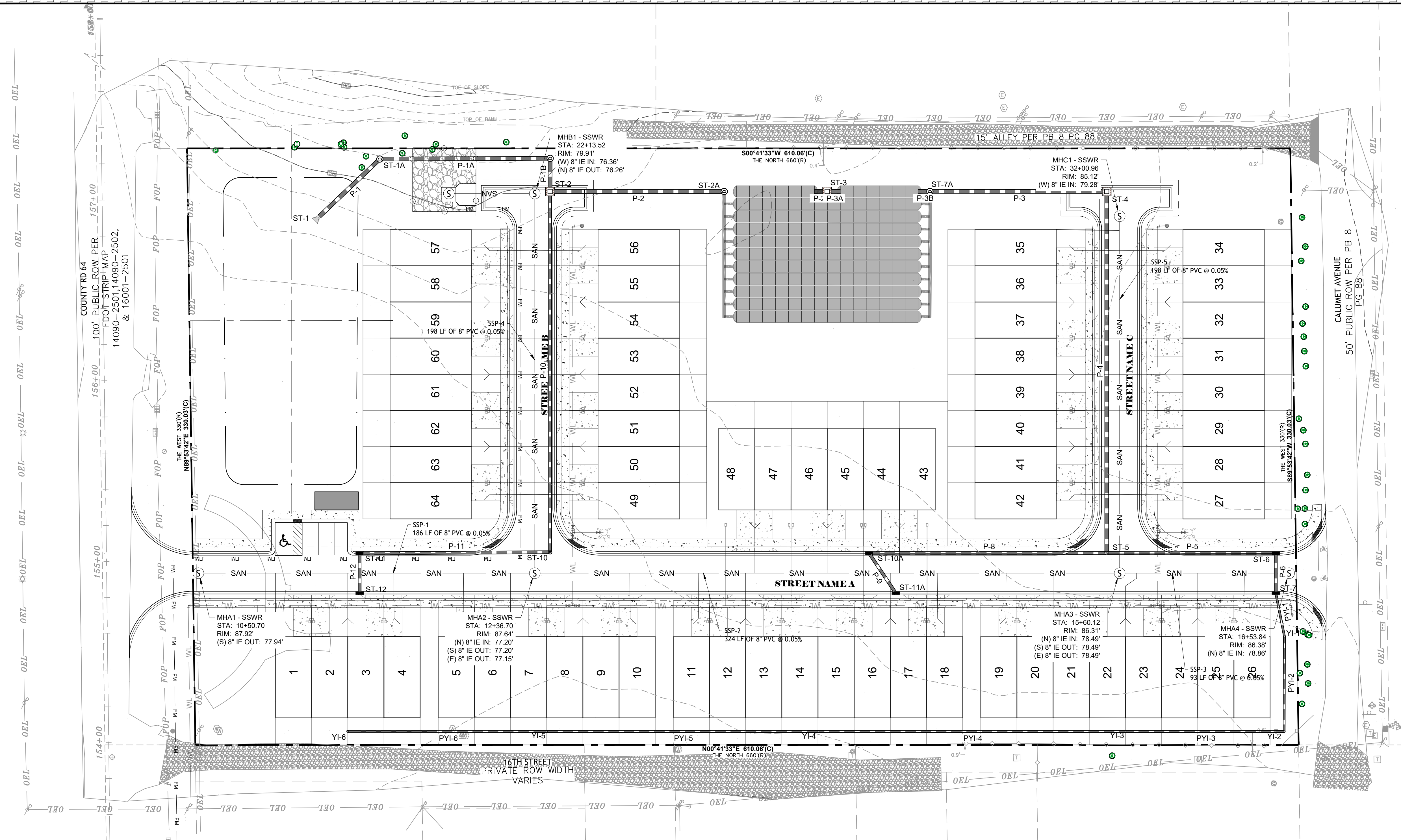
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STRUCTURE TABLE		
NAME	STRUCTURE TYPE	STRUCTURE DATA
MHA1 - SSWR	SANITARY MANHOLE	RIM: 87.92' SSP-1 IE OUT: 77.94'
MHA2 - SSWR	SANITARY MANHOLE	RIM: 87.64' SSP-1 IE IN: 77.20' SSP-3 IE OUT: 77.30' SSP-4 IE OUT: 77.15'
MHA3 - SSWR	SANITARY MANHOLE	RIM: 86.31' SSP-2 IE IN: 78.49' SSP-3 IE OUT: 78.49' SSP-4 IE OUT: 78.49'
MHA4 - SSWR	SANITARY MANHOLE	RIM: 86.38' SSP-3 IE IN: 78.86'
MHB1 - SSWR	SANITARY MANHOLE	RIM: 79.91' SSP-4 IE IN: 76.36' SSP-5 IE OUT: 76.36'
MHB2 - SSWR	SANITARY MANHOLE	RIM: 79.57' SSP-5 IE IN: 76.02'
MHC1 - SSWR	SANITARY MANHOLE	RIM: 85.12' SSP-6 IE IN: 79.28'

PIPE TABLE				
PIPE NAME	MATL	SIZE	LENGTH	SLOPE
SSP-1	PVC	8"	186 LF	-0.40%
SSP-2	PVC	8"	323 LF	-0.40%
SSP-3	PVC	8"	94 LF	-0.40%
SSP-4	PVC	8"	210 LF	0.38%
SSP-5	PVC	8"	48 LF	0.50%
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CIVIL ENGINEERING

60 30 15 0 30
SCALE : 1" = 30'

LEGEND

WL

WL

WL

PROPOSED WATER PIPE

FM

FM

FM

PROPOSED SANITARY SEWER PIPE

FM

FM

FM

PROPOSED SANITARY FORCE MAIN

RECL

RECL

RECL

PROPOSED RECLAIMED WATER

OPEN

OPEN

OPEN

PROPOSED OPEN TRENCH

BFP

W

PROPOSED WATER METER AND BACKFLOW PREVENTER

VAL

VAL

VAL

PROPOSED WATER VALVE

S

S

S

PROPOSED WATER SERVICE

SS

SS

SS

PROPOSED SANITARY SEWER SERVICE

SC

SC

SC

PROPOSED SANITARY SEWER CLEANOUT

SM

SM

SM

PROPOSED SANITARY SEWER MANHOLE

UC

UC

UC

UTILITY CROSSING INDICATOR. SEE UTILITY CROSSING TABLE, THIS SHEET, FOR DETAILS

FHA

FHA

FHA

PROPOSED FIRE HYDRANT ASSEMBLY

NOTE: LIGHTER TONE INDICATES EXISTING CONDITION

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 - MANHOLES ARE TO BE INSTALLED CONSISTENT WITH DETAILS S1, S2 AND S3
 - SANITARY LATERALS ARE TO BE INSTALLED CONSISTENT WITH DETAILS S4, S5 AND S6
 - UTILITY LENGTHS ARE MEASURED FROM FITTING TO FITTING
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 - PIPES TRENCHING TO BE CONSISTENT WITH DETAIL G-3
 - ALL FITTINGS ARE TO BE INSTALLED CONSISTENT WITH THE RETRAINED JOINT SCHEDULE SHOWN IN DETAIL G-6
 - PIPES TO BE CONNECTED CONSISTENT WITH DETAIL G-11.
 - GATE VALVES TO BE ENCASED AND COVERED CONSISTENT WITH DETAILS W3 AND W5.
 - NEAR SIDE WATER SERVICES ARE TO BE INSTALLED PER DETAILS W-9A, W-9D AND W-9E.
 - FAR SIDE WATER SERVICES ARE TO BE INSTALLED PER DETAILS W-9, W-9A, W-9F, W-9G AND W-9H.
 - DOUBLE WATER SERVICES ARE TO BE INSTALLED PER DETAIL W-9C.
 - SINGLE WATER SERVICES ARE TO BE INSTALLED PER DETAIL W-9B.
 - WATER METERS ARE TO BE ENCASED PER DETAIL W-17.
 - FIRE HYDRANTS TO BE INSTALLED PER DETAILS S-2, S-2A AND W-11.
 - WATER METERS TO BE DEMARCATED CONSISTENT WITH DETAIL W-20.
 - MANHOLES TO BE INSTALLED PER DETAIL S-1.
 - MANHOLE COVERS TO BE INSTALLED PER DETAIL S-1A.
 - SEE DETAIL S-1B FOR CHANNELING INTERNAL TO MANHOLE
 - PIPE CONNECTIONS TO BE INSTALLED PER DETAILS S-2, S-2A AND S-3.
 - SEE DETAILS S-5, S-6 AND S-7 FOR SANITARY SERVICE CONNECTION TO GRAVITY SEWER.
 - GRAVITY CLEANOUTS TO BE IN INSTALLED PER DETAILS S-8 AND S-9.
 - SANITARY SERVICE LINES TO BE DEMARCATED PER DETAIL S-20.
 - ALL GRAVITY SEWER LINES ARE TO BE DR-18 UNLESS OTHERWISE NOTED

ISSUED FOR PERMITTING

DESIGNED BY: LB
DRAWN BY: CB
CHECKED BY: AH
NO. BY DATE

DATE: 3/31/23
JOB NO.: 22-548
REVISION DESCRIPTION

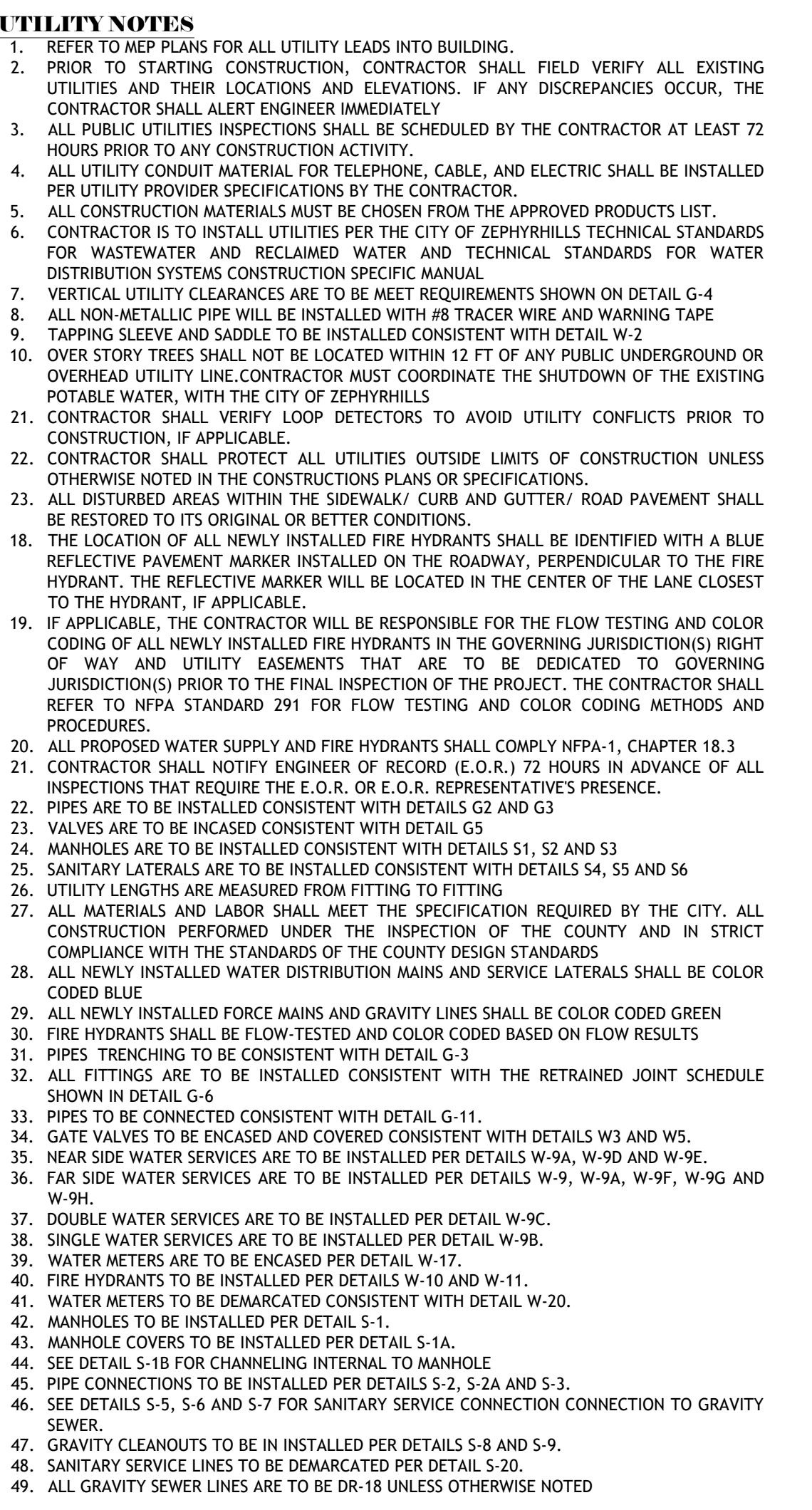
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UNDERGROUND UTILITIES

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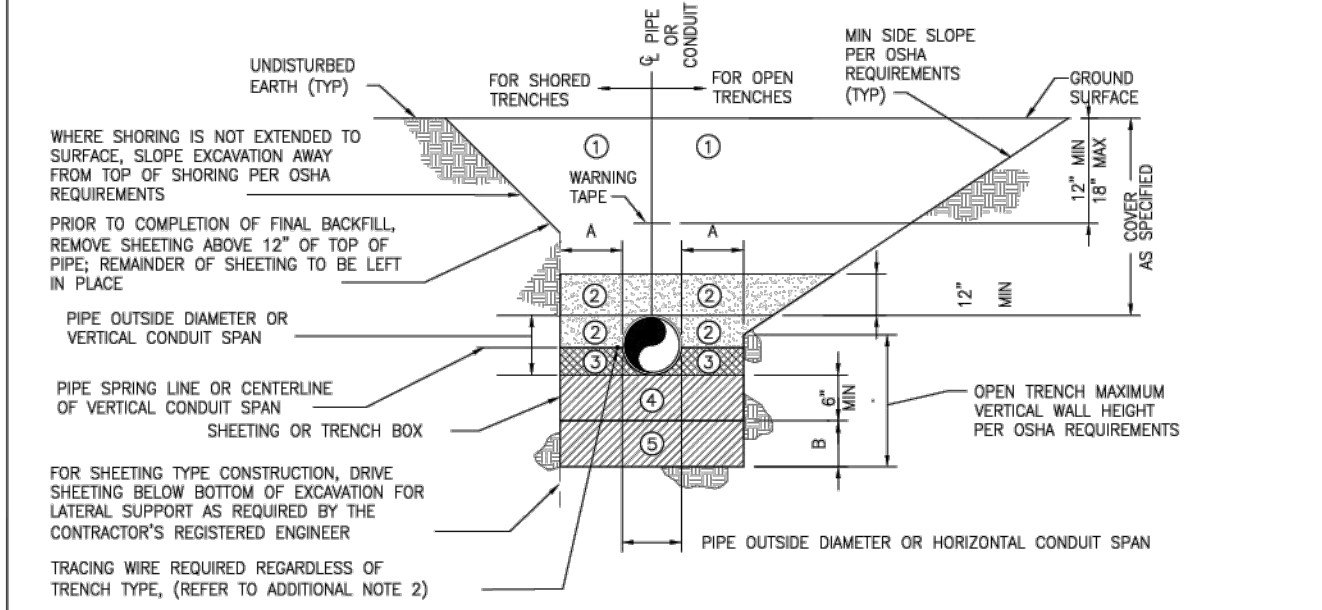
LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
TAMPA, FL 33626

SHEET NAME:
UTILITY PLAN
(SANITARY)

SHEET NUMBER:
C-7.1



SHEET NAME: UTILITY PLAN (WATER)
SHEET NUMBER: C-7.2



NOMINAL PIPE DIAMETER OR VERTICAL CONDUIT SPAN (INCHES)	MINIMUM SIDEWALL CLEARANCE (INCHES)	ADDITIONAL EXCAVATION DEPTH (1)
LESS THAN 24	12	12
24 AND GREATER	18	18

(1) REQUIRED WHERE UNSUITABLE MATERIAL IS ENCOUNTERED.

- TRENCH ZONE NOTES:**
- FINAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. REFER TO ADDITIONAL NOTE 3.
 - INITIAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. ALL LIFTS SHALL BE COMPACTED BY HAND TAMPING OR AN APPROVED METHOD OF MECHANICAL TAMPING. REFER TO ADDITIONAL NOTE 3.
 - HANDLING SHALL BE IN COMPLETELY DEDICATED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. ALL LIFTS SHALL BE COMPACTED BY HAND TAMPING. HANDLING SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF THE PIPE.
 - BEDDING SHALL BE INSTALLED IN COMPLETELY DEDICATED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT, AND SHALL BE COMPACTED BY HAND OR MECHANICAL TAMPING. PROPERLY SHAPED BELL HOLES SHALL BE EXCAVATED IN THE BEDDING TO PERMIT ASSEMBLY OF THE PIPE. REFER TO ADDITIONAL NOTE 3.
 - NATIVE UNDISTURBED MATERIAL IN COMPLETELY DEDICATED TRENCHES MEETING THE COMPACTION AND MATERIAL REQUIREMENTS FOR COMPACTED BEDDING MATERIAL NEED NOT BE REPLACED OR REWORKED, EXCEPT FOR SHAPING OF THE BELL HOLES, AND WHERE REFILL IS REQUIRED.
- FOUNDATION SHALL BE REQUIRED WHERE UNSUITABLE MATERIAL IS ENCOUNTERED. FOUNDATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS FOR BEDDING. REFER TO ADDITIONAL NOTE 3.

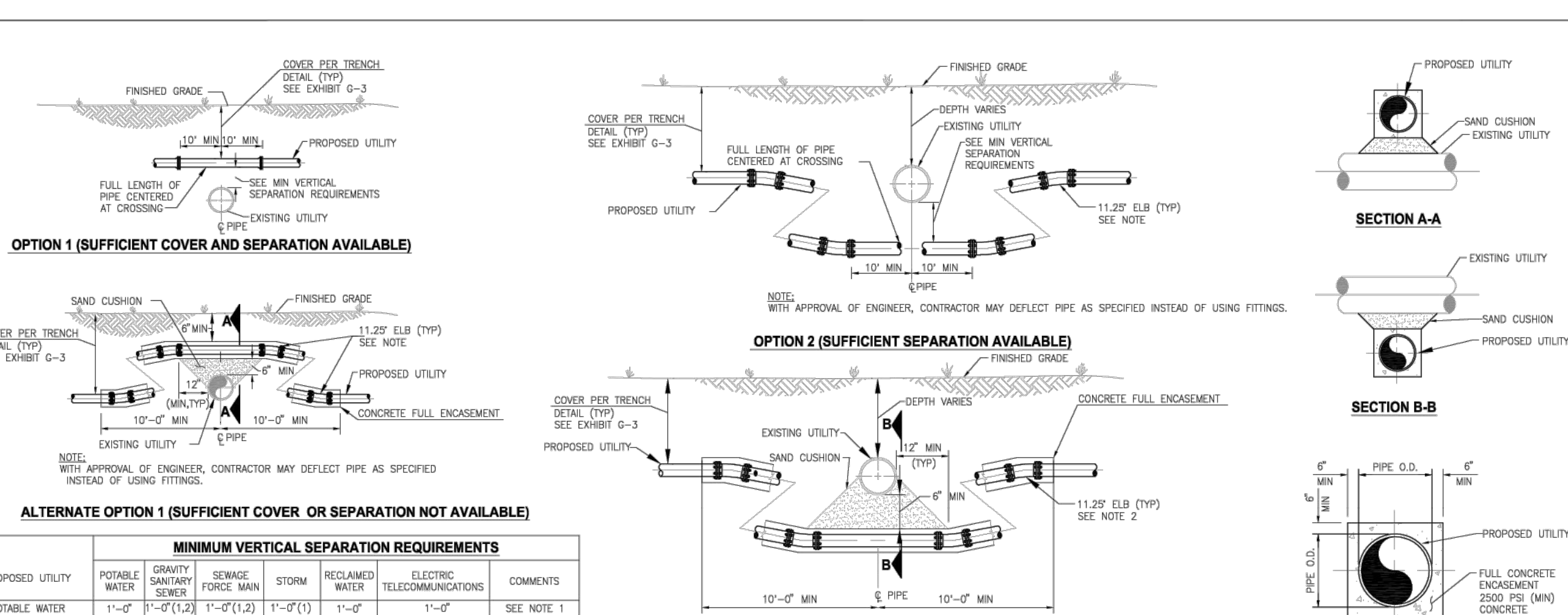
- ADDITIONAL NOTES:**
- FOR TRENCHES IN VEHICULAR TRAFFIC AREAS OR BENEATH SURFACE IMPROVEMENTS (E.G. SLABS, ASPHALT, ETC.) SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL COMPACTION REQUIREMENTS. SEE DRAWINGS FOR SURFACE IMPROVEMENT AND /OR RESTORATION DETAILS WHERE APPLICABLE.
 - TRACING WIRE SHALL BE INSTALLED ON THE SIDE OF THE PIPE AND ATTACHED TO THE PIPE EVERY 10' W/ A NYLON WIRE TIE. IF THE WIRE IS DAMAGED OR NEEDS TO BE EXTENDED A 3M WATERPROOF TYPE UF SPLICE SHALL BE INSTALLED TO REPAIR THE WIRE. THE ENDS OF THE TRACING WIRE SHALL BE BROUGHT UP IN EVERY VALVE BOX ON THE LINE AND AT THE HYDRANT VALVES. THERE SHALL BE A MINIMUM COIL OF 3' LEFT UNDER THE VALVE BOX COVER. THE WIRE SHALL BE TESTED TO VERIFY CONDUCTIVITY.
 - ALTERNATIVE LIFT THICKNESSES, NOT EXCEEDING 12 INCHES LOOSE MEASUREMENT, ARE ACCEPTABLE IN TRENCH ZONES 1, 2, 4, AND 5 PROVIDED (1) THE LIFT THICKNESS DOES NOT EXCEED THE MAXIMUM VALUE RECOMMENDED IN WRITING BY THE APPLICABLE PIPE MANUFACTURER AND 2) FIELD TEST RESULTS CONFIRM THAT THE SPECIFIED COMPACTION REQUIREMENTS ARE BEING MET.

