

PORT OF BROWNSVILLE

the port that works



CALL BEFORE YOU DIG!

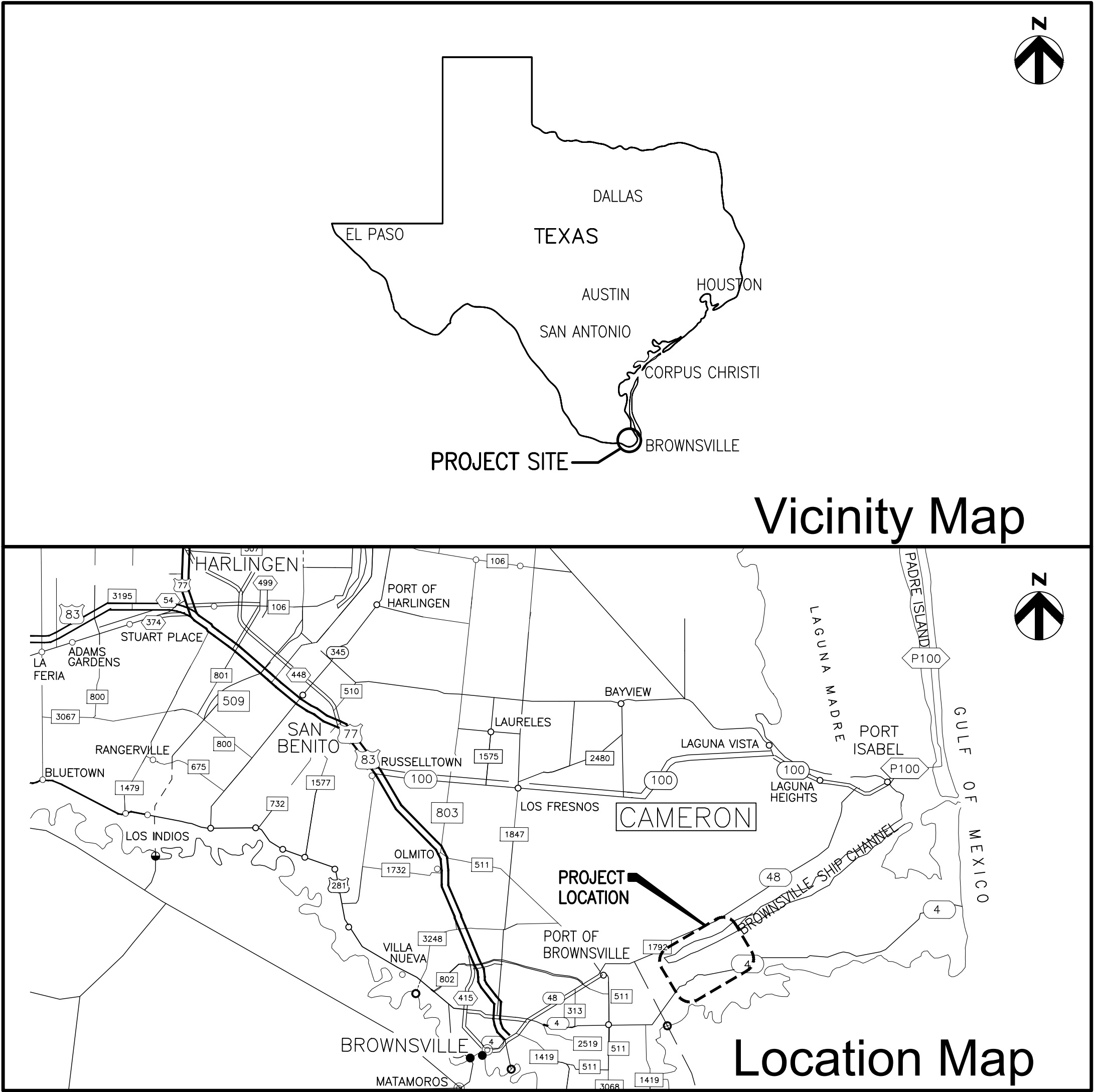


TEXAS 811
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PARTICIPANTS REQUEST
48 HOURS NOTICE BEFORE YOU DIG,
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811

THE LONE STAR
NOTIFICATION COMPANY
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Construction Drawings For

Brownsville Navigation District

Placement Area 8 Dike Relocation

HDR Project No.
10376072

BROWNSVILLE, TEXAS
Submittal Date: FRI 01 / 17 / 2025



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GENERAL NOTES:

- | | | | |
|----|---|--|---|
| 1. | AERIAL PHOTOGRAPH SHOWN WAS OBTAINED FROM DIGITAL GLOBE WORLD IMAGERY VIA ESRIS ARCGIS ONLINE DATED FEBRUARY 2021. | 10. | CONTRACTOR SHALL BE AWARE THAT PLACEMENT AREA INTERIORS HAVE BEEN UTILIZED AS DREDGED MATERIAL DEPOSIT FACILITIES SINCE THEIR ESTABLISHMENT. FOUNDATION CONDITIONS WITHIN PLACEMENT AREAS MAY NOT BE AS UNIFORM OR FIRM AS NATURAL SOIL CONDITIONS. THE SOIL CLASSIFICATIONS SHOWN IN THE GEOTECHNICAL BORINGS FOR THIS PROJECT ONLY REPRESENT THE LOCATIONS WHERE THE SAMPLES WERE TAKEN FOR ANALYSIS. |
| 2. | ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN; CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO COMMENCING WORK. | 11. | CONTINUOUS EROSION CONTROL FENCE SHALL BE INSTALLED ALONG OUTER TOE OF DIKES PRIOR TO DIKE IMPROVEMENT WORK. EROSION CONTROL FENCE SHALL BE MAINTAINED THROUGH DURATION OF DIKE WORK AND REMOVED UPON COMPLETION OF DIKE WORK. CONTRACTOR MAY REQUEST A VARIANCE FROM THIS REQUIREMENT IF HEAVY BRUSH OR STANDING WATER MAKES INSTALLATION OR MAINTENANCE OF EROSION CONTROL FENCE IMPRACTICAL. |
| 3. | CONTRACTOR SHALL VERIFY EXISTING GRADES PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES AND/OR CONFLICTS. | 12. | THE TERM "OUTFALL STRUCTURE" IS USED SYNONYMOUSLY WITH "DROP OUTLET STRUCTURE" IN THESE DRAWINGS AND IN THE SPECIFICATIONS. |
| 4. | PROJECT IS WITHIN AND ADJACENT TO ENVIRONMENTALLY SENSITIVE AREAS INCLUDING WETLANDS AND OTHER SENSITIVE VEGETATION. OUTSIDE OF THE DIRECT WORK AREAS AND ACCESS CORRIDORS SPECIFIED ON THESE DRAWINGS, CONTRACTOR SHALL AVOID IMPACTS TO ENVIRONMENTALLY SENSITIVE AREAS DURING THE COURSE OF WORK. ANY DAMAGE CAUSED BY CONTRACTOR'S ACTIVITIES SHALL BE RESTORED AT THE EXPENSE OF CONTRACTOR AND TO THE SATISFACTION OF OWNER AND RESOURCE AGENCIES. OWNER SHALL BE THE SOLE ASSESSOR AS TO WHETHER ENVIRONMENTAL IMPACTS HAVE OCCURRED AS A RESULT OF CONTRACTOR'S ACTIVITIES. OWNER RESERVES THE RIGHT TO SUSPEND WORK AT ANY TIME IF IMPACTS OCCUR UNTIL SATISFACTORY CORRECTIVE MEASURES ARE IMPLEMENTED BY CONTRACTOR. | 13. | CONSTRUCT EARTHEN RAMPS TO ACCESS DIKES AND PLACEMENT AREAS. CONSTRUCT RAMPS USING MATERIAL EXCAVATED FROM DIKE INTERIORS. STABILIZE RAMPS WITH TIMBER MATS, STONE, OR OTHER MEANS AND METHODS AS NEEDED TO ADDRESS RUTTING AND EROSION. NUMBER AND CONFIGURATION OF ACCESS RAMPS SHALL BE SELECTED BY CONTRACTOR. NOTIFY OWNER OF PROPOSED LOCATIONS FOR ACCESS RAMPS PRIOR TO CONSTRUCTING RAMPS. RAMPS MAY REMAIN AFTER CONSTRUCTION WITH APPROVAL FROM OWNER. |
| 5. | CONTRACTOR SHALL OBTAIN PERMISSION FROM PROPERTY OWNERS FOR STAGING AREAS AND CONSTRUCTION ACCESS ROUTES ON PRIVATE AND FEDERAL PROPERTY. ENVIRONMENTALLY SENSITIVE AREAS SHALL NOT BE USED FOR STAGING OR ACCESS. | <p><u>SURVEYING NOTES:</u></p> <p>1. TOPOGRAPHIC DATA SHOWN FOR PA8 WAS OBTAINED THROUGH SURVEYS PERFORMED BY PTC-PERSONAL TECHNOLOGY CONSULTING UNDER CONTRACT WITH BOWNSVILLE NAVIGATION DISTRICT. SURVEYS WERE PERFORMED DURING OCTOBER 28, 2023. THESE DATA ARE REPRESENTATIVE OF THE SITE CONDITIONS THAT EXISTED AT THE TIME OF THE SURVEY. SITE CONDITIONS ARE SUBJECT TO CHANGE.</p> <p>2. ALL COORDINATES SHOWN ARE IN U.S. SURVEY FEET REFERENCED TO STATE PLANE, TEXAS SOUTH ZONE, NAD'83, GEOID 12A.</p> | |
| 6. | CONTRACTOR SHALL TAKE MEASURES TO PROTECT ALL EXISTING IMPROVEMENTS WITHIN THE WORK AREA. ANY DAMAGE CAUSED BY CONTRACTOR'S ACTIVITIES SHALL BE REPLACED/REPAIRED AT THE EXPENSE OF CONTRACTOR TO THE SATISFACTION OF OWNER. | | |
| 7. | CONTRACTOR SHALL TAKE PRECAUTIONS, SECURE EQUIPMENT, AND PROTECT THE WORK AGAINST ADVERSE WEATHER CONDITIONS AND/OR SURGE/WAKE FROM PASSING VESSELS REGARDLESS OF MARINE CONDITIONS. | | |
| 8. | REFER TO APPENDIX B OF THE SPECIFICATIONS FOR GEOTECHNICAL INFORMATION. | | |

SURVEYING NOTES:

