CENTRAL AND SOUTHERN FLORIDA PROJECT
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA

8.5 SQUARE MILE AREA

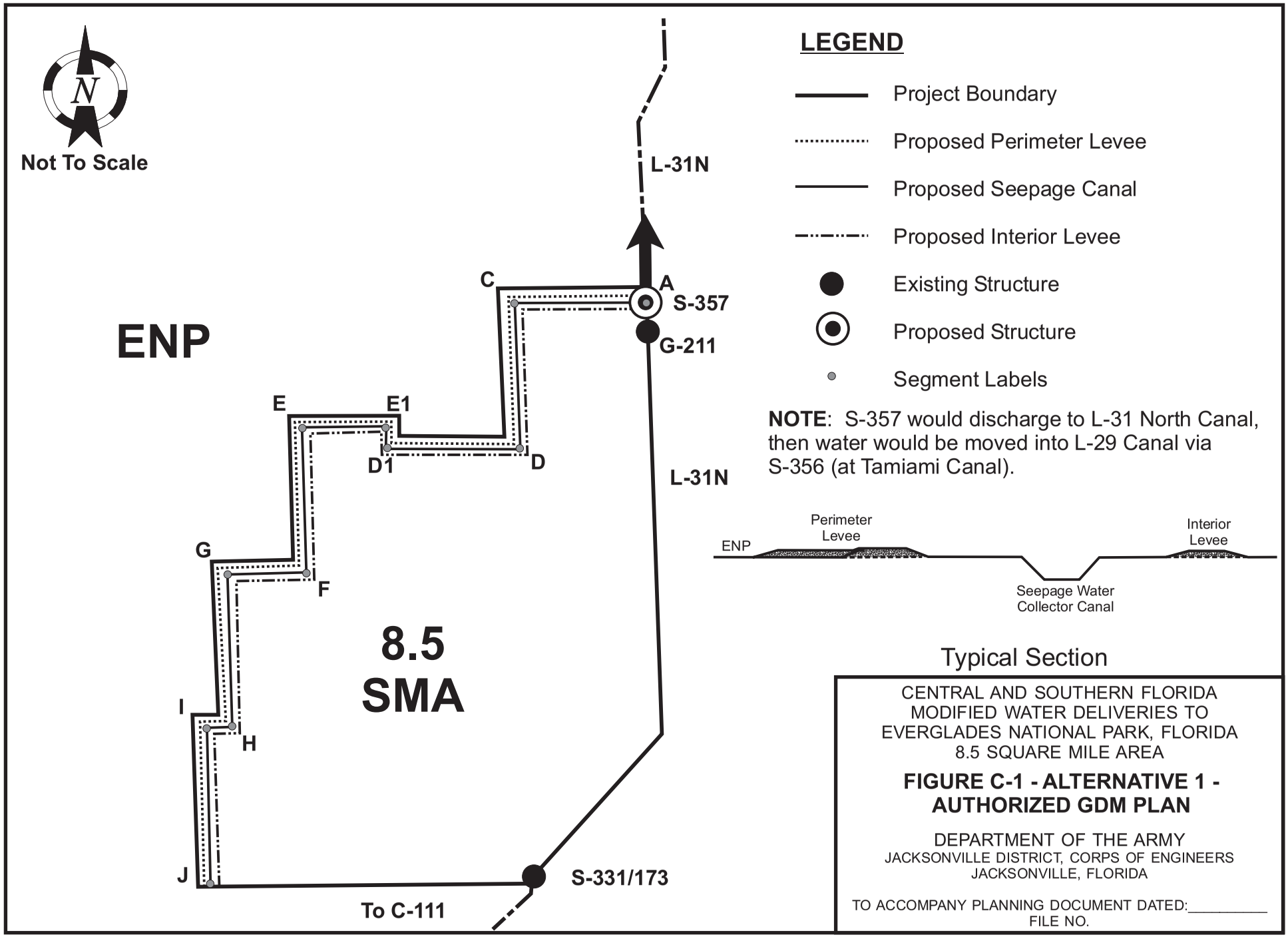
APPENDIX C
PRELIMINARY ENGINEERING AND COSTS

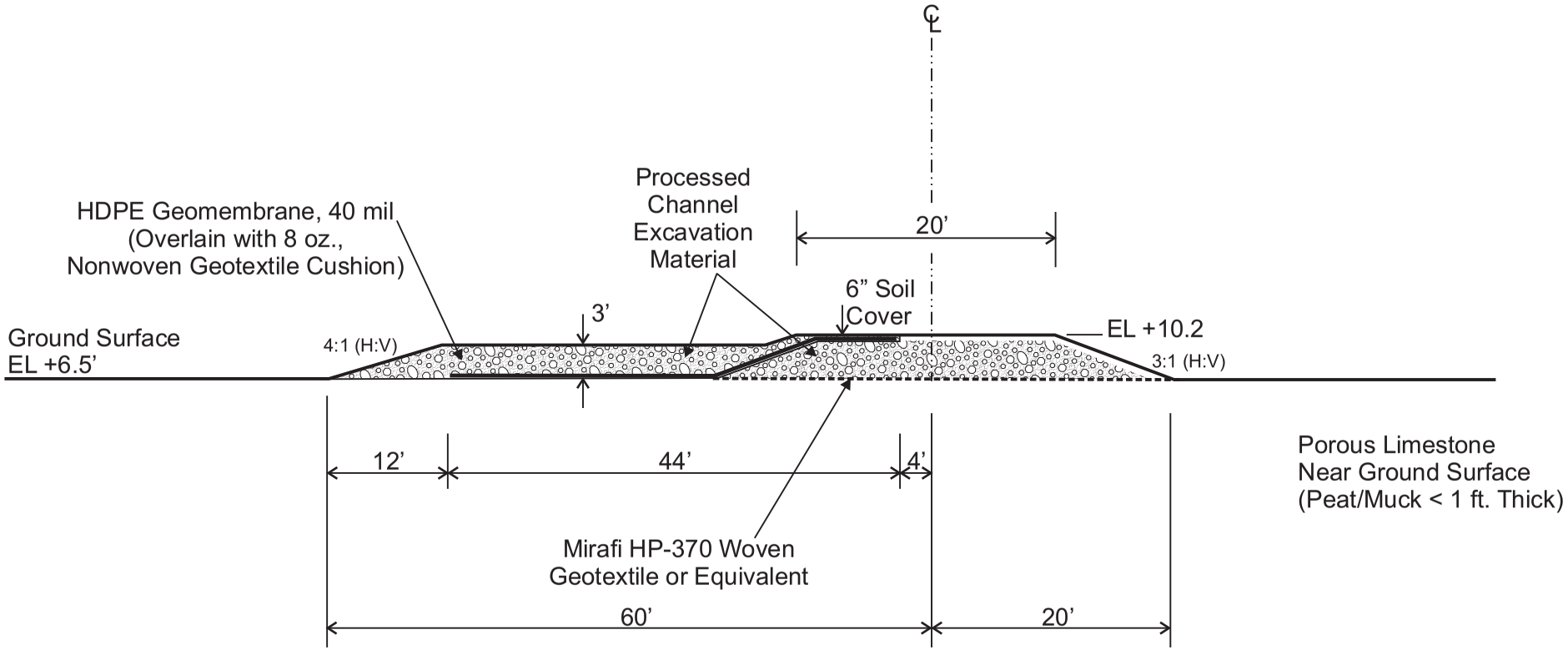
FIGURES

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

July 2000

HDR Engineering, Inc.


N
Not To Scale
ENP
L-31N
C
A
S-357
G-211
E
E1
D1
D
L-31N
G
F
8.5
SMA
I
H
J
S-331/173
To C-111
LEGEND
Project Boundary
Proposed Perimeter Levee
Proposed Seepage Canal
Proposed Interior Levee
Existing Structure
Proposed Structure
Segment Labels
NOTE: S-357 would discharge to L-31 North Canal, then water would be moved into L-29 Canal via S-356 (at Tamiami Canal).
ENP
Perimeter Levee
Interior Levee
Seepage Water Collector Canal
Typical Section
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA
FIGURE C-1 - ALTERNATIVE 1 - AUTHORIZED GDM PLAN
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA
TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.



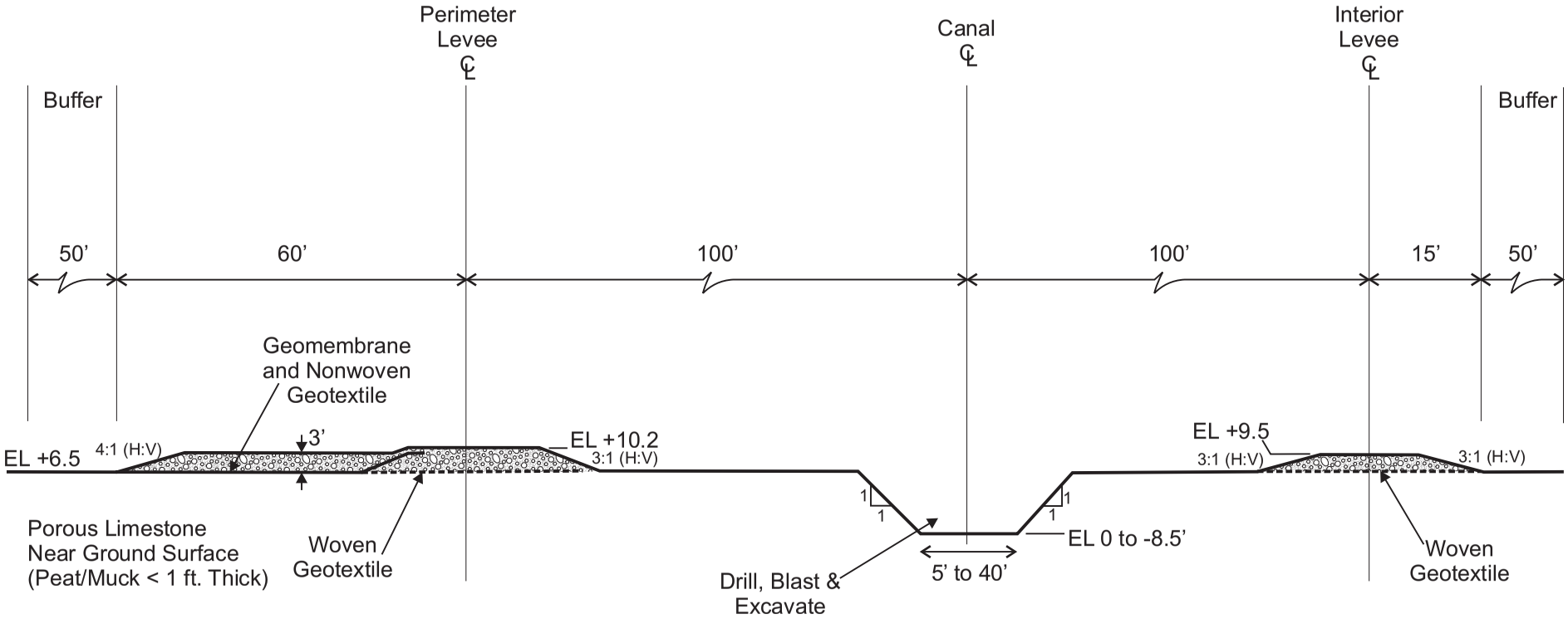
Not to Scale

CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA

FIGURE C-2 - ALTERNATIVE 1 - TYPICAL PERIMETER LEVEE CROSS-SECTION

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.