TYPICAL UTILITY TRENCH DETAIL
NTS



**CITY OF ZEPHYRHILLS
STANDARD DETAILS**
CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
39825 ALSTON AVENUE ZEPHYRHILLS, FLORIDA 33542
PHONE (813)780-0029 FAX (813)780-0613

NOVEMBER 2021
G-3



PROPOSED UTILITY	POTABLE WATER	GRAVITY SANITARY SEWER	SEWAGE FORCE MAIN	STORM	RECLAIMED WATER	ELECTRIC TELECOMMUNICATIONS	COMMENTS
POTABLE WATER	1'-0"	1'-0" (1.2)	1'-0" (1.2)	1'-0" (1)	1'-0" (1)	1'-0"	SEE NOTE 1
GRAVITY SANITARY SEWER	1'-0" (2)	1'-0"	1'-0"	1'-0"	1'-0" (2)	1'-0"	SEE NOTE 2
SEWAGE FORCE MAIN	1'-0" (2)	1'-0"	1'-0"	1'-0"	1'-0" (2)	1'-0"	SEE NOTE 2
STORM	1'-0" (1)	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	SEE NOTE 2
RECLAIMED WATER	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	SEE NOTE 2
ELECTRIC TELECOMMUNICATIONS	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	SEE NOTE 2

PROPOSED UTILITY	POTABLE WATER	GRAVITY SANITARY SEWER	SEWAGE FORCE MAIN	STORM	RECLAIMED WATER	ELECTRIC TELECOMMUNICATIONS	COMMENTS
POTABLE WATER	1'-0"	1'-0" (1.2)	1'-0" (1.2)	3'-0" (1)	3'-0" (1.3)	3'-0"	
GRAVITY SANITARY SEWER	1'-0" (2)	1'-0"	1'-0"	3'-0"	3'-0" (2)	3'-0"	
SEWAGE FORCE MAIN	1'-0" (2)	1'-0"	1'-0"	3'-0"	3'-0" (2)	3'-0"	
STORM	3'-0" (1)	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	
RECLAIMED WATER	3'-0" (1.3)	3'-0" (2)	3'-0" (2)	3'-0"	3'-0"	3'-0"	
ELECTRIC TELECOMMUNICATIONS	3'-0"	3'-0"	3'-0"	3'-0"	3'-0"	2'-0"	

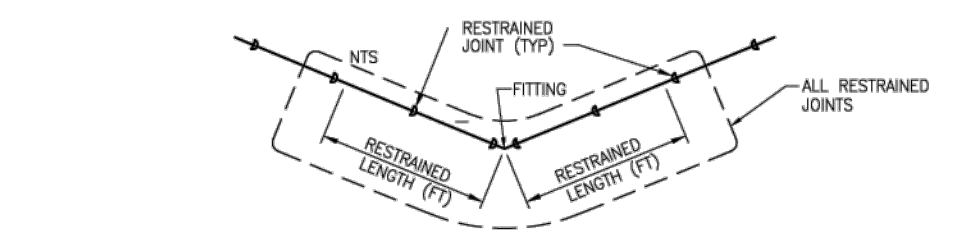
NOTE: UTILITIES SHALL NOT BE INSTALLED WITHIN THE DRIP LINE OF TREES WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER.

UTILITY CONFLICT



**CITY OF ZEPHYRHILLS
STANDARD DETAILS**
CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
39825 ALSTON AVENUE ZEPHYRHILLS, FLORIDA 33542
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DECEMBER 2015
G-4



RESTRAINED JOINT SCHEDULE									
PIPE SIZE	FITTING								
	90° BEND	45° BEND	45° BEND (VERT)	22 1/2° BEND	22 1/2° BEND (VERT)	11 1/4° BEND	11 1/4° BEND (VERT)	VALVE, DEAD END OR REDUCER	TEE (BRANCH)
8"	37	16	45	8	14	4	7	107	107
6"	29	12	34	6	11	3	6	82	82
4"	17	8	16	4	8	2	4	38	37

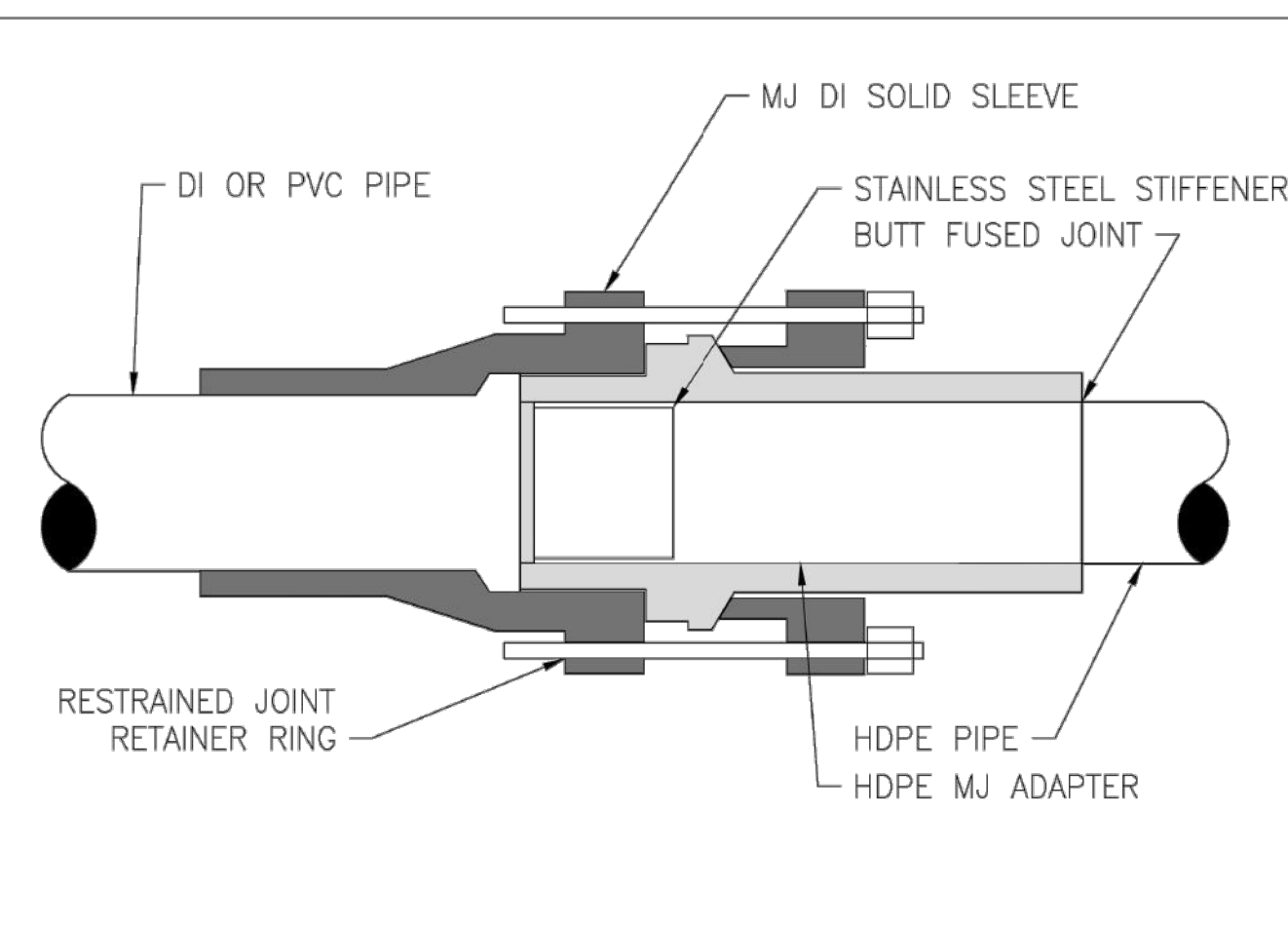
- NOTES:**
- RESTRAINED LENGTHS ARE IN FEET AND ARE FOR POLYETHYLENE WRAPPED DUCTILE IRON PIPE UNLESS OTHERWISE NOTED.
 - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING RESTRAINED JOINTS.
 - THE SCHEDULE SHOWN IS FOR THE FOLLOWING SERVICE CONDITIONS 150 PSIG TEST PRESSURE; POORLY GRADED COARSE SAND; 36 INCHES COVER, TYPE 3 TRENCH CONDITIONS; AND 1.5 SAFETY FACTOR.
 - RESTRAINED LENGTHS SHOWN IN TABLE ARE IN FEET AND ARE MINIMUM LENGTHS REQUIRED IN EACH DIRECTION FROM FITTINGS OR VALVES.
 - ALL PIPE SHALL BE RESTRAINED TO THE NEXT JOINT BEYOND THE RESTRAINED LENGTH GIVEN.
 - RESTRAINED LENGTH FOR REDUCERS SHALL BE BASED ON THE SIZE OF THE LARGEST END OF THE REDUCER.
 - CONTRACTOR SHALL HAVE FLORIDA LICENSED PROFESSIONAL ENGINEER VERIFY ALL THE RESTRAINED LENGTHS SHOWN IN THE TABLE ABOVE ARE ADEQUATE FOR ALL VARYING SOIL CONDITIONS ON THE PROJECT. THE CONTRACTOR'S ENGINEER SHALL PROVIDE A SIGNED AND SEALED STATEMENT THAT ALL PIPING WAS INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TABLE ABOVE OR IN ACCORDANCE WITH THE FINDINGS OF THE CONTRACTOR'S PROFESSIONAL ENGINEER. WHENEVER ARE MORE STRINGENT, CONTRACTOR'S COST FOR MEETING THESE REQUIREMENTS SHALL BE INCLUDED IN THEIR BID.
 - FOR CONNECTION OF PIPING TO EXISTING PIPING, WHEN THE REQUIRED RESTRAINED JOINT PIPE LENGTHS TO PREVENT PIPE MOVEMENT CANNOT BE ATTAINED IN ACCORDANCE WITH RESTRAINED JOINT SCHEDULE, THE APPROPRIATE TEE, VALVES, BEND AND/OR CROSS FITTINGS SHALL BE FULLY RESTRAINED IN ACCORDANCE WITH EXHIBIT G-6A TO PREVENT PIPE MOVEMENT.
 - WHERE HDD CONNECTS TO PUSH-ON JOINT PIPING, THIS CONNECTION SHALL BE TREATED AS DEAD END W/ RESPECT TO THE RESTRAINED JOINT SCHEDULE.

RESTRAINED JOINT SCHEDULE
NTS



**CITY OF ZEPHYRHILLS
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G-6

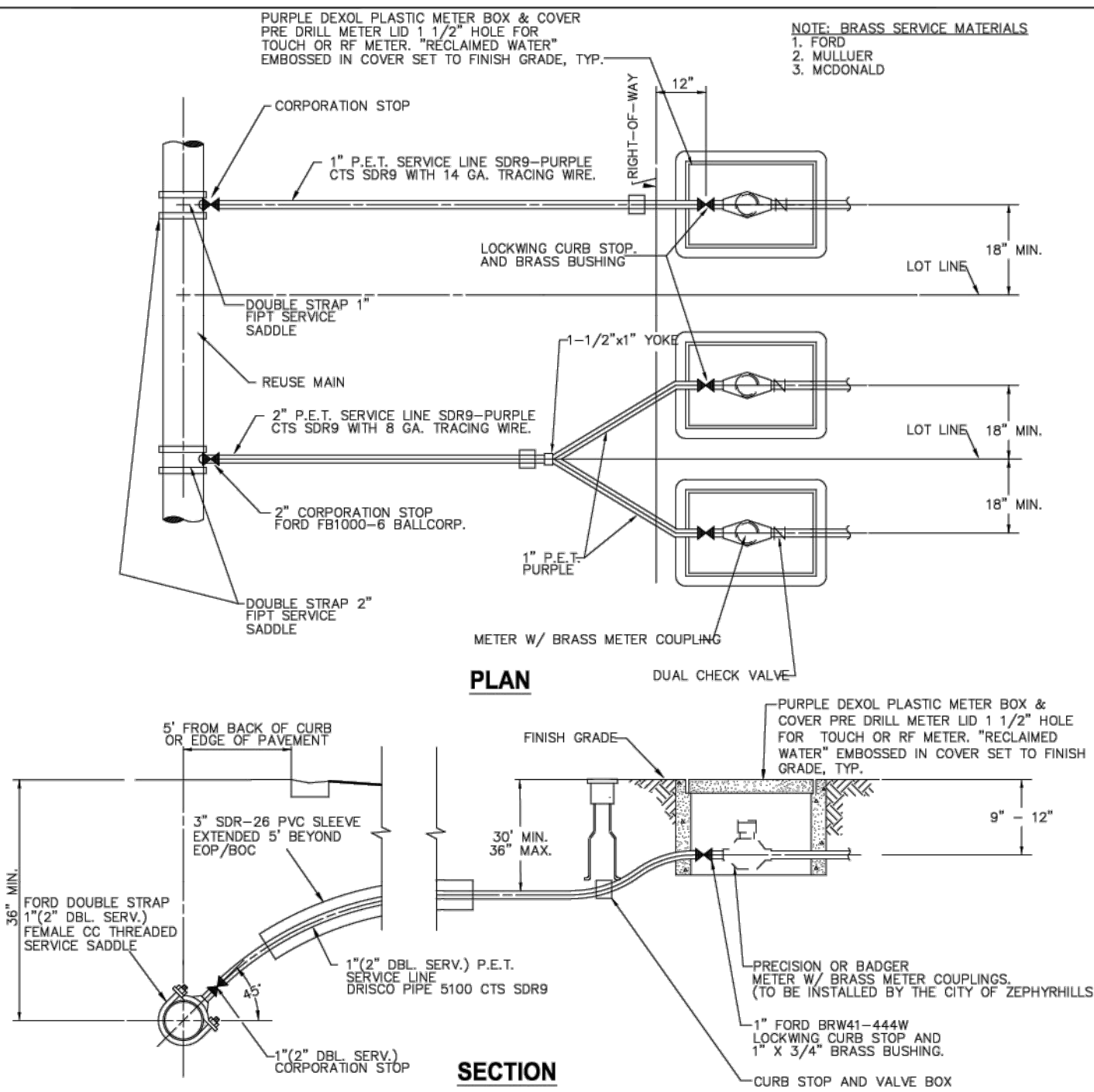


PIPING CONNECTION
HDPE TO DI OR PVC
NTS



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REUSE WATER SERVICE CONNECTION DETAILS
NTS



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NOVEMBER 2021
R-3

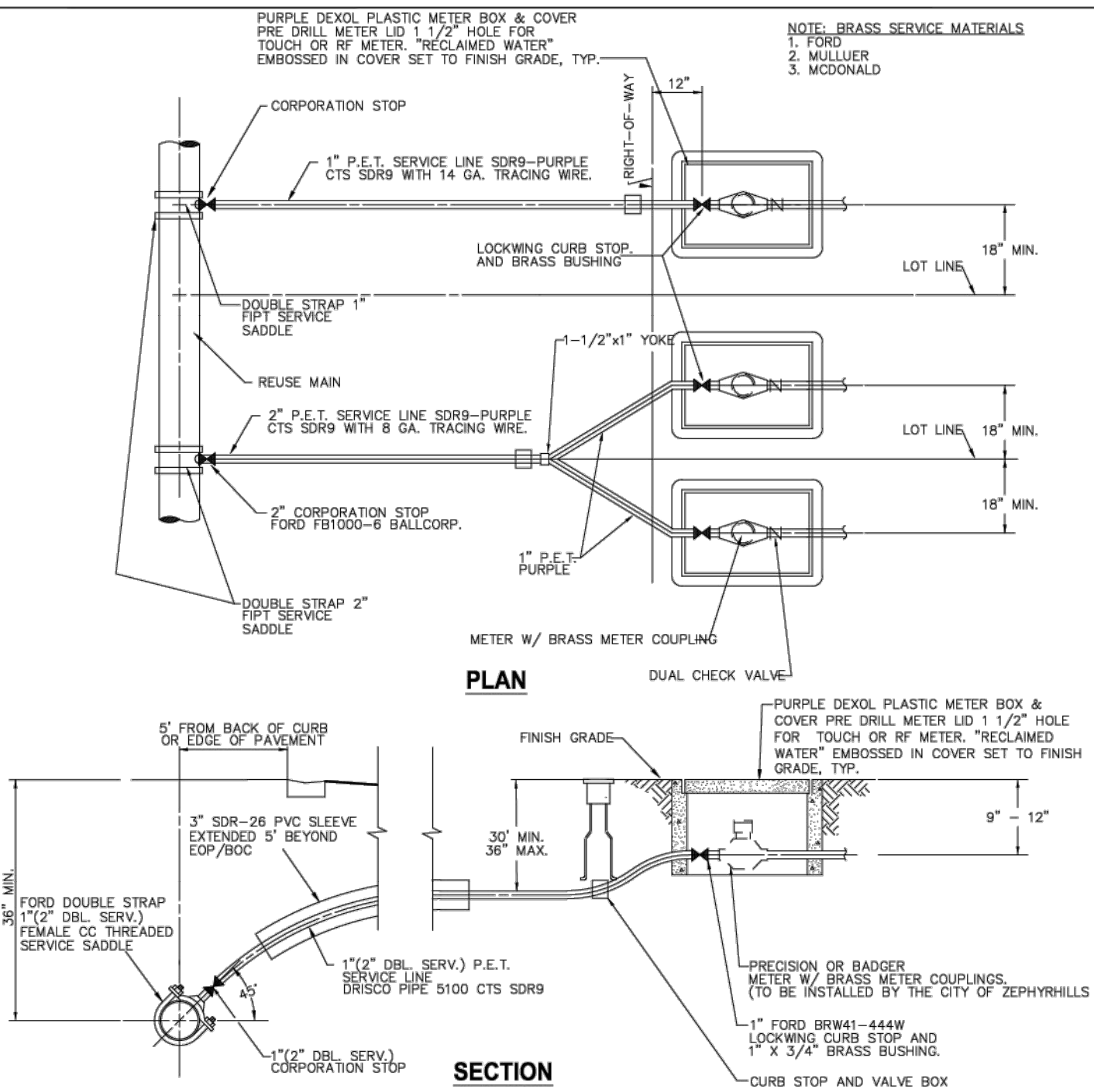
GENERAL REUSE AND EFFLUENT REUSE NOTES

- ALL REUSE AND EFFLUENT REUSE PIPING TO BE OWNED AND MAINTAINED BY THE CITY OF ZEPHYRHILLS SHALL BE A SOLID PURPLE COLOR.
- REUSE AND EFFLUENT REUSE MAINS TO BE PVC CONFORMING TO AWWA C-900, DR 18 FOR PIPE SIZES 4"-12". PIPES 14" & LARGER SHALL BE AWWA C-905, DR 25. PRESSURE CLASS 350 DIP IS AN ACCEPTABLE ALTERNATE. ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE PREPARATION, FOR LAYING, SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURERS LATEST RECOMMENDATIONS.
- DEPTH OF REUSE AND EFFLUENT REUSE LINES TO BE 36" MIN. BELOW FINISHED GRADE.
- REUSE AND EFFLUENT REUSE MAINS TO BE LOCATED 5' FROM BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL PIPING CLEARANCES SHALL BE IN ACCORDANCE WITH CHAPTER 62-555.314, F.A.C.
- ALL REUSE AND EFFLUENT REUSE MAINS UNDER PAVEMENT SHALL BE DUCTILE IRON PIPE AND SHALL EXTEND 5' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB, EXCEPT DIRECTIONAL BORES, WHICH SHALL BE SDR-11 HDPE.
- ALL IRRIGATION SLEEVING UNDER PAVEMENT SHALL EXTEND 5' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB.
- ALL OTHER REQUIREMENTS OF THE CITY WATER SYSTEM SHALL APPLY TO THE RE-USE SYSTEM.
- PROPER SIGNAGE FOR PUBLIC ACCESS IRRIGATION AREAS TO BE SUPPLIED BY THE DEVELOPER / CONTRACTOR, IN ACCORDANCE WITH CHAPTER 62-610.418, F.A.C.



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R-1



REUSE WATER SERVICE CONNECTION DETAILS
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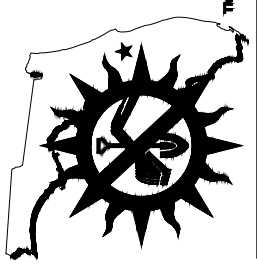
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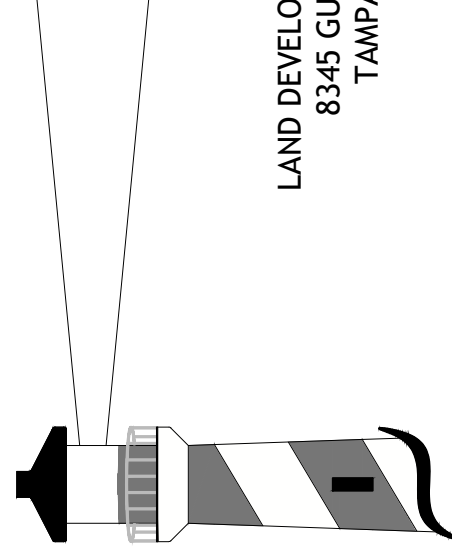
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THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCURRED BY THE CONTRACTOR'S NEGLIGENCE, LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

LAURIE S. BURCAW, PE #46064

**BEACON
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LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
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CALUMET TOWNS