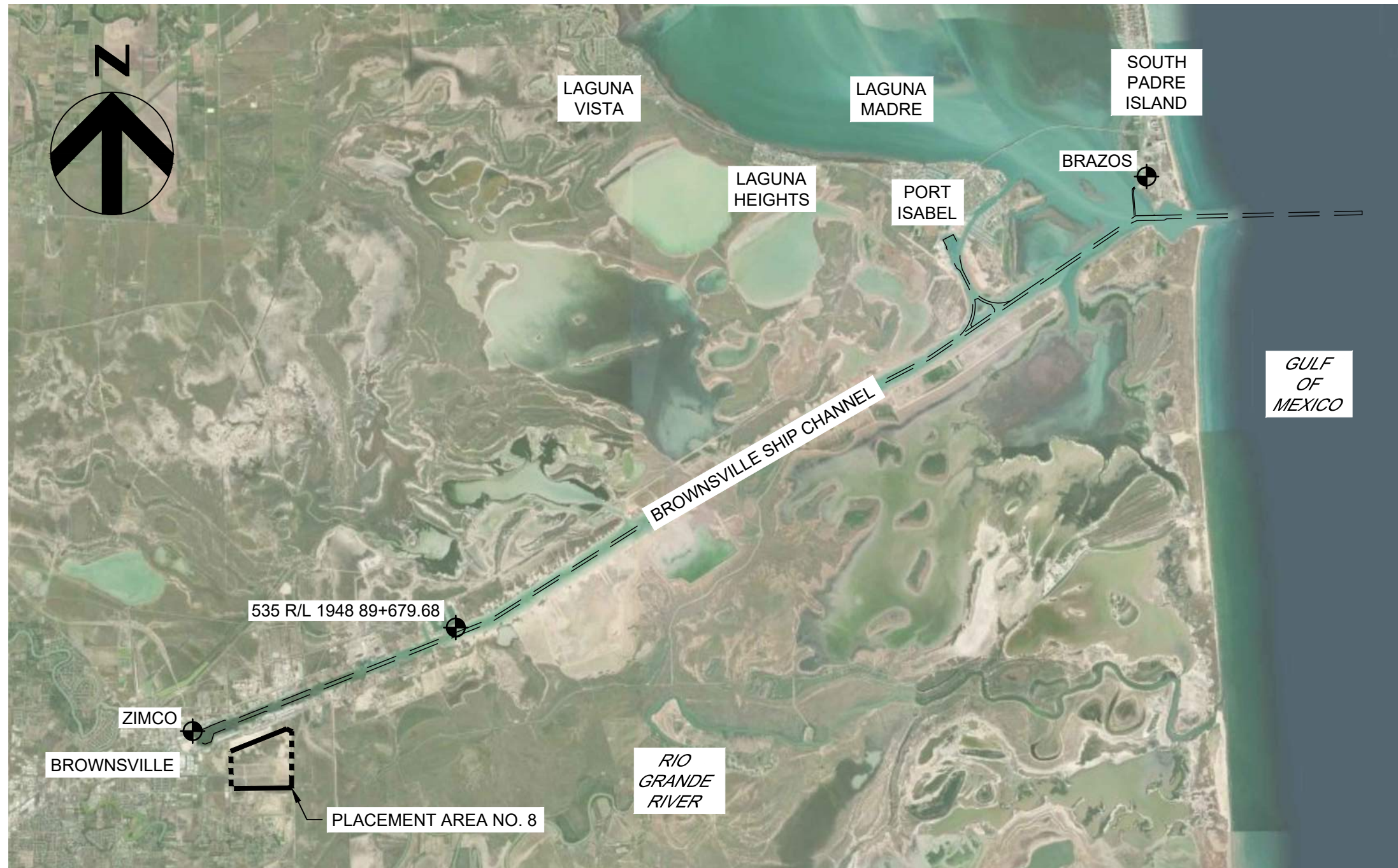
1. TOPOGRAPHIC DATA SHOWN FOR PA8 WAS OBTAINED THROUGH SURVEYS PERFORMED BY PTC-PERSONAL TECHNOLOGY CONSULTING UNDER CONTRACT WITH BOWNSVILLE NAVIGATION DISTRICT. SURVEYS WERE PERFORMED DURING OCTOBER 28, 2023. THESE DATA ARE REPRESENTATIVE OF THE SITE CONDITIONS THAT EXISTED AT THE TIME OF THE SURVEY. SITE CONDITIONS ARE SUBJECT TO CHANGE.
2. ALL COORDINATES SHOWN ARE IN U.S. SURVEY FEET REFERENCED TO STATE PLANE, TEXAS SOUTH ZONE, NAD'83, GEOID 12A.
3. THE FOLLOWING MONUMENTS SHALL BE APPLIED FOR SURVEY CONTROL:
REFERENCE MONUMENT "ZIMCO"
N: 16,518,058.49
E: 1,366,219.45
ELEV.: +6.6' NAVD

REFERENCE MONUMENT "535 R/L 1948 89+679.68"
N: 16,509,591.26
E: 1,344,712.44
ELEV.: +13.9' NAVD

REFERENCE MONUMENT "BRAZOS"
N: 16,554,943.9
E: 1,422,679.84
ELEV.: +4.2' NAVD
4. CONTRACTOR SHALL VERIFY ACCURACY OF SURVEY CONTROL MONUMENTS PRIOR TO CONSTRUCTION. IMMEDIATELY REPORT ANY DISCREPANCIES TO ENGINEER.

DREDGED MATERIAL PLACEMENT AREAS:

- BORROW MATERIAL FOR DIKE IMPROVEMENTS SHALL BE OBTAINED FROM PA INTERIORS AND SHALL BE TESTED FOR COMPLIANCE WITH SPECIFICATION 31 24 00 (EMBANKMENT CONSTRUCTION). BORROW AREAS SHALL BE OFFSET 100' (MIN.) FROM TOE OF NEW/RAISED PERIMETER DIKES AND 50' (MIN.) FROM TOE OF INTERIOR DIKES.
2. ALL SIDES SLOPES OF DIKES SHALL BE 3:1 (H:V) OR FLATTER. REPAIR RUTTING AND EROSION ALONG EXTERIOR SIDE SLOPE OF PERIMETER DIKES.
3. CONTRACTOR SHALL STRIP VEGETATION FROM AREAS WHERE FILL WILL BE PLACED FOR DIKE IMPROVEMENTS, AND FROM TOP OF BORROW AREAS. REFER TO SPECIFICATION SECTION 31 24 00 (EMBANKMENT CONSTRUCTION) FOR ADDITIONAL REQUIREMENTS FOR CONSTRUCTION OF DIKE IMPROVEMENTS.
4. CONSTRUCTION TOLERANCE FOR DIKE CREST ELEVATIONS SHALL BE NO GREATER THAN 6 INCHES ABOVE OR 2 INCHES BELOW PRESCRIBED ELEVATIONS. CONSTRUCTION TOLERANCE FOR DIKE CREST WIDTHS SHALL BE +/- 0.5 FEET. IN LOCATIONS WHERE EXISTING DIKE CROSS SECTION IS LARGER THAN SPECIFIED DIKE CONSTRUCTION TEMPLATE, CONTRACTOR SHALL NOT DEGRADE, CUT, OR EXCAVATE EXISTING DIKE TO DECREASE THE CROSS SECTION. WHERE CREST OF EXISTING DIKE IS HIGHER OR WIDER THAN THE SPECIFIED DIKE CONSTRUCTION TEMPLATE, NO WORK IS REQUIRED EXCEPT AS NEEDED TO FILL ANY LOCALIZED DEPRESSIONS, RILLS, OR GULLIES.
5. FINISHED GRADE BETWEEN DIKES AND BORROW AREAS SHALL BE SLOPED TO DRAIN AWAY FROM DIKES. DRAINAGE SWALES THAT DISCHARGE TO OPEN AREAS OR BORROW AREAS SHALL BE CONSTRUCTED AS NEEDED TO PREVENT PONDING NEAR DIKES.
6. CONTRACTOR SHALL BE AWARE THAT WORK SITES CONTAIN PONDED AND TIDALLY INFLUENCED AREAS THAT WILL REQUIRE CARE AND CONTROL OF WATER DURING CONSTRUCTION. CONTRACTOR SHALL CONSTRUCT TEMPORARY BERMS AND DRAINAGE DITCHES, PERFORM PUMPING, AND INSTALL TEMPORARY WELL POINT SYSTEMS AS NEEDED TO DEWATER THE WORK AREAS DURING CONSTRUCTION. ANY EARTHWORK FOR CARE AND CONTROL OF WATER OUTSIDE OF PLACEMENT AREAS REQUIRES PRIOR APPROVAL FROM OWNER.
7. REFER TO SPECIFICATION 31 24 00 (EMBANKMENT CONSTRUCTION) FOR COMPACTION REQUIREMENTS AND CONSTRUCTION LIFT DETAILS.
8. WITHIN PA INTERIORS, FOUNDATION SOILS WHERE PERIMETER DIKE CONSTRUCTION WILL OCCUR SHALL BE SEMI-COMPACTED. MATERIAL PLACED FOR PERIMETER DIKE CONSTRUCTION (INCLUDING DIKE RAISES) SHALL BE COMPACTED. REFER TO SPECIFICATION 31 24 00 (EMBANKMENT CONSTRUCTION) FOR COMPACTION REQUIREMENTS OF SEMI-COMPACTED AND COMPACTED MATERIALS.
9. EXCEPT AS SPECIFIED OTHERWISE ON THESE DRAWINGS, EXISTING INTERIOR DIKES SHALL NOT BE DEGRADED OR USED AS BORROW MATERIAL FOR PERIMETER DIKE IMPROVEMENTS.



0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	DANIEL GARZA
DESIGNED BY	D. GARZA
DRAWN BY	M. MORALES
CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072