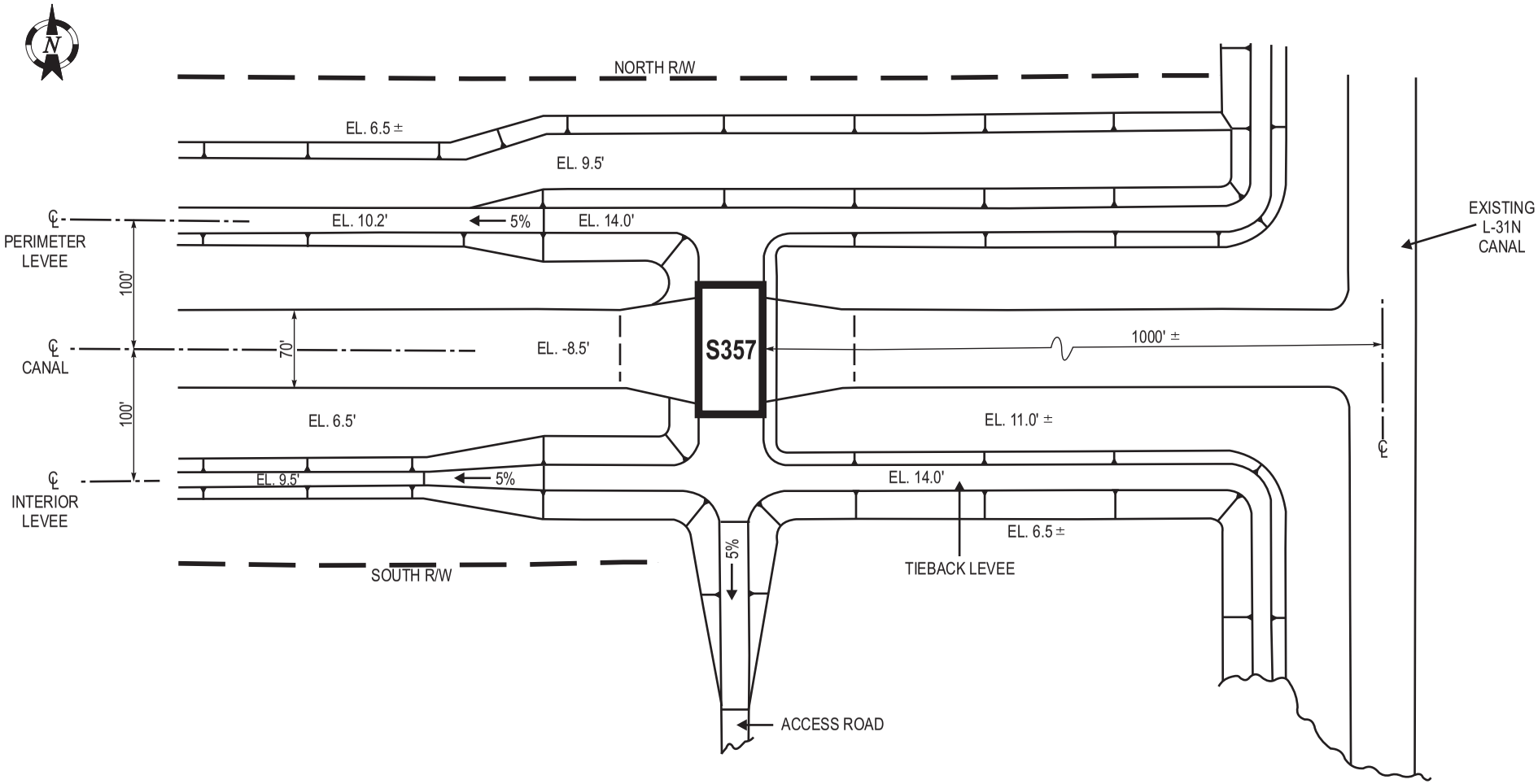
Not to Scale

CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA

FIGURE C-3 - ALTERNATIVE 1 - TYPICAL LEVEE AND CANAL CROSS-SECTION

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.



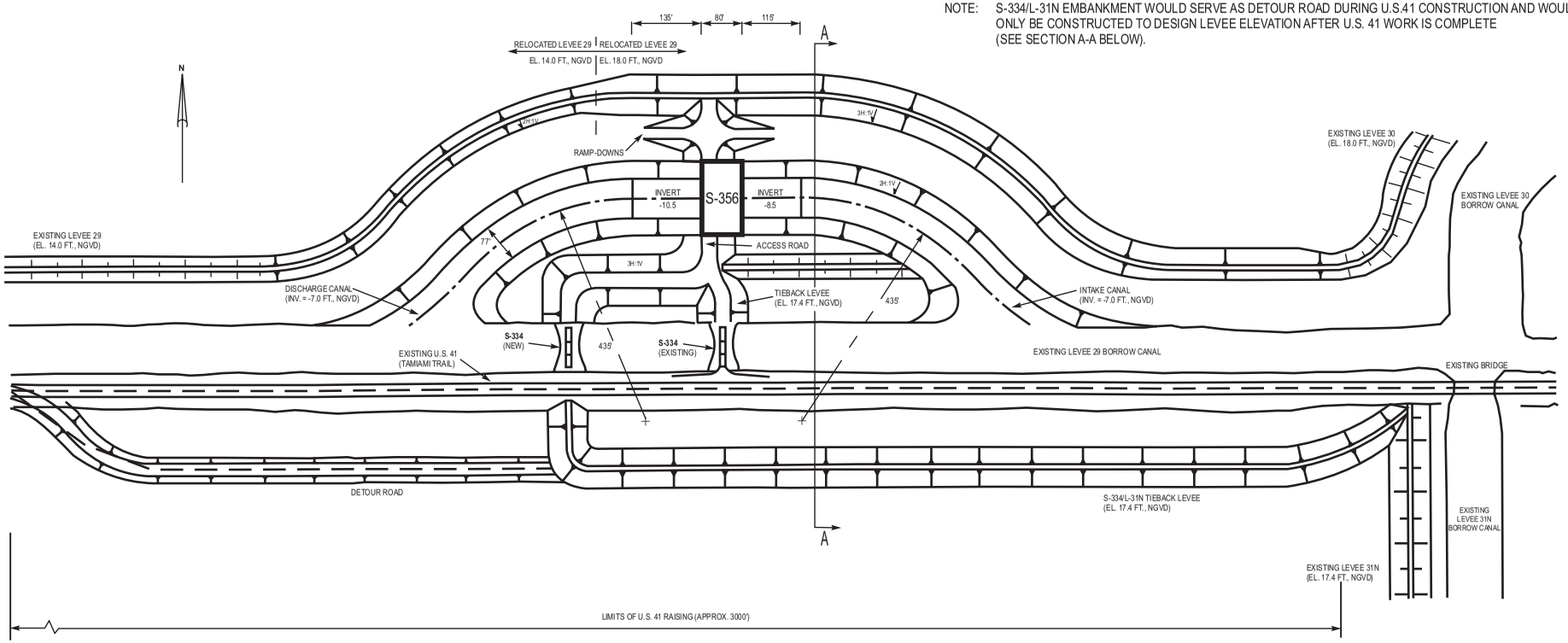
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA

FIGURE C-4
PUMP STATION 357 - PLAN

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.

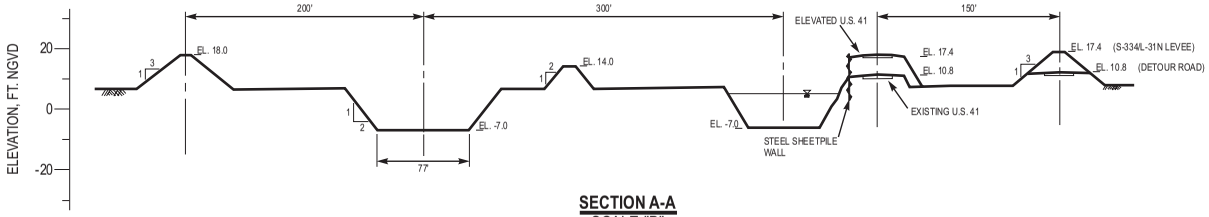
NOTE: S-334/L-31N EMBANKMENT WOULD SERVE AS DETOUR ROAD DURING U.S.41 CONSTRUCTION AND WOULD ONLY BE CONSTRUCTED TO DESIGN LEVEE ELEVATION AFTER U.S. 41 WORK IS COMPLETE (SEE SECTION A-A BELOW).