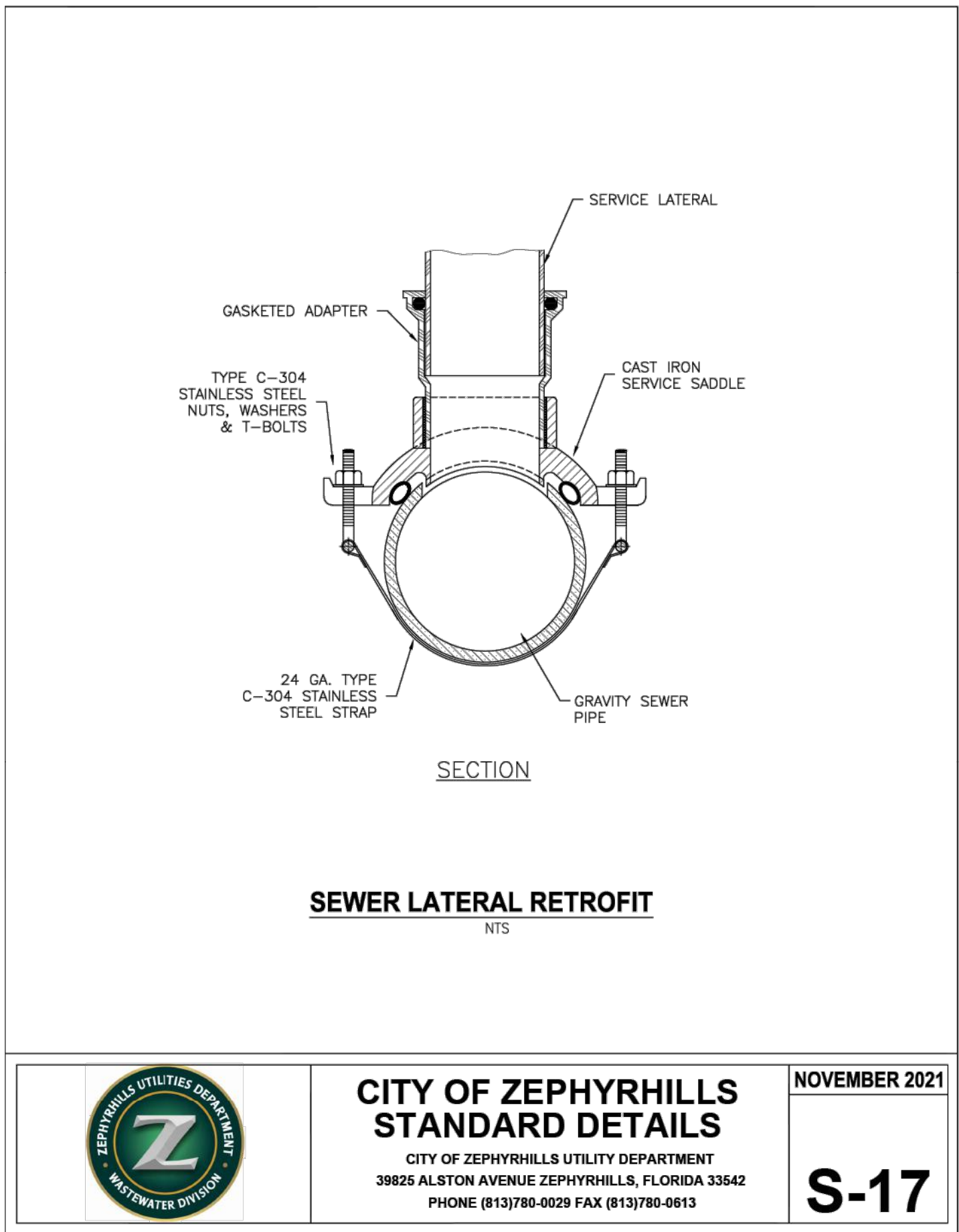
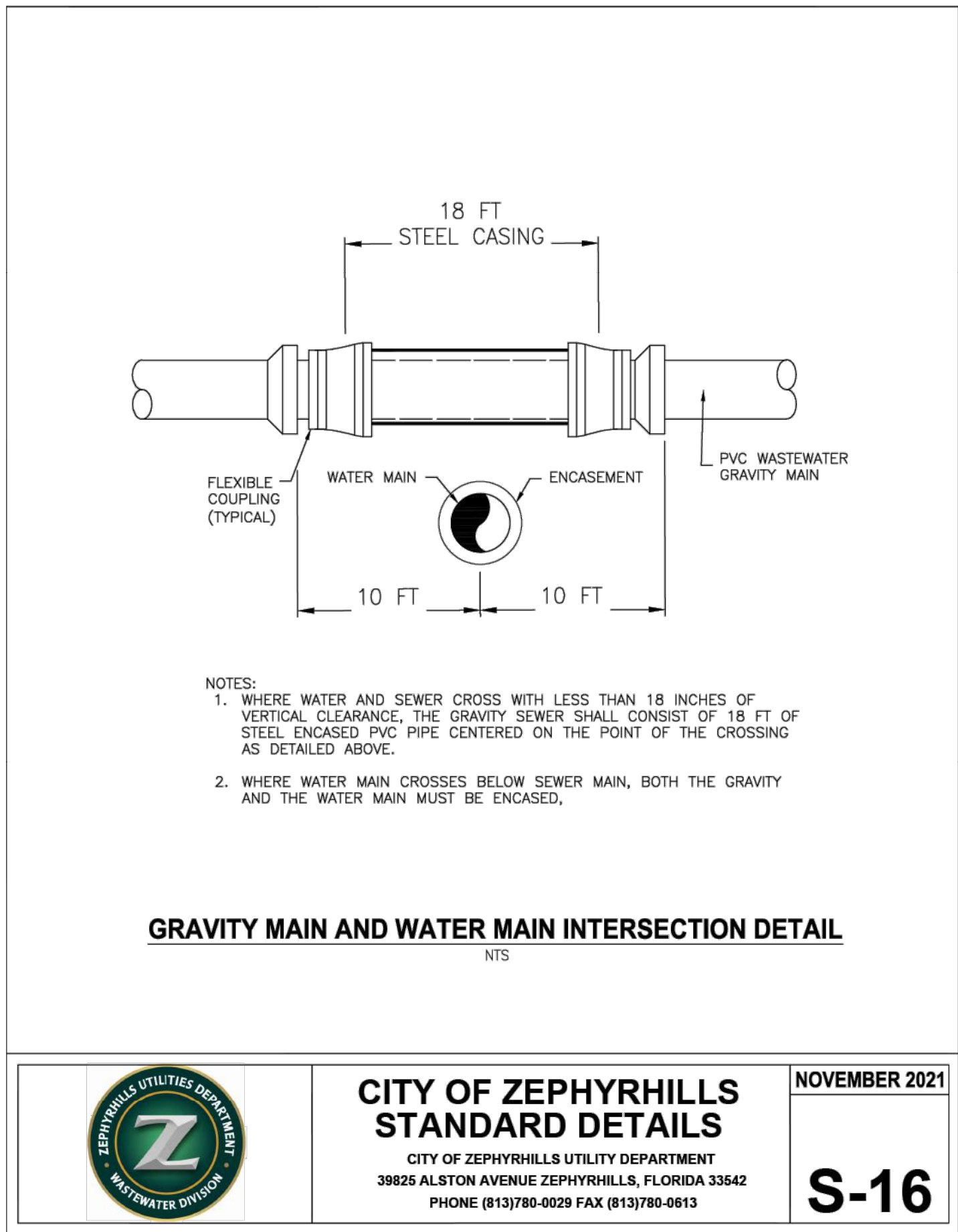
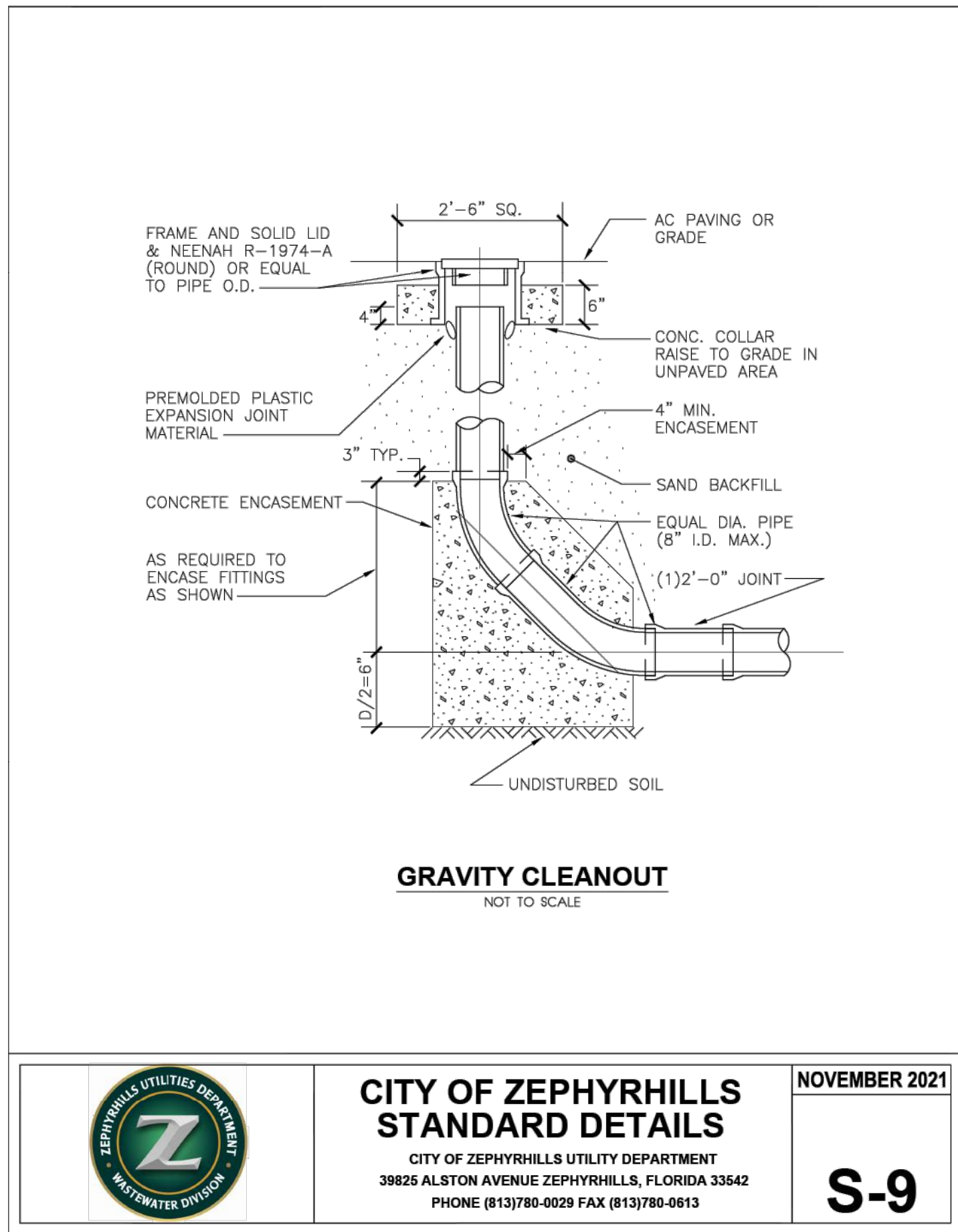
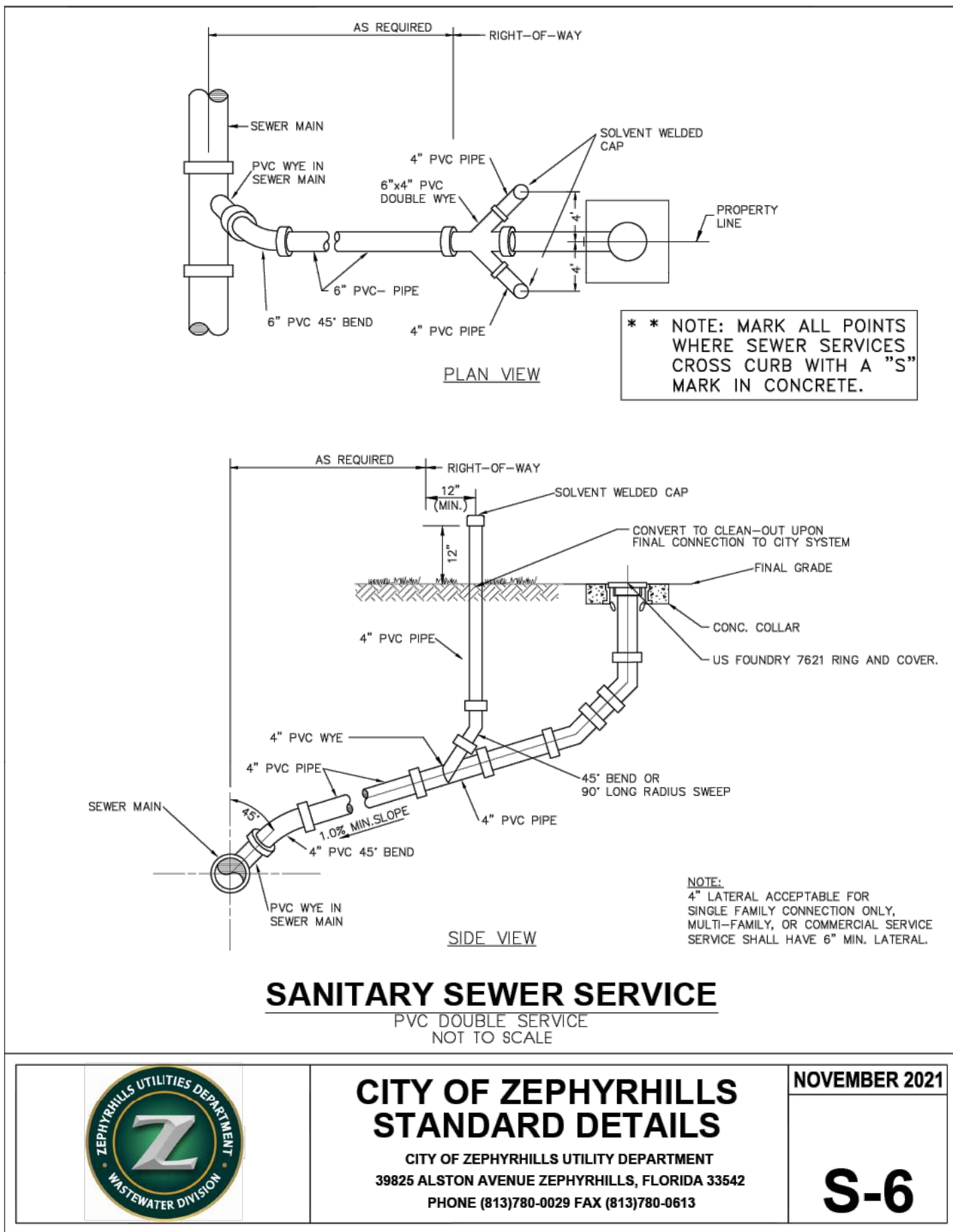
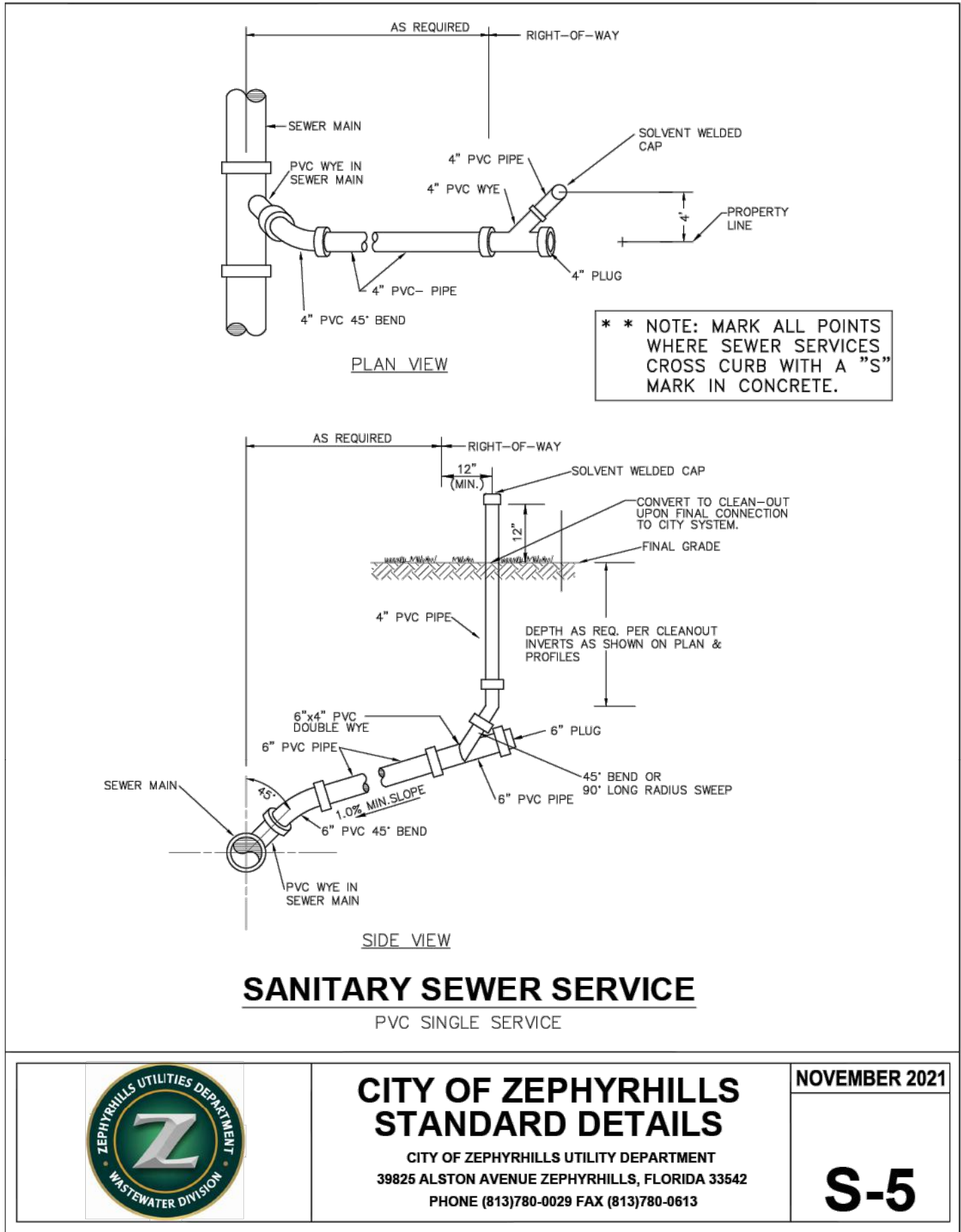
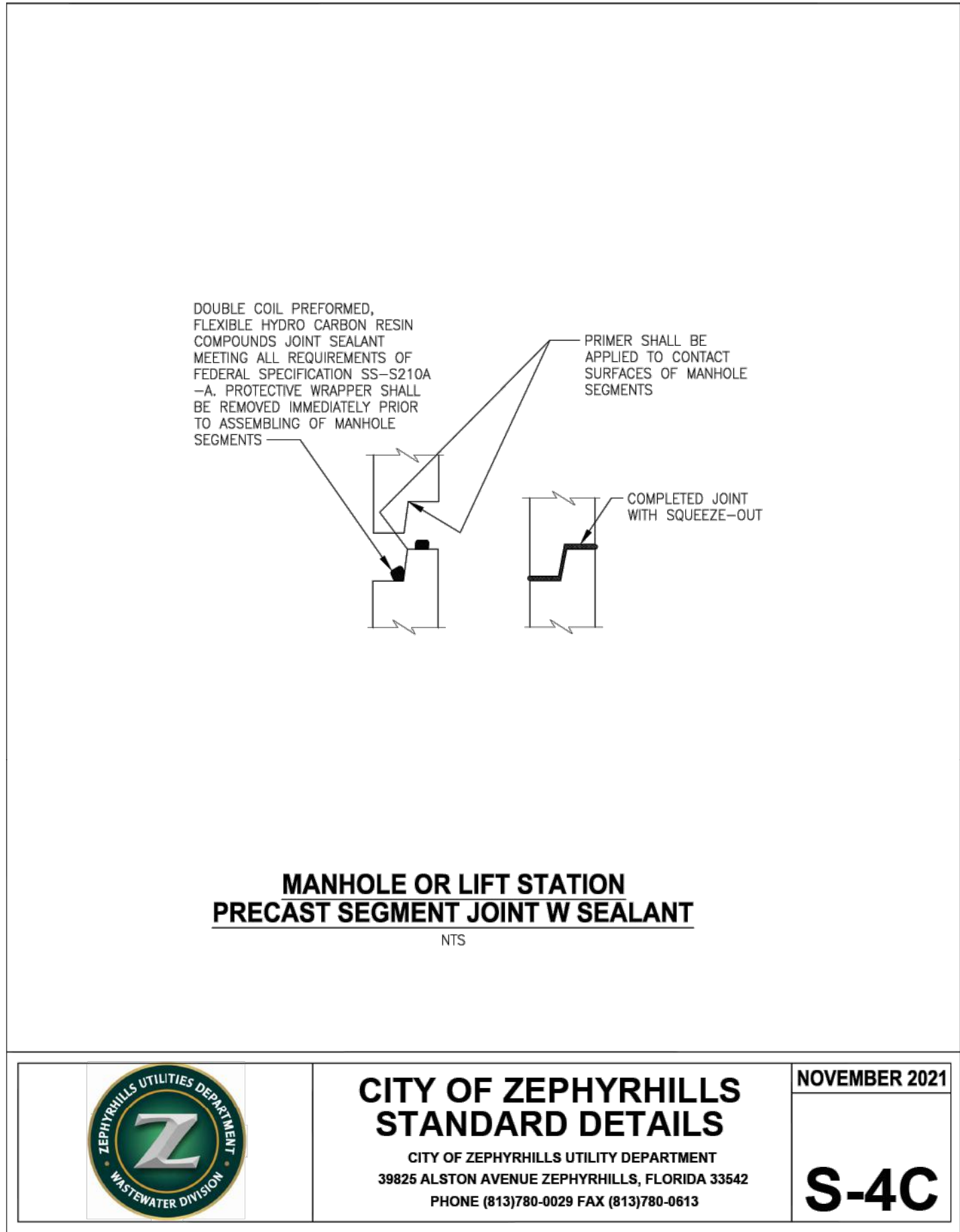
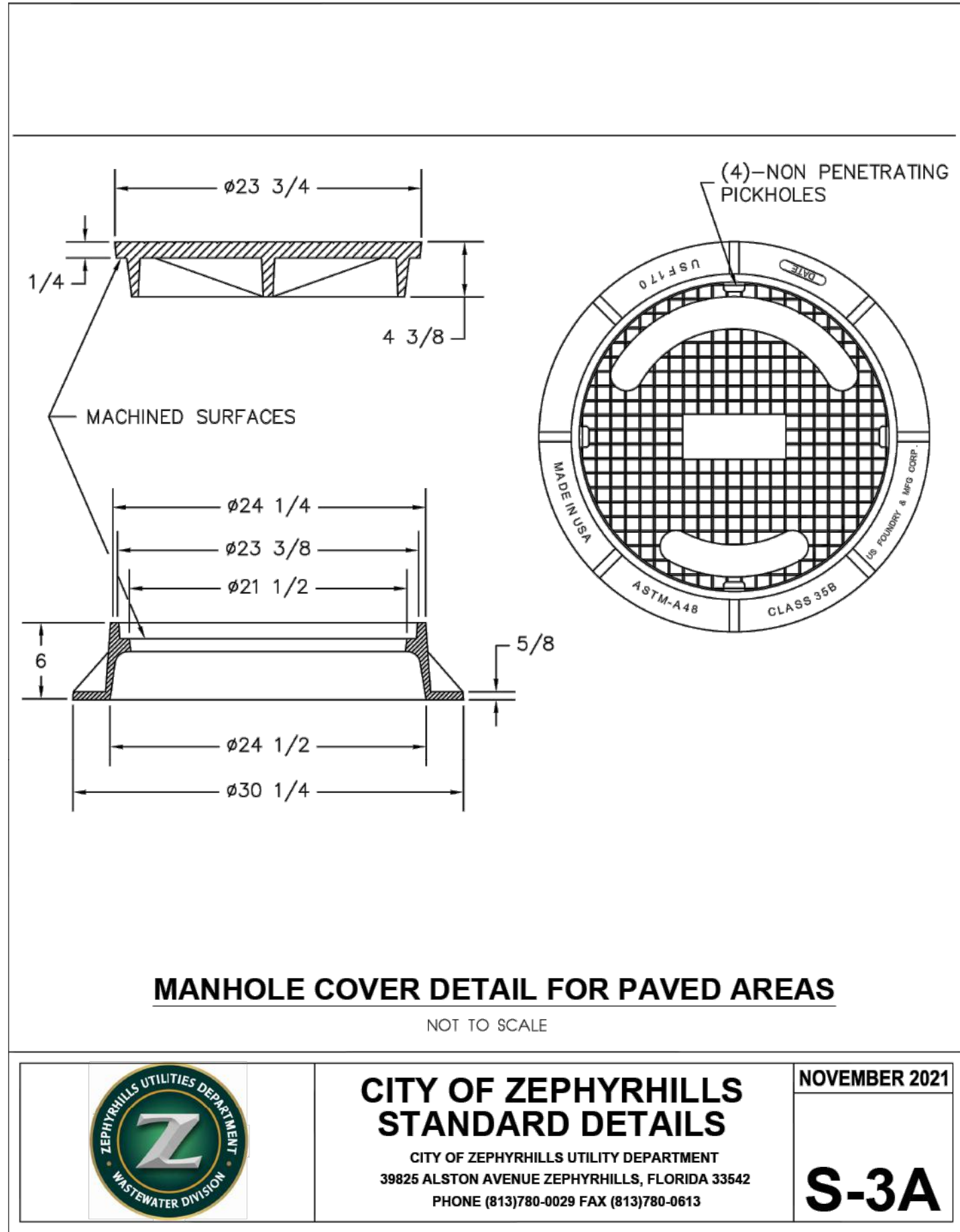
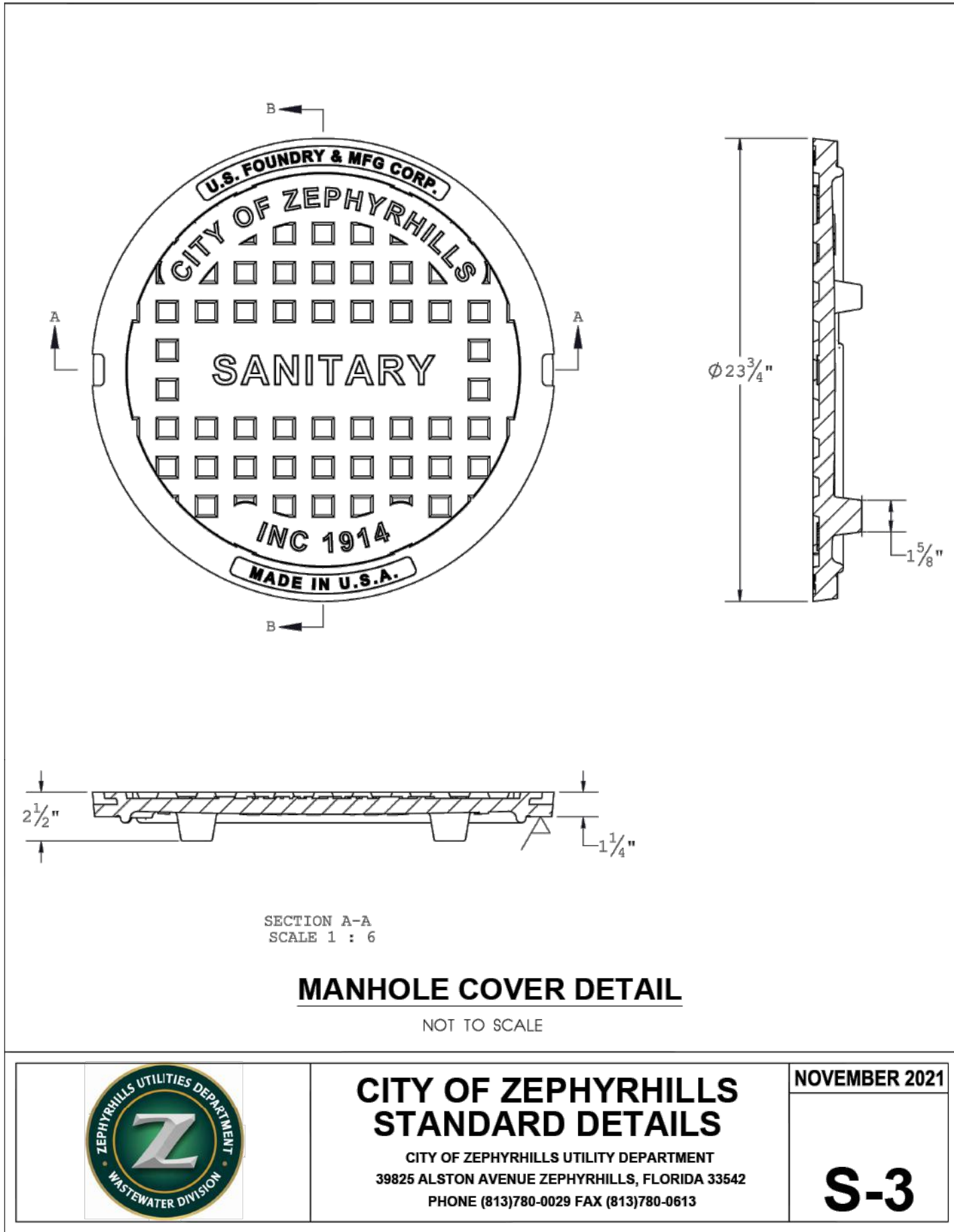
CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

UTILITY DETAILS

SHEET NUMBER:

C-7.3



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LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
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CALUMET
TOWNS

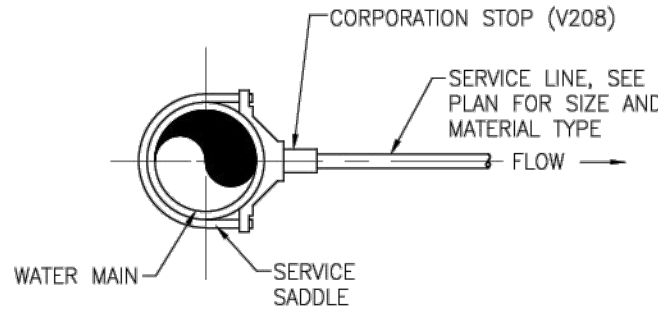
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ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

UTILITY DETAILS

SHEET NUMBER:

C-7.4



NOTE:
SIZE OF SERVICE SADDLE OUTLET, CORPORATION STOP, ADAPTERS, ETC. SHALL BE THE SAME AS THE SERVICE LINE SIZE UNLESS NOTED OTHERWISE.

