




May 19, 2014

MEMORANDUM

TO: District Board of Trustees

FROM: Jim Murdaugh, President 

SUBJECT: Phase III Document Approval for Wakulla Environmental Institute, Preservation Way road and infrastructure project.

Item Description

This item requests Board of Trustees approval of the Phase III Construction Documents for the Preservation Way road and infrastructure project at the Wakulla Environmental Institute.

Overview and Background

In order to address the schedule constraints on the Wakulla Environment Institute project, and to address the variables in the project scope associated with the Economic Development Administration grant, the engineering design of the entry road and associated utility infrastructure was contracted through DAG Architects Inc. under the College's continuing services agreement.

Completion of the construction documents for this part of the project was delayed by two actions of the Florida Department of Transportation (FDOT). After engineering design was well underway, FDOT determined that they wanted to add design of additional turn lanes at both Highway 319 and at the entry road, requiring redesign that was not contemplated in the original schedule.

The overall schedule for the project will not be affected because the construction duration for the road is less than that for the building. The construction documents for the road and infrastructure have been reviewed by the College's technical staff and TCC's Building Code Official will complete Florida Building Code review.

Past Actions by the Board

The Board approved the architectural agreement with DAG Architects Inc. at the January 21, 2014 meeting.

Funding/Financial Implications

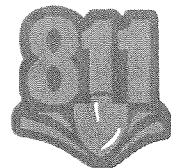
Funds for this project were appropriated by the Florida Legislature during the 2012 session. Additional funds may be made available through a U.S. Economic Development Administration grant, however the status of the grant is still not known.

Staff Resource

Teresa Smith

Recommended Action

Approve the Phase III Construction Documents for the Wakulla Environmental Institute Preservation Way Road and Infrastructure Project.



Know what's below.
Call before you dig.

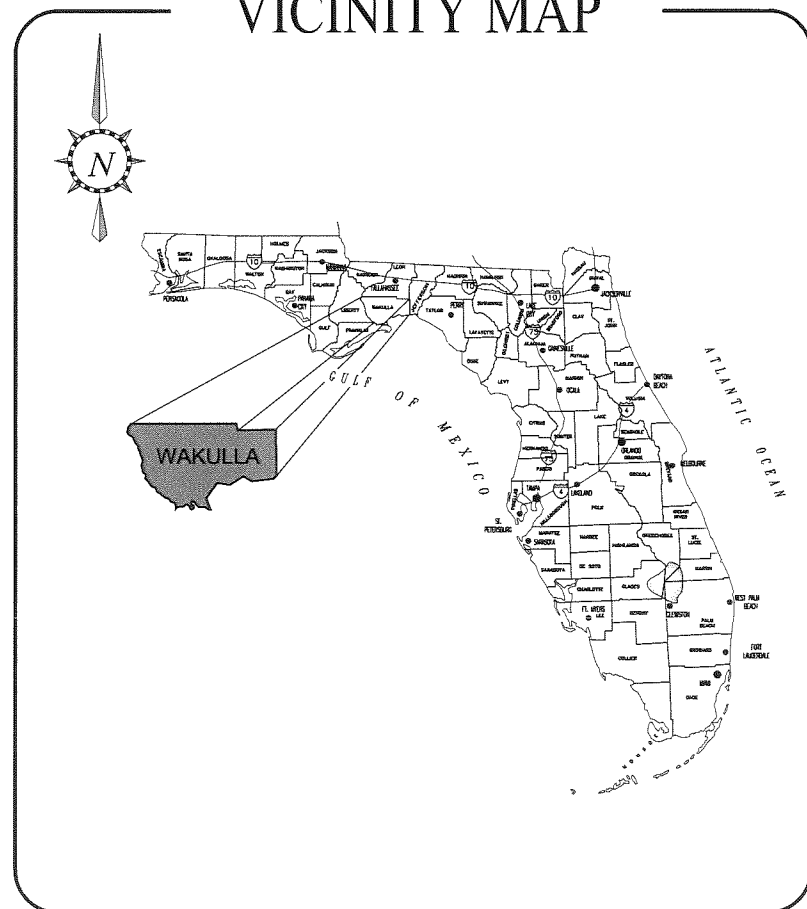
sunshine state
ONE CALL
of florida

CONSTRUCTION DRAWINGS FOR Preservation Way

PREPARED FOR:
Wakulla Environmental Institute
Wakulla County, Florida



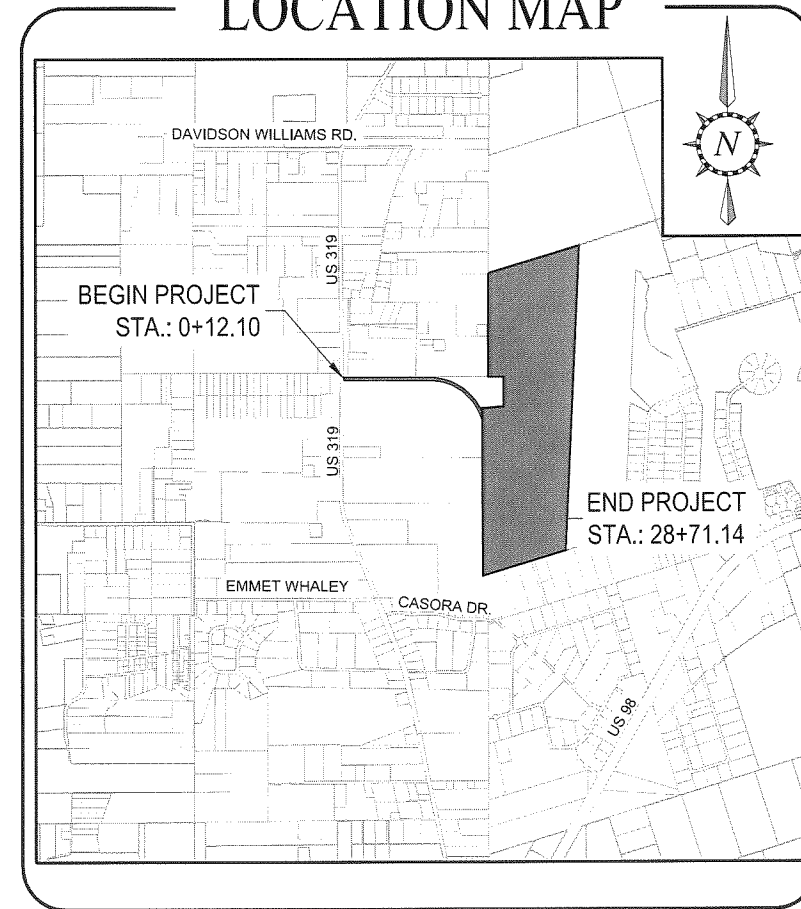
VICINITY MAP



SHEET	DESCRIPTION:
C1	COVER SHEET
C2-C3	TYPICAL SECTIONS
C4	GENERAL NOTES
C5	SUMMARY OF QUANTITIES
C6-C13	EROSION CONTROL/DEMOLITION PLAN
C14-C25	PLAN AND PROFILES
C26	INTERSECTION LAYOUT
C27	RELOCATION PLAN
C28	OFFSITE GRADING
C29-C33	CROSS SECTIONS
C34	DRAINAGE STRUCTURES
C35-C41	UTILITY PLANS
C42	JACK & BORE DETAIL
C43-C44	POTABLE WATER DETAILS
C45-C51	SANITARY SEWER LIFT STATION & DETAILS
C52	LIFT STATION DRIVE/SECTION
C53	SWPPP NOTES
C54	CONSTRUCTION DETAILS
C55-C64	LANDSCAPING PLANS, NOTES AND DETAILS

REV. NO.	REV. DATE	REVISION DESCRIPTION	RELEASED TO	RELEASE DATE

LOCATION MAP



ERRORS AND OMISSIONS, IF ANY, IN THESE CONSTRUCTION DOCUMENTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
GENERAL CONTRACTOR TO THOROUGHLY INSPECT EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS SHALL BE NOTED AT ONCE AND CALLED TO THE ENGINEER'S ATTENTION PRIOR TO SUBMITTING BIDS.
ALL CORRESPONDENCE IN REGARDS TO THESE CONSTRUCTION/BID DOCUMENTS SHALL BE DIRECTED TO ALAN WISE AT PREBLE-RISH, INC. CONSULTING ENGINEERS
36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY	2859.04	0.541
BRIDGES	0	0
NET LENGTH OF PROJECT	2859.04	0.541
GROSS LENGTH OF PROJECT	2859.04	0.541

April 2014

PREPARED BY:

PREBLE-RISH INC
CONSULTING ENGINEERS AND SURVEYORS
CIVIL • SURVEYING • SITE PLANNING

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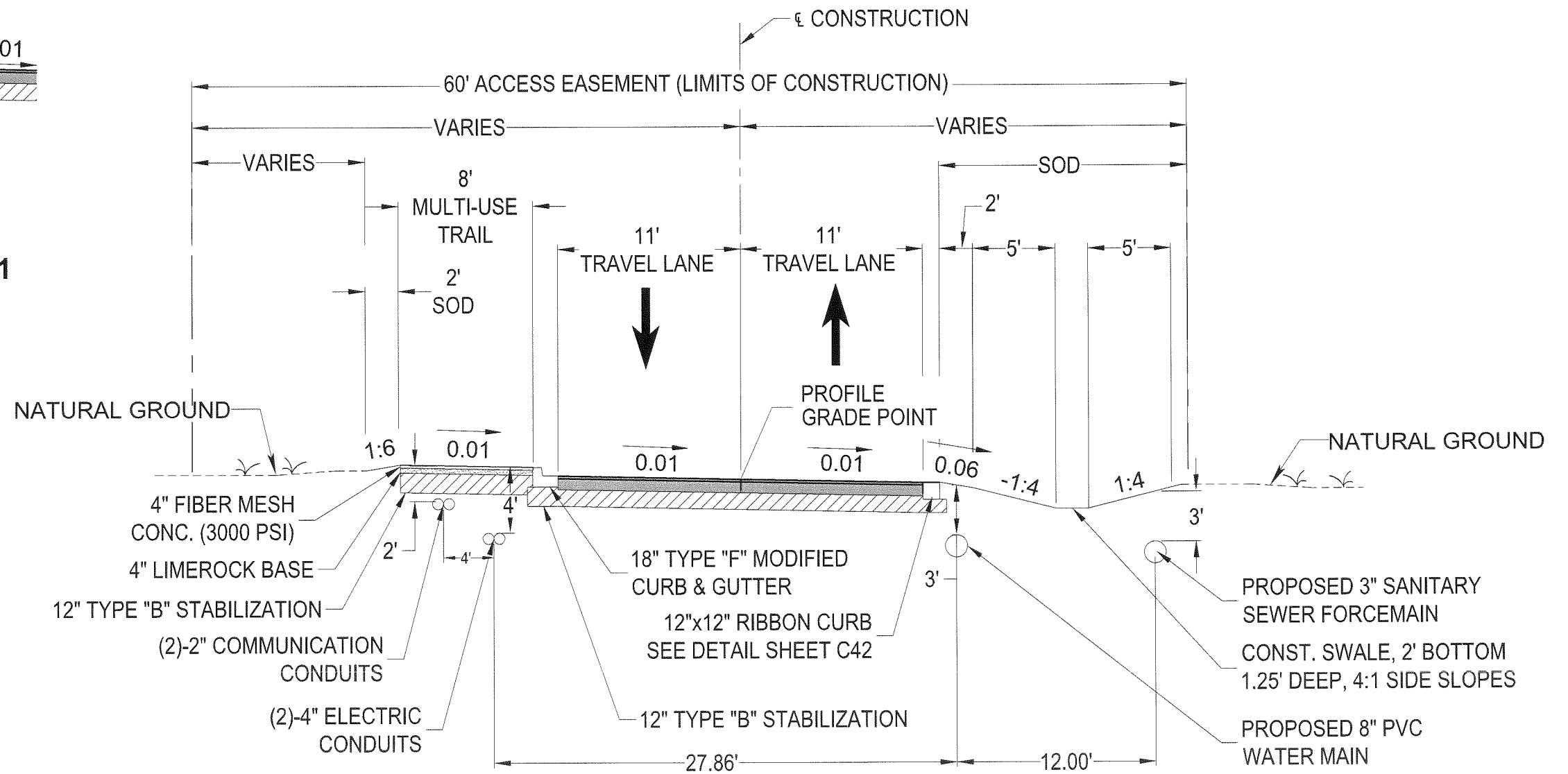
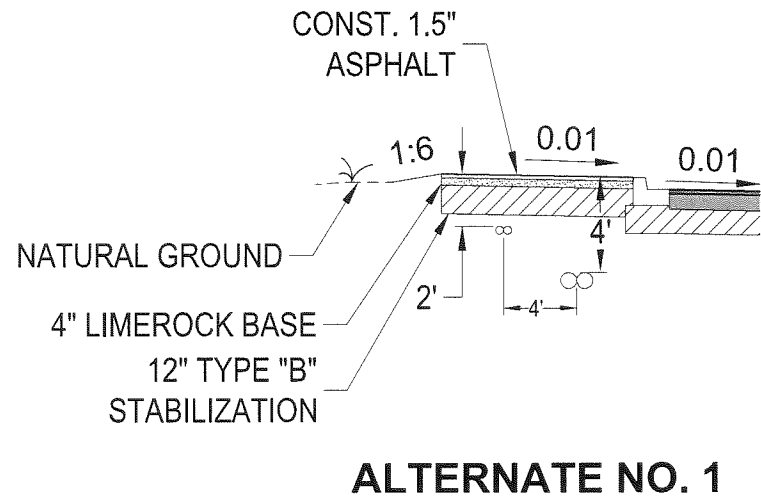
PROJECT NUMBER: 662.014

EB# 0006155

ENGINEER OF RECORD: ALAN WISE, P.E.

P.E. NO.: 70831

April 16, 2014 (15:10:22 EST)
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TYPICAL SECTION
STATION: 4+96.00 - 28+71.14
 SCALE: 1"=8'

ROADWAY CONSTRUCTION
 2" TYPE SP 9.5 ASPHALTIC CONCRETE (PLACED IN 2-1" LIFTS)
 OPTIONAL BASE GROUP 6 (8" LIMEROCK) LBR 100
 12" TYPE "B" STABILIZATION (MIN. LBR 40, 98% MODIFIED PROCTOR)

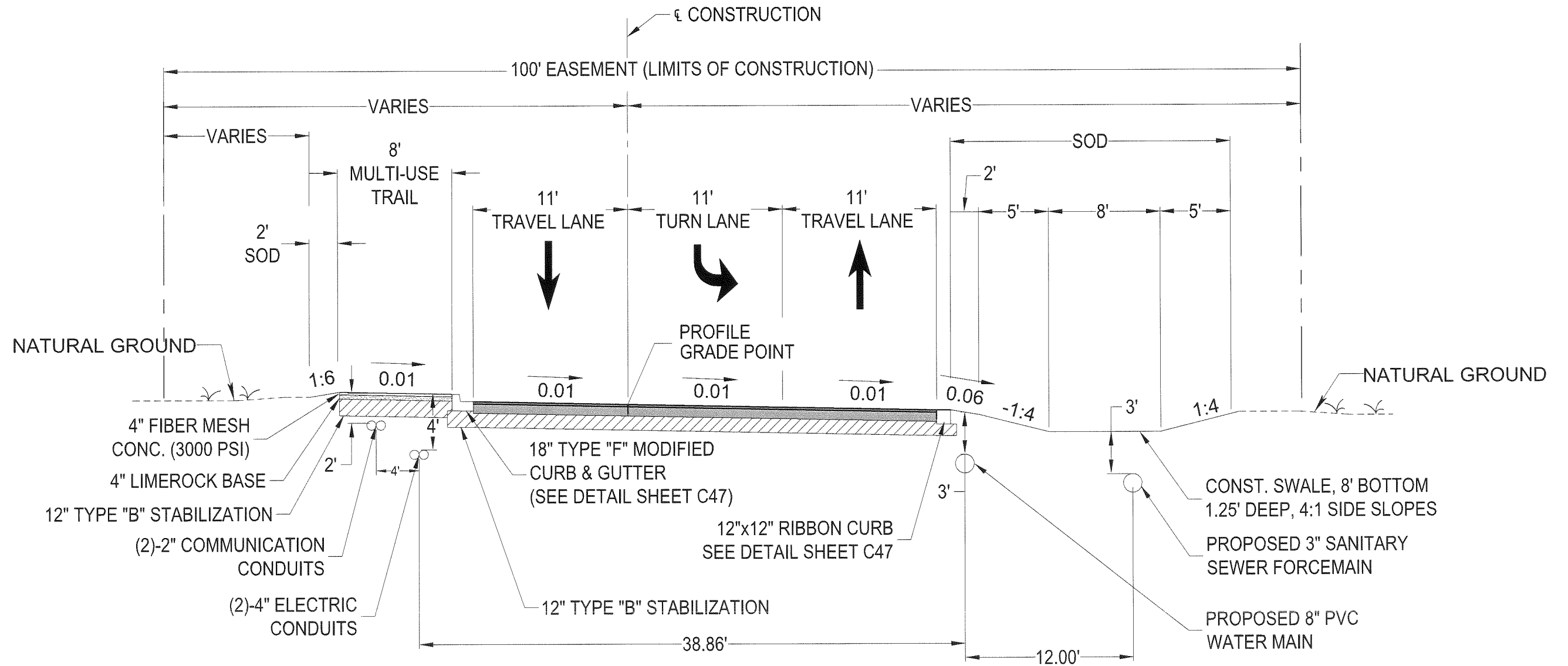
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TYPICAL SECTION
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: 3/20/14	PROJECT NO. 662.014
SCALE: AS SHOWN	SHEET C2
DRAWN: BDAHLEN	
CHECKED: AWISE	

ES# 006155



TYPICAL SECTION
STATION: 0+12.10 - 4+96.00
 SCALE: 1"=8'

ROADWAY CONSTRUCTION

- 2" TYPE SP 9.5 ASPHALTIC CONCRETE (PLACED IN 2-1" LIFTS)
- OPTIONAL BASE GROUP 6 (8" LIMEROCK) LBR 100
- 12" TYPE "B" STABILIZATION (MIN. LBR 40, 98% MODIFIED PROCTOR)

April 24, 2014 (19:41:00 EST)
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TYPICAL SECTION
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
SCALE: AS SHOWN	SHEET C3
DRAWN: BDAHLEN	
CHECKED: AWISE	

EB# 0000155


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1. The Contractor shall become familiar with the permit and inspection requirements specified by the various governmental agencies and the Agent. The Contractor is responsible for scheduling inspections at critical milestones and/or according to permit requirements.
2. Contractor shall check plans for conflicts and discrepancies and notify Agent prior to construction. Contractor shall notify the Agent of any conflicts before performing work in the affected area.
3. Contractor is responsible for repairing any damage to existing facilities, above or below ground, which may occur as a result of the work performed by the Contractor called for in this contract.
4. It is the responsibility of Contractor to establish the following in the field: existing utility locations, Right of Way lines, benchmarks, centerlines and stationing as may be required to construct the project.
5. Benchmarks to be relocated by a licensed surveyor prior to power pole relocation.
6. All construction debris and other waste material shall be disposed of off-site in accordance with applicable regulatory agency requirements.
7. Contractor may stockpile materials within the limits of the current construction phase. If stockpiling is necessary, Contractor shall locate the material at his discretion, using appropriate erosion and sedimentation control Best Management Practices (BMPs).
8. Contractor shall notify the Agent if they encounter any unidentified utility or structure during construction that impacts the project implementation.
9. Contractor shall clear and grub only those portions of the project necessary for construction. Disturbed areas will be performance turfed in accordance with the Plans. All disturbed areas shall be sodded.
10. Earthwork that results from site excavation is to be utilized on-site if of suitable material. Excess material is to be disposed of in accordance with local, State, and Federal regulations.
11. The burning of materials and/or debris as a means of disposal is prohibited unless done so off site in an acceptable, approved manner.
12. For any equipment or materials stored or staged on property not owned by owner, Contractor, if required, shall obtaining written permission from adjacent property owners prior to storing or staging. A copy of the written permission shall be provided to the Agent prior to storing or staging.
13. Non-select soils, when encountered, shall be removed from construction areas and back-filled with select materials in accordance with FOOT Indices 500 and 505.
14. Any damage to existing topographic features (includes but not limited to property corners, structures, site features) not specifically related to the scope of work, shall be repaired to their original condition at Contractor's expense.
15. All deleterious subsurface material (i.e. mulch, peat, buried debris) is to be excavated in accordance with these plans.
16. Deleterious material is to be removed from the site. Excavated areas are to be backfilled with approved materials and compacted as shown on these plans.
17. Contractor shall be responsible for protecting excavations against collapse and will provide bracing, sheeting or shoring as necessary. Dewatering methods shall be used as required to keep work area dry while pipe and appurtenances are being placed.
18. Contractor shall stabilize by sod any disturbed areas within one (1) week of achieving finished grade. Contractor shall maintain such areas until final acceptance by the Agent.
19. Existing signage to remain that will be affected by construction shall be relocated during construction.
20. Contractor is responsible for coordinating with an independent testing company to verify compaction. Upon completion of the work, Contractor shall have all test results signed and sealed by a Professional Engineer registered in the State of Florida pursuant to chapter 471 Florida Statutes and submitted to the Agent.
21. Contractor is responsible for providing as-built drawings to the Agent that have been prepared and certified by a registered professional surveyor.

22. The Contractor shall obtain a Dig Ticket a minimum of 3 days in advance of performing the work. Any utilities that are in conflict with the proposed improvements shall be relocated at the cost of the Contractor.
23. The Contractor is responsible for ensuring that erosion is controlled on site and that no sedimentation leaves the project area. Additional erosion controls beyond what are shown in this plan may be necessary and are the responsibility of the Contractor.
24. As construction progresses, the Contractor shall make adjustments and/or install additional measures to prevent direct flow or tracking of sediments onto adjacent property, conservation areas, public streets or drainage systems.
25. Any sediments, gravel or mud spilled, dropped, washed, or tracked from vehicles onto adjacent property, roadways or into storm drainage systems shall be recovered immediately and disposed of properly.
26. Temporary erosion and sediment control devices shall be placed adjacent to any waterway or drainage feature prior to construction and remain in place until construction of the feature is complete and all areas are suitably stabilized.
27. Contractor shall not bring any hazardous materials onto the project. Should Contractor require such for performing the contracted work, Contractor shall request in writing, written permission from the Agent. Contractor shall provide the Agent with a copy of the Material Safety Data Sheet (MSDS) for each hazardous material proposed for use. Since State does not treat petroleum products that are properly containerized and intended for equipment use as a hazardous material, such products do not need the MSDS submittal. Any known or suspected hazardous material found on the project by Contractor shall be immediately reported to the Agent and shall protect the area of known or suspected contamination from further access. The Agent will arrange for investigation, identification, and remediation of the hazardous material. Contractor shall not return to the area of contamination until approval is provided by the Agent; however, Contractor shall relocate construction activities to another area of the project until such approval is provided.
28. Contractor shall furnish the Agent, prior to incorporation into the project, a certification from the Florida Department of Agriculture and Consumer Service Division of Plant Industry, stating that the sod, hay, straw, and mulch materials are free of noxious weeds.
29. Equipment maintenance and repair shall not be performed on site.
30. Storage of chemicals, cements, solvents, paints, or other potential water pollutants is prohibited on site. If these products are needed, they shall be brought to the site, utilized in a responsible manner, and removed from the site to prevent spills or leaks that would be detrimental to the environment or surrounding property.
31. The Contractor shall provide Maintenance of Traffic in accordance with the FDOT Index, 600 Series. In cases where a road or lane needs to be closed, the Contractor shall request such in writing to the Agent and County 3 days in advance of the closure. The Agent will approve or deny within 24 hours of the request. Be aware that some areas will not be subject to lane closures during peak traffic hours and some areas will not be subject to lane closures for more than 30 minutes at a time
32. The contractor shall notify utility owners through sunshine one call (800-432-4770) at least 3 days in advance of performing any soil disturbing activities. The contractor is responsible for ensuring that the marks are protected during construction, or are re-marked as necessary by sunshine one call to delineate existing utilities. the contractor shall locate and verify all existing utilities in the field, prior to commencing construction. The contractor shall protect and/or relocate all existing utilities as necessary to construct the improvements shown herein. Unless otherwise stated, the contractor is responsible for the cost of said relocation or protection of existing utilities and these efforts shall be coordinated and approved by the utility owner. The contractor is responsible for repairing any damage to existing utility during the construction of the improvements shown herein.
33. Multi-use path shall be constructed to allow for emergency access in the event that Preservation Way access lanes are blocked.
34. Concrete construction shall be in accordance with FDOT std. index 310 as applicable.
35. All striping shall be thermoplastic and in accordance with FDOT index 17346 and std. specifications.
36. Contractor shall prohibit any vibratory compaction.
37. Contractor shall trim all low hanging limbs to provide 16' clearance from finished grade.
38. Depths and dimensions shown in plans are in place & compacted measurements.

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GENERAL NOTES
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: 3/20/14	PROJECT NO. 662.014
SCALE: N.T.S.	SHEET C4
DRAWN: BDAHLEN	
CHECKED: AWISE	

April 24, 2014 (19:41:00 EST)
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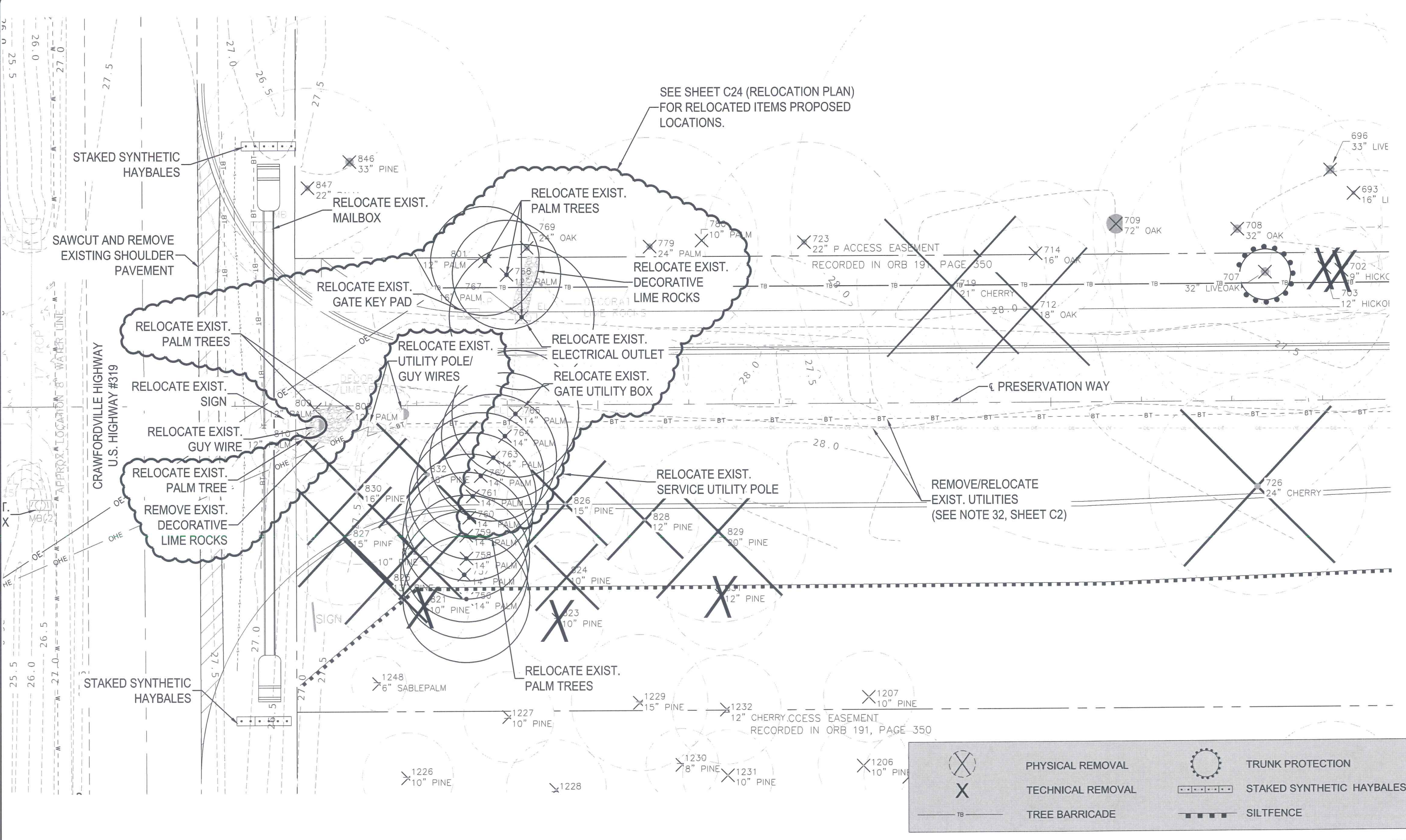
SUMMARY OF QUANTITIES
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE:
3/20/14
SCALE:
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PROJECT NO.
662.014
SHEET
C5

April 15, 2014 (15:56:49 EST)

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SEE SHEET C24 (RELOCATION PLAN)
FOR RELOCATED ITEMS PROPOSED
LOCATIONS.

STAKED SYNTHETIC
HAYBALES

SAWCUT AND REMOVE
EXISTING SHOULDER
PAVEMENT

RELOCATE EXIST.
MAILBOX

RELOCATE EXIST.
PALM TREES

RELOCATE EXIST.
DECORATIVE
LIME ROCKS

RELOCATE EXIST.
GATE KEY PAD

RELOCATE EXIST.
PALM TREES

RELOCATE EXIST.
UTILITY POLE/
GUY WIRES

RELOCATE EXIST.
ELECTRICAL OUTLET
RELOCATE EXIST.
GATE UTILITY BOX

RELOCATE EXIST.
SIGN

RELOCATE EXIST.
GUY WIRE

RELOCATE EXIST.
PALM TREE

REMOVE EXIST.
DECORATIVE
LIME ROCKS

RELOCATE EXIST.
SERVICE UTILITY POLE

REMOVE/RELOCATE
EXIST. UTILITIES
(SEE NOTE 32, SHEET C2)

STAKED SYNTHETIC
HAYBALES

RELOCATE EXIST.
PALM TREES

- PHYSICAL REMOVAL
- TECHNICAL REMOVAL
- TREE BARRICADE
- TRUNK PROTECTION
- STAKED SYNTHETIC HAYBALES
- SILT FENCE

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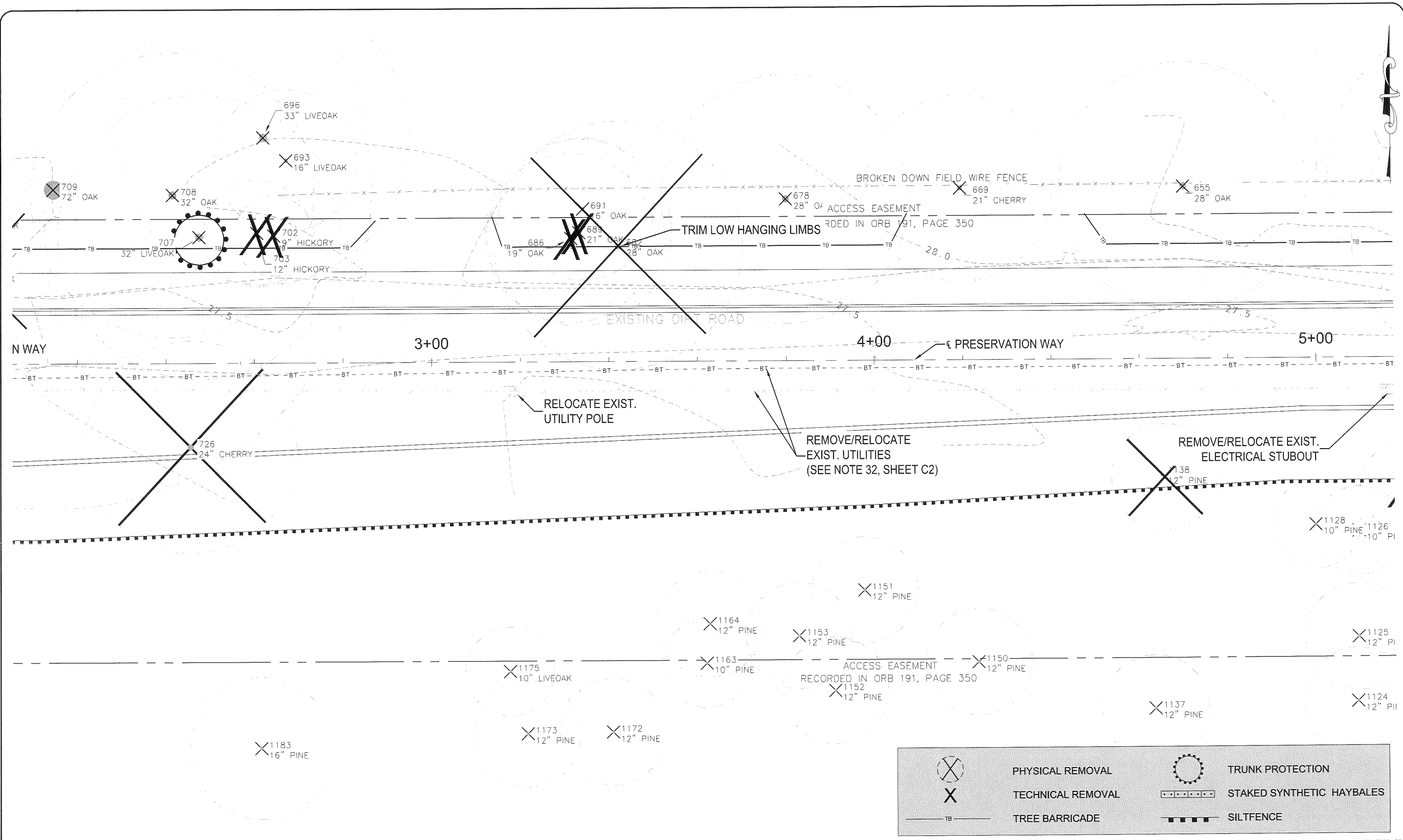
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EROSION CONTROL - DEMOLITION PLAN
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
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CHECKED: AWISE	

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	PHYSICAL REMOVAL		TRUNK PROTECTION
	TECHNICAL REMOVAL		STAKED SYNTHETIC HAYBALES
	TREE BARRICADE		SILTFENCE

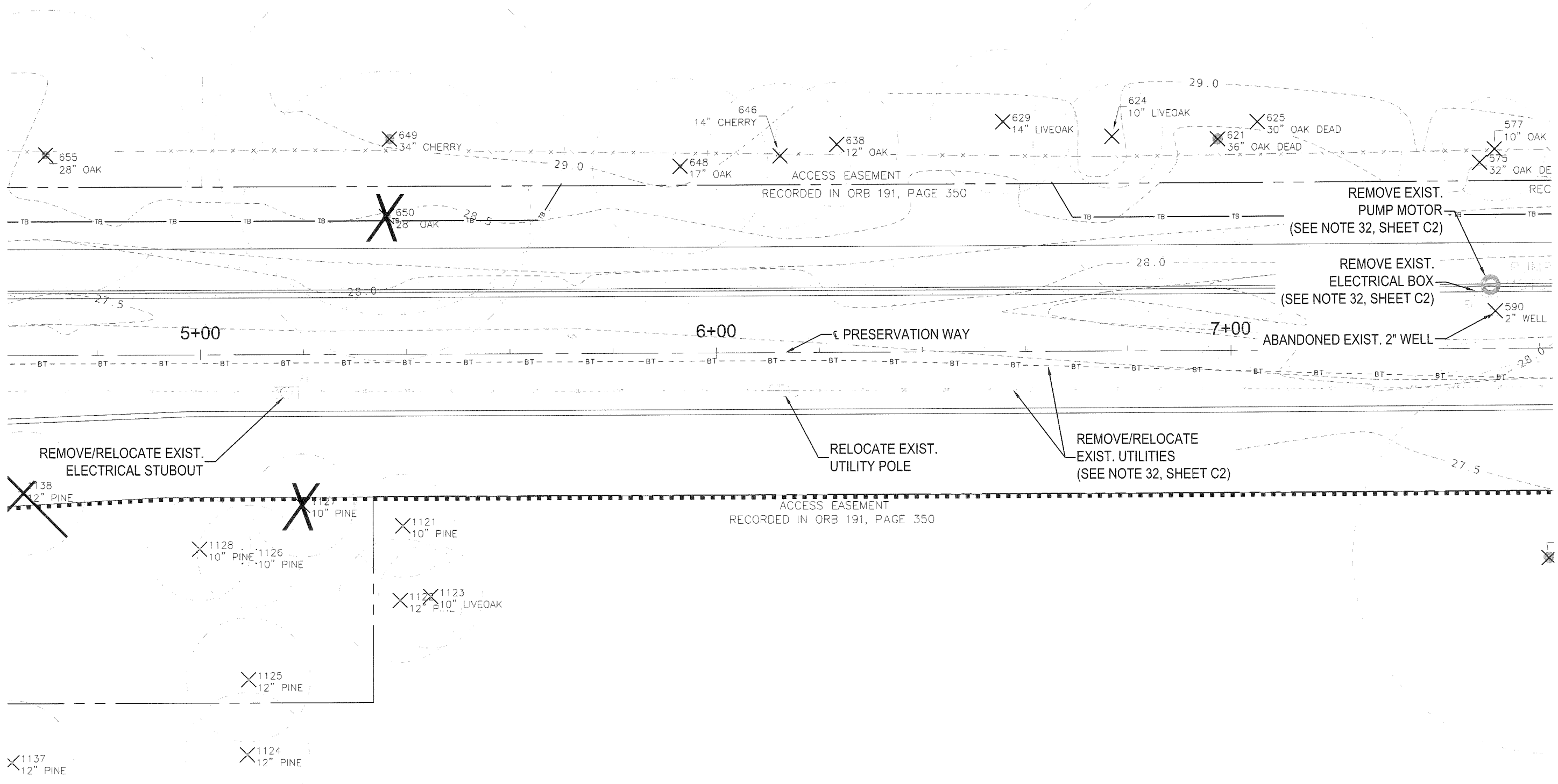
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EROSION CONTROL - DEMOLITION PLAN
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C7
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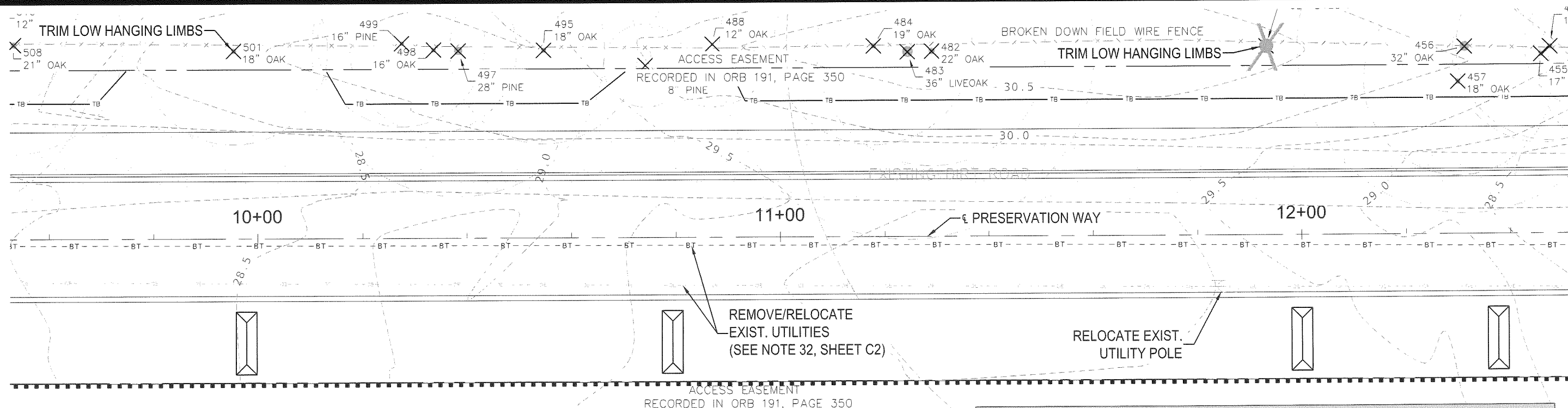
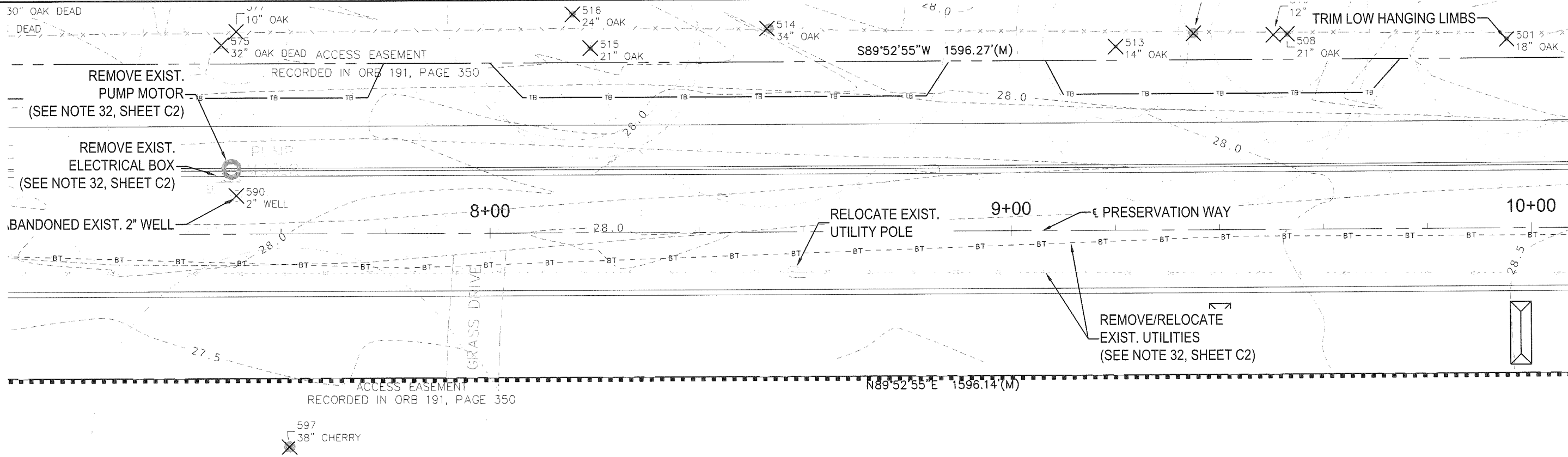
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	PHYSICAL REMOVAL		TRUNK PROTECTION
	TECHNICAL REMOVAL		STAKED SYNTHETIC HAYBALES
	TREE BARRICADE		SILTFENCE

EROSION CONTROL - DEMOLITION PLAN
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C8
DRAWN: BDAHLEN	CHECKED: AWISE

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	PHYSICAL REMOVAL		TRUNK PROTECTION
	TECHNICAL REMOVAL		STAKED SYNTHETIC HAYBALES
	TREE BARRICADE		SILTFENCE

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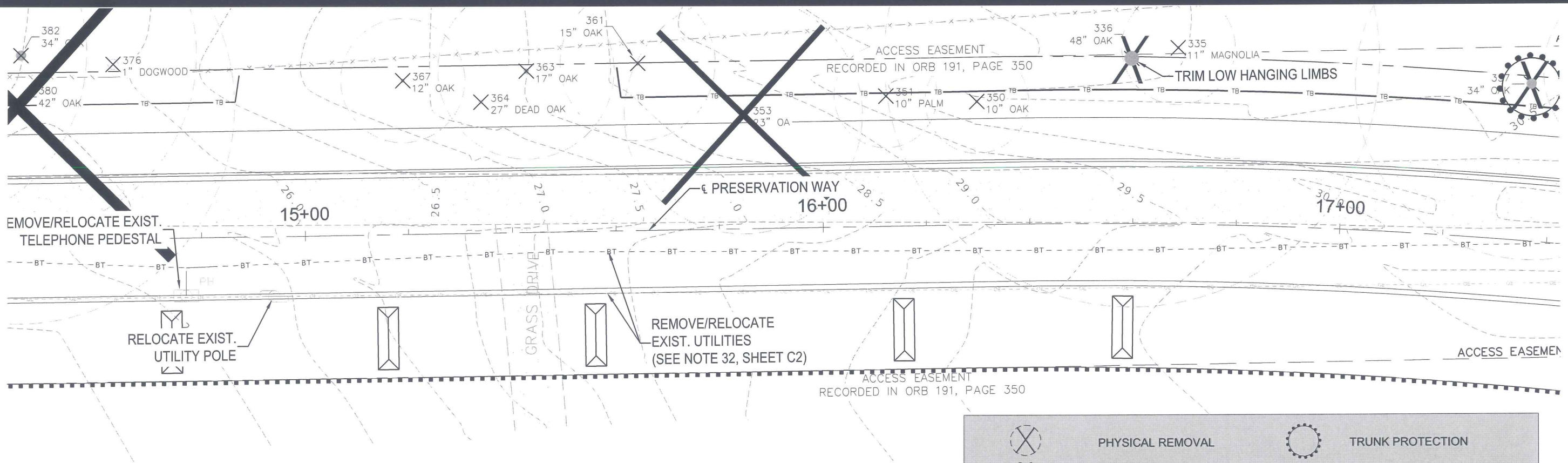
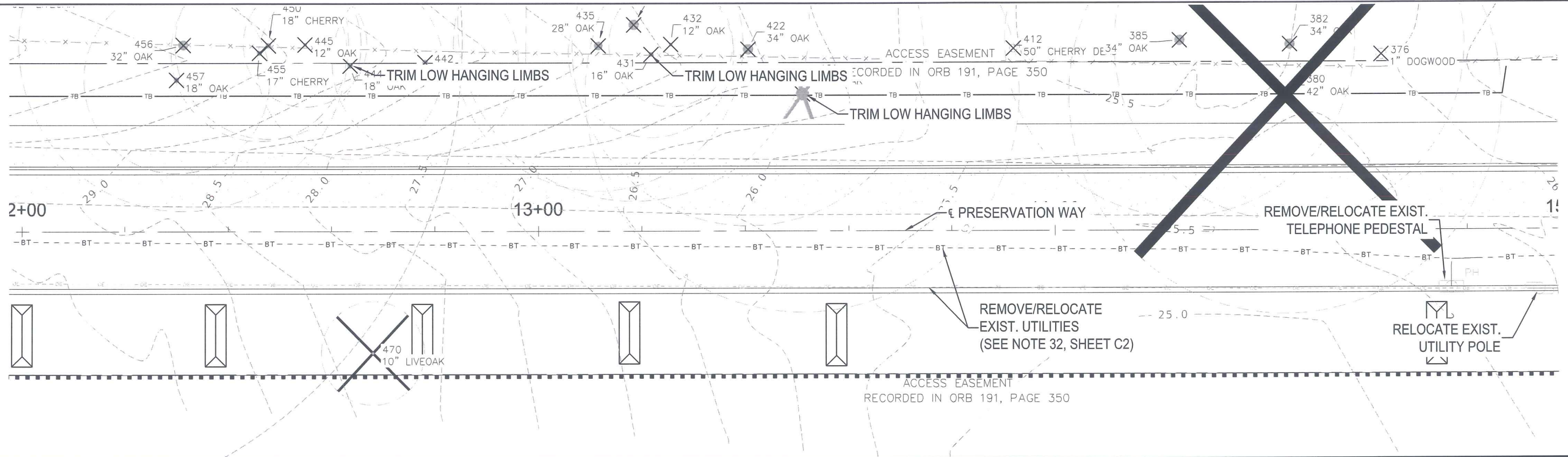
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EROSION CONTROL - DEMOLITION PLAN
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C9
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* CONTRACTOR SHALL REMOVE FALLEN TREES AND LIMBS FROM R/W.

	PHYSICAL REMOVAL		TRUNK PROTECTION
	TECHNICAL REMOVAL		STAKED SYNTHETIC HAYBALES
	TREE BARRICADE		SILTFENCE

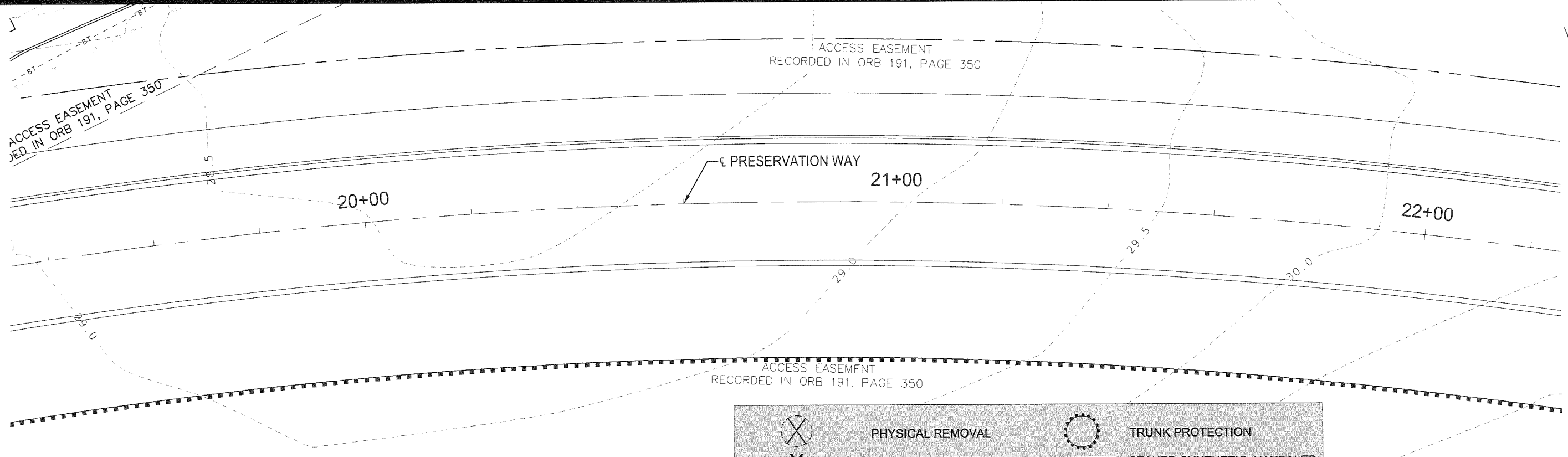
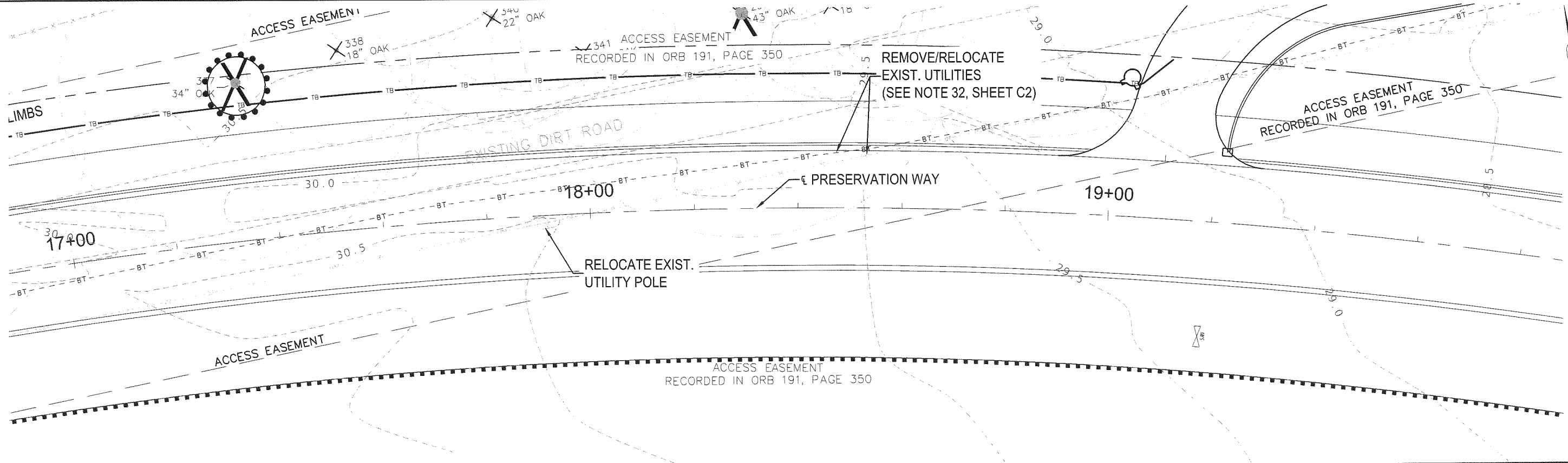
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EROSION CONTROL - DEMOLITION PLAN
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C10
DRAWN: BDAHLEN	
CHECKED: AWISE	

EB# 0006155



* CONTRACTOR SHALL REMOVE FALLEN TREES AND LIMBS FROM R/W.