PLAN
SCALE "A"

SCALE "A" 100' 0 100' 200'

SCALE "B" 50' 0 50' 100'



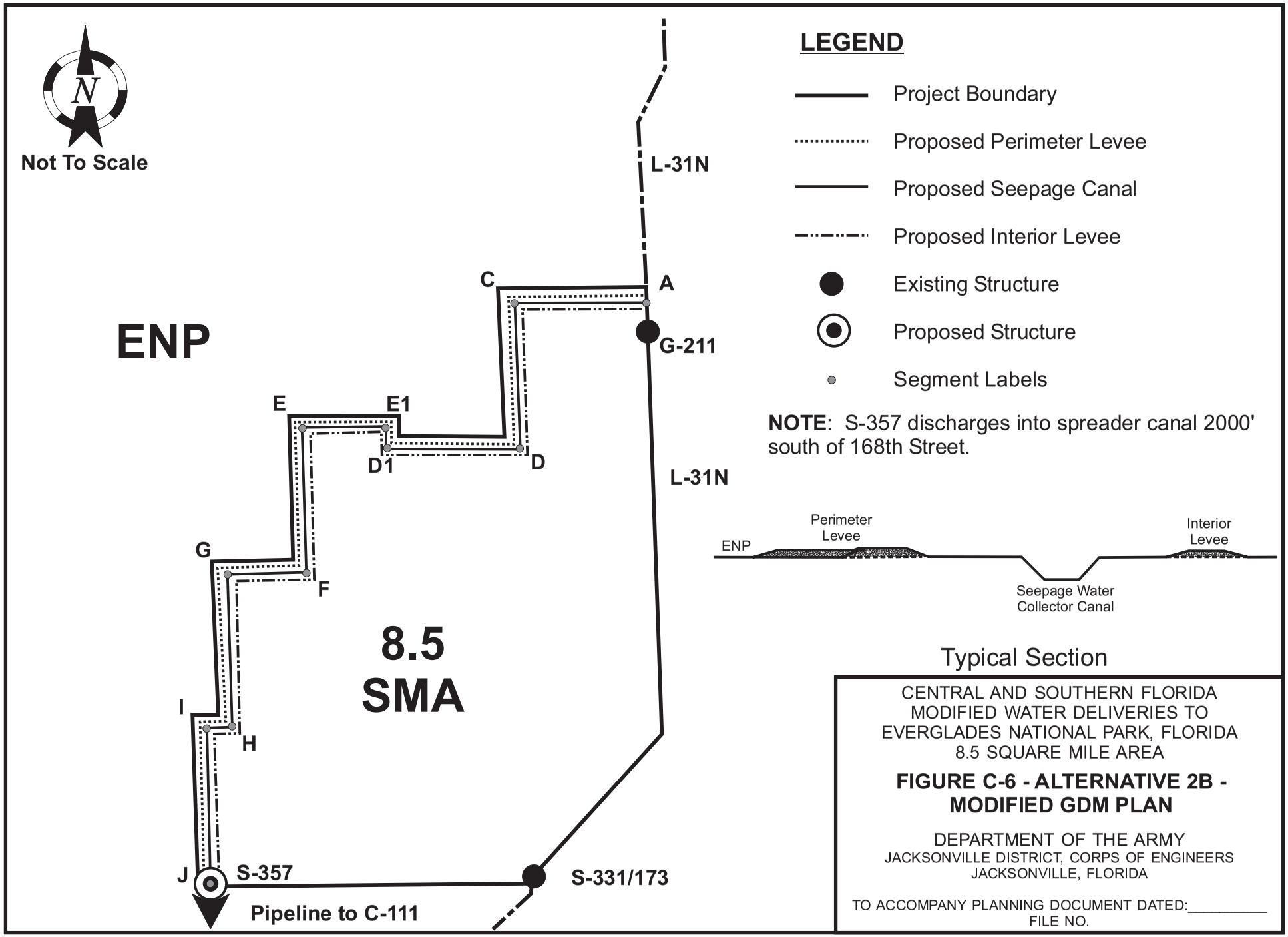
SECTION A-A
SCALE "B"

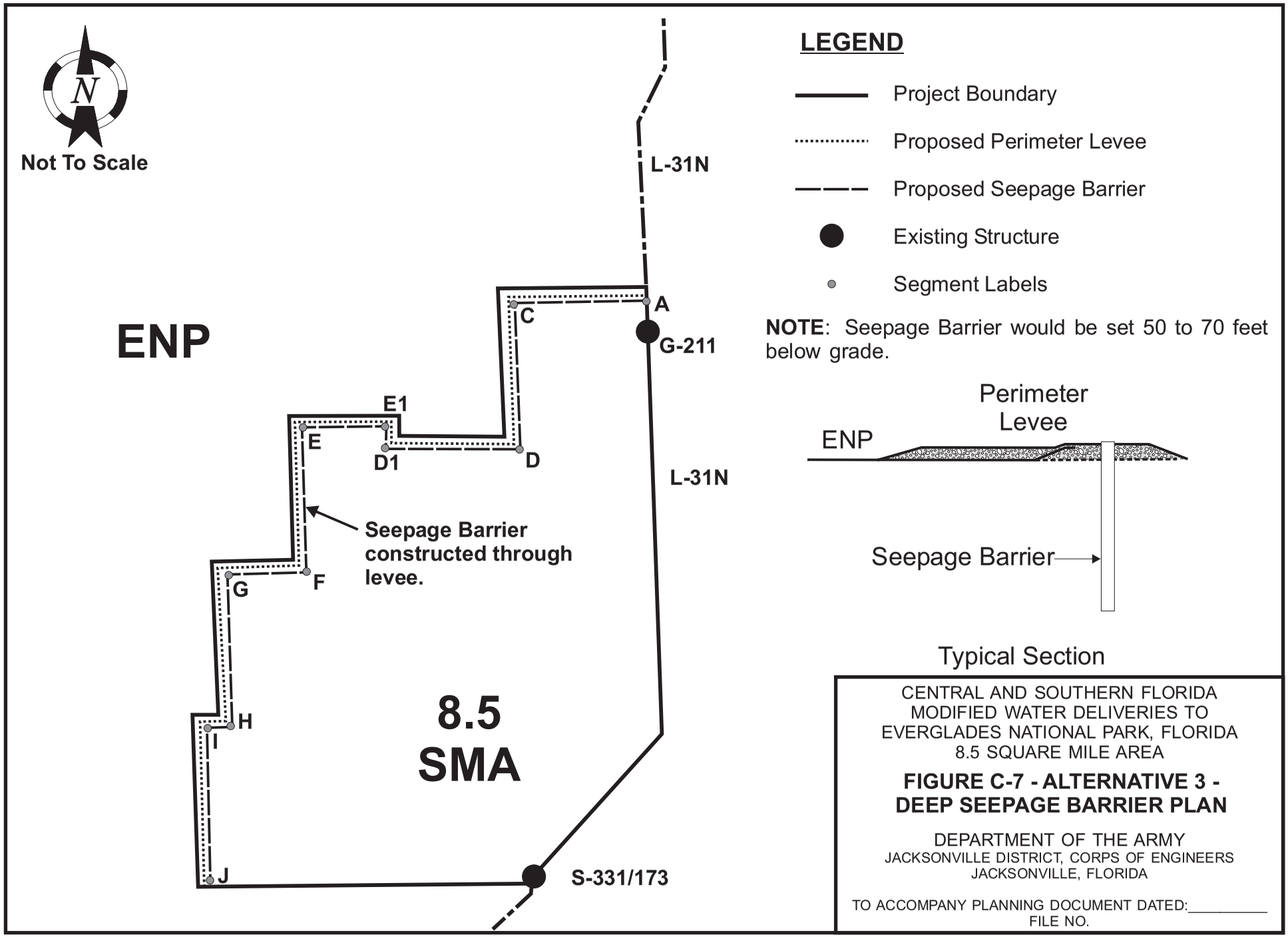
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA

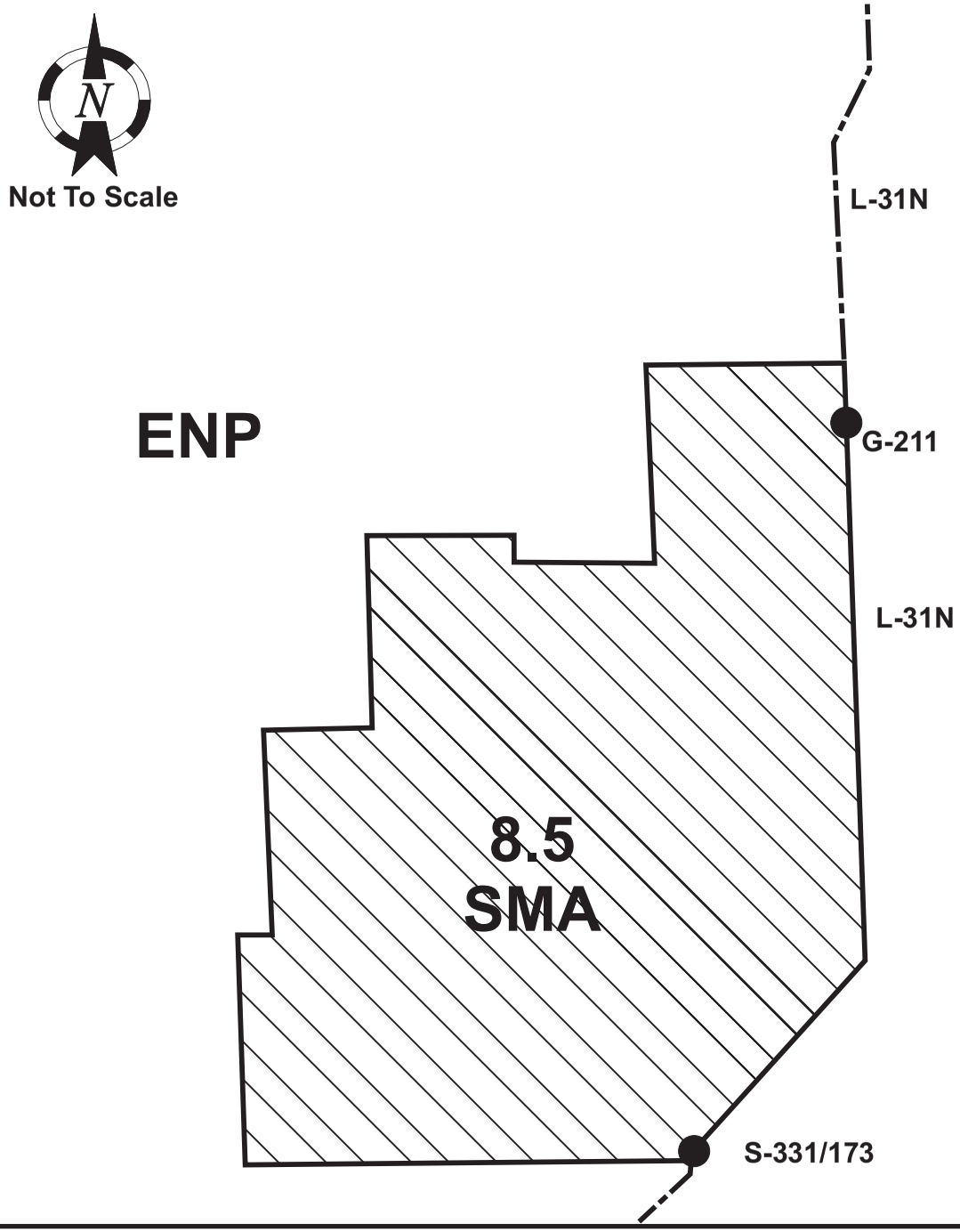
FIGURE C-5
PUMP STATION 356 - PLAN AND SECTION

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.