SERVICE TAP
NTS

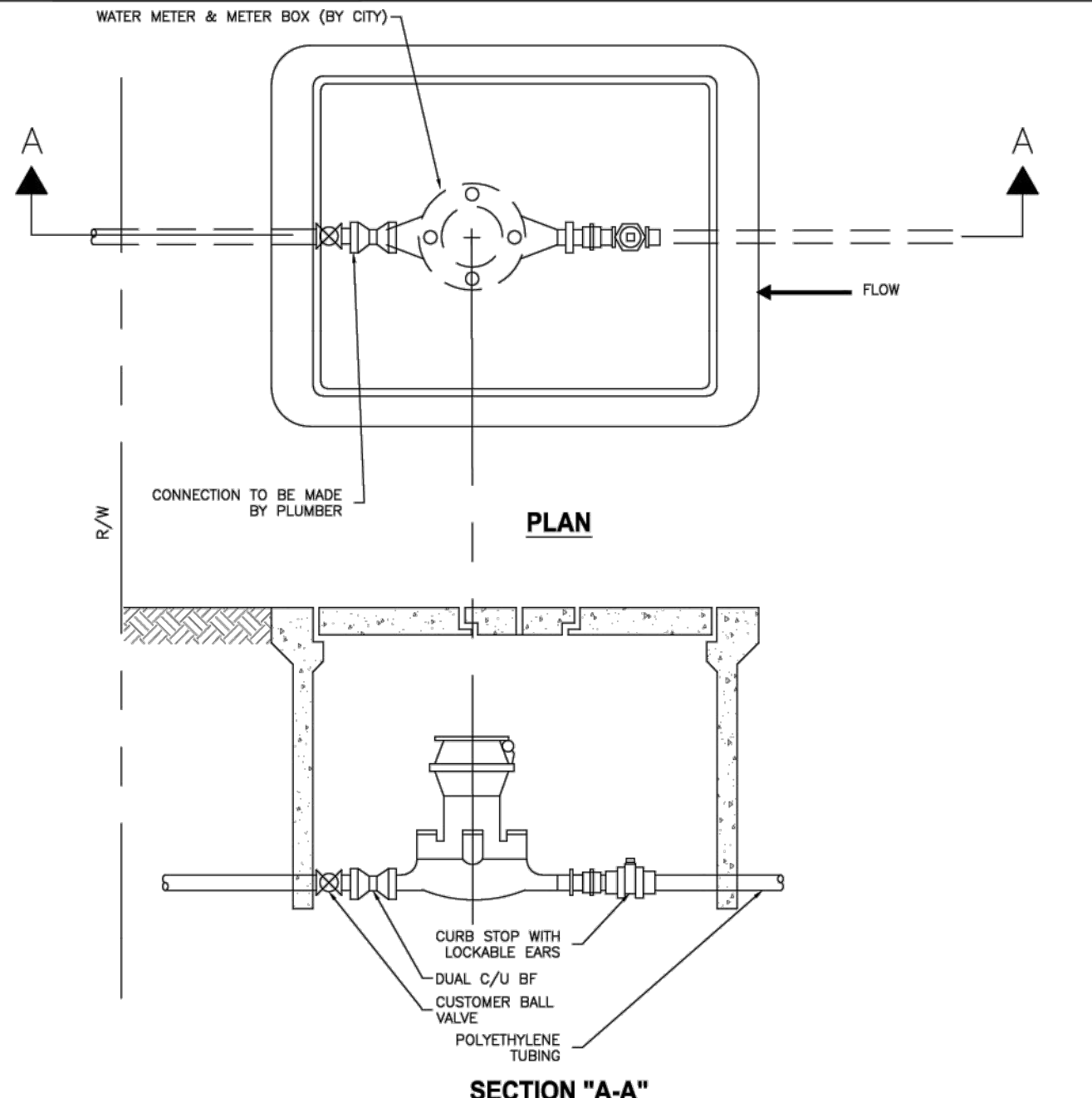


**CITY OF ZEPHYRHILLS
STANDARD DETAILS**

CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
39825 ALSTON AVENUE ZEPHYRHILLS, FLORIDA 33542
PHONE (813)780-0029 FAX (813)780-0613

NOVEMBER 2018

W-9



NOTES:
1. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
2. TEMPORARY IDENTIFICATION: EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED APPROXIMATELY 6 INCHES BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2 INCH x 2 INCH x 18 INCH STAKE WITH THE TOP PAINTED BLUE AND MARKED WITH THE LOT NUMBER SERVED.

RESIDENTIAL SINGLE METER SERVICE (NEAR AND FAR SIDE)
NTS

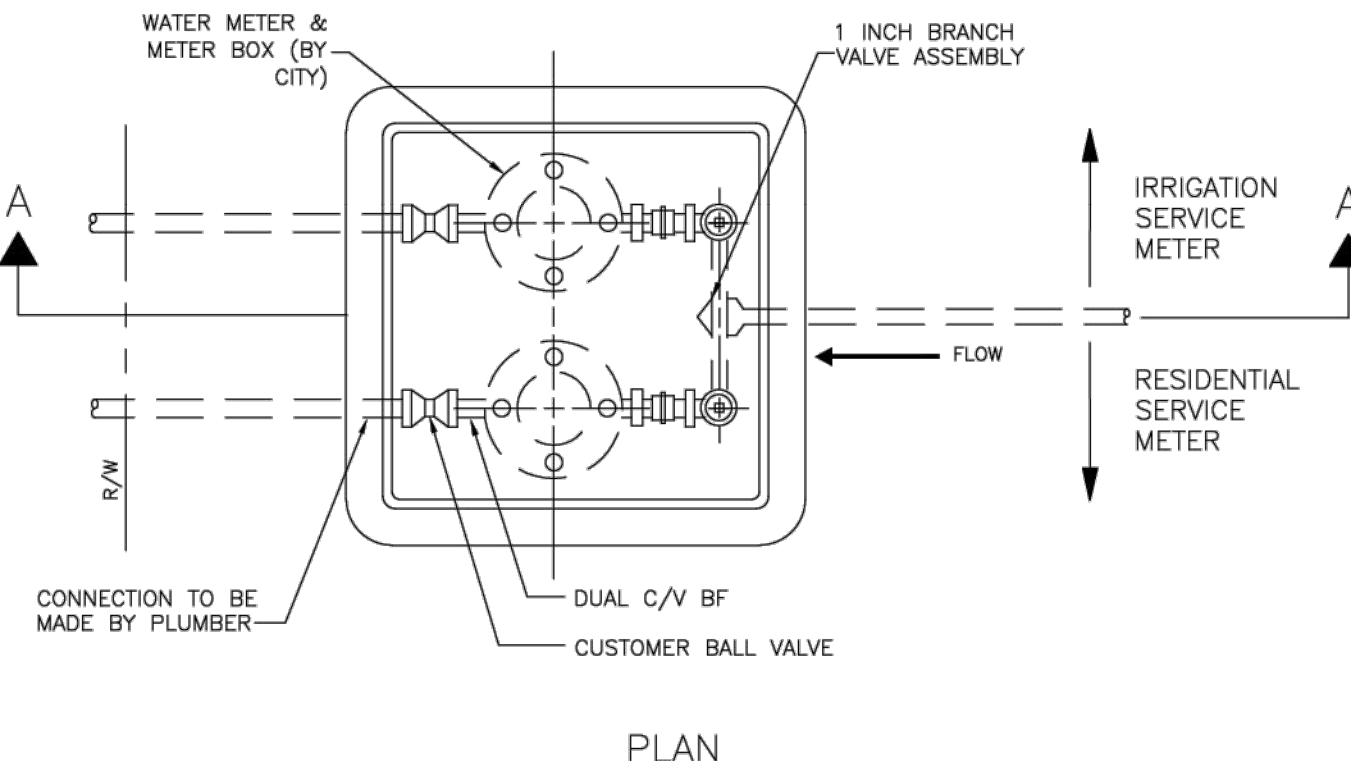


**CITY OF ZEPHYRHILLS
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W-9B



NOTES:
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RESIDENTIAL DUAL METER SERVICE (SINGLE LOT SERVICE)
NTS

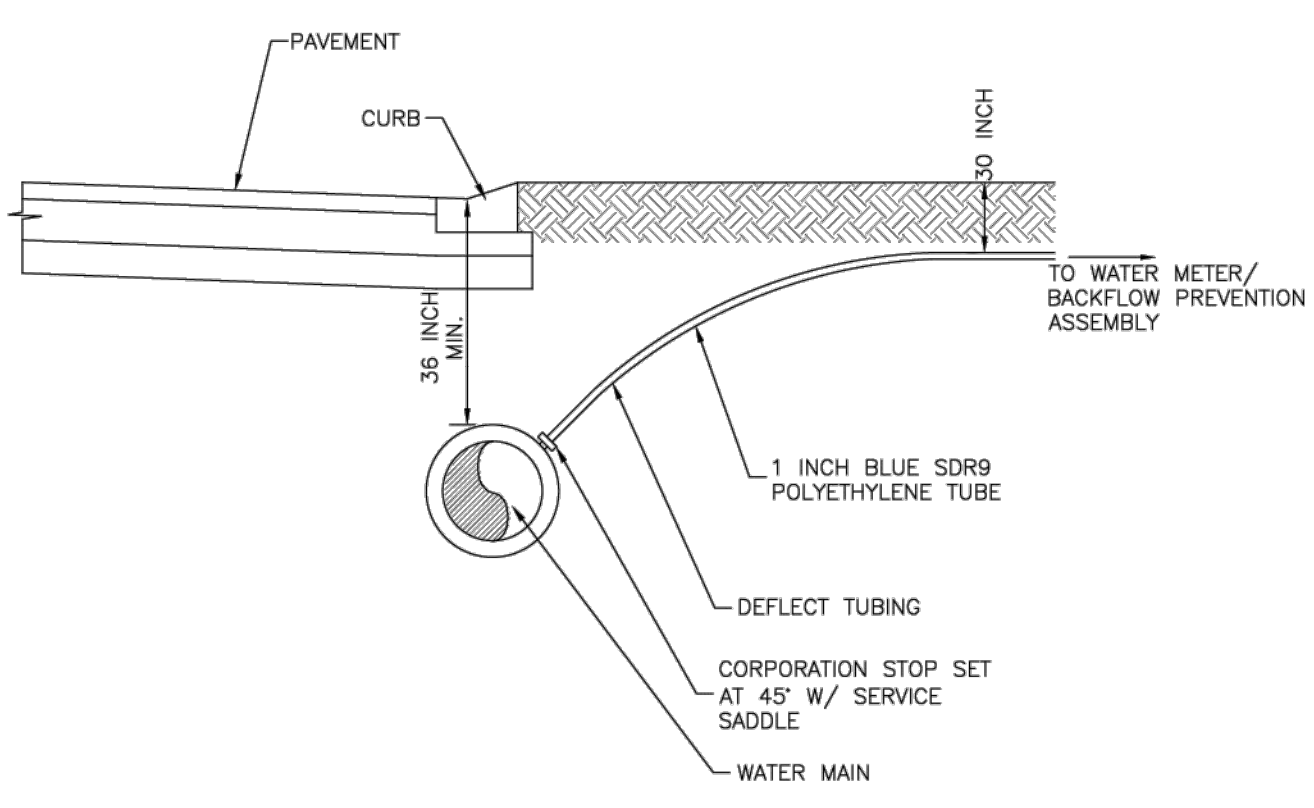


**CITY OF ZEPHYRHILLS
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CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
39825 ALSTON AVENUE ZEPHYRHILLS, FLORIDA 33542
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W-9C



NOTE:
1. CAST BRONZE COMPRESSION FITTING CONNECTIONS SHALL BE USED & INSTALLED IN ACCORDANCE WITH CITY OF ZEPHYRHILLS STANDARDS.
2. USE 1 INCH DIAMETER HDPE FOR SINGLE SERVICE.
3. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
4. POD SHOWN ON METER/BACKFLOW ASSEMBLY EXHIBIT.

1" WATER SERVICE INSTALLATION (NEAR SIDE)
NTS

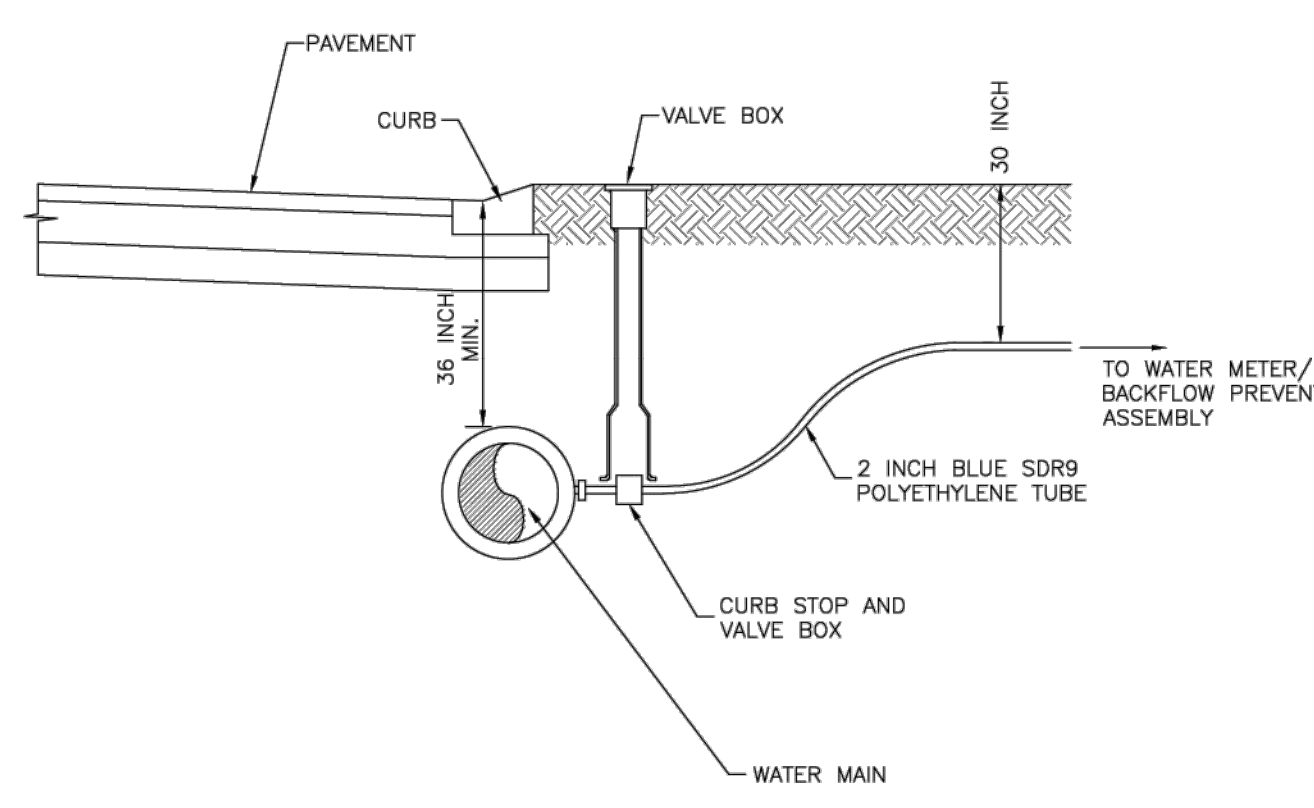


**CITY OF ZEPHYRHILLS
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W-9D



NOTE:
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2. USE 2 INCH DIAMETER HDPE FOR SINGLE SERVICE.
3. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
4. POD SHOWN ON METER/BACKFLOW ASSEMBLY EXHIBIT.

2" WATER SERVICE INSTALLATION (NEAR SIDE)
NTS

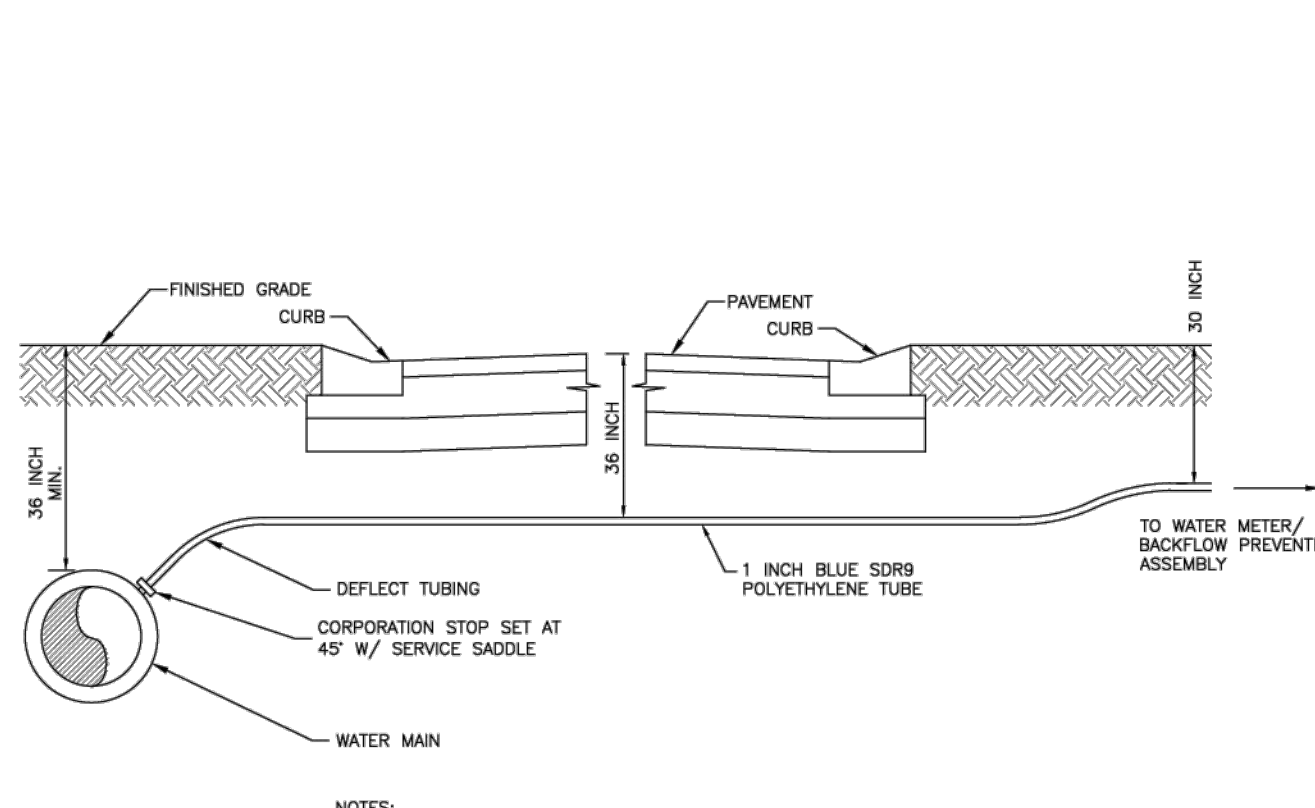


**CITY OF ZEPHYRHILLS
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3. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
4. POD SHOWN ON METER/BACKFLOW ASSEMBLY EXHIBIT.