	PHYSICAL REMOVAL		TRUNK PROTECTION
	TECHNICAL REMOVAL		STAKED SYNTHETIC HAYBALES
	TREE BARRICADE		SILTFENCE

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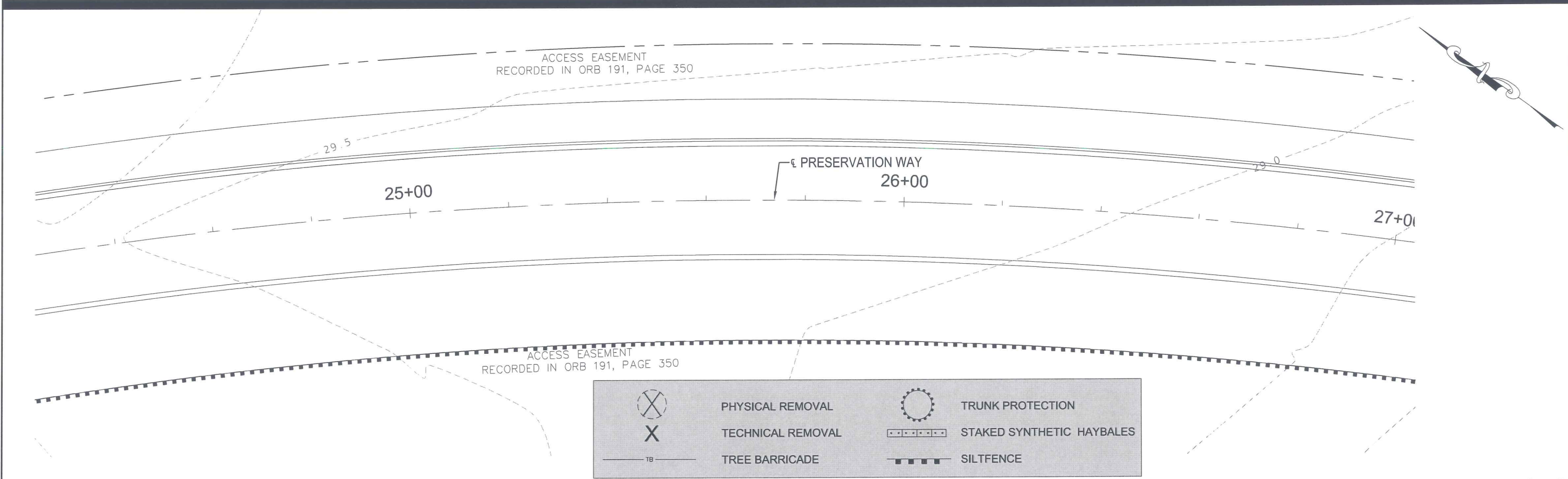
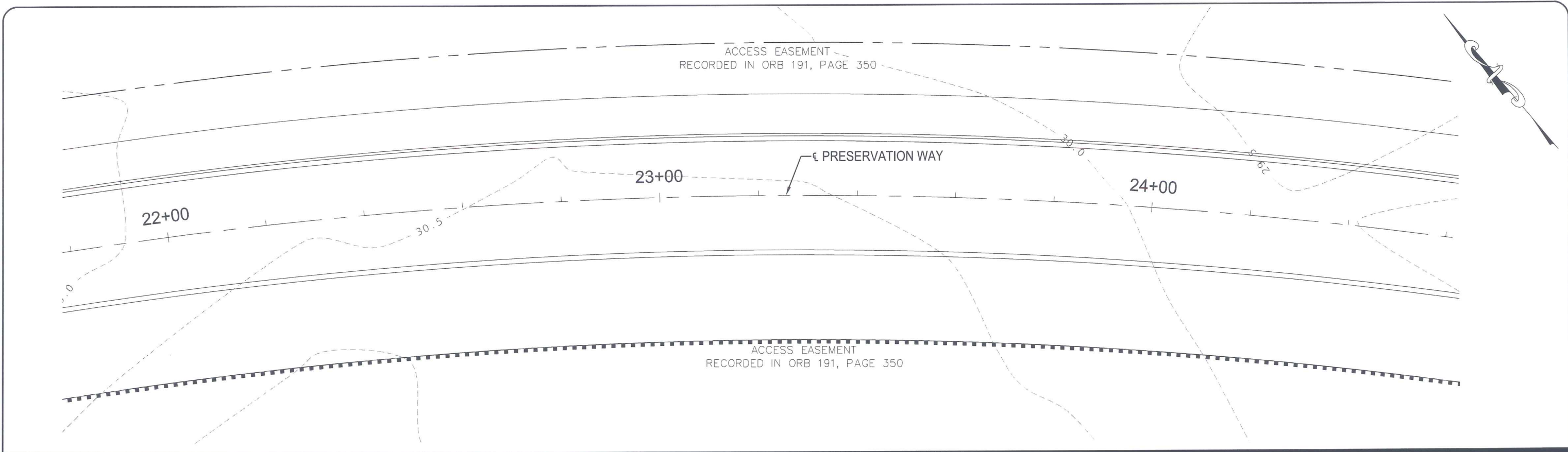
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EROSION CONTROL - DEMOLITION PLAN
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
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DRAWN: BDAHLEN	
CHECKED: AWISE	

EB# 3005155

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	PHYSICAL REMOVAL		TRUNK PROTECTION
	TECHNICAL REMOVAL		STAKED SYNTHETIC HAYBALES
	TREE BARRICADE		SILTFENCE

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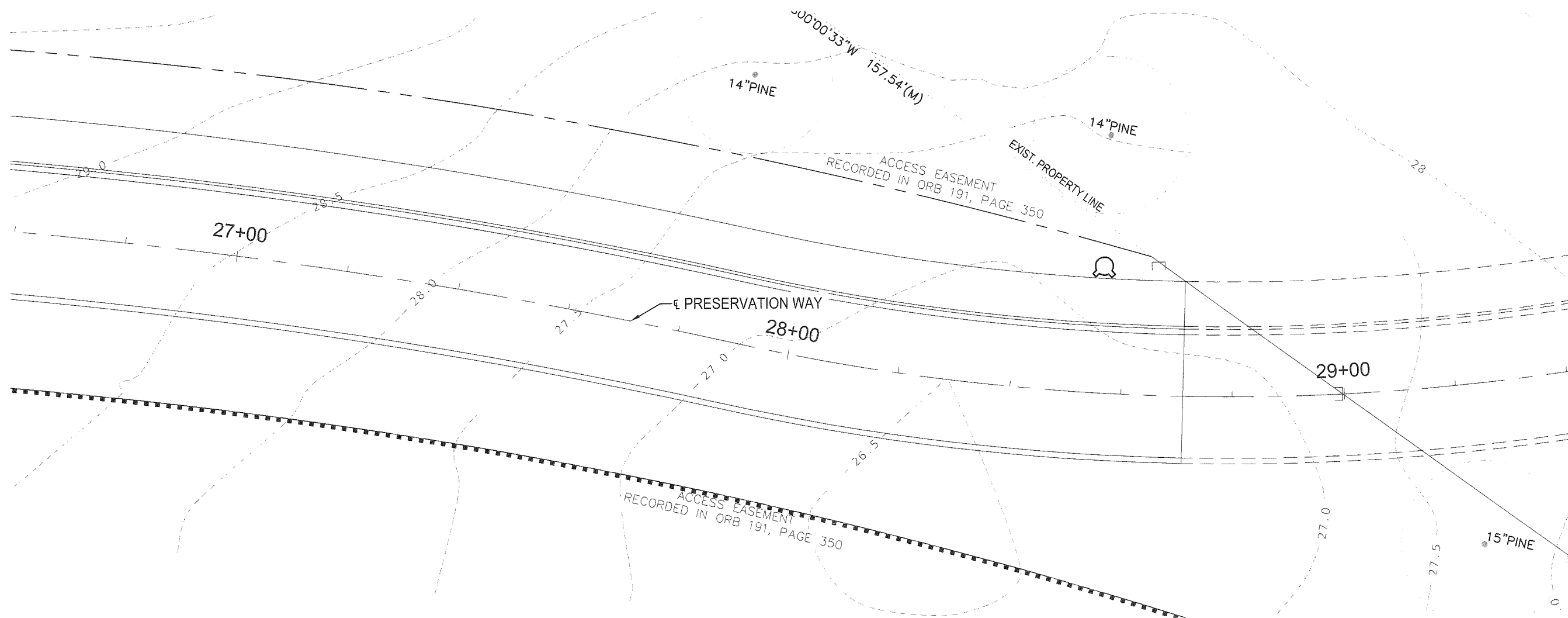
PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

EROSION CONTROL - DEMOLITION PLAN
PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C12
DRAWN: BDAHLEN	CHECKED: AWISE

EB# 0006155

April 15, 2014 (15:56:49 EST)
 C:\GWL_3D_PROJECTS\662.014_TCC_WEL_ENTRANCE_ROAD\ROADWAY\TCC_EROSION-DEMOLITION.DWG



	PHYSICAL REMOVAL		TRUNK PROTECTION
	TECHNICAL REMOVAL		STAKED SYNTHETIC HAYBALES
	TREE BARRICADE		SILTFENCE

NO.	DATE	APPR.	REVISION:
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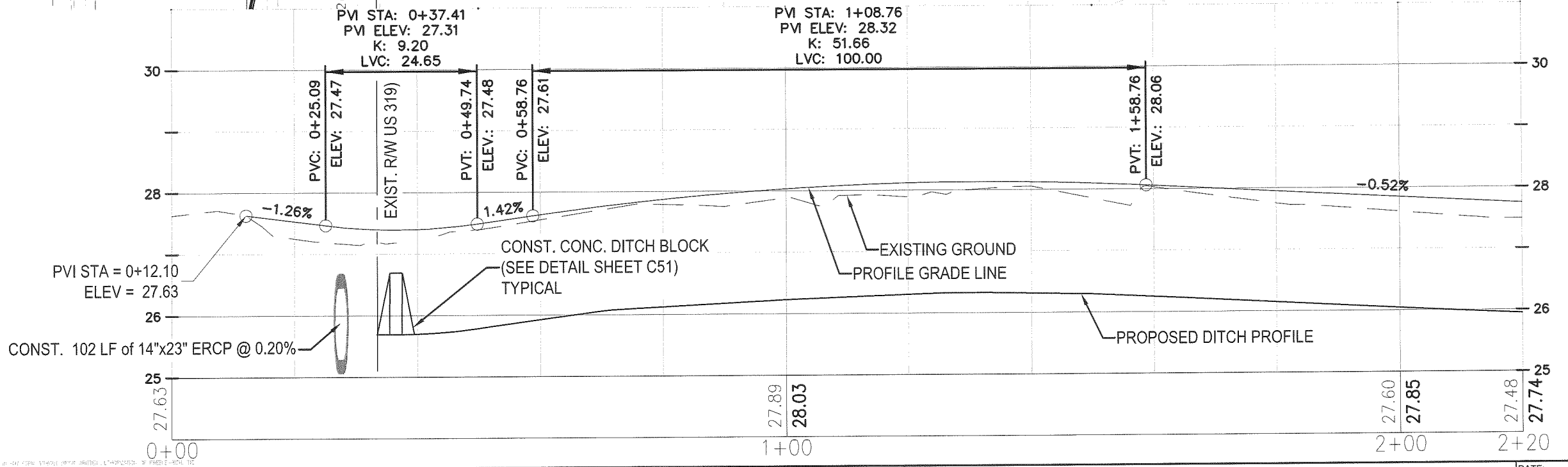
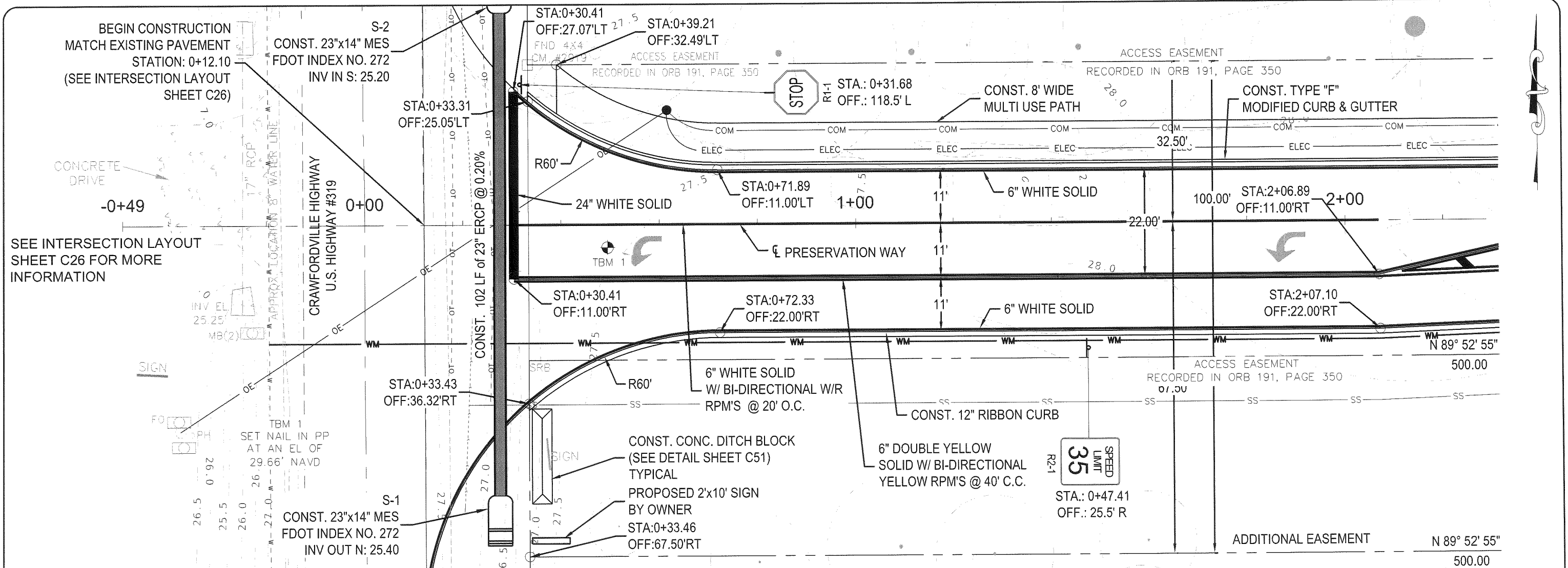
PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

EROSION CONTROL - DEMOLITION PLAN
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C13
DRAWN: BDAHLEN	
CHECKED: AWISE	

EB# 0006155

April 24, 2014 (20:32:30 EST)
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SCALES:
 1"=40' HORIZ
 1"=10' VERT
 EBA 0606155

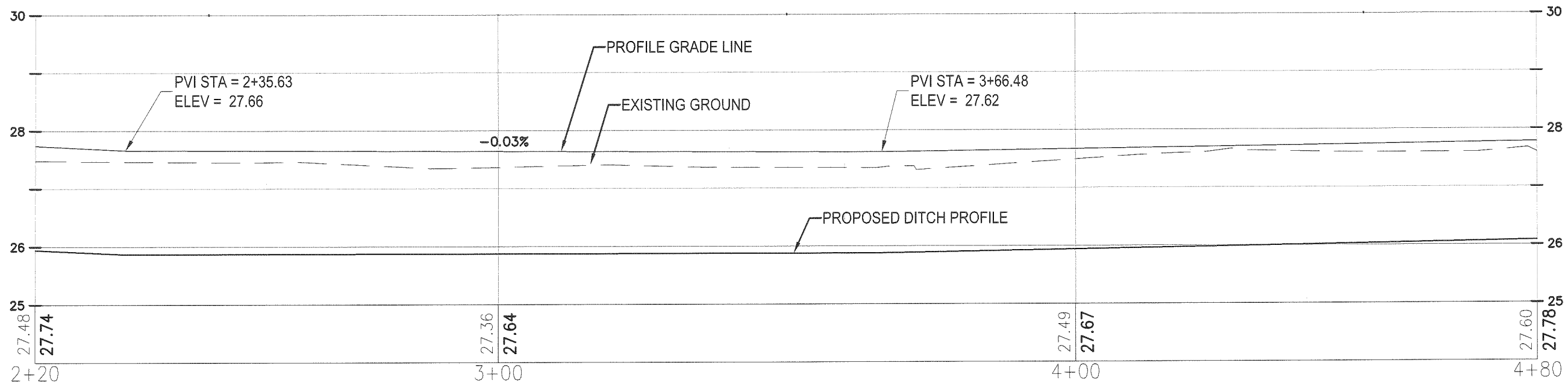
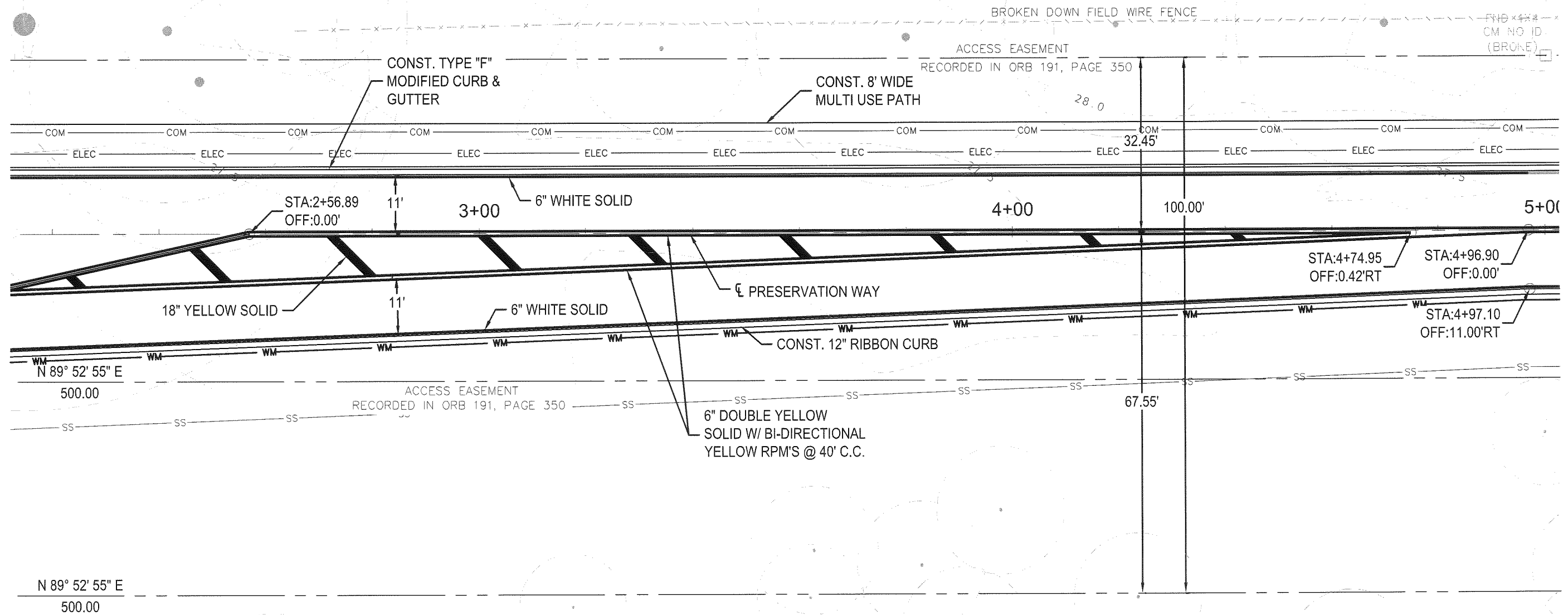
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PREBLE-RISH INC
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 CIVIL • SURVEYING • SITE PLANNING
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PLAN - PROFILE
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C14
DRAWN: BOAHLEN	CHECKED: AWISE

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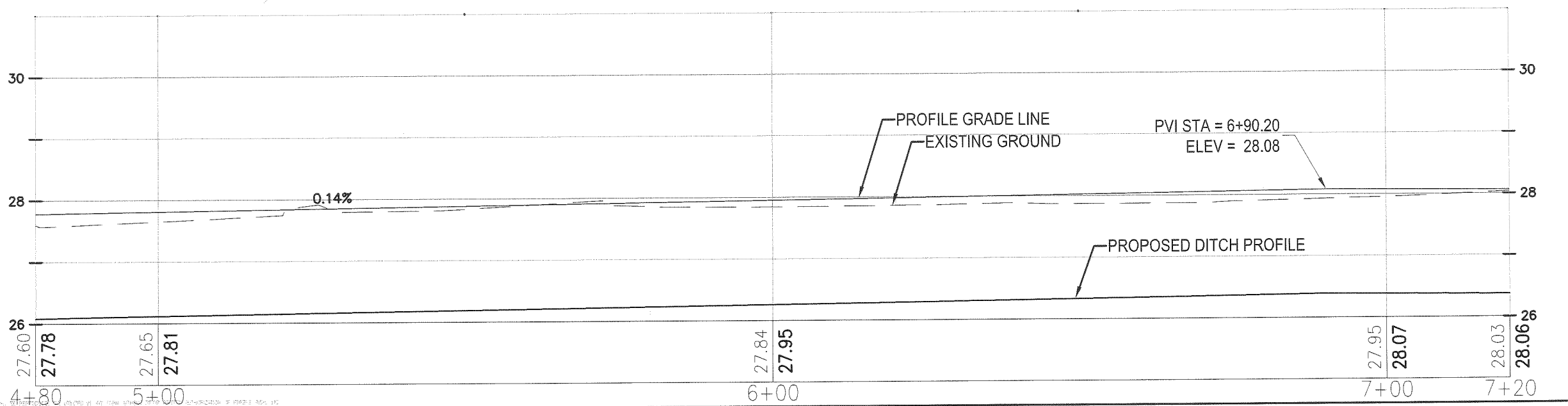
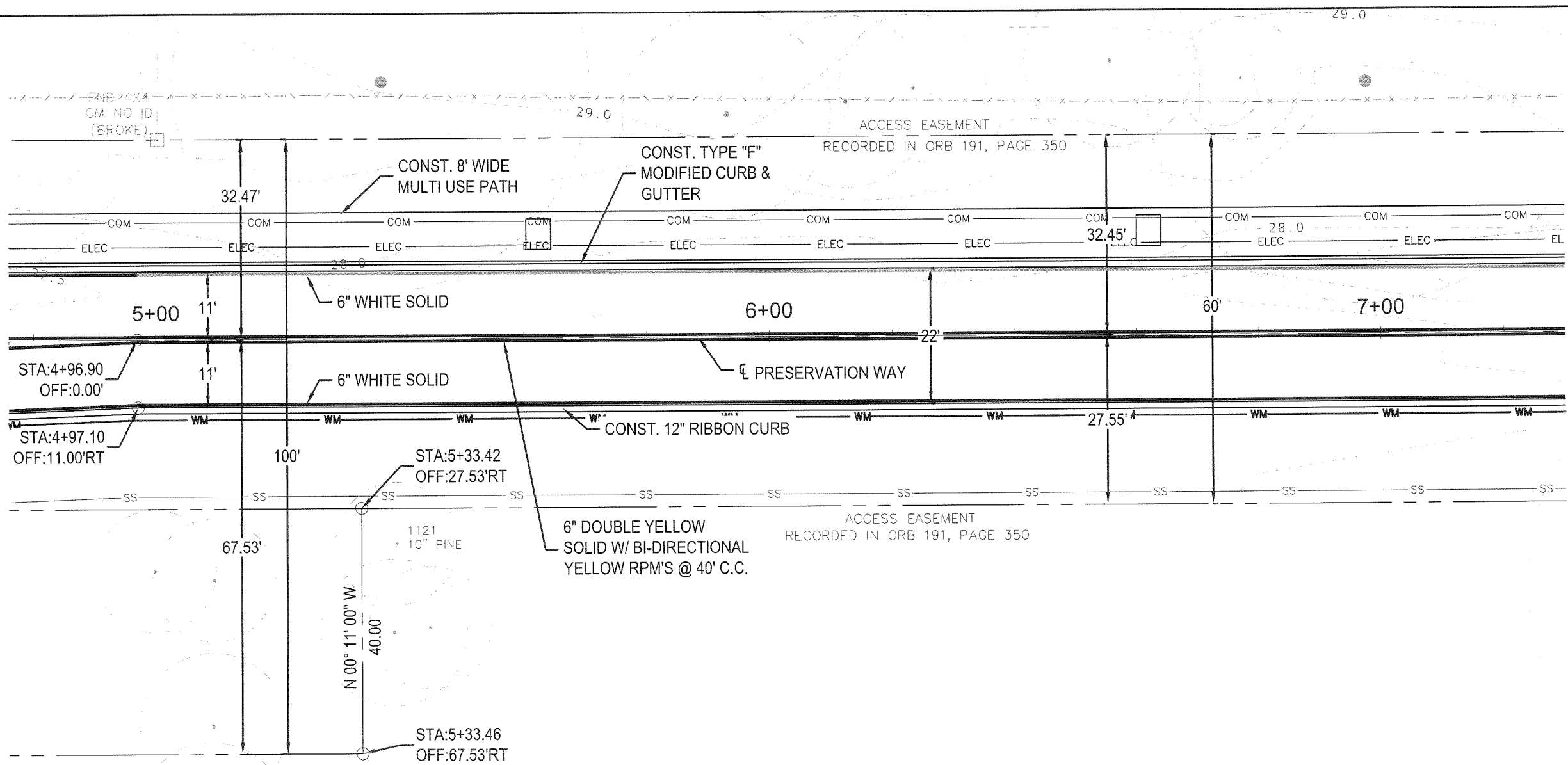


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PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
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 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

PLAN - PROFILE
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C15
DRAWN: BDAHLEN	CHECKED: AWISE



SCALES:
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 1"=10' VERT
 ESR 0608155

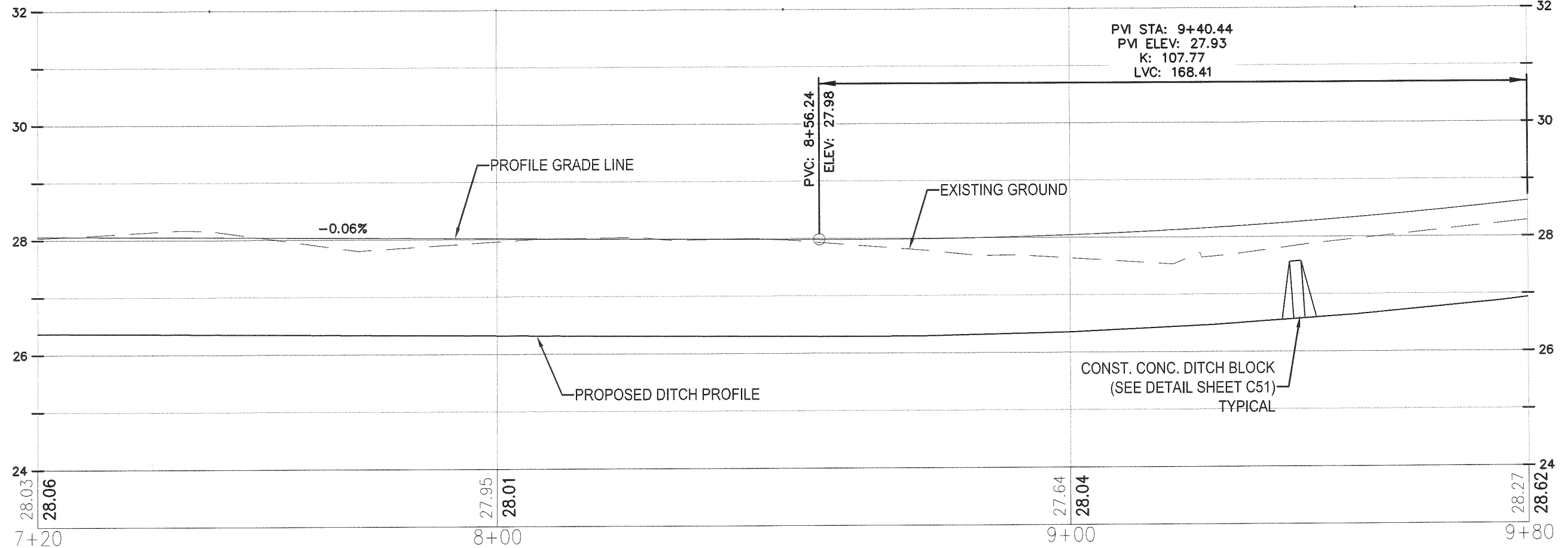
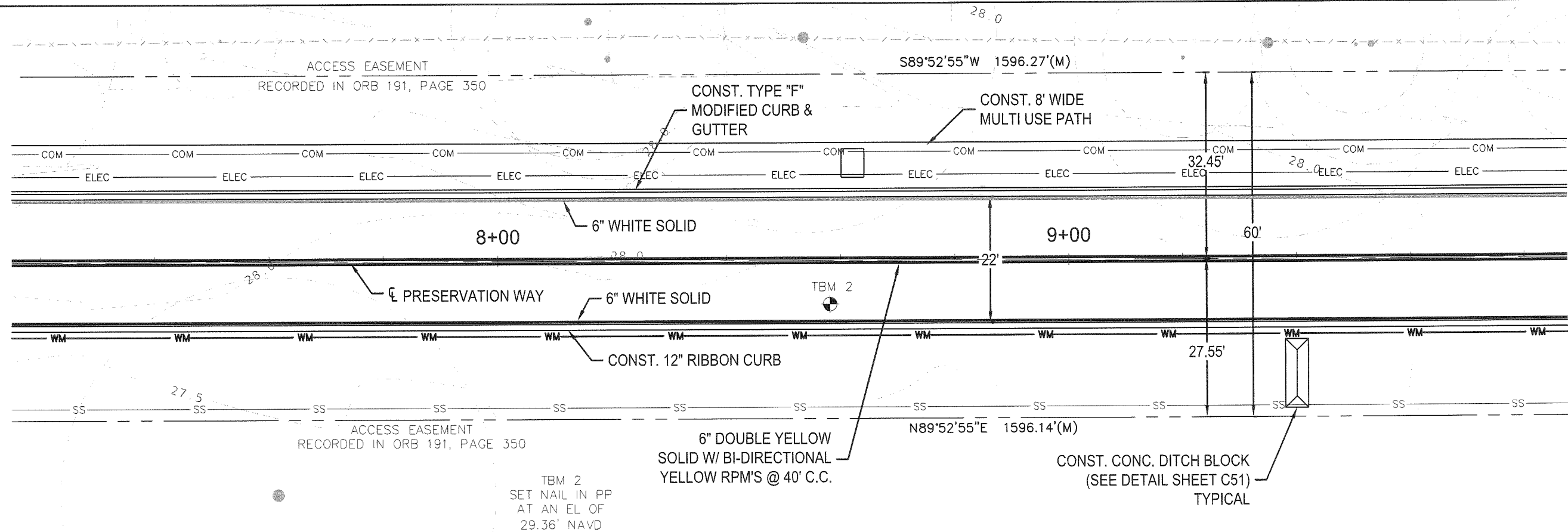
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PLAN - PROFILE
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET
DRAWN: BDAHLEN	C16
CHECKED: AWISE	



April 24, 2014 (20:32:30 EST)
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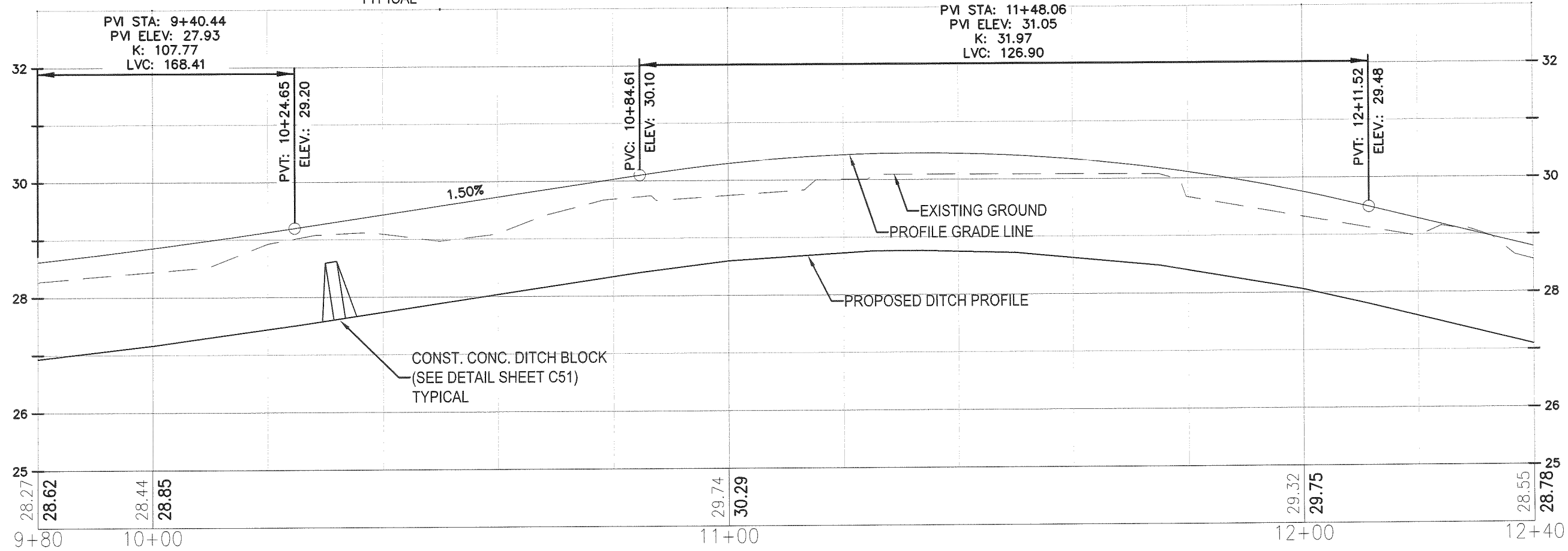
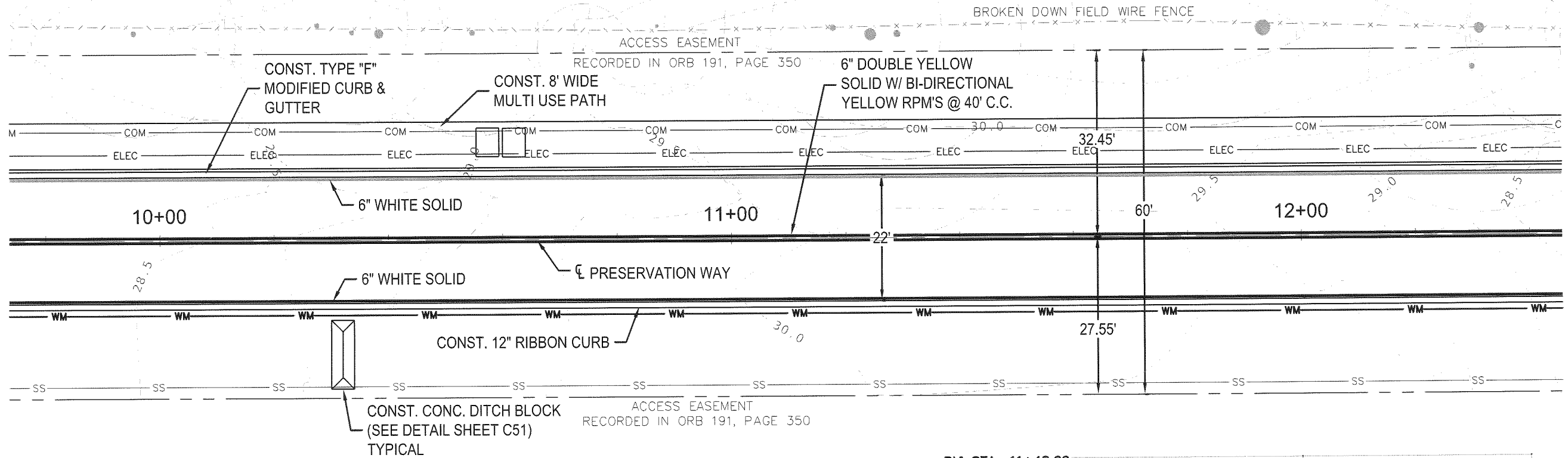
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PLAN - PROFILE
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C17
DRAWN: BDAHLEN	
CHECKED: AWISE	

SCALES:
 1"=40' HORIZ
 1"=10' VERT
 EB# 0006155



April 24, 2014 (20:32:30 EST)
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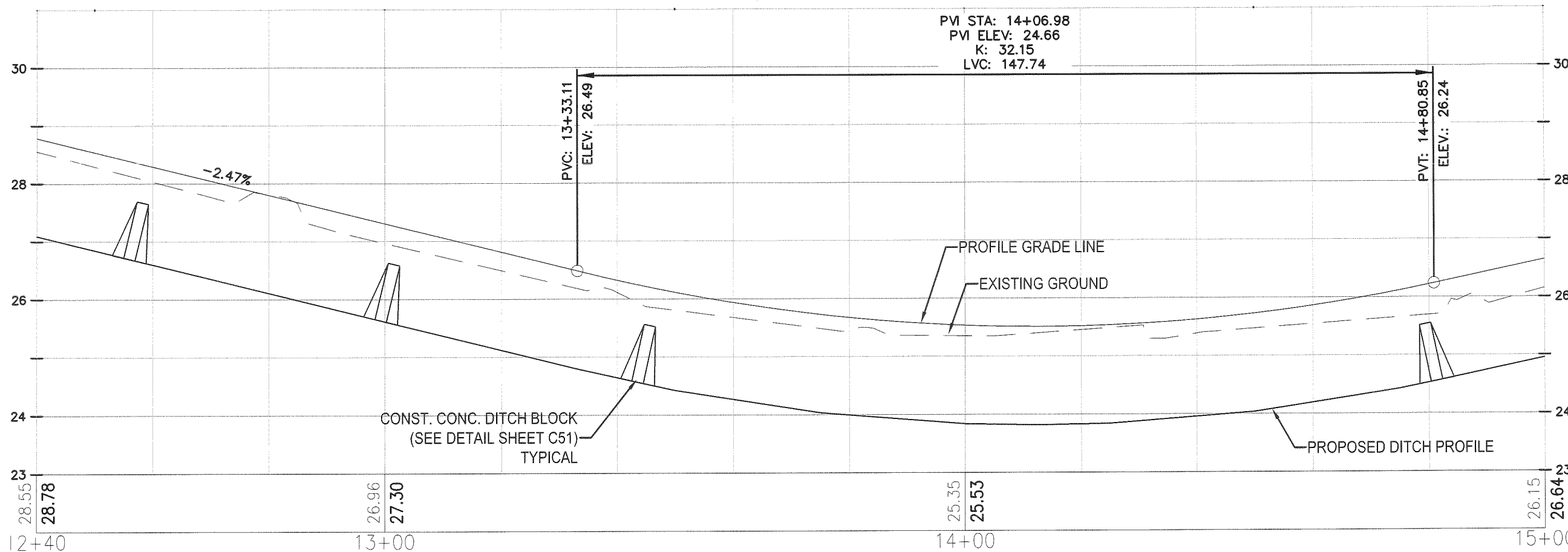
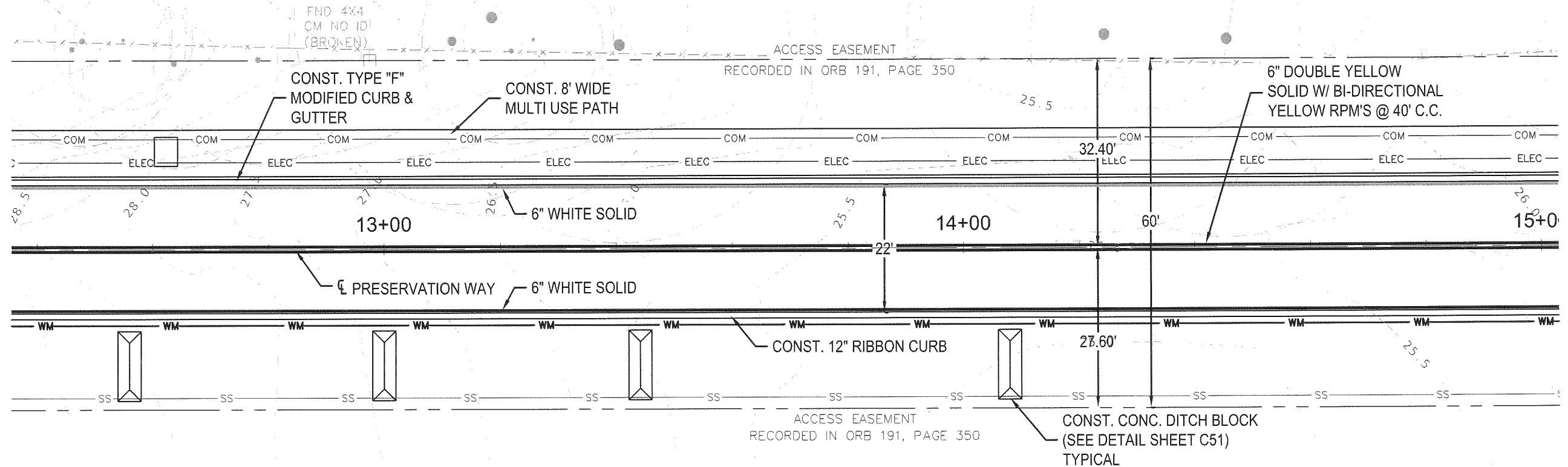
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PREBLE-RISH INC
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PLAN - PROFILE
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA


DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET
DRAWN: DAHLEN	C18
CHECKED: AWISE	

SCALES:
 1"=40' HORIZ
 1"=10' VERT
 EBB 0006195



April 24, 2014 (20:32:30 EST)
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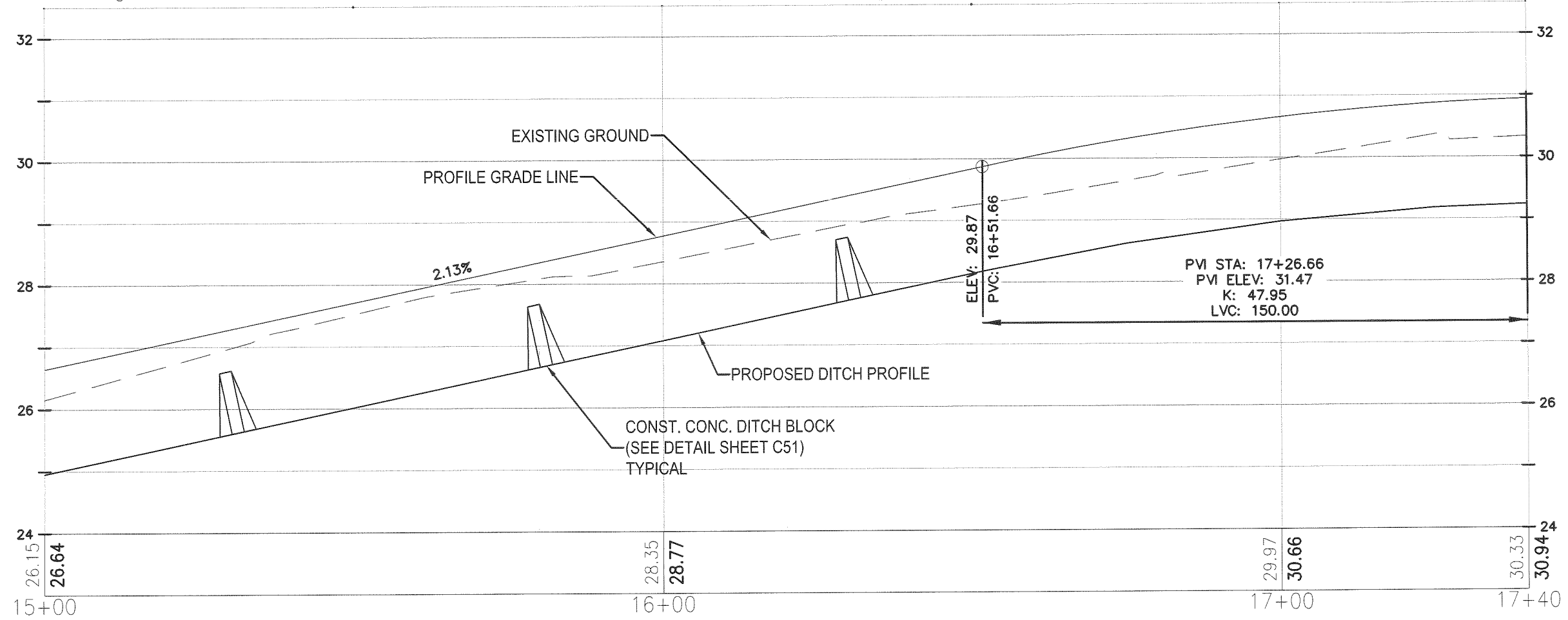
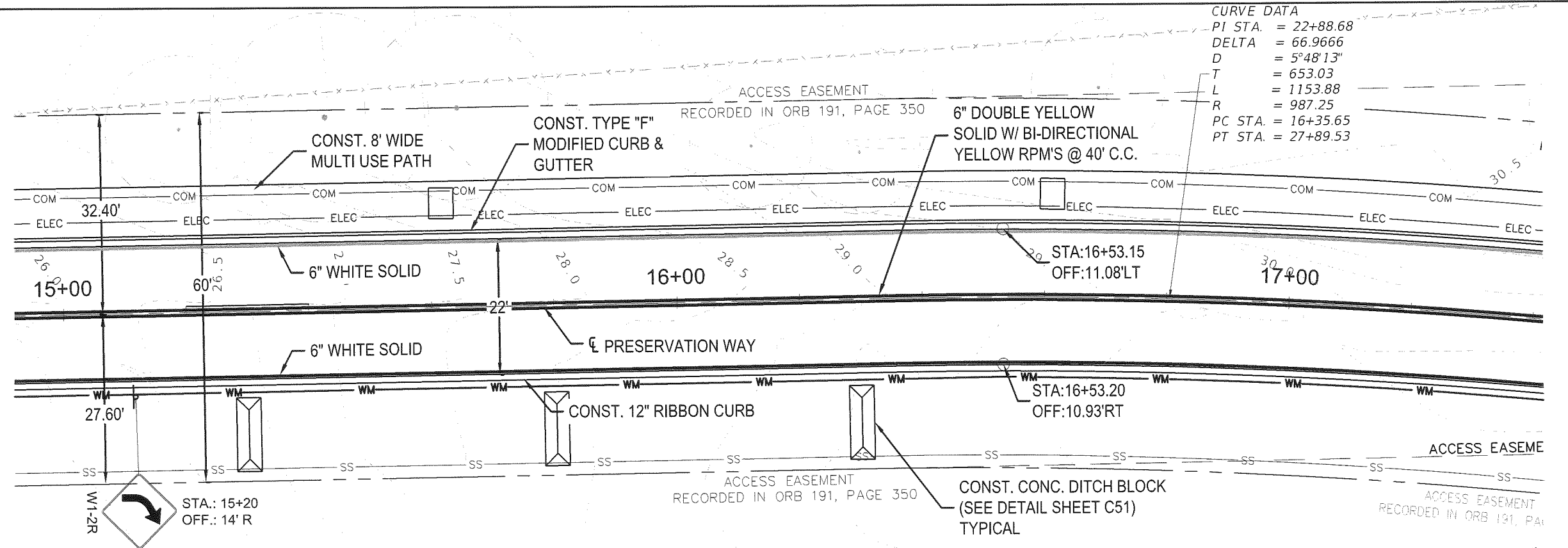

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PLAN - PROFILE
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C19
DRAWN: BDAHLEN	CHECKED: AWISE

SCALES:
 1"=40' HORIZ
 1"=10' VERT
 EB# 0006155

CURVE DATA
 PI STA. = 22+88.68
 DELTA = 66.9666
 D = 5°48'13"
 T = 653.03
 L = 1153.88
 R = 987.25
 PC STA. = 16+35.65
 PT STA. = 27+89.53



SCALES:
 1"=40' HORIZ
 1"=10' VERT
 E8# 0066155

April 24, 2014 (20:32:30 EST)
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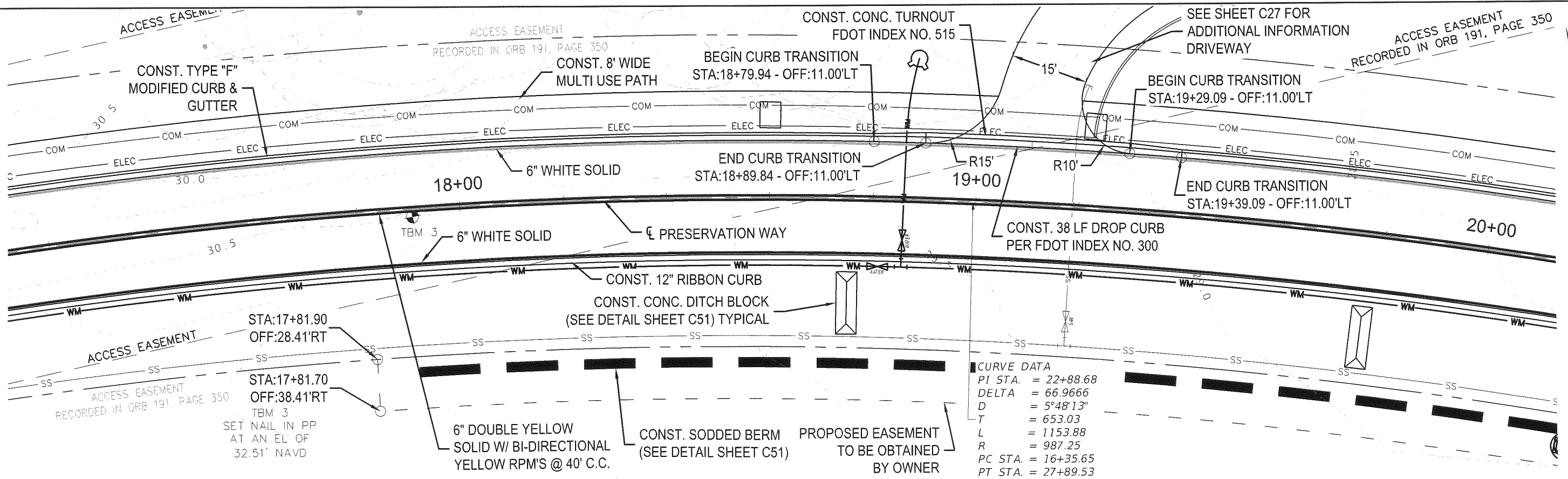
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PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
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PLAN - PROFILE
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

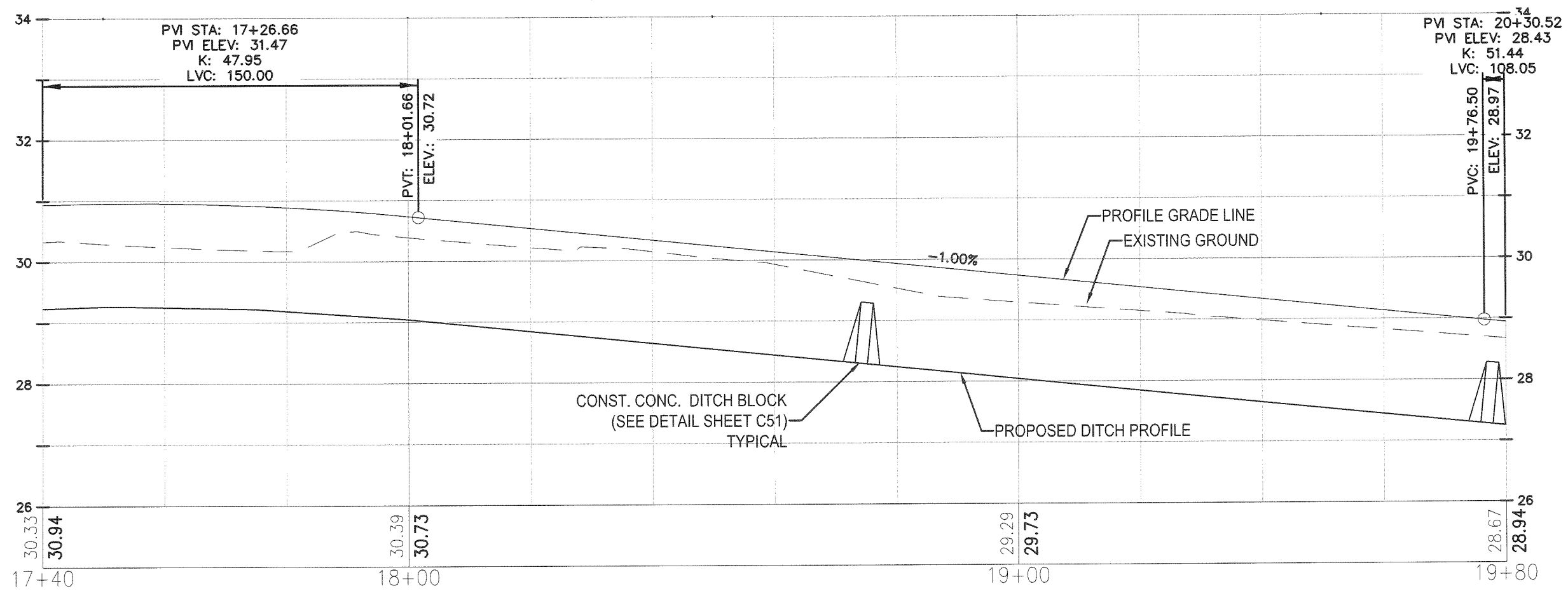
DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C20
DRAWN: BDAHLEN	
CHECKED: AWISE	

April 25, 2014 (09:00:06 EST)
 C:\CIVIL_3D_PROJECTS\662.014_TCC_WEI_ENTRANCE_ROAD\ROADWAY\TCC_PLAN_PROFILE_SHEETS.DWG



CURVE DATA

PI STA.	= 22+88.68
DELTA	= 66.9666
D	= 5°48'13"
T	= 653.03
L	= 1153.88
R	= 987.25
PC STA.	= 16+35.65
PT STA.	= 27+89.53



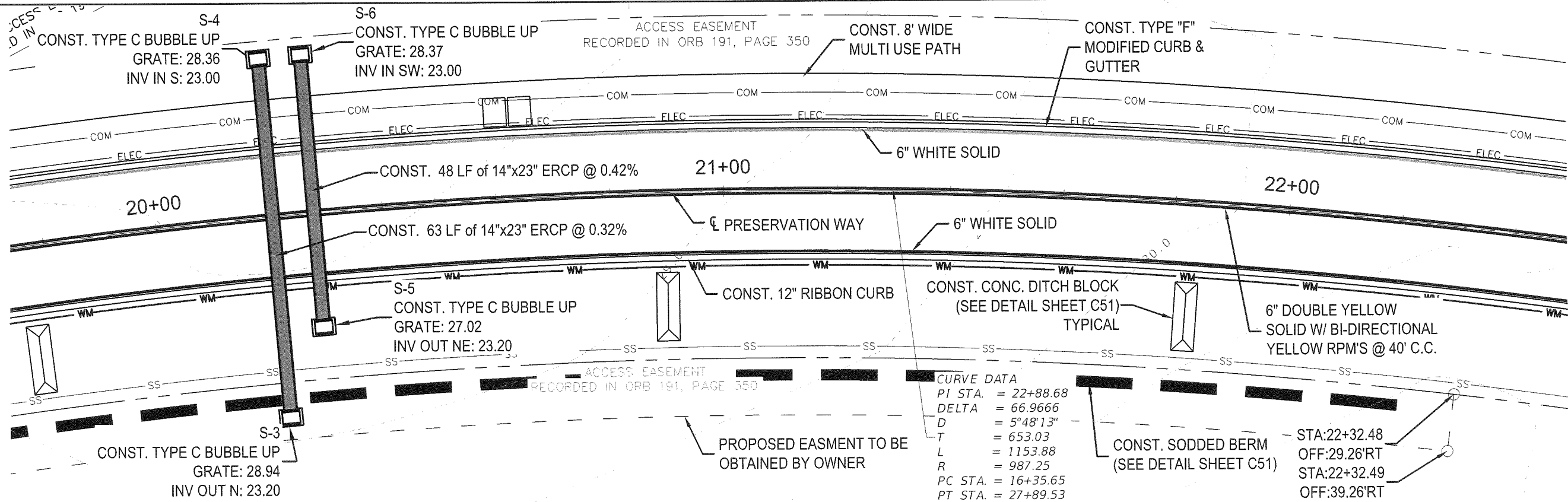
SCALES:
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 1"=10' VERT
 EB# 0006155