BROWNSVILLE NAVIGATION DISTRICT
PLACEMENT AREA 8
DIKE RELOCATION



GENERAL NOTES

FILENAME	00G-03.DWG
SCALE	AS NOTED

SHEET

00G-03

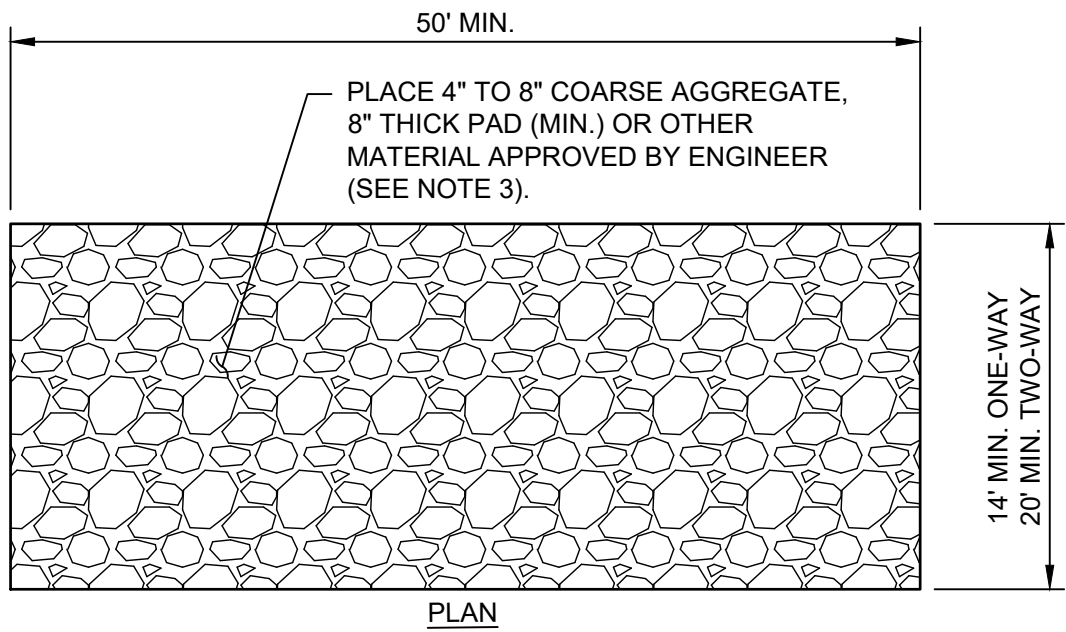


- NOTES:
- OPTIONAL CONSTRUCTION ACCESS ROUTES SHOWN ON THIS SHEET ARE NOT GUARANTEED AND ARE SUBJECT TO APPROVAL FROM THE PROPERTY OWNER. CONDITION OF ALL CONSTRUCTION ACCESS ROUTES SHALL BE DOCUMENTED THROUGH GROUND PHOTOGRAPHY INCLUDED WITH DAILY REPORTS PRIOR TO SITE ACCESS. ALL CONSTRUCTION ACCESS ROUTES SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION UPON COMPLETION OF WORK.
 - AT PA8B, ADJACENT PROPERTY OWNER IS U.S. FISH AND WILDLIFE SERVICE. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM USFWS PRIOR TO USE OF THESE ACCESS ROUTES. CONTACT AT USFWS IS: CHRIS PEREZ (REFUGEE MANAGER), 956-475-1372, 956-784-7500, CHRIS_PEREZ@FWS.GOV.
 - PROVIDE SEDIMENT CONTROL PADS AT TRUCK EXIT POINTS AT ALL DREDGED MATERIAL PLACEMENT AREAS WHERE WORK IS PERFORMED. PADS SHALL BE CONSTRUCTED NEAR LOCATIONS WHERE VEHICLES ACCESS PAVED ROADS. REFER TO TYPICAL DETAIL ON THIS SHEET. REMOVE PAD AT COMPLETION OF CONSTRUCTION AND GRADE FOOTPRINT TO MATCH ORIGINAL CONDITION. COORDINATE PAD LOCATION WITH ENGINEER PRIOR TO CONSTRUCTION. SEE DETAIL 5 ON THIS SHEET FOR SEDIMENT CONTROL PAD REQUIREMENTS.

1 CONSTRUCTION ACCESS ROUTES
SCALE: 0 2000' 4000'



2 PA 8 ACCESS ROUTE
SCALE: N.T.S.



5 DETAIL - SEDIMENT CONTROL PAD AT CONSTRUCTION EXITS
SCALE: N.T.S.



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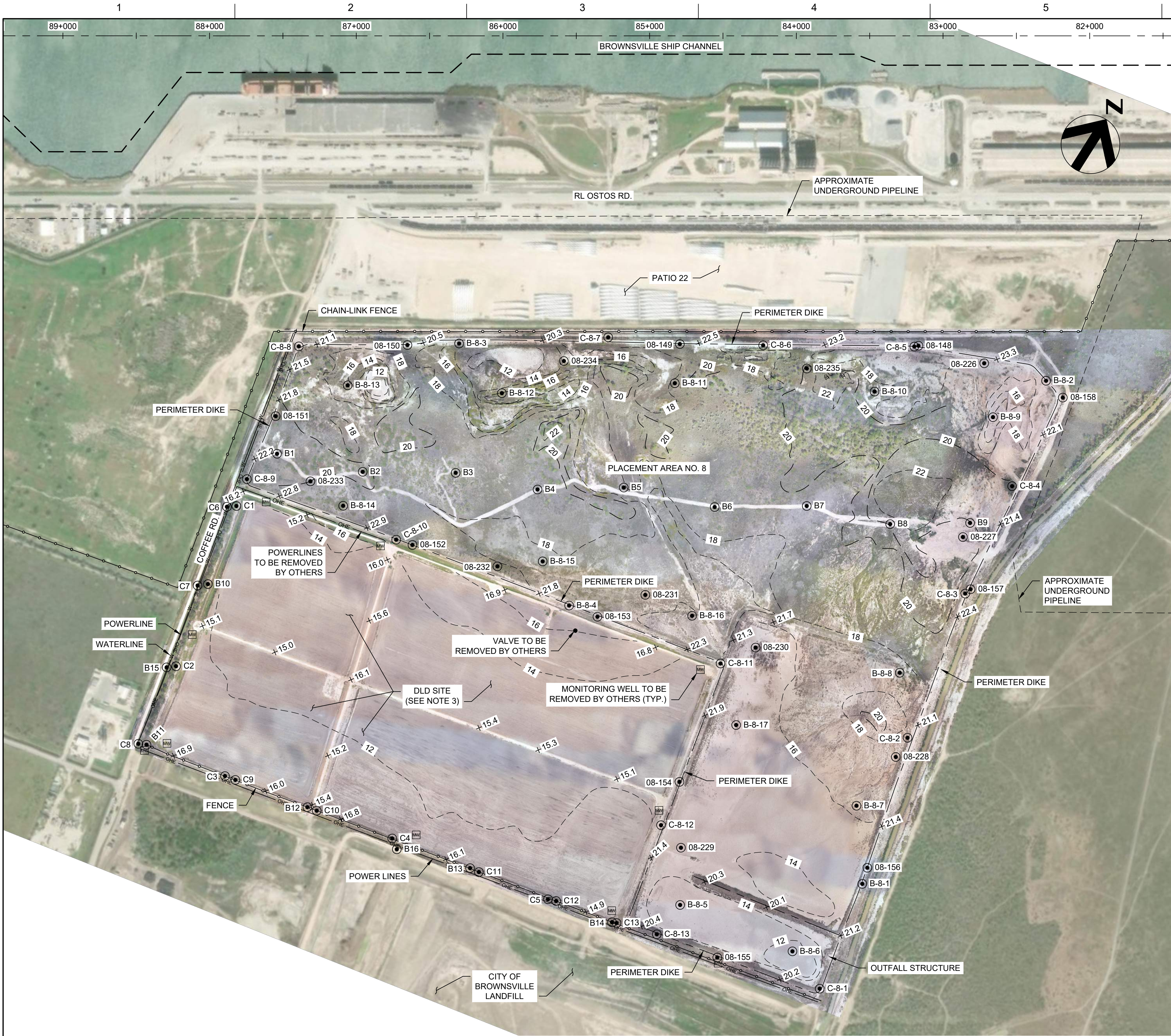
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CONSTRUCTION ACCESS ROUTES

FILENAME | 00G-04.DWG
SCALE | AS NOTED

SHEET
00G-04



1
00G-02
EXISTING CONDITIONS
SCALE: 0 400' 800'

2018 BORING LOCATIONS			
NUMBER	NORTHING	EASTING	ELEVATION
B-8-1	16,505,962	1,352,782	22.0
B-8-2	16,509,611	1,352,675	24.4
B-8-3	16,508,364	1,348,864	17.5
B-8-4	16,506,983	1,350,223	22.1
B-8-5	16,505,368	1,351,882	13.0
B-8-6	16,505,359	1,352,510	14.0
B-8-7	16,506,442	1,352,548	13.7
B-8-8	16,507,393	1,352,486	15.2
B-8-9	16,509,247	1,352,430	20.1
B-8-10	16,509,109	1,351,616	20.3
B-8-11	16,508,657	1,350,330	17.4
B-8-12	16,508,157	1,349,260	13.7
B-8-13	16,507,817	1,348,264	19.0
B-8-14	16,507,043	1,348,540	20.3
B-8-15	16,507,196	1,349,944	18.1

2018 BORING LOCATIONS			
NUMBER	NORTHING	EASTING	ELEVATION
B-8-16	16,507,229	1,351,027	14.6
B-8-17	16,506,649	1,351,582	15.1
C-8-1	16,505,191	1,352,777	22.0
C-8-2	16,507,001	1,352,700	14.5
C-8-3	16,508,060	1,352,700	22.5
C-8-4	16,508,858	1,352,726	22.6
C-8-5	16,509,495	1,351,754	23.9
C-8-6	16,509,121	1,350,794	23.9
C-8-7	16,508,780	1,349,792	20.6
C-8-8	16,507,941	1,347,856	20.8
C-8-9	16,506,969	1,347,863	22.4
C-8-10	16,506,963	1,348,961	24.0
C-8-11	16,506,999	1,351,328	21.7
C-8-12	16,505,825	1,351,359	16.4
C-8-13	16,505,124	1,351,608	21.5

2023 BORING LOCATIONS			
NUMBER	NORTHING	EASTING	ELEVATION
B1	16,507,206	1,347,990	19.3
B2	16,507,308	1,348,578	20.9
B3	16,507,536	1,349,169	18.6
B4	16,507,638	1,349,729	18.4
B5	16,507,868	1,350,271	17.2
B6	16,507,975	1,350,895	18.2
B7	16,508,214	1,351,475	18.2
B8	16,508,310	1,352,050	19.6
B9	16,508,519	1,352,553	19.7
B10	16,506,206	1,347,882	12.9
B11	16,505,034	1,347,898	17.0
B12	16,505,045	1,349,075	16.6
B13	16,505,071	1,350,259	16.0
B14	16,505,087	1,351,294	14.9
B15	16,505,575	1,347,831	12.1
B16	16,505,005	1,349,747	13.0
C1	16,506,772	1,347,865	13.7
C2	16,505,605	1,347,887	12.3
C3	16,505,034	1,348,475	16.9
C4	16,505,062	1,349,691	15.8
C5	16,505,071	1,350,830	13.6
C6	16,506,743	1,347,807	11.9
C7	16,506,171	1,347,820	12.0
C8	16,505,019	1,347,845	13.2
C9	16,505,036	1,348,550	16.6
C10	16,505,047	1,349,143	16.8
C11	16,505,068	1,350,325	16.0
C12	16,505,080	1,350,887	15.0
C13	16,505,093	1,351,325	15.2

HISTORICAL USACE BORING LOCATIONS			
NUMBER	NORTHING	EASTING	ELEVATION
08-148	16,509,510	1,351,778	19.6
08-149	16,508,918	1,350,263	20.8
08-150	16,508,223	1,348,541	19.1
08-151	16,507,440	1,347,886	20.3
08-152	16,506,970	1,349,078	20.1
08-153	16,506,984	1,350,430	21.1
08-154	16,506,146	1,351,367	17.7
08-155	16,505,130	1,352,050	18.0
08-156	16,506,077	1,352,773	17.4
08-157	16,508,101	1,352,723	17.8
08-158	16,509,547	1,352,823	16.3
08-226	16,509,566	1,352,238	13.4
08-227	16,508,412	1,352,543	16.7
08-228	16,506,850	1,352,674	10.9
08-229	16,505,733	1,351,543	12.2
08-230	16,507,188	1,351,509	12.3
08-231	16,507,243	1,350,678	14.1
08-232	16,507,050	1,349,670	16.1
08-233	16,507,115	1,348,271	18.3
08-234	16,508,518	1,349,572	19.4
08-235	16,509,084	1,351,129	22.7

- NOTES:
- REFER TO DREDGED MATERIAL PLACEMENT AREA NOTES ON SHEET 00G-03.
 - REFER TO SHEET 01C-02 FOR DIKE BASELINE AND STATIONING.
 - DLD SITE IS A PREVIOUS DEDICATED LAND DISPOSAL AREA USED BY THE BROWNSVILLE PUBLIC UTILITIES BOARD FOR PLACEMENT OF BIOSOLIDS FROM A CITY OF BROWNSVILLE SEWAGE TREATMENT PLANT. BIOSOLIDS WERE PLACED IN THE DLD SITE AFTER BEING TREATED AND DRIED.