1" WATER SERVICE INSTALLATION (FAR SIDE)
NTS

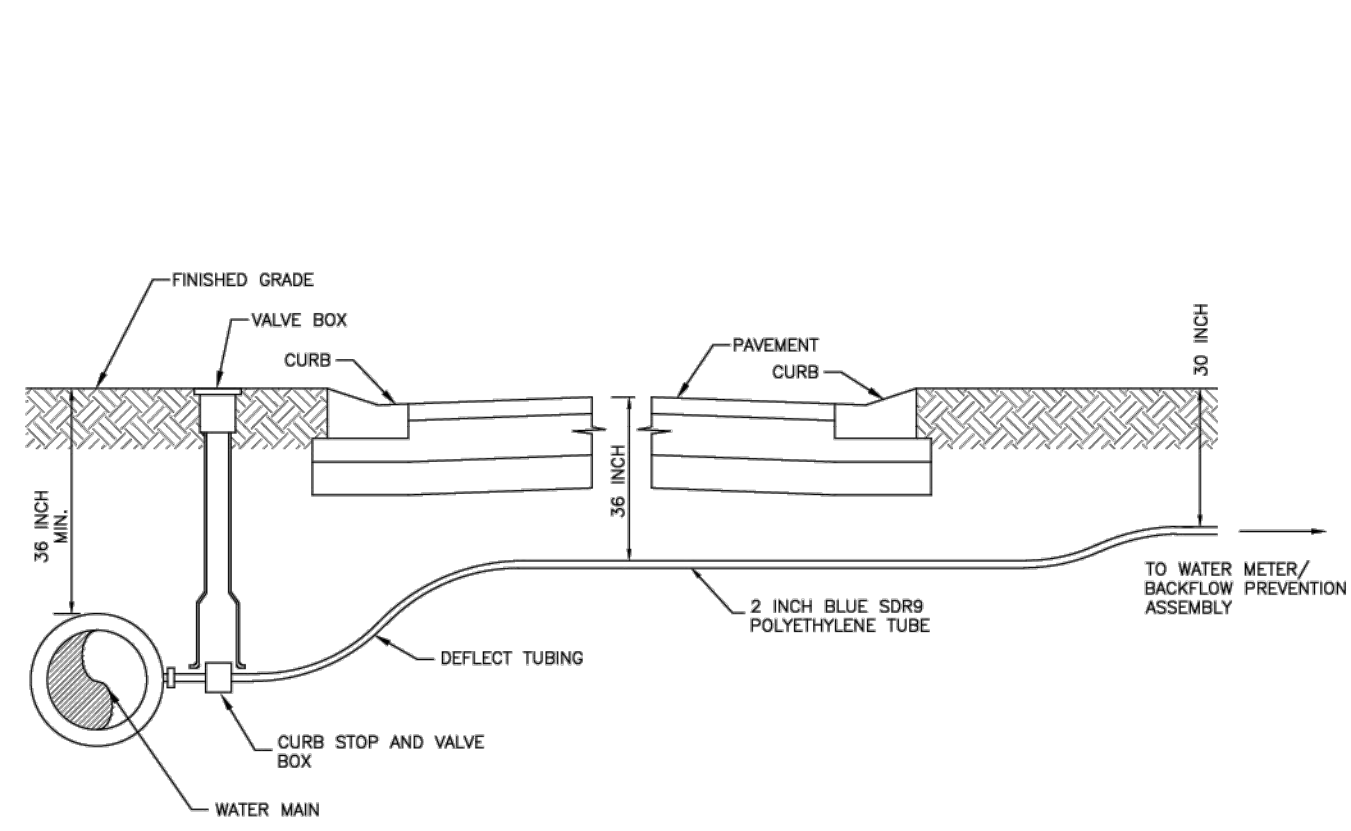


**CITY OF ZEPHYRHILLS
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2" WATER SERVICE INSTALLATION (FAR SIDE)
NTS

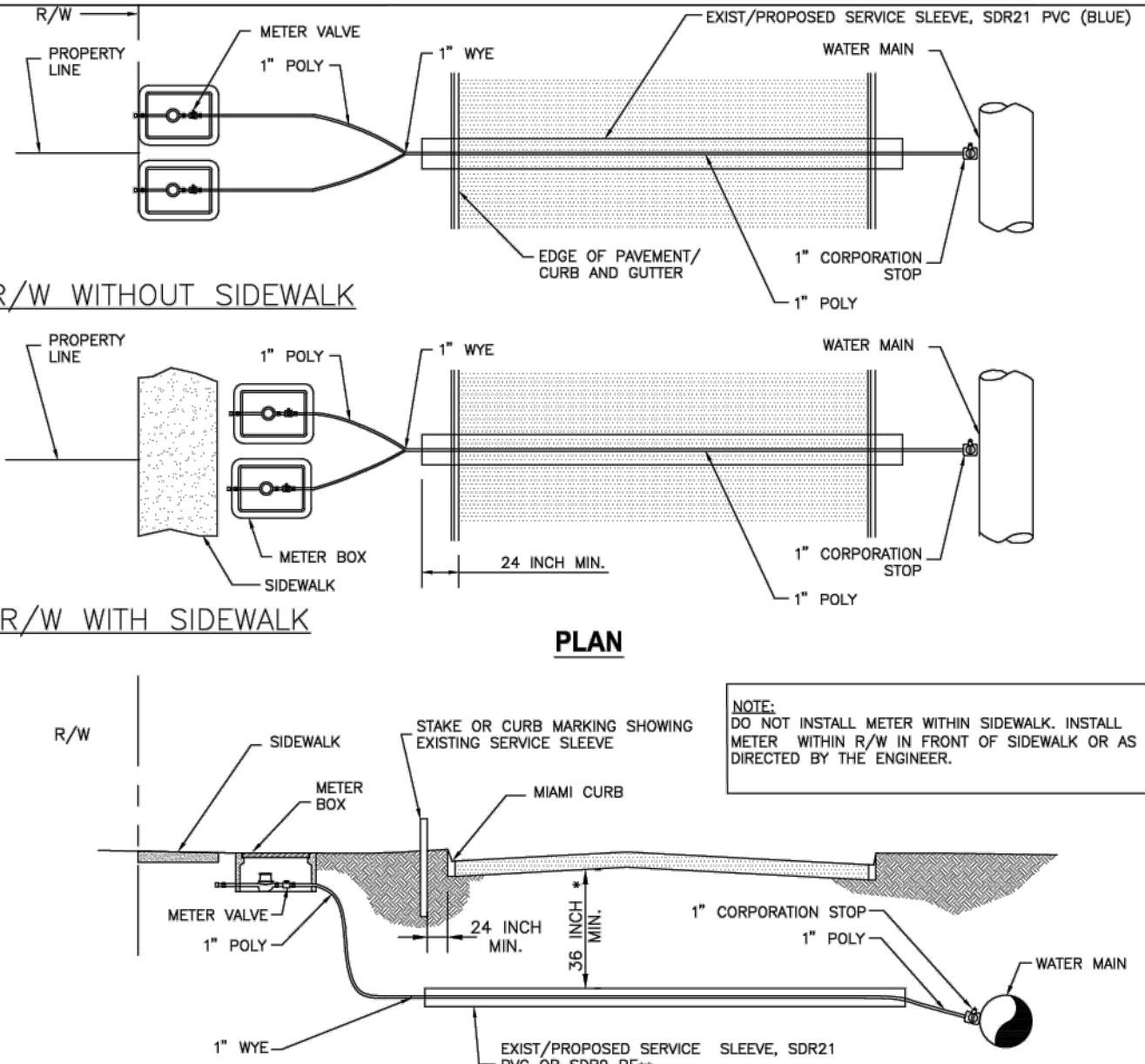


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W-9G



NOTE:
DO NOT INSTALL METER WITHIN SIDEWALK. INSTALL METER WITHIN R/W IN FRONT OF SIDEWALK OR AS DIRECTED BY THE ENGINEER.

RESIDENTIAL DUAL LOT METERED SERVICE (FAR SIDE)
NTS



**CITY OF ZEPHYRHILLS
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UNDERGROUND UTILITIES

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. IT IS THE RESPONSIBILITY OF THE USER OF THIS PLAN TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCURRED BY THE USER OF THIS PLAN. LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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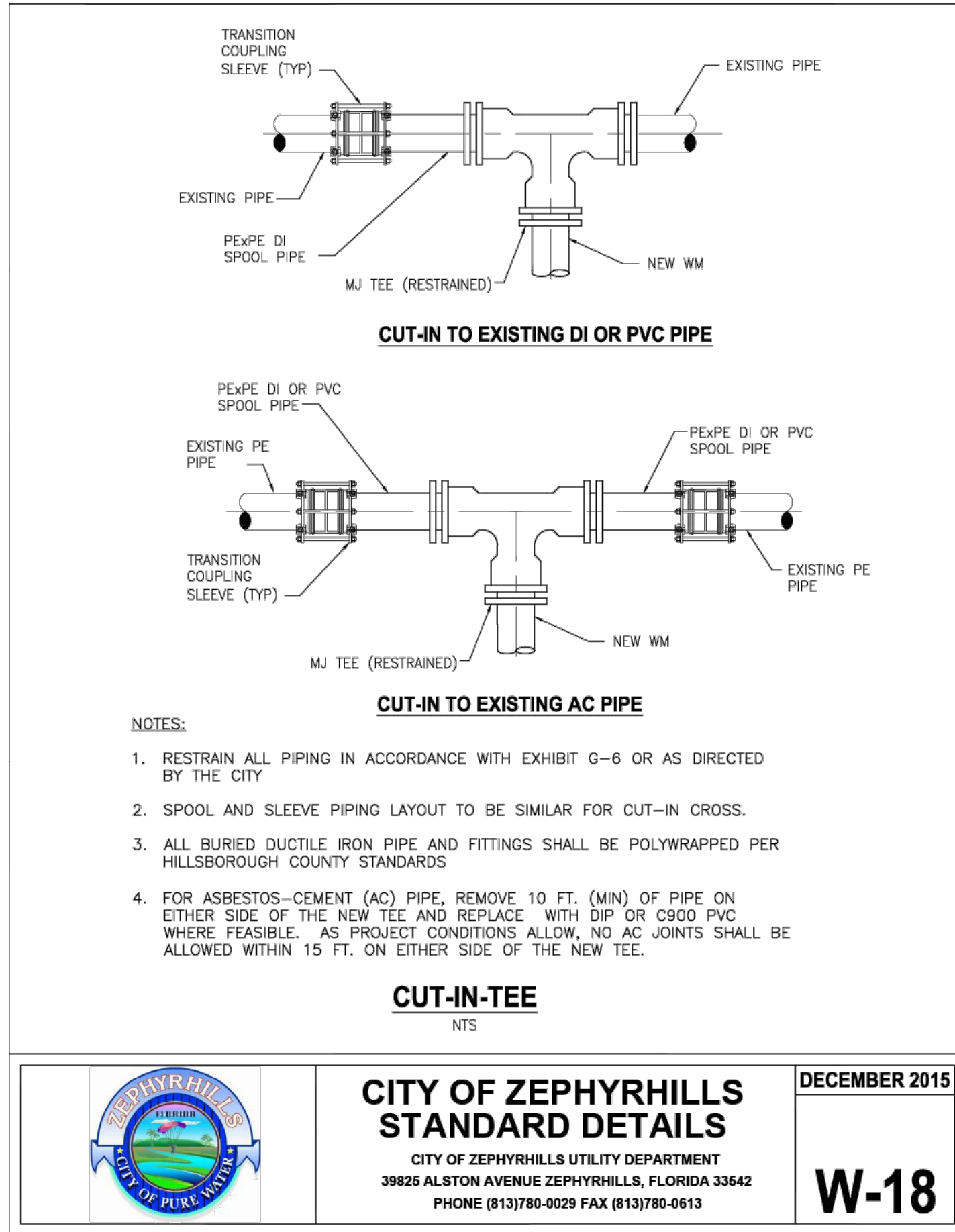
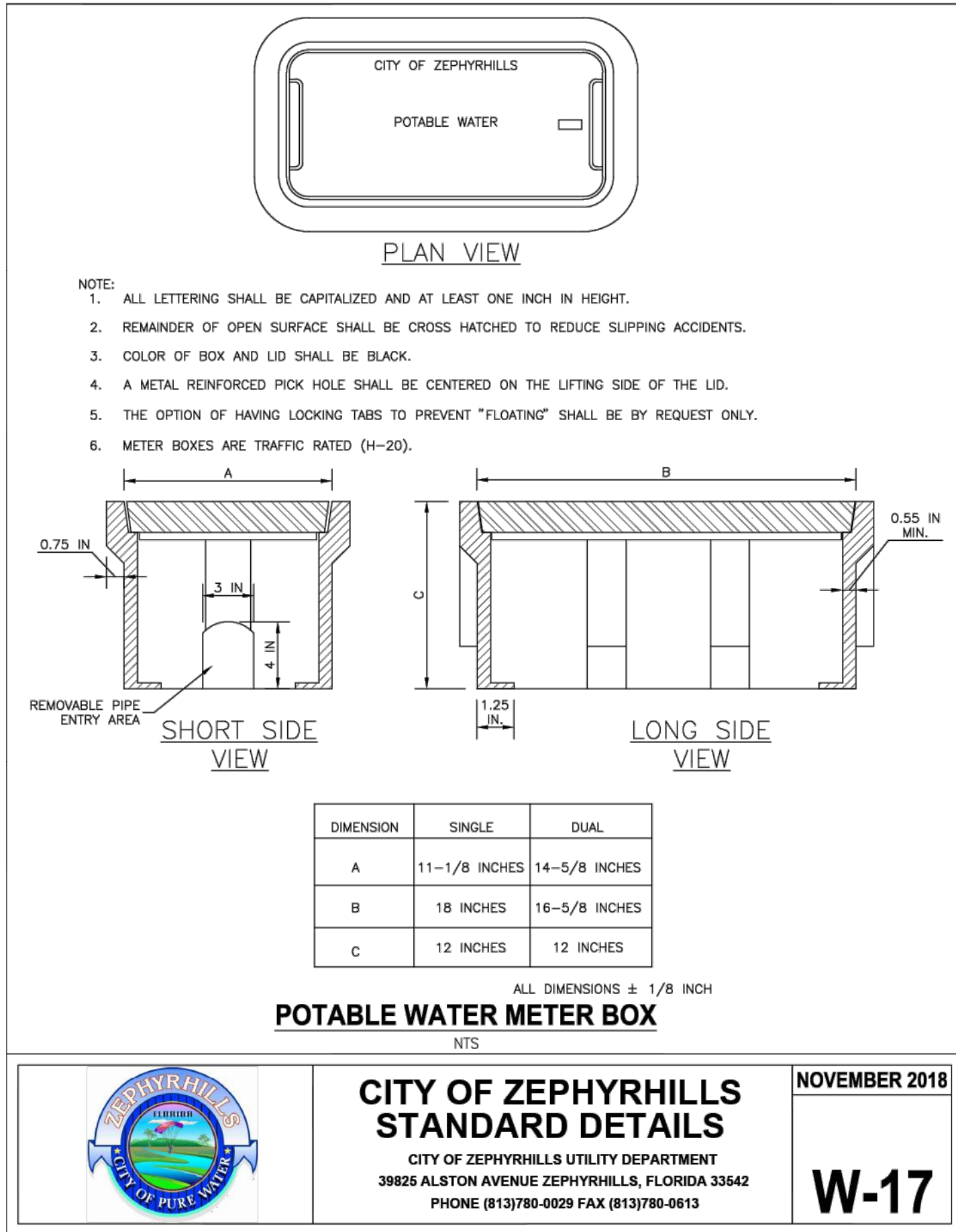
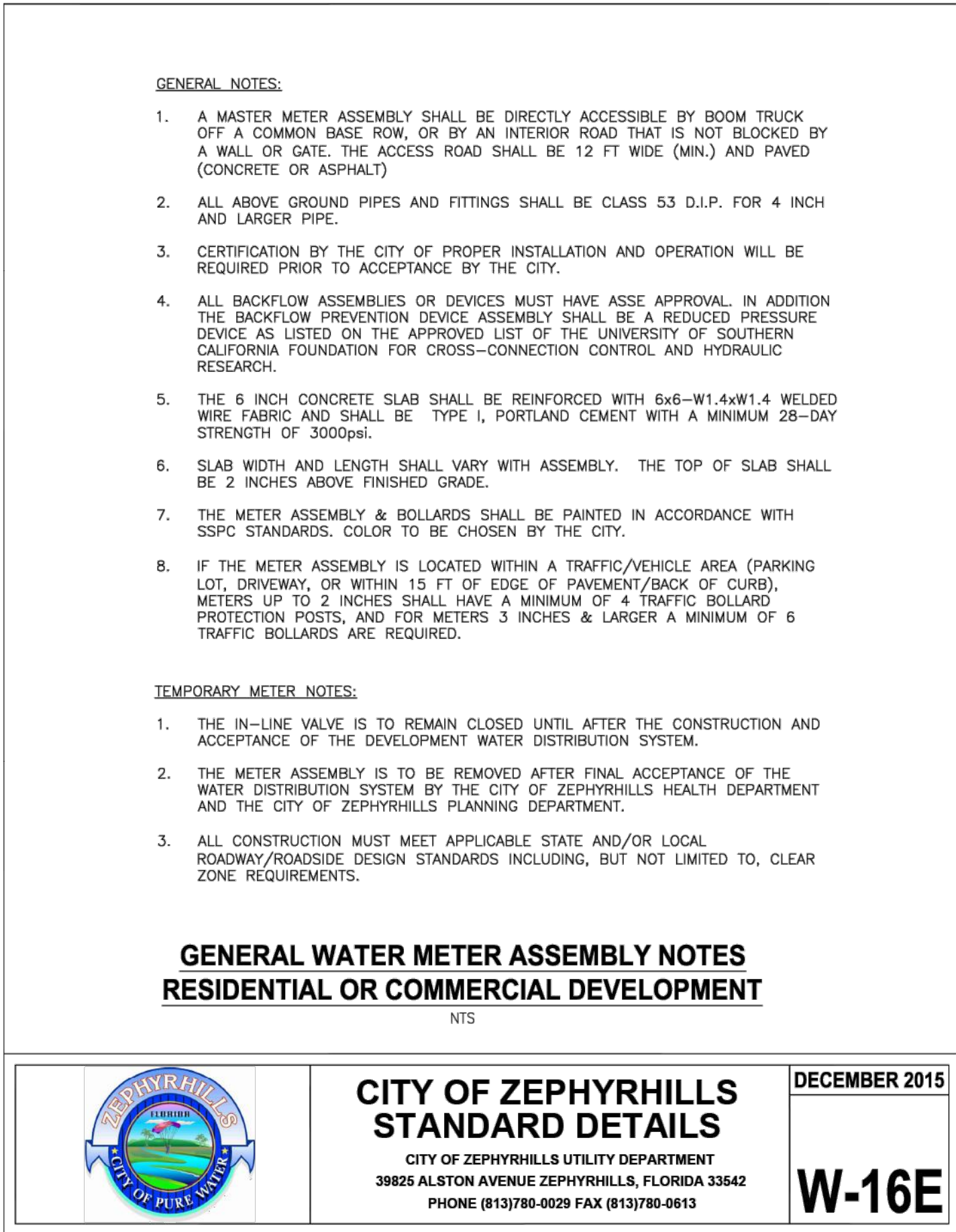
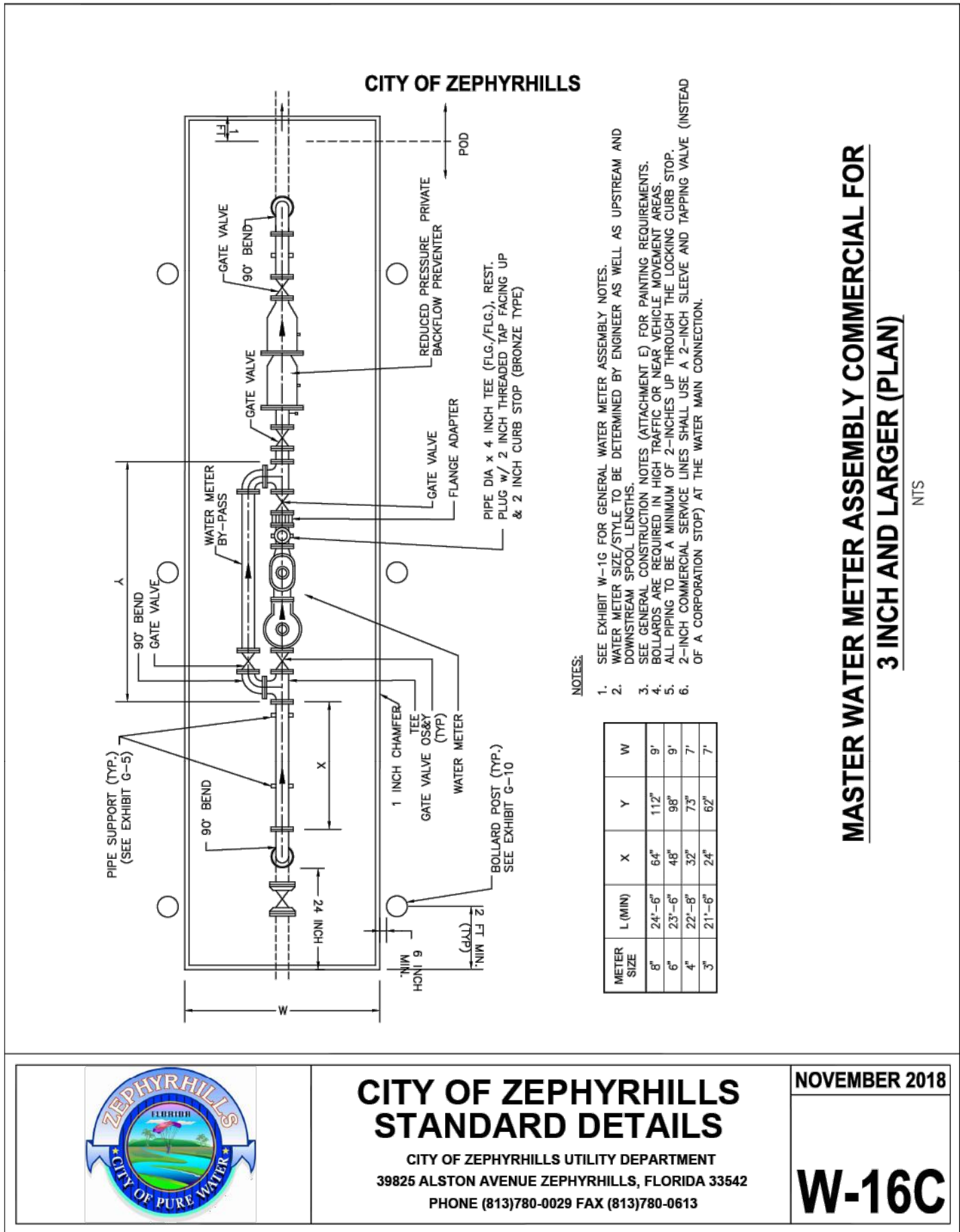
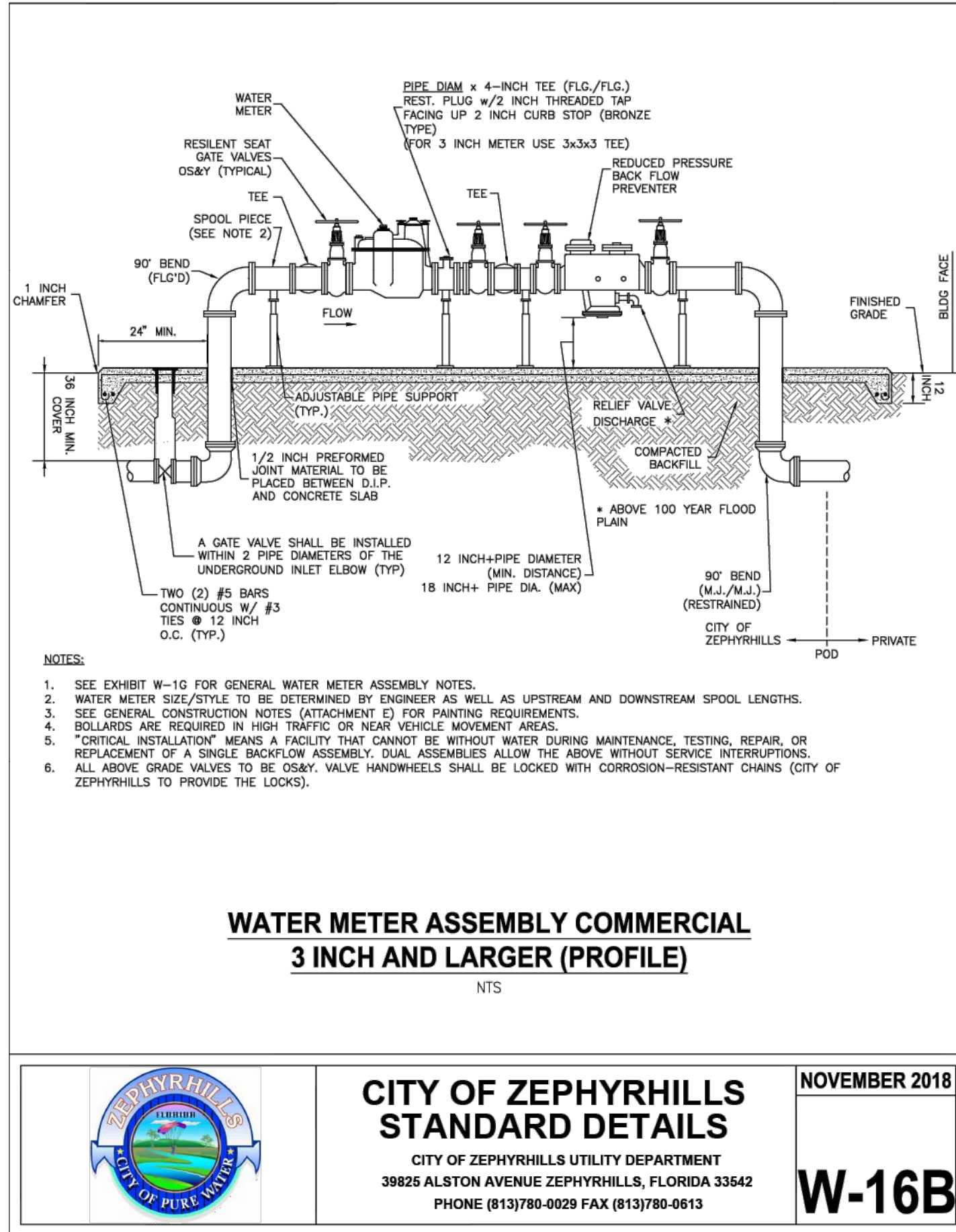
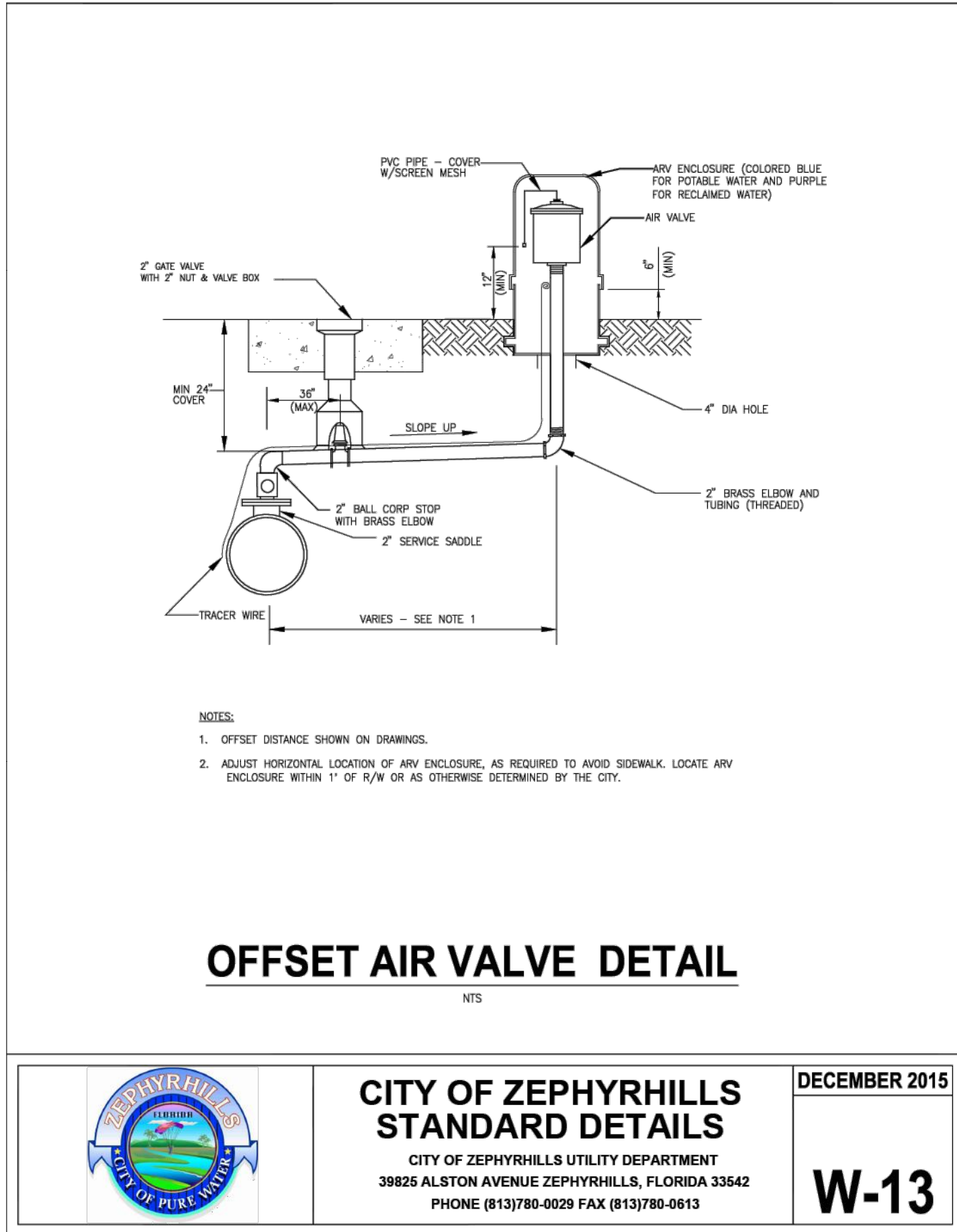
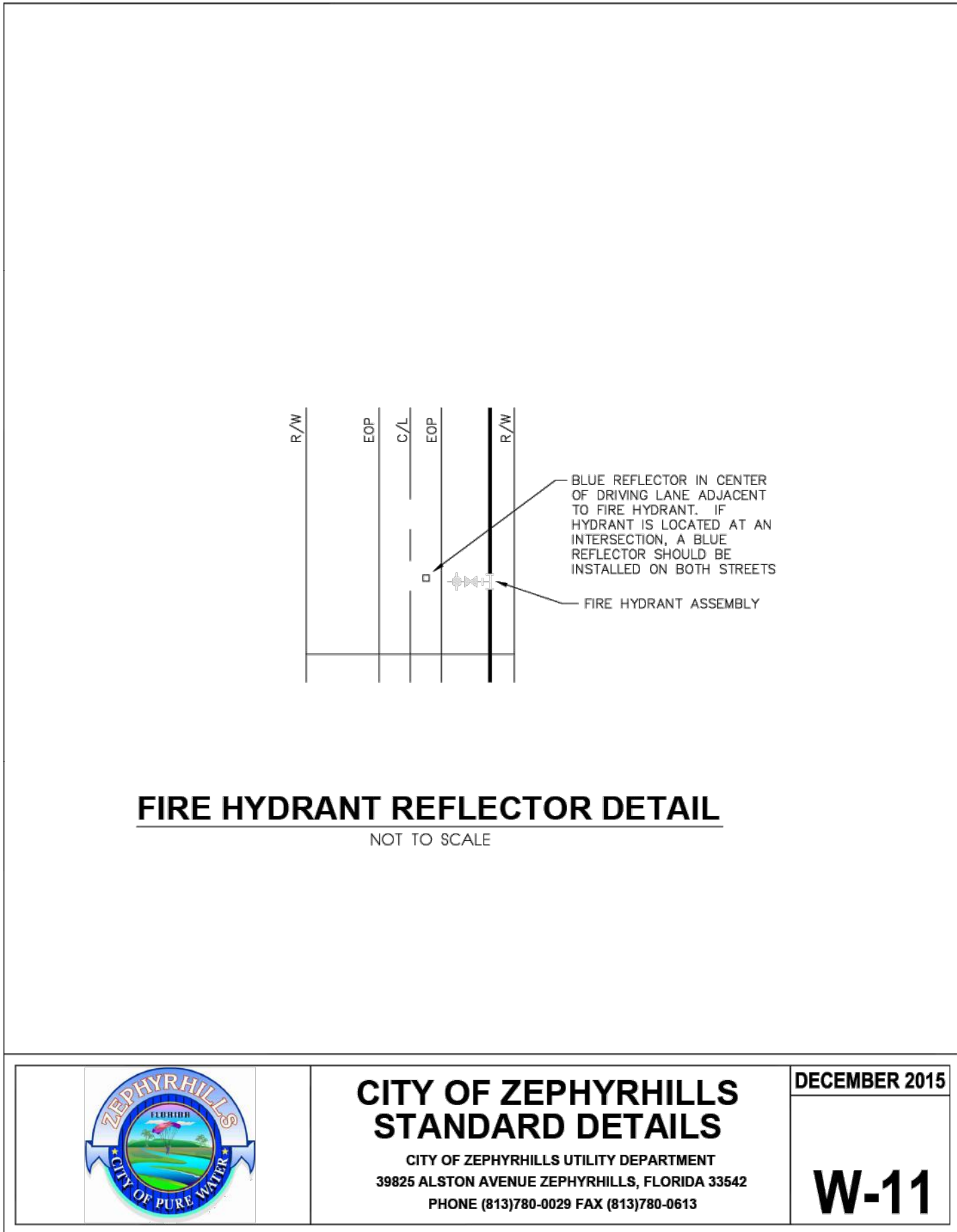
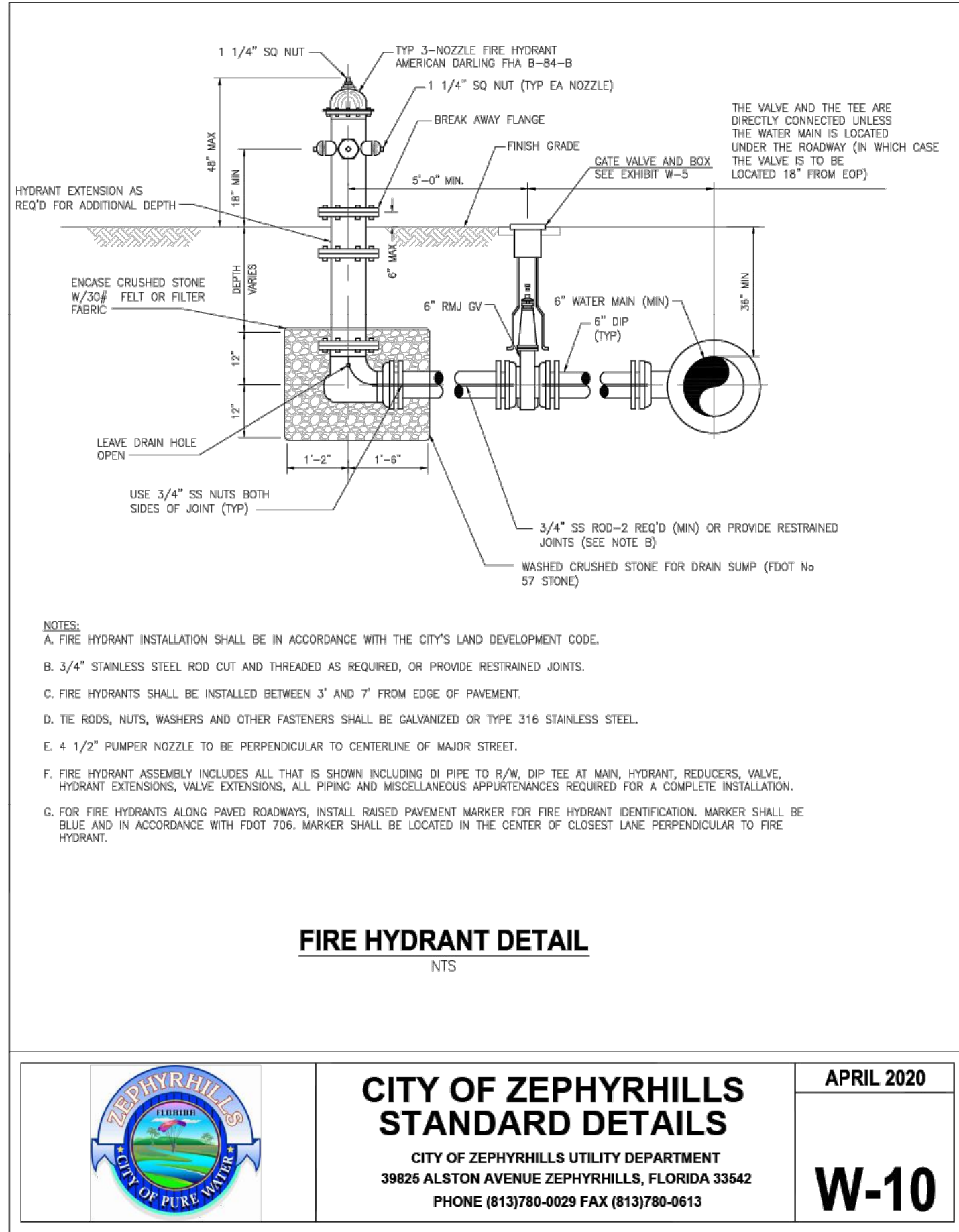
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TAMPA, FL 33626