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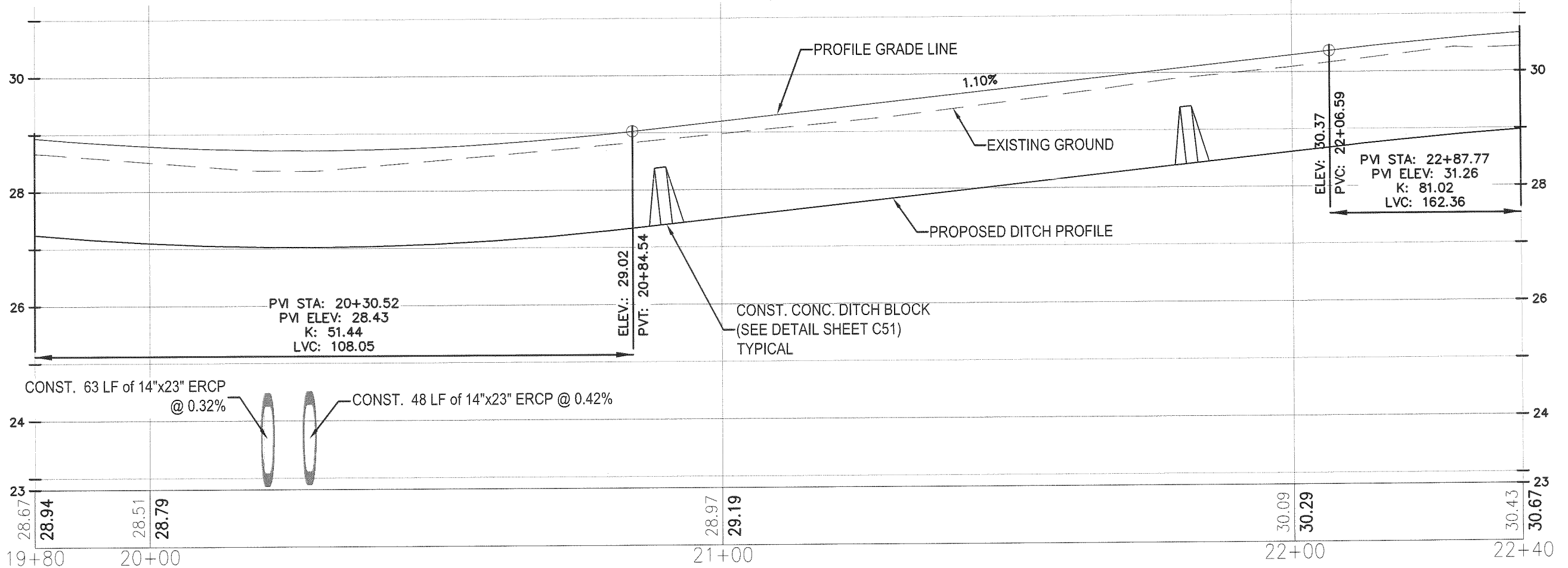
PREBLE-RISH INC
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 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

PLAN - PROFILE
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C21
DRAWN: BDAHLEN	
CHECKED: AWISE	



CURVE DATA
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 D = 5°48'13"
 T = 653.03
 L = 1153.88
 R = 987.25
 PC STA. = 16+35.65
 PT STA. = 27+89.53



SCALES:
 1"=40' HORIZ
 1"=10' VERT

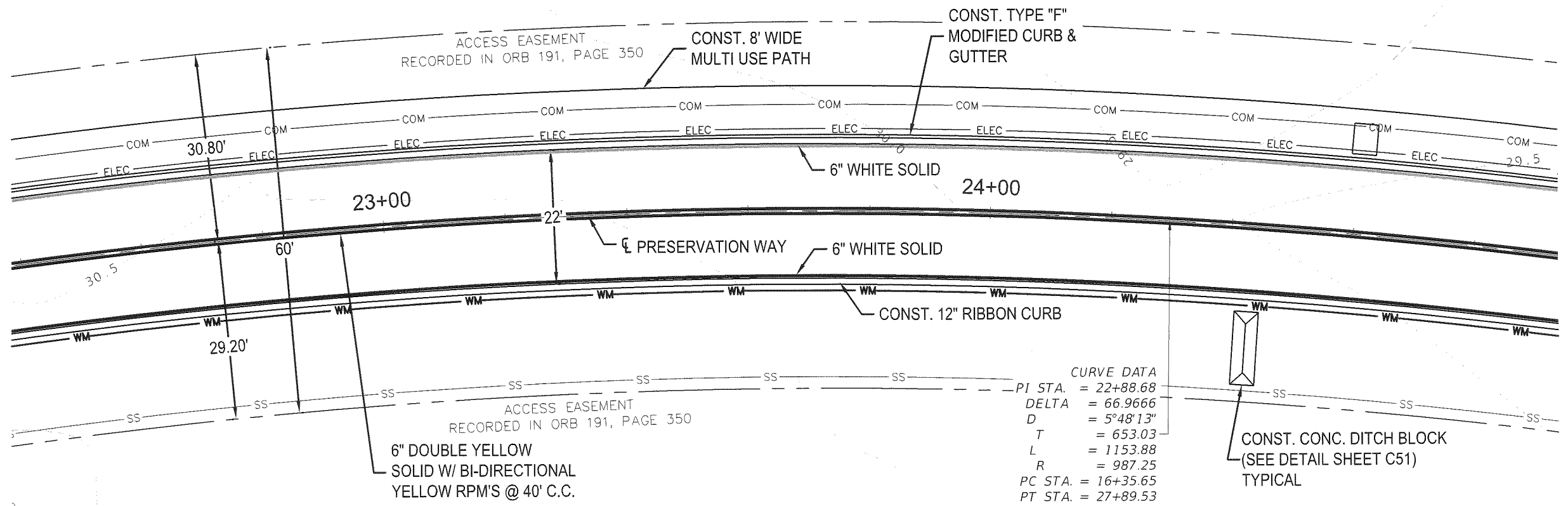
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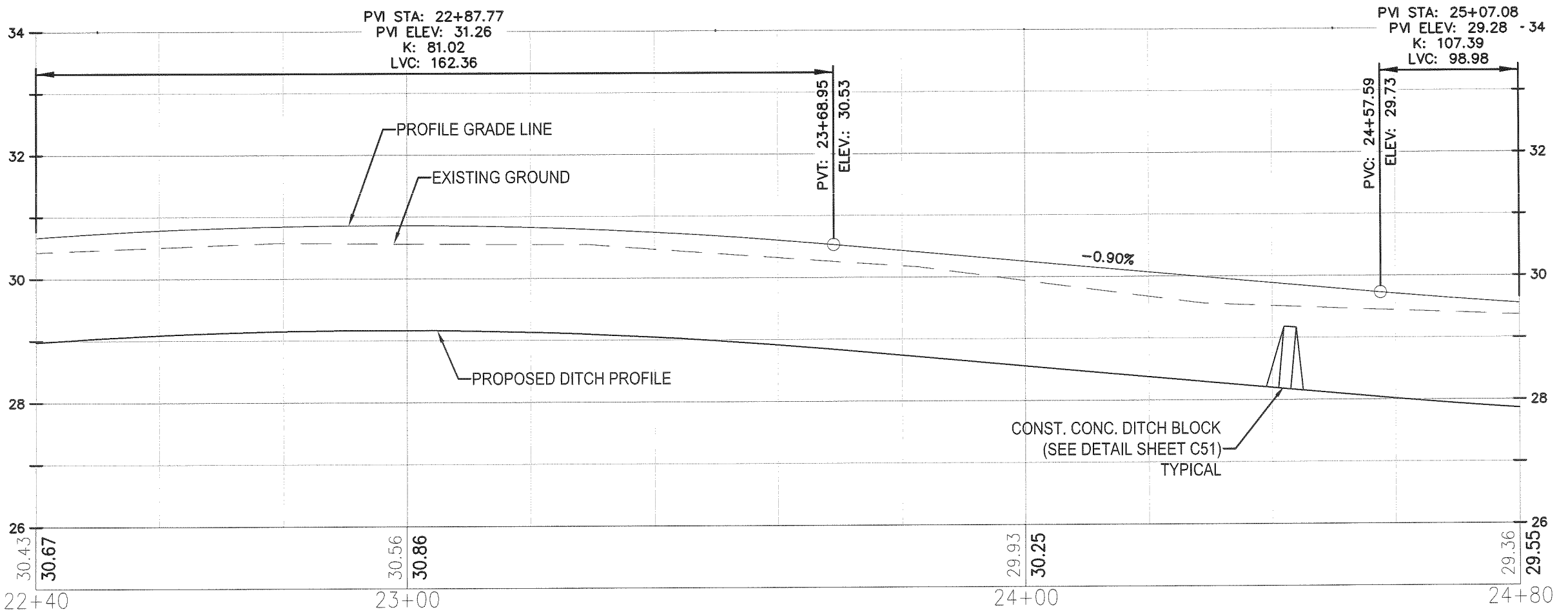
PREBLE-RISH INC
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PLAN - PROFILE
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	
DRAWN: BDAHLEN	SHEET C22
CHECKED: AWISE	



CURVE DATA
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 DELTA = 66.9666
 D = 5°48'13"
 T = 653.03
 L = 1153.88
 R = 987.25
 PC STA. = 16+35.65
 PT STA. = 27+89.53



SCALES:
 1"=40' HORIZ
 1"=10' VERT
 EB# 0006155

April 24, 2014 (20:32:30 EST)
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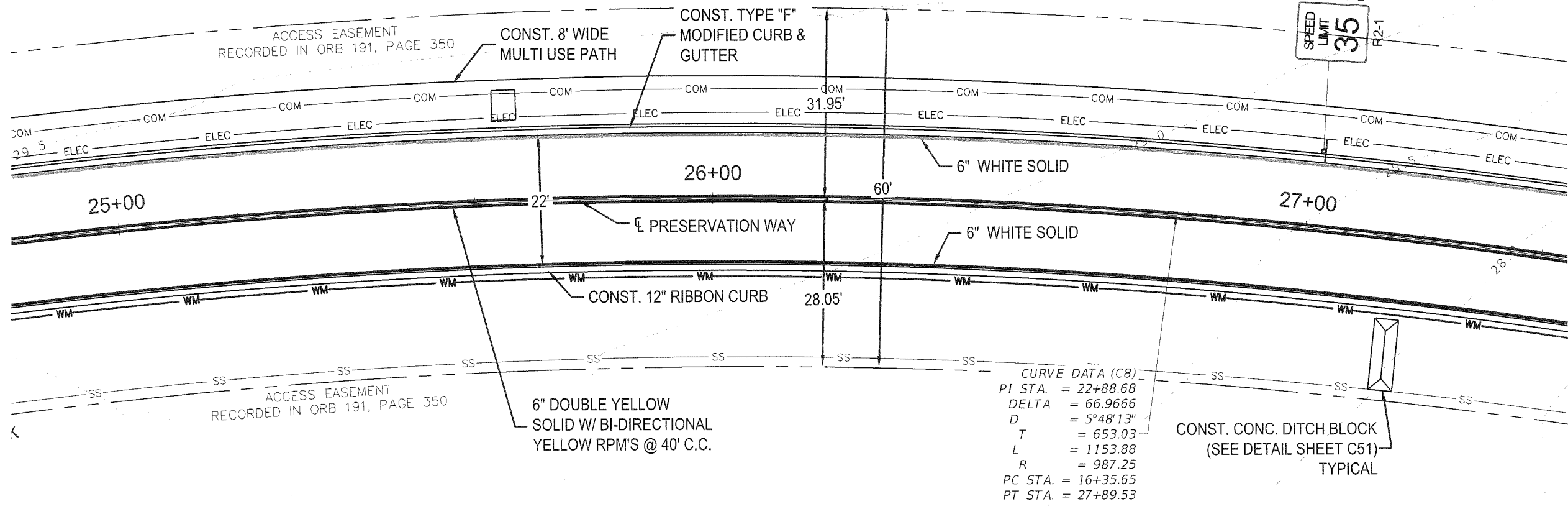
PLAN - PROFILE
PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
SCALE: 1"=40'	
DRAWN: BDAHLEN	SHEET C23
CHECKED: AWISE	

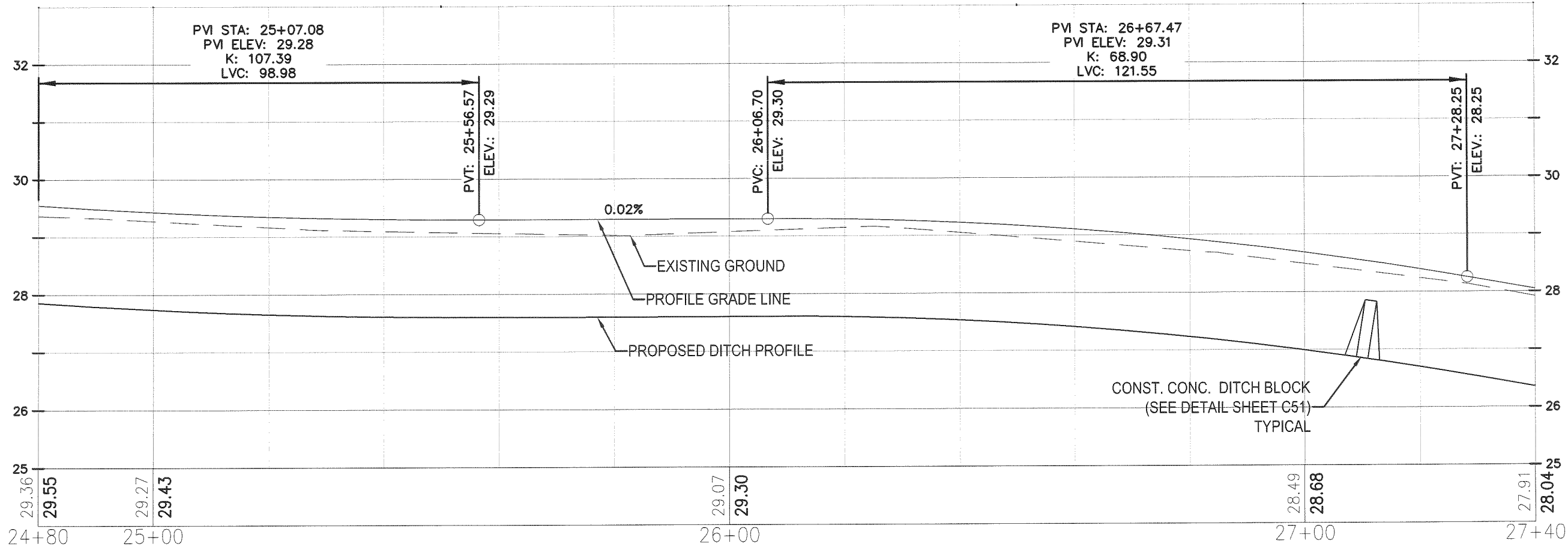
STA.: 27+00
OFF.: 13' L

SPEED
LIMIT
35

R2-1



CURVE DATA (C8)
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 DELTA = 66.9666
 D = 5°48'13"
 T = 653.03
 L = 1153.88
 R = 987.25
 PC STA. = 16+35.65
 PT STA. = 27+89.53



SCALES:
 1"=40' HORIZ
 1"=10' VERT
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April 24, 2014 (20:32:30 EST)
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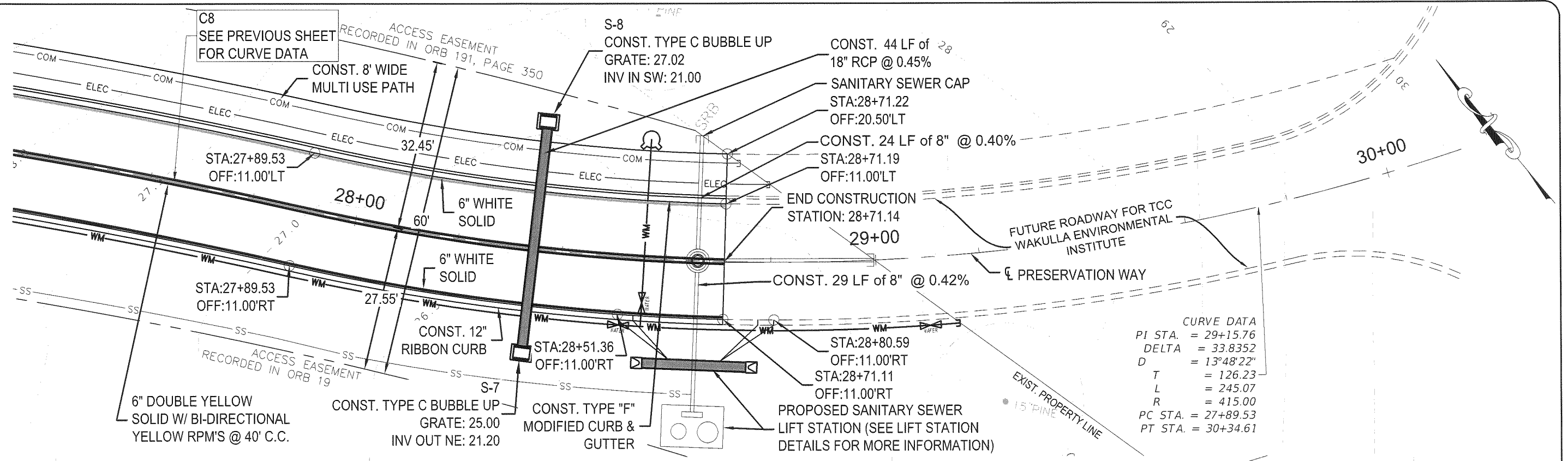
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PREBLE-RISH INC
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PLAN - PROFILE
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

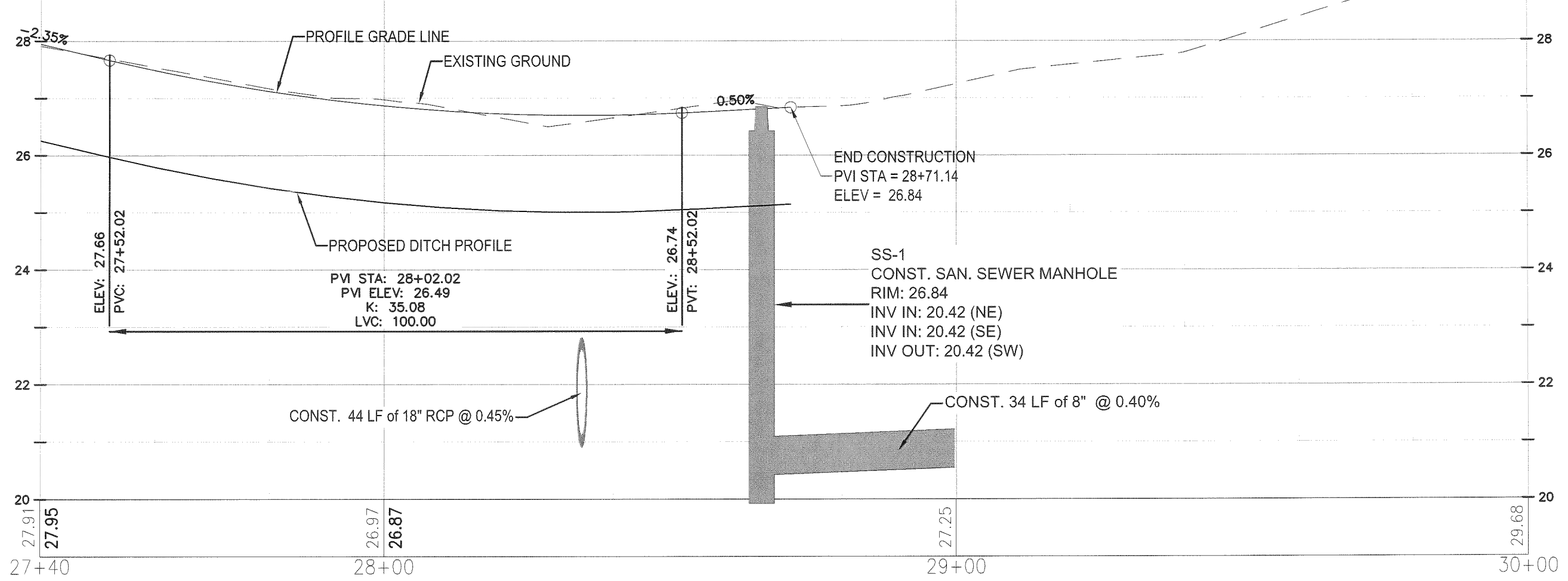
DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	
DRAWN: BOAHLEN	SHEET C24
CHECKED: AWISE	

April 25, 2014 (13:22:04 EST)
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CURVE DATA

PI STA.	= 29+15.76
DELTA	= 33.8352
D	= 13°48'22"
T	= 126.23
L	= 245.07
R	= 415.00
PC STA.	= 27+89.53
PT STA.	= 30+34.61



SCALES:
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 1"=10' VERT
 EB# 0006155

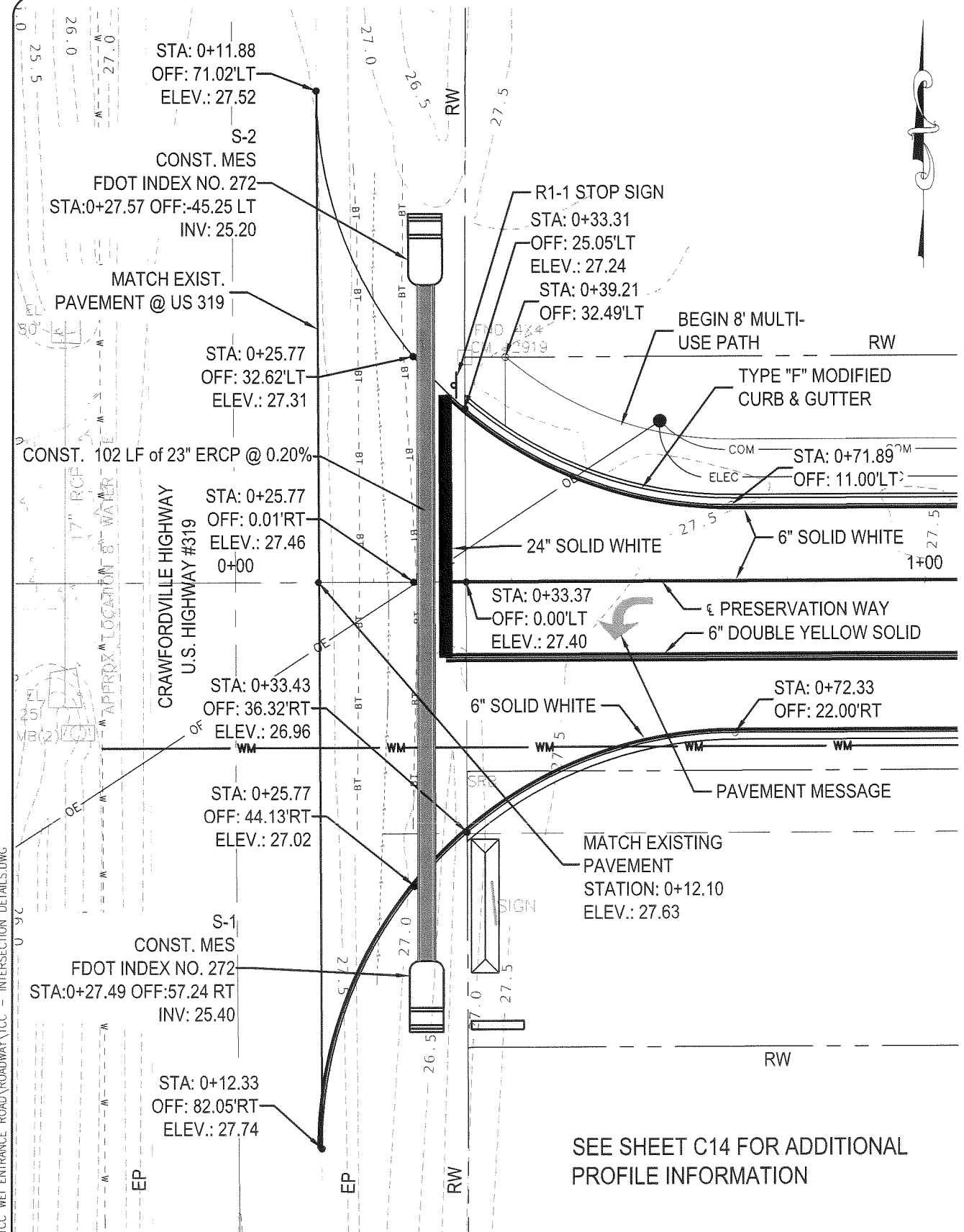
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PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

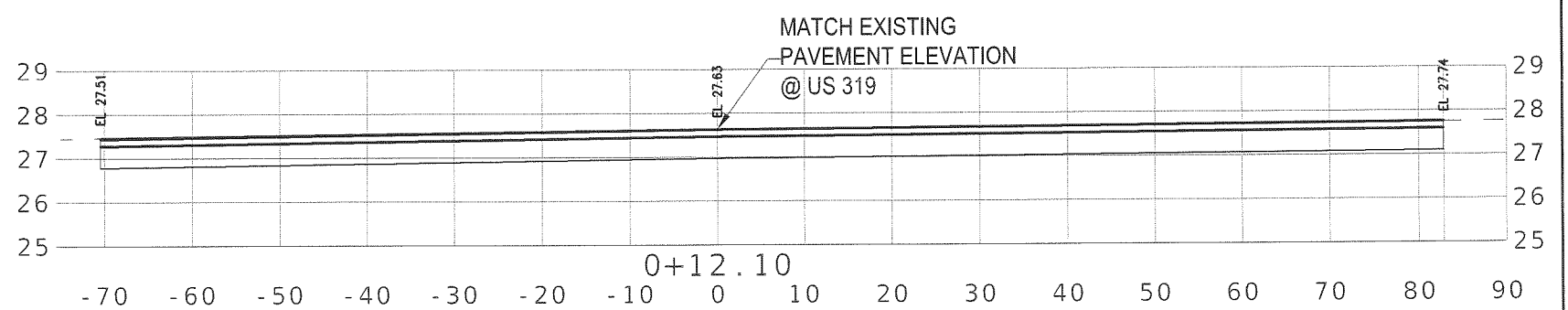
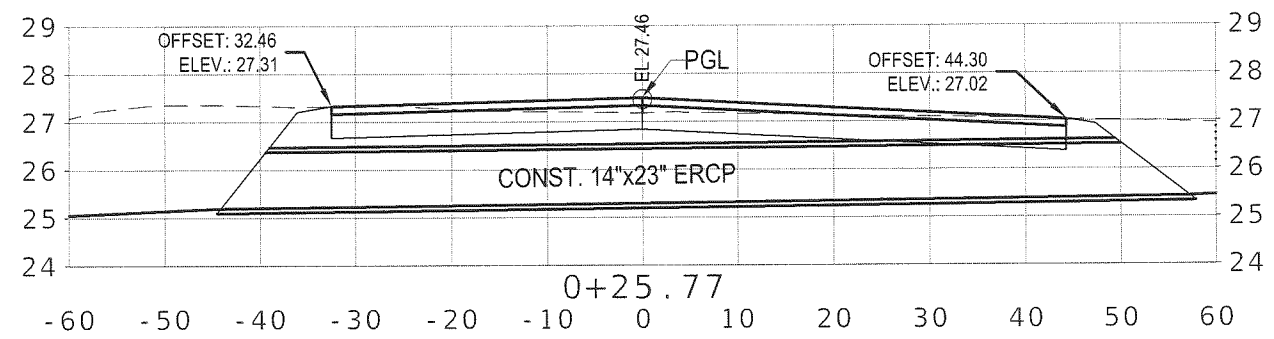
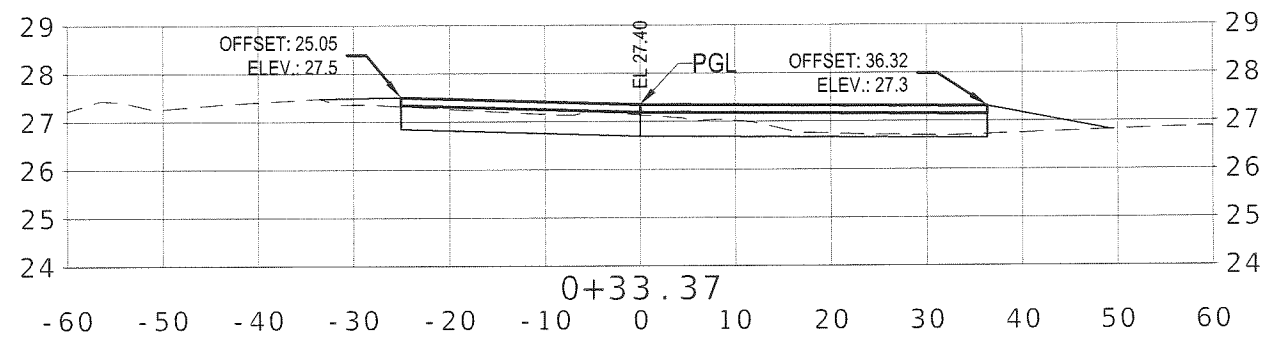
PLAN - PROFILE
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE:	April 2014
SCALE:	1"=40'
DRAWN:	BDAHLEN
CHECKED:	AWISE
PROJECT NO.	662.014
SHEET	C25

April 21, 2014 (16:20:46 EST)
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SEE SHEET C14 FOR ADDITIONAL
 PROFILE INFORMATION



CROSS SECTIONS
 SCALE: 1"=20' HOR.
 1"=4' VERT.

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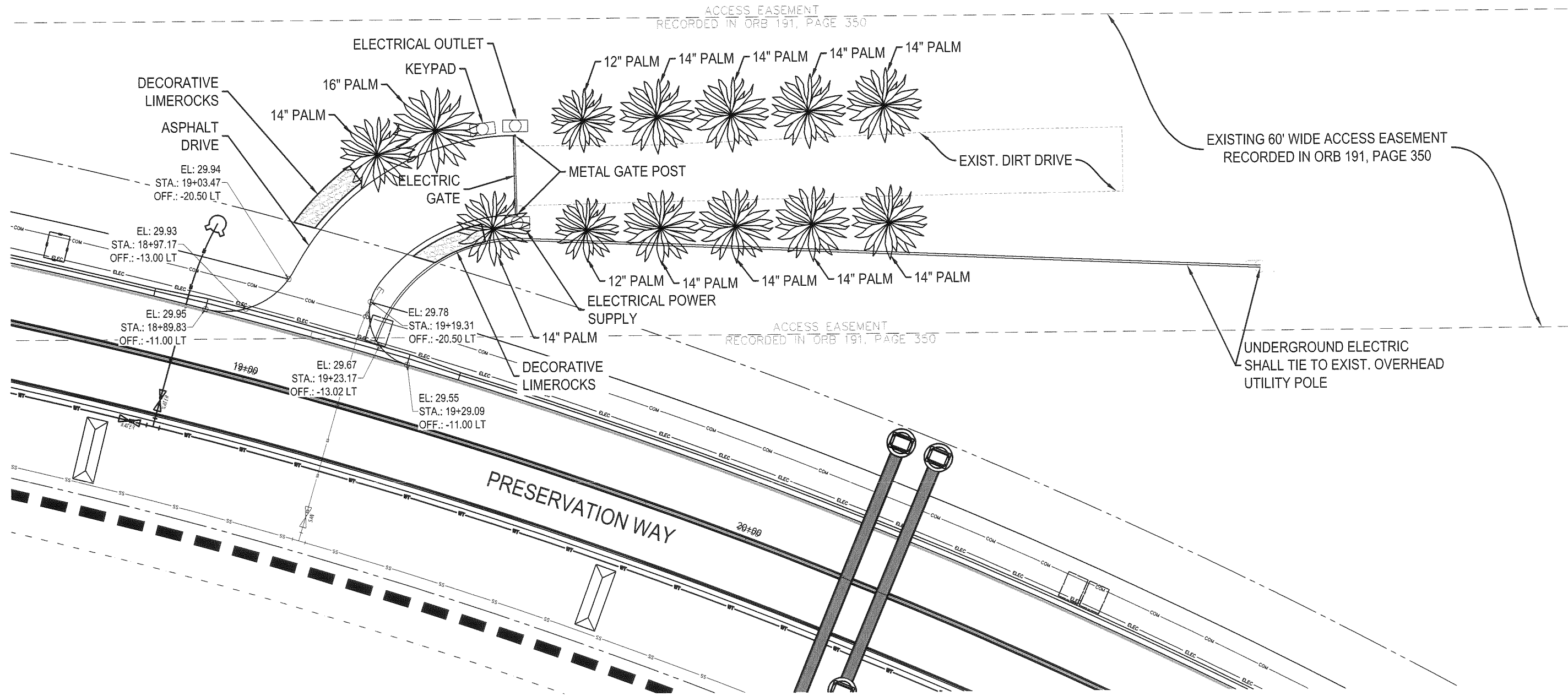
INTERSECTION LAYOUT
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
SCALE: AS NOTED	SHEET C26
DRAWN: BDAHLEN	
CHECKED: AWISE	

EB# 0006155



ACCESS EASEMENT
RECORDED IN ORB 191, PAGE 350



EXISTING 60' WIDE ACCESS EASEMENT
RECORDED IN ORB 191, PAGE 350

ACCESS EASEMENT
RECORDED IN ORB 191, PAGE 350

UNDERGROUND ELECTRIC
SHALL TIE TO EXIST. OVERHEAD
UTILITY POLE

NOTE:
THE IMPROVEMENTS SHOWN ON THIS SHEET ARE THE NEW
LOCATIONS OF THE RELOCATED ITEMS FROM SHEET C6.

April 24, 2014 (06:56:43 EST)
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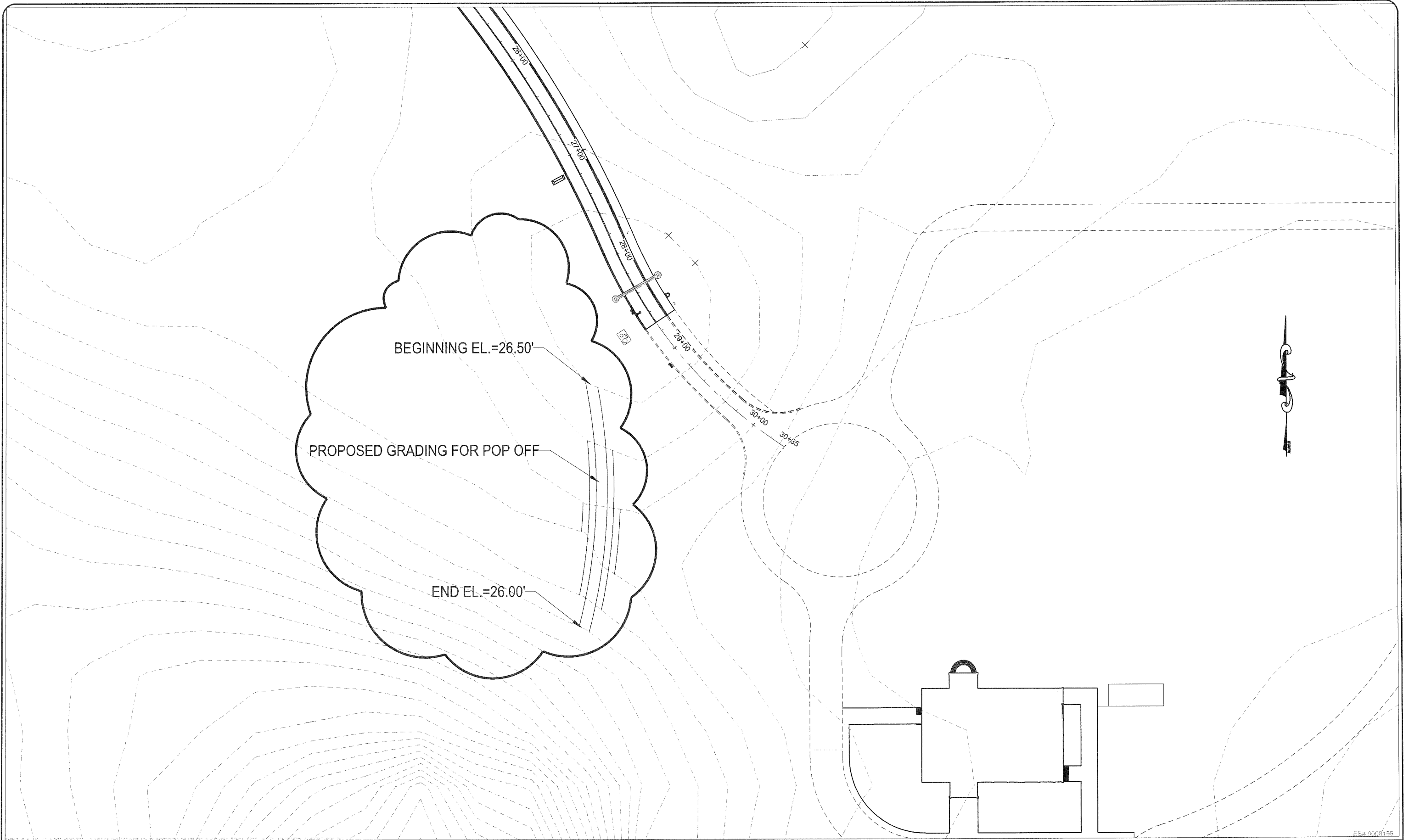
PREBLE-RISH INC
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36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

RELOCATION PLAN
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: April 14	PROJECT NO. 662.014
SCALE: 1"=20'	SHEET C27
DRAWN: BDAHLEN	CHECKED: AWISE

EB# 0006155

April 25, 2014 (06:52:07 EST)
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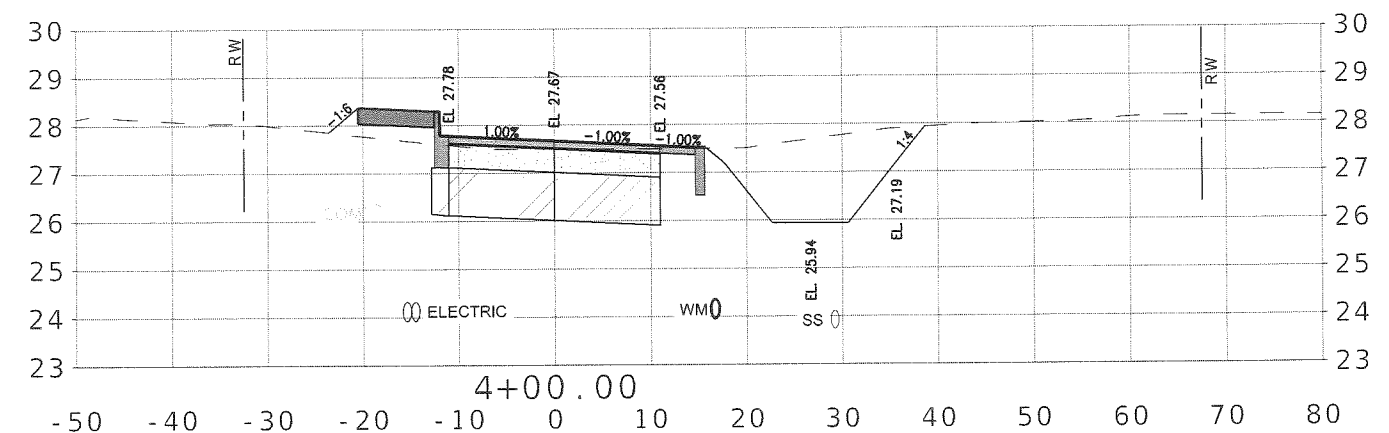
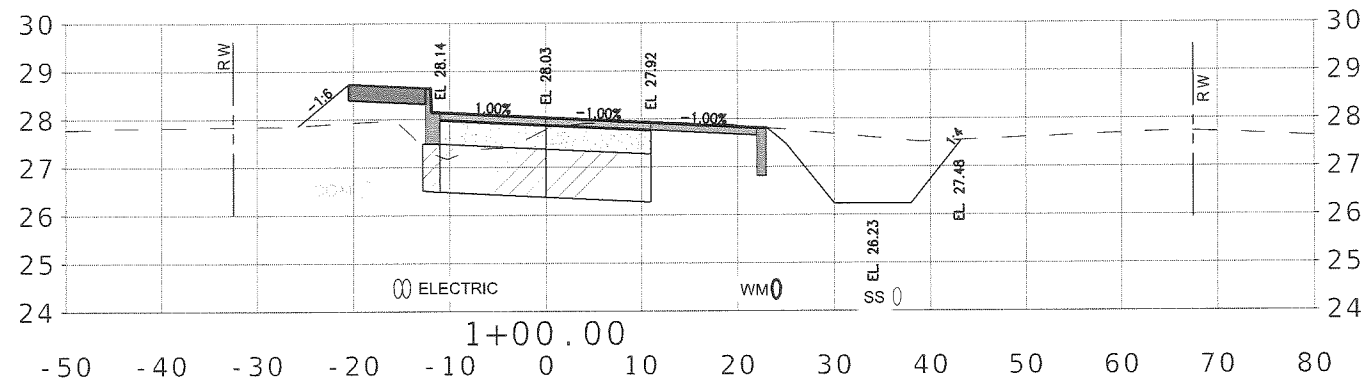
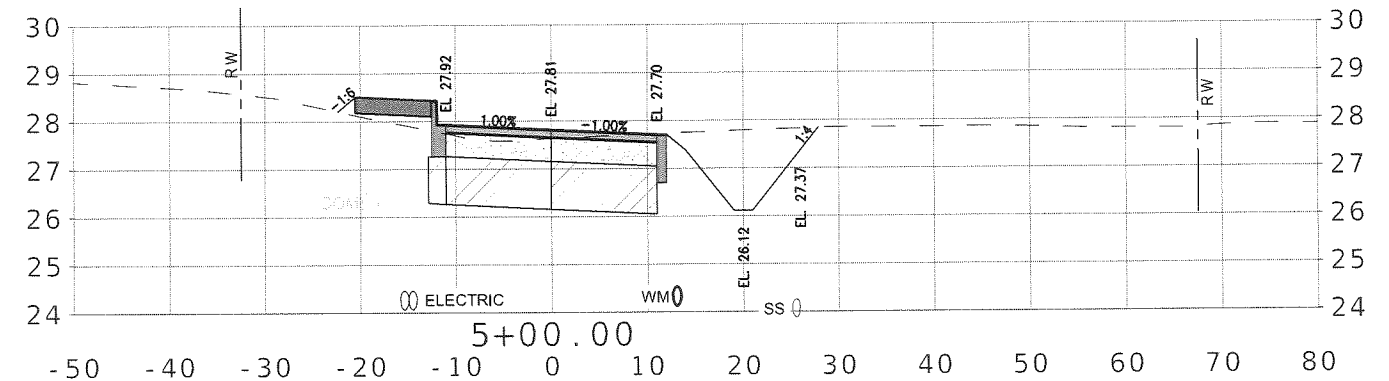
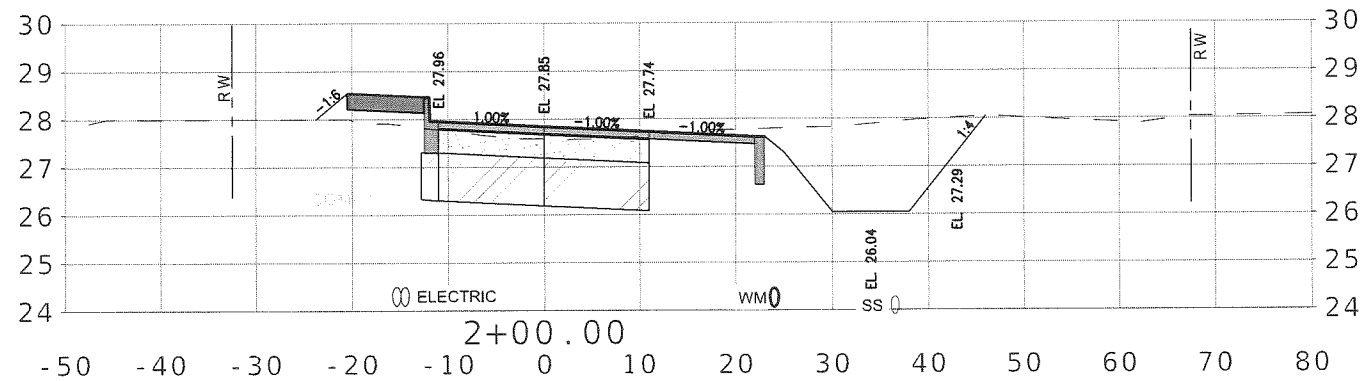
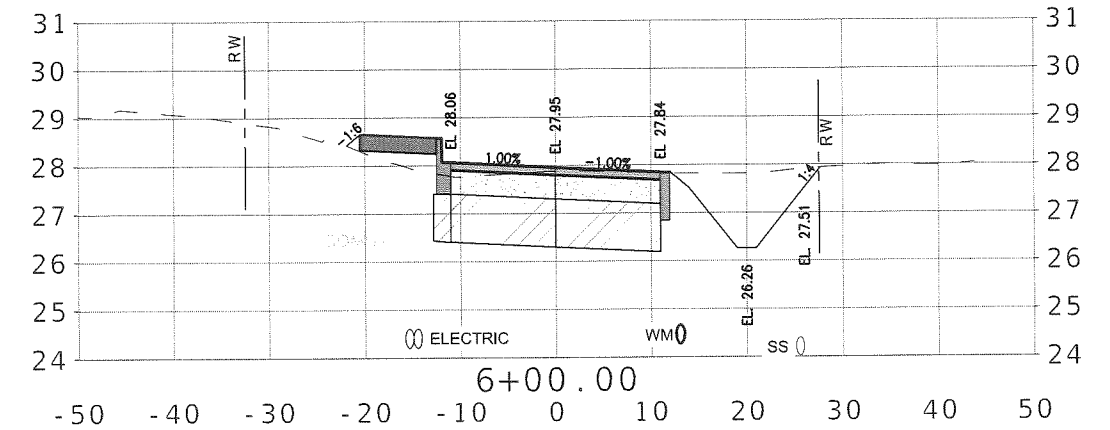
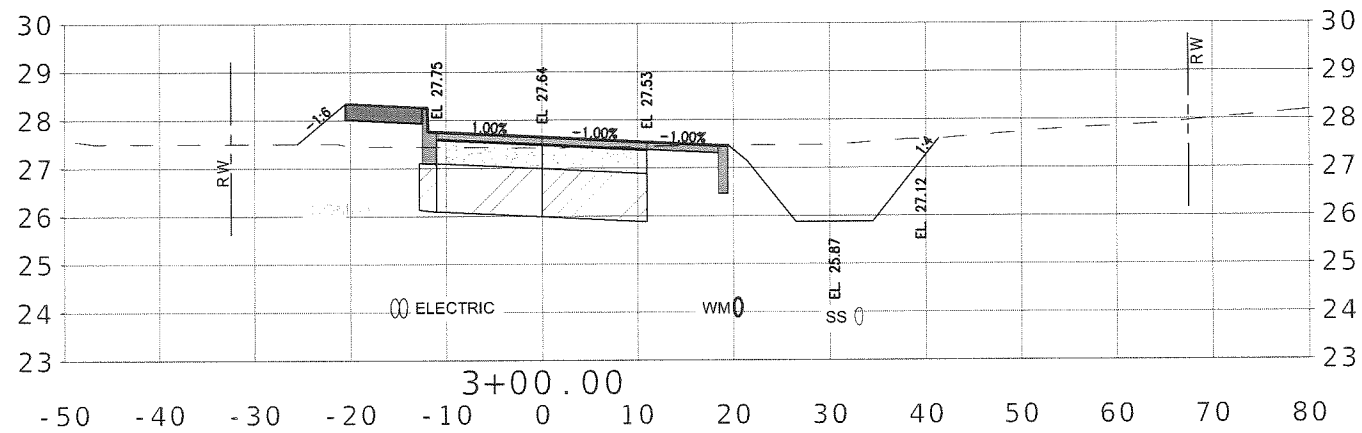
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PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

OFFSITE GRADING
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: N.T.S.	
DRAWN: BDAHLEN	SHEET C28
CHECKED: AWISE	

ES: 0008155



April 24, 2014 (20:02:10 EST)
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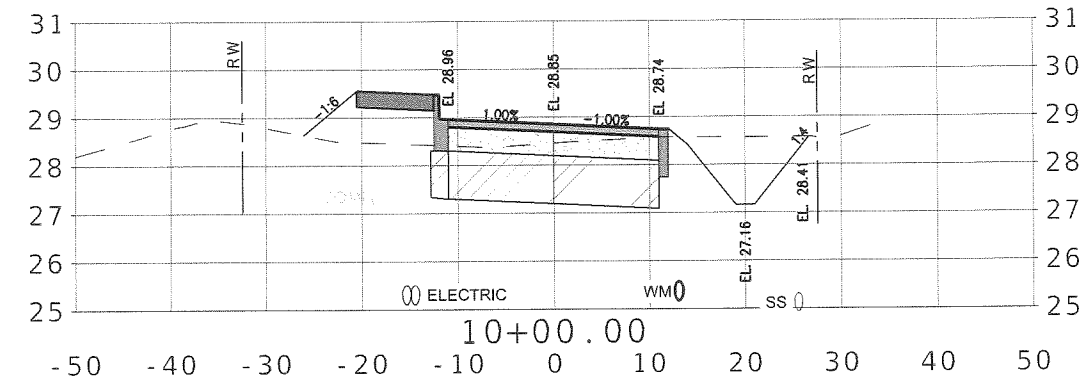
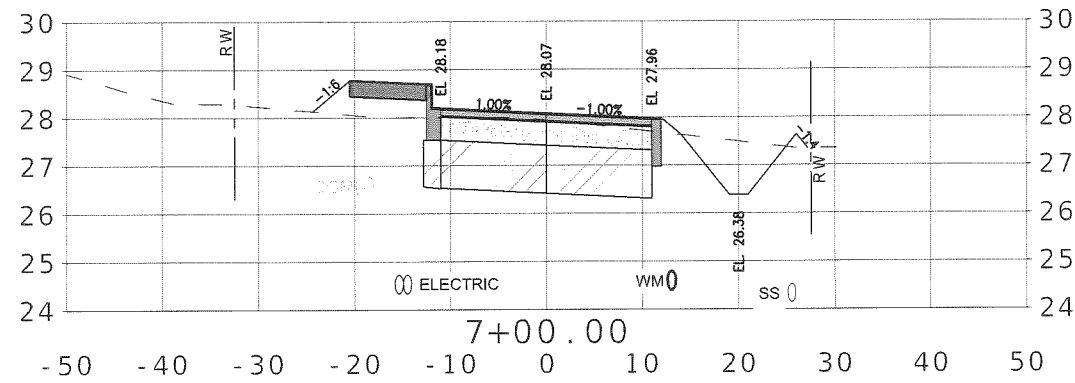
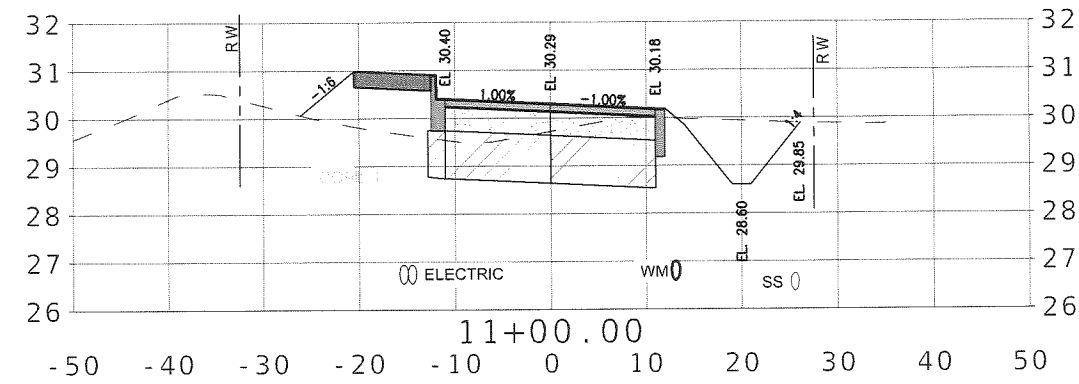
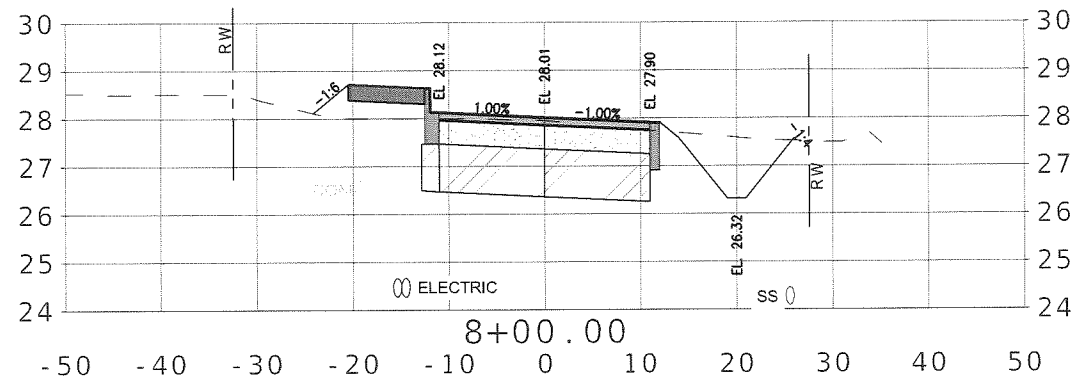
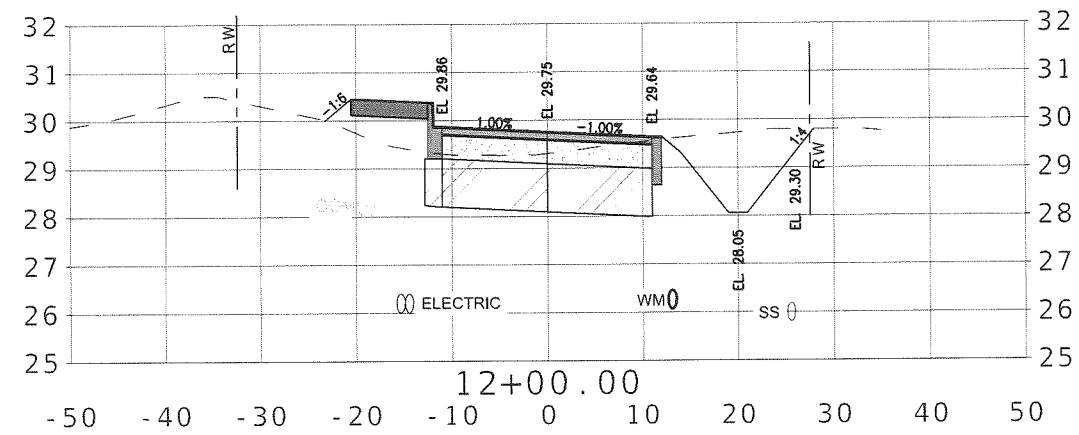
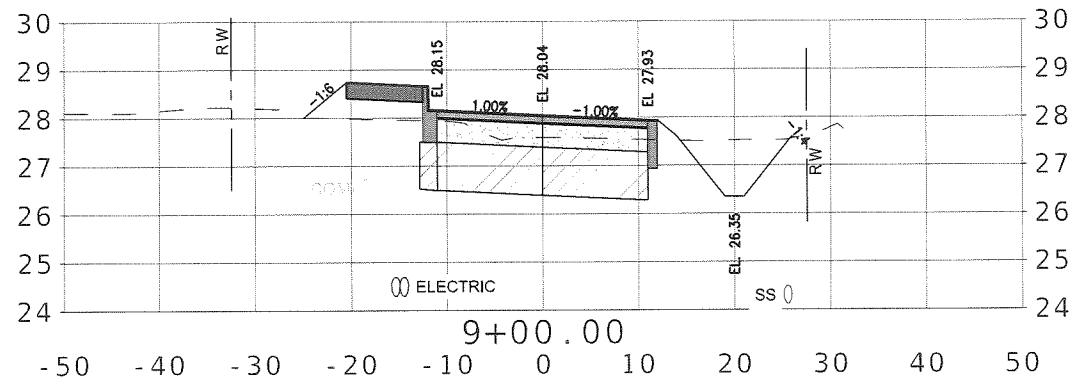
PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

CROSS SECTIONS
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=20'	SHEET C29
DRAWN: BOAHLEN	CHECKED: AWISE

SCALES:
 1"=40' HORIZ
 1"=10' VERT
 EB# 0006155

April 24, 2014 (20:02:10 EST)
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SCALES:
 1"=40' HORIZ
 1"=10' VERT
 EB# 0006155