Not To Scale
N
ENP
L-31N
C
A
G-211
E
E1
D1
D
L-31N
G
F
8.5
SMA
I
H
J
S-357
S-331/173
Pipeline to C-111
LEGEND
Project Boundary
Proposed Perimeter Levee
Proposed Seepage Canal
Proposed Interior Levee
Existing Structure
Proposed Structure
Segment Labels
NOTE: S-357 discharges into spreader canal 2000' south of 168th Street.
ENP
Perimeter Levee
Interior Levee
Seepage Water Collector Canal
Typical Section
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA
FIGURE C-6 - ALTERNATIVE 2B -
MODIFIED GDM PLAN
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA
TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.


N
Not To Scale
ENP
L-31N
A
C
G-211
E1
E
D1
D
L-31N
Seepage Barrier constructed through levee.
G
F
H
I
8.5 SMA
J
S-331/173
LEGEND
Project Boundary
Proposed Perimeter Levee
Proposed Seepage Barrier
Existing Structure
Segment Labels
NOTE: Seepage Barrier would be set 50 to 70 feet below grade.
Perimeter Levee
ENP
Seepage Barrier
Typical Section
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA
FIGURE C-7 - ALTERNATIVE 3 -
DEEP SEEPAGE BARRIER PLAN
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA
TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.



LEGEND

Project Boundary

Landowner have choice of Flowage Easement, Buy-Out, or Life Estates

Existing Structure

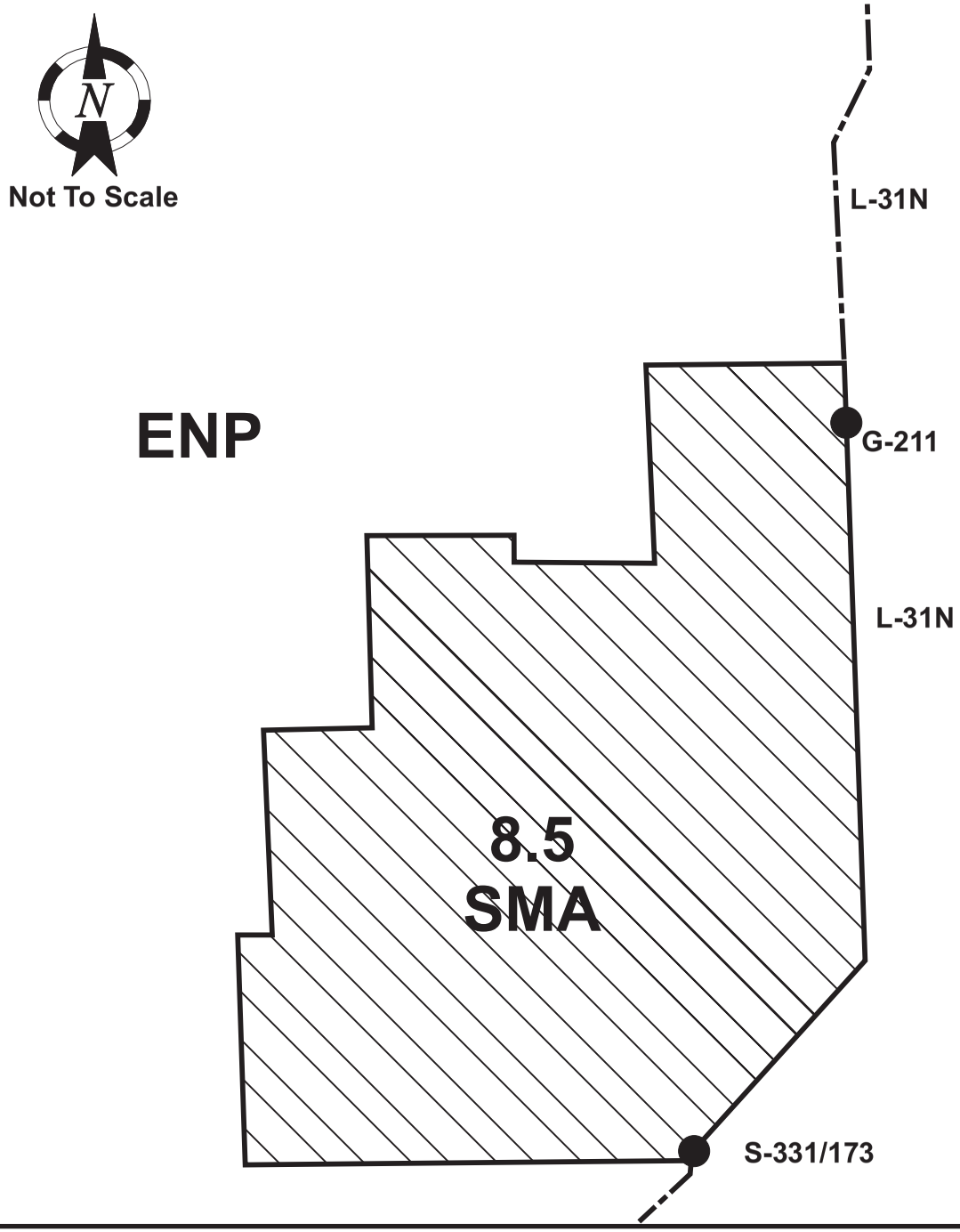
NOTE: Exact real estate requirements will be determined through further analysis.

CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA

FIGURE C-8 - ALTERNATIVE 4 - LANDOWNER'S CHOICE LAND ACQUISITION PLAN

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.



LEGEND

Project Boundary

Proposed Buy-Out Areas

Existing Structure

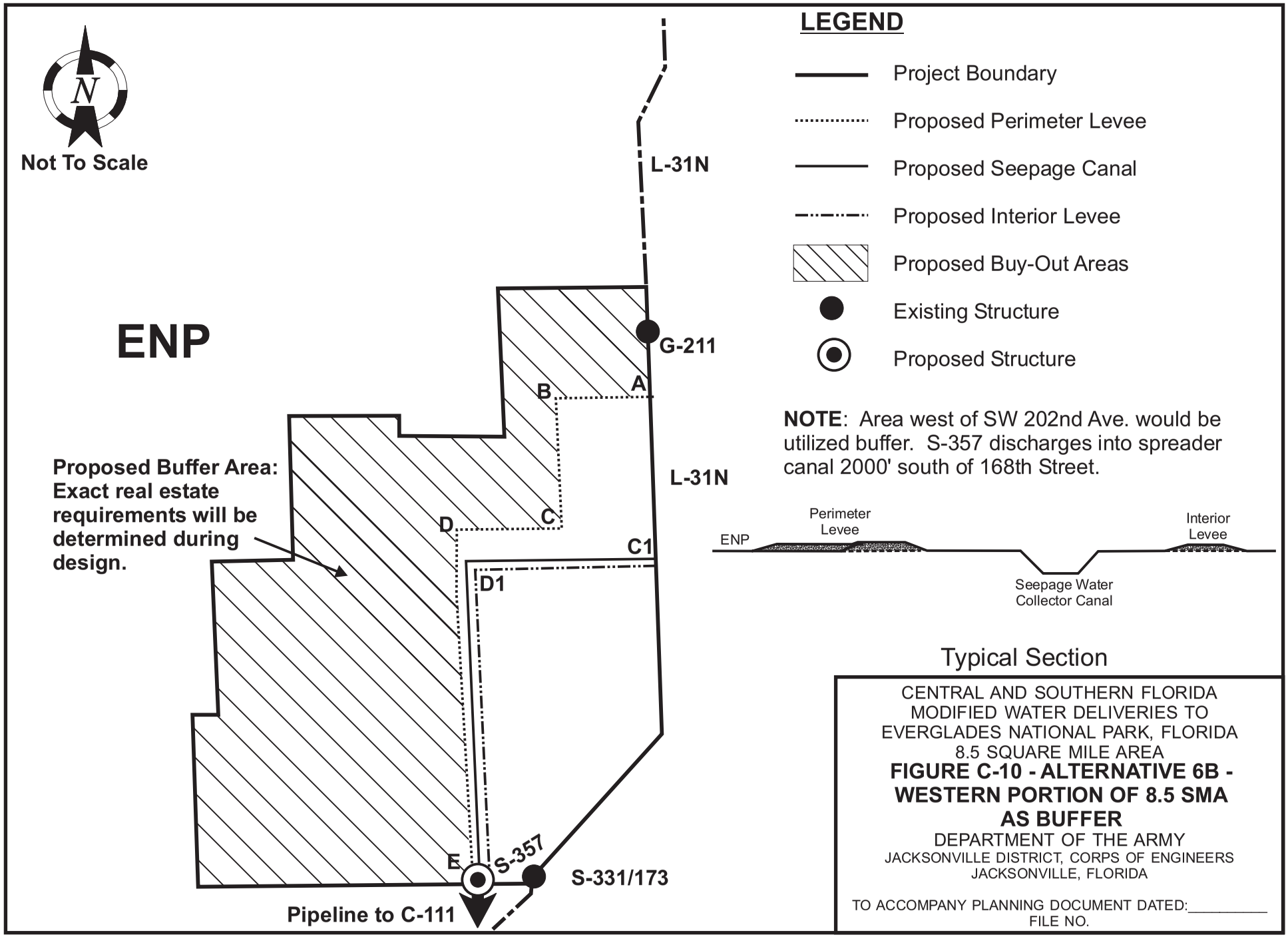
NOTE: Overall management of the area has not been determined yet.