CALUMET TOWNS

CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:
UTILITY DETAILS

SHEET NUMBER:
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CALUMET TOWNS

CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

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UTILITY DETAILS

SHEET NUMBER:
C-7.7

LEGEND

BP BACKFLOW PREVENTION ASSEMBLY

M WATER METER

V SERVICE VALVE

NOTES:

1. POD IS THE DOWNSTREAM SIDE OF THE WATER METER, BACKFLOW ASSEMBLY, OR VALVE (CLOSEST APPARATUS TO THE EXTERIOR OF THE STRUCTURE). THIS APPLIES TO BOTH EXISTING AND NEW COMPONENTS LOCATED WITHIN 25' OF A STRUCTURE.

2. POD IS WHERE THE SERVICE LINE ENTERS THE STRUCTURE WHEN NO COMPONENTS ARE LOCATED WITHIN 25' OF A STRUCTURE.

3. POD IS WHERE THE SERVICE LINE ENTERS THE STRUCTURE WHEN THE LENGTH OF THE SERVICE LINE ORIGINATING FROM A WATER METER, BACKFLOW ASSEMBLY, OR VALVE INSTALLED WITHIN 25' OF A STRUCTURE EXCEEDS 25'.

POINTS OF DEMARCATION POTABLE WATER SERVICE

NTS



CITY OF ZEPHYRHILLS
STANDARD DETAILS

CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
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W-19

LEGEND

AMR AUTOMATIC METER READING

NOTES:

1. THE POD FOR AN AMR IS THE SAME REGARDLESS IF IT'S SERVING A STRUCTURE OR PROVIDING A SERVICE TO CITY OF ZEPHYRHILLS WATER SYSTEM

2. POD IS THE INLET SIDE OF ALL AMR'S.

POINTS OF DEMARCATION POTABLE WATER SERVICE

NTS



CITY OF ZEPHYRHILLS
STANDARD DETAILS

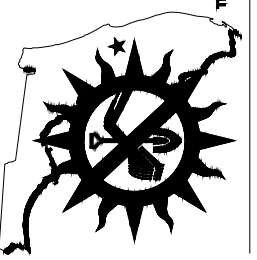
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THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE USE OF THIS INFORMATION. LOCATE AND PROTECT ANY AND ALL UNDERGROUND UTILITIES.

LAURIE S. BURCAW, PE #46064



BEACON
CIVIL ENGINEERING

LAND DEVELOPMENT ENGINEERS
8345 GUNN HIGHWAY
TAMPA, FL 33626

CALUMET TOWNS

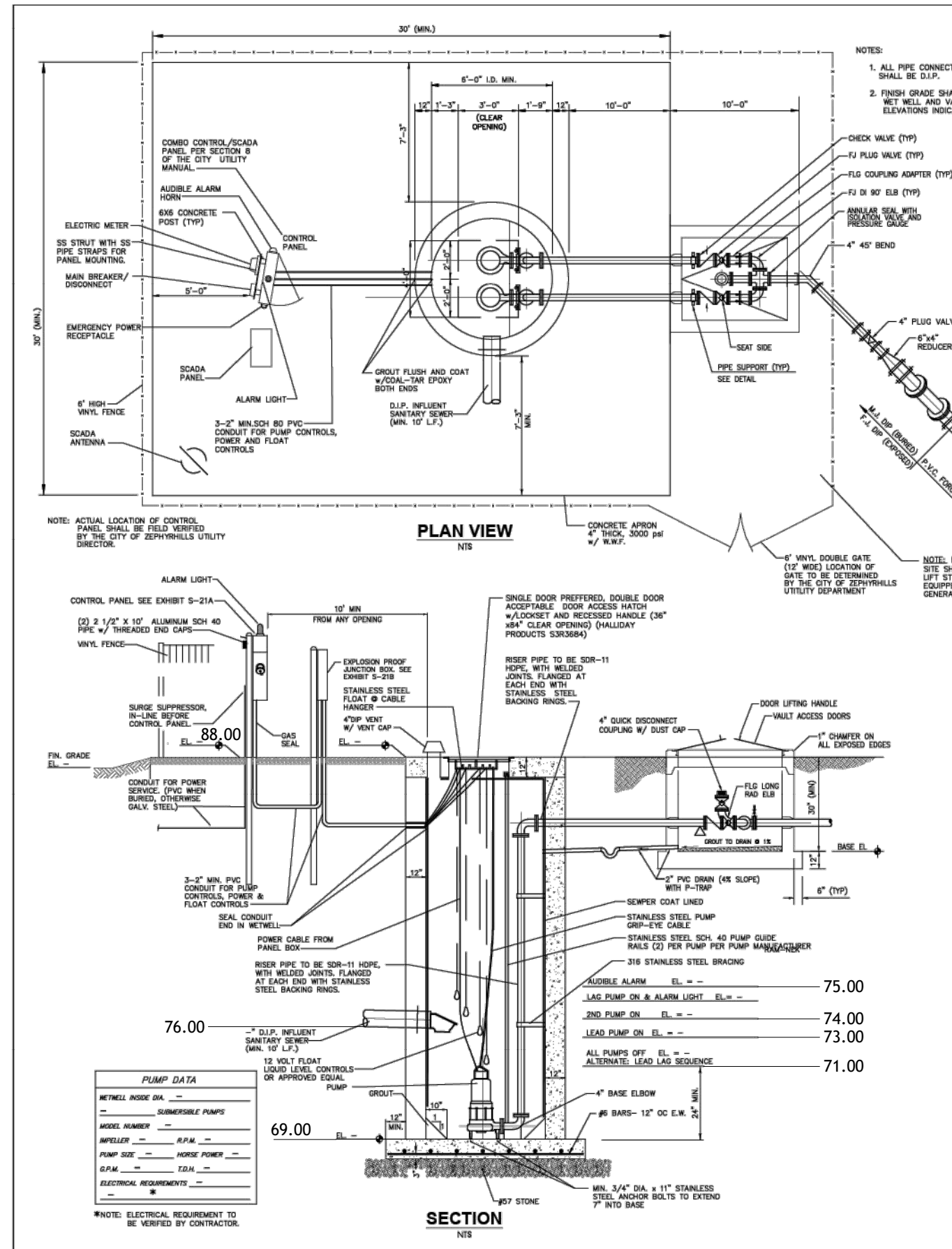
CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

UTILITY DETAILS

SHEET NUMBER:

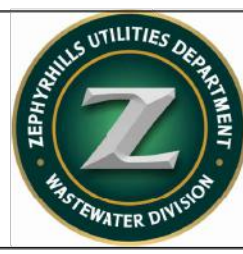
C-7.8



NOTES

- [illegible]

DUPLEX LIFT STATION

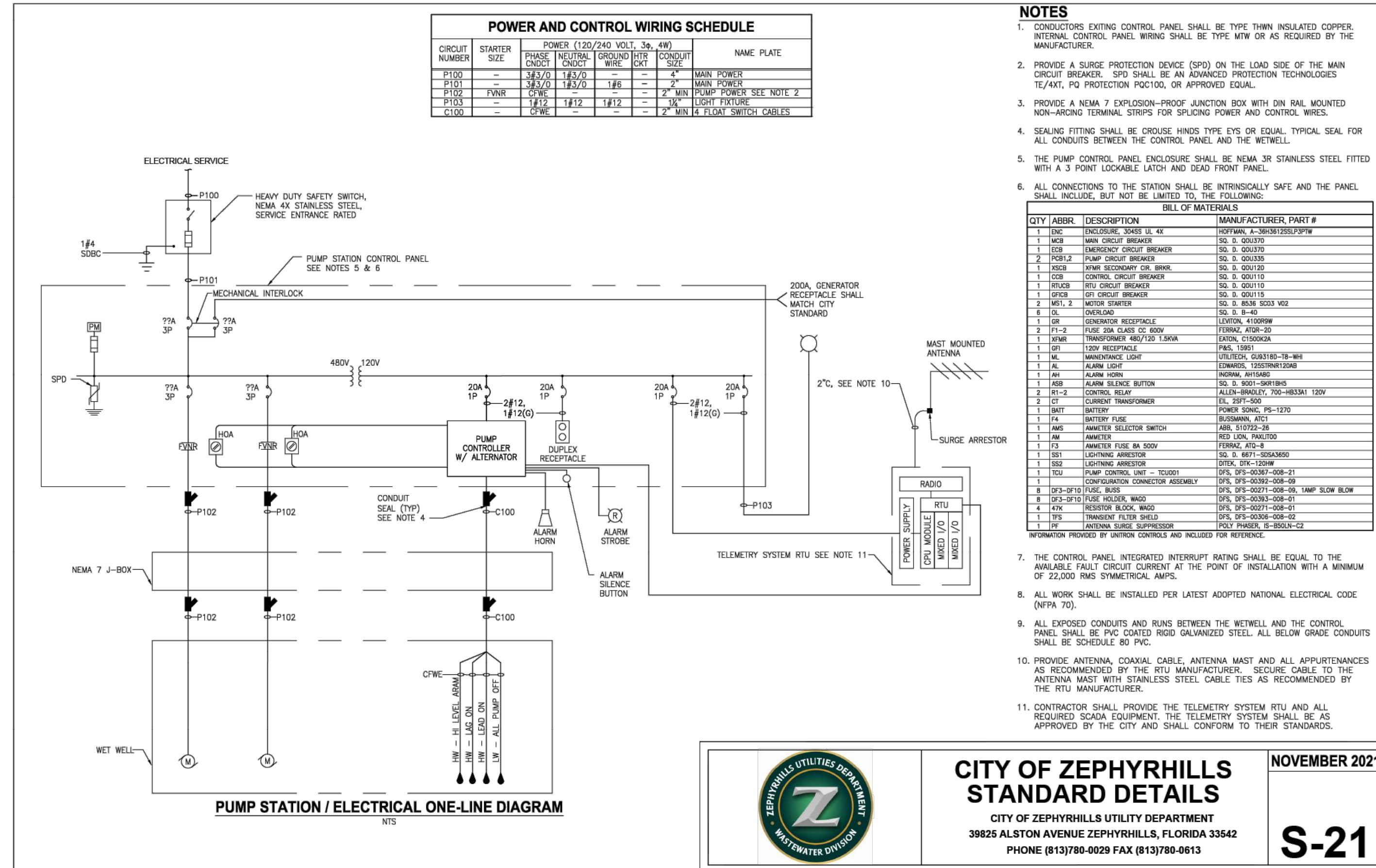


CITY OF ZEPHYRHILLS STANDARD DETAILS

CITY OF ZEPHYRHILLS UTILITY DEPARTMENT
39825 ALSTON AVENUE ZEPHYRHILLS, FLORIDA 33542
PHONE (813)780-0029 FAX (813)780-0613