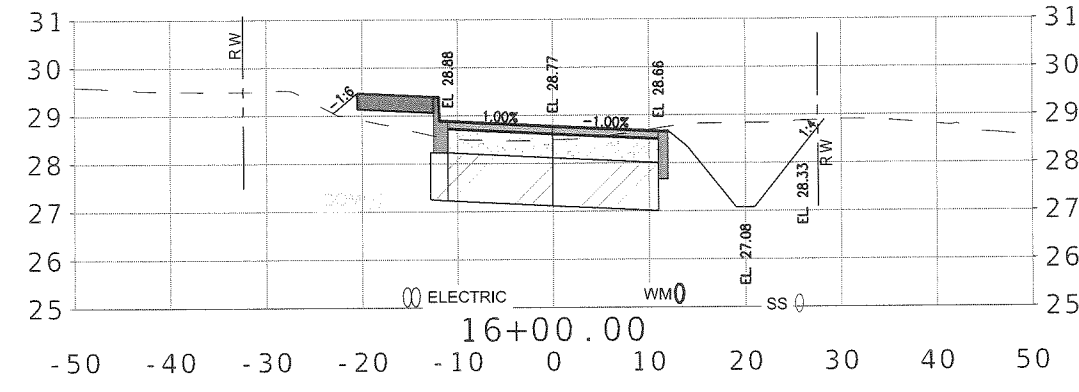
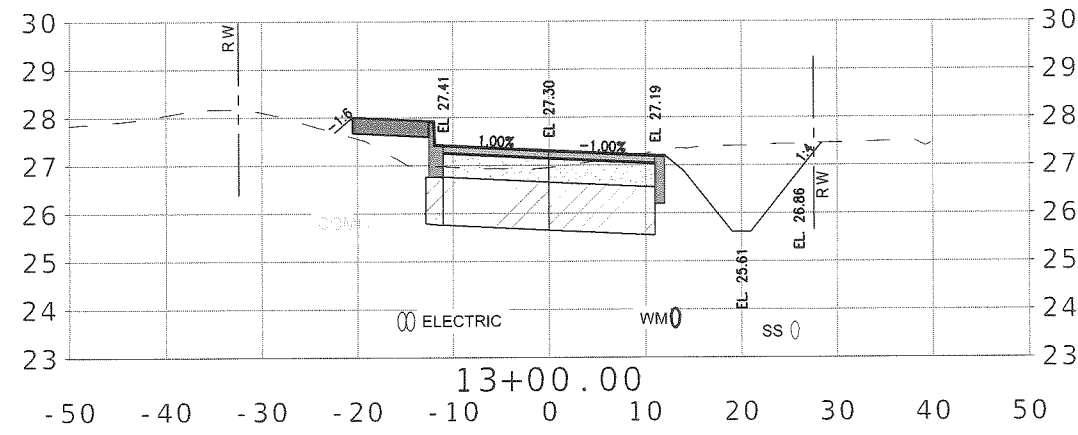
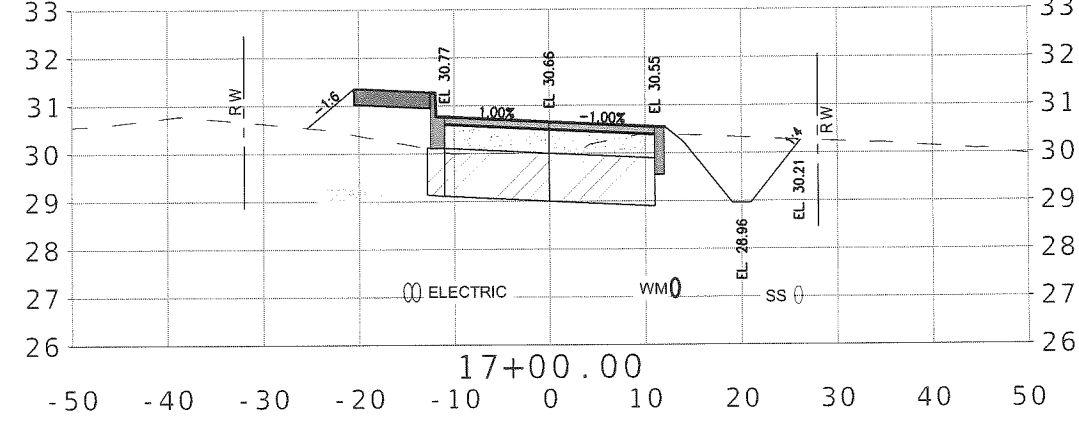
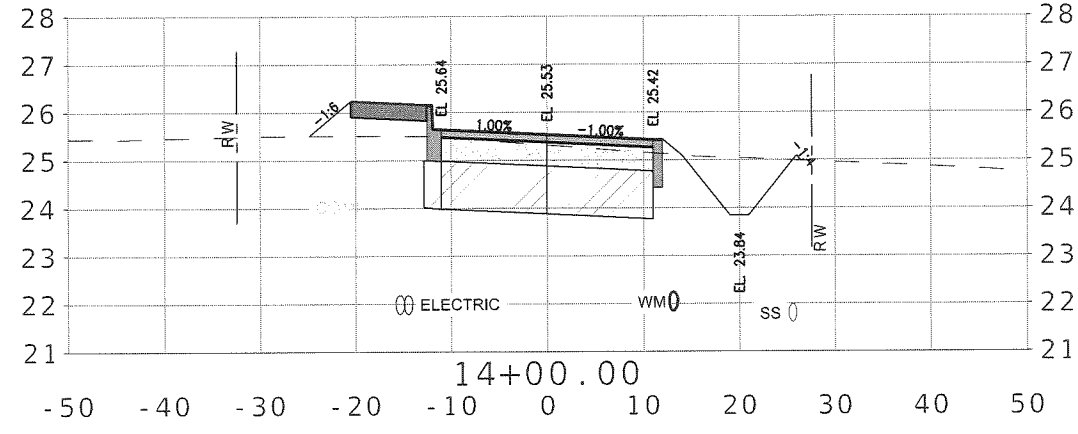
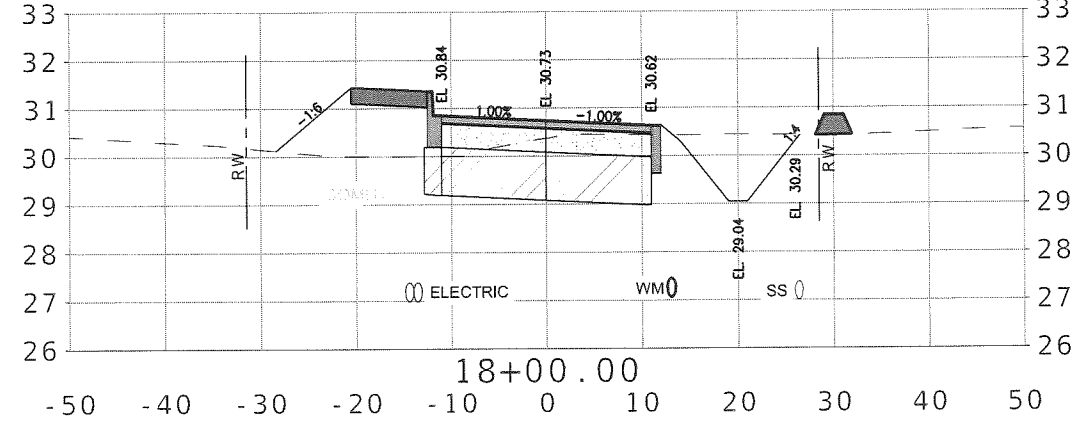
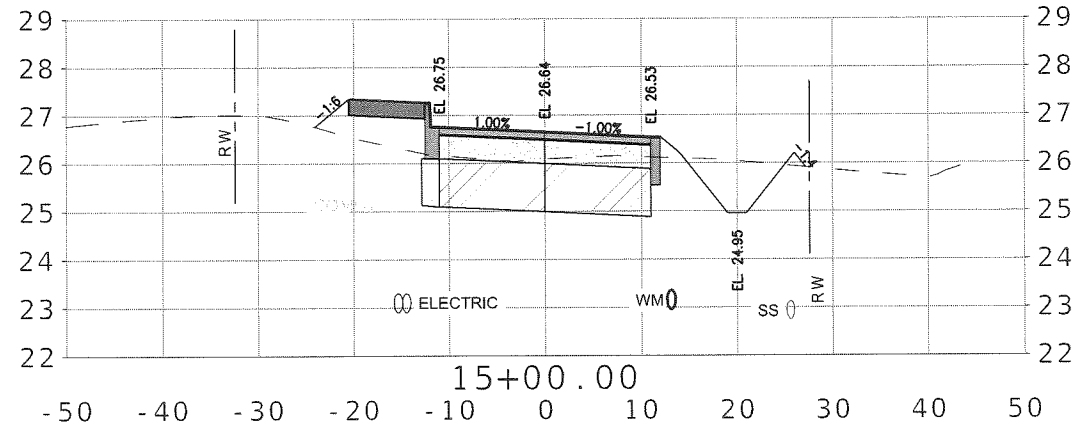
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CROSS SECTIONS
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=20'	SHEET C30
DRAWN: BDAHLEN	
CHECKED: AWISE	

April 24, 2014 (20:02:10 EST)
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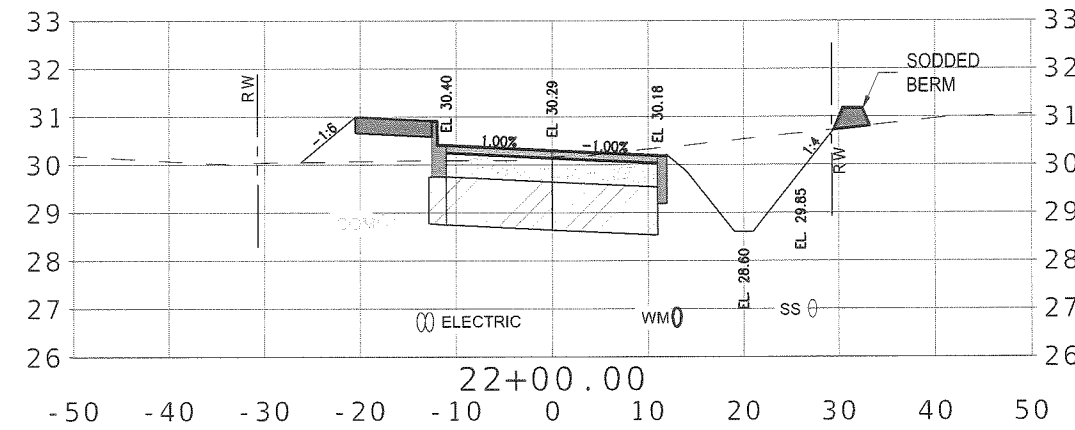
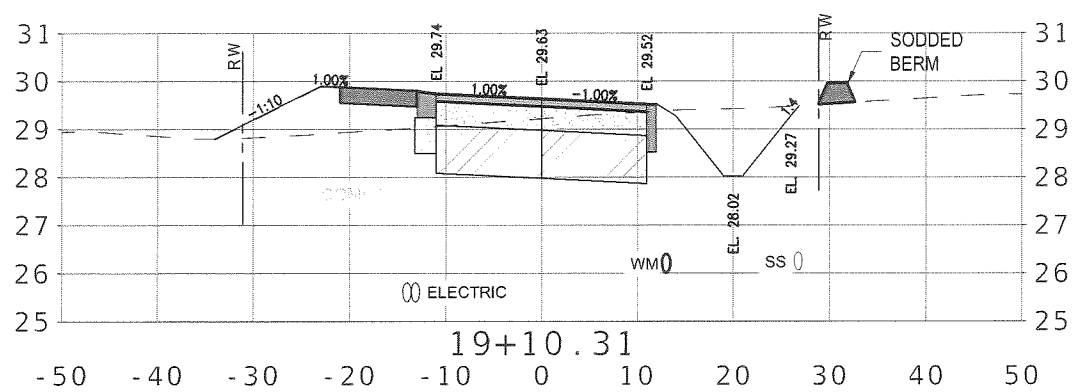
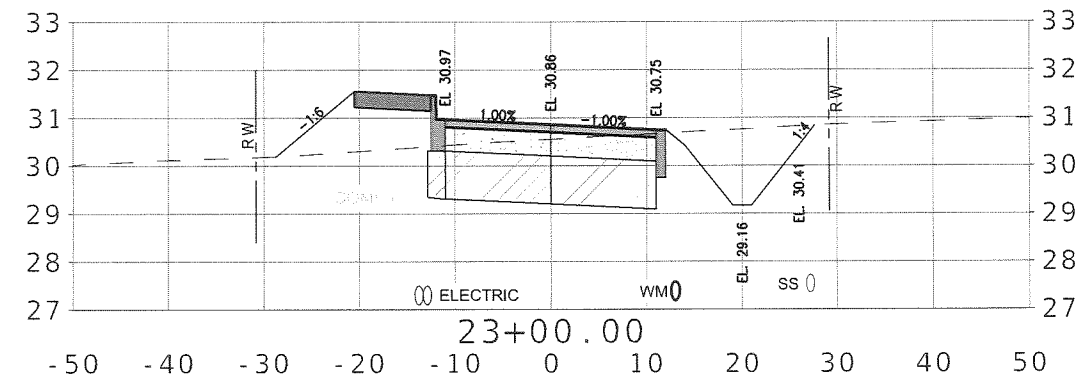
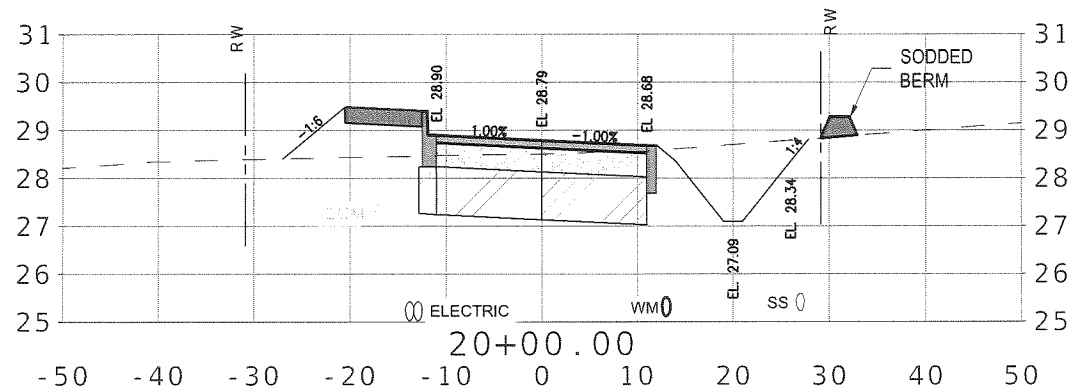
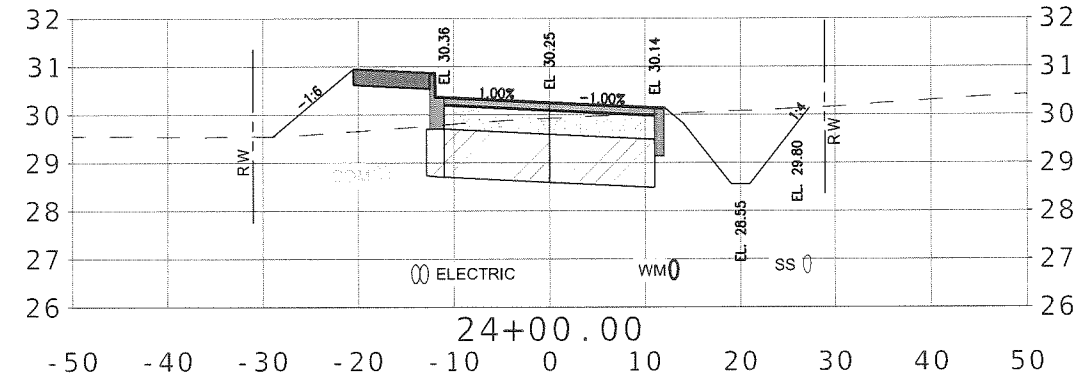
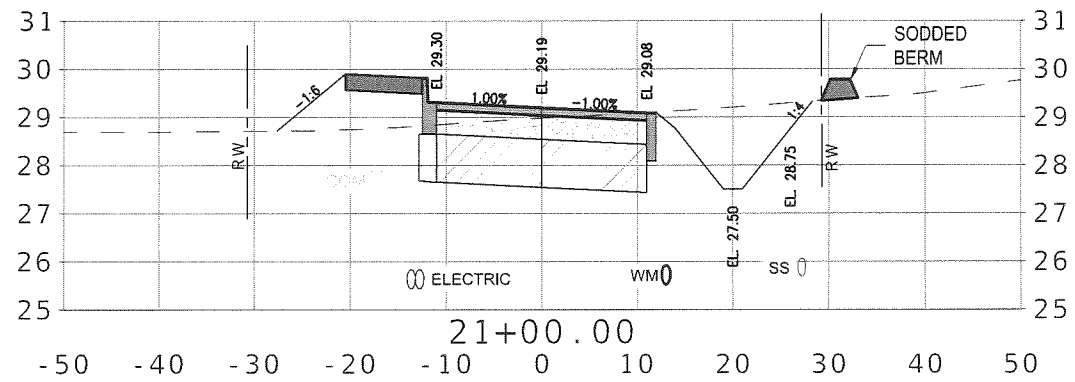
SCALES:
 1"=40' HORIZ
 1"=10' VERT
 EB# 0005155

NO.	DATE	APPR.	REVISION:
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CROSS SECTIONS
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=20'	
DRAWN: BOAHLEN	SHEET C31
CHECKED: AWISE	



April 24, 2014 (20:02:10 EST)
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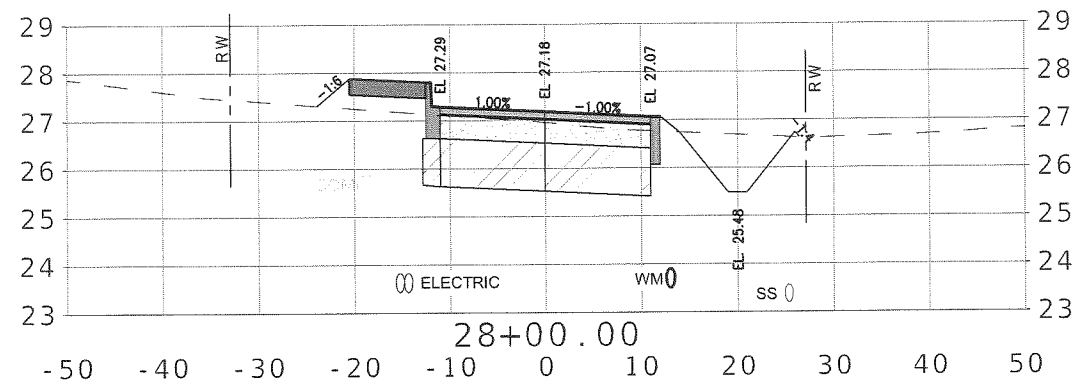
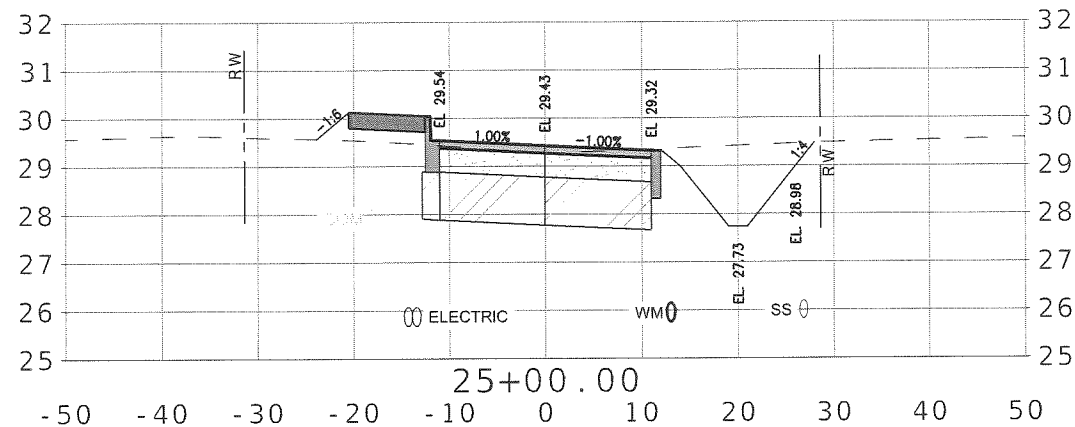
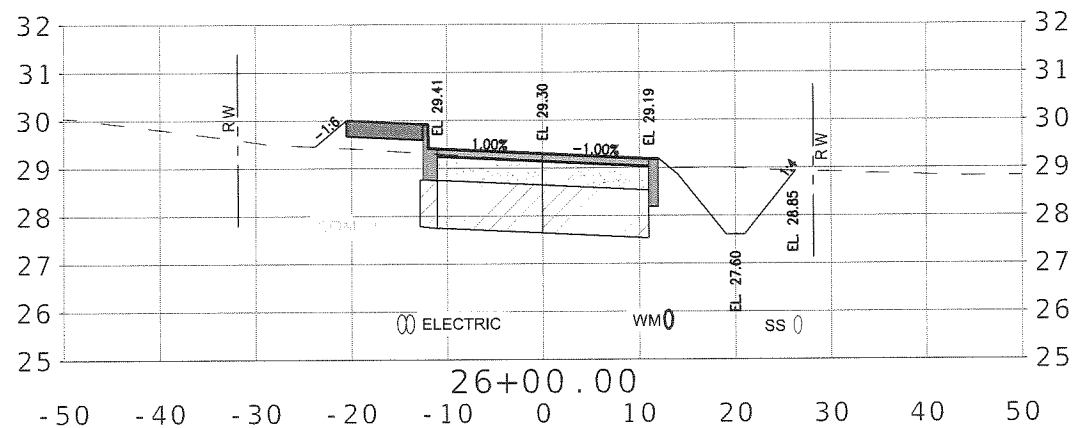
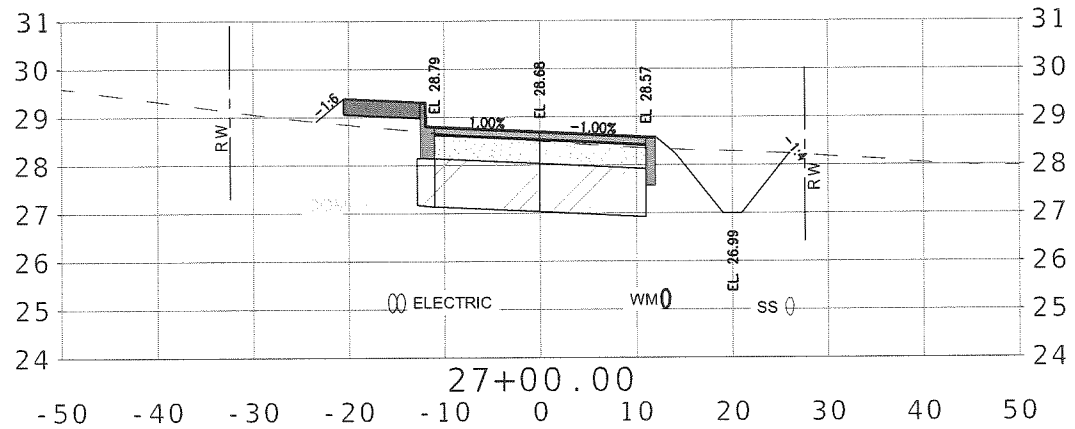
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 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
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CROSS SECTIONS
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=20'	SHEET C32
DRAWN: BDAHLEN	CHECKED: AWISE

SCALES:
 1"=40' HORIZ
 1"=10' VERT
 EB# 0005155



April 24, 2014 (20:02:10 EST)
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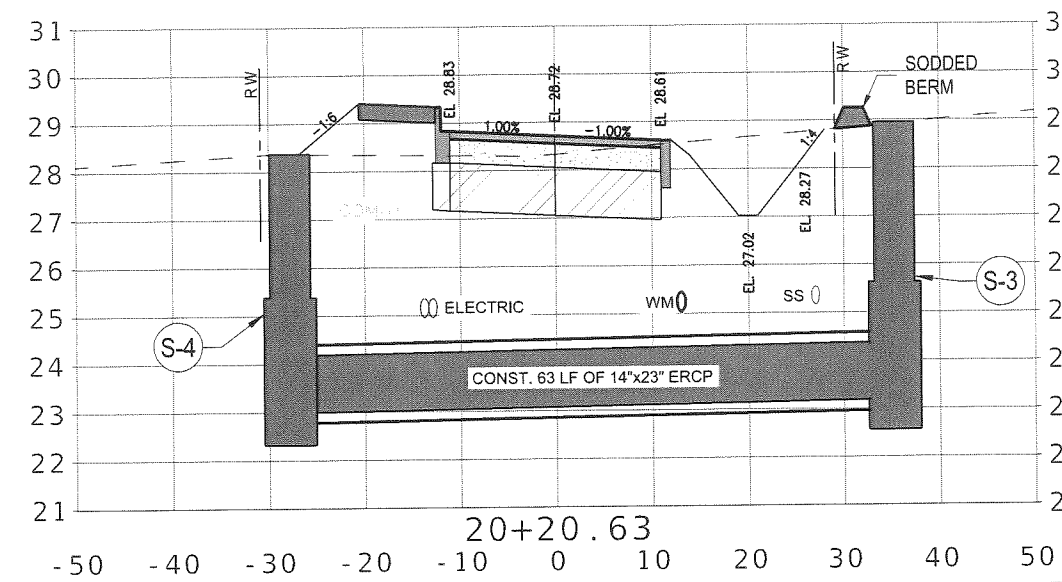
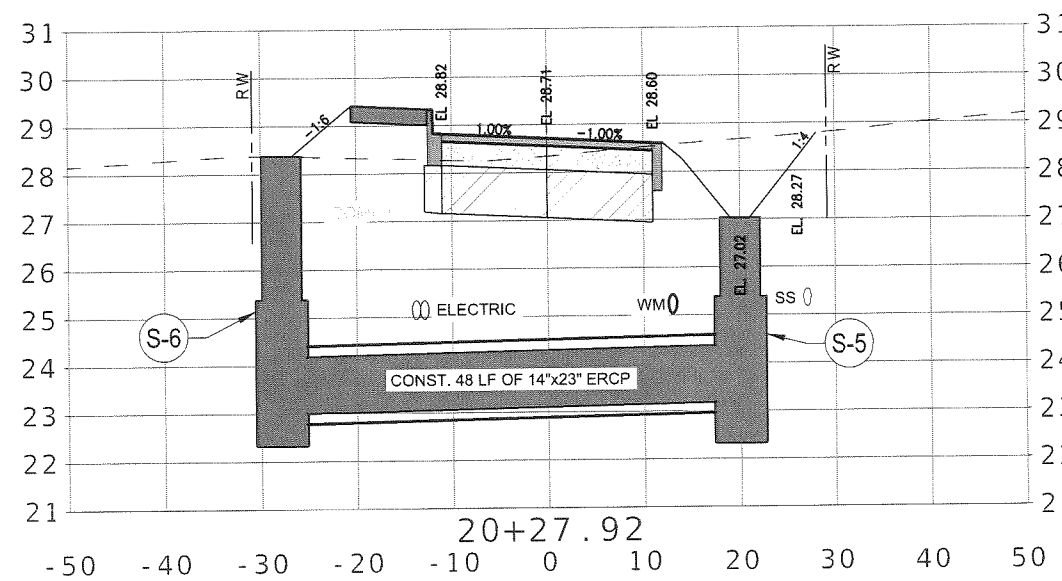
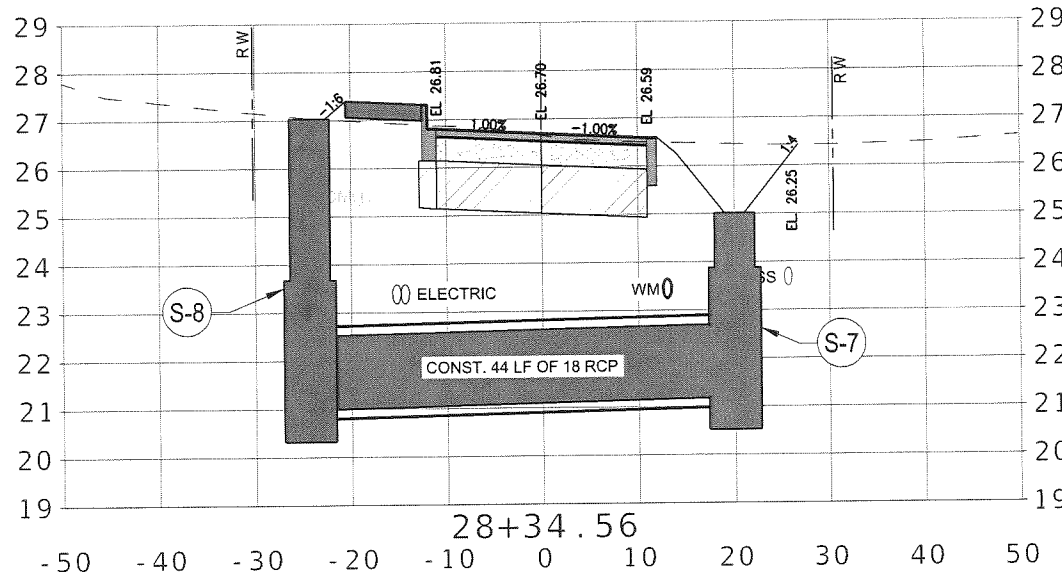
PREBLE-RISH INC
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CROSS SECTIONS
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=20'	
DRAWN: BDAHLEN	SHEET C33
CHECKED: AWISE	

SCALES:
 1"=40' HORIZ
 1"=10' VERT
 E6# 0009195

April 25, 2014 (09:03:35 EST)
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SCALES:
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 1"=10' VERT
 EB# 0005156

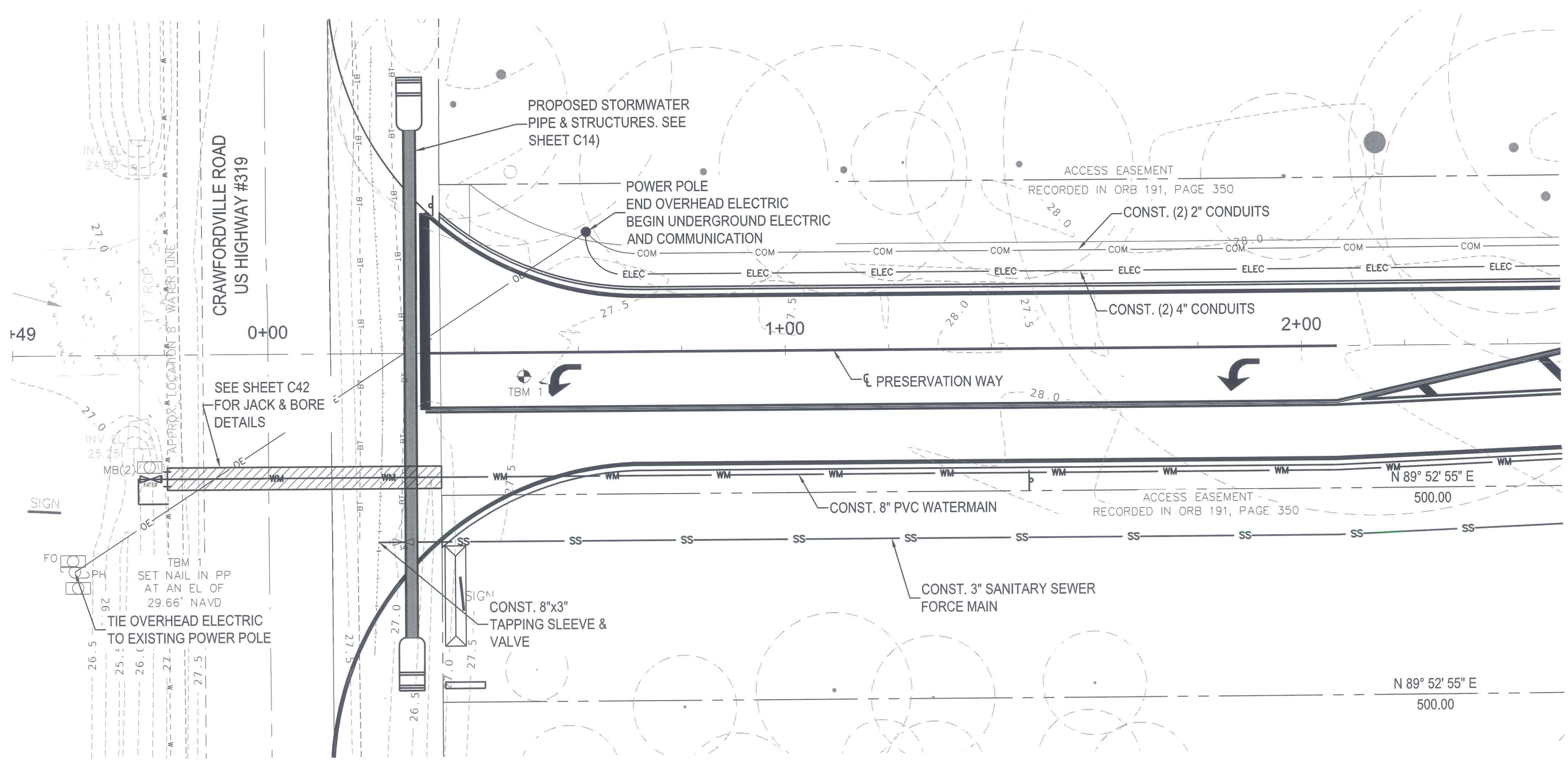
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PREBLE-RISH INC
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 CIVIL • SURVEYING • SITE PLANNING
 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

DRAINAGE STRUCTURES
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=20'	
DRAWN: BDAHLEN	SHEET C34
CHECKED: AWISE	

April 24, 2014 (20:45:10 EST)
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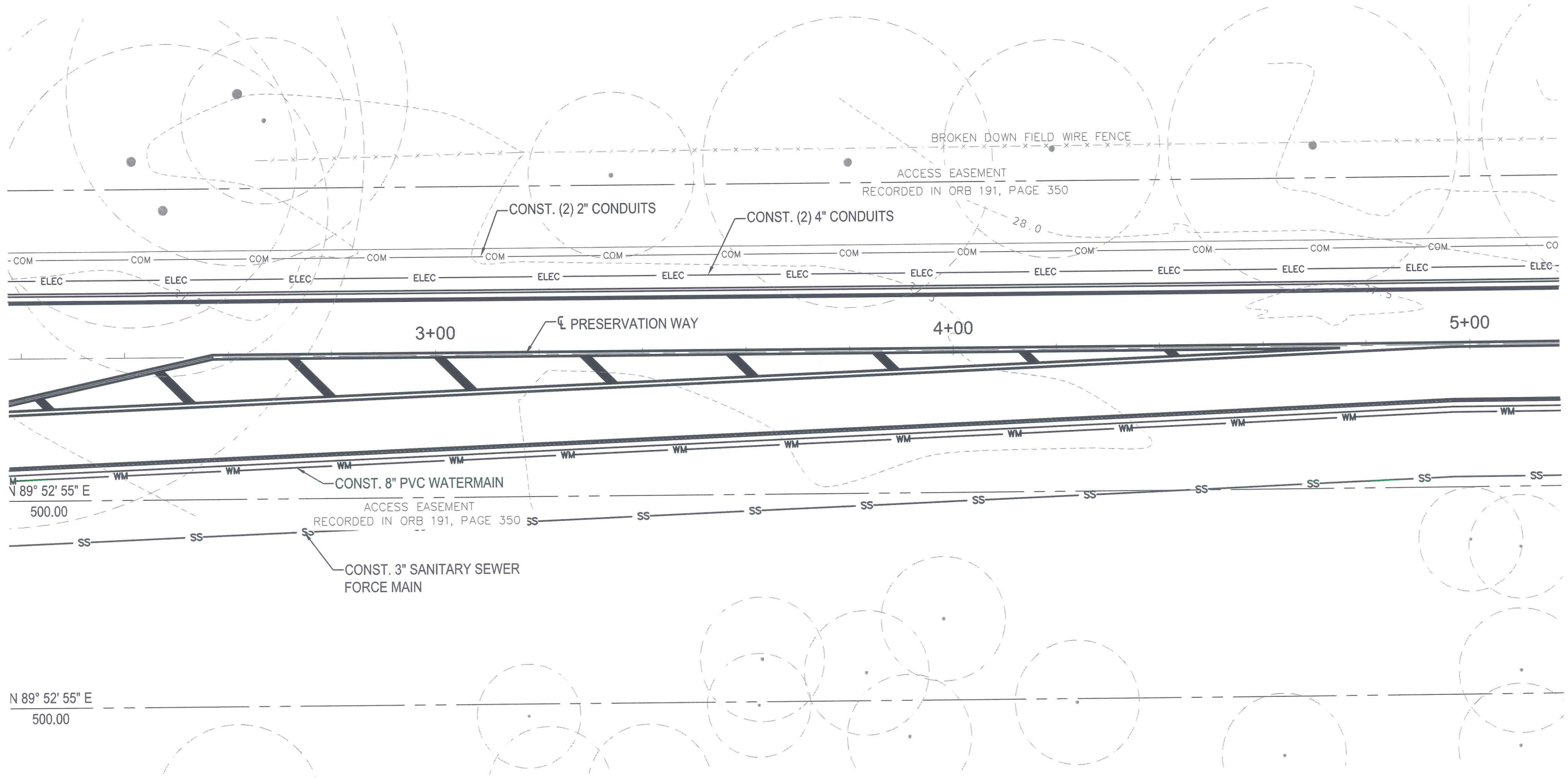
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PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

UTILITY PLAN
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: Apr-2014	PROJECT NO. 662.014
SCALE: 1"=20'	SHEET C35
DRAWN: BDAHLEN	CHECKED: AWISE

EB# 0006155



April 24, 2014 (20:45:10 EST)
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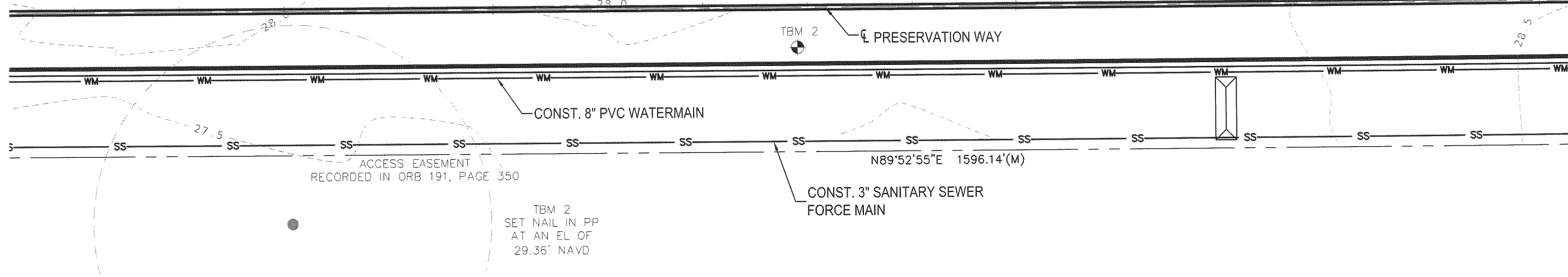
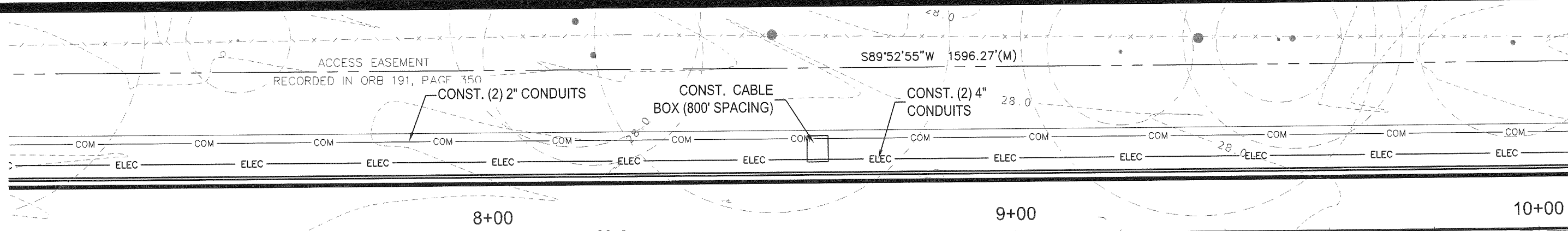
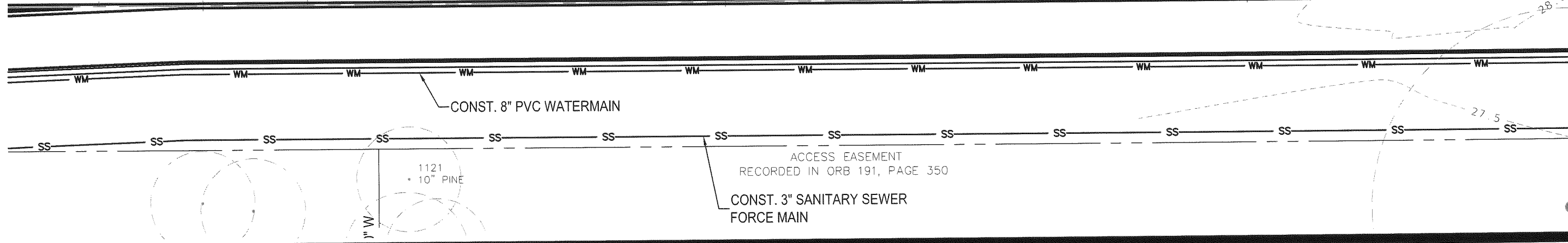
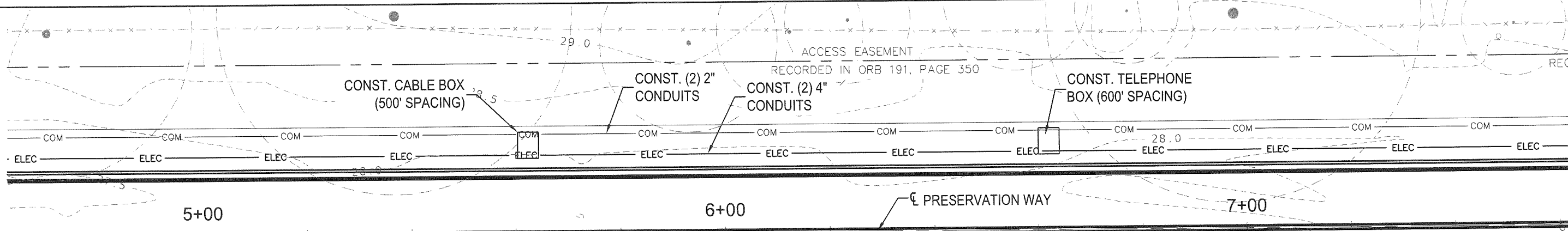
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PREBLE-RISH INC
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 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

UTILITY PLAN
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: Apr-2014	PROJECT NO. 662.014
SCALE: 1"=20'	SHEET C36
DRAWN: BDAHLEN	CHECKED: AWISE

ES# 0006155



April 24, 2014 (20:45:10 EST)
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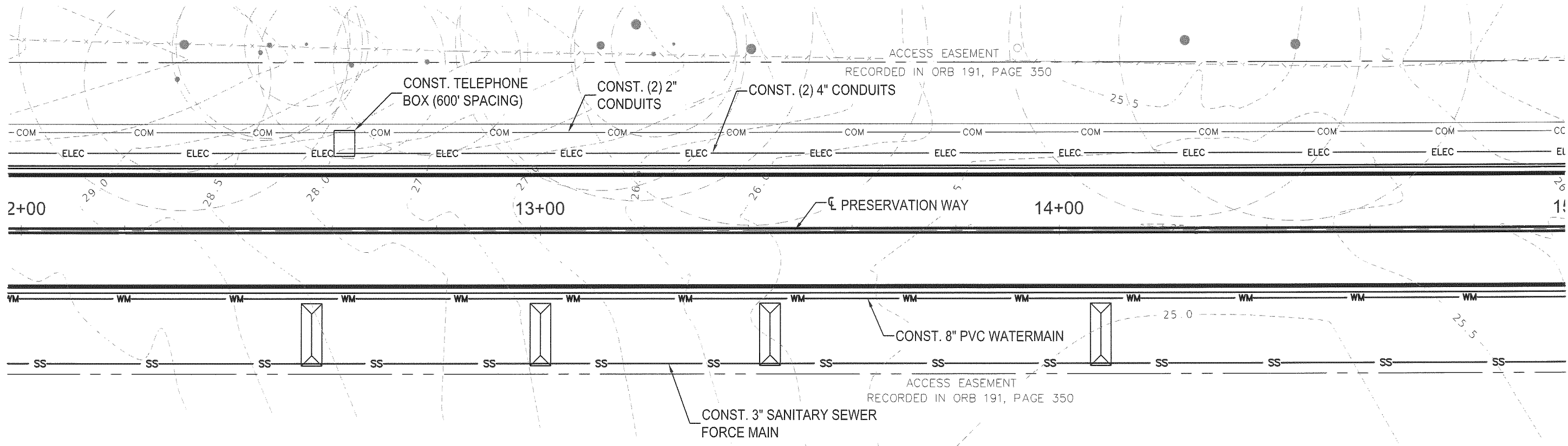
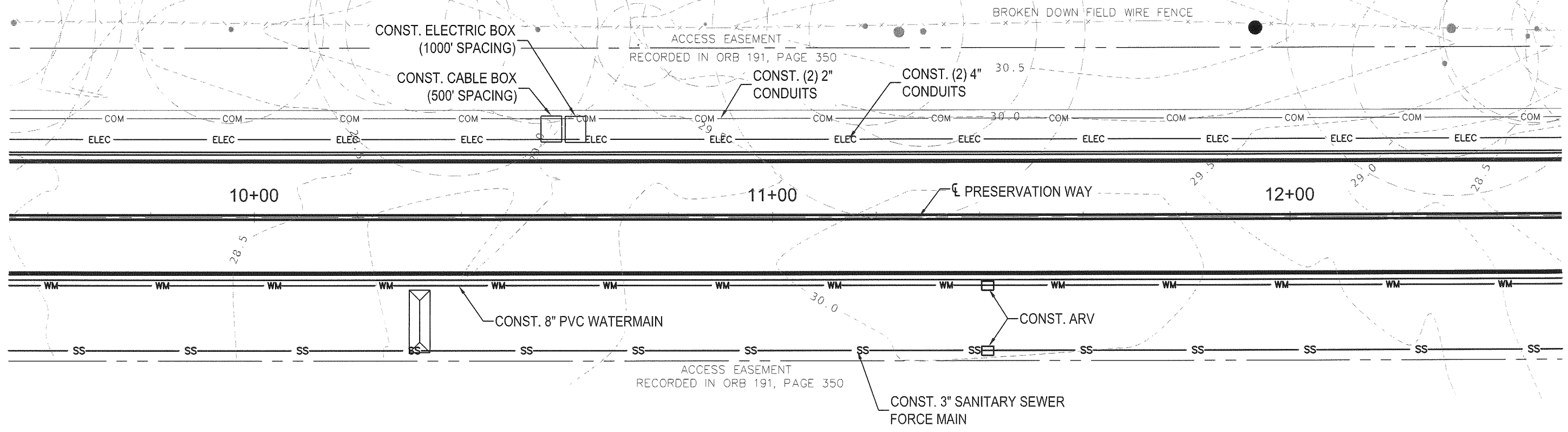
PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

UTILITY PLAN
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: Apr-2014	PROJECT NO. 662.014
SCALE: 1"=20'	SHEET C37
DRAWN: BDAHLEN	CHECKED: AWISE

ES# 0006155

April 24, 2014 (20:45:10 EST)
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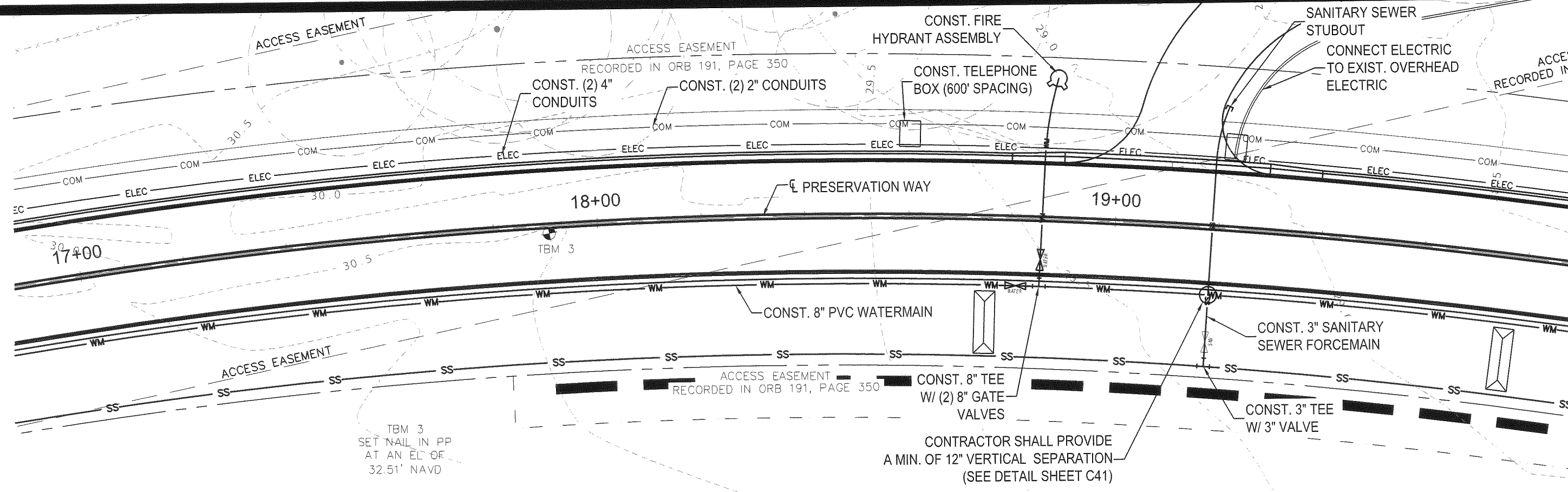
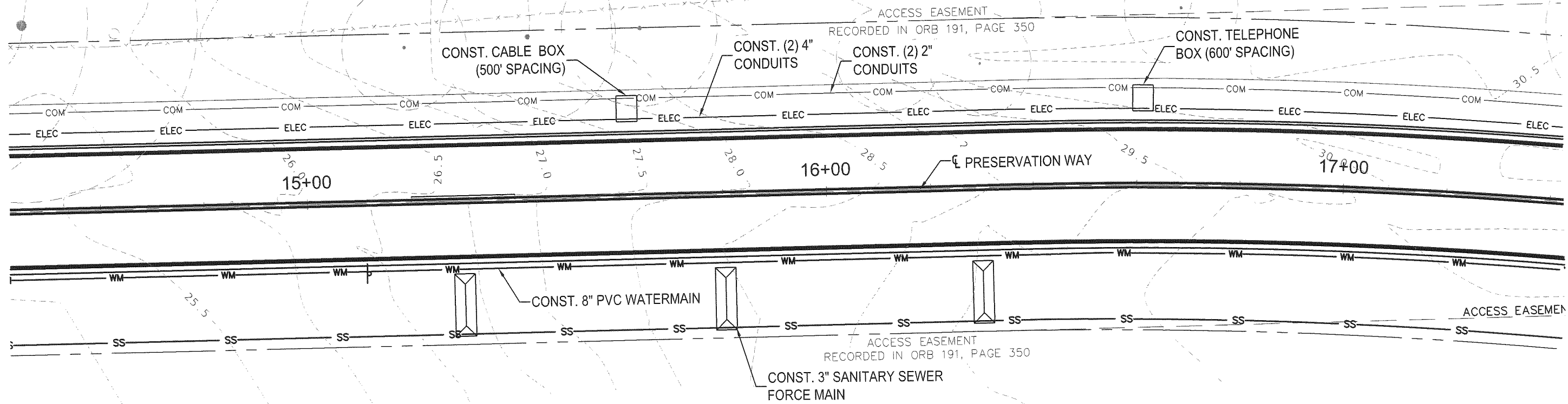
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PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

UTILITY PLAN
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: Apr-2014	PROJECT NO. 662.014
SCALE: 1"=20'	SHEET C38
DRAWN: BDAHLEN	CHECKED: AWISE

EB# 0006155



April 24, 2014 (20:45:10 EST)
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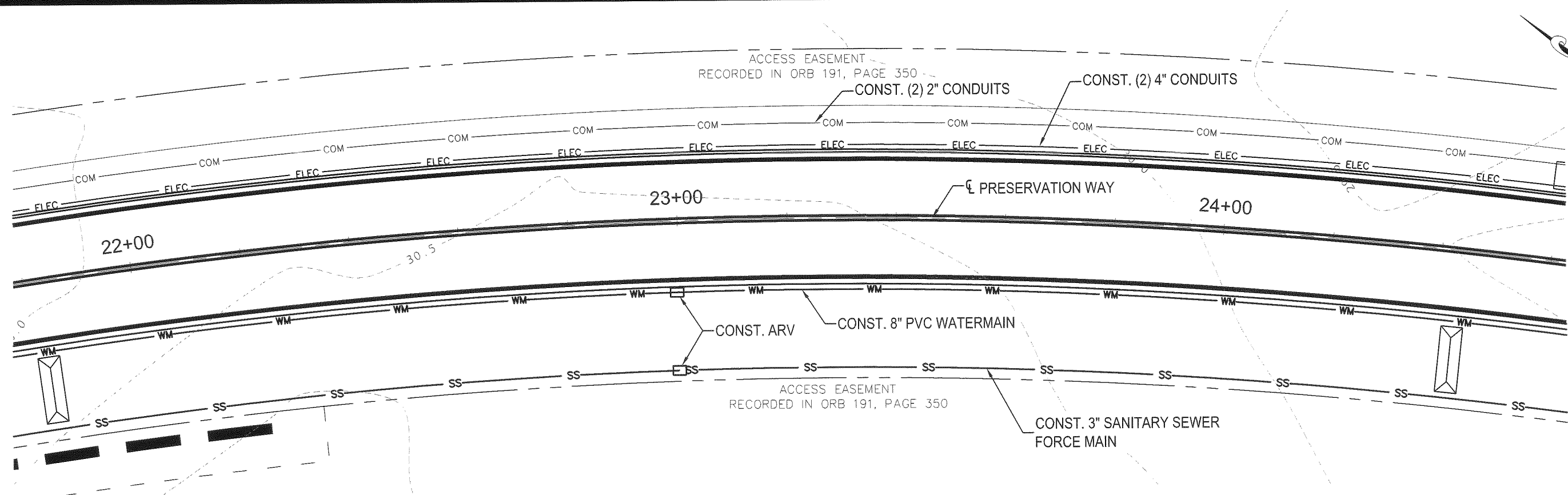
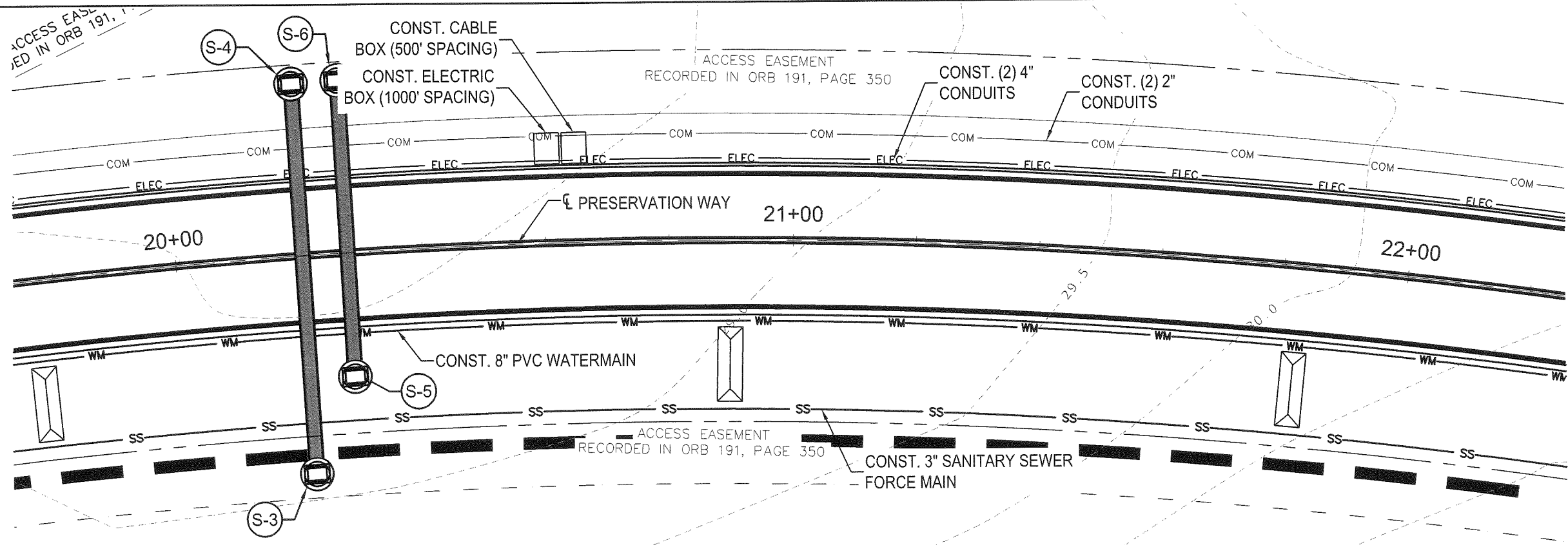
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PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