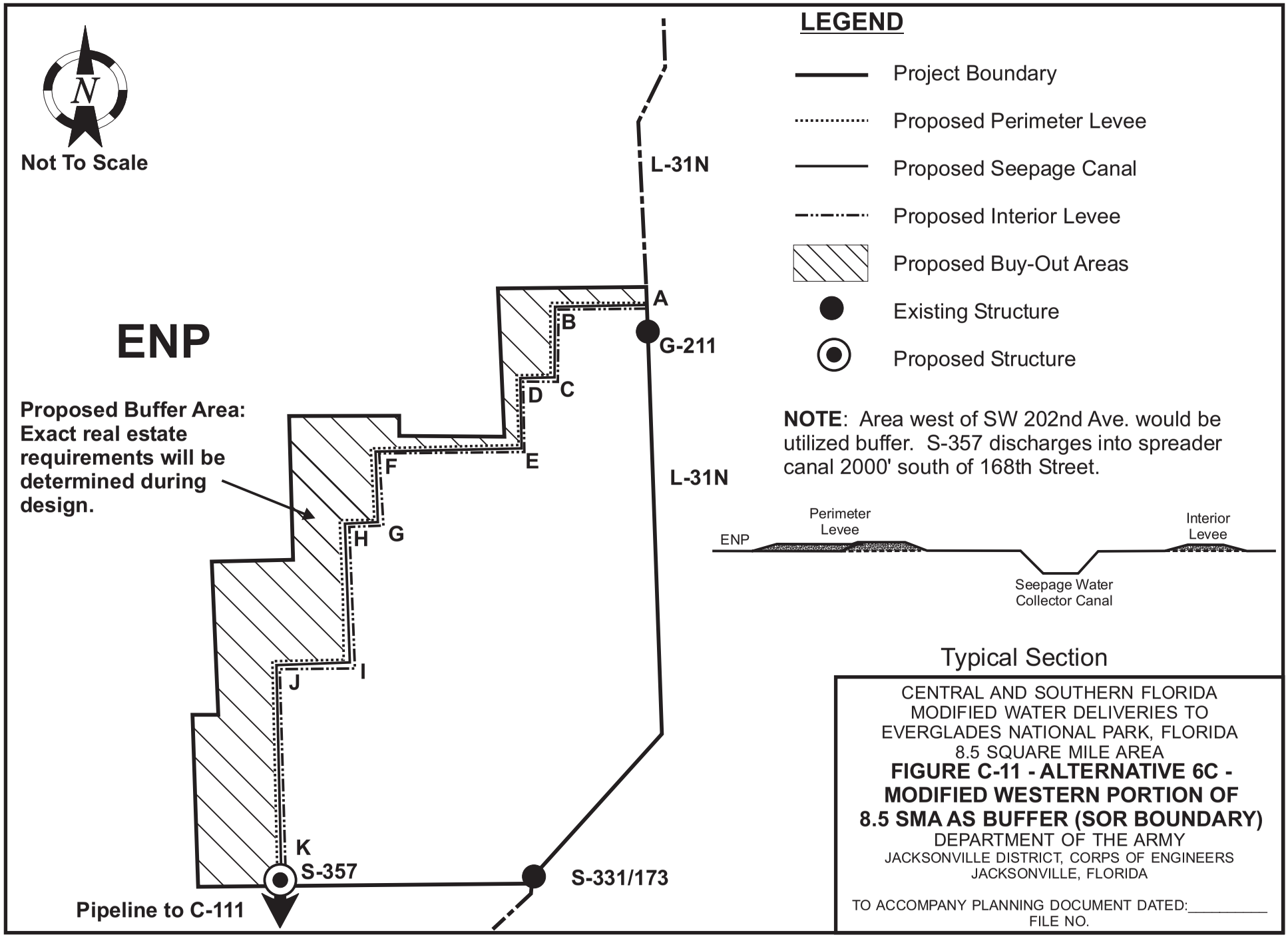
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA

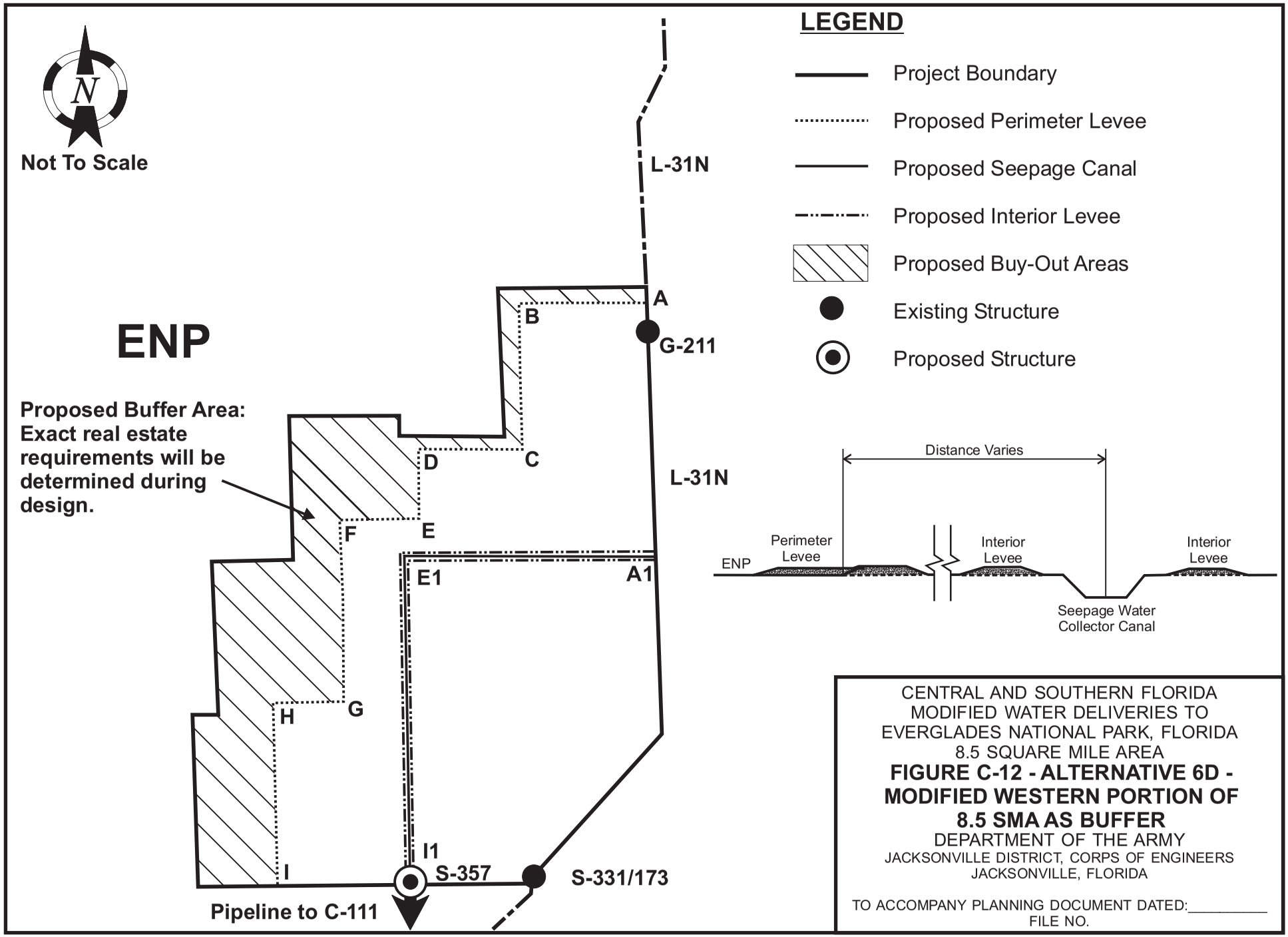
FIGURE C-9 - ALTERNATIVE 5 - TOTAL BUY-OUT PLAN

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.


N
Not To Scale
ENP
L-31N
G-211
A
B
L-31N
C
D
C1
D1
E
S-357
S-331/173
Pipeline to C-111
Proposed Buffer Area: Exact real estate requirements will be determined during design.
LEGEND
Project Boundary
Proposed Perimeter Levee
Proposed Seepage Canal
Proposed Interior Levee
Proposed Buy-Out Areas
Existing Structure
Proposed Structure
NOTE: Area west of SW 202nd Ave. would be utilized buffer. S-357 discharges into spreader canal 2000' south of 168th Street.
ENP
Perimeter Levee
Interior Levee
Seepage Water Collector Canal
Typical Section
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA
FIGURE C-10 - ALTERNATIVE 6B -
WESTERN PORTION OF 8.5 SMA
AS BUFFER
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA
TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.


N
Not To Scale
ENP
Proposed Buffer Area: Exact real estate requirements will be determined during design.
L-31N
L-31N
A
B
C
D
E
F
G
H
I
J
K
G-211
S-357
S-331/173
Pipeline to C-111
LEGEND
Project Boundary
Proposed Perimeter Levee
Proposed Seepage Canal
Proposed Interior Levee
Proposed Buy-Out Areas
Existing Structure
Proposed Structure
NOTE: Area west of SW 202nd Ave. would be utilized buffer. S-357 discharges into spreader canal 2000' south of 168th Street.
ENP
Perimeter Levee
Interior Levee
Seepage Water Collector Canal
Typical Section
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA
FIGURE C-11 - ALTERNATIVE 6C -
MODIFIED WESTERN PORTION OF
8.5 SMA AS BUFFER (SOR BOUNDARY)
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA
TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.