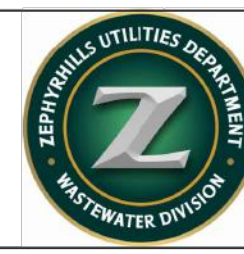
NOVEMBER 2021

S-11



NOTES

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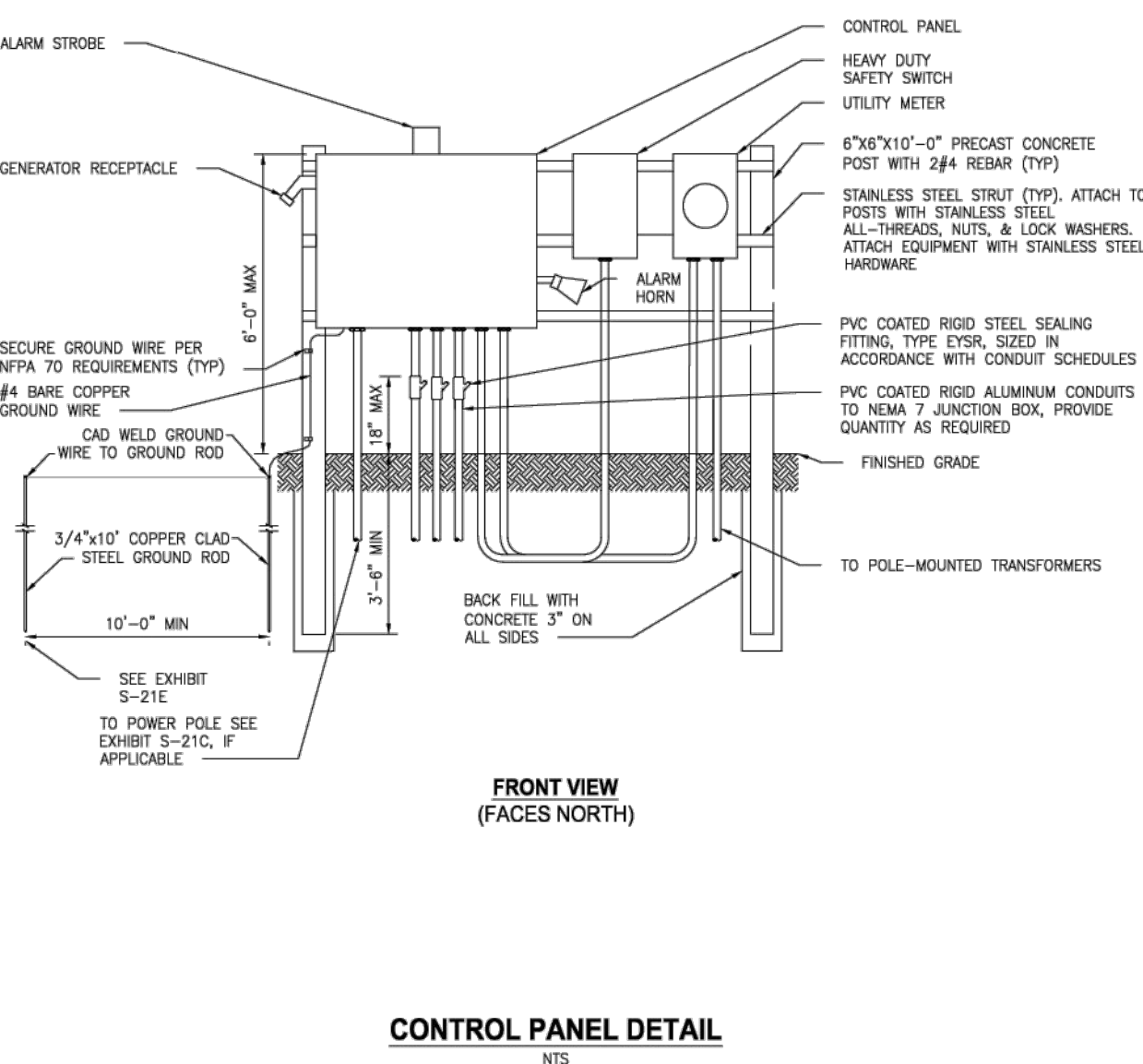


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325 ALSTON AVENUE ZEPHYRHILLS, FLORIDA 33542
PHONE (813)780-0029 FAX (813)780-0613

NOVEMBER 2021

S-21



EXPLOSION PROOF JUNCTION BOX MOUNTING DETAIL

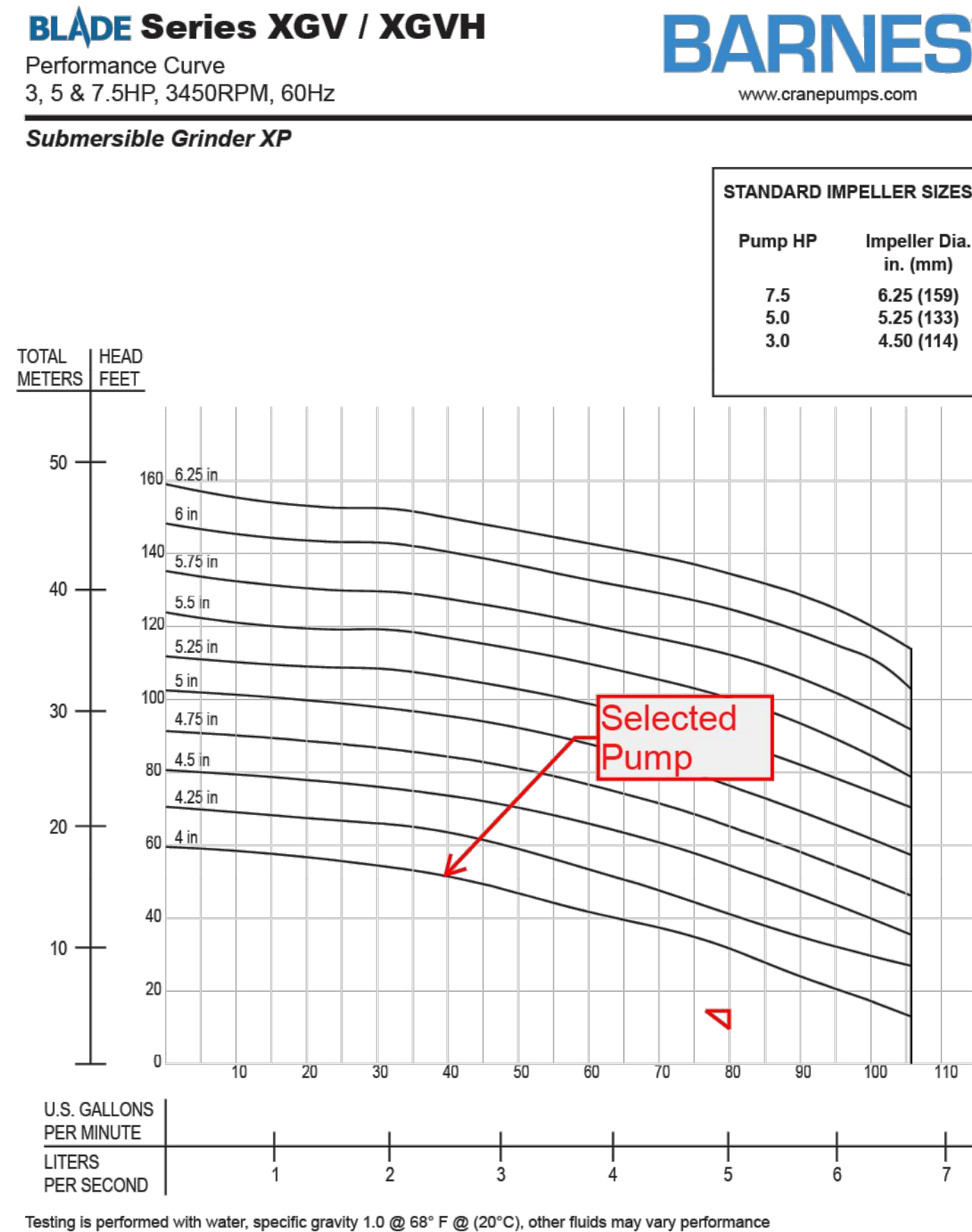


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PHONE (813)780-0029 FAX (813)780-0613

NOVEMBER 2021

S-21B



STANDARD IMPELLER SIZES	
Pump HP	Impeller Dia. in. (mm)
7.5	6.25 (159)
5.0	5.25 (133)
3.0	4.50 (114)

TOP OF WETWELL	88.00	Feet
TOP OF VALVEBOX	88.00	Feet
INLET INVERT	76.00	Feet
HIGH LEVEL ALARM	75.00	Feet
LAG PUMP ON	74.00	Feet
LEAD PUMP ON	73.00	Feet
PUMPS OFF	71.00	Feet
BOTTOM OF WETWELL	69.00	Feet
TOTAL DEPTH	19.00	

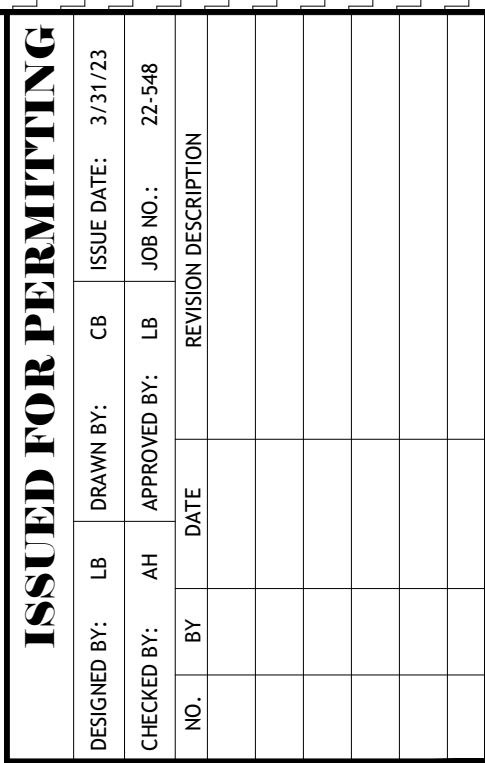


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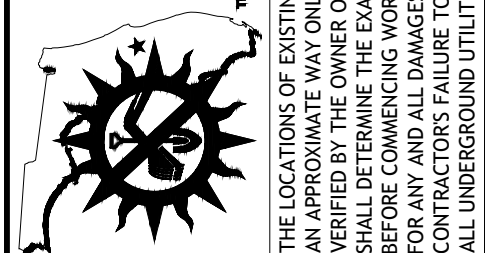
NOVEMBER 2021

S-21A

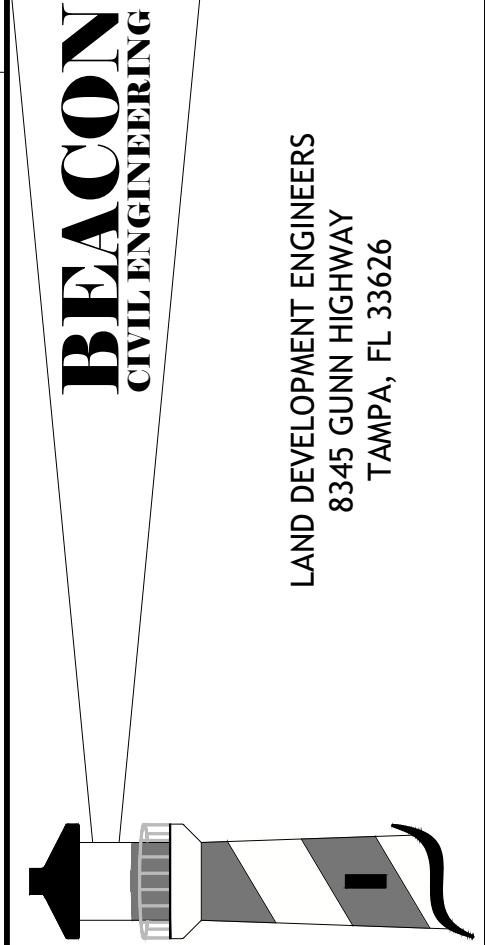


**3 WORKING DAYS
BEFORE YOU DIG
CALL SUNSHINE STATE
ONE CALL OF FLORIDA
1-800-432-4770
FOR THE LOCATION OF
UNDERGROUND FACILITIES**

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN THE RECORD DRAWINGS AND SHALL BE VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES.



LAURIE S. BURCAW, PE #46064



CALUMET TOWNS

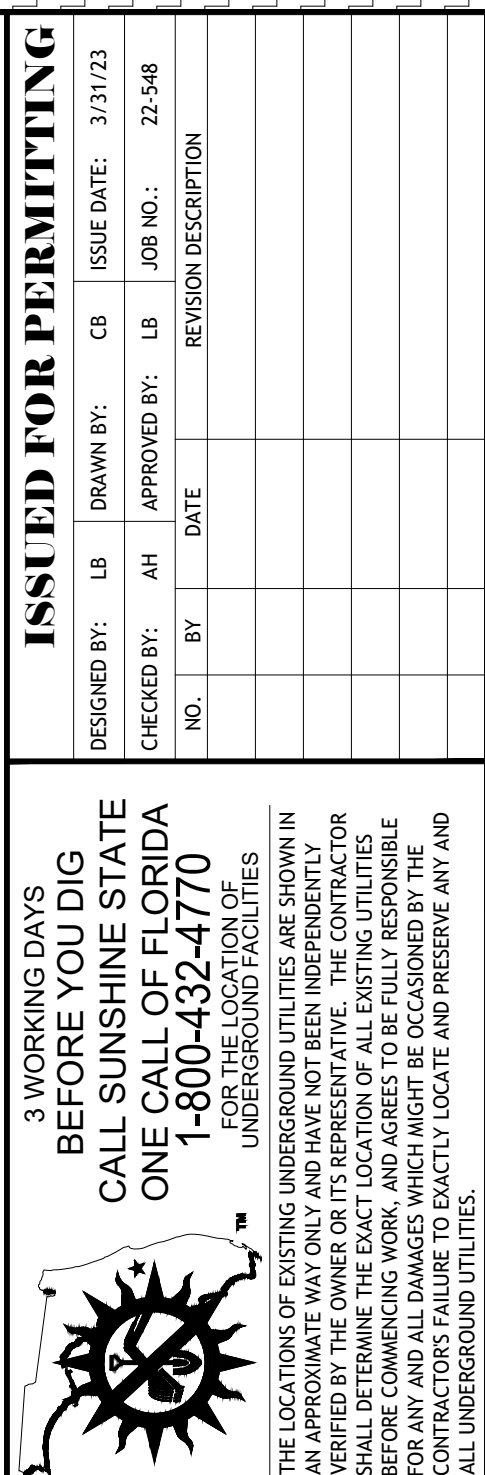
CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

PUMP STATION DETAILS

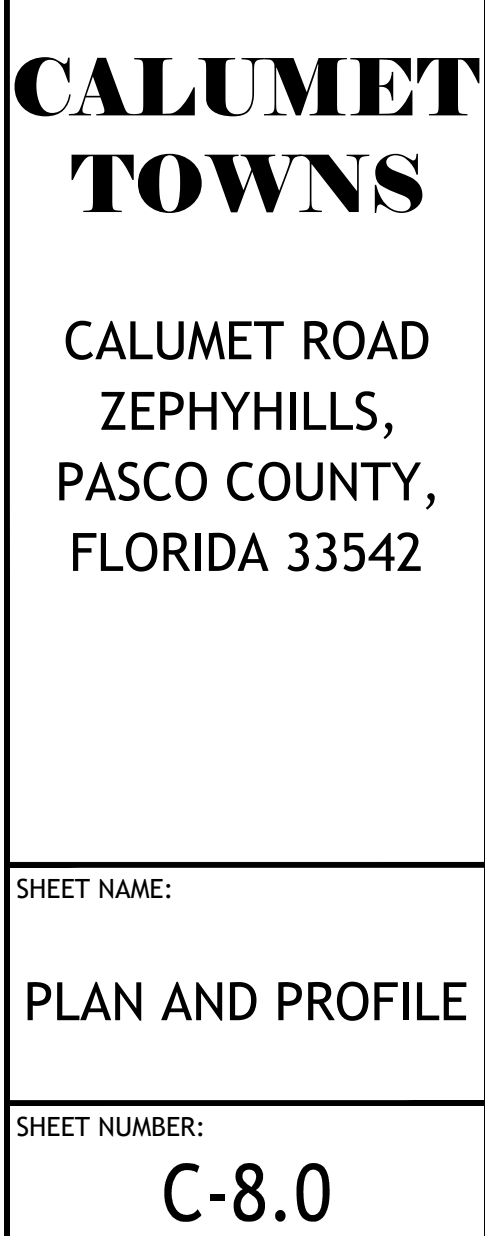
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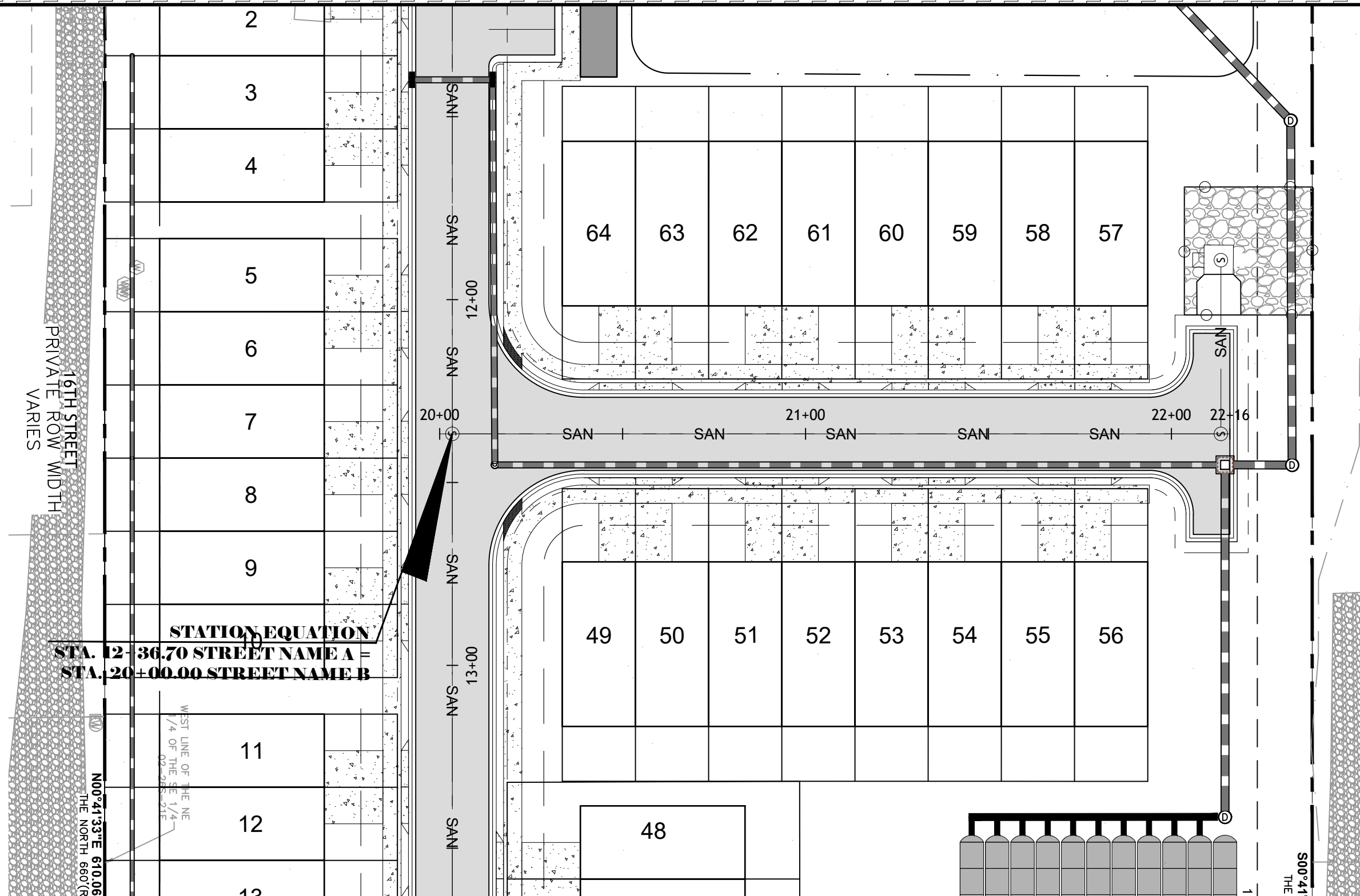
C-7.9



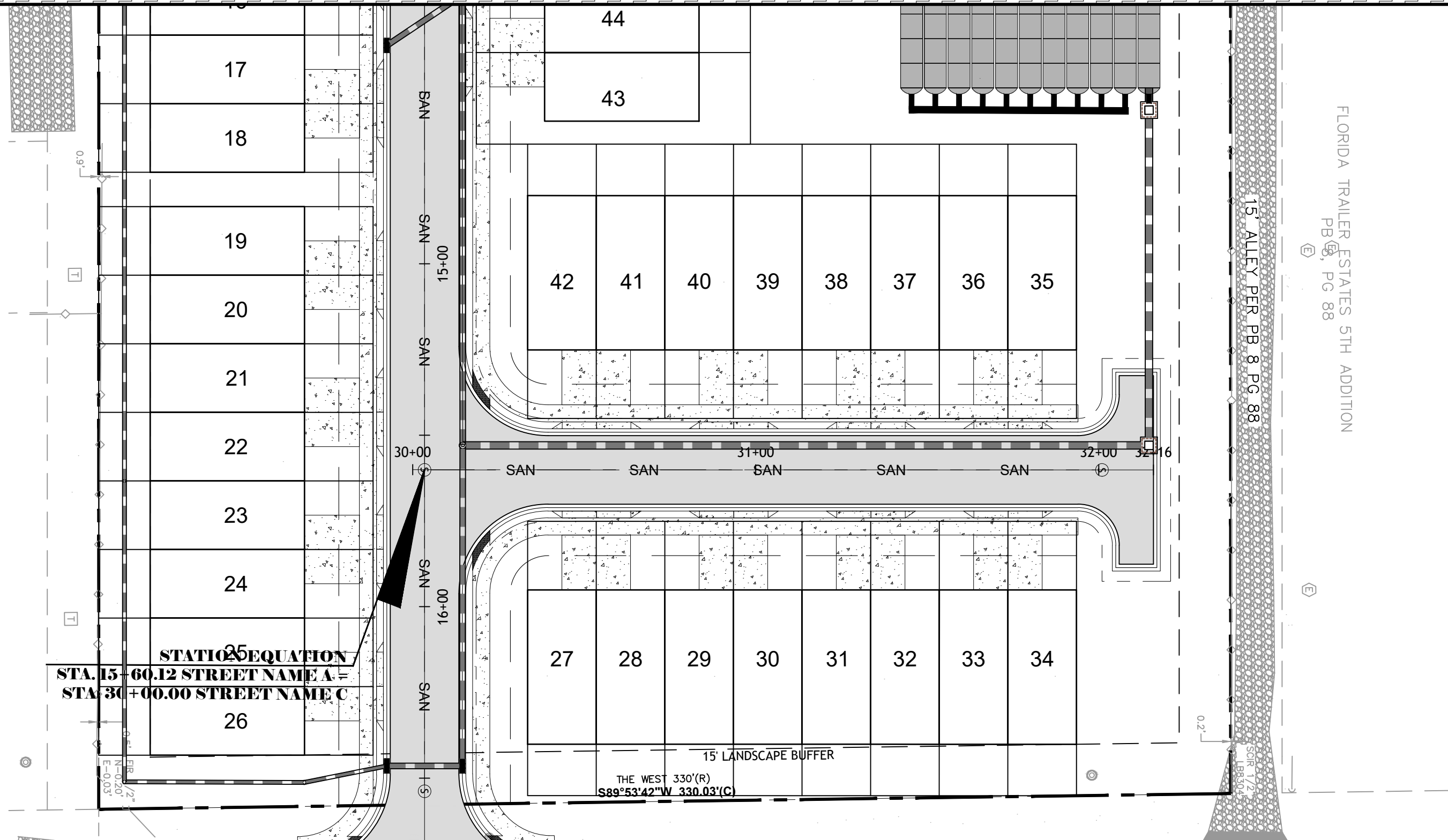
BEACON
CIVIL ENGINEERING

SCALE : 1" = 30'





PARCEL ID: 02-26-21-0000-02600-0000
OWNER: FLORIDA ESTATES INC.