UTILITY PLAN
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: Apr-2014	PROJECT NO: 662.014
SCALE: 1"=20'	SHEET C39
DRAWN: BDAHLEN	CHECKED: AWISE

ES# 0008155



April 24, 2014 (20:45:10 EST)
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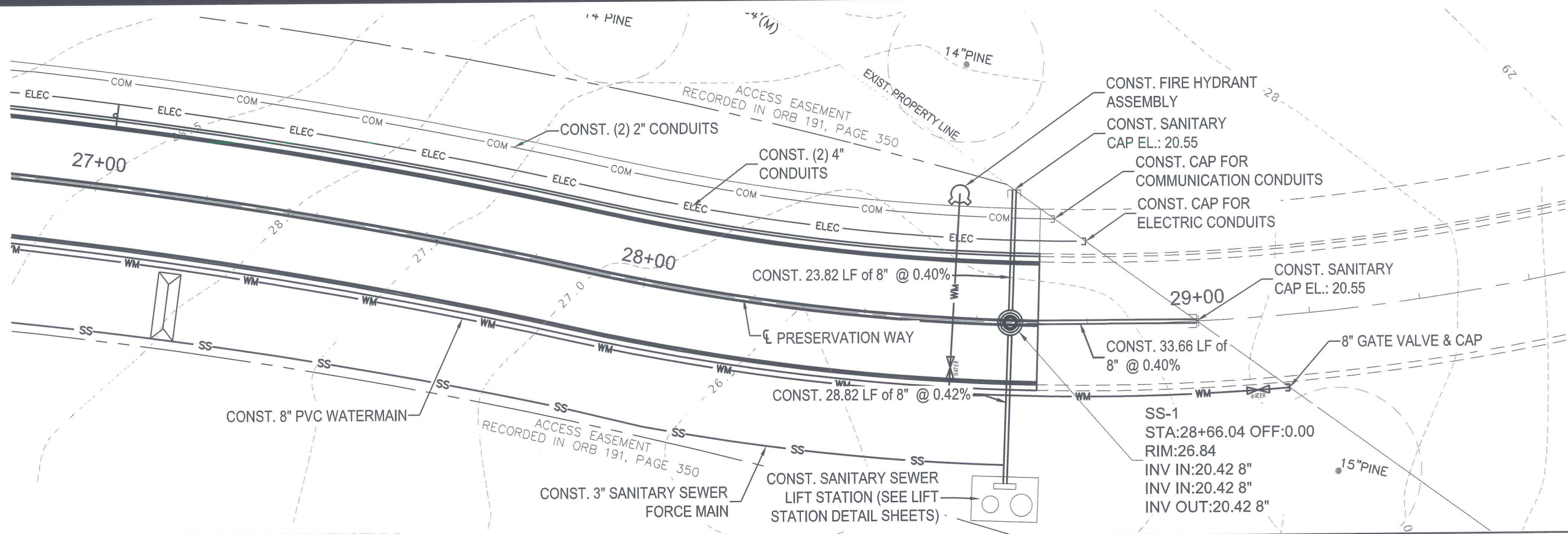
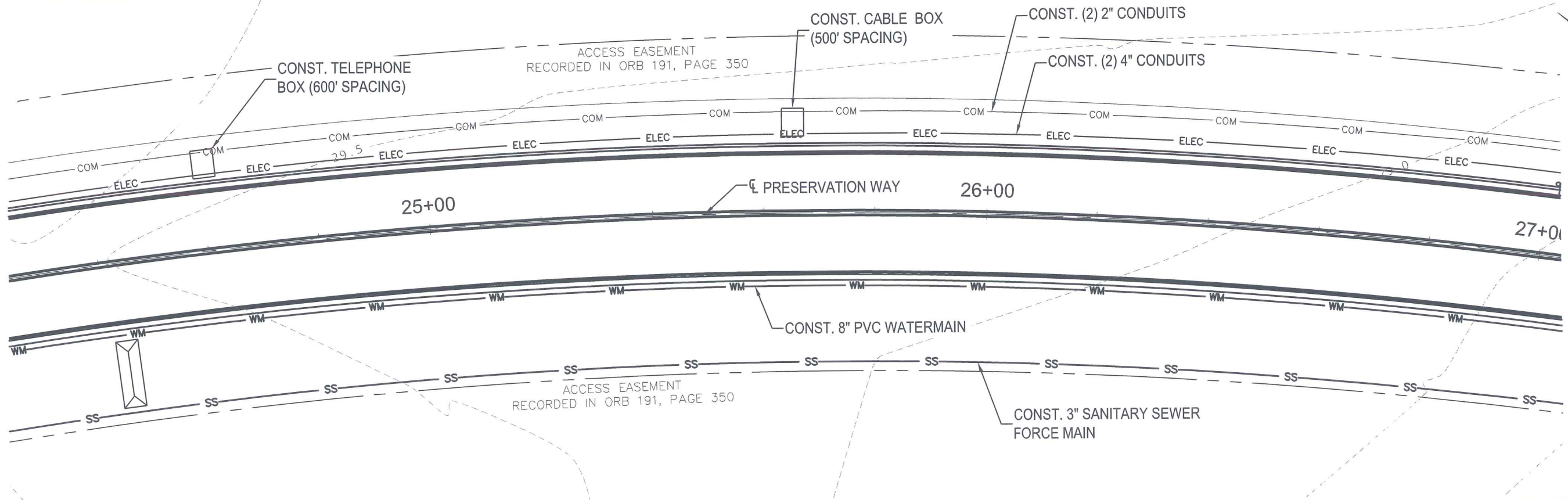
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PREBLE-RISH INC
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UTILITY PLAN
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: Apr-2014	PROJECT NO. 662.014
SCALE: 1"=20'	SHEET C40
DRAWN: BDAHLEN	
CHECKED: AWISE	

EB# 0006165



April 24, 2014 (20:45:10 EST)
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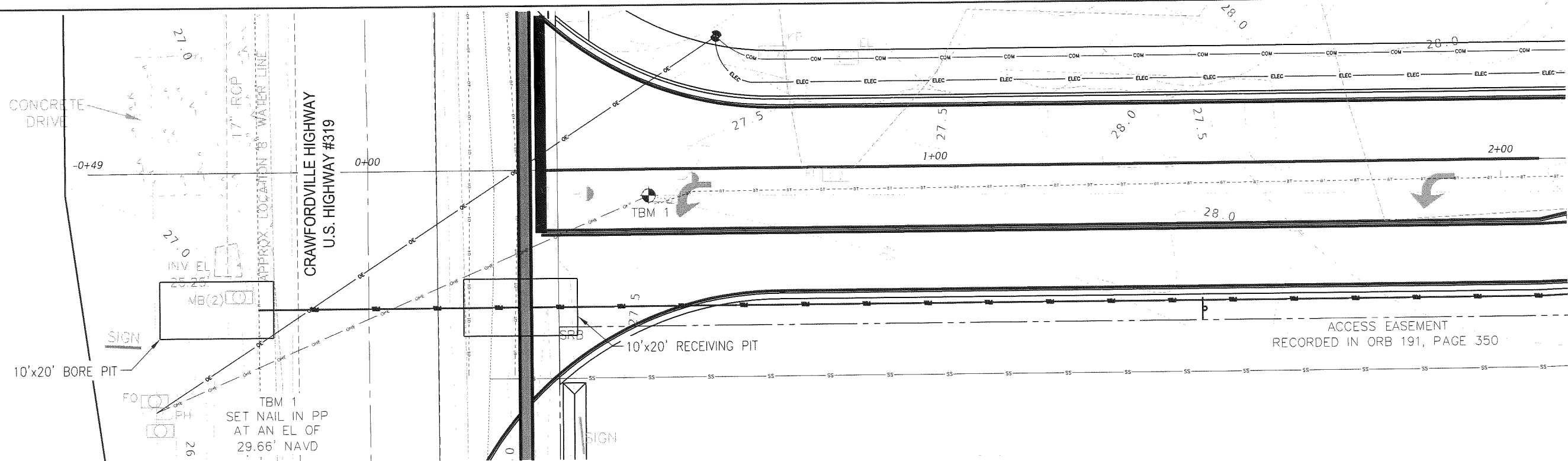
NO.	DATE	APPR.	REVISION:
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PREBLE-RISH INC
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UTILITY PLAN
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

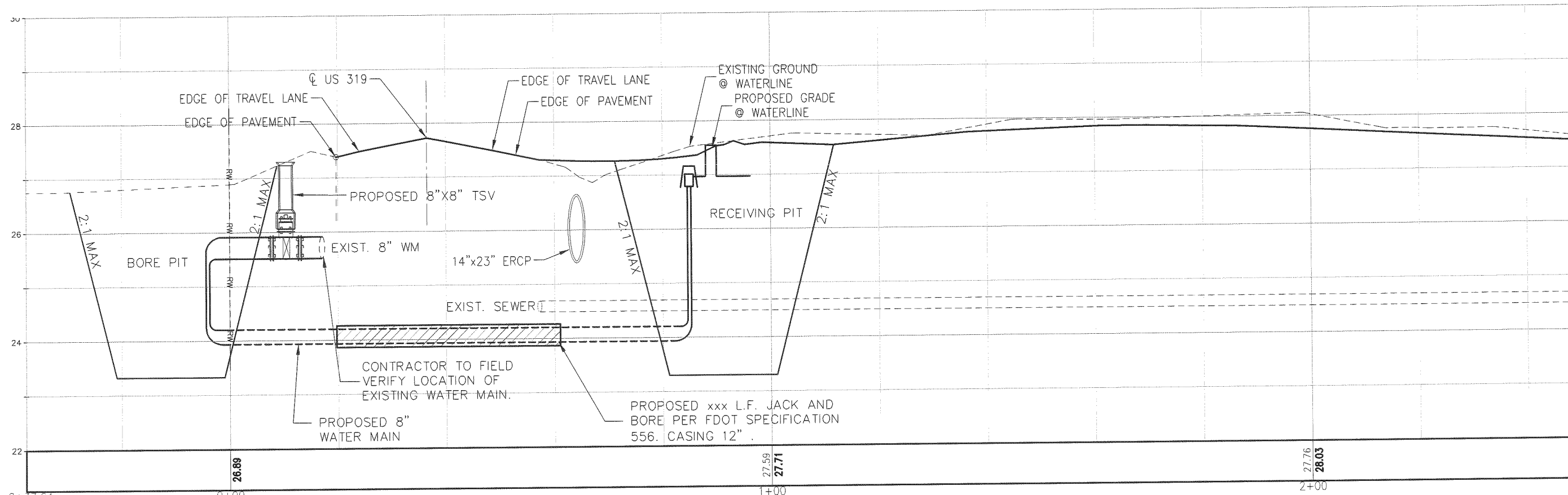
DATE: Apr-2014	PROJECT NO. 662.014
SCALE: 1"=20'	SHEET C41
DRAWN: BDAHLEN	CHECKED: AWISE

EB# 0006155



WATERMAIN PLAN VIEW (JACK & BORE) DETAIL

N.T.S.



WATERMAIN PROFILE VIEW (JACK & BORE) DETAIL

N.T.S.

April 24, 2014 (15:33:47 EST) C:\CIVIL 3D PROJECTS\662.014 TCC WEI ENTRANCE ROAD\ROADWAY\TCC CONSTRUCTION DETAILS.DWG

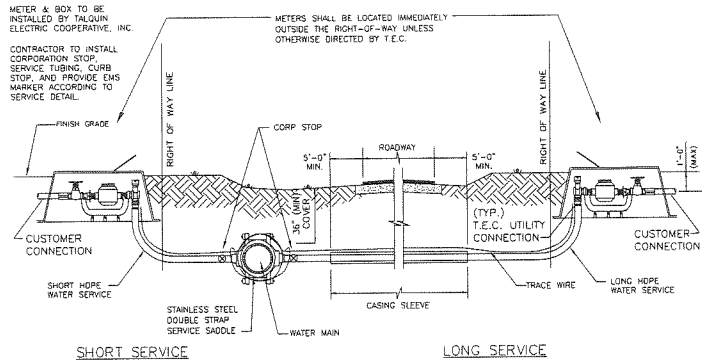
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PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
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JACK & BORE DETAIL
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=20'	
DRAWN: BDAHLEN	SHEET C42
CHECKED: AWISE	

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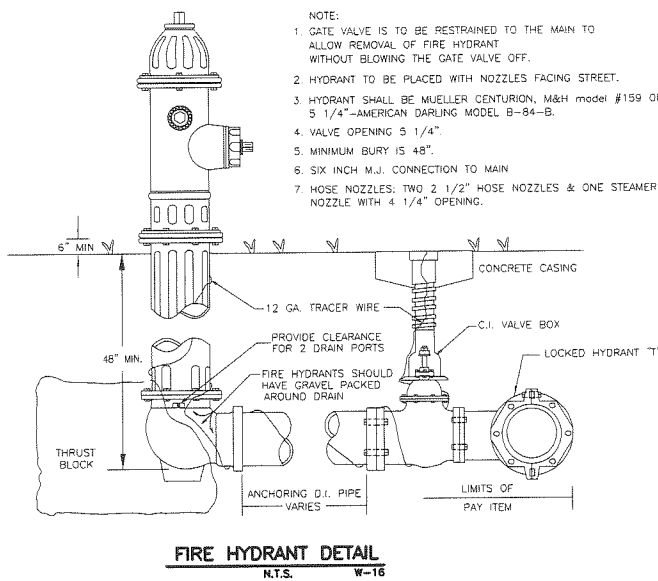


SHORT SERVICE LONG SERVICE
TYPICAL HDPE WATER SERVICE PROFILE
N.T.S. W-2

HDPE WATER SERVICE INSTALLATION NOTES:

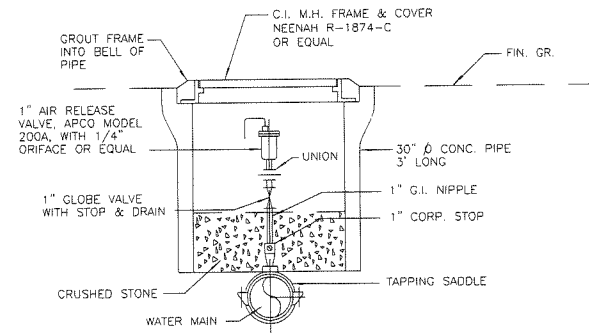
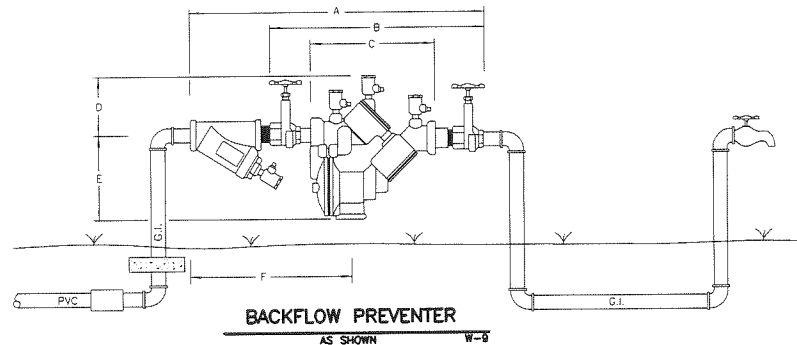
1. ALL HDPE LONG SERVICE INSTALLATION ACTIVITIES SHALL BE IN ACCORDANCE WITH THE F.D.O.T. UTILITY ACCOMMODATIONS MANUAL AND/OR THE LOCAL COUNTY PUBLIC WORKS DEPT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF AFFECTED AGENCIES AND COORDINATION WITH ALL UTILITIES PRIOR TO CONSTRUCTION.
3. ALL CONSTRUCTION MATERIALS SHALL BE REMOVED FROM THE SITE PRIOR TO RESTORATION OF DISTURBED AREAS.
4. ALL RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE F.D.O.T. DESIGN STANDARDS AND THE UTILITIES ACCOMMODATION MANUAL AND/OR THE LOCAL COUNTY PUBLIC WORKS DEPT.
5. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE A MINIMUM OF 18" ON CENTER.
6. ALL SERVICES REQUIRE 36" MINIMUM COVER. ALL LONG SERVICES REQUIRE 36" MIN COVER UNDER ALL ROADS AND SHALES, AND MUST MAINTAIN MINIMUM SEPARATION BETWEEN OTHER UTILITIES.
7. 3/4" & 1" LONG SERVICES REQUIRE A 2" MINIMUM I.D. CASING PIPE. 1-1/2" & 2" LONG SERVICES REQUIRE A 4" MINIMUM I.D. CASING PIPE.
8. CURB STOPS SHALL BE THE SAME SIZE AS THE SERVICE TUBING.
9. TRACE WIRE TO BE INSTALLED AS PER THIS DETAIL.

H.D.P.E. WATER SERVICE DETAIL
N.T.S. W-21

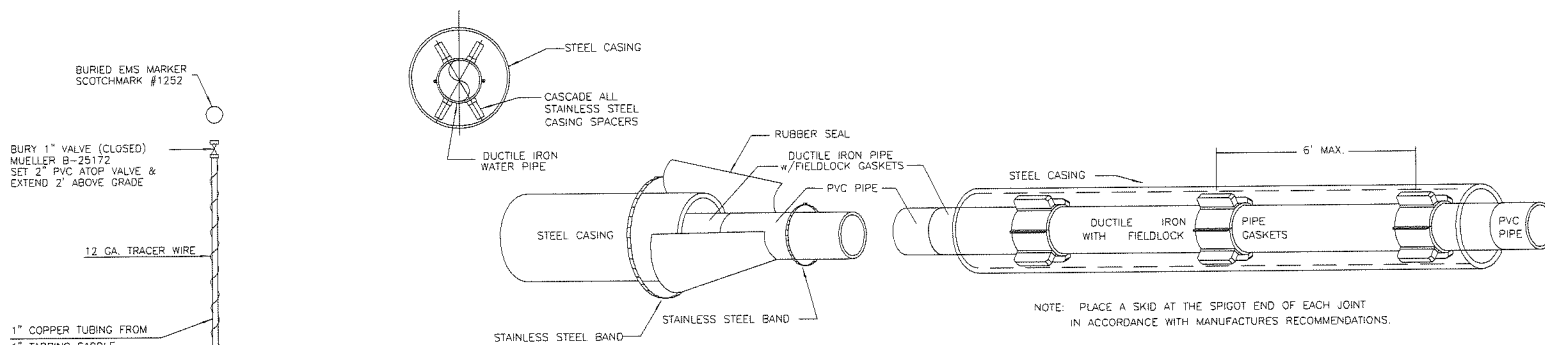


FIRE HYDRANT DETAIL
N.T.S. W-16

SIZE	DIMENSIONS (Inches)							Total weight (lbs)		
	A	B	C	D	E	F	G	Width	Less Strainer	With Strainer
3/4"	18	13	7 5/16	4	4 3/4	9 3/4	5 1/4	3 7/8	14	15 7/8
1"	19	13 1/2	7 5/16	4	4 3/4	11 1/2	5 1/2	3 7/8	15	17 1/2
1-1/4"	22 1/8	16 5/8	10 3/8	5	6 5/8	12 1/2	6	5 1/4	40	42 3/4
1-1/2"	23 5/16	16 7/8	10 3/8	5	6 5/8	13 1/2	6	5 1/4	40	44
2"	25 5/16	17 5/8	10 3/8	5	6 5/8	14 1/2	6 1/4	5 1/4	40	47 3/8

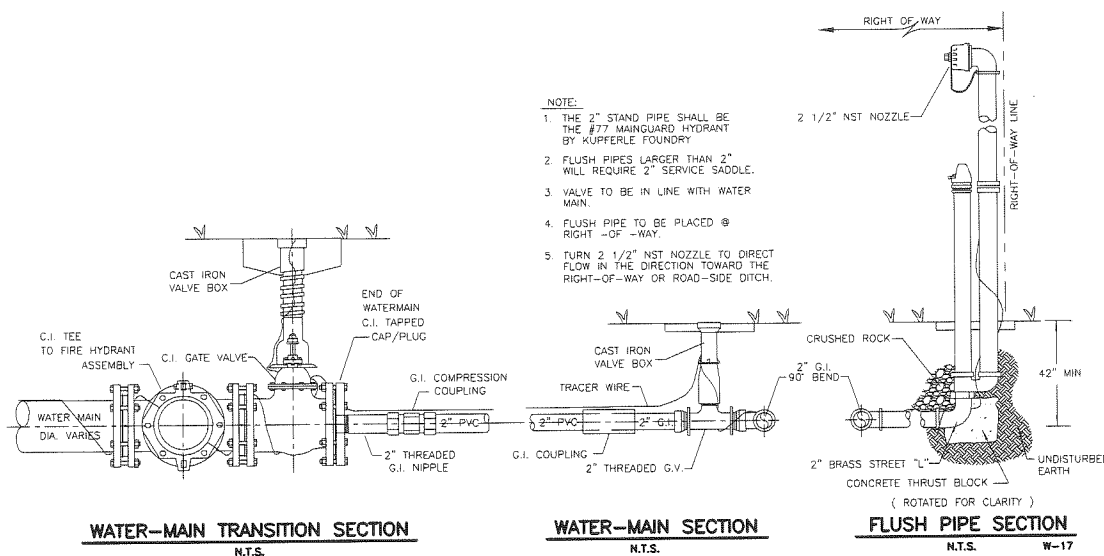


(USE 1 JT. OF D.I.)
AIR RELEASE VALVE DETAIL
N.T.S. W-2



DETAIL OF SKIDS FOR DUCTILE IRON PIPE INSTALLED IN STEEL CASING
N.T.S. W-18

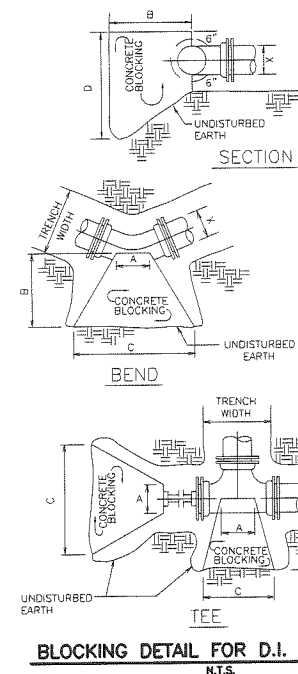
SINGLE WATER SERVICE CONNECTION
N.T.S. W-6



WATER-MAIN TRANSITION SECTION
N.T.S.

WATER-MAIN SECTION
N.T.S.

FLUSH PIPE SECTION
N.T.S. W-17



BLOCKING DETAIL FOR D.I. FITTINGS
N.T.S. W-10

CONCRETE BLOCKING DIMENSIONS						
X	A	B	C	D	CU. YD.	
TEES - 8" RUN						
12"	14"	2'-6"	3'-9"	3'-0"	0.59	
10"	12"	2'-5"	2'-10"	2'-10"	0.48	
8"	10"	2'-4"	1'-9"	2'-8"	0.32	
6"	8"	2'-3"	1'-3"	2'-6"	0.19	
4"	6"	2'-0"	1'-0"	2'-0"	0.07	
90° BENDS						
12"	12"	2'-8"	5'-4"	3'-0"	0.91	
10"	10"	2'-6"	4'-0"	2'-10"	0.46	
8"	8"	2'-4"	2'-8"	2'-8"	0.38	
6"	6"	2'-3"	1'-8"	2'-8"	0.22	
4"	4"	2'-2"	8"	2'-2"	0.09	
45° BENDS						
12"	6"	2'-6"	2'-10"	3'-0"	0.47	
10"	5"	2'-5"	2'-2"	2'-10"	0.32	
8"	4"	2'-4"	1'-3"	2'-8"	0.21	
6"	3"	2'-3"	9"	2'-6"	0.11	
4"	2"	2'-0"	6"	2'-2"	0.01	
22-1/2° BENDS						
12"	6"	2'-6"	1'-6"	3'-0"	0.27	
10"	5"	2'-5"	1'-1"	2'-10"	0.19	
8"	4"	2'-4"	9"	2'-8"	0.12	
6"	3"	2'-3"	6"	2'-6"	0.07	
4"	2"	2'-0"	4"	2'-2"	0.02	
PLUGS						
12"	12"	2'-6"	3'-10"	3'-0"	0.66	
10"	12"	2'-5"	2'-10"	2'-10"	0.48	
8"	12"	2'-4"	1'-10"	2'-8"	0.33	
6"	12"	2'-3"	1'-2"	2'-6"	0.22	
4"	12"	2'-2"	1'-0"	2'-4"	0.11	

EB# 006195

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CONSULTING ENGINEERS AND SURVEYORS
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36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

POTABLE WATER DETAILS
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: Apr-2014	PROJECT NO. 662.014
SCALE: N.T.S.	SHEET C43
DRAWN: DBAHLEN	CHECKED: AWISE

NOTES

W-1A & W-1B

- 1.) ALL WATER MAINS SHALL BE INSTALLED ACCORDING TO ENGINEERING PLANS AND CITY OF SOPCHOPPY SPECIFICATIONS.
- 2.) WATER MAIN SHALL BE INSTALLED ON NORTH OR EAST ROAD CENTERLINE AT A DISTANCE TO INSURE MAIN IS A MINIMUM OF 6' FROM EDGE OF PAVEMENT OR IN ACCORDANCE WITH COUNTY AND STATE RECOMMENDED GUIDELINES FOR UTILITY PLACEMENT.
- 3.) ALL PAVEMENT SHALL BE CUT AND PATCHED IN ACCORDANCE WITH COUNTY AND STATE SPECIFICATIONS.
- 4.) ALL VALVES AND MATERIALS SHALL COMPLY WITH AWWA (AMERICAN WATER WORKS ASSOCIATION) STANDARDS.
- 5.) MATERIALS APPROVED FOR WATER MAIN CONSTRUCTION INCLUDES:
A. PVC CLASS 900 DR 18
B. 6" THRU 16" CAST IRON, CLASS 22 (AWWA C-601), DUCTILE IRON, CLASS 50 (AWWA C-151).
- 6.) ALL MAIN LINE VALVES SHALL BE RESILIENT SEATED GATE VALVES.
- 7.) SERVICE TAPS SHALL NOT BE LESS THAN 7/8" (OPENING CUT) IN SADDLE CLAMP.
- 8.) WATER SERVICE TUBING SHALL BE TYPE K COPPER TUBING AND COMPLY WITH ASTM-B88-55, RATE AT 160 P.S.I.
- 9.) FLUSH PIPE DISCHARGE SHALL BE OPPOSITE DIRECTION OF VALVE AND PIPE SHALL EXTEND 20" TO 30" ABOVE GROUND LEVEL.
- 10.) MAINS SHALL HAVE A MINIMUM OF 36" COVER. IN DITCH BOTTOMS SERVICE LINES SHALL HAVE A MINIMUM OF 30" OF COVER.
- 11.) ALL WATER MAINS AND SERVICE LINES SHALL HAVE 12 GAUGE, THIN INSULATED, SOLID COPPER WIRE COILED AROUND ALL WATER MAINS AND SERVICE LINES. ALL WIRE SHALL BE JOINED BY A COMMON BOND USING "BUTT SPLICE". WHERE A SERVICE WIRE IS BEING BONDED TO A MAIN WIRE, THE BOND (CONNECTION) SHALL BE MADE WITH A "T" BUTT SPLICE. IN THE EVENT THE "T" BUTT SPLICE IS NOT AVAILABLE, THE BOND SHALL BE MADE BY TIGHTLY WRAPPING THE SERVICE LINE WIRE TO THE MAIN WIRE WITH A MINIMUM OF TEN WRAPS. WIRE SPLICES SHALL BE WRAPPED WITH SCOTCH E-Z SEAL NO. 2200 ELECTRICAL INSULATING PAD WITH VINYL BACKING. THE SERVICE LINE WIRE SHALL EXTEND 12" INTO THE METER BOX.
- 12.) "AS BUILT PLANS" SHALL INDICATE LOCATIONS OF ALL SERVICES WITH RESPECT TO LOT CORNERS, LOCATIONS AND TYPES OF ALL FITTINGS, LOCATION OF ALL VALVES, AND DEAD END RUNS WITH THREE (3) PHYSICAL FEATURES (LOT CORNERS, TREES, ETC.).
- 13.) ALL STUB-OUTS SHALL HAVE WATER EMS MARKERS INSTALLED 18" BELOW GROUND LEVEL.
- 14.) ALL MAINS AND SERVICE LINES SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH AWWA C-601 UNDER SUPERVISION OF CITY OF SOPCHOPPY INSPECTORS.
- 15.) COMPACTING REQUIREMENTS: REFERENCE CITY OF SOPCHOPPY, COUNTY, AND STATE SPECIFICATIONS.
- 16.) ALL SERVICES SHALL BE INSTALLED IN THE APPROXIMATE CENTER OF EACH LOT.
- 17.) ALL PIPE USE IN WATER DISTRIBUTION SYSTEMS SHALL BE N.S.F. APPROVED FOR POTABLE WATER USE.
- 18.) THE TWO INCH STAND PIPE SHALL BE THE #77 MAINGUARD HYDRANT BY KUPFERLE FOUNDRY.
- 19.) ALL CONSTRUCTION STAKING SHALL BE DONE AT CONTRACTORS EXPENSE.
- 20.) BEFORE ANY CONSTRUCTION BEGINS "SHOP DRAWINGS" SHALL BE APPROVED BY OWNER.
- 21.) CONSTRUCTION OF PIPE ALONG AN ARC SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S INSTALLATION GUIDELINES. THE PIPE SHALL BE CURVED UNIFORMLY THROUGHOUT ITS LENGTH AND NO JOINT DEFLECTION WILL BE ALLOWED. THE MAXIMUM PIPE RADIUS BASED ON J-M BLUE BRUTE AND RING TITE PIPE SHALL BE AS FOLLOWS:

12"	-	300 FEET
10"	-	250 FEET
8"	-	200 FEET
6"	-	150 FEET
4"	-	100 FEET
2"	-	25 FEET
- 22.) FOR FURTHER DETAILS SEE CITY OF SOPCHOPPY SPECIFICATIONS.

COMPACTION & TESTING REQUIREMENTS

W-12

COMPACTION OF BACKFILL

- A. BACKFILL PLACED IN TRENCHES WHICH ARE UNDER THE PAVEMENT, OR WITHIN 4 FEET OF THE EDGE OF PAVING OR WITHIN 2 FEET OF THE BACK OF THE CURBLINES OR WITHIN 2:1 SLOPE OF THESE LIMITS, SHALL EACH BE COMPACTED IN ACCORDANCE WITH THE FOLLOWING:
1. ROADWAY BASE AND SUB-BASE TO 98% AASHTO T-180 (MODIFIED PROCTOR)
 2. DEPTH BELOW SUBGRADE:

0 - 3'	100% AASHTO T-99 STANDARD PROCTOR
3' - 10'	98% AASHTO T-99 STANDARD PROCTOR
10' +	95% AASHTO T-99 STANDARD PROCTOR
- B. THE ENTIRE DEPTH OF BACKFILL PLACED IN TRENCHES THAT ARE OUTSIDE THE AREAS DESCRIBED IN THE ABOVE SCHEDULE MAY BE COMPACTED TO A DENSITY WHICH MATCHES THAT OF UNDISTURBED MATERIALS LOCATED IN IMMEDIATELY ADJACENT AREAS.

TESTING

TEST	STANDARD	FREQUENCY
A. PROCTOR LAB DENSITY	AASHTO T-99, T-180, ASTM D 698, ASTM D 1557	ONE PER MATERIAL TYPE
B. DENSITY (INSITU) ALONG PIPELINE	ASTM D2922 ASTM D1556	ONE PER EVERY 12-INCH DEPTH AND 400 LF OF PIPELINE OR BETWEEN STRUCTURES
C. DENSITY (INSITU) AT SERVICES	ASTM D2922 ASTM D1556	1 FOR EACH 12" DEPTH OF EACH SERVICE
D. DENSITY (INSITU) AROUND	ASTM D2922 ASTM D1556	1 FOR EACH 12" DEPTH OF STRUCTURE

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

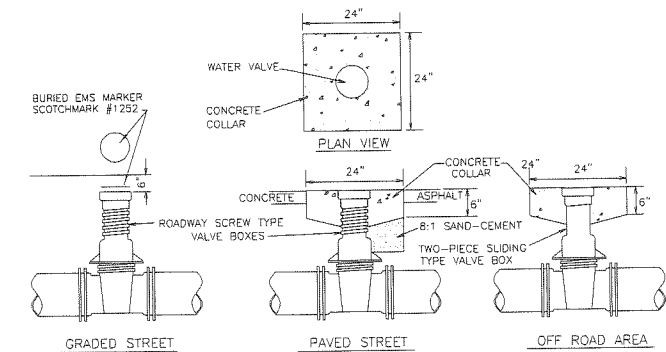
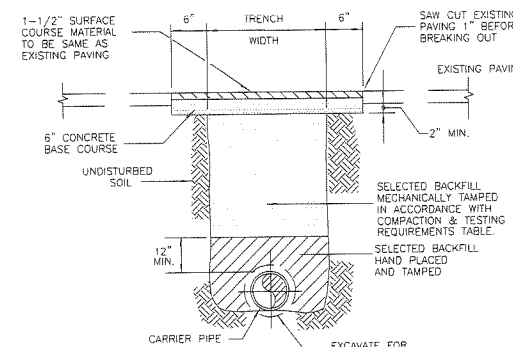
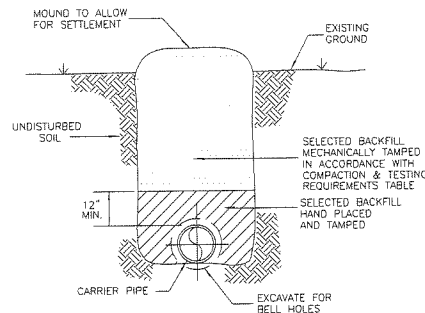
Other Pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossings (Full Joint Centered)
Storm Sewer, Stormwater Force Main, Reclaimed Water (2)	Water Main 3 feet minimum	Water Main 12 inches is the minimum, except for storm sewer, then 6 inches is minimum and 12 inches is preferred.	Alternate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

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

NOTE: MINIMUM SEPARATION DIMENSIONS MUST BE APPROVED BY TALQUIN.

SEPARATION DETAIL

N.T.S.



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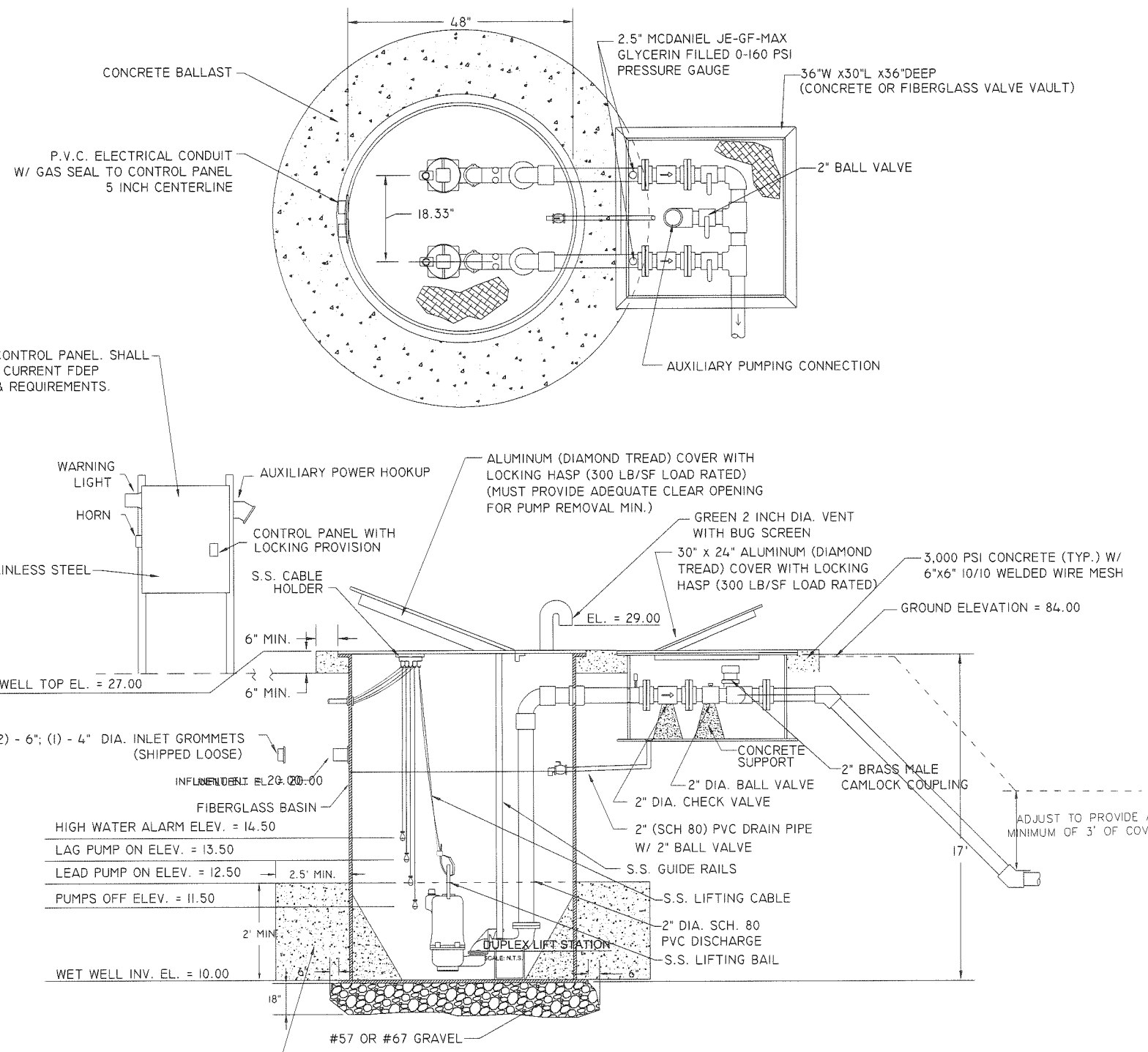
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POTABLE WATER DETAILS
 PRESERVATION WAY
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 WAKULLA COUNTY, FLORIDA

DATE: Apr-2014	PROJECT NO. 662.014
SCALE: N.T.S.	SHEET C44
DRAWN: BDahlen	CHECKED: AWISE

EE# 0008155

April 24, 2014 (2:18:44 EST)
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POUR CONCRETE BALLAST, ENGINEER MUST OBSERVE PLACEMENT PRIOR TO COVERING WITH BACKFILL (CONTRACTOR SHALL USE AT A MINIMUM 4 C.Y. OF CONCRETE FOR CONCRETE BALLAST.)

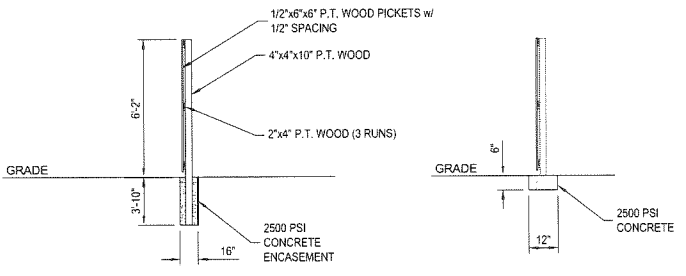
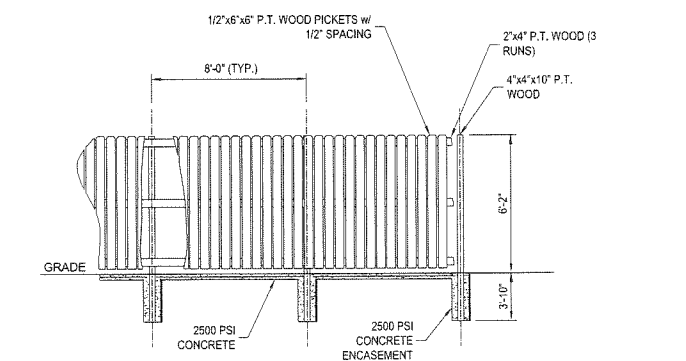
GRINDER STATION INFORMATION		
DESCRIPTION	REF.	STATION #1
TOP	'A'	26.00'
INFLUENT HUB	'B'	FIELD CORE 20.00'
HIGH LEVEL ALARM	'C'	14.50'
TWO PUMPS ON	'D'	13.50'
ONE PUMP ON	'E'	12.50'
PUMPS OFF	'F'	11.50'
LOW LEVEL ALARM	'G'	NA
BOTTOM	'H'	10.00'
WET WELL DEPTH	'I'	16.00'
WET WELL DIAMETER		4.00'
# OF PUMPS		2
GPM		33.00
TDH (FT)		83.48
VOLTAGE / PHASE		230/1ph
HP		5
PUMP MODEL		HPGH/HPCHX-500

NOTES:

- LIFT STATION SHALL BE BARNEY'S PUMPS PACKAGED DUPLEX GRINDER STATION OR APPROVED EQUAL.
- PUMPS SHALL BE SEWAGE GRINDER PUMPS, AND BE CAPABLE OF:
 - 33.00 GPM @ 85 TDH
 - 41.7 GPM @ 97.2 TDH
 - 50 GPM @ 89.3 TDH

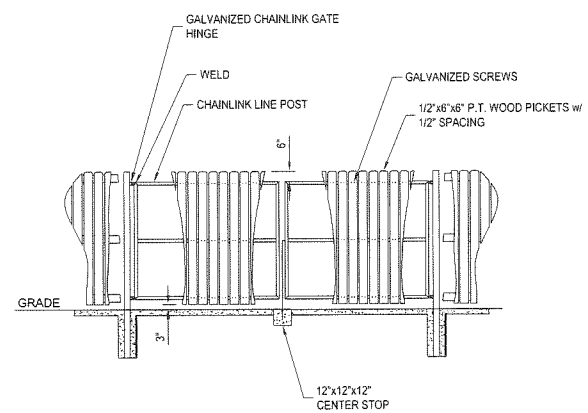
Barney's Pumps, Inc.
11306 BUSINESS PARK BLVD.
JACKSONVILLE, FLORIDA 32256
(904) 260-0669 (PHONE)
WWW.BARNEYPUMPS.COM

DETAIL - LIFT STATION SIGN
SCALE: N.T.S.



SECTION VIEW 1 SECTION VIEW 2

DETAIL - 6' PRESSURE TREATED WOOD FENCE
SCALE: N.T.S.



DETAIL - 6' PRESSURE TREATED WOOD GATE
SCALE: N.T.S.

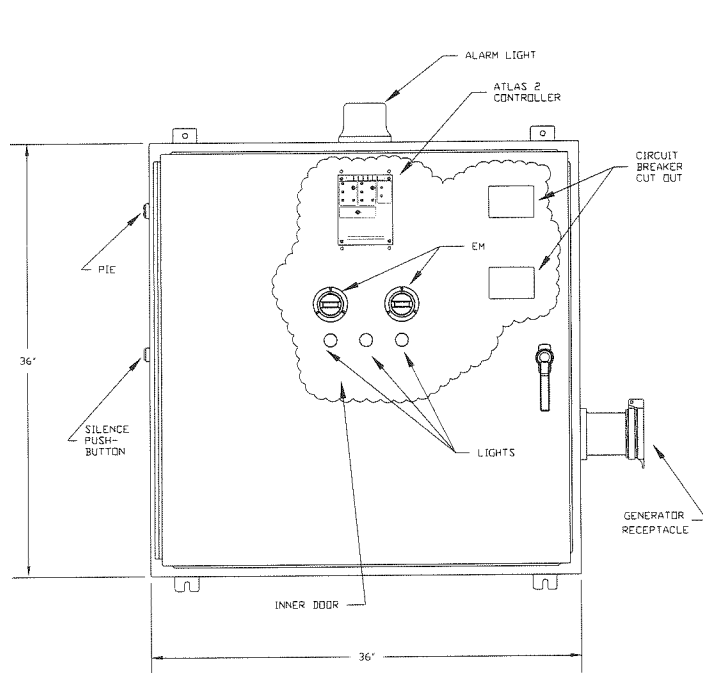
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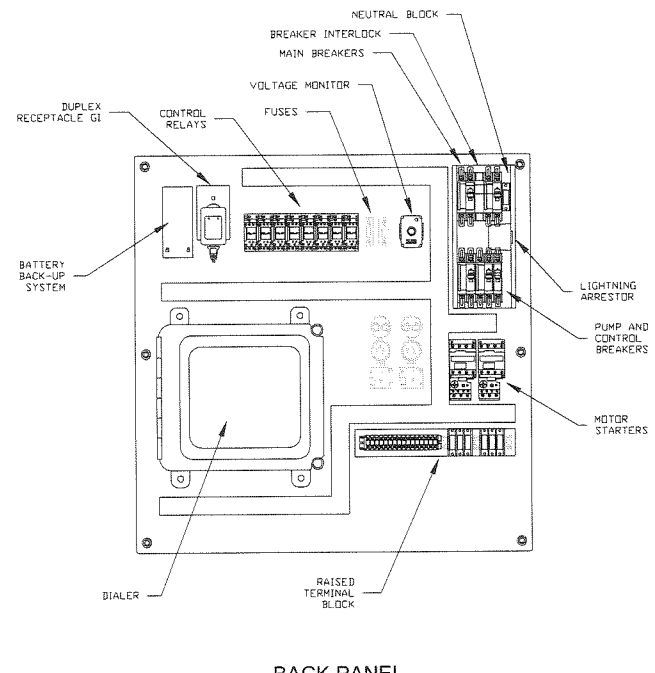
LIFT STATION DETAILS
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DATE: Apr-2014	PROJECT NO. 662.014
SCALE: N.T.S.	SHEET C45
DRAWN: BDAHLEN	CHECKED: AWISE

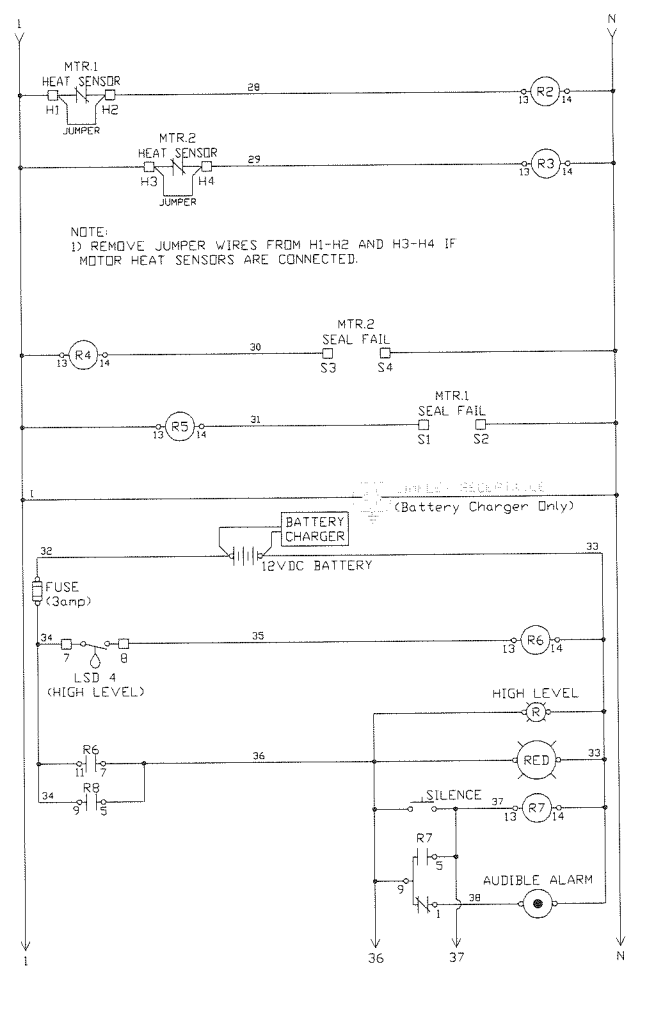
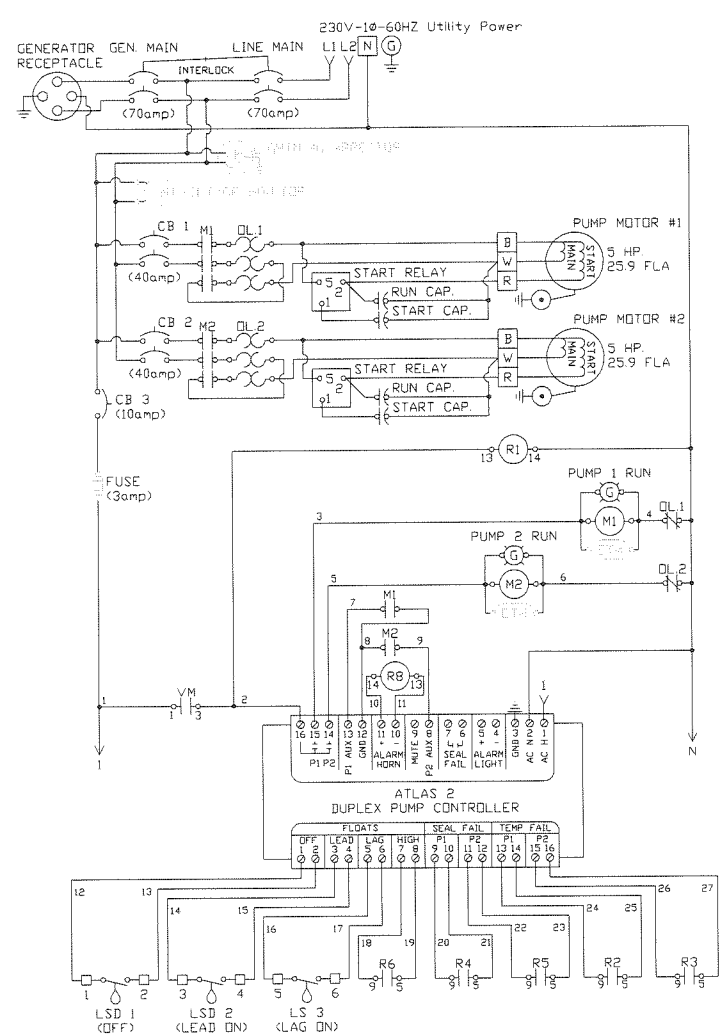
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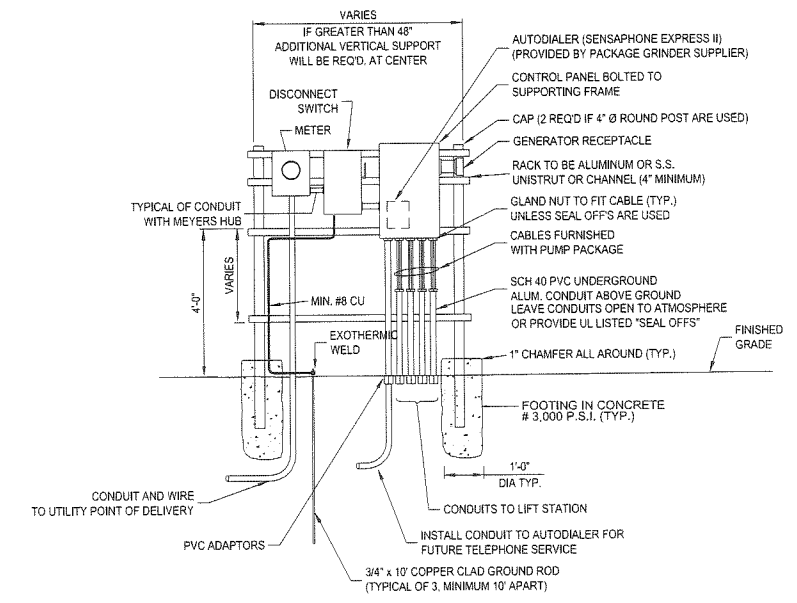
NEMA 4X STAINLESS STEEL ENCLOSURE
SCALE: N.T.S.



BACK PANEL

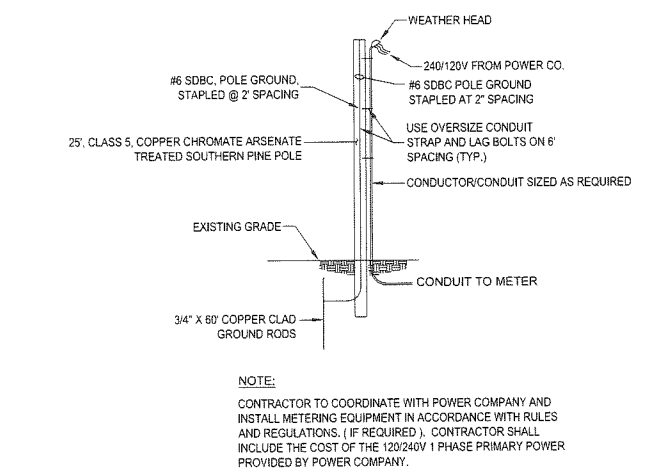


DUPLEX PUMP CONTROL PANEL
SCALE: N.T.S.