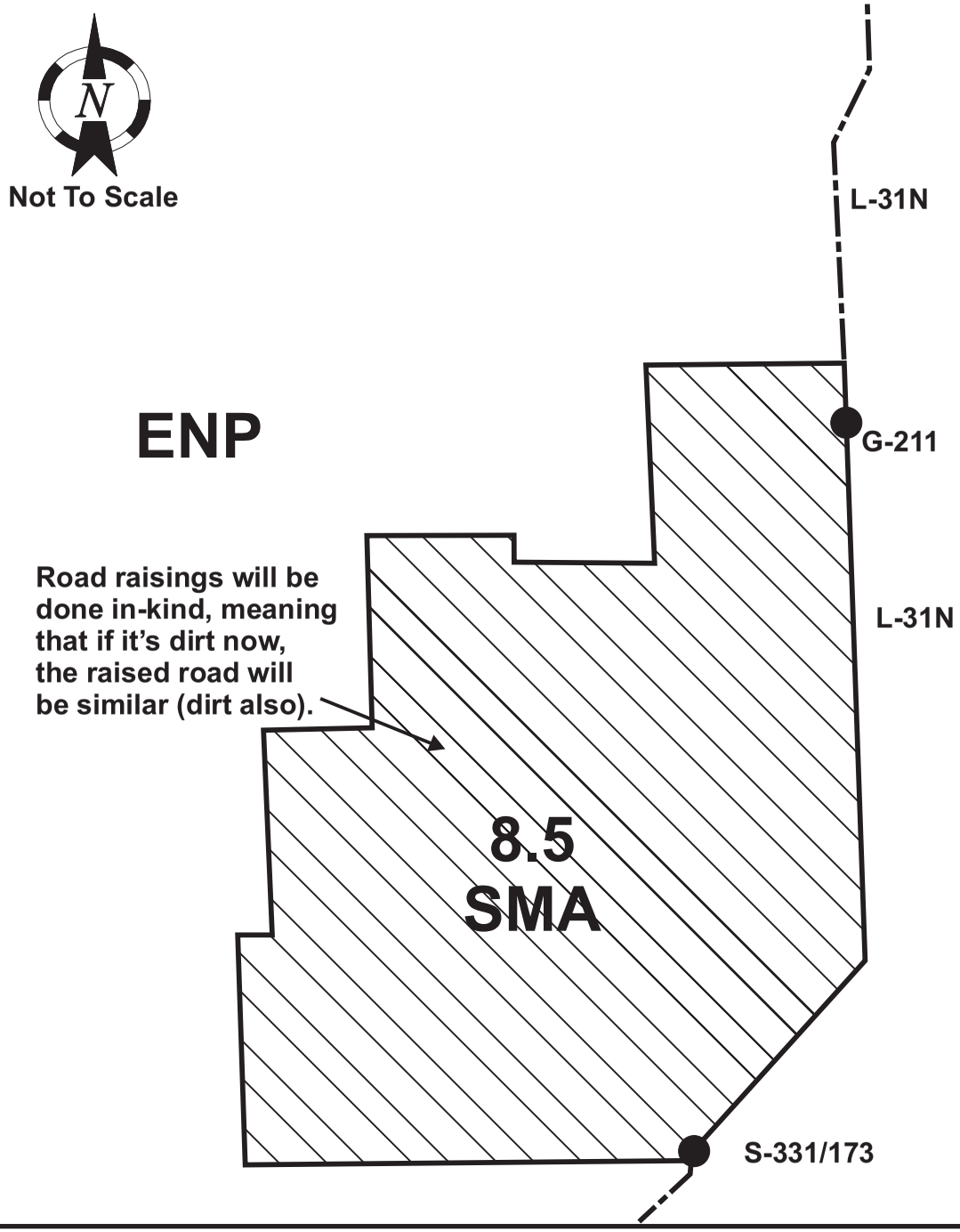


CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA

FIGURE C-12 - ALTERNATIVE 6D - MODIFIED WESTERN PORTION OF 8.5 SMA AS BUFFER

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.



LEGEND

Project Boundary

Raise all area roads in-kind

Existing Structure

NOTE: Interior Drainage/Seepage would be handled through flowage easements.

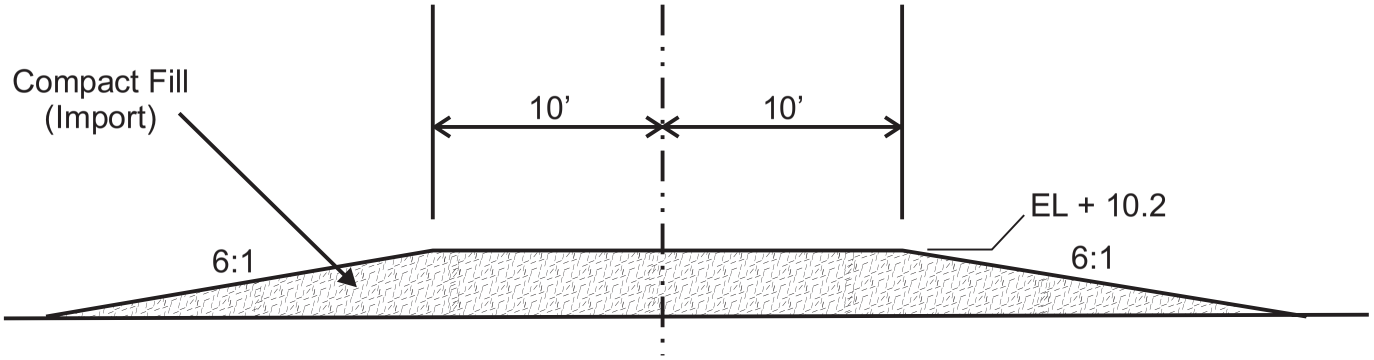
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA

FIGURE C-13 - ALTERNATIVE 7 - RAISE ALL ROADS PLAN

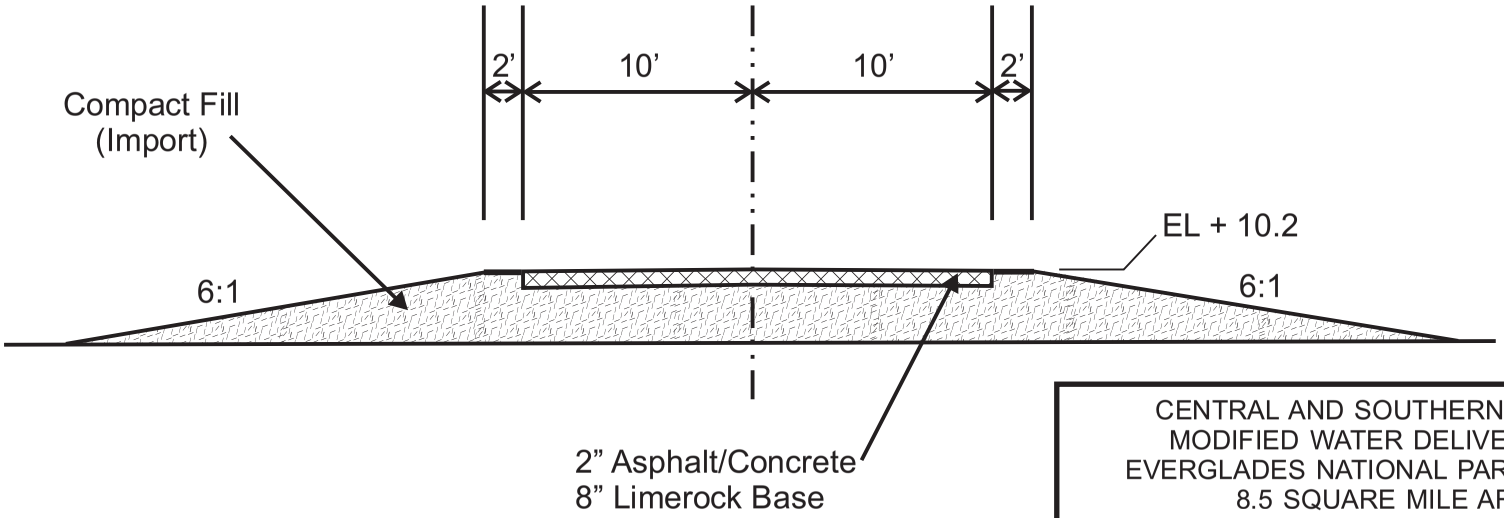
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.

DIRT ROADWAY



PAVED ROADWAY



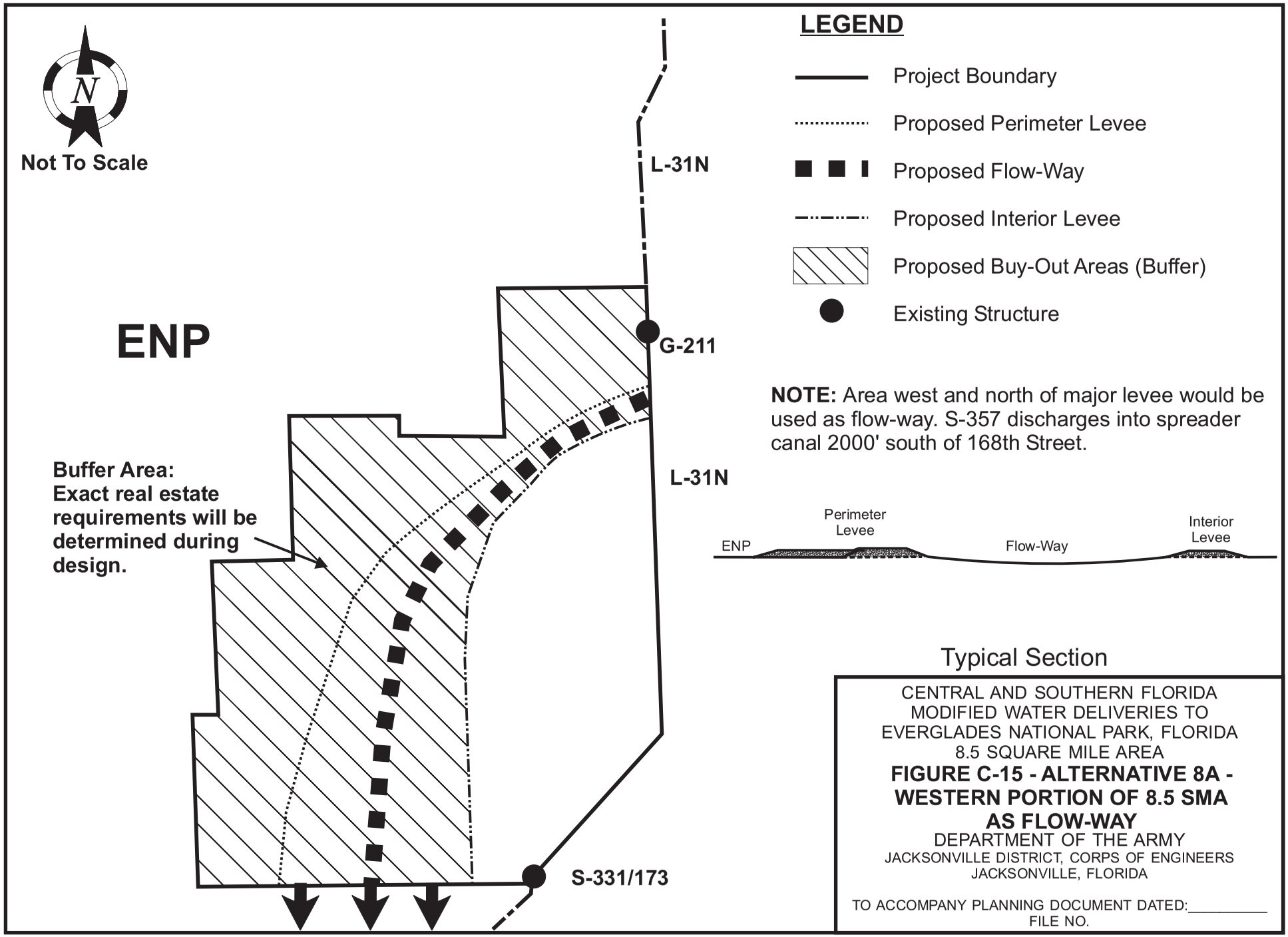
NOTE: Assume existing dirt roadways average elevation +7.0.