ISSUED FOR PERMITTING

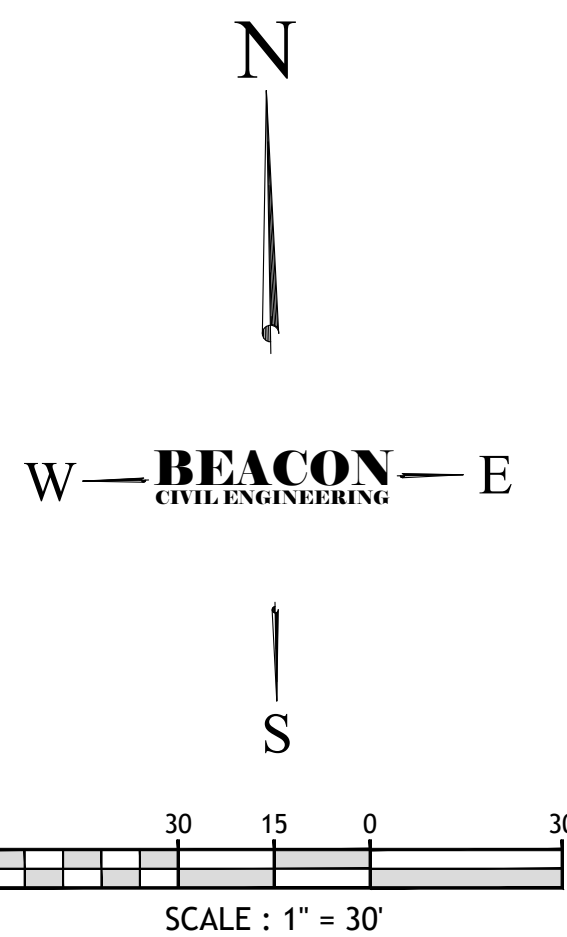
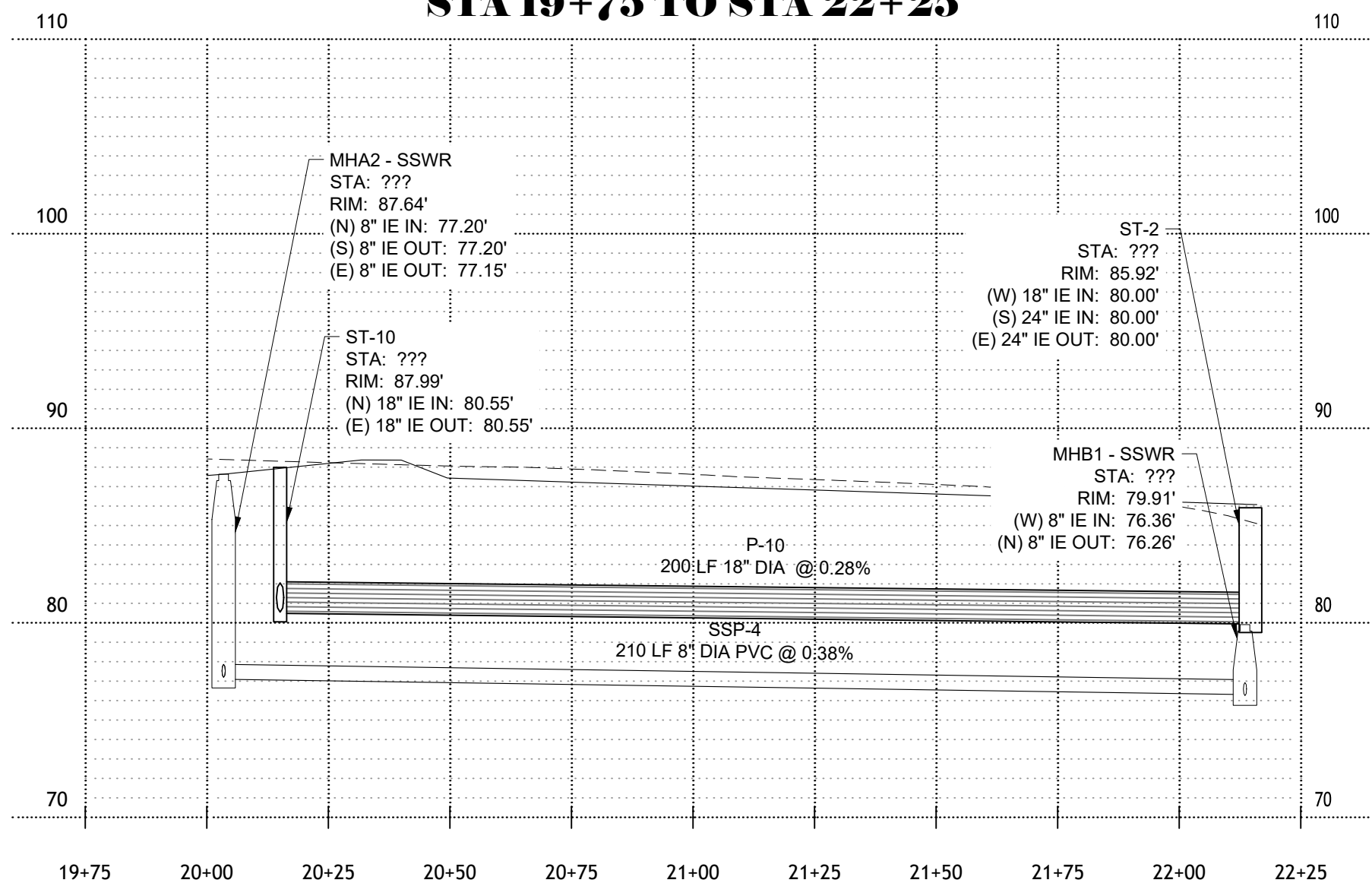
DESIGNED BY: LB
DRAWN BY: LB
CHECKED BY: AH
NO. BY DATE

ISSUE DATE: 3/31/23
JOB NO.: 22-548
REVISION DESCRIPTION

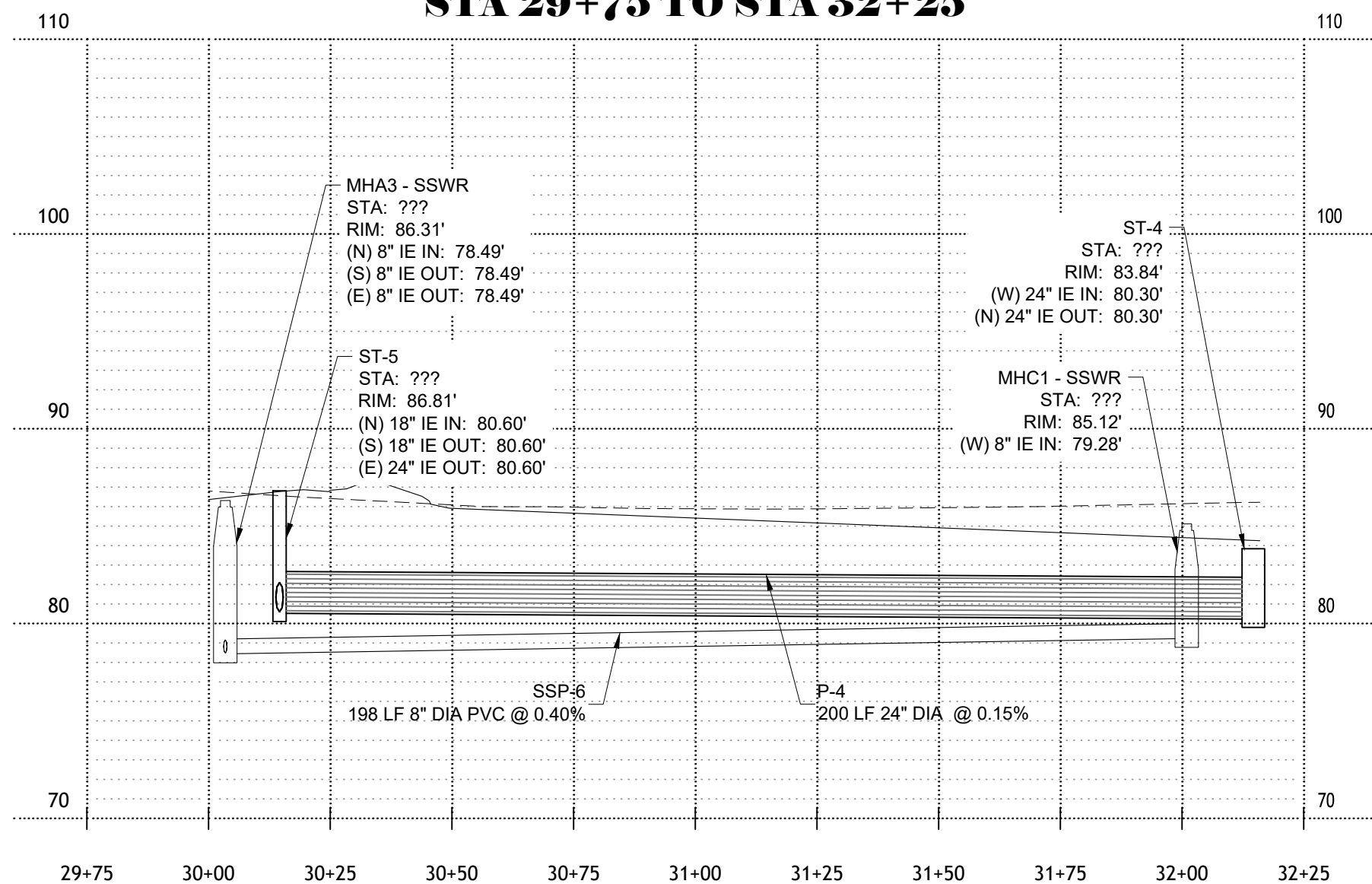
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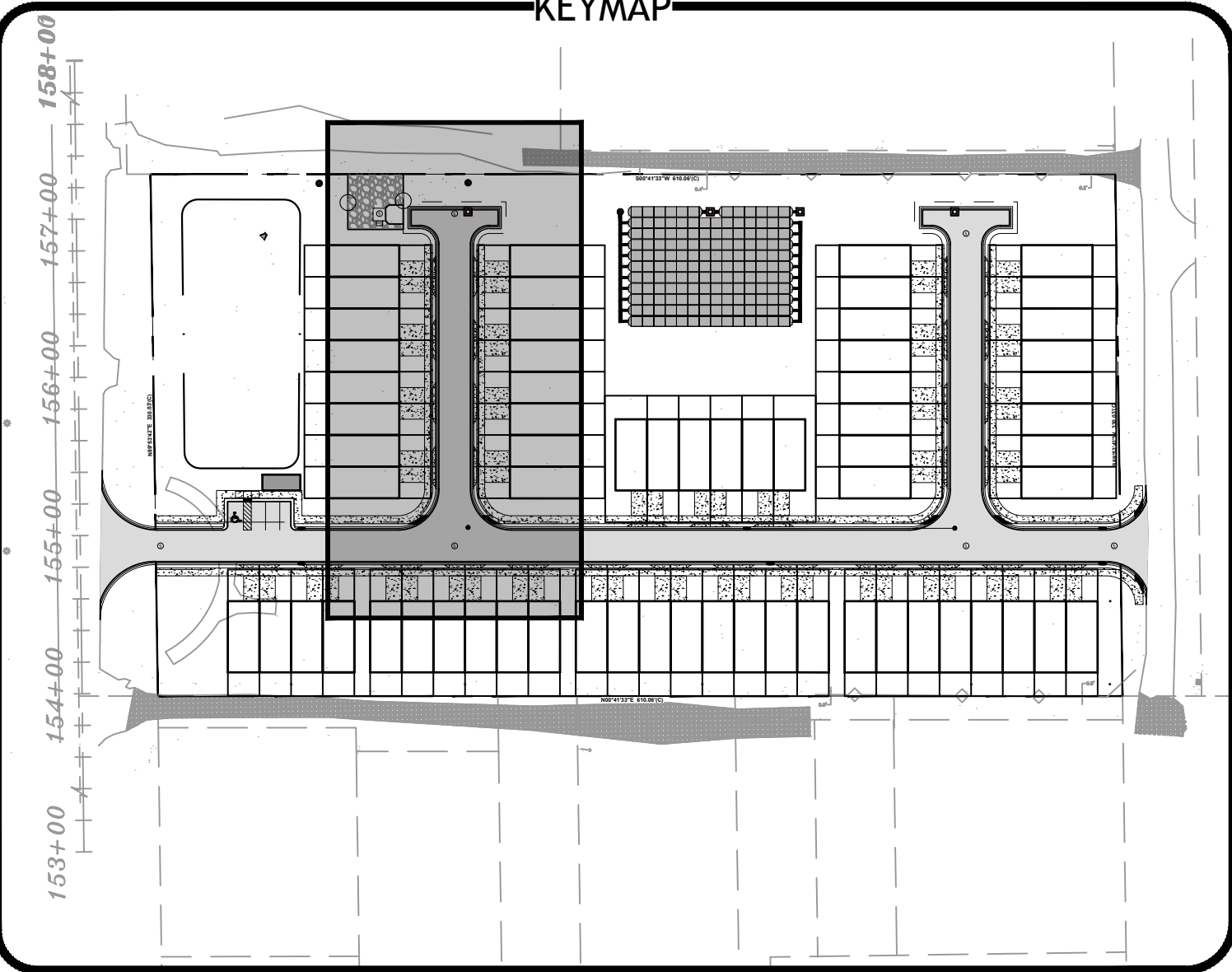
STREET NAME B
STA 19+75 TO STA 22+25



STREET NAME C
STA 29+75 TO STA 32+25



KEYMAP



SANITARY

NAME	STRUCTURE TYPE	STRUCTURE DATA
MHA1 - SSWR	SANITARY MANHOLE	RIM: 87.92 SSP-1 IE OUT: 77.94
MHA2 - SSWR	SANITARY MANHOLE	RIM: 87.64 SSP-1 IE IN: 77.20 SSP-2 IE OUT: 77.20 SSP-4 IE OUT: 77.15
MHA3 - SSWR	SANITARY MANHOLE	RIM: 86.31 SSP-2 IE IN: 78.49 SSP-3 IE OUT: 78.49 SSP-6 IE OUT: 78.49
MHA4 - SSWR	SANITARY MANHOLE	RIM: 86.38 SSP-3 IE IN: 78.86
MHB1 - SSWR	SANITARY MANHOLE	RIM: 79.91 SSP-4 IE IN: 76.36 SSP-5 IE OUT: 76.26
MHB2 - SSWR	SANITARY MANHOLE	RIM: 79.57 SSP-5 IE IN: 76.02 RIM: 85.12

PIPE TABLE

PIPE NAME	MATL	SIZE	LENGTH	SLOPE
SSP-1	PVC	8"	186 LF	0.40%
SSP-2	PVC	8"	323 LF	-0.40%
SSP-3	PVC	8"	94 LF	-0.40%
SSP-4	PVC	8"	210 LF	0.38%
SSP-5	PVC	8"	48 LF	0.50%
SSP-6	PVC	8"	198 LF	-0.40%

STRUCTURE TABLE

NAME	STRUCTURE TYPE	STRUCTURE DATA
NULL 1	NULL 1	RIM: 82.20 P-2A IE IN: 80.15
NULL 2	NULL 2	RIM: 82.28 P-3A IE OUT: 80.15
NULL 3	NULL 3	RIM: 82.28 P-3B IE IN: 80.15
ST-1	MITERED END SECTION	RIM: 83.03 P-1 IE IN: 80.00
ST-1A	MANHOLE	RIM: 84.40 P-1A IE IN: 80.00 P-1 IE OUT: 80.00
ST-1B	MANHOLE	RIM: 84.88 P-1B IE IN: 80.00 P-1A IE OUT: 80.00
ST-2	FOOT TYPE C INLET	RIM: 85.92 P-10 IE IN: 80.00 P-2 IE IN: 80.00 P-1B IE OUT: 80.00
ST-2A	MANHOLE	RIM: 87.11 P-2 IE IN: 80.15 P-2A IE OUT: 80.15
ST-3	FOOT TYPE C INLET	RIM: 87.11 P-3A IE IN: 80.15 P-2A IE OUT: 80.15
ST-4	FOOT TYPE C INLET	RIM: 83.84 P-4 IE IN: 80.30 P-3 IE OUT: 80.30
ST-5	MANHOLE	RIM: 86.51 P-8 IE IN: 80.60 P-5 IE OUT: 80.60 P-4 IE OUT: 80.60
ST-6	FOOT TYPE V INLET	RIM: 85.69 P-5 IE IN: 80.75 P-6 IE OUT: 80.75
ST-7	FOOT TYPE V INLET	RIM: 85.69 P-6 IE IN: 80.85 P-6 IE OUT: 81.99

STORM

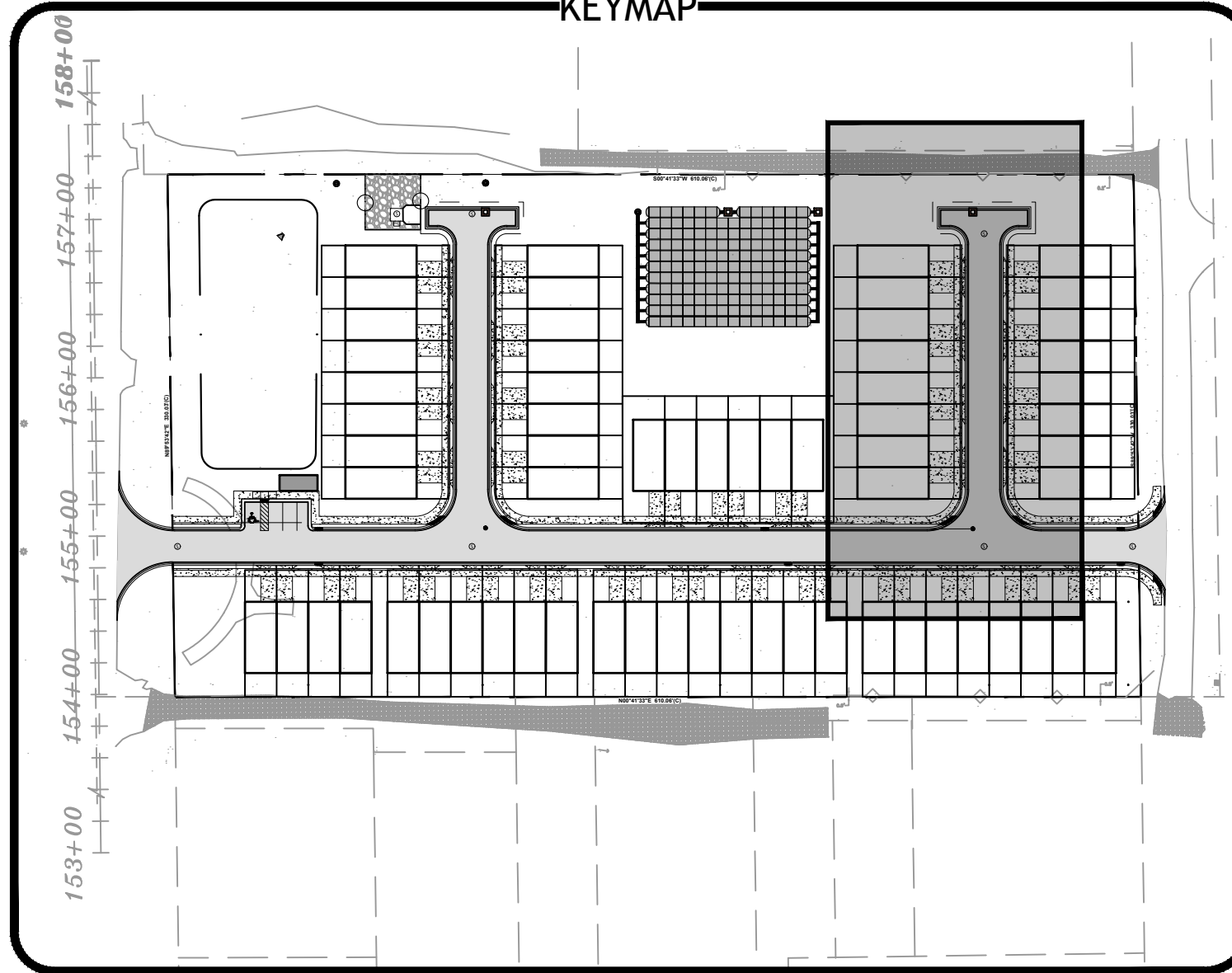
STRUCTURE TABLE

NAME	STRUCTURE TYPE	STRUCTURE DATA
ST-7A	MANHOLE	RIM: 87.24 P-3 IE IN: 80.15 P-3B IE OUT: 80.15
ST-10	MANHOLE	RIM: 87.99 P-11 IE IN: 80.55 P-10 IE OUT: 80.55
ST-10A	FOOT TYPE V INLET	RIM: 86.93 P-9 IE IN: 80.80 P-8 IE OUT: 80.80
ST-11	FOOT TYPE V INLET	RIM: 86.63 P-12 IE IN: 80.65 P-11 IE OUT: 80.65
ST-11A	FOOT TYPE V INLET	RIM: 86.84 P-9 IE OUT: 80.90
ST-12	FOOT TYPE V INLET	RIM: 86.63 P-12 IE OUT: 80.75
YI-1	YARD DRAIN	RIM: 88.15 PYI-1 IE IN: 81.99 PYI-2 IE OUT: 81.99
YI-2	YARD DRAIN	RIM: 88.20 PYI-2 IE IN: 82.15 PYI-3 IE OUT: 82.15
YI-3	YARD DRAIN	RIM: 88.20 PYI-3 IE IN: 82.41 PYI-4 IE OUT: 82.41
YI-4	YARD DRAIN	RIM: 87.30 PYI-4 IE IN: 82.92 PYI-5 IE OUT: 82.92
YI-5	YARD DRAIN	RIM: 87.51 PYI-5 IE IN: 83.37 PYI-6 IE OUT: 83.37
YI-6	YARD DRAIN	RIM: 87.70 PYI-6 IE IN: 83.70

PIPE TABLE

PIPE NAME	MATL	SIZE	LENGTH	SLOPE
P-1		24"	46 LF	0.00%
P-1A		24"	94 LF	0.00%
P-1B		24"	18 LF	0.00%
P-2		24"	96 LF	0.16%
P-2A		24"	7 LF	0.00%
P-3		24"	98 LF	0.15%
P-3A		24"	7 LF	0.00%
P-3B		24"	6 LF	0.00%
P-4		24"	200 LF	0.15%
P-5		18"	93 LF	-0.16%
P-6		18"	22 LF	-0.45%
P-8		18"	131 LF	0.15%
P-9		18"	26 LF	0.38%
P-10		18"	200 LF	0.28%
P-11		18"	105 LF	0.09%
P-12		18"	22 LF	-0.45%
PYI-1		12"	24 LF	-0.41%
PYI-2		12"	52 LF	-0.30%
PYI-3		12"	88 LF	-0.30%
PYI-4		12"	170 LF	-0.30%
PYI-5		12"	150 LF	-0.30%
PYI-6		12"	110 LF	-0.30%

KEYMAP



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LAND DEVELOPMENT ENGINEERS
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TOWNS

CALUMET ROAD
ZEPHYRHILLS,
PASCO COUNTY,
FLORIDA 33542

SHEET NAME:

PLAN AND PROFILE

SHEET NUMBER:

C-8.1