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0	01/17/2025	ISSUED FOR BIDS

PROJECT MANAGER	DANIEL GARZA
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CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072



BROWNSVILLE NAVIGATION DISTRICT
PLACEMENT AREA 8
DIKE RELOCATION

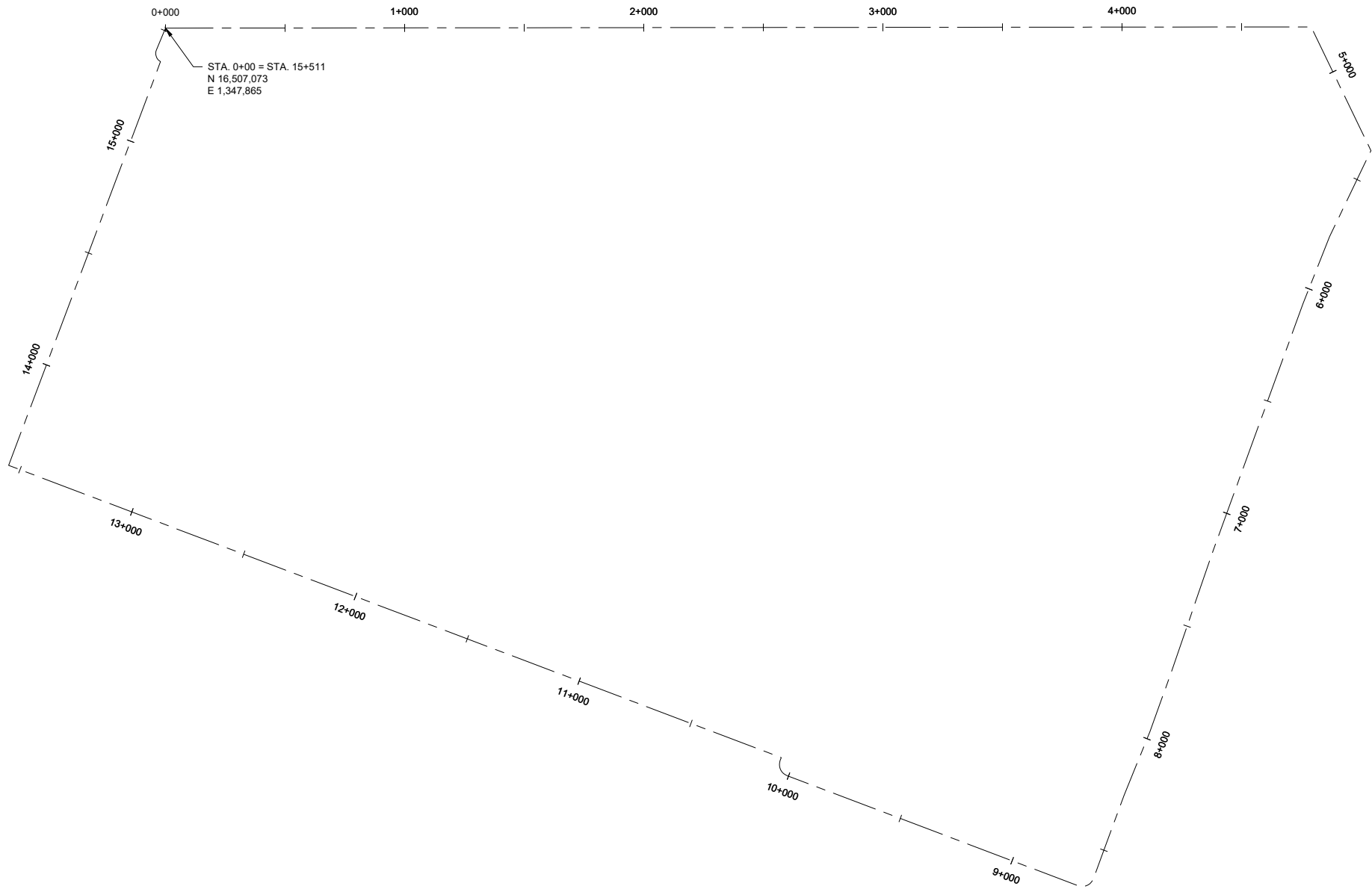
PORT OF BROWNSVILLE
the port that works

EXISTING CONDITIONS

FILENAME | 01C-01.DWG
SCALE | AS NOTED

SHEET
01C-01

NOTES:
1. DIKE BASELINE REPRESENTS APPROXIMATE CENTERLINE OF EXISTING DIKE. OWNER WILL PROVIDE CAD LINEWORK FOR DIKE BASELINE TO CONTRACTOR PRIOR TO CONSTRUCTION.



1
01C-01 SCALE: 0 300' 600'

PLACEMENT AREA NO. 8 DIKE BASELINE



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PLACEMENT AREA NO. 8 DIKE BASELINE

FILENAME 01C-02.DWG
SCALE AS NOTED

SHEET
01C-02



1 EXISTING OUTFALL STRUCTURE
01C-01 SCALE: N.T.S. EXISTING OUTFALL STRUCTURE TO REMAIN



EXISTING OUTFALL STRUCTURE PHOTO



0	01/17/2025	ISSUED FOR BIDS
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PROJECT NUMBER	10376072



EXISTING OUTFALL STRUCTURE PHOTOS

FILENAME	01C-03.DWG
SCALE	AS NOTED

SHEET
01C-03



- NOTES:
- REFER TO DREDGED MATERIAL PLACEMENT AREA NOTES ON SHEET 00G-03.
 - WHERE RAISING EXISTING DIKES IS SPECIFIED, REPAIR AND PERFORM MAINTENANCE ON DIKES TO PROVIDE THE MINIMUM TEMPLATE SHOWN ON SHEET 10C-01. REPAIR EROSION RILLS, RUTS, AND GULLIES, AND RESTORE CREST ELEVATION AND WIDTH.
 - ALL ORGANIC MATERIAL FROM CLEARING AND GRUBBING, INCLUDING TREES AND BRUSH, SHALL BE RELOCATED TO ANOTHER PORTION OF PLACEMENT AREA AND BURIED UNDER 2' (MIN.) OF SOIL COVER. DEBRIS SHALL NOT BE ALLOWED TO CLOG OR DAMAGE OUTFALL STRUCTURES.
 - EXISTING CHAIN-LINK FENCE IS A SECURITY FEATURE THAT SHALL REMAIN FUNCTIONAL THROUGH DURATION OF WORK. FENCE SHALL BE RELOCATED AS NEEDED TO COMPLETE PA IMPROVEMENTS. ANY TEMPORARY GAPS IN FENCE SHALL BE CLOSED WITHIN 12 HOURS.
 - BORROW MATERIAL SHALL BE OBTAINED FROM PATIO 22 EXPANSION AREA AND PA8 INTERIOR. PATIO 22 EXPANSION AREA SHALL NOT BE EXCAVATED BELOW ELEV. +10 FT. BORROW MATERIAL FROM PA8 INTERIOR SHALL NOT BE EXCAVATED WITHIN 100 FT OF PERIMETER DIKES.
 - EXCEPT WHERE OTHERWISE NOTED, EXISTING INTERIOR TRAINING DIKES MAY BE EXCAVATED FOR USE AS BORROW MATERIAL.
 - ALL BORROW MATERIAL IS SUBJECT TO TESTING FOR COMPLIANCE WITH "SUITABLE MATERIALS" REQUIREMENTS IN SPECIFICATION 31 24 00 (EMBANKMENT CONSTRUCTION). MATERIAL EXCAVATED FROM EXISTING DIKES IS NOT GUARANTEED TO CONTAIN SUITABLE MATERIALS FOR NEW DIKE CONSTRUCTION.
 - CONSTRUCTION OF NEW NORTH DIKE ADJACENT TO PATIO EXPANSION AREA REQUIRES A TOE STABILITY BERM. THE EXCAVATION FOR THE TOE STABILITY BERM SHALL NOT BE BACKFILLED. TO ALLOW DRAINAGE FROM THIS EXCAVATION, EXCAVATE A SWALE TO ALLOW WATER TO FLOW TO EAST AWAY FROM DIKE AND PATIO EXPANSION AREA. BOTTOM OF SWALE SHALL BE 2 FT WIDE (MIN) AND ELEV +10 FT.
 - EXISTING NORTH DIKE SHALL BE EXCAVATED AND DEGRADED AT LOCATIONS SHOWN (SEE SHEET 08C-01). EXCAVATED MATERIAL SHALL BE PLACED WITHIN INTERIOR OF PA8. EXCAVATED MATERIAL MAY BE USED FOR NEW DIKE CONSTRUCTION, SUBJECT TO TESTING AS STATED IN NOTE 7.
 - ADDITIVE BID NO. 1 WORK CONSISTS OF REMOVAL OF 5,250 LF OF EXISTING INTERIOR DIKE AT LOCATION SHOWN. IF THIS ADDITIVE BID IS AWARDED, DIKE SHALL BE EXCAVATED TO APPROXIMATE ELEVATION OF +15 FT TO MATCH EXISTING ELEVATIONS ADJACENT TO DIKE. SUBJECT TO TESTING AS STATED IN NOTE 7, EXCAVATED MATERIAL MAY BE USED FOR NEW DIKE CONSTRUCTION. EXCAVATED MATERIAL NOT USED FOR NEW DIKE CONSTRUCTION SHALL BE PLACED IN DESIGNATED STOCKPILE AREAS WITHIN OLD PORTION OF DMPA INTERIOR. MOUNDING HEIGHT LIMIT WITHIN THESE STOCKPILE AREAS IS +18 FT.