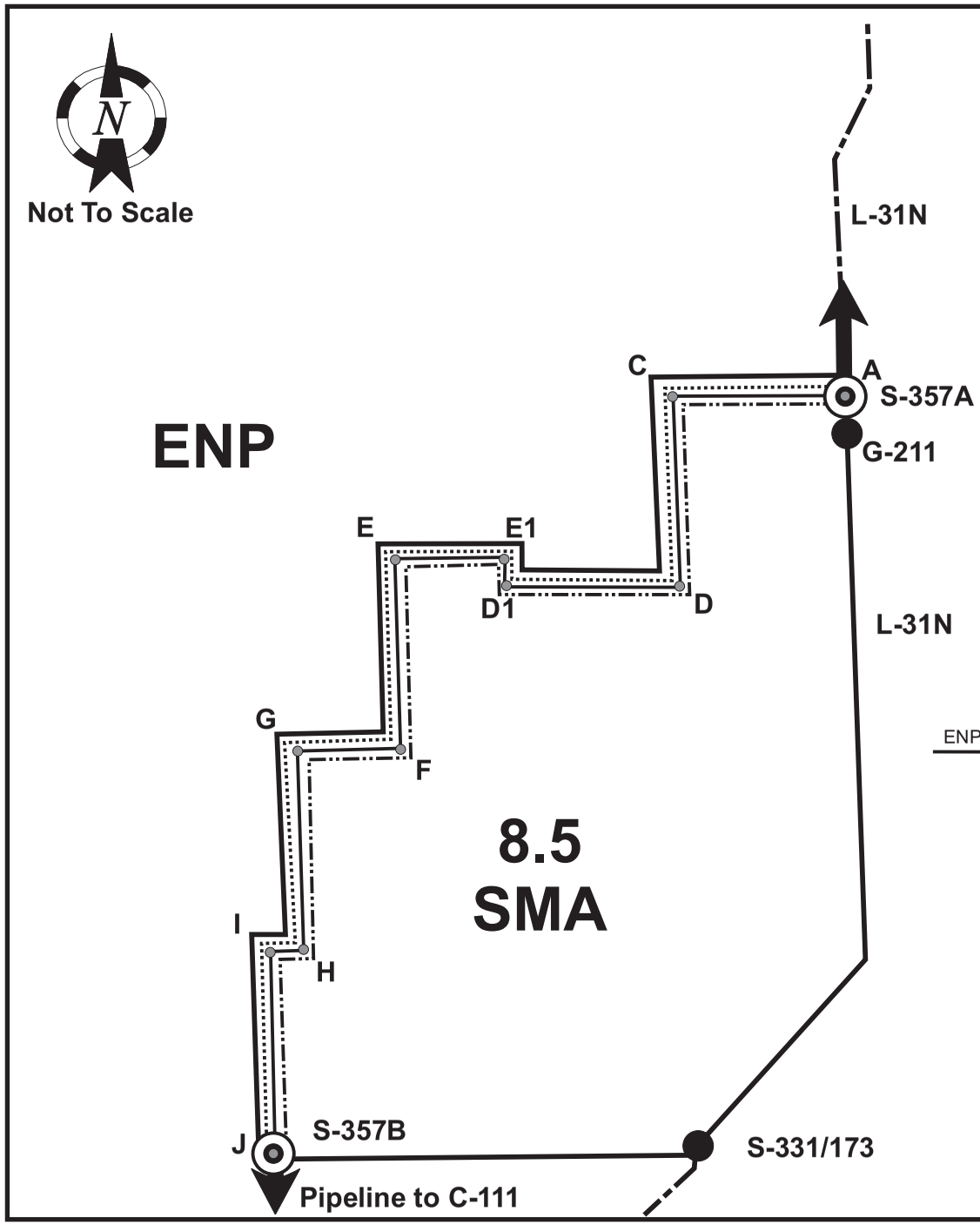
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA

FIGURE C-14 - ALTERNATIVE 7 - TYPICAL ROADWAY SECTIONS

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.


N
Not To Scale
ENP
L-31N
G-211
L-31N
S-331/173
Buffer Area:
Exact real estate requirements will be determined during design.
LEGEND
Project Boundary
Proposed Perimeter Levee
Proposed Flow-Way
Proposed Interior Levee
Proposed Buy-Out Areas (Buffer)
Existing Structure
NOTE: Area west and north of major levee would be used as flow-way. S-357 discharges into spreader canal 2000' south of 168th Street.
ENP
Perimeter Levee
Flow-Way
Interior Levee
Typical Section
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA
FIGURE C-15 - ALTERNATIVE 8A -
WESTERN PORTION OF 8.5 SMA
AS FLOW-WAY
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA
TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.



LEGEND

- Project Boundary
- Proposed Perimeter Levee
- Proposed Seepage Canal
- Proposed Interior Levee
- Existing Structure
- Proposed Structures
- Segments

NOTE 1: S-357A would discharge to L-31 North Canal, then water would be moved into L-29 Canal via S-356 (at Tamiami Canal).
NOTE 2: S-357B would discharge into spreader canal 2000' south of 168th Street.

Typical Section

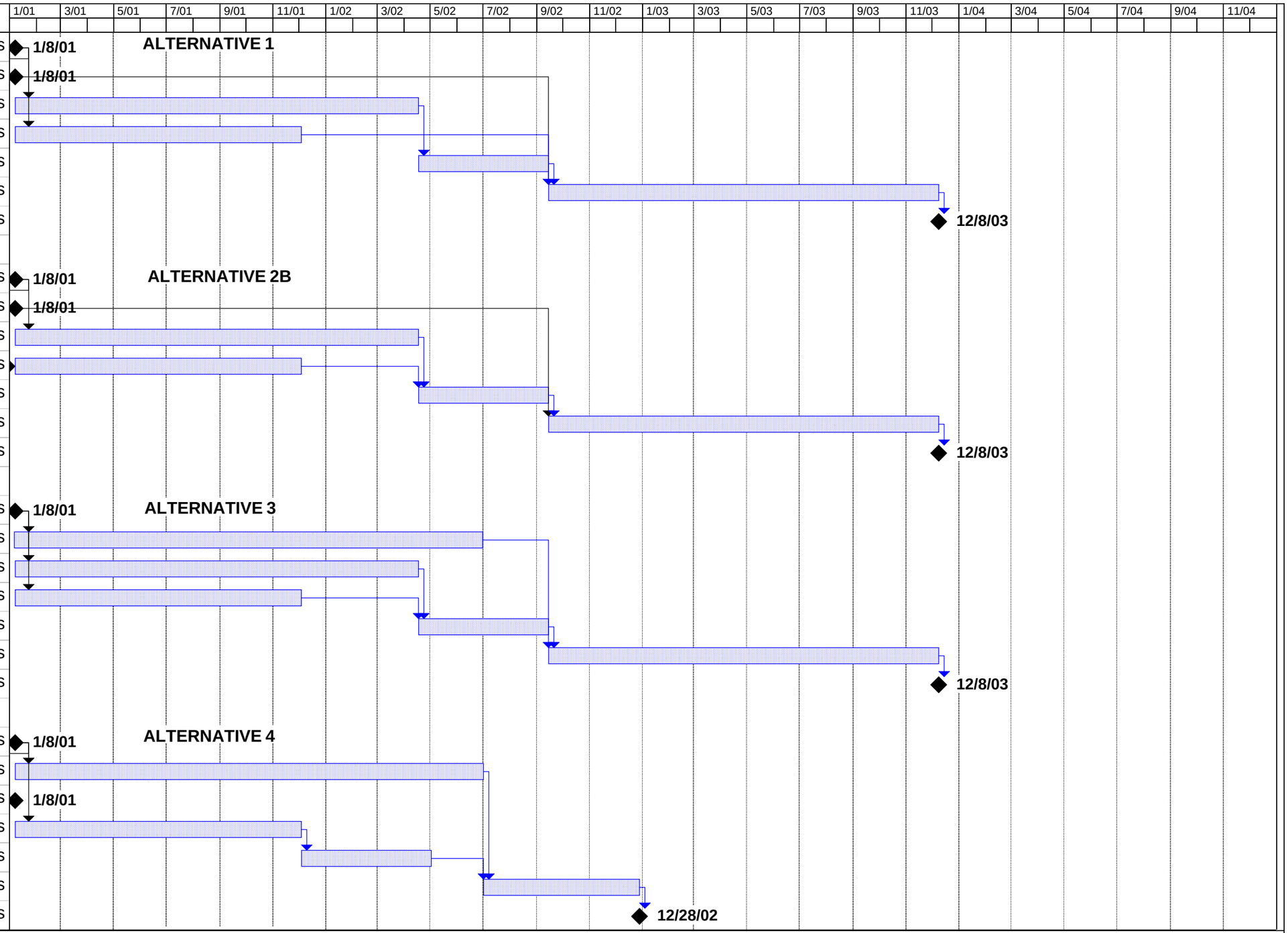
CENTRAL AND SOUTHERN FLORIDA
MODIFIED WATER DELIVERIES TO
EVERGLADES NATIONAL PARK, FLORIDA
8.5 SQUARE MILE AREA

FIGURE C-16 - ALTERNATIVE NO. 9 - ADAPTIVE REFINEMENT OF GDM PLAN

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

TO ACCOMPANY PLANNING DOCUMENT DATED:_____
FILE NO.