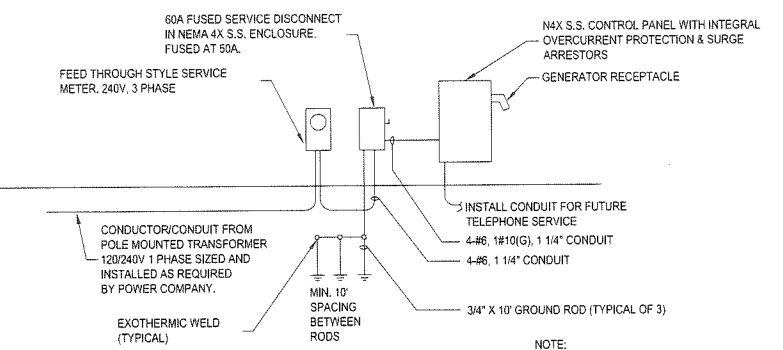


- NOTES**
- IF FREESTANDING ENCLOSURES ARE SUPPLIED, CONTRACTOR TO PROVIDE CONCRETE HOUSEKEEPING PAD (MINIMUM 4" THICK).
 - RACK SHALL BE CONSTRUCTED OF MINIMUM 4" DIAMETER ROUND POST OR 4" CHANNEL. MATERIAL SHALL BE ALUMINUM OR STAINLESS STEEL. SIZE PER SUPPLIED EQUIPMENT.

EQUIPMENT INSTALLATION DETAIL
NOT TO SCALE



SERVICE POLE DETAIL (WHEN REQUIRED)
NOT TO SCALE



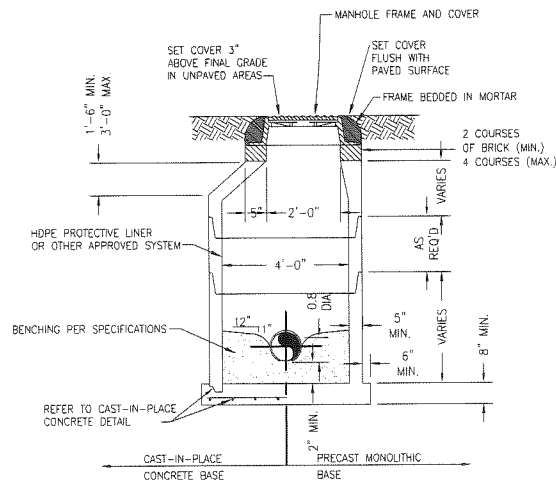
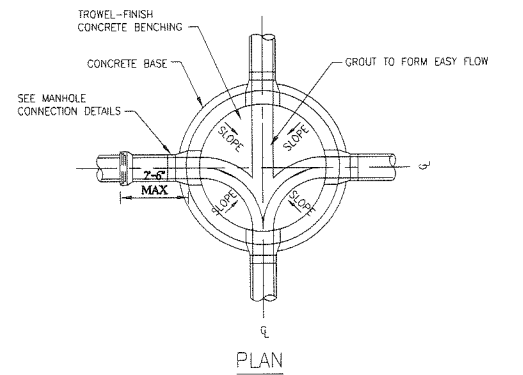
ELECTRICAL RISER DIAGRAM
NOT TO SCALE

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LIFT STATION DETAILS
PRESERVATION WAY
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WAKULLA COUNTY, FLORIDA

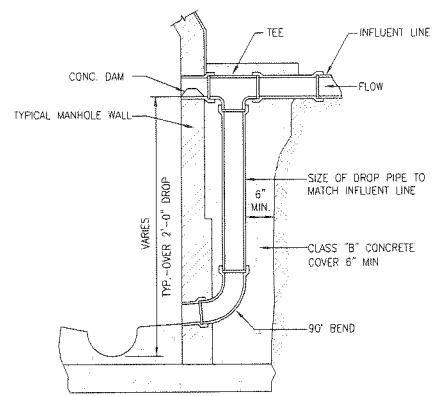
DATE: Apr-2014	PROJECT NO. 662.014
SCALE: N.T.S.	SHEET C46
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April 24, 2014 (2:18:44 EST)
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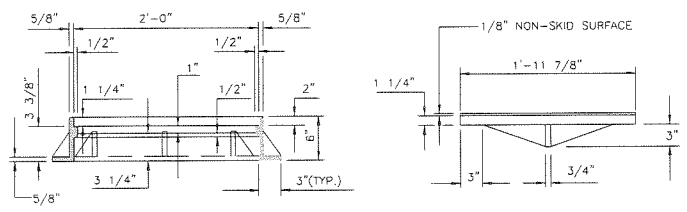
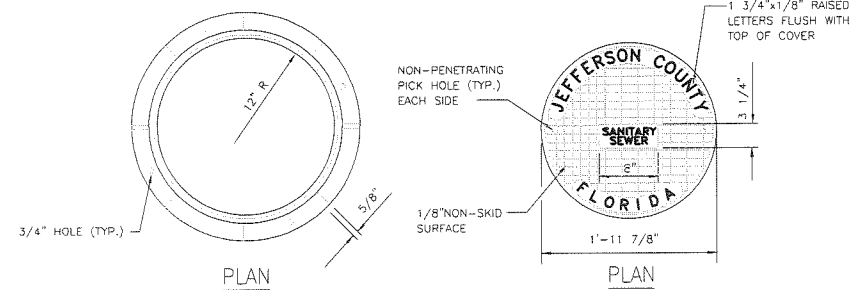


- NOTES:
1. MANHOLE SHOWN IS FOR SEWER SIZE 8" THRU 18", MANHOLE DIAMETER FOR SEWERS GREATER THAN 18" SHALL BE AS APPROVED BY CITY'S ENGINEERS.
 2. DROP CONNECTIONS ARE REQUIRED WHENEVER INVERT OF INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE. SEE TYPICAL MANHOLE DROP PIPE CONNECTION.
 3. APPROVED CONCENTRIC CONE DESIGN MAY BE USED AS AN ALTERNATIVE.
 4. THE INTERIOR OF ALL MANHOLES SHALL BE HDPE LINED OR OTHER APPROVED SYSTEM.
 5. THE EXTERIOR OF ALL MANHOLES SHALL BE COATED WITH COAL TAR. (2 COATS, 9 MILS EACH)
 6. PIPE SHALL NOT BE INSTALLED IN CONSTRUCTION JOINT OF A MANHOLE.

DETAIL SANITARY SEWER STANDARD MANHOLE
SCALE: N.T.S.

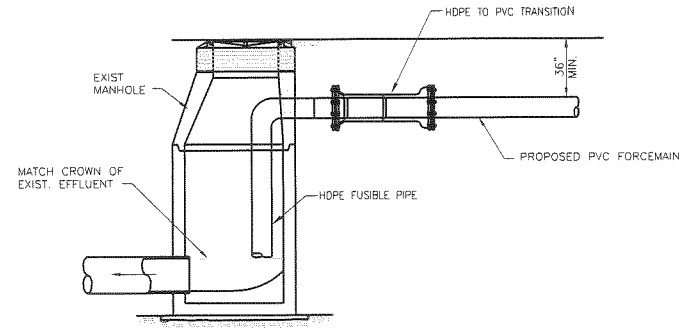
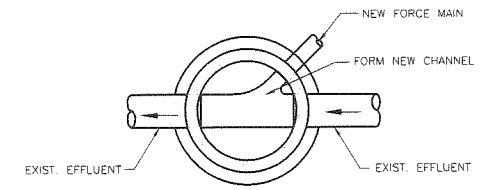


DETAIL TYPICAL MANHOLE DROP PIPE CONNECTION (DROP MANHOLE)
SCALE: N.T.S.

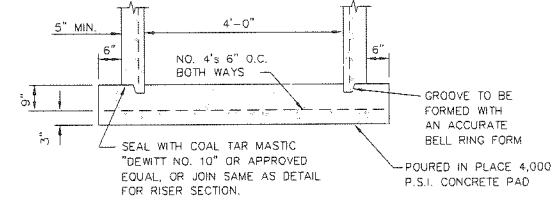


DETAIL FRAME & COVER
SCALE: N.T.S.

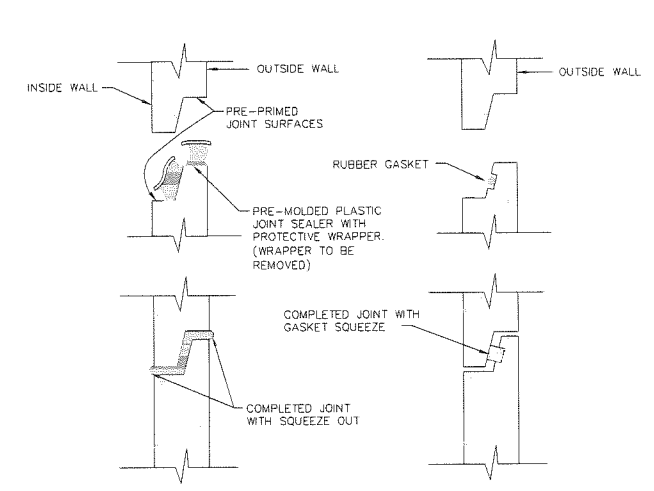
- GENERAL NOTES:
1. PRECAST MANHOLE SECTIONS AND GRADE RINGS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITION OF ASTM SPECIFICATIONS C-478 AND C-76 WITH 4000 P.S.I. CONCRETE, TYPE II CEMENT. STANDARD WALL THICKNESS SHALL BE 5" WITH A SINGLE LAYER OF 6 X 6, 4/4 WELDED WIRE FABRIC (0.192" WIRE DIA.) FOR ALL MANHOLES.
 2. CONCRETE TOP SLABS, WHERE REQUIRED, SHALL BE CAPABLE OF SUPPORTING THE OVERBURDEN PLUS A LIVE LOAD EQUIVALENT TO AASHTO H-20 LOADING.
 3. PRE-MOLDED POLYURETHANE COMPRESSION JOINTS ON ALL INFLUENT AND EFFLUENT ADAPTERS MEET OR EXCEED ASTM SPECIFICATIONS C-425.
 4. ALIGN TOP OPENING WITH CENTER LINE OF EFFLUENT LINE FROM MANHOLE.
 5. ALIGN STEPS VERTICALLY OVER CENTER LINE OF EFFLUENT LINE FROM MANHOLE.
 6. MANHOLE STEPS SHALL BE DRIVEN INTO PRECAST 3 5/8" DEEP, TAPERED HOLE, 16" ON CENTER VERTICALLY.
 7. MANHOLE COVER LIFT HOLES SHALL BE A MAXIMUM OF 3 1/2" DEEP.
 8. MANHOLE FRAME AND COVER SHALL BE U.S. FOUNDRY E-170 ORS TYPE E "O" RING GASKETED OR EQUIVALENT



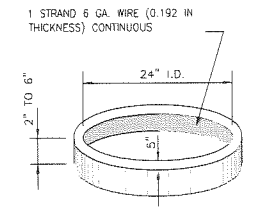
DETAIL FORCEMAIN CONNECTION TO MANHOLE
SCALE: N.T.S.



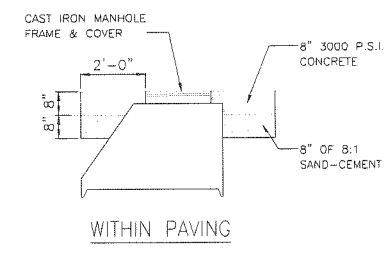
DETAIL CAST-IN-PLACE CONCRETE BASE
SCALE: N.T.S.



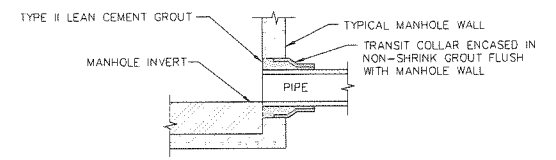
DETAIL TYPICAL MANHOLE JOINT
SCALE: N.T.S.



DETAIL ADJUSTMENT RING
SCALE: N.T.S.



DETAIL MANHOLE BACKFILLED
SCALE: N.T.S.



DETAIL PRECAST MANHOLE PIPE CONNECTION
SCALE: N.T.S.

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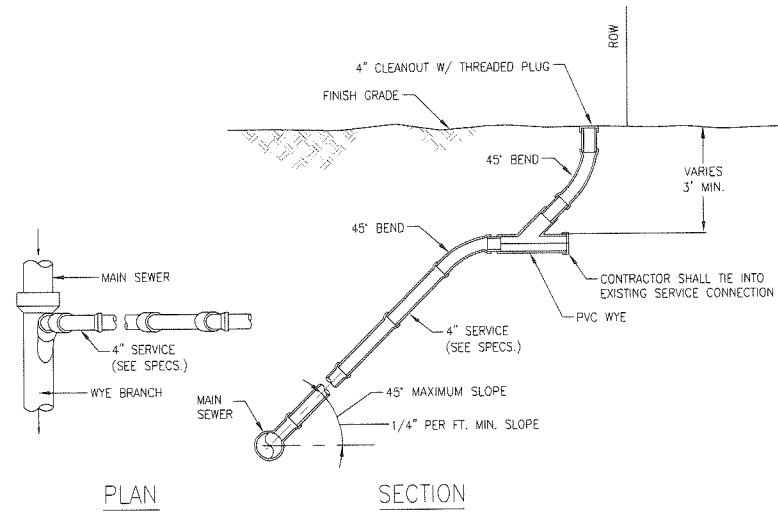
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SANITARY SEWER DETAILS
PRESERVATION WAY
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WAKULLA COUNTY, FLORIDA

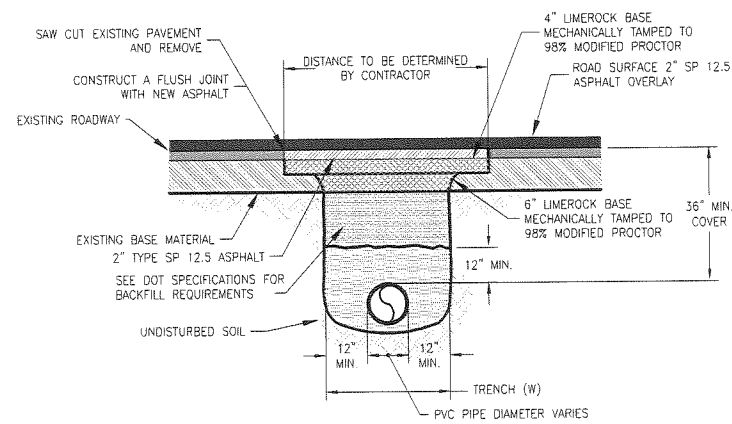
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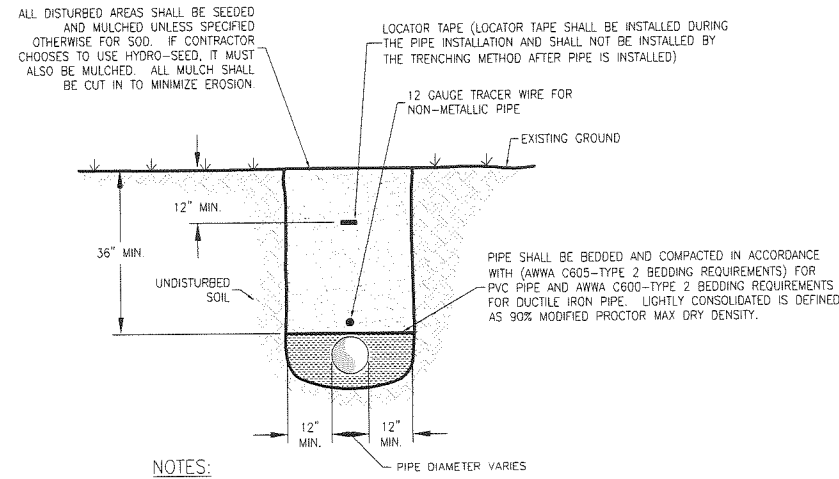


PLAN SECTION

DETAIL TYPICAL SEWER LATERAL
SCALE: N.T.S.



DETAIL REMOVAL AND REPLACEMENT OF ASPHALT PAVING FOR SERVICE LATERALS
SCALE: N.T.S.



DETAIL TYPICAL PIPE BEDDING
SCALE: N.T.S.

NOTES:
1. NO TRASH, RUBBISH, ROCKS OR DEBRIS WILL BE ALLOWED IN TRENCHES.
2. ALL PIPE SHALL BE INSTALLED IN DRY TRENCHES.
3. CONTRACTOR MAY BE REQUIRED BY THE ENGINEER TO DE-WATER PIPE TRENCH, IF NECESSARY.
4. AT THE ENGINEER'S DISCRETION, THE CONTRACTOR SHALL SUBSTITUTE SELECT BACKFILL IN LIEU OF NATIVE SOILS FOR A UNIT PRICE SPECIFIED IN THE CONTRACTOR'S BID FORM.
5. THE CONTRACTOR WILL BE COMPENSATED FOR SELECT BACKFILL ONLY IF DIRECTED BY THE ENGINEER IN WRITING. THE ENGINEER MAY ISSUE A FIELD ORDER WITH WRITTEN CONFIRMATION WITHIN 24 HOURS.

- NOTES:
1) CONTRACTOR SHALL SUBMIT 6 COPIES OF SHOP DRAWINGS TO THE E.O.R. FOR REVIEW AND APPROVAL. PRIOR TO SUBMITTING, THE CONTRACTOR SHALL REVIEW, STAMP, AND SIGNOFF (CONTACT E.O.R. FOR DETAILS).
2) CONTRACTOR SHALL PERFORM STARTUP TEST OF PUMP STATION AND COORDINATE WITH SALES REPRESENTATIVE TO SCHEDULE AND PERFORM TEST. CONTRACTOR SHALL NOTIFY OWNER AND E.O.R. (ENGINEER OF RECORD) 48 HOURS IN ADVANCE OF STARTUP.
3) CONTRACTOR SHALL PROVIDE 4 ORIGINAL COPIES OF OPERATION AND MAINTENANCE MANUALS TO THE E.O.R. AT THE TIME OF STARTUP.
4) CONTRACTOR SHALL COMPACT BACKFILL MATERIAL UNTIL A DENSITY OF 95% OF THE MODIFIED PROCTOR (ASTM D-1557) MAXIMUM DRY DENSITY IS ACHIEVED THROUGHOUT ITS FULL DEPTH OF BACKFILL.
5) SANITARY SEWER AS-BUILTS SHALL INCLUDE PUMP STATION DETAILS (TOP, INVERT, DISCHARGE INTO WET WELL, FLOAT SWITCH ELEVATIONS, DISCHARGE PIPE ELEVATIONS, ETC.).
6) CONTRACTOR SHALL PRESSURE TEST DISCHARGE PIPE FOR NO LESS THAN 2 HOURS AT 100 PSI. TEST SHALL COMPLY WITH AWWA C605, "UNDERGROUND INSTALLATION OF POLYVINYL CHLORIDE (PVC) PRESSURE PIPE AND FITTINGS FOR WATER. E.O.R. SHALL BE NOTIFIED 48 HOURS IN ADVANCE AND SHALL BE PRESENT DURING TESTING. DUE TO THE SHORT LENGTH OF FORCEMAIN, NO LEAKAGE SHALL BE ALLOWED.
7) CONTRACTOR SHALL PROVIDE A CLEARLY VISIBLE & LEGIBLE SIGN WITH CONTACT INFORMATION IN CASE OF ALARM OR EMERGENCY. INFORMATION SHALL INCLUDE, AT A MINIMUM, COMPANY OR DEPARTMENT NAME, PHONE NUMBER, FAX NUMBER, ADDRESS, AND 24-HR EMERGENCY CONTACT PHONE NUMBER (INFORMATION SHALL BE PROVIDED BY PARK MANAGER). SIGN SHALL BE PLACED SO THAT A RESIDENT WILL BE ABLE TO READ WITHOUT ENTERING FENCED AREA.
8) CONTRACTOR SHALL INSTALL "MASTER LOCK" PADLOCKS, KEYED ALIKE, ON FENCE GATE, WET WELL, VALVE BOX AND PANEL, AND FURNISH OWNER WITH 2 SETS OF KEYS.
9) GROUNDWATER LEVEL WAS OBSERVED @ APPROXIMATELY ELEVATION 18.20, CONTRACTOR SHALL DEWATER AS DESCRIBED IN SOUTHERN EARTH SCIENCES, INC'S 9/23/08 REPORT USING INDUSTRY ACCEPTED, STANDARDS TECHNIQUES. IF A PERMIT IS REQUIRED FOR DISPOSAL OF WATER FROM DEWATERING ACTIVITIES, CONTRACTOR SHALL OBTAIN SAID PERMIT AND PROVIDE A COPY TO BOTH THE OWNER AND ENGINEER OF RECORD PRIOR TO COMMENCING.
10) GRAVEL SHALL CONFORM TO FDOT STANDARDS SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, 2007 EDITION, SECTION 901-2.1 OR 901-2.2. (LIMESTONE, DOLOMITE, SANDSTONE SHALL NOT BE USED!)

PANEL DESCRIPTION (MINIMUM) REQUIREMENTS
230V SINGLE PHASE
NEMA 4X, 304 STAINLESS ENCLOSURE
SEAL FAILURE RELAYS WITH INDICATION
GFI DUPLEX RECEPTACLE MOUNTED ON THE INNER DOOR
SELF-CONTAINED BATTERY BACKUP SYSTEM

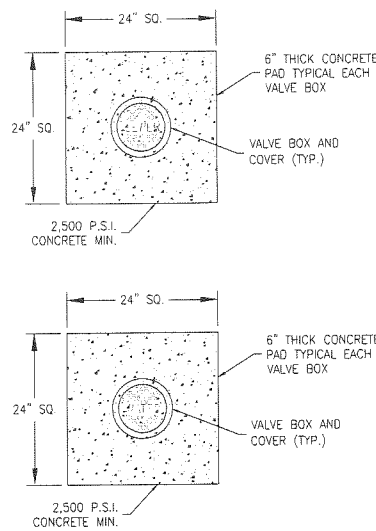
PANEL OPERATION REQUIREMENTS:
1) PUMPS SHALL ALTERNATE BETWEEN CYCLES.
2) LAG PUMP SHALL TURN ON IN THE EVENT OF A LEAD PUMP FAILURE.
3) ALARM SHALL OCCUR UNDER ANY PUMP FAILURE CONDITION.

PANEL SHALL CONFORM TO CURRENT FDEP STANDARDS SUCH AS AUX. GENERATOR RECEPTACLE, LIGHTNING/SURGE ARRESTOR, UNDER VOLTAGE AND OVER CURRENT PROTECTION, SEAL FAILURE LIGHTS, TIME METER, ALARM LIGHT & HORN, ETC.

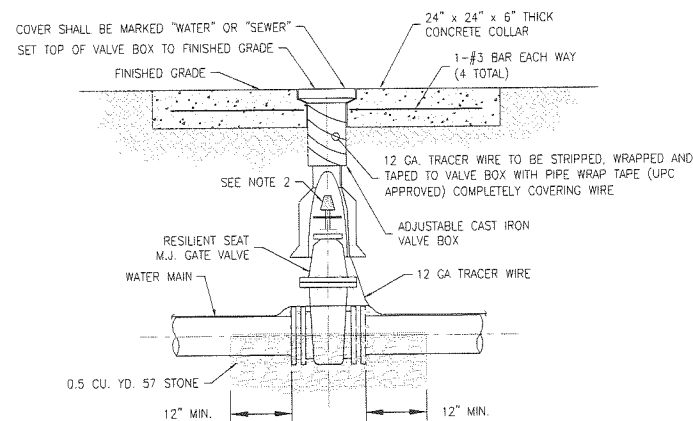
PUMP - DESIGN DESCRIPTION (2 SHALL BE PROVIDED)
RATED VOLTAGE - 230, SINGLE PHASE
MAXIMUM MOTOR LOAD SPEED - 3,500 (RPM),
MOTORS (2) TO BE SUPPLIED - 5 (HP)
PUMP MODEL TO BE UTILIZED - HYDOMATIC HPGH/HPGHX-500
133MM IMPELLOR
MINIMUM PUMP SHUT-OFF HEAD - xx+ (FEET)
PRIMARY TDH - 83.46 (FEET)
MINIMUM CAPACITY AT PRIMARY TDH - 33 (GPM)
SECONDARY TDH - xx (FEET)
MINIMUM CAPACITY AT SECONDARY TDH - xx (GPM)

THE CONTROL PANEL SHALL, AT A MINIMUM, MEET THE FDEP STANDARDS, WITH THE ADDITION OF THE SELF-CONTAINED BATTERY BACKUP SYSTEM

PANEL OPERATION REQUIREMENTS:
1) ALARM SHALL OCCUR UNDER ANY PUMP FAILURE CONDITION.



DETAIL TYPICAL VALVE AND BOX
SCALE: N.T.S.



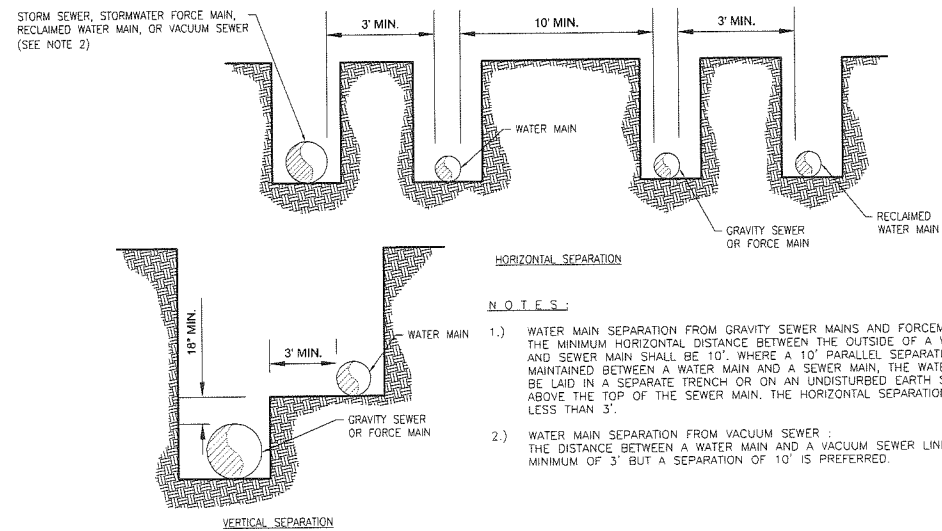
NOTES:
1. PVC EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO COME UP TO 4 FOOT DEPTH BELOW FINISHED GRADE.

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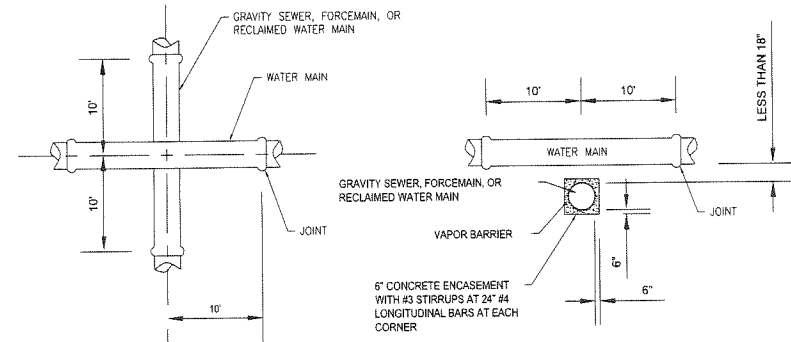
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SANITARY SEWER DETAILS & NOTES
PRESERVATION WAY
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WAKULLA COUNTY, FLORIDA

DATE: Apr-2014	PROJECT NO. 662.014
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DETAIL WATER / SEWER HORIZONTAL & VERTICAL SEPARATION
SCALE: N.T.S.

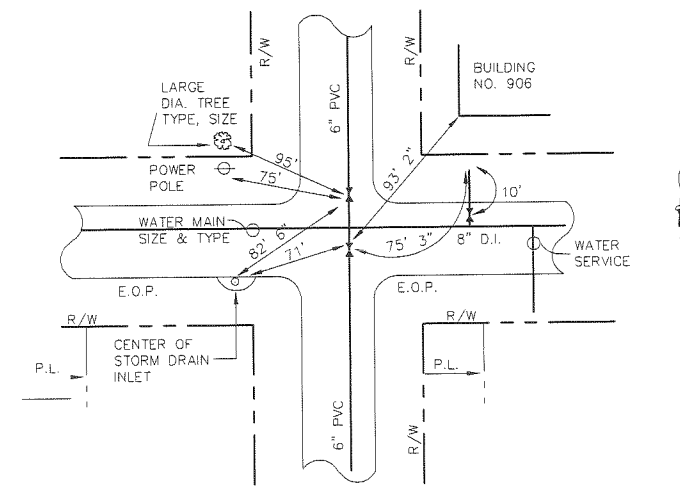


- NOTES:**
- 1.) CONCRETE ENCASEMENT IS TO BE USED SUBJECT TO APPROVAL BY THE FDEP AND THE CITY OF PORT ST. JOE.
 - 2.) WHERE AN 18" VERTICAL SEPARATION DISTANCE CANNOT BE MAINTAINED BETWEEN A WATER MAIN AND A GRAVITY SEWER, FORCEMAIN, OR RECLAIMED WATER MAIN, THEN THE GRAVITY SEWER, FORCEMAIN, OR RECLAIMED WATER MAIN SHALL BE CONCRETE ENCASED 6" AND PASS UNDER THE WATERMAIN.
 - 3.) THE PIPE JOINTS SHALL BE ARRANGED SO THAT ALL PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN TEN FEET BETWEEN ANY TWO JOINTS. ALTERNATELY, CROSSING SHALL BE ENCASED IN CONCRETE TO OBTAIN THE EQUIVALENT OF THE TEN FOOT SEPARATION BETWEEN JOINTS.

DETAIL WATER/SEWER CROSSING
SCALE: N.T.S.

MAIN PIPE SIZE	HORIZ. BENDS			TEE BRANCH SIZE				REDUCERS				PLUGS
	90'	45'	22.5'	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	
48	128	63	26	X48	X42	X36	X30	X24	X18	X12	X6	321
42	117	49	24	X42	X36	X30	X24	X18	X12	X6	289	
36	106	44	21	X36	X30	X24	X18	X12	X6	257		
30	93	39	19	X30	X24	X18	X12	X6	222			
24	79	33	16	X24	X18	X12	X6	185				
20	68	29	14	X20	X15	X10	X6	159				
16	57	24	12	X16	X12	X8	X6	131				
12	45	19	9	X12	X8	X6	X4	102				
10	39	16	8	X10	X8	X6	X4	87				
8	33	14	7	X8	X6	X4	X3	72				
6	25	11	5	X6	X4	X3	X2	55				
4	18	8	4	X4	X3	X2	X1	39				

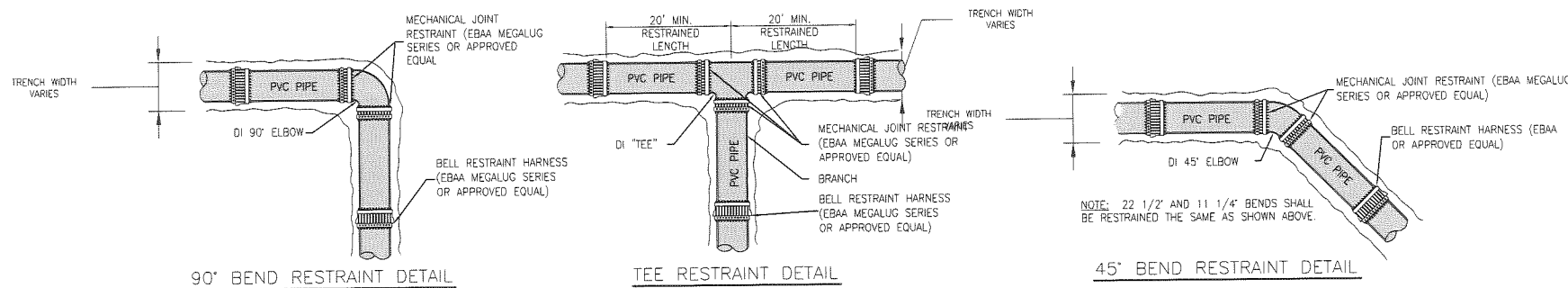
- NOTES:**
- 1.) RESTRAIN TO NEXT FULL JOINT BEYOND GIVEN LENGTH.
 - 2.) RESTRAIN 11.25' BENDS 50% OF LENGTH FOR 22.5' BENDS.
 - 3.) ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
 - 4.) ALL VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 200 PSI TEST PRESSURE IN EITHER DIRECTION.
 - 5.) PIPE SIZES ARE GIVEN IN INCHES.
 - 6.) PIPE LENGTHS ARE GIVEN IN FEET.
 - 7.) LENGTHS SHOWN ARE FOR A TEST PRESSURE OF 150 PSI.
 - 8.) RESTRAIN LENGTHS ARE TO BE USED FOR PVC WATERMAIN.
 - 9.) THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON THE USE OF LIGHTLY COMPACTED CLEAN SAND WITH AT LEAST A 95% COARSE PARTICLE CONTENT. ACTUAL SOIL CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY. SAFETY FACTOR OF 1.5:1 TO BE CALCULATED WITH A "SM" SOIL TYPE AND TRENCH TYPE "3".
 - 10.) ALL DIRECTIONAL BORES SHALL BE RESTRAINED A MINIMUM OF 20'.



EXAMPLE FOR AS BUILT DRAWINGS OF WATER LINES AND VALVES

1. ASBUILT DRAWINGS WILL BE PREPARED INDICATING LOCATIONS OF ALL SERVICES, LOCATIONS AND TYPES OF ALL FITTINGS, WITH RESPECT TO LOT CORNERS, LOCATIONS OF ALL VALVE AND DEAD END RUNS WITH THREE (3) TIES TO PHYSICAL FEATURES (BUILDING CORNERS, MAN HOLES, EXISTING STRUCTURES, POWER POLES, STORM DRAIN INLETS, CENTER OF FIRE HYDRANTS, FACE OF LARGE DIAMETER TREES >18").
2. ASBUILT DRAWINGS MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE A LETTER OF ACCEPTANCE WILL BE ISSUED.
3. CONTRACTOR SHALL ALSO PROVIDE CERTIFIED ASBUILTS BY A P.L.S. REGISTERED IN THE STATE OF FLORIDA IN DIGITAL AND HARD COPY SIGNED AND SEALED. THE ASBUILTS SHALL BE IN STATE PLANE COORDINATES.
4. CONTRACTOR SHALL MEET THE CITY OF PORT ST. JOE (MINIMUM OF STANDARDS FOR ASBUILTS). SEE SPECIFICATIONS.

DETAIL AS-BUILT REQUIREMENTS
SCALE: N.T.S.



DETAIL THRUST RESTRAINTS
SCALE: N.T.S.

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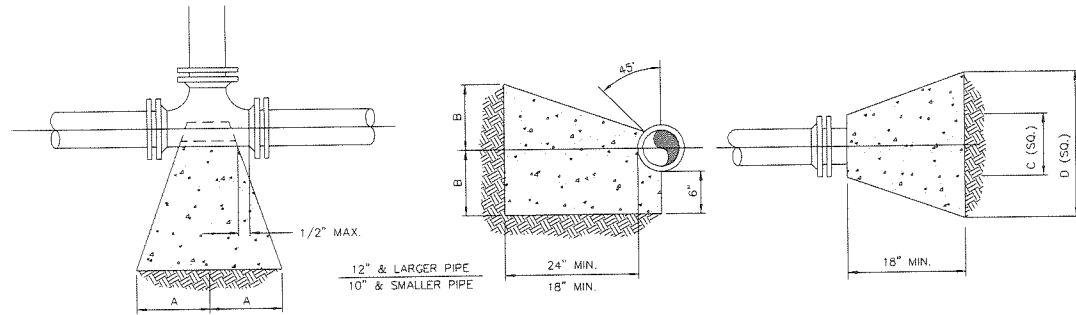
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SCALE: N.T.S.	SHEET C49
DRAWN: BDAHLEN	CHECKED: AWISE

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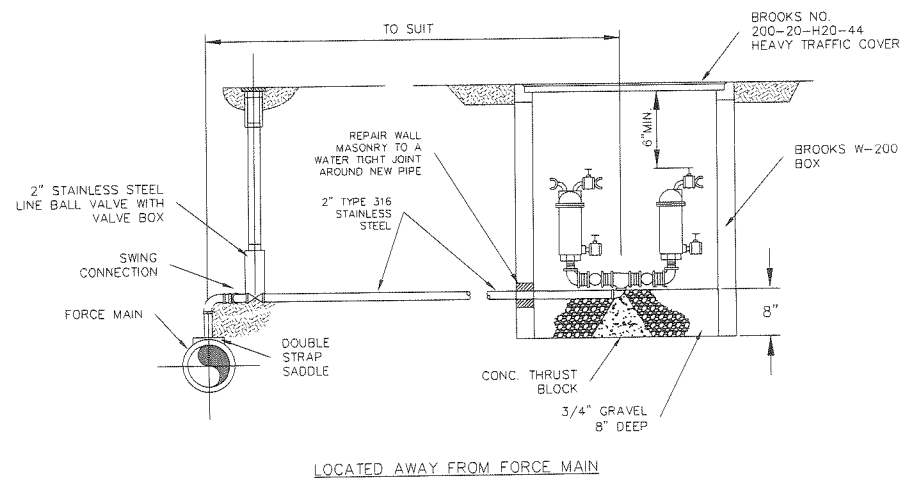


SIZE	TEE		CU. FT. CONC.
	A	B	
6"	10"	12"	3.5
8"	13"	16"	5.4
10"	16"	20"	9.4
12"	18"	24"	16.6
14"	22"	27"	23.2
16"	24"	30"	28.6
18"	26"	32"	36.2

- NOTES:**
1. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
 2. THESE TABLES SHOW MINIMUM SIZE THRUST BLOCKS FOR GOOD SOIL (A-1 THRU A-3, CLEAN SAND AND GRAVELS).
 3. POOR SOIL (A-4 THRU A-8, SILTY SOILS, CLAYS, MUCK AND PEAT) WILL REQUIRE LARGER THRUST BLOCKS.

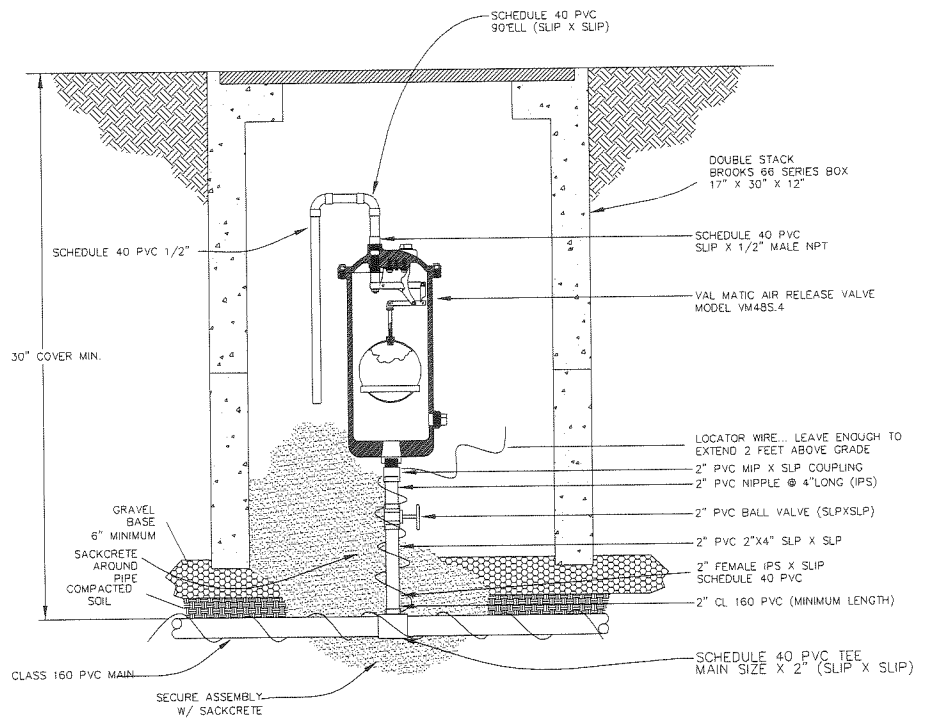
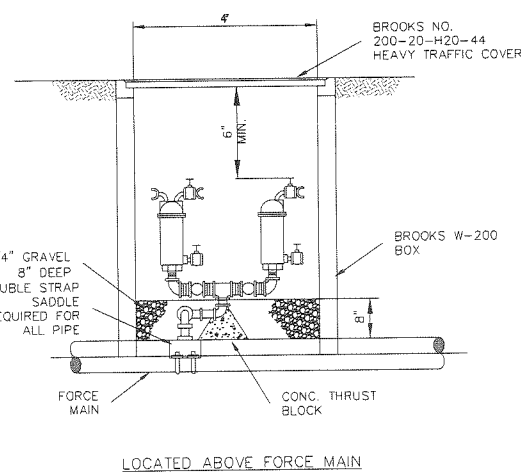
SIZE	PLUG		CU. FT. CONC.
	C	D	
6"	10"	21"	2.6
8"	12"	29"	4.5
10"	14"	36"	6.9
12"	16"	41"	9.0
14"	18"	48"	12.3
16"	20"	54"	15.2
18"	22"	60"	19.2

THRUST BLOCK DETAIL
N.T.S.

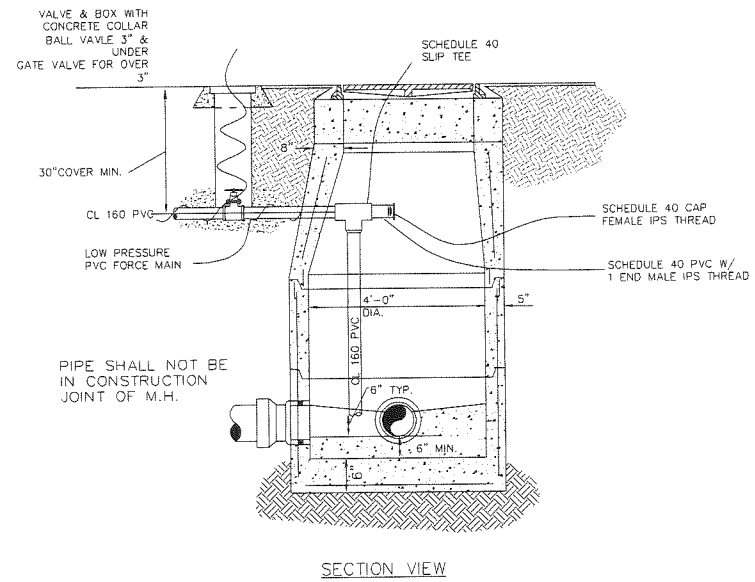


- NOTES:**
1. M.H. TO BE BROOKS W-200 SERIES WITH 200-20-H20-44 HEAVY TRAFFIC COVER AS MFG. BY BROOKS PRODUCTS INC. OR EQUAL.
 2. BOX TO BE LOCATED OUT OF PAVED AREAS. SET TOP FLUSH IF OCCURS IN SIDEWALK OR 1 1/2" ABOVE GROUND IF IN DIRT OR GRASS AREAS.
 3. COMBINATION AIR & VACUUM VALVE ASSEMBLY SHALL BE VAL-MATIC NO. 48/301BW OR EQUAL.
 4. AIR VALVE ONLY ASSEMBLY SHALL BE VAL-MATIC NO. 48BW OR AS OTHER WISE SPECIFIED.

TYPICAL AIR AND/OR VACUUM VALVES
N.T.S.



TYPICAL PRESSURE SEWER AIR RELEASE MANHOLE
N.T.S.



- NOTES:**
1. PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH LATEST EDITION OF ASTM C 478 WITH 4,000 LB. CONCRETE, TYPE II CEMENT.
 2. THE INTERIOR AND EXTERIOR OF MANHOLE SHALL BE GIVEN TWO COATS OF FABERTITE BITUMINOUS WATERPROOFING MATERIAL, DO NOT COAT JOINT OR PIPE OPENING SURFACES.
- NOTE: MANHOLE FRAME AND COVER SHALL BE U.S. FOUNDARY E-170 OR EQUIVALENT.

SANITARY SEWER STANDARD MANHOLE
LOW PRESSURE FORCE MAIN TIE IN
N.T.S.

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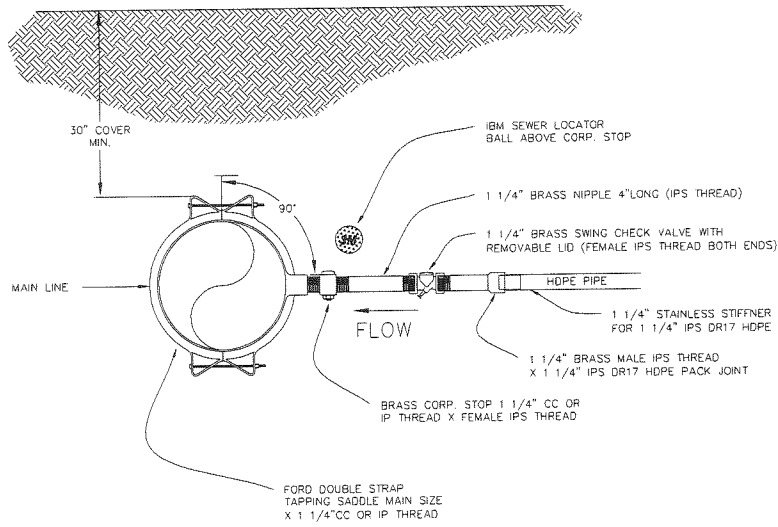
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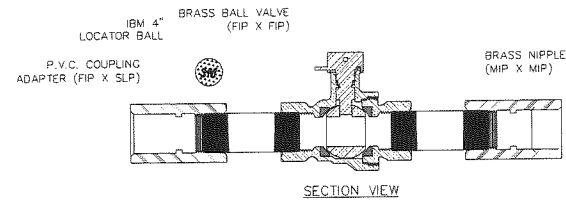
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CHECKED: AWISE	

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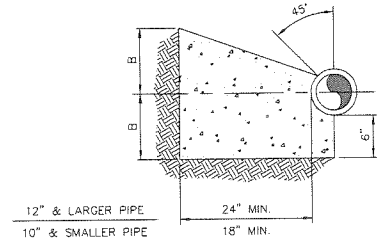
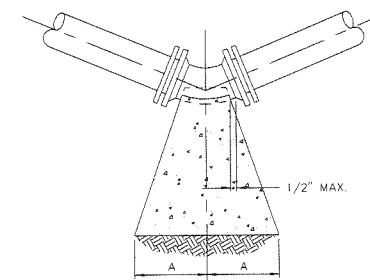
LOW PRESSURE SERVICE

N.T.S.



TYPICAL BRASS BALL VALVE CONNECTION

N.T.S.



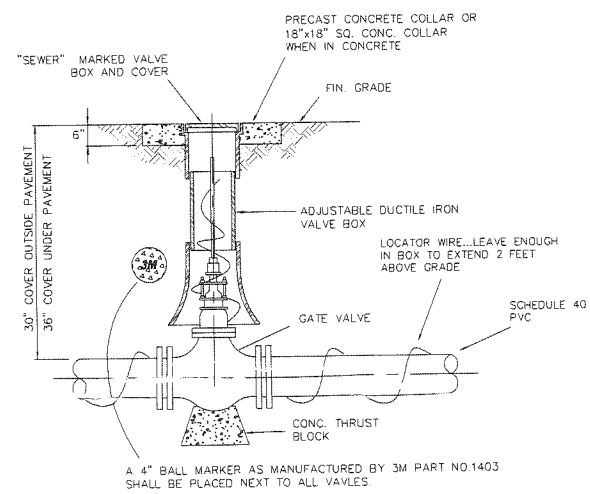
SIZE	1/4 BENDS		CU. FT.	1/8 BENDS		CU. FT.	1/16 BENDS		CU. FT.
	A	B		A	B		A	B	
6"	16"	10"	3.2	9"	10"	3.0	6"	8"	1.3
8"	22"	13"	7.2	12"	13"	3.7	8"	10"	2.1
10"	26"	17"	11.5	14"	17"	5.9	10"	13"	3.6
12"	29"	21"	21.1	16"	21"	8.6	11"	16"	6.6
14"	35"	24"	29.8	19"	24"	14.9	12"	20"	8.9
16"	38"	27"	37.8	21"	27"	19.1	12"	24"	11.2
18"	42"	29"	47.8	22"	29"	24.2	13"	26"	14.2

NOTES:

1. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
2. THESE TABLES SHOW MINIMUM SIZE THRUST BLOCKS FOR GOOD SOIL. (A-1 THRU A-3, CLEAN SAND AND GRAVELS)
3. POOR SOIL (A-4 THRU A-8, SILTY SOILS, CLAYS, MUCK AND PEAT) WILL REQUIRE LARGER THRUST BLOCKS.

THRUST BLOCK DETAIL

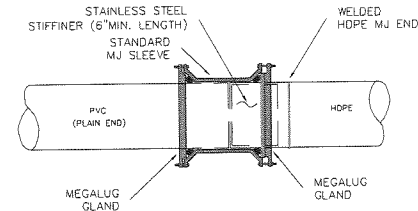
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TYPICAL INLINE VALVE

N.T.S.

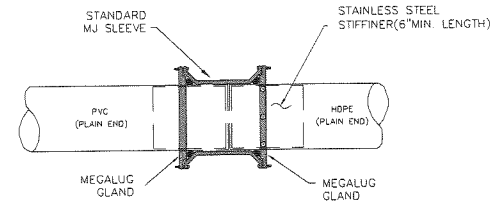
NOTE:
ALL BELOW GROUND VALVES REQUIRE VALVE BOX.
ALL SCHEDULE 40 PVC SHALL BE PRESSURE RATED NO DWV FITTING SHALL BE ALLOWED



HDPE-TO-PVC CONNECTION

(12" PIPE AND LARGER)
N.T.S.

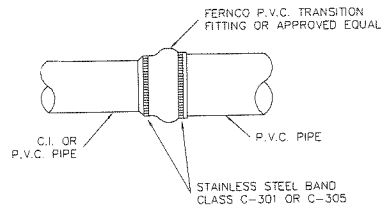
NOTE:
JOINT RESTRAINT REQUIRED ON 3 PVC JOINTS BEFORE TRANSITION CONNECTION



HDPE TO PVC TRANSITION

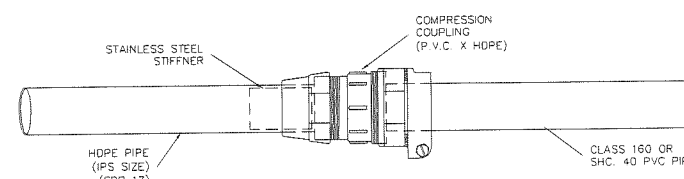
(4" TO 10")
N.T.S.

NOTE:
JOINT RESTRAINT REQUIRED ON 3 PVC JOINTS BEFORE TRANSITION CONNECTION



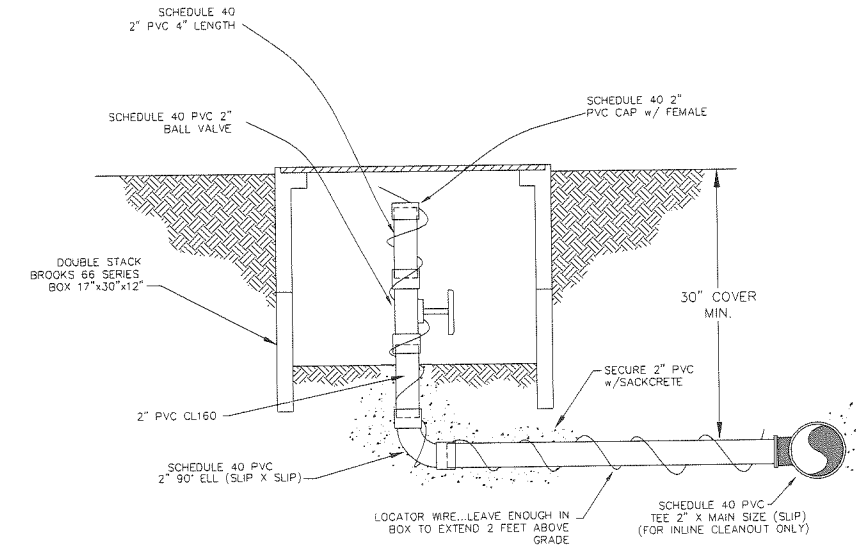
C.I. TO P.V.C. COUPLING ADAPTER

N.T.S.



HDPE TO PVC TRANSITION

(3" DIAMETER AND SMALLER)
N.T.S.



TYPICAL CLEANOUT

N.T.S.

GENERAL NOTES:

- 1) ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF REGIONAL UTILITIES' STANDARD SPECIFICATIONS.