ID	Task Name	Duration
1	Project Start	0 days
2	Land Acquisition	0 days
3	Design	465 days
4	Permitting	330 days
5	Contractor Selection	150 days
6	Construction	450 days
7	Completion Date	0 days
8		
9	Project Start	0 days
10	Land Acquisition	0 days
11	Design	465 days
12	Permitting	330 days
13	Contractor Selection	150 days
14	Construction	450 days
15	Completion Date	0 days
16		
17	Project Start	0 days
18	Land Acquisition	540 days
19	Design	465 days
20	Permitting	330 days
21	Contractor Selection	150 days
22	Construction	450 days
23	Completion Date	0 days
24		
25	Project Start	0 days
26	Land Acquisition	540 days
27	Design	0 days
28	Permitting	330 days
29	Contractor Selection	150 days
30	Construction	180 days
31	Completion Date	0 days

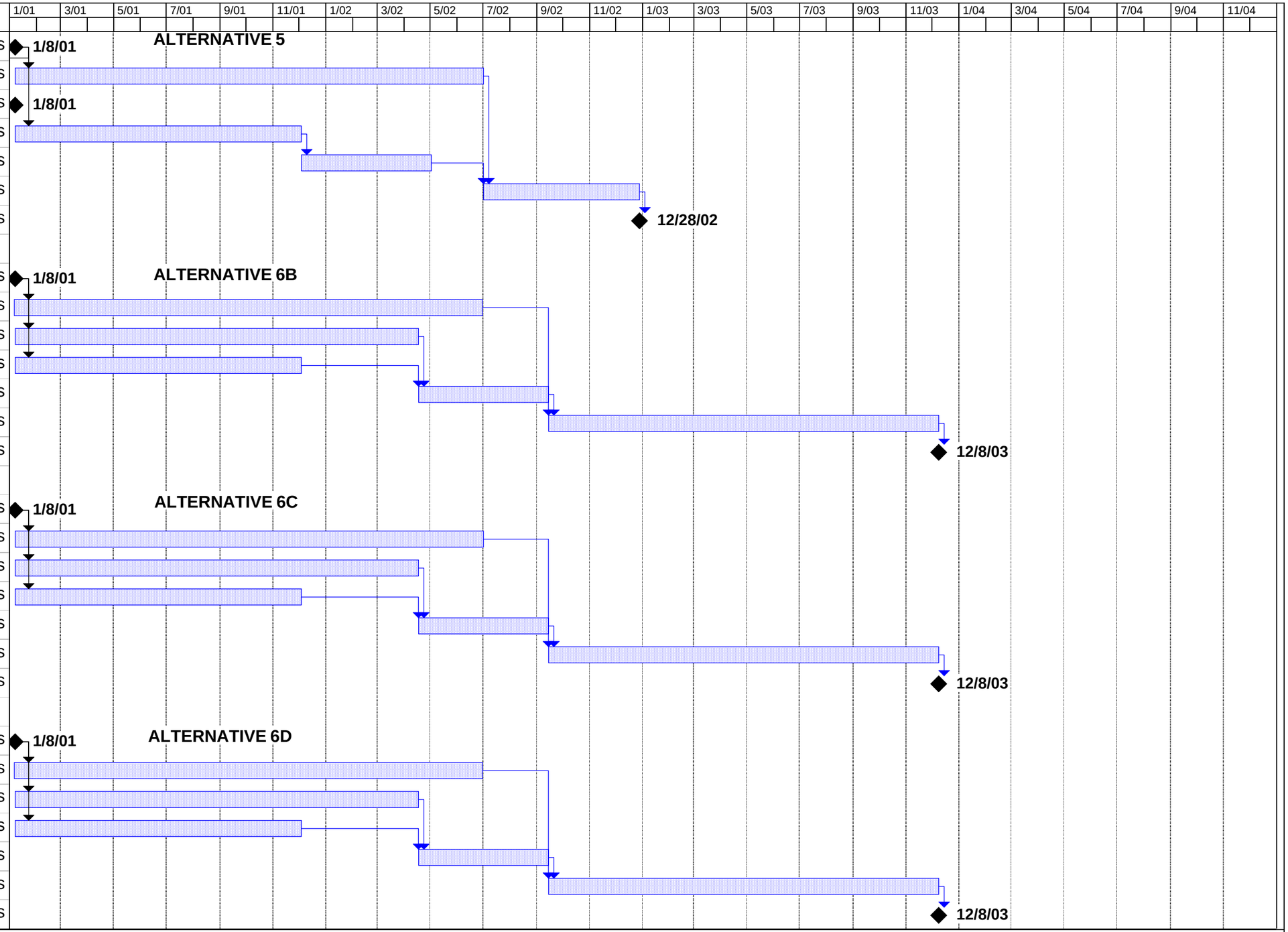


Project: 8.5 SMA
Date: Thu 6/29/00

Task | Progress | Summary | Rolled Up Split | Rolled Up Progress | Project Summary
Split | Milestone | Rolled Up Task | Rolled Up Milestone | External Tasks

FIGURE NO. C-17, PRELIMINARY PROJECT SCHEDULE

ID	Task Name	Duration
32	Project Start	0 days
33	Land Acquisition	540 days
34	Design	0 days
35	Permitting	330 days
36	Contractor Selection	150 days
37	Construction	180 days
38	Completion Date	0 days
39		
40	Project Start	0 days
41	Land Acquisition	540 days
42	Design	465 days
43	Permitting	330 days
44	Contractor Selection	150 days
45	Construction	450 days
46	Completion Date	0 days
47		
48	Project Start	0 days
49	Land Acquisition	540 days
50	Design	465 days
51	Permitting	330 days
52	Contractor Selection	150 days
53	Construction	450 days
54	Completion Date	0 days
55		
56	Project Start	0 days
57	Land Acquisition	540 days
58	Design	465 days
59	Permitting	330 days
60	Contractor Selection	150 days
61	Construction	450 days
62	Completion Date	0 days

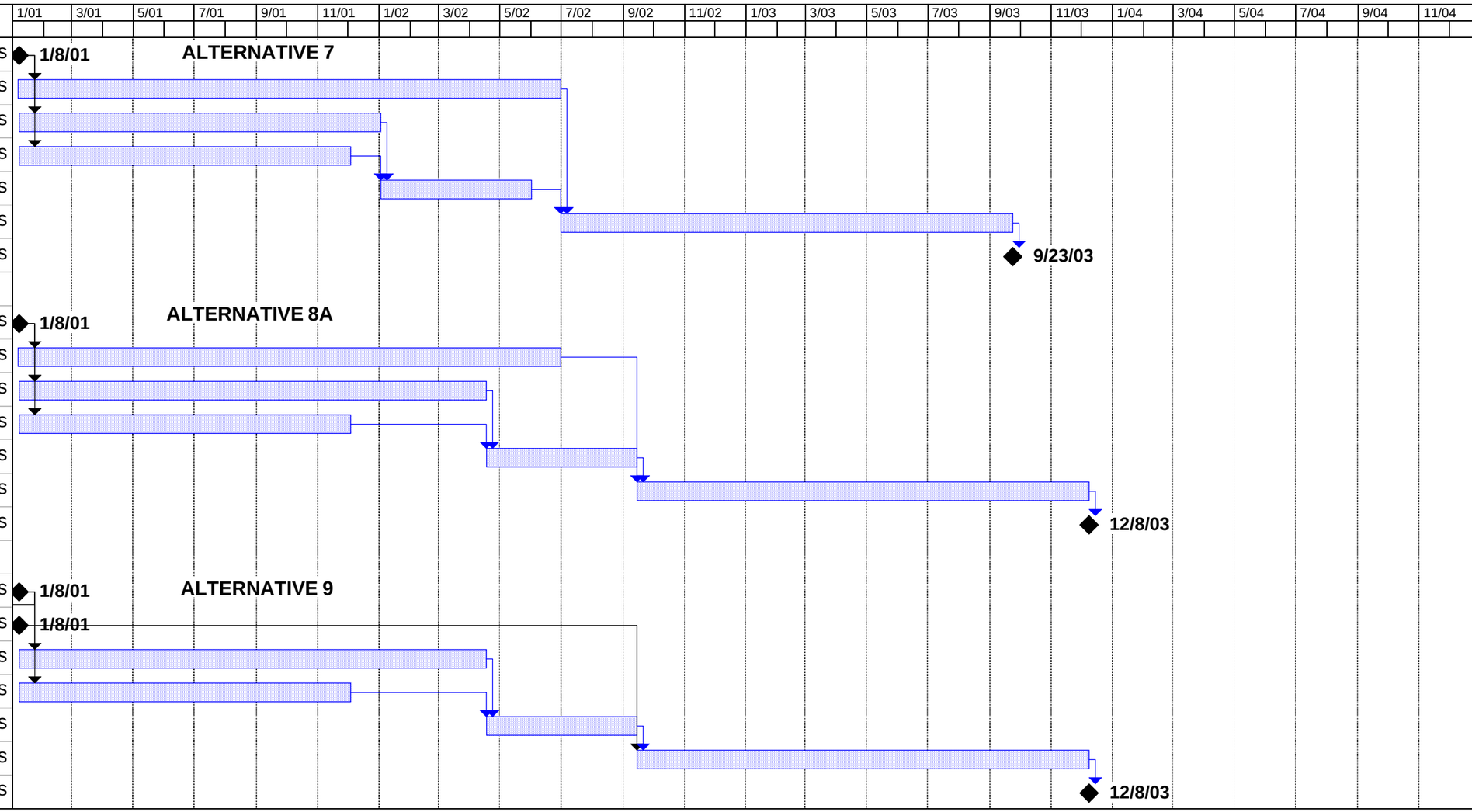


Project: 8.5 SMA
Date: Thu 6/29/00

Task | Split | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Split | Rolled Up Milestone | Rolled Up Progress | External Tasks | Project Summary

FIGURE NO. C-17, PRELIMINARY PROJECT SCHEDULE

ID	Task Name	Duration
63	Project Start	0 days
64	Land Acquisition	540 days
65	Design	360 days
66	Permitting	330 days
67	Contractor Selection	150 days
68	Construction	450 days
69	Completion Date	0 days
70		
71	Project Start	0 days
72	Land Acquisition	540 days
73	Design	465 days
74	Permitting	330 days
75	Contractor Selection	150 days
76	Construction	450 days
77	Completion Date	0 days
78		
79	Project Start	0 days
80	Land Acquisition	0 days
81	Design	465 days
82	Permitting	330 days
83	Contractor Selection	150 days
84	Construction	450 days
85	Completion Date	0 days



Project: 8.5 SMA
Date: Thu 6/29/00

Task | Progress | Summary | Rolled Up Split | Rolled Up Progress | Project Summary
Split | Milestone | Rolled Up Task | Rolled Up Milestone | External Tasks

FIGURE NO. C-17, PRELIMINARY PROJECT SCHEDULE