April 25, 2014 (10:04:43 EST)
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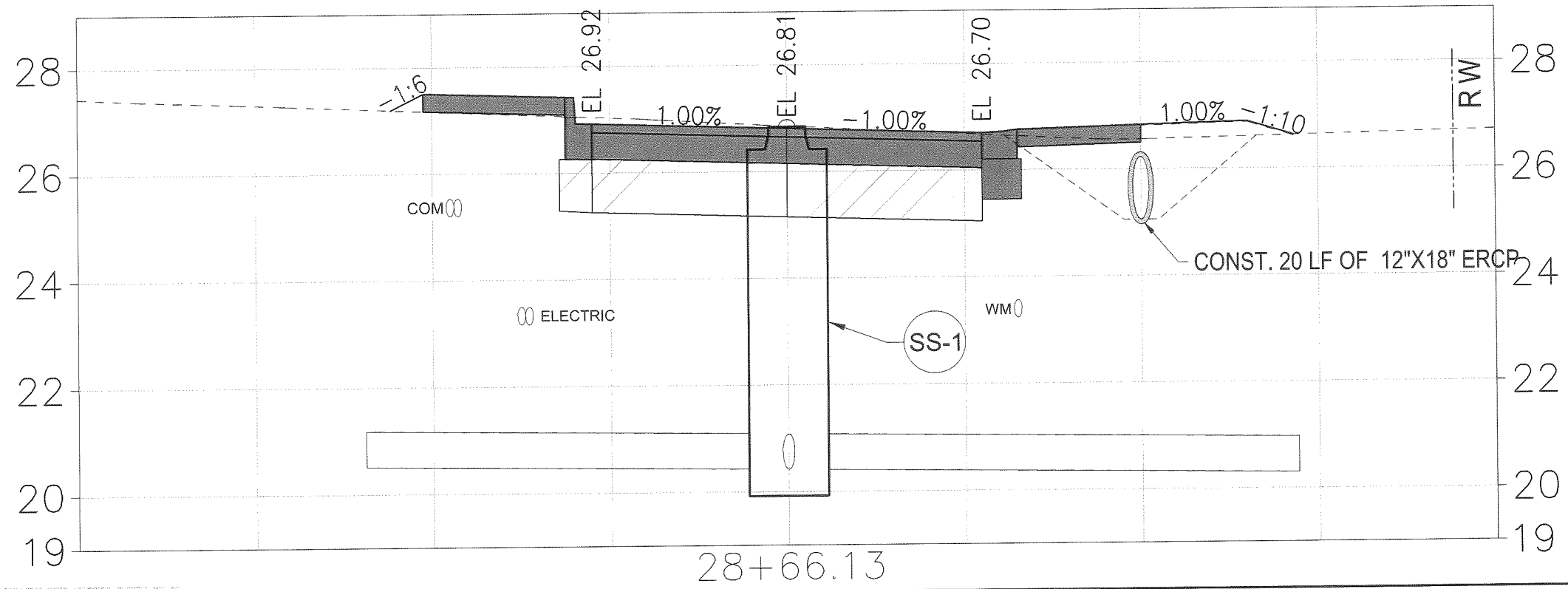
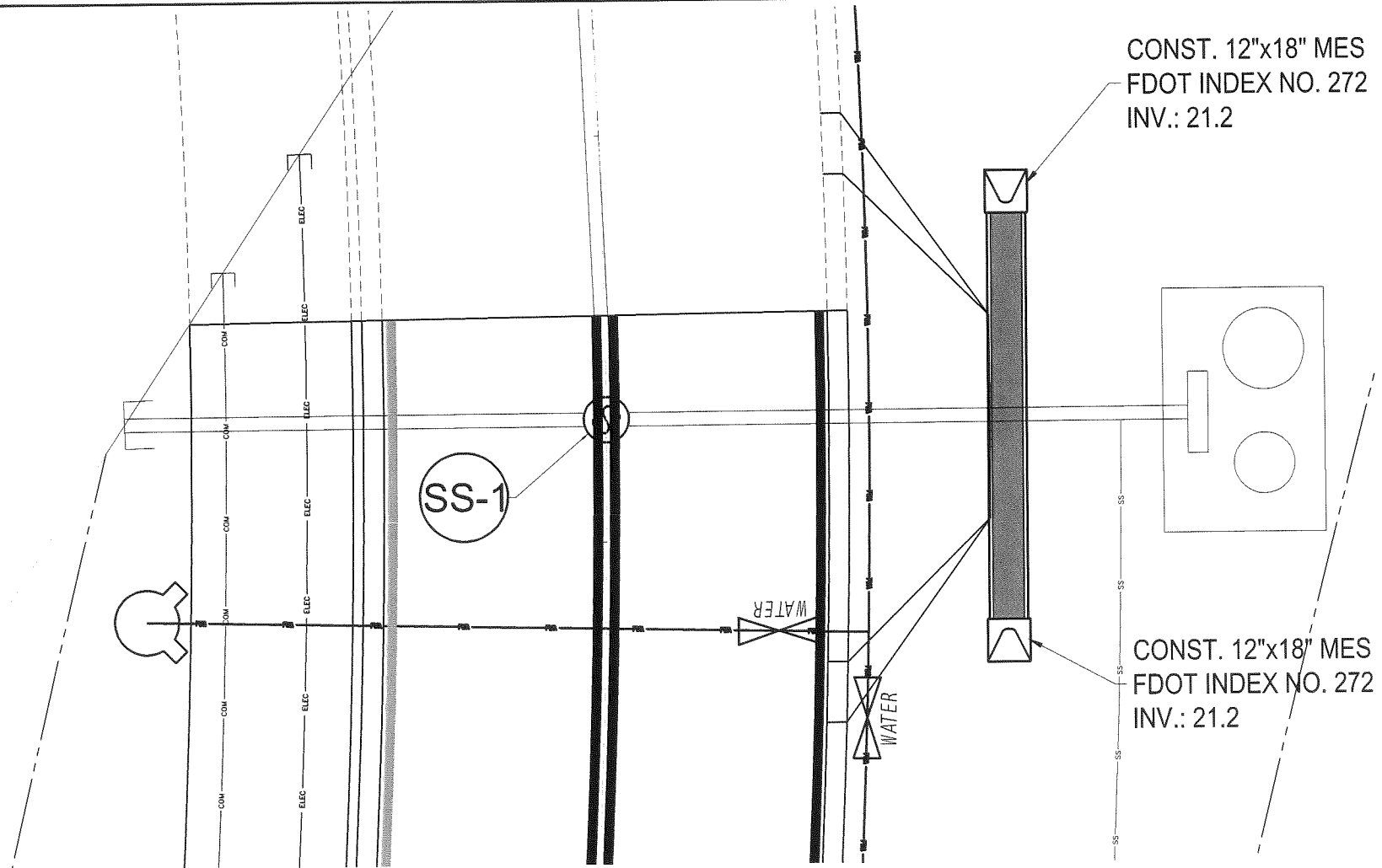
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36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

SANITARY SEWER DETAILS
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: Apr-2014	PROJECT NO. 662.014
SCALE: N.T.S.	
DRAWN: BDAHLEN	SHEET C51
CHECKED: AWISE	

EB# 0605155

April 25, 2014 (14:36:46 EST)
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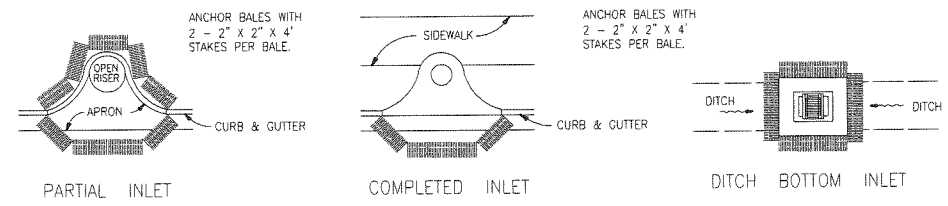
LIFT STATION DRIVE
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

DATE: Apr-2014	PROJECT NO. 662.014
SCALE: N.T.S.	SHEET C52
DRAWN: BDAHLEN	
CHECKED: AWISE	

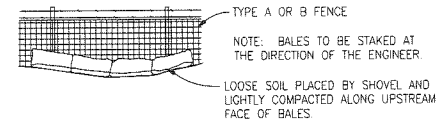
ES# 3006155

STORMWATER POLLUTION PREVENTION PLAN:

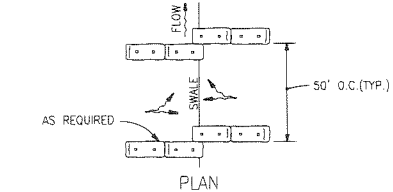
1. SITE DESCRIPTION:
 - A. CONSTRUCTION ACTIVITY: WAKULLA ENVIRONMENTAL INSTITUTE
 - PROJECT LIMITS: SEE SHEET C3
 - PROJECT DESCRIPTION: CONSTRUCTION OF NEW ROADWAY
 - MAJOR SOIL DISTURBING ACTIVITIES: CLEARING AND GRUBBING OVER PROJECT LIMITS.
 - B. TOTAL PROJECT AREA: XXXXX SQUARE FEET OR XX ACRES
 - C. TOTAL CONTRIBUTING AREA: XXXX SQUARE FEET OR XXX ACRES
 - D. (1) RUNOFF COEFFICIENTS BEFORE: 7.3, DURING: 80, AND AFTER: 98
 (2) DESCRIPTION OF SOIL OR QUALITY OF DISCHARGE: N/A
 (3) ESTIMATES OF SIZE OF DRAINAGE AREA FOR EACH OUTFALL: N/A
 - F. (1) NAME OF RECEIVING WATERS: UNNAMED WETLANDS
2. CONTROLS:
 - NARRATIVE - SEQUENCE OF SOIL DISTURBING ACTIVITIES AND IMPLEMENTATION OF CONTROLS THE SOIL DISTURBING ACTIVITIES FOR THIS PROJECT ARE AS FOLLOWS: ONLY UPON PROPER PLACEMENT OF ALL EROSION CONTROLS CAN SOIL DISTURBING ACTIVITIES TAKE PLACE. HAY BALES AND SILT FENCE WILL BE USED LATERALLY AT SPECIFIED INTERVALS. HAY BALES SHALL BE USED TO PREVENT SEDIMENTATION FROM ESCAPING PROJECT LIMITS.
 - A. EROSION AND SEDIMENT CONTROLS:
 - (1) STABILIZATION PRACTICES:
 - TEMPORARY SODDING
 - TEMPORARY GRASSING
 - X PERMANENT PLANTING, SODDING, OR SEEDING
 - TEMPORARY MULCHING
 - ARTIFICIAL COVERING
 - BUFFER ZONES
 - PRESERVATION OF NATURAL RESOURCES
 - (2) STRUCTURAL PRACTICES:
 - SAND BAGING
 - X SILT FENCES
 - X HAY BALES
 - BERMS
 - DIVERSION, INTERCEPTOR, OR PERIMETER DITCHES
 - PIPE SLOPE DRAINS
 - FLUMES
 - ROCK BEDDING AT CONSTRUCTION EXIT
 - TIMBER BEDDING AT CONSTRUCTION EXIT
 - DITCH LINER
 - SEDIMENT TRAPS
 - SEDIMENT BASINS
 - STORM INLET SEDIMENT TRAP (ROCK BAGS)
 - X STONE OUTLET STRUCTURES
 - CURBS AND GUTTERS
 - STORM SEWERS
 - VELOCITY CONTROL DEVICES
 - TURBIDITY BARRIER
 - X RIP RAP
 - B. OTHER CONTROLS:
 - (1) WASTE DISPOSAL: NO CONSTRUCTION WASTE MATERIAL WILL BE BURIED ON SITE
 - (2) OFF SITE VEHICLE TRACKING:
 - HAUL ROADS DAMPENED FOR DUST CONTROL
 - X LOADED HAUL TRUCKS TO BE COVERED WITH TARPULIN
 - X EXCESS DIRT ON ROAD REMOVED DAILY
 - X STABILIZED CONSTRUCTION ENTRANCE
 - (3) SANITARY WASTE: N/A
 - (4) FERTILIZERS AND PESTICIDES: FERTILIZERS AND/OR PESTICIDES SHALL BE APPLIED ACCORDING TO MANUFACTURERS RECOMMENDATIONS BY A LICENSED OR CERTIFIED APPLICATOR AS DIRECTED BY THE PROJECT ENGINEER.
 - (5) NON-STORMWATER DISCHARGE (INCLUDING SPILL REPORTING): NO NON-STORMWATER DISCHARGES ARE ANTICIPATED.
 - C. APPROVED STATE, LOCAL PLANS, OR STORMWATER PERMITS: NFWPMD GENERAL STORMWATER PERMIT AND JEFFERSON COUNTY DEVELOPMENT ORDER
 3. MAINTENANCE:
 - ALL OF THE CONTROLS SHALL BE MAINTAINED AT ALL TIMES. IF A REPAIR IS NECESSARY, IT WILL BE DONE AT THE EARLIEST DATE POSSIBLE, BUT NO LATER THAN (7) CALENDAR DAYS AFTER THE SURROUNDING EXPOSED AREA HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT.
 4. INSPECTION:
 - ALL CONTROLS SHALL BE INSPECTED WEEKLY BY THE COUNTY AS WELL AS AFTER 0.25" OR MORE OF RAIN. AN INSPECTION AND MAINTENANCE REPORT WILL BE MADE PER EACH INSPECTION. BASED ON INSPECTION RESULTS THE CONTROLS SHALL BE REVISED PER THE INSPECTION REPORTS.
 - A. THE COUNTY SHALL INITIATE REPAIRS WITHIN 24 HOURS OF INSPECTION THAT INDICATE ITEMS ARE NOT IN GOOD WORKING ORDER. TO COMPLY, THE COUNTY SHALL INSTALL AND MAINTAIN RAIN GAGES AND DAILY RAINFALL RECORDS. WHERE SITES HAVE BEEN PERMANENTLY STABILIZED, INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH. THE COUNTY SHALL ALSO INSPECT AND CERTIFY THAT CONTROLS INSTALLED IN THE FIELD AGREE WITH THE LATEST STORMWATER POLLUTION PREVENTION PLAN.
 - B. IN INSPECTIONS INDICATE THAT THE INSTALLED STABILIZATION AND STRUCTURAL PRACTICES ARE NOT SUFFICIENT TO MINIMIZE EROSION, RETAIN SEDIMENT, AND PREVENT DISCHARGING POLLUTANTS, THE COUNTY SHALL PROVIDE ADDITIONAL MEASURES, AS NEEDED.
 - C. RECORDS OF THE INSPECTION AND THE CONSTRUCTION PERMIT MUST BE MAINTAINED AT THE CONSTRUCTION SITE AND BE READILY AVAILABLE FOR INSPECTION.
 5. THE DEVELOPER AND/OR COUNTY IS RESPONSIBLE FOR OBTAINING COVERAGE UNDER THE GENERAL PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES PRIOR TO START OF CONSTRUCTION OR ANY DISTURBANCE OF LAND GREATER THAN ONE ACRE. THE DEVELOPER/COUNTY WILL FORWARD A COPY OF THE PERMIT AND WILL PROVIDE 24 HOUR NOTIFICATION TO JEFFERSON COUNTY PRIOR TO COMMENCEMENT OF WORK. ALL REQUIRED ELEMENTS OF THE STORMWATER POLLUTION PREVENTION PLAN MUST BE IN PLACE PRIOR TO COMMENCEMENT OF CONSTRUCTION. FAILURE TO COMPLY COULD RESULT IN CODE ENFORCEMENT ACTION AND FINES.



PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

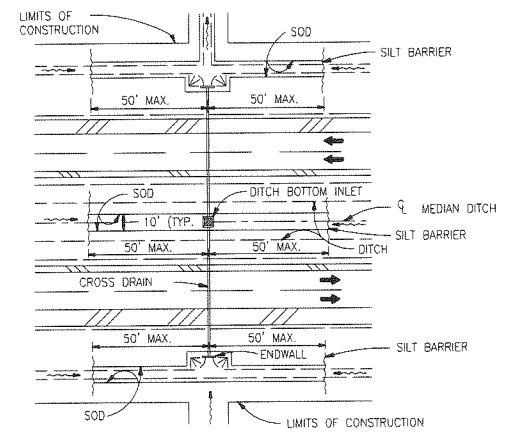


BALES BACKED BY FENCE

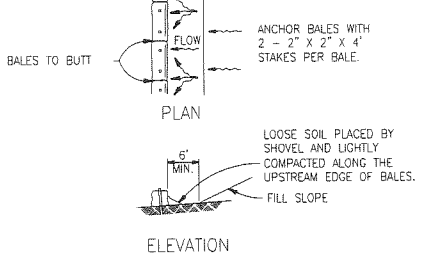


SILT FENCE

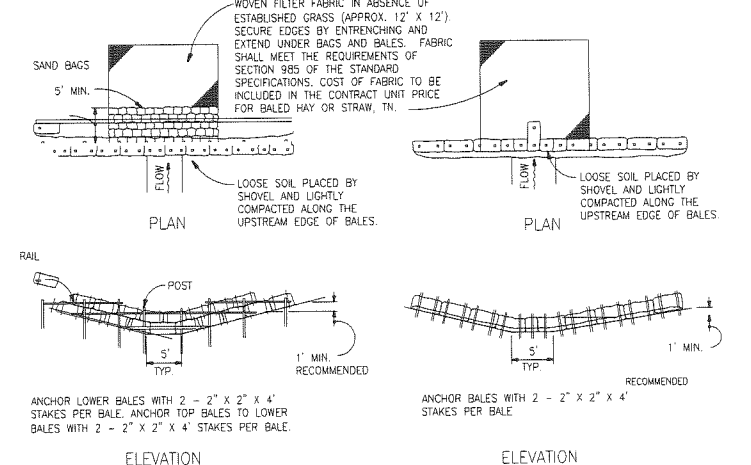
- NOTES:
1. DIG TRENCH 6" DEEP.
 2. LAY IN FABRIC TO BOTTOM OF TRENCH.
 3. BACK TRENCH, COVERING FABRIC.



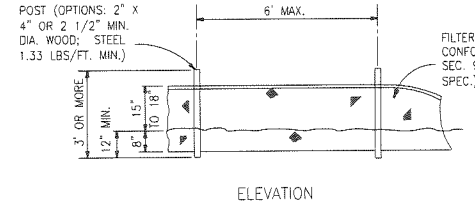
DITCH INSTALLATIONS AT DRAINAGE STRUCTURES



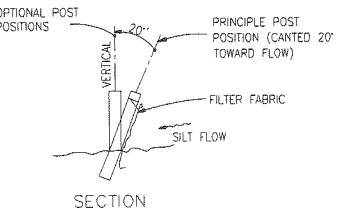
BARRIERS FOR FILL SLOPES



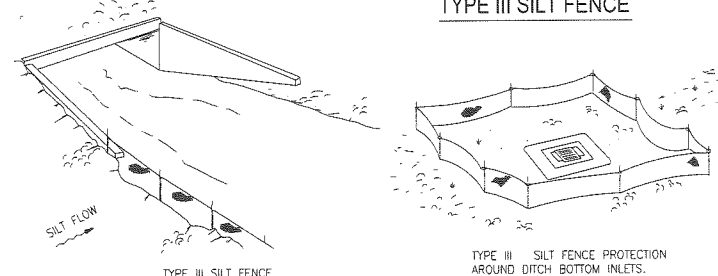
BARRIER FOR UNPAVED DITCHES



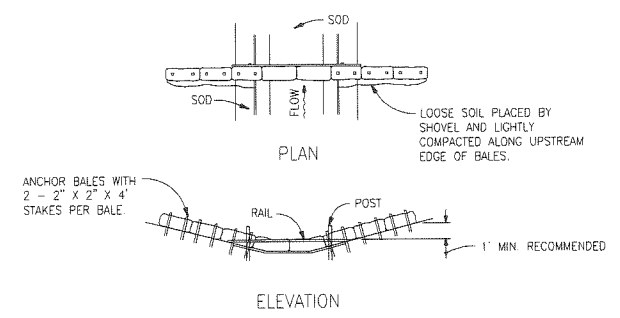
TYPE III SILT FENCE



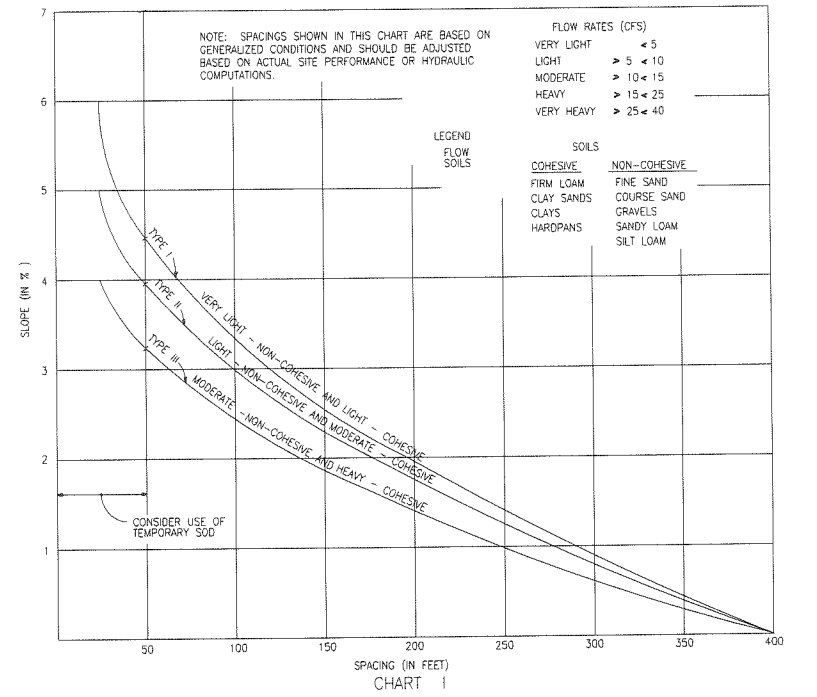
TYPE II SILT FENCE



SILT FENCE APPLICATIONS



BARRIER FOR PAVED DITCH



RECOMMENDED SPACING FOR TYPE I AND TYPE II HAY BALE BARRIERS, AND TYPE III SILT FENCES

ES# 0008155

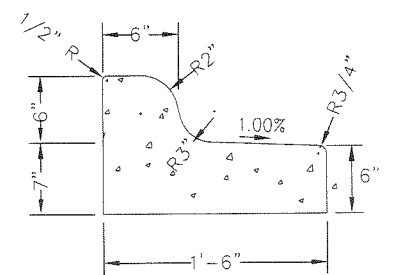
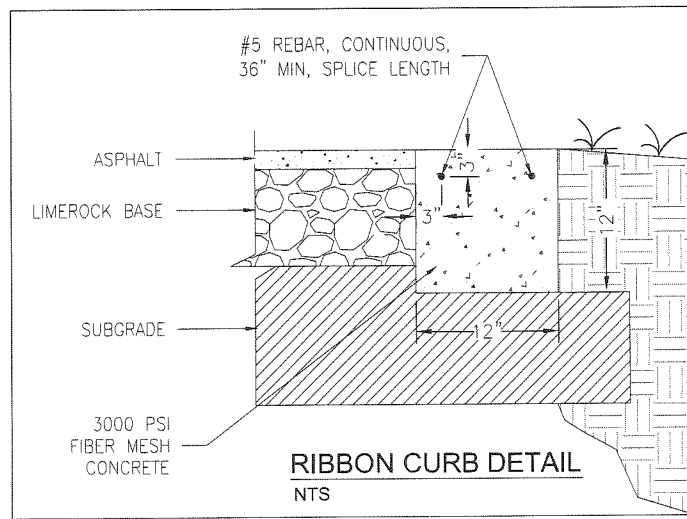
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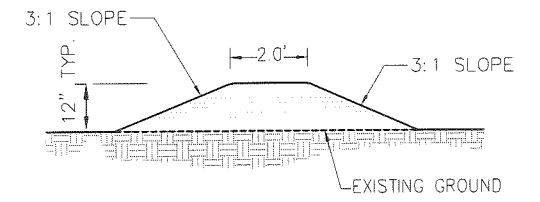
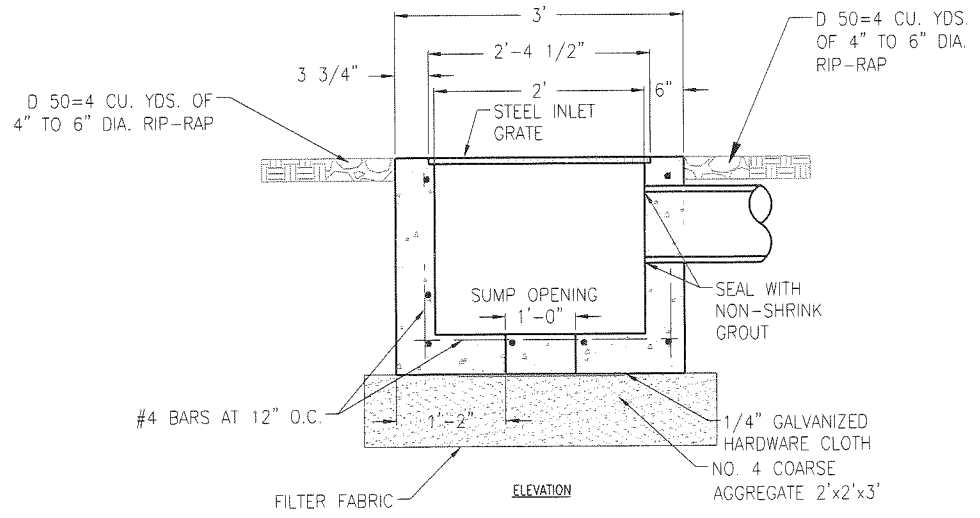
PREBLE-RISH INC
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STORMWATER POLLUTION PREVENTION PLAN
 PRESERVATION WAY
 WAKULLA ENVIRONMENTAL INSTITUTE
 WAKULLA COUNTY, FLORIDA

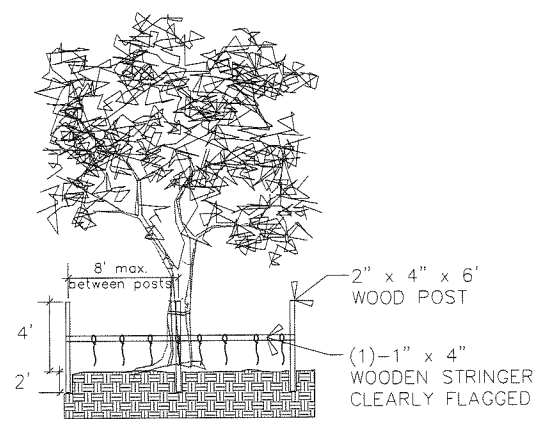
DATE: Apr-2014	PROJECT NO. 662.014
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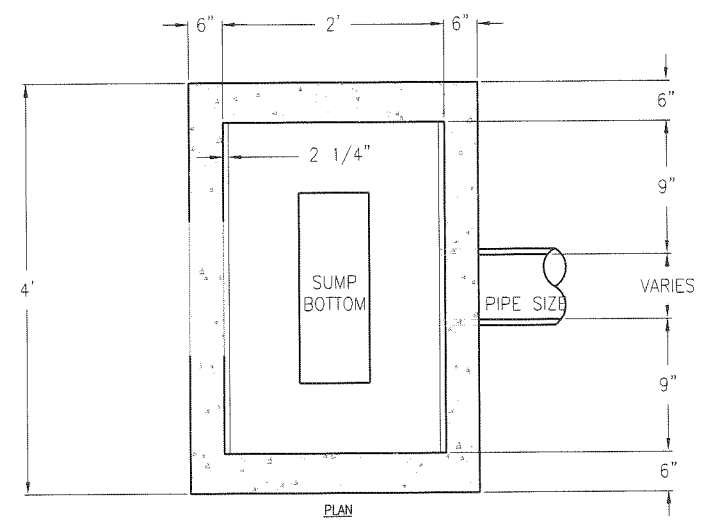
TYPE "F" MODIFIED CURB & GUTTER
N.T.S.



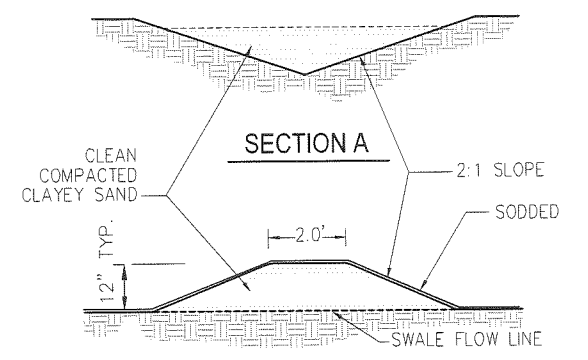
BERM
N.T.S.



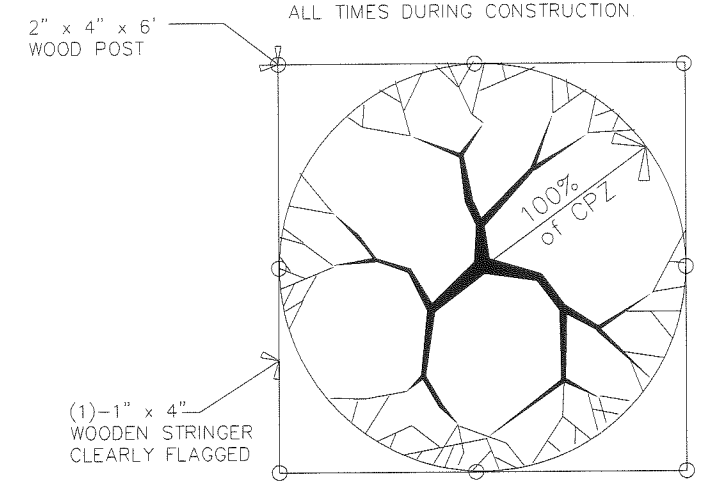
NOTE: THE TREE PROTECTION BARRIER SHALL BE PLACED SO AS TO PROTECT AS MUCH OF THE PROTECTED TREES' CRITICAL PROTECTION ZONE (CPZ) AS POSSIBLE. THE CPZ EQUALS A CIRCLE DESCRIBED ABOUT THE CENTER OF THE TREE HAVING A RADIUS OF 1' FOR EVERY INCH OF TRUNK DIAMETER AT BREAST HEIGHT (DBH). FIELD WIRE OR ORANGE PLASTIC BARRICADE MAY BE USED AS AN ALTERNATE. TYPE BARRICADE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.



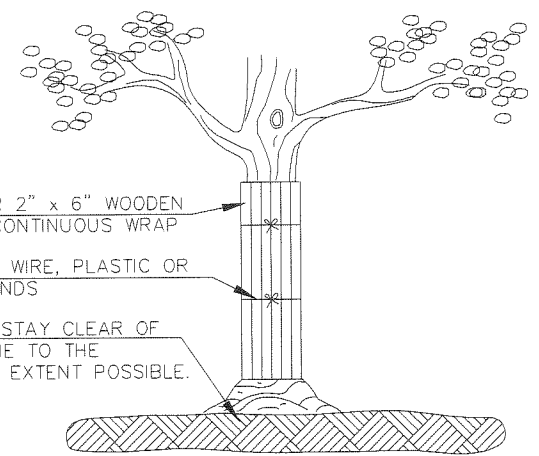
DETAIL - TYPE 'C' BUBBLE UP (ST-20)
N.T.S.



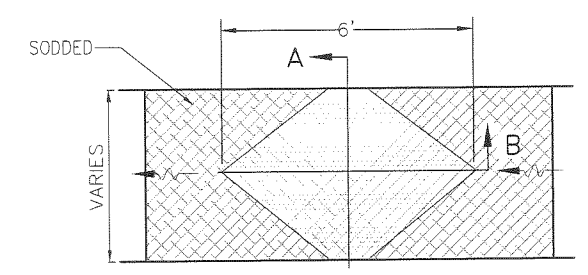
SECTION B



TREE PROTECTION BARRICADE
N.T.S.



TRUNK PROTECTION DETAIL
N.T.S.



CONCRETE DITCH BLOCK
N.T.S.

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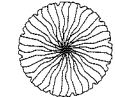
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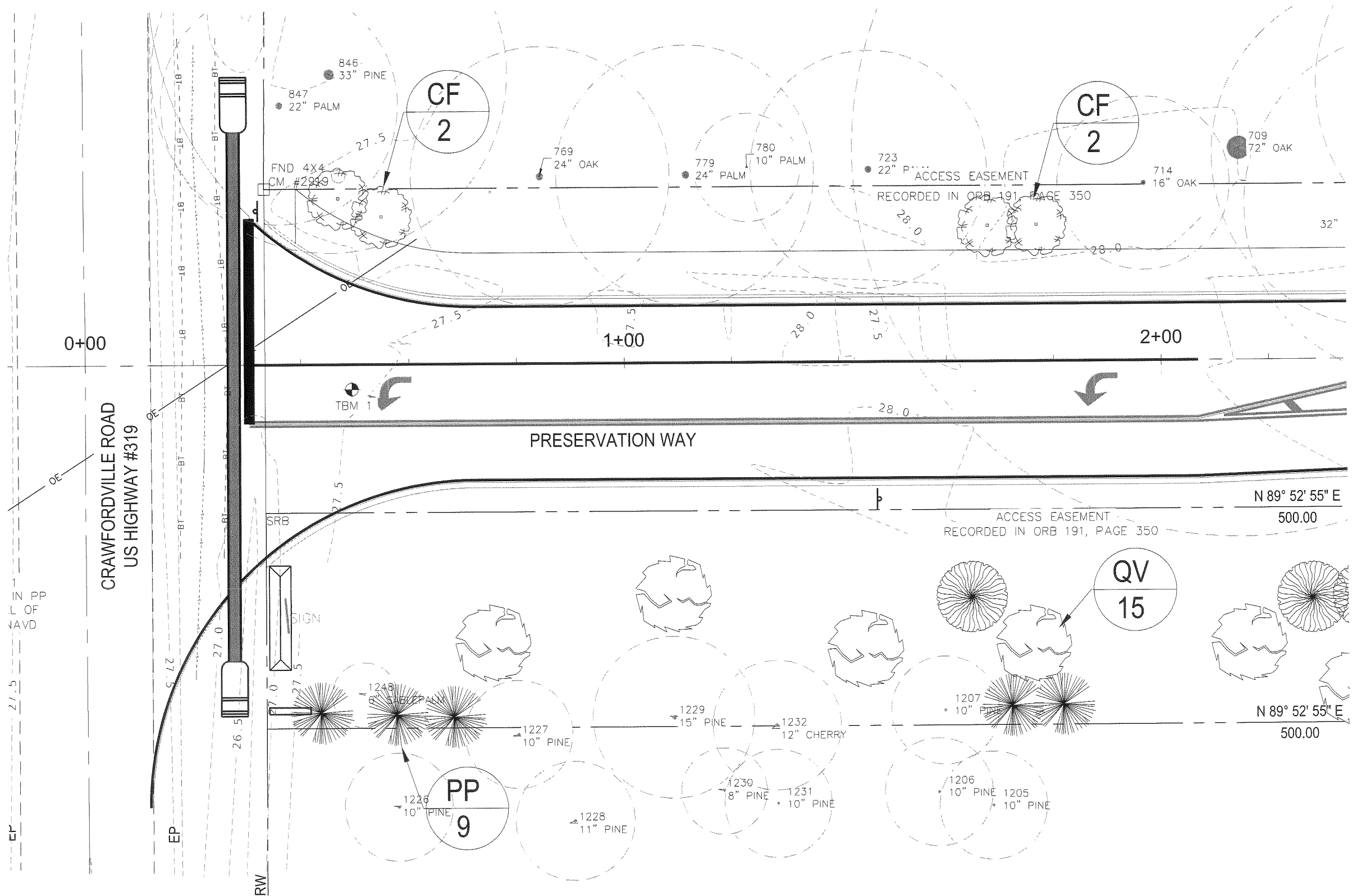
CONSTRUCTION DETAILS
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: N.T.S.	SHEET C54
DRAWN: BDAHLEN	CHECKED: AWISE

EB# 0006155

LEGEND

-  LIVE OAK
-  DOGWOOD (CORNUS FLORIDA)
-  RED BUD
-  LONG LEAF PINE



April 25, 2014 (10:44:04 EST)
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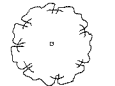
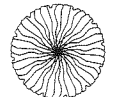


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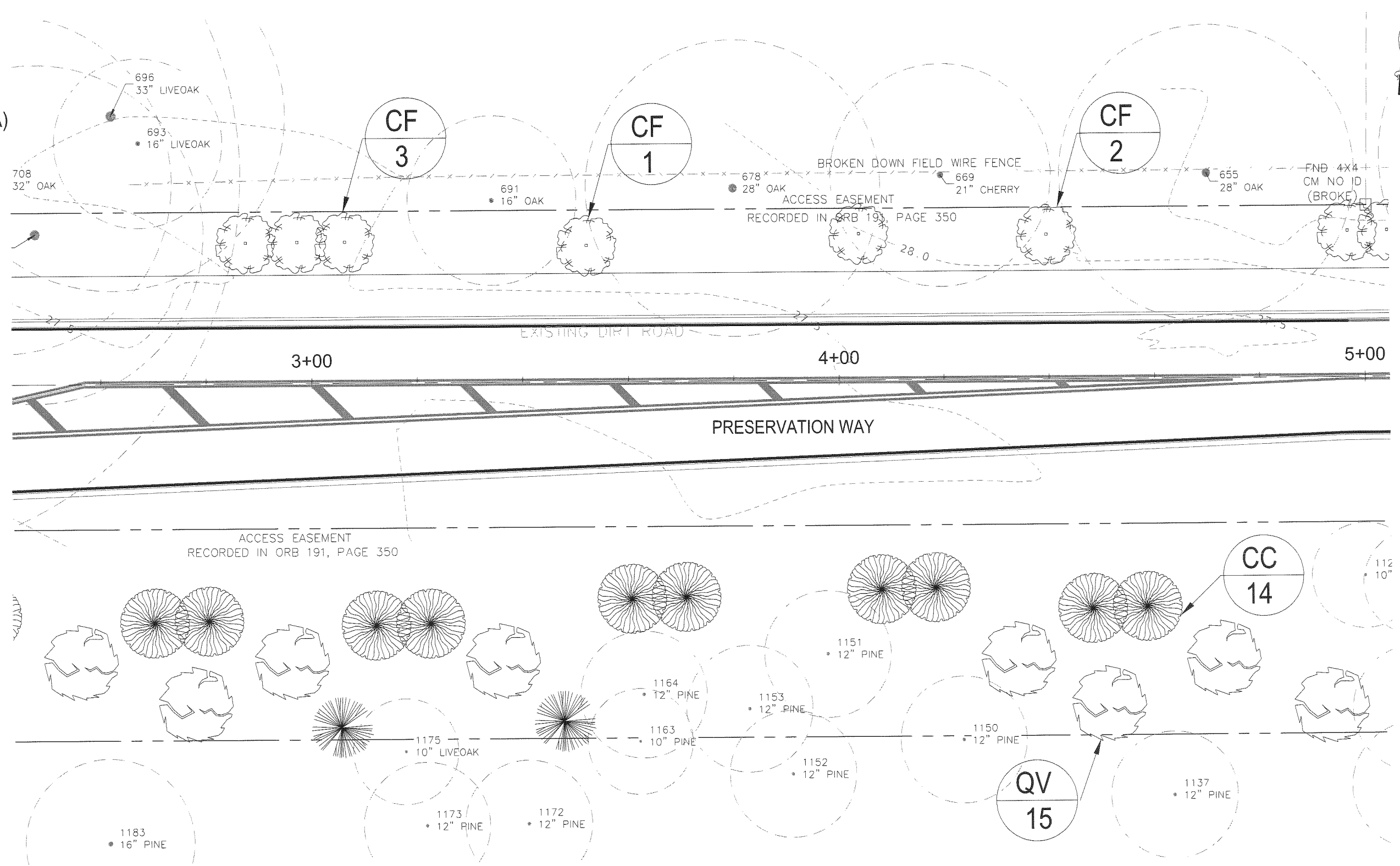
LANDSCAPING
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	
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LEGEND

-  LIVE OAK
-  DOGWOOD (CORNUS FLORIDA)
-  RED BUD
-  LONG LEAF PINE



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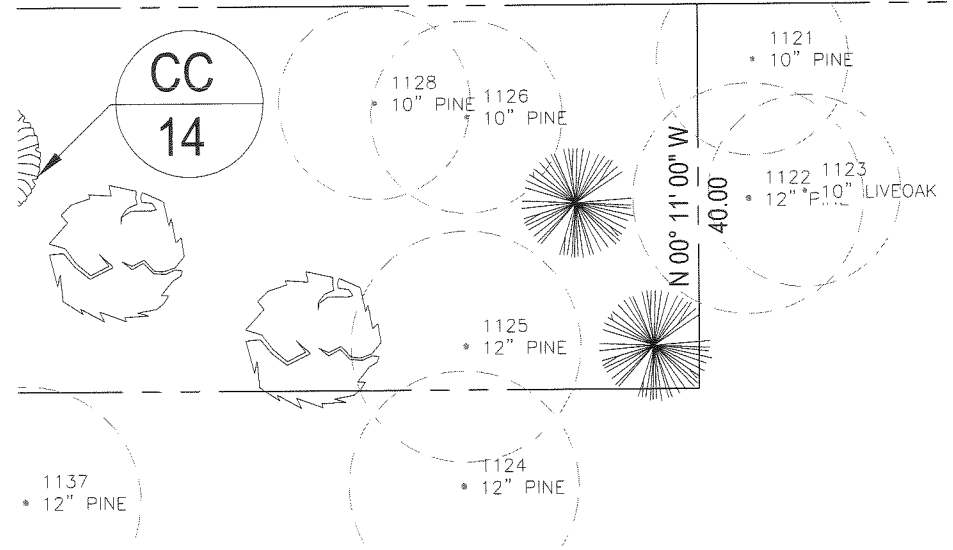
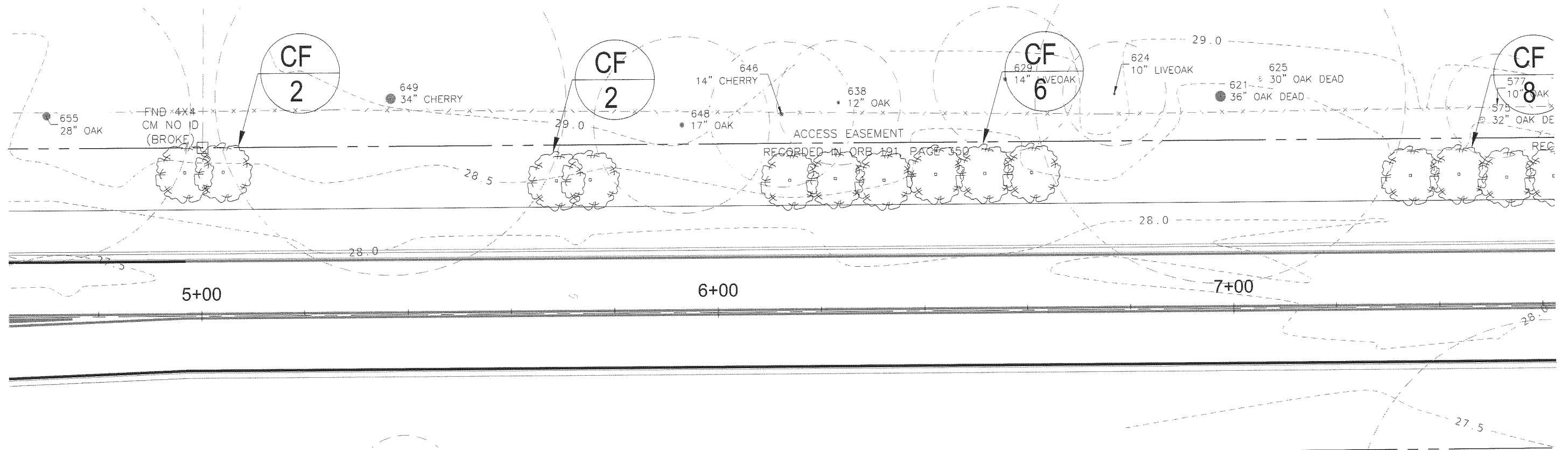

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LANDSCAPING
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	
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ACCESS EASEMENT
 RECORDED IN ORB 191, PAGE 350

LEGEND

-  LIVE OAK
-  DOGWOOD
(CORNUS FLORIDA)
-  RED BUD
-  LONG LEAF PINE

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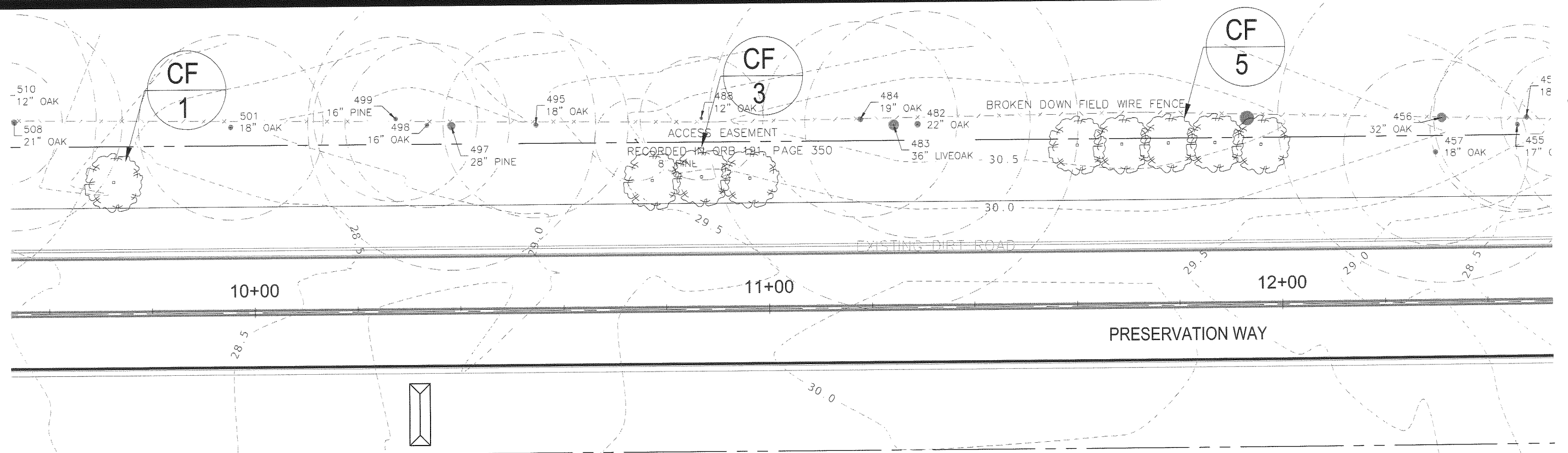
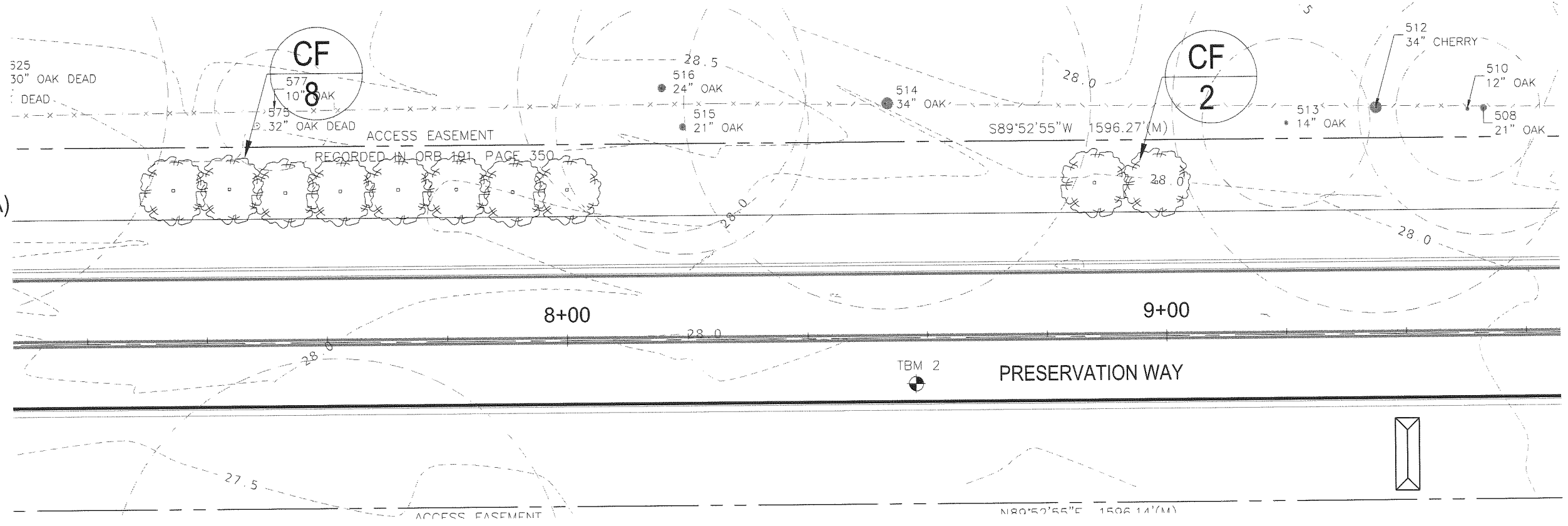
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 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	SHEET C57
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LEGEND

-  LIVE OAK
-  DOGWOOD (CORNUS FLORIDA)
-  RED BUD
-  LONG LEAF PINE



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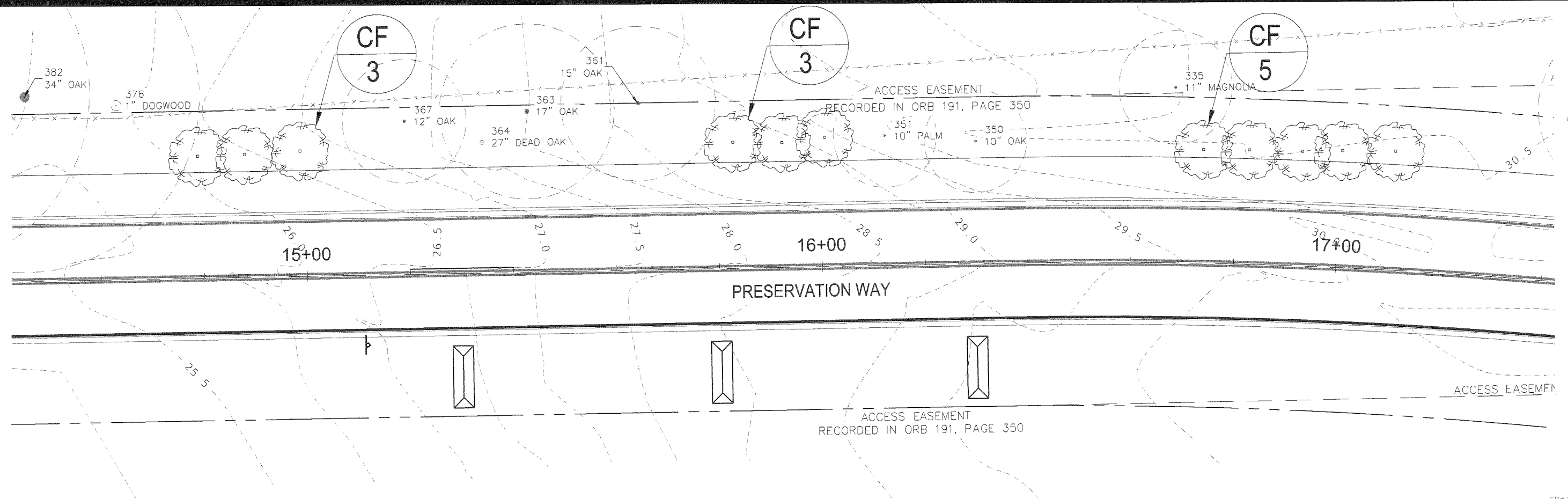
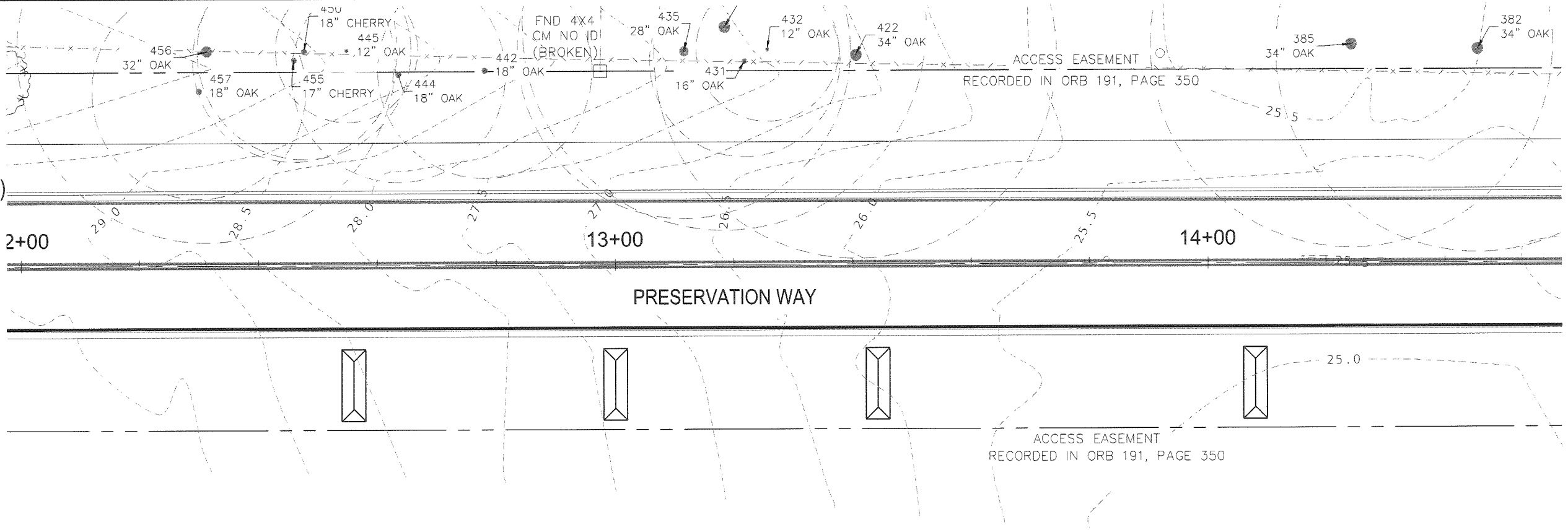
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 WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
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LEGEND

-  LIVE OAK
-  DOGWOOD (CORNUS FLORIDA)
-  RED BUD
-  LONG LEAF PINE



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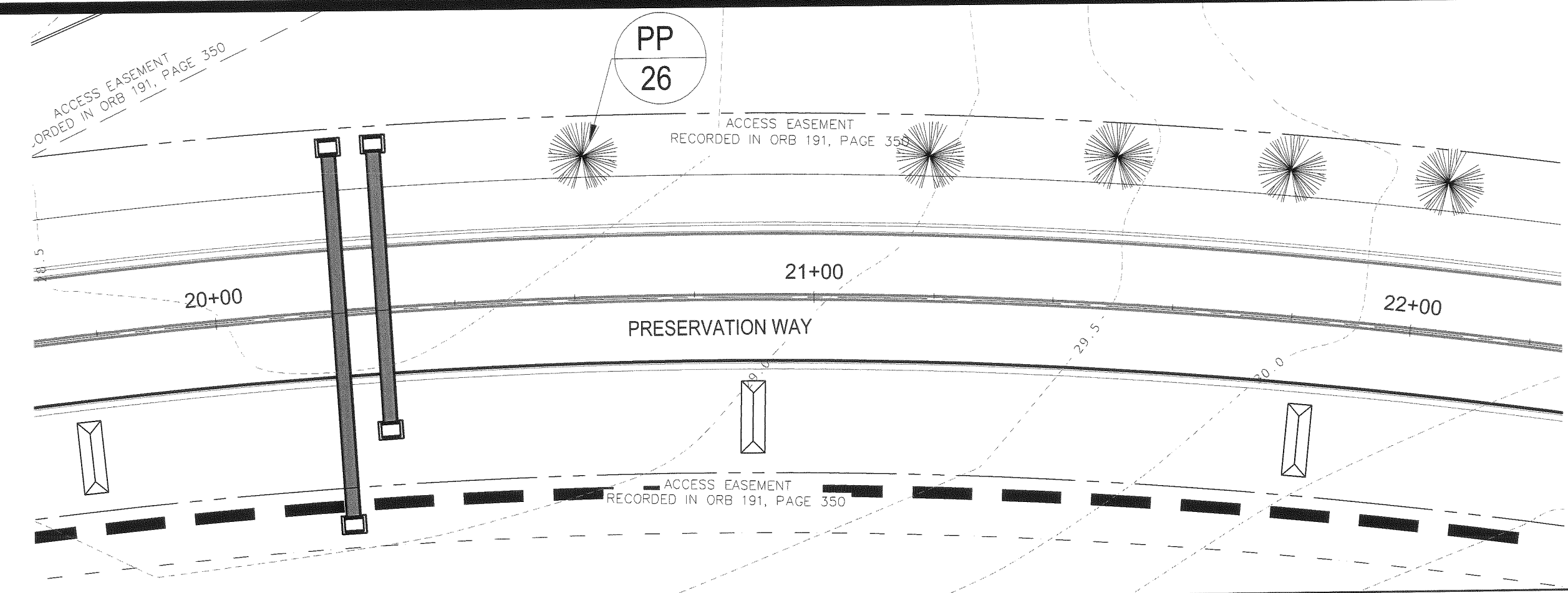
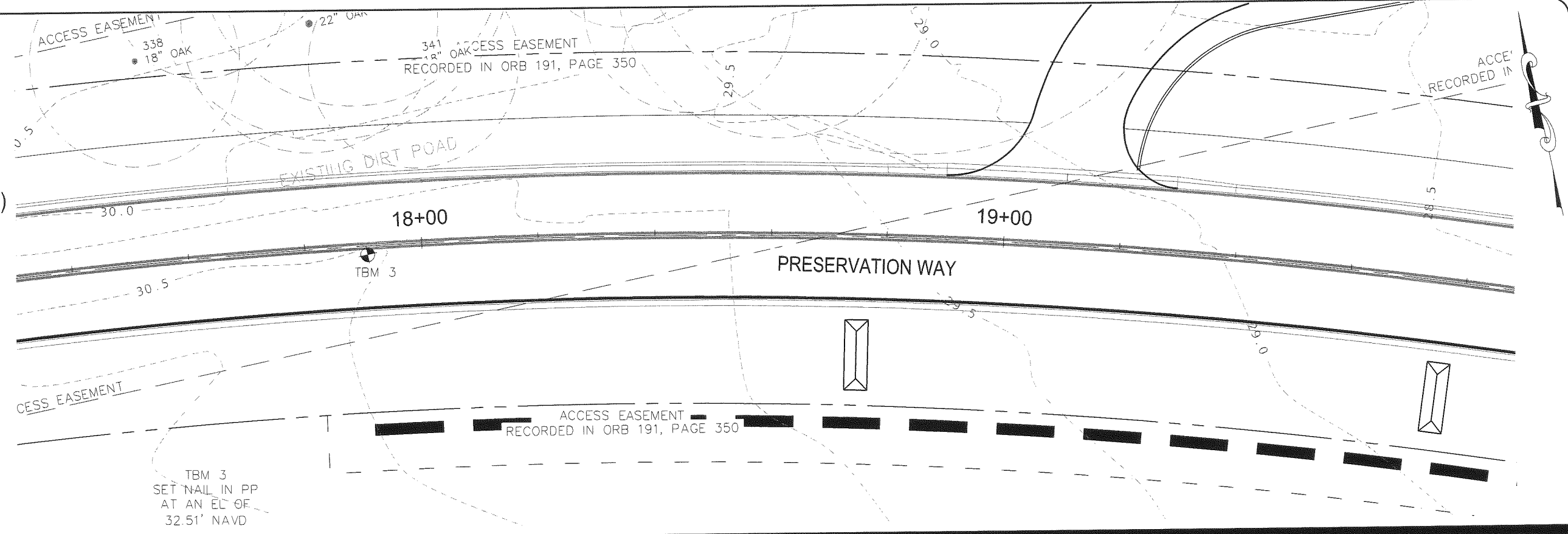
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WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	
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CHECKED: AWISE	

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LEGEND

-  LIVE OAK
-  DOGWOOD (CORNUS FLORIDA)
-  RED BUD
-  LONG LEAF PINE



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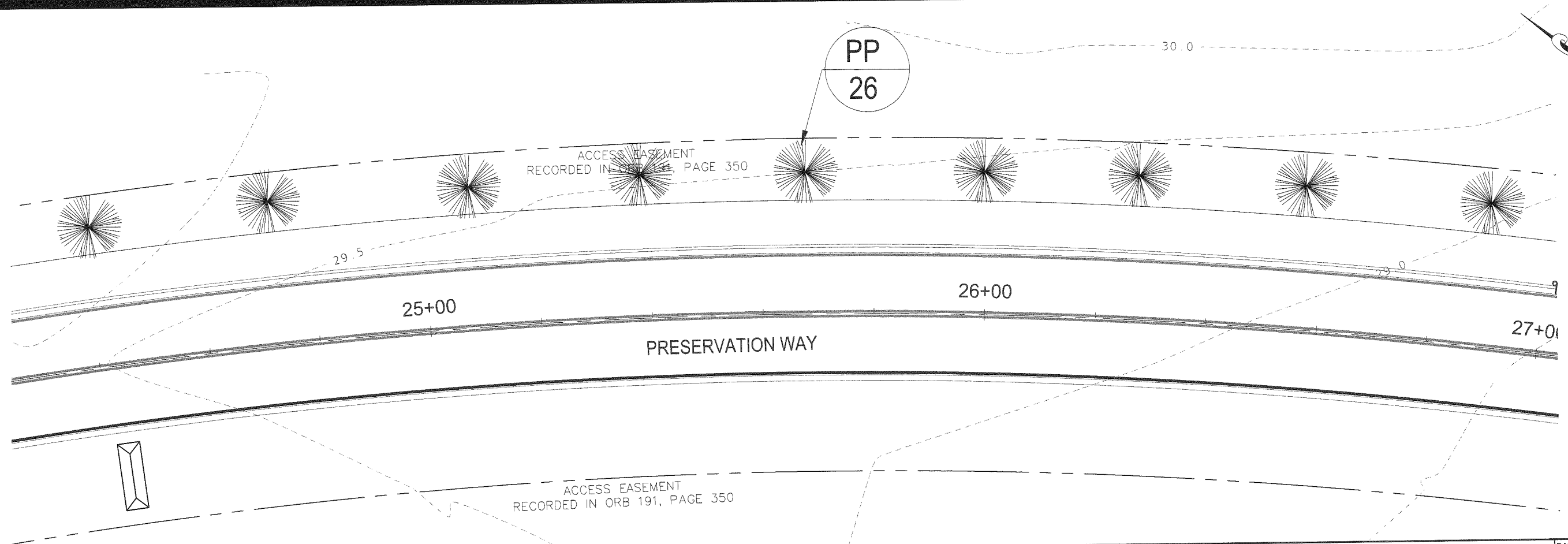
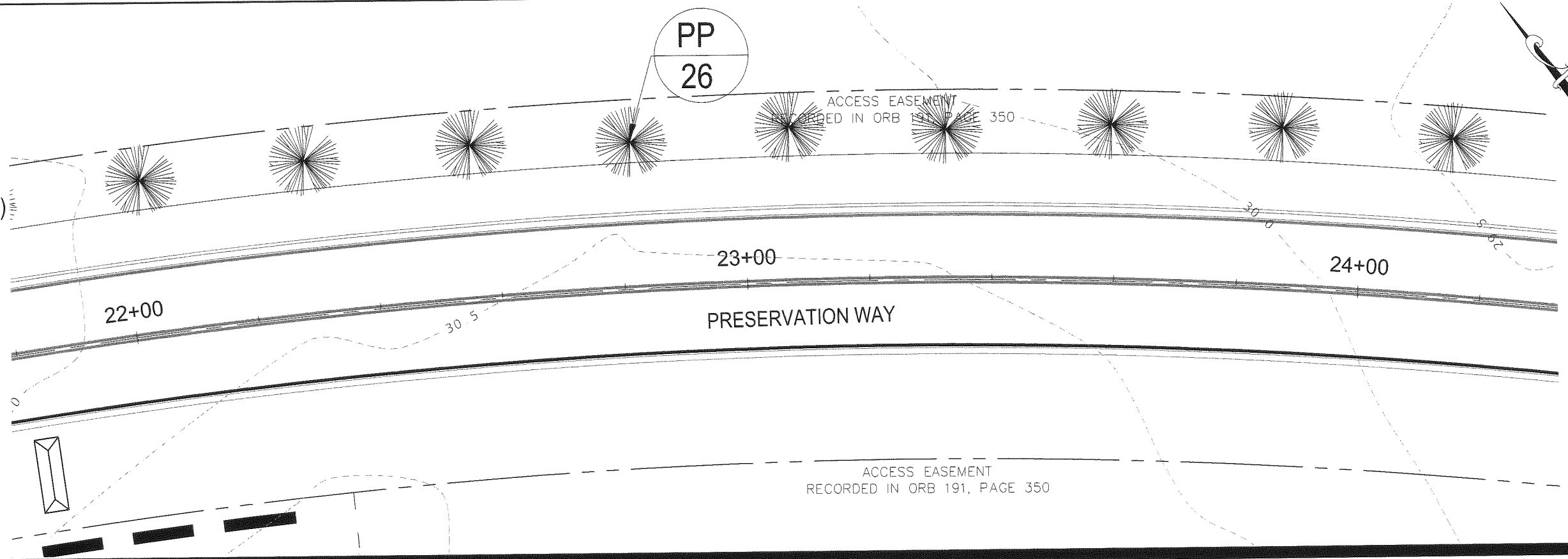
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DATE: April 2014	PROJECT NO. 662.014
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LEGEND

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(CORNUS FLORIDA)
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 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

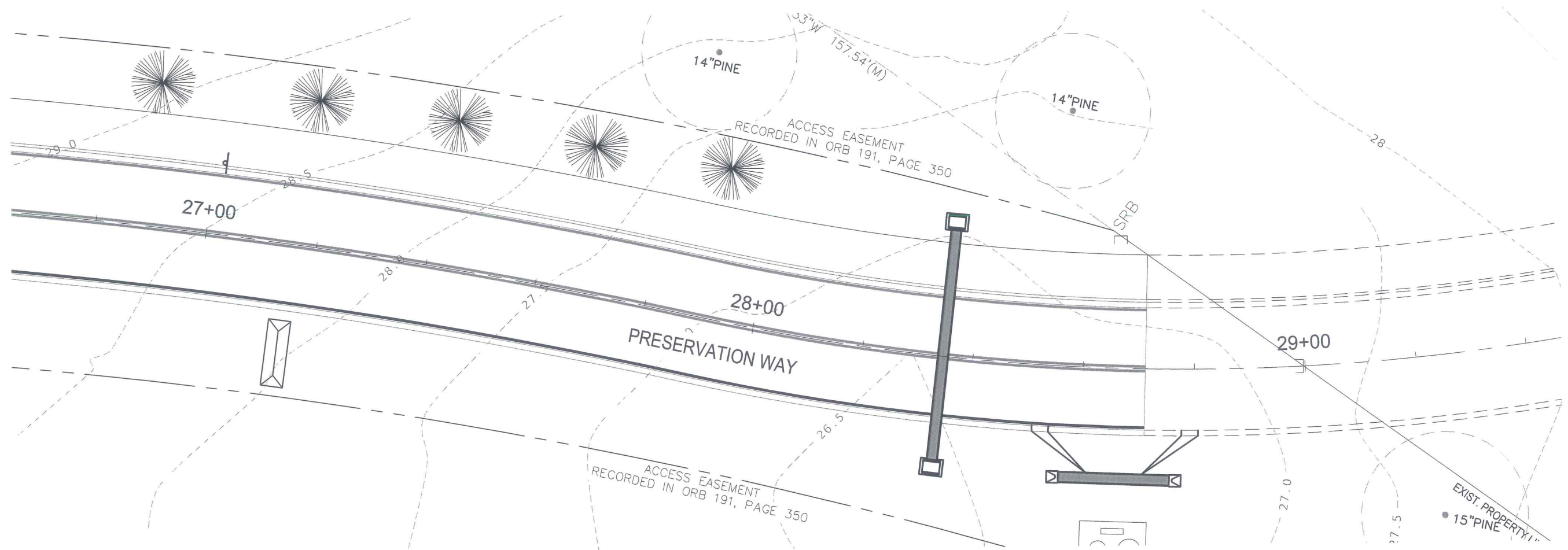
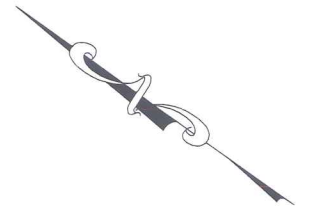
LANDSCAPING
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE: April 2014	PROJECT NO. 662.014
SCALE: 1"=40'	
DRAWN: BDAHLEN	SHEET C61
CHECKED: AWISE	

ES# 0006155

LEGEND

-  LIVE OAK
-  DOGWOOD
(CORNUS FLORIDA)
-  RED BUD
-  LONG LEAF PINE



April 25, 2014 (10:44:04 EST)
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PREBLE-RISH INC
 CONSULTING ENGINEERS AND SURVEYORS
 CIVIL • SURVEYING • SITE PLANNING
 36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

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PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
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DATE: April 2014	PROJECT NO. 662.014
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LANDSCAPE SPECIFICATIONS

MATERIALS

1. PLANTING SOIL BACKFILL MIX: TREE PITS, LANDSCAPE AREAS, AND SOD AREAS: MIX 50% EXISTING TOPSOIL TO 50% SOIL ADMIXTURE COMPRISED OF 1/3 PARTS DECOMPOSED PINE BARK OR PEAT MOSS, 1/3 PARTS COW MANURE, AND 1/3 PARTS IMPORTED TOPSOIL AND SOIL AMENDMENTS AS REQUIRED TO BRING THE pH TO BETWEEN 5.5 TO 6.5. ALTERNATE PLANTING SOIL BACKFILL MIXTURE: MIX 50% EXISTING TOPSOIL AND 50% FLORIDA MUCK AND SOIL AMENDMENT AS REQUIRED TO BRING pH TO BETWEEN 5.5 AND 6.5.
2. TOP SOIL SHALL BE DEFINED AS THE UPPER 4" TO 6" OF NATURALLY OCCURRING SOILS SUITABLE FOR AGRICULTURAL PRODUCTION, AND ARE WITHOUT DRAINAGE LIMITATIONS. IMPORT TOPSOIL FROM OFF-SITE SOURCES, IF REQUIRED. OBTAIN TOPSOIL FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. UNDER NO CIRCUMSTANCES SHOULD TOPSOIL BE OBTAINED FROM BOGS OR MARSHES.
3. PLANTING BED AND TREE MULCH: PINE STRAW CLEAN, BRIGHT, AND FREE OF WEEDS, STICKS, AND OTHER DEBRIS.
4. SOD: CENTIPEDE SOD
5. FERTILIZER: FOR PLANT BEDS USE 8-8-8 RATIO, AND FOR LAWN AREAS USE 16-4-8 RATIO, BOTH WITH AT LEAST 25% OF THE NITROGEN IN A WATER INSOLUBLE ORGANIC FORM.
6. ALL PLANTS MUST BE FLORIDA #1 OR BETTER AS DESCRIBED IN THE LATEST VERSION OF FLORIDA DEPARTMENT OF AGRICULTURE'S "GRADES & STANDARDS FOR NURSERY PLANTS" PARTS I AND II.

SUBMITTALS

1. SOD CERTIFICATE FROM GROWER.
2. SAMPLE OF PREPARED SOIL BACKFILL MIX (1/2 CU FOOT)
3. SOIL TEST REPORT FOR pH WITH RECOMMENDATIONS FOR pH ADJUSTMENT (ALL PLANTING AREAS AND SOIL MIXTURE)
4. WRITTEN PLANT GUARANTEE
5. SUBMIT MANUFACTURER DATA WITH INSTRUCTIONS FOR APPLICATIONS FOR ALL HERBICIDES.
6. PLANTING AREA / BED PREP HERBICIDES
 - A. FOR GRASS AND WEED KILL PRIOR TO TILLING, TOP DRESSING OR MULCHING: ROUNDUP BY MONSANTO
7. FUNGICIDE
 - A. FOR ROT AND WILT DISEASES: BROAD SPECTRUM SYSTEMIC FUNGICIDE THAT IS ALSO LABELED FOR THE CONTROL OF PHYTOPHTHORA BUD ROT.
 - B. FOR GRAPHIDIOA LEAF SPOT: MANEB, MANCOZEB OR BROAD SPECTRUM COPPER FUNGICIDE SUCH AS KOOBIE 101. COPPER (Cu) AND BORON (B) PROVIDE 100% OF N, K AND Mg IN CONTROLLED-RELEASE FORM (RESIN OR SULFUR COATED).
8. INSECTICIDE
 - A. SYSTEMIC INSECTICIDE SUCH AS LINDANE OR SEVIN.

EXECUTION

1. PERFORM ALL WORK AS SHOWN AND IN STRICT ACCORDANCE WITH SOUND HORTICULTURAL PRACTICE.
2. PREPARATION OF PLANTING SOIL MIXTURE:
 - A. DESCRIPTION: PROVIDE IN ALL BACKFILL AREAS AS INDICATED ON THE DETAILS AND DRAWINGS.
 - B. ADJUST SOIL AND BACKFILL pH TO 5.5 AND 6.5
 - C. ADJUST SOIL pH TO 5.5-6.5 AS RECOMMENDED BY THE SOIL TEST. USE ALUMINUM SULFATE OR IRON SULFATE TO LOWER THE pH AND USE HYDRATED LIME OR BASIC SLAG TO RAISE THE pH.
 - D. ADJUST SOIL pH IN AZALEA PLANTING BEDS IN THE ACIDITY RANGE OF 4.5 TO 5.5.
 - E. LANDSCAPE CONTRACTOR SHALL MAINTAIN RECORDS OF ALL SOIL ADJUSTMENTS FOR REVIEW BY CITY INSPECTOR.
3. SUPPLEMENT GROUND COVER BEDS WITH 2 INCHES OF COMPOSTED PINE BARK OR PEAT AND INCORPORATE TO A DEPTH OF 6 INCHES PRIOR TO PLANTING.
4. PLACE ALL PLANT MATERIALS WHERE SHOWN.
5. AFTER PLANTS ARE INSTALLED, BROADCAST 2 LBS. OF 8-8-8 FERTILIZER PER 100 SQUARE FEET OF PLANT BED. EACH TREE SHALL HAVE 1/2 LBS. OF 8-8-8 FERTILIZER APPLIED PER CALIPER INCH.
6. STAKE TREES AS NECESSARY TO MAINTAIN THEM IN A VERTICAL ALIGNMENT IN SANDY OR SLOPED CONDITIONS
7. APPLY PINE STRAW TO PROVIDE 2-1/2"-3" OF THICKNESS AFTER SETTLING IN SHRUBBERY AREAS AND OVER TREE PITS. (1-1/2" IN GROUND COVER AREAS)
8. ALL TREES IN SOD AREAS SHALL HAVE A 3-FOOT DIAMETER CIRCLE OF LANDSCAPE MULCH BENEATH, NO SOD.
9. ALL TREE PITS SHALL BE EXCAVATED TO A DEPTH NO LESS THAN 4" GREATER THAN THE BALL HEIGHT AND FILLED WITH THE SPECIFIED PLANTING BACKFILL MIX
10. APPLY HERBICIDES IN ACCORDANCE WITH MANUFACTURERS PRODUCT LABELS AND GUIDELINES.
11. ALL TRANSPLANTED TREES, INCLUDING PALMS SHALL BE SPRAYED WITH FUNGICIDE AND INSECTICIDE. ALL APPLICATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURERS PRODUCT LABELS AND GUIDELINES.
12. TREES AND SHRUBS SHALL NOT BE PLANTED CLOSER THAN THREE FEET FROM THE EDGE OF ANY IMPERVIOUS AREA.
13. NO REQUIRED LANDSCAPE AREA SHALL BE USED FOR ACCESSORY STRUCTURES, GARBAGE OR TRASH COLLECTION, PARKING OR ANY OTHER FUNCTIONAL USE CONTRARY TO THE INTENT AND PURPOSE OF CHAPTER 5 OF THE ENVIRONMENTAL MANAGEMENT ORDINANCE.

GRASSING

1. SOIL PREPARATION:
 - A. REMOVE STONES OVER 1-1/2" IN DIAMETER, STICKS, ROOTS, RUBBISH AND OTHER EXTRANEIOUS MATTER FROM ALL LAWN AREAS.
 - B. ADJUST SOIL pH AS RECOMMENDED BY THE SOIL TEST FOR GRASS SPECIFIED.
 - C. ROTOTILL SOIL 4" DEEP AND THEN RAKE LAWN AREAS TO A SMOOTH EVEN SURFACE. IN AREAS TO BE SODDED, ALLOW FOR SOD THICKNESS, PROVIDING A FINISH GRADE 2" BELOW ADJACENT PAVEMENT.
 - D. MOISTEN PREPARED LAWN AREAS BEFORE PLANTING IF DRY.
2. SODDING:
 - A. APPLY FERTILIZER OVER PREPARED SOIL AREA. APPLY MATERIAL AT A RATE OF 6 LBS. PER 1,000 SQUARE FEET. SECOND APPLICATION- AS SPECIFIED UNDER LAWN MAINTENANCE AND WARRANTY.
 - B. LAY SOD WITHIN 36 HOURS OF STRIPPING AT FARM.
 - C. LAY SOD IN STRAIGHT, (NOT CURVED) PARALLEL ROWS TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. WITHOUT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS. WORK TOPSOIL INTO MINOR CRACKS.
 - D. ROLL ENTIRE SODDED AREA WITH A 200 LB. ROLLER.
 - E. WATER SOD IMMEDIATELY AFTER ROLLING, THEREAFTER WATER SUFFICIENTLY TO KEEP SOIL MOIST TO A DEPTH OF 4" UNTIL ESTABLISHED.

CLEANUP

1. AT THE END OF EACH WORK DAY, REMOVE ALL DEBRIS RESULTING FROM THE WORK, CLEAN PAVED SURFACES, AND BARRICADE ALL HAZARDS.
2. RESTORE DAMAGED AREAS CAUSED BY THE WORK.

INITIAL INSPECTION AND ACCEPTANCE

1. THE WARRANTY SHALL BEGIN AFTER INITIAL LANDSCAPE INSPECTION AND ACCEPTANCE.
2. INSPECTION SHALL BE MADE BY THE OWNER OR OWNER'S REPRESENTATIVE WITHIN ONE WEEK OF WRITTEN NOTIFICATION FROM THE LANDSCAPE CONTRACTOR THAT INSTALLATION IS COMPLETE. PLANTS ARE SUBJECT TO INSPECTION AT ANY TIME.

PLANT GUARANTEE

1. ALL TREES, SHRUBS, AND GROUND COVERS SHALL BE GUARANTEED BY THE LANDSCAPE CONTRACTOR TO BE HEALTHY, AND IN FLOURISHING CONDITION OF ACTIVE GROWTH FOR A PERIOD OF (1) ONE YEAR FROM FINAL INSPECTION AND ACCEPTANCE. SOD SHALL BE GUARANTEED TO BE HEALTHY, FREE OF NOXIOUS WEEDS, DISEASE AND INSECT INFESTATION FOR A PERIOD OF SIXTY (60) DAYS FROM THE DATE OF FINAL ACCEPTANCE. (PLANT GUARANTEE DOES NOT APPLY TO ON-SITE TRANSPLANTED MATERIALS)

MAINTENANCE AND WARRANTY

1. BEGIN MAINTENANCE OF LANDSCAPE WORK IMMEDIATELY AFTER EACH AREA IS PLANTED AND CONTINUE FOR THE MAINTENANCE PERIOD SPECIFIED.
2. PLANT MAINTENANCE AND WARRANTY:
 - A. MAINTAIN PLANTS FOR A MINIMUM PERIOD OF 90 DAYS AFTER FINAL ACCEPTANCE.
 - B. AFTER INITIAL WATERING, WATER PLANTS AS CONDITIONS REQUIRE TO MAINTAIN HEALTHY GROWTH.
 - C. RESET SETTLED PLANTS TO PROPER GRADE AND POSITION, REMOVE DEAD MATERIAL, AND TIGHTEN OR REPAIR STAKES.
 - D. KEEP PLANT BEDS NEAT AND ATTRACTIVE DURING THE 90 DAY PERIOD: FREE OF WEEDS AND DEBRIS.
 - E. AT THE END OF THE MAINTENANCE PERIOD, RE-MULCH ANY TREES AND BED AREAS WHICH HAVE LESS THAN 2-1/2 INCHES OF MULCH.
3. LAWN MAINTENANCE AND WARRANTY:
 - A. MAINTAIN LAWNS FOR A MINIMUM PERIOD OF 30 DAYS AFTER FINAL ACCEPTANCE.
 - B. WATER LAWN SUFFICIENTLY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES UNTIL FINAL ACCEPTANCE.
 - C. MOW LAWNS WHEN SOD IS FIRMLY ROOTED AND TOP GROWTH EXCEEDS 3 INCHES. REPEAT MOWINGS TO MAINTAIN HEIGHT BETWEEN 2 1/2 AND 3 INCHES.
 - D. FERTILIZE LAWNS 6 WEEKS AFTER PLANTING WITH 16-4-8 AT A RATE OF 6 LBS. PER 1000 SQUARE FEET.

REPLACEMENTS AND CONDITIONS

1. REPLACEMENTS WILL BE MADE DURING THE NEXT PLANTING PERIOD FOR THE SPECIES UNLESS THE OWNER OR OWNER'S REPRESENTATIVE AGREES TO AN EARLIER DATE.
2. THERE WILL BE A ONE TIME REPLACEMENT POLICY.
3. A REPLACEMENT WILL BE OF THE SAME SIZE AS THE ORIGINAL WITH NO ADDITIONAL SOIL ADDITIVES TO BE USED.
4. AFTER INITIAL INSPECTION THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, REMOVAL, RELOCATION OR OTHER ACTIVITIES BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL.
5. PLANT LOSSES DUE TO ABNORMAL WEATHER CONDITIONS SUCH AS FLOODS, EXCESSIVE WIND DAMAGE, DROUGHT, SEVERE FREEZING OR ABNORMAL RAINS WILL NOT BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.

FINAL INSPECTION AND ACCEPTANCE

1. FINAL INSPECTION: THE LANDSCAPE CONTRACTOR WILL CONDUCT A FINAL INSPECTION WITH THE OWNER OR OWNER'S REPRESENTATIVE AT THE END OF EACH MAINTENANCE PERIOD SPECIFIED FOR LAWNS AND PLANT MATERIALS. NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE WITHIN 10 DAYS OF THE ANTICIPATED MEETING.
2. PLANT MATERIALS
 - A. REPLACE ANY MATERIAL NOT IN HEALTHY CONDITION OR WHICH FAILS TO MEET SPECIFICATIONS.
 - B. DECIDUOUS MATERIAL WILL BE GUARANTEED TO BREAK DORMANCY IF PLANTED IN DORMANT SEASON
3. LAWNS
 - A. AT THE TIME OF FINAL INSPECTION, SODDED LAWNS WILL BE ACCEPTABLE PROVIDED A HEALTHY, WELL-ROOTED, EVEN-COLORED, LAWN IS ESTABLISHED, FREE OF WEEDS, DISEASE AND INSECT INFESTATION. THERE SHALL BE NO OPEN JOINTS OR BARE AREAS.
4. AS-BUILT DRAWINGS: THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS OF BOTH LANDSCAPING AND IRRIGATION TO THE OWNER PRIOR TO FINAL ACCEPTANCE.

SPECIES SPECIFIC MAINTENANCE SPECIFICATIONS

FOLLOWING IS A LIST OF THE PROPOSED PLANT SPECIES AND THE COMMON DISEASES AND PARASITES THAT AFFECT EACH. FOLLOWING THE LIST ARE RECOMMENDED CONTROLS.

- LIVE OAK (*Quercus virginiana*)
 - MUSHROOM ROOT-ROT
 - SOUTHERN MAGNOLIA (*Magnolia grandiflora*)
 - MAGNOLIA SCALE
 - ALGAL LEAF-SPOT
 - FLOWERING DOGWOOD (*Cornus florida*)
 - BORERS
 - THRIPS
 - ROOT-ROT DISEASE
 - EASTERN RED CEDAR (*Juniperus virginiana*)
 - SPITTLE BUGS
 - SCALE
 - LEAF MINERS
 - REDBUD (*Cercis canadensis*)
 - BORERS
 - THRIPS
 - ROOT-ROT DISEASE
 - FRINGE TREE (*Chionanthus virginicus*)
 - BORERS
 - THRIPS
 - ROOT-ROT DISEASE
- RECOMMENDED CONTROLS:

LEAF MINERS
APPLY DIMETHOATE AS A SOIL DRENCH AROUND THE DRIPLENE OF THE TREE. THE APPLICATION RATE IS DETERMINED BY THE DIAMETER OF THE TREE. MEASURE THE TRUNK DIAMETER AT 4 FEET FROM THE GROUND. FOLLOW THE RATE'S RECOMMENDED ON LABEL.

THE INSECTICIDE IS APPLIED INTO AT LEAST 4-8 SHALLOW HOLES AROUND THE TREE AT THE DRIPLENE. THESE HOLES SHOULD NOT BE DEEPER THAN 6 INCHES. THE TOTAL AMOUNT OF UNDILUTED DIMETHOATE IS DIVIDED EVENLY AMONG THE HOLES WHICH ARE THEN FILLED WITH SOIL AND THE AREA WATERED WELL.

SPITTLE BUGS
APPLY DORMANT OIL SPRAY BEFORE FOLIAGE EMERGES IN THE SPRING TO PREVENT EGG-HATCHING, OR BY DUSTING LIBERALLY WITH DIATOMACEOUS EARTH AFTER INSECT PRESENCE IS NOTED. A SPRAY OF PYRETHRIN IS ALSO HIGHLY EFFECTIVE AGAINST IMMATURE AND ADULT STAGES. AS IS A DUSTING OF ROTENONE.

MUSHROOM ROOT-ROT
HORTICULTURISTS HAVE HAD SOME SUCCESS IN TREATING DISEASED PLANTS WITH A HIGH NITROGEN FERTILIZER, AMMONIUM SULFATE, TO FUMIGATE THE SOIL WITH AMMONIA. FIRST PRUNE THE PLANT BACK AND BUILD A RIDGE OF SOIL OUT FROM IT IN LINE WITH THE TOP OF THE PLANT. WORK ONE POUND OF AMMONIUM SULFATE INTO THE SOIL FOR EACH 100 SQUARE FEET OF SURFACE INSIDE THE RIDGE. FILL THE AREA WITHIN THE RIDGE WITH WATER TO A DEPTH OF ABOUT 4 INCHES. REPEAT THE TREATMENT AND WATERING IN 5 TO 10 DAYS BUT DON'T APPLY MORE THAN TWO TREATMENTS IN THE SAME SEASON. KEEP THE PLANT WELL WATERED TO AVOID DROUGHT STRESS.

MAGNOLIA SCALE
DORMANT OIL IS EFFECTIVE AGAINST EXPOSED SCALES IN EARLY SPRING (END-MARCH/EARLY-APRIL) BUT EARLY FLOWERING SOMETIMES PRECLUDES SPRAYING AT THAT TIME, AS FLOWERS ARE KILLED OFF BY THE DORMANT OIL. THERE IS ONLY ONE OTHER "WINDOW" OF TIME WHEN SPRAYING IS EFFECTIVE AND THAT IS LATE AUGUST/EARLY SEPTEMBER WHEN A SUITABLE INSECTICIDE IS EFFECTIVE, ONCE AGAIN ONLY AGAINST EXPOSED SCALES. IT HAS BEEN OBSERVED THAT 2 FALL SPRAYS, @10-14 DAYS APART, HAVE A SUBSTANTIALLY BETTER EFFECT THAN JUST ONE.

ALGAL LEAF-SPOT
HAND REMOVE SPOTTED LEAVES ON LIGHTLY DISEASED PLANTS. COLLECT AND DISCARD OR DESTROY ALL FALLEN LEAVES. YOU CAN DISCARD LEAVES WITH TRASH, BURN THEM, OR ADD THEM TO A HOT, PROPERLY MAINTAINED COMPOST PILE.

PRUNE OVERHANGING TREES AROUND DISEASED PLANTS TO HELP LOWER HUMIDITY LEVELS AND SPEED THE DRYING OF LEAF SURFACES.
IMPROVE SOIL DRAINAGE IF THIS IS A PROBLEM.

APPLY BORDEAUX MIXTURE (8 TABLESPOONS PER GALLON) AS PROTECTIVE SPRAYS ON HEAVILY SPOTTED CAMELLIA AND SOUTHERN MAGNOLIA. ALWAYS FOLLOW THE DIRECTIONS ON THE LABEL. REPEAT SPRAY TREATMENTS EVERY 2 WEEKS IF COOL WET WEATHER PERSISTS.

BORERS
INSECTICIDE SPRAYS OF ENDOSULFAN OR ANY OTHER APPROPRIATELY LABELED PRODUCT, APPLIED IN AUGUST, WILL PROVIDE THE MOST EFFECTIVE CONTROL. THESE TRUNK SPRAYS SHOULD BE DIRECTED FROM THE LOWER SCAFFOLD BRANCHES DOWN TO THE SOIL LINE. SOAK THE BARK TO RUNOFF, SO THAT A PUDDLE OF SOLUTION CAN BE SEEN AT THE BASE OF THE TREE.

SCALE
DORMANT OIL IS EFFECTIVE AGAINST EXPOSED SCALES IN EARLY SPRING (END-MARCH/EARLY-APRIL) BUT EARLY FLOWERING SOMETIMES PRECLUDES SPRAYING AT THAT TIME, AS FLOWERS ARE KILLED OFF BY THE DORMANT OIL. THERE IS ONLY ONE OTHER "WINDOW" OF TIME WHEN SPRAYING IS EFFECTIVE AND THAT IS LATE AUGUST/EARLY SEPTEMBER WHEN A SUITABLE INSECTICIDE IS EFFECTIVE, ONCE AGAIN ONLY AGAINST EXPOSED SCALES.
NOTE THAT 2 FALL SPRAYS, @10-14 DAYS APART, HAVE A SUBSTANTIALLY BETTER EFFECT THAN JUST ONE.

THRIPS
INSECTICIDAL SPRAYS CONTAINING BIFENTHRIN OR IMIDACLOPRID + METHIOCARB OR IMIDACLOPRID + SUNFLOWER OIL, CAN BE USED TO CONTROL THRIPS. CHECK THE MANUFACTURER'S INSTRUCTIONS FOR USE OF A PRODUCT THAT IS APPROVED FOR USE ON THAT PARTICULAR PLANT SPECIES.

ROOT-ROT DISEASE
HORTICULTURISTS HAVE HAD SOME SUCCESS IN TREATING DISEASED PLANTS WITH A HIGH NITROGEN FERTILIZER, AMMONIUM SULFATE, TO FUMIGATE THE SOIL WITH AMMONIA. FIRST PRUNE THE PLANT BACK AND BUILD A RIDGE OF SOIL OUT FROM IT IN LINE WITH THE TOP OF THE PLANT. WORK ONE POUND OF AMMONIUM SULFATE INTO THE SOIL FOR EACH 100 SQUARE FEET OF SURFACE INSIDE THE RIDGE. FILL THE AREA WITHIN THE RIDGE WITH WATER TO A DEPTH OF ABOUT 4 INCHES. REPEAT THE TREATMENT AND WATERING IN 5 TO 10 DAYS BUT DON'T APPLY MORE THAN TWO TREATMENTS IN THE SAME SEASON. KEEP THE PLANT WELL WATERED TO AVOID DROUGHT STRESS.

NOTE
USE CHEMICALS ONLY ACCORDING TO THE DIRECTIONS ON THE LABEL. FOLLOW ALL DIRECTIONS, PRECAUTIONS, AND RESTRICTIONS THAT ARE LISTED. TRADE NAMES ARE USED ONLY TO GIVE SPECIFIC INFORMATION. THE CITY OR PREBLE-RISH DOES NOT ENDORSE OR GUARANTEE ANY PRODUCT AND DOES NOT RECOMMEND ONE PRODUCT OVER OF ANOTHER THAT MIGHT BE SIMILAR.

URBAN FOREST MANAGEMENT PLAN

IT IS THE INTENTION OF THIS MANAGEMENT PLAN TO PROVIDE FOR THE HEALTH, SAFETY AND WELFARE OF THE PUBLIC AND SURROUNDING COMMUNITY. PROTECTED URBAN FOREST AREAS ARE SHOWN ON THE ENVIRONMENTAL PLAN. BEST MANAGEMENT PRACTICES ARE REQUIRED AND ARE DETAILED IN THE FOLLOWING NOTES AND WILL BE PERFORMED BY A CERTIFIED ARBORIST. THE FOLLOWING BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED IN THEIR ENTIRETY TO PROVIDE FOR A PEDESTRIAN ACCESSIBLE AND SAFE URBAN FOREST AREA AND ALLOW FOR ADDED VALUE, INCREASED BEAUTY, HEALTH AND SAFETY OF THE TREES.

1. NO HEAVY EQUIPMENT SHALL BE USED TO PERFORM THE FOLLOWING ACTIVITIES WITHIN THE URBAN FOREST AREAS. ALL ACTIVITIES SHALL BE PERFORMED USING EQUIPMENT THAT WILL NOT COMPACT THE EARTH OR IMPACT THE ROOT SYSTEMS OF THE EXISTING PROTECTED TREES WITHIN THE URBAN FOREST AREAS.
2. CLEAN THE CROWN OF ONE INCH AND LARGER DEAD AND HAZARDOUS BRANCHES; REMOVE NO GREEN TISSUE OR LIVE LIMBS UNLESS DECAYED OR NECESSARY FOR EQUIPMENT ACCESS. REMOVE ALL DEAD AND DISEASED LIMBS THAT HARBOR DECAY AND DISEASED PATHOGENS AS WELL AS HEAVY MASSES OF MOSS AND VINES THAT COMPETE WITH CROWN FOLIAGE WITH CARE NOT TO BREAK OR DAMAGE EXISTING BRANCHES. WHEN NECESSARY TO RAISE LIMBS IN ORDER TO ACCOMMODATE PEDESTRIAN TRAFFIC, VISIBILITY AND SAFETY, ONLY A CERTIFIED ARBORIST SHALL BE ALLOWED TO COLLAR CUT BRANCHES OVER EIGHT INCHES.
3. HAND CLEAR ALL COMPETING UNDERSTORY SAPLINGS, VINES, WEEDS AND OTHER VEGETATION TO REDUCE COMPETITION FOR SOIL MOISTURE AND NUTRIENTS AND ALLOW FOR CLEAR VISIBILITY. CLEAN UP AND HAUL AWAY ALL DEBRIS.
4. MONITOR SITE SOIL CONDITIONS, AND WATER THE TREES TO PROVIDE THE EQUIVALENT OF 1 INCH PER WEEK DURING PERIODS OF HOT DRY WEATHER - ADJUST FOR LOCAL WEATHER CONDITIONS THROUGHOUT THE CONTRACT TIME. METHOD OF WATERING SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE OWNER.
5. AERATE AND FERTILIZE THE CPZ OF ALL TREES THAT APPEAR TO BE IN DECLINE.
 - A. AERATE BY USING A 1 3/4" TO 2" SOIL AUGER TO DRILL HOLES TO A DEPTH OF TWELVE INCHES IN DIAMETER WHOLESALE BE SPACED ON APPROXIMATELY THREE FEET CENTERS STARTING THREE FEET FROM THE COLLAR AND STOPPING THREE TO FIVE FEET PAST THE CANOPY DRIP LINE OF THE TREE TO BE MITIGATED.
 - B. CREATE A MIXTURE OF HIGH NITROGEN SLOW RELEASE FERTILIZER (3-1-1 N.P.K. RATIO) MIX AND BACKFILL INTO AERATION HOLES. PERFORM SOIL TESTING IN THE AREA OF THE TREES THAT ARE TO BE MITIGATED TO DETERMINE THE CORRECT MIX OF SOIL SUPPLEMENTS TO BE APPLIED AS PRESCRIBED BY ANALYSIS.
6. MULCHING SHALL BE USED THROUGHOUT THE URBAN FOREST AREA WITHIN THE CRITICAL PROTECTION ZONE OF PROTECTED TREES TO THE GREATEST EXTENT POSSIBLE. THIS PREVENTS SOIL COMPACTION BY ACTING AS A SHOCK ABSORBER FOR PEDESTRIAN TRAFFIC AND LIGHT EQUIPMENT USE. IT ALSO HOLDS SOIL ON SITE AS A TEMPORARY GROUND COVER REDUCING EROSION AND EVAPORATION AND ADDS ORGANIC MATTER TO THE SOIL. MULCH TO ACHIEVE A 3 INCH LAYER OF PINE NEEDLE THROUGHOUT THE EXISTING GRADE WITHIN THE CPZ. KEEP MULCH AWAY FROM THE TRUNK OF TREES.
7. PEST CONTROL SHALL BE PERFORMED USING A GENERAL INSECTICIDE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED APPLICATIONS.
8. SUPPLEMENTAL PLANTINGS ARE REQUIRED IN SPECIFIC URBAN FOREST AREAS TO MEET THE CITY LAND USE BUFFER REQUIREMENTS. SUPPLEMENTAL PLANTINGS SHALL BE INSTALLED TO MINIMIZE ANY IMPACTS TO EXISTING ROOT SYSTEMS OF PROTECTED TREES WITHIN THESE URBAN FOREST AREAS. THE USE OF HAND TOOLS SHALL BE REQUIRED TO MINIMIZE ROOT SYSTEM IMPACTS.
9. ROOT PRUNING SHALL OCCUR WHERE ANY SUPPLEMENTAL PLANTING ACTIVITIES MAY DAMAGE THE ROOTS OF A PROTECTED TREE WITHIN THE URBAN FOREST AREA. WHEN ANY SUCH ACTIVITIES ARE REQUIRED WITHIN THE CPZ OF PROTECTED TREES, ROOT PRUNING SHALL BE PERFORMED AS NOTED BELOW.
 - A. ROOTS SHALL BE CUT CLEANLY JUST BEHIND WHERE CUTS ARE REQUIRED, AND TO THE DEPTHS REQUIRED DUE TO PROPOSED ACTIVITY, USING SHARP BLADED EQUIPMENT WHICH WILL NOT TEAR OUT THE ROOTS.
 - B. USE SHARP HAND HELD PRUNERS TO PROVIDE A CLEAN CUT FOR ROOTS 3/4" DIAMETER AND UP TO 2". USE SHARP BLADED SAW FOR ROOTS LARGER THAN 2 INCHES.
 - C. (OPTIONAL) SPRAY ALL CUT ROOTS WITH BROAD SPECTRUM FUNGICIDE.
 - D. COVER THE EXPOSED AND CUT ROOT AREA WITH BURLAP AND KEEP IN A WETTED CONDITION TO RETARD SOIL AND ROOT DEHYDRATION UNTIL BACKFILLING WITH TOPSOIL CAN BE ACHIEVED. SUPPLY AND MONITOR WATER AS NEEDED.
10. THE FOLLOWING IS A SUGGESTED PROCEDURE FOR THE ERADICATION OF INVASIVE AND NOXIOUS VEGETATION. THIS PROCESS IS RECOMMENDED AS THE LEAST INTRUSIVE WHEN ADJACENT TREES, STRUCTURES AND THE SURROUNDING ENVIRONMENT ARE OF CONCERN. THE EFFECTIVENESS OF THIS PROCESS IS DEPENDENT UPON SEVERAL FACTORS INCLUDING WEATHER AND CONTINUATION OF RECOMMENDED PROCEDURES.
 - A. THIS PROCEDURE IS BASED PRIMARILY ON A CONTINUAL COMBINATION OF MOWING AND SPRAYING WITHIN THE TARGET SITE. THIS PROCESS SHALL NEED TO BE CONTINUED ON AN INDEFINITE SCHEDULE UNTIL THE INVASIVE AND NOXIOUS VEGETATION IS TOTALLY ERADICATED. THIS MAY TAKE A PERIOD OF THREE TO FIVE YEARS. IF NEIGHBORING PROPERTIES ARE ALSO CONTAMINATED WITH INVASIVE AND NOXIOUS VEGETATION, IT SHALL BE NECESSARY TO REVISIT THE TARGET SITE, WITH THIS PROCESS, ON A YEARLY BASIS AFTER THE INITIAL INVASIVE AND NOXIOUS VEGETATION HAS BEEN ERADICATED.
 - B. SINCE MOST HERBICIDES ARE NOT EFFECTIVE IN HOT OR DRY CONDITIONS, THE FIRST SPRAYING SHOULD TAKE PLACE IN LATE SPRING/EARLY SUMMER AND AGAIN IN THE FALL WHEN ENVIRONMENTAL CONDITIONS ARE FAVORABLE. THIS SHALL BE DONE IN COMBINATION WITH A MONTHLY MOWING SCHEDULE BETWEEN THE TWO SPRAYING APPLICATIONS.
 - C. THE HERBICIDE OF CHOICE IS ROUNDUP FOR THIS PARTICULAR PROCEDURE, WITH THE APPLICATION RATE BASED UPON THE RECOMMENDATIONS OF THE MANUFACTURER AS STATED ON THE LABEL. SINCE ROUNDUP IS NOT AS STRONG AS THE OTHER COMMERCIAL HERBICIDES, IT IS HARD TO PREDICT EXACTLY HOW LONG IT WILL TAKE TO ERADICATE THE INVASIVE AND NOXIOUS VEGETATION ENTIRELY.
 - D. THE ROUNDUP MIXTURE SHALL BE APPLIED BY A STATE LICENSED APPLICATOR. THE FIRST SEVERAL APPLICATIONS SHALL BE SPREAD BY BROADCAST SPRAYING. AFTER SOME MEASURE OF CONTROL IS OBTAINED, THE SPRAYING CAN BE REDUCED TO SPOT SPRAYING FOR INDIVIDUAL SPROUTS.
 - E. THE RECOMMENDED PROCEDURE AS STATED ABOVE DOES NOT INTEND TO PROMOTE ANY SPECIFIC PRODUCT OR VALIDATE THIS OR ANY OTHER PROCEDURE AS A GUARANTEE TO ERADICATE THE INVASIVE AND NOXIOUS VEGETATION. EACH SITE SITUATION SHOULD BE REVIEWED SEPARATELY ON ORDER TO ASCERTAIN THE BEST PROCEDURE AND HERBICIDE FOR THE PARTICULAR SITUATION AND SITE. CONSULTANTS AND RESEARCHERS WITHIN STATE WIDE ORGANIZATIONS AND INSTITUTIONS SHOULD BE CONTACTED FOR MORE DETAILED INFORMATION.

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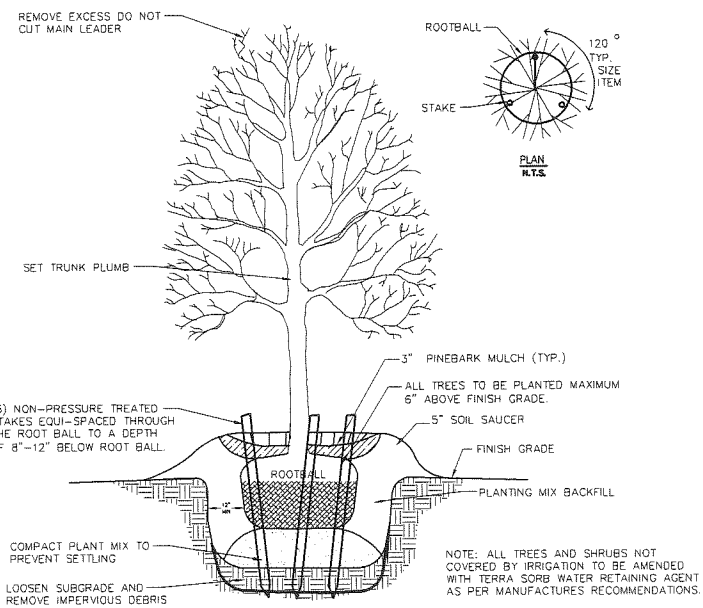
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36 JASPER THOMAS ROAD, CRAWFORDVILLE, FL 32327

LANDSCAPE GENERAL NOTES
PRESERVATION WAY
WAKULLA ENVIRONMENTAL INSTITUTE
WAKULLA COUNTY, FLORIDA

DATE:	April 2014	PROJECT NO.	662.014
SCALE:	N.T.S.	SHEET	C63
DRAWN:	BD AHLÉN	CHECKED:	AWISE

EB# 0066195

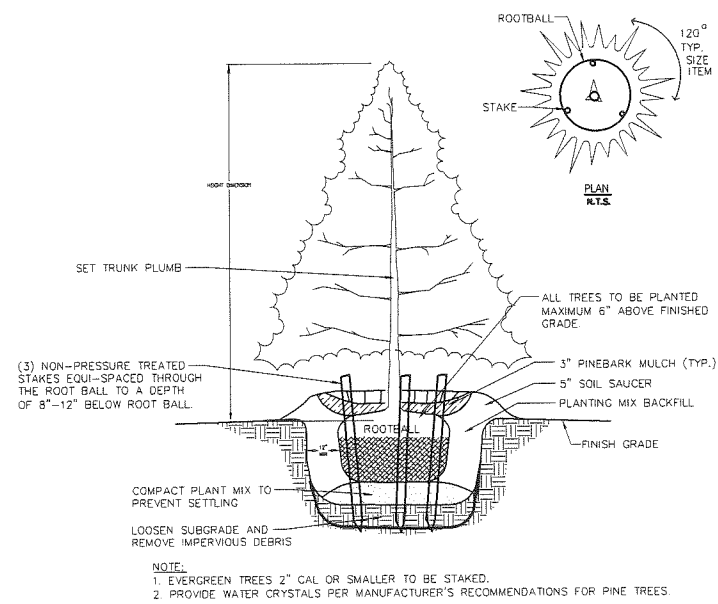


NOTE: TREE STAKING REQUIRED ONLY ON SLOPES OR IN SANDY SOIL.
DETAIL TYPICAL TREE PLANTING AND STAKING
 N.T.S.

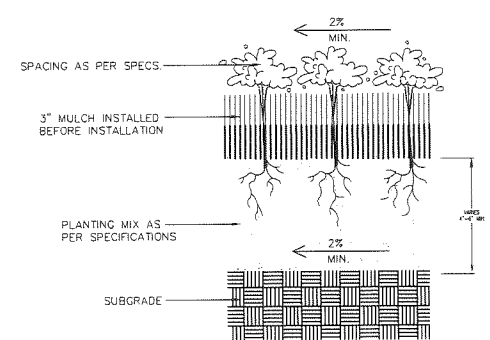
TREE TABULATION TABLE.			
Total No. of Tree inches required=	4.48 Acres x	100 in/ac.	= 448.00 in.
Trees Inches Remaining=			= 131.00 In
Total Tree inches needed to meet code	448.00 in	- 131.00 in.	= 317.00 in.
Total Trees Required=	448.00 in. /	3 in. Tree =	149.00 Planted Trees
Additional Trees needed	317.00 /	3 in. Tree =	106.00 Planted Trees
Trees Provided			112.00 Trees

PLANTING SCHEDULE				
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/REMARKS
TREES				
QV	14	QUERCUS VIRGINIANA	LIVE OAK	8' HT. X 4-5' SPR., 3" CAL., 25 GAL
QF	50	CORNUS	DOG WOOD	8' HT. X 4-5' SPR., 3" CAL., 25 GAL
PP	35	PINUS PALUSTRIS	LONGLEAF PINE	8' HT. X 4-5' SPR., 2" CAL., 25 GAL
CC	13	CERCIS CANADENSIS	RED BUD	8' HT. X 4-5' SPR., 2" CAL., 25 GAL
	112			

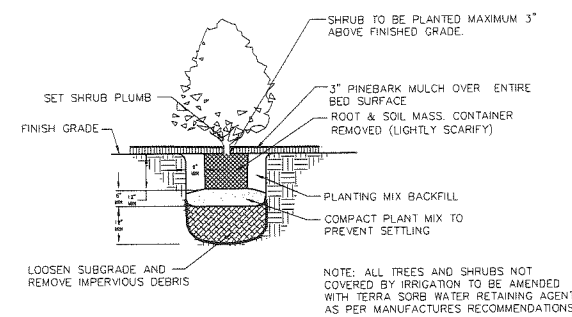
*SOD ALL DISTURBED AREAS UNLESS INDICATED TO CONTAIN SEED & MULCH, SHRUBS, GROUND COVER, MULCH OR OTHER MATERIAL.
 NOTE: TREES AND SHRUBS LANDSCAPE ISLAND TO BE PLANTED AT LEAST 3 FEET FROM FACE OF CURB.



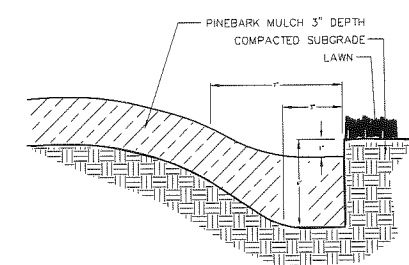
DETAIL EVERGREEN TREE PLANTING
 N.T.S.



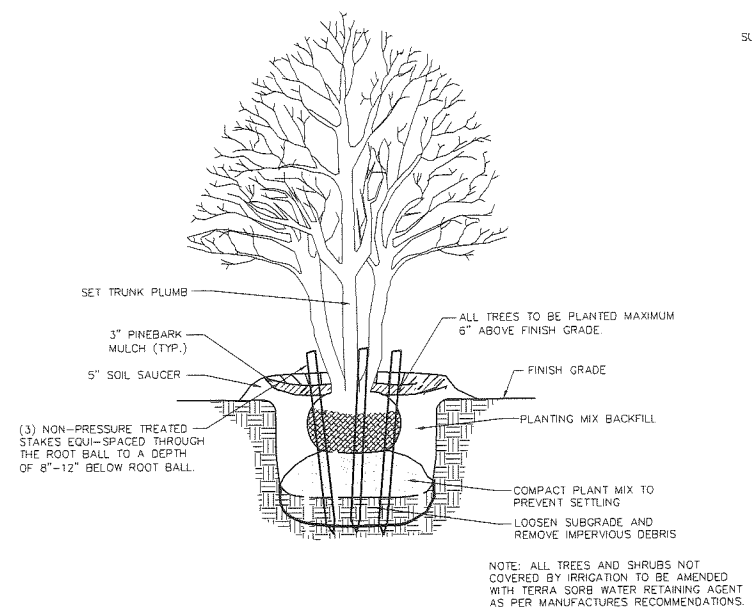
GROUND COVER DETAIL
 N.T.S.



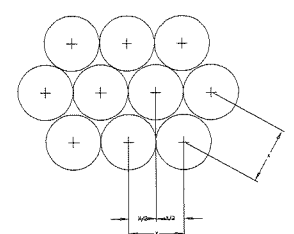
DETAIL TYPICAL CONTAINERIZED SHRUB PLANTING
 N.T.S.



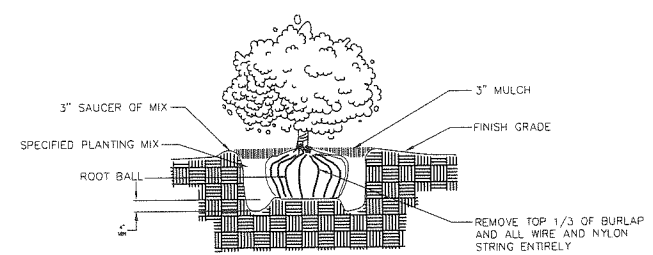
NOTE: TRENCH EDGE TO BE LOCATED BETWEEN PLANTING BEDS, AROUND TREE PITS AND ALL LAWN AREAS.
TRENCH EDGER DETAIL FOR ALL BEDS
 N.T.S.



NOTE: TREE STAKING REQUIRED ONLY ON SLOPES OR IN SANDY SOIL.
DETAIL MULTI-TRUNKED TREE PLANTING
 N.T.S.



NOTE: 1. SEE PLANTING PLANS FOR SHRUB & GROUND COVER BED AREAS.
 2. ROWS SHALL BE STRAIGHT & PARALLEL.
 3. SPACING SHOWN ON PLANT SCHEDULE (X).
DETAIL TYPICAL STAGGERED ROW SPACING
 N.T.S.



B&B SHRUB DETAIL
 N.T.S.

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DATE: April 2014	PROJECT NO. 662.014
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