- LEGEND:
- OPTIONAL BORROW AREA FOR DIKE CONSTRUCTION. THIS AREA SHALL NOT BE EXCAVATED BELOW ELEV. +10 FT.
 - AREAS NOT ALLOWED TO BE EXCAVATED AS BORROW MATERIAL FOR DIKE CONSTRUCTION
 - ADDITIVE BID NO. 1 (SEE NOTE 10)

1 PROJECT LAYOUT
00G-02 SCALE: 0 300' 600'



0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

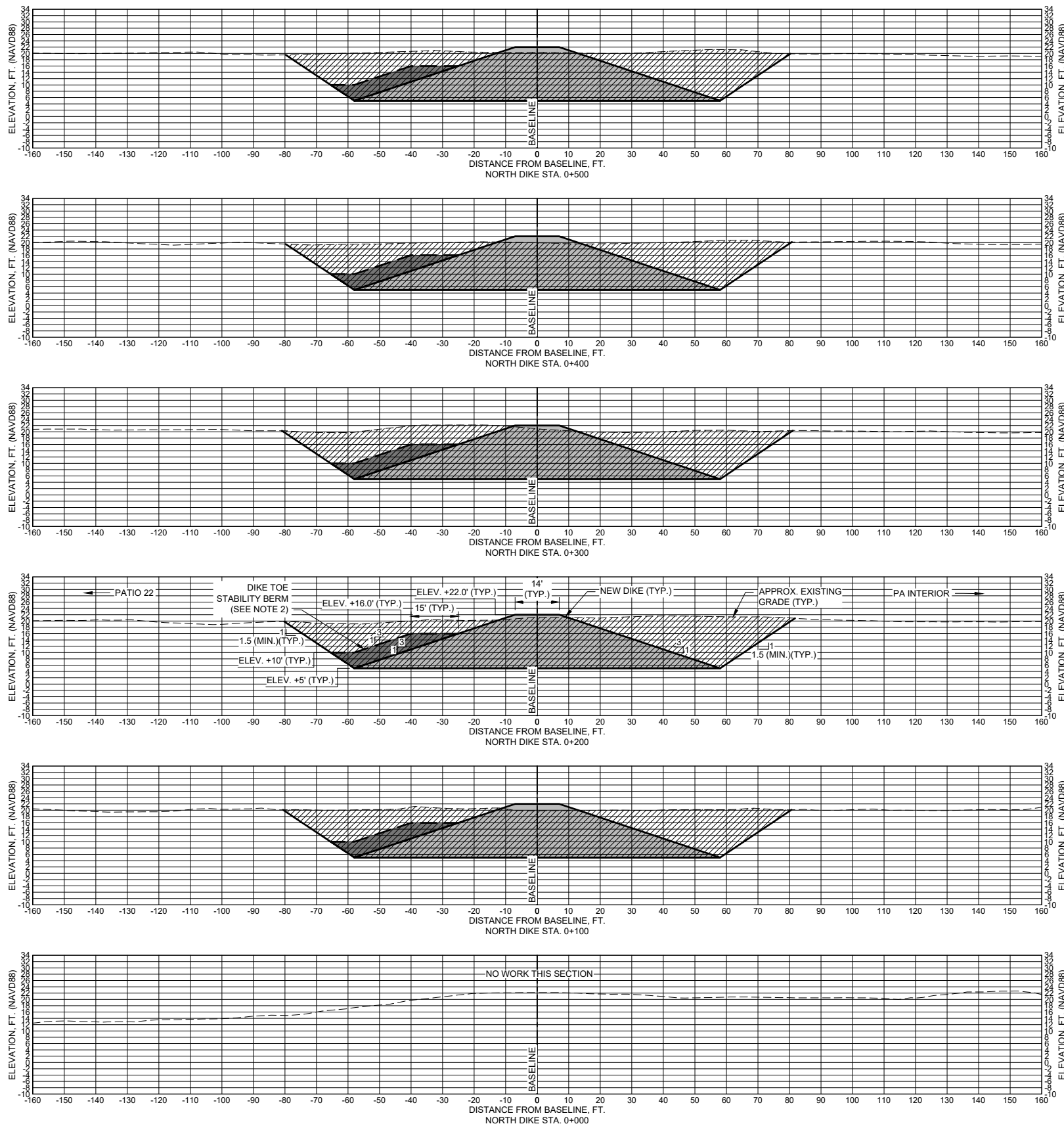
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CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072



PROJECT LAYOUT

FILENAME 02C-01.DWG
SCALE AS NOTED

SHEET
02C-01



NOTES:

1. SECTIONS VIEWED LOOKING TOWARDS INCREASING STATIONS.
2. DIKE TOE STABILITY BERM SHALL CONSIST OF SEMI-COMPACTED FILL. THIS BERM IS INTEGRAL TO THE NEW DIKE AND REQUIRED FOR DIKE STABILITY. ANY FUTURE DEGRADING THAT IS PERFORMED BY OTHERS ON THE NORTH (PATIO 22) SIDE OF THIS DIKE SHALL NOT REMOVE OR MODIFY THIS TOE STABILITY BERM.
3. ALL SURPLUS MATERIAL SHALL BE PLACED WITHIN PA INTERIOR A MINIMUM OF 100 FT FROM DIKE CENTERLINE.

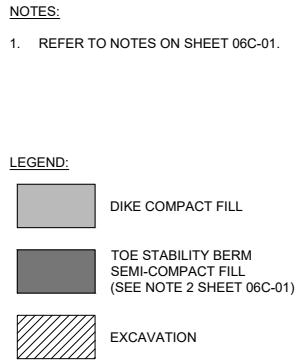
LEGEND:

- DIKE COMPACT FILL
- TOE STABILITY BERM SEMI-COMPACT FILL (SEE NOTE 2)
- EXCAVATION

0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	DANIEL GARZA
DESIGNED BY	D. GARZA
DRAWN BY	M. MORALES
CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072



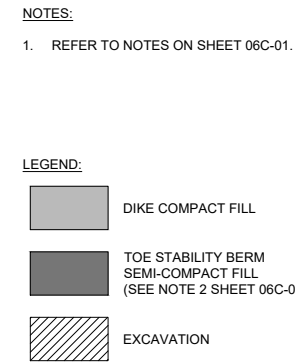


NOTES:

1. REFER TO NOTES ON SHEET 06C-01.

LEGEND:

	DIKE COMPACT FILL
	TOE STABILITY BERM SEMI-COMPACT FILL (SEE NOTE 2 SHEET 06C-01)
	EXCAVATION

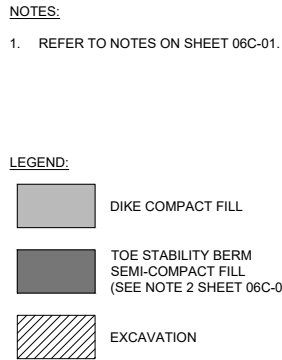


NOTES:

1. REFER TO NOTES ON SHEET 06C-01.

LEGEND:

	DIKE COMPACT FILL
	TOE STABILITY BERM SEMI-COMPACT FILL (SEE NOTE 2 SHEET 06C-01)
	EXCAVATION

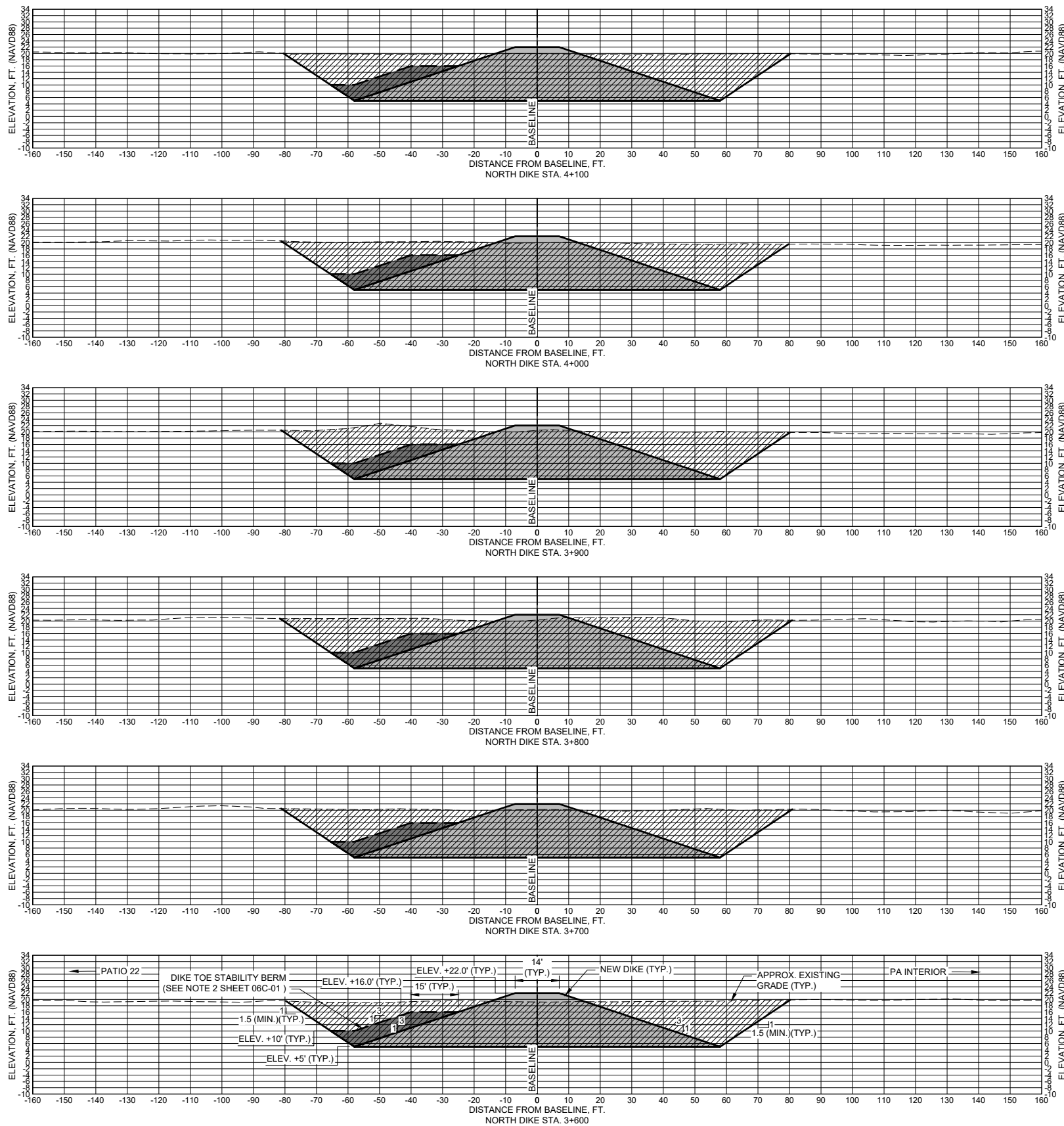


NOTES:

1. REFER TO NOTES ON SHEET 06C-01.

LEGEND:

	DIKE COMPACT FILL
	TOE STABILITY BERM SEMI-COMPACT FILL (SEE NOTE 2 SHEET 06C-01)
	EXCAVATION

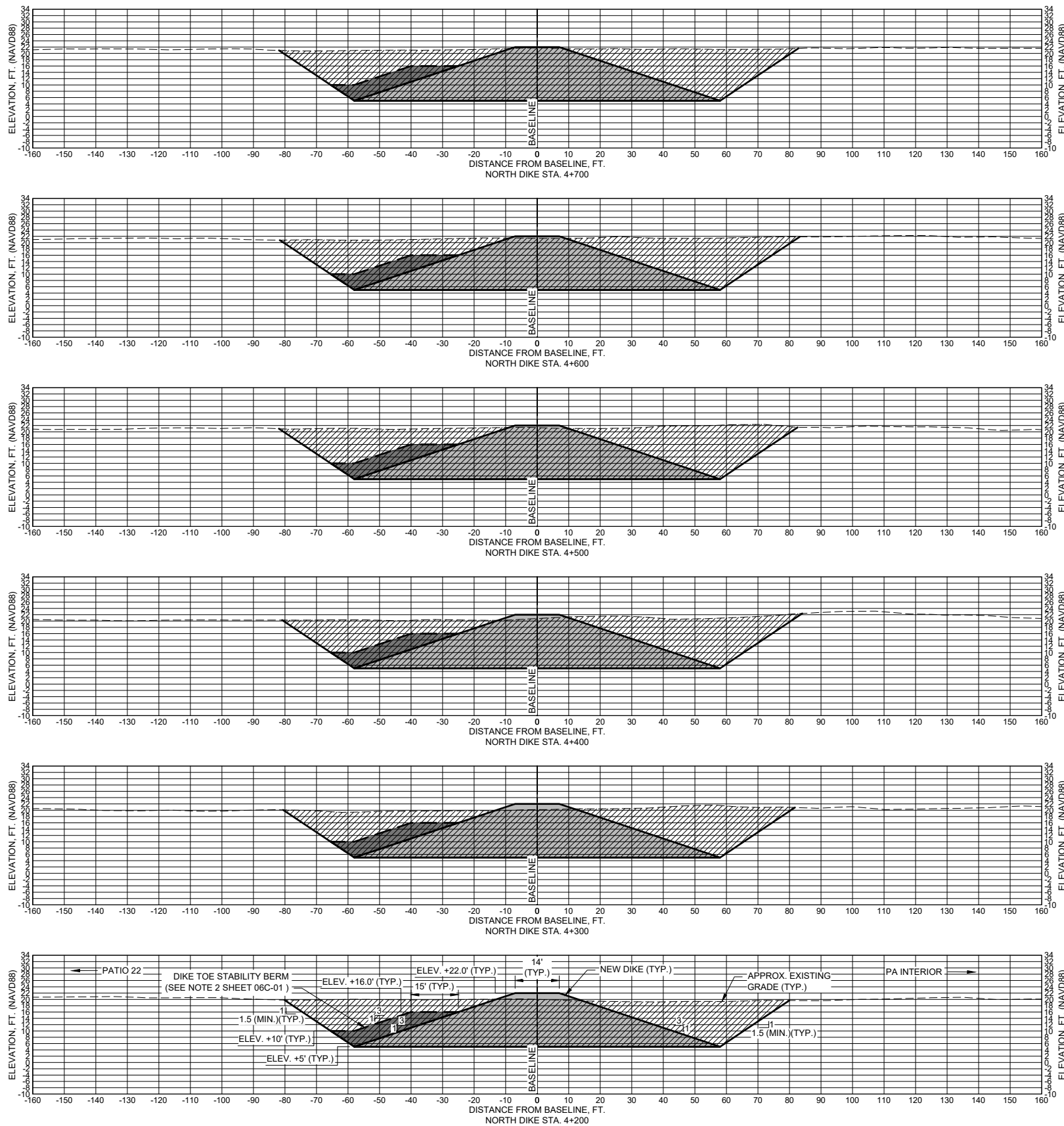


NOTES:

1. REFER TO NOTES ON SHEET 06C-01.

LEGEND:

- DIKE COMPACT FILL
- TOE STABILITY BERM SEMI-COMPACT FILL (SEE NOTE 2 SHEET 06C-01)
- EXCAVATION



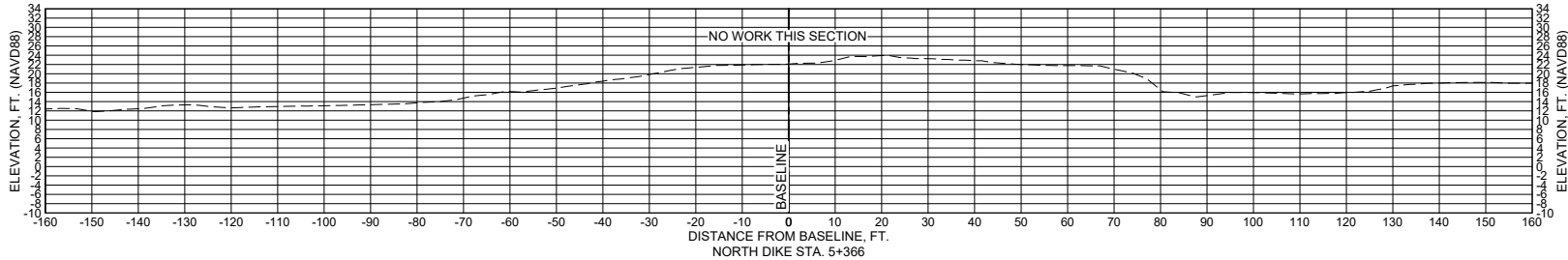
NOTES:

1. REFER TO NOTES ON SHEET 06C-01.

LEGEND:

- DIKE COMPACT FILL
- TOE STABILITY BERM
SEMI-COMPACT FILL
(SEE NOTE 2 SHEET 06C-01)
- EXCAVATION

- NOTES:
- 1. SECTIONS VIEWED LOOKING TOWARDS INCREASING STATIONS.



0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	DANIEL GARZA
DESIGNED BY	D. GARZA
DRAWN BY	M. MORALES
CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072



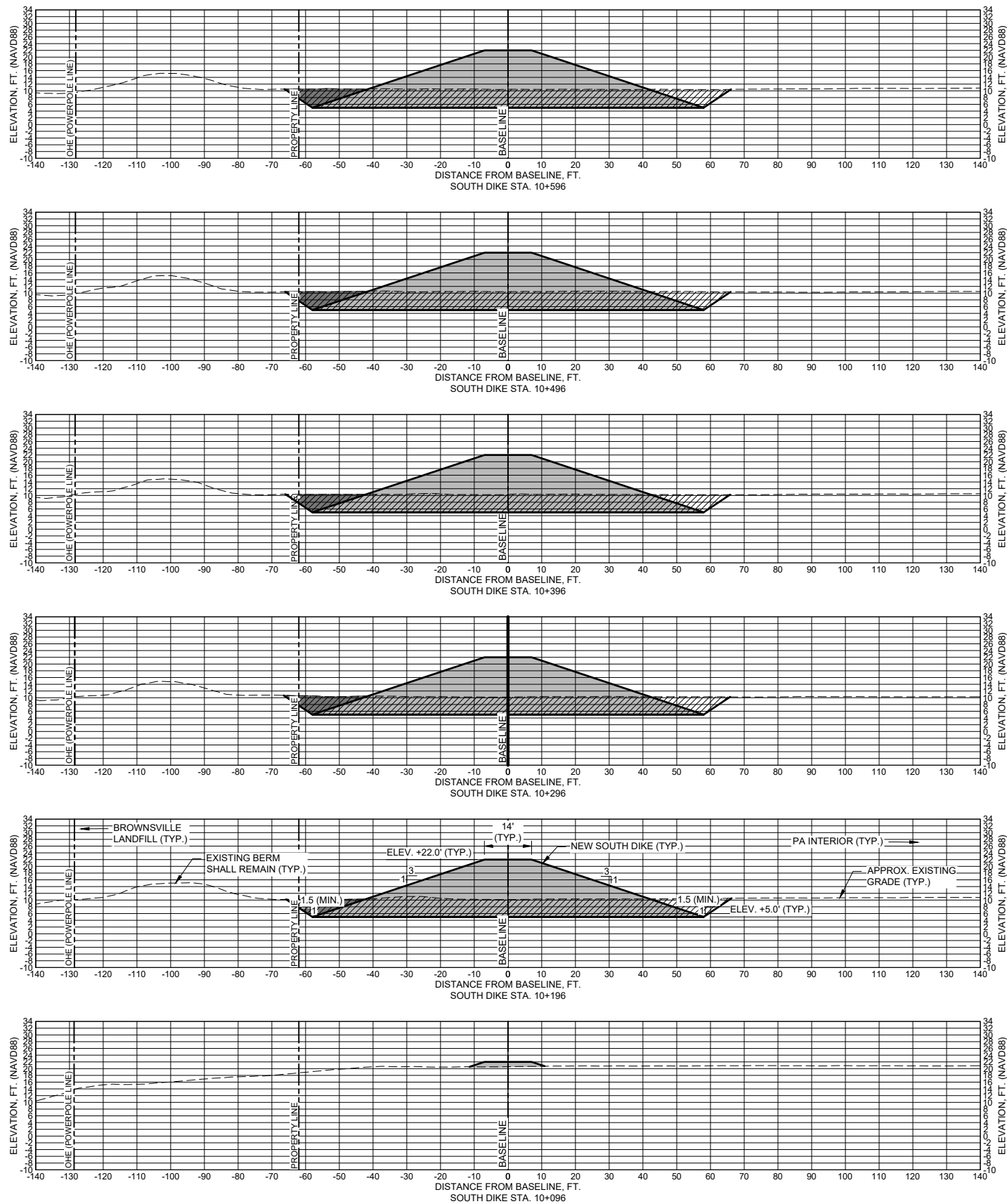
DIKE RELOCATION - CROSS-SECTIONS 10

FILENAME | 06C-10.DWG

SCALE | AS NOTED

SHEET

06C-10



NOTES:

1. SECTIONS VIEWED LOOKING TOWARDS INCREASING STATIONS.

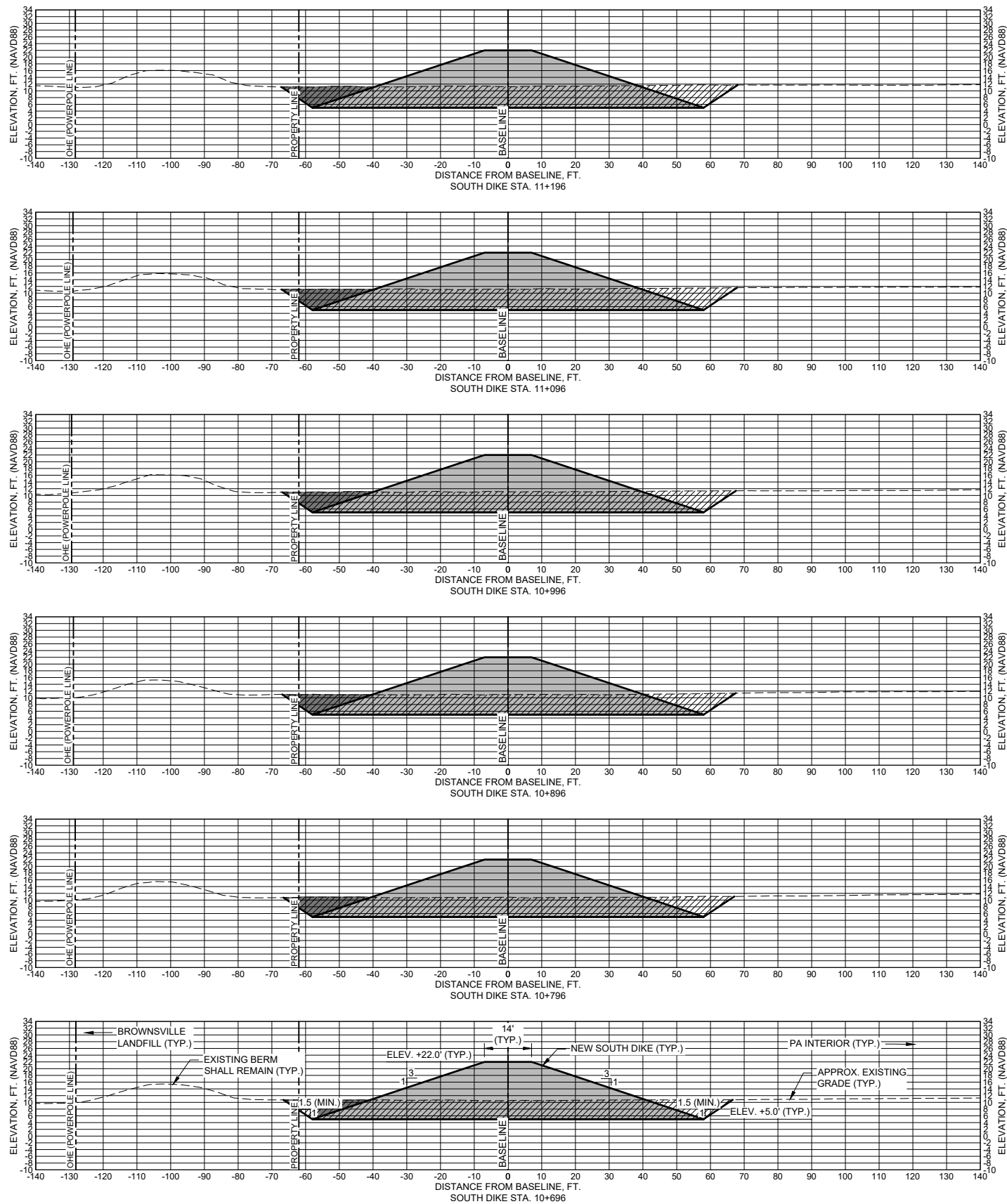
LEGEND:

- DIKE COMPACT FILL
- EXCAVATION
- EXCAVATE AND BACKFILL

0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	DANIEL GARZA
DESIGNED BY	D. GARZA
DRAWN BY	M. MORALES
CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072





NOTES:

1. REFER TO NOTES ON SHEET 07C-01.

LEGEND:

- DIKE COMPACT FILL
- EXCAVATION
- EXCAVATE AND BACKFILL

0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

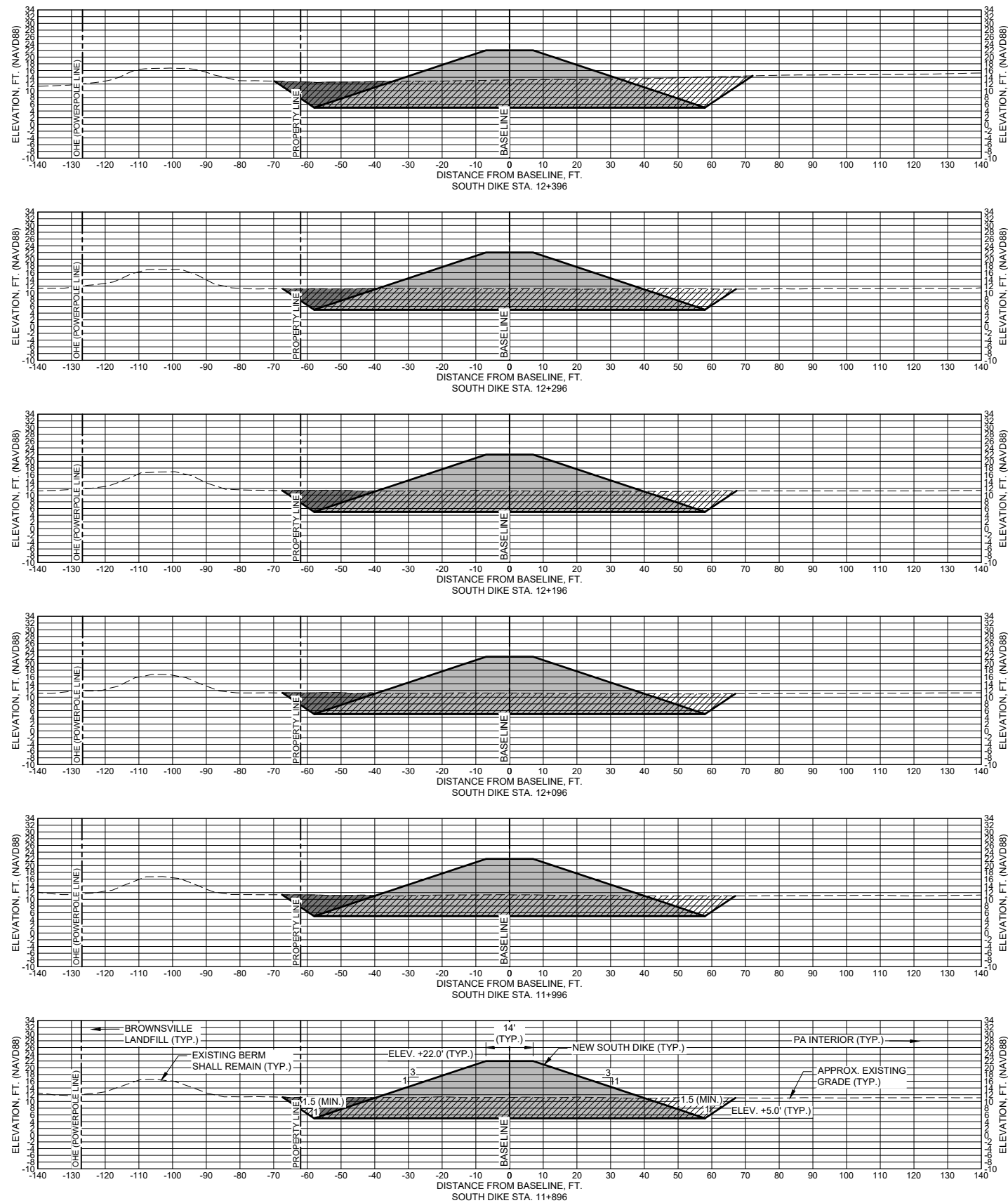
PROJECT MANAGER	DANIEL GARZA
DESIGNED BY	D. GARZA
DRAWN BY	M. MORALES
CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072



BROWNSVILLE NAVIGATION DISTRICT
PLACEMENT AREA 8
DIKE RELOCATION



NEW DIKE - CROSS-SECTIONS 02



NOTES:

1. REFER TO NOTES ON SHEET 07C-01.

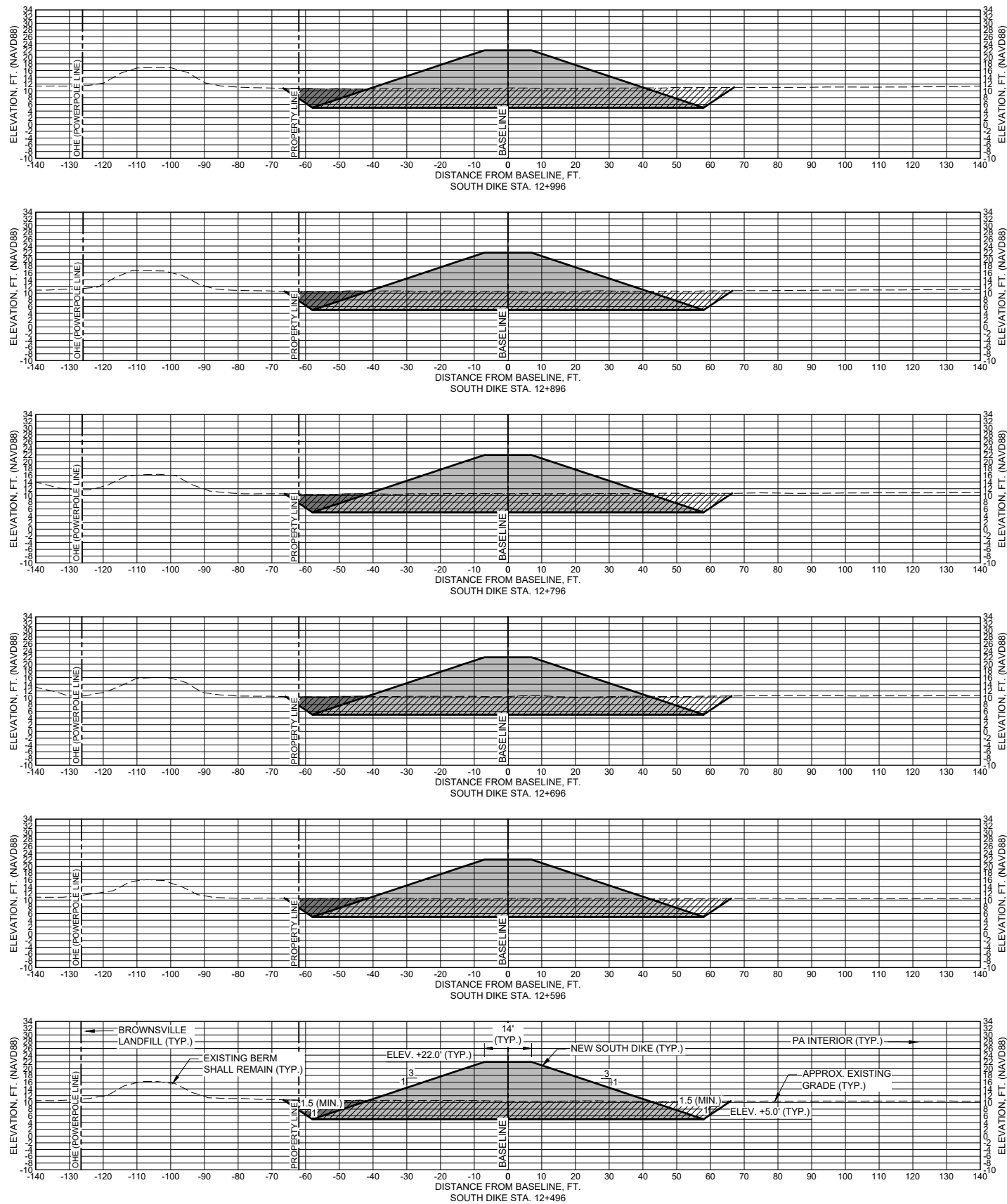
LEGEND:

- DIKE COMPACT FILL
- EXCAVATION
- EXCAVATE AND BACKFILL

0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	DANIEL GARZA
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PROJECT NUMBER	10376072

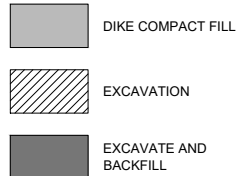




NOTES:

1. REFER TO NOTES ON SHEET 07C-01.

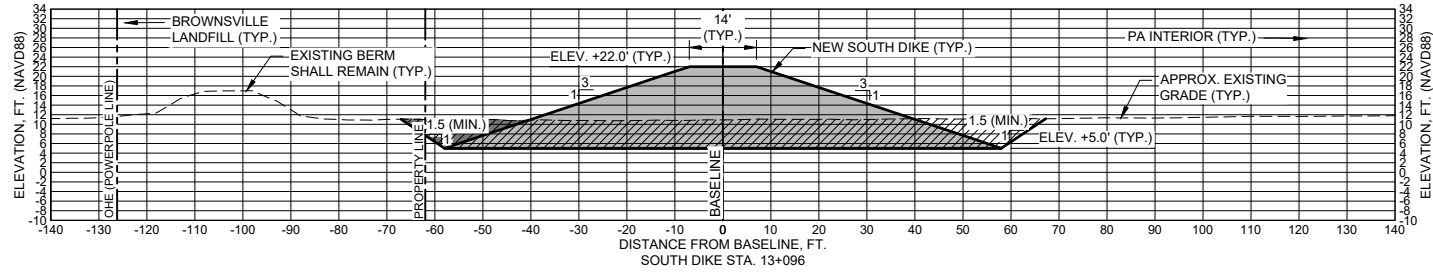
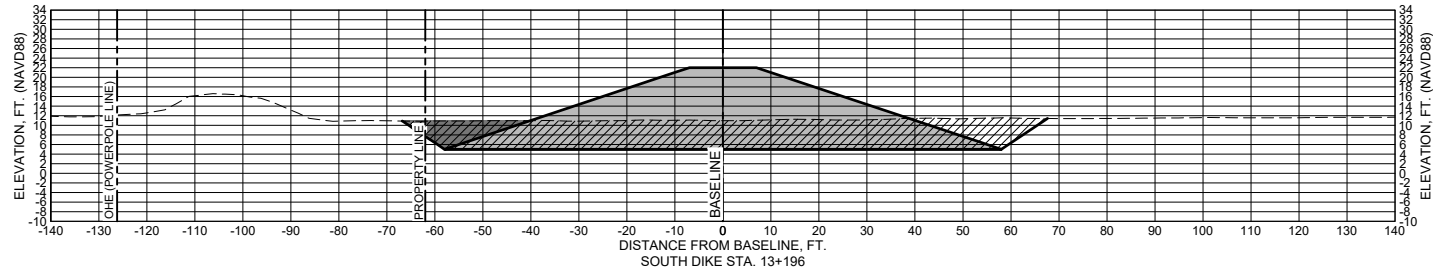
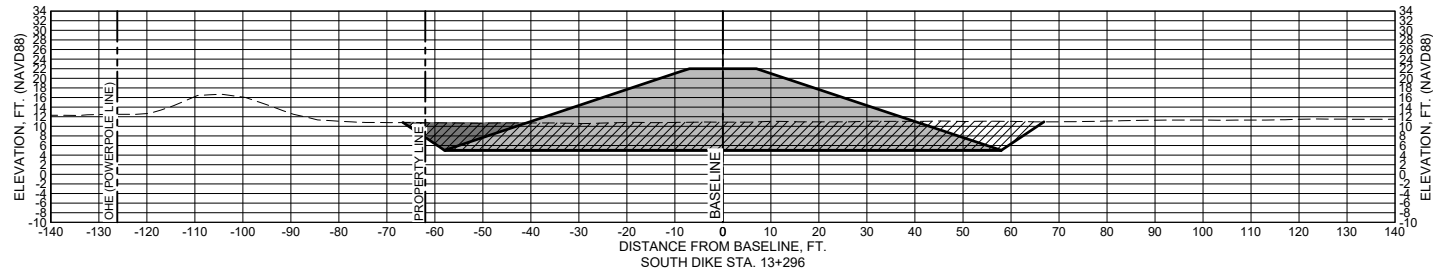
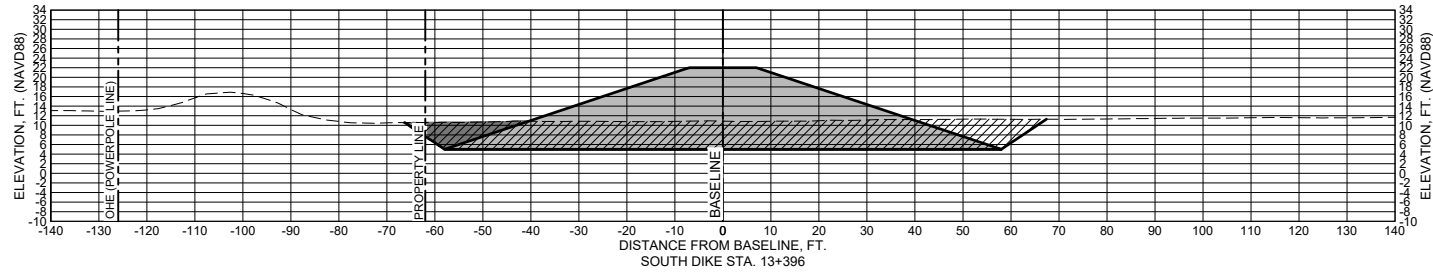
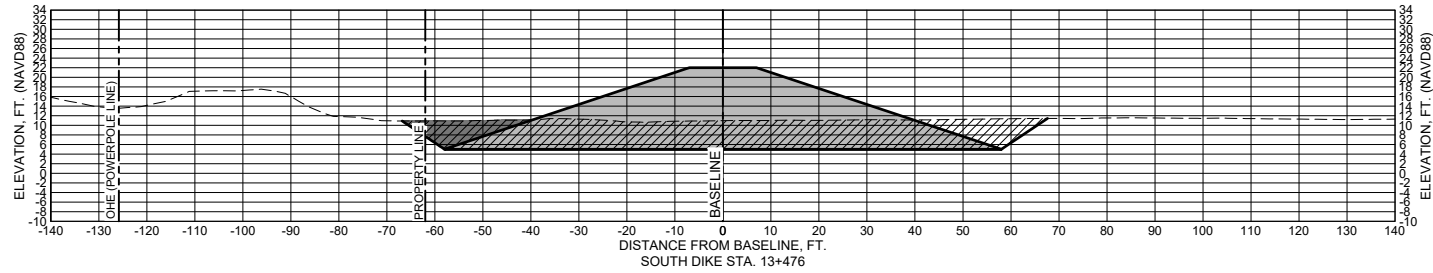
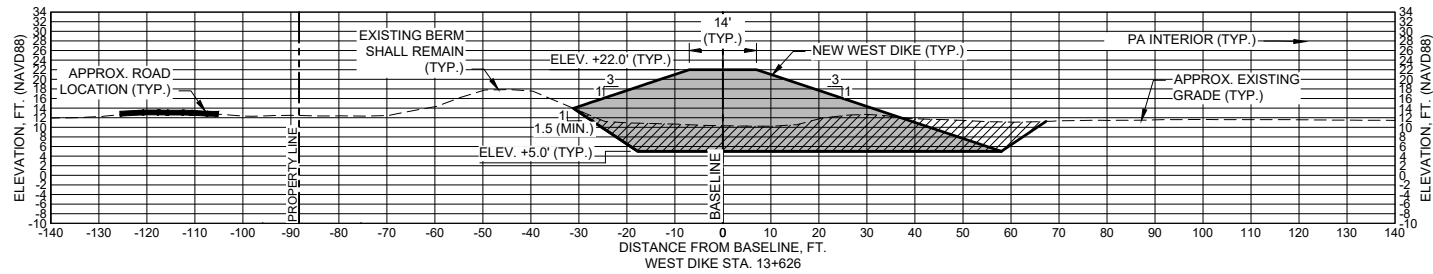
LEGEND:



0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	DANIEL GARZA
DESIGNED BY	D. GARZA
DRAWN BY	M. MORALES
CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072



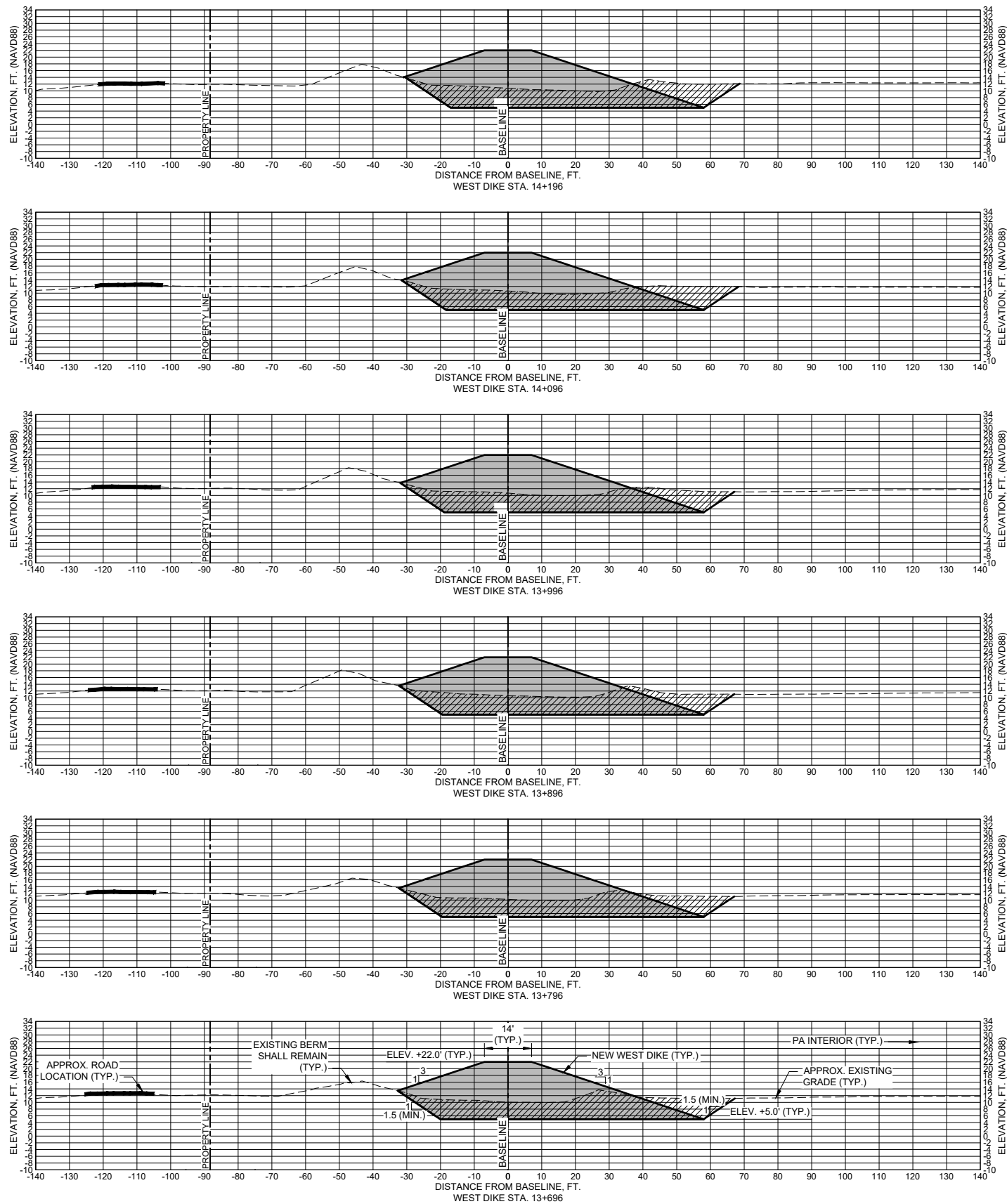


NOTES:

1. REFER TO NOTES ON SHEET 07C-01.

LEGEND:

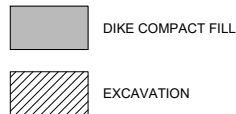
- DIKE COMPACT FILL
- EXCAVATION
- EXCAVATE AND BACKFILL



NOTES:

1. REFER TO NOTES ON SHEET 07C-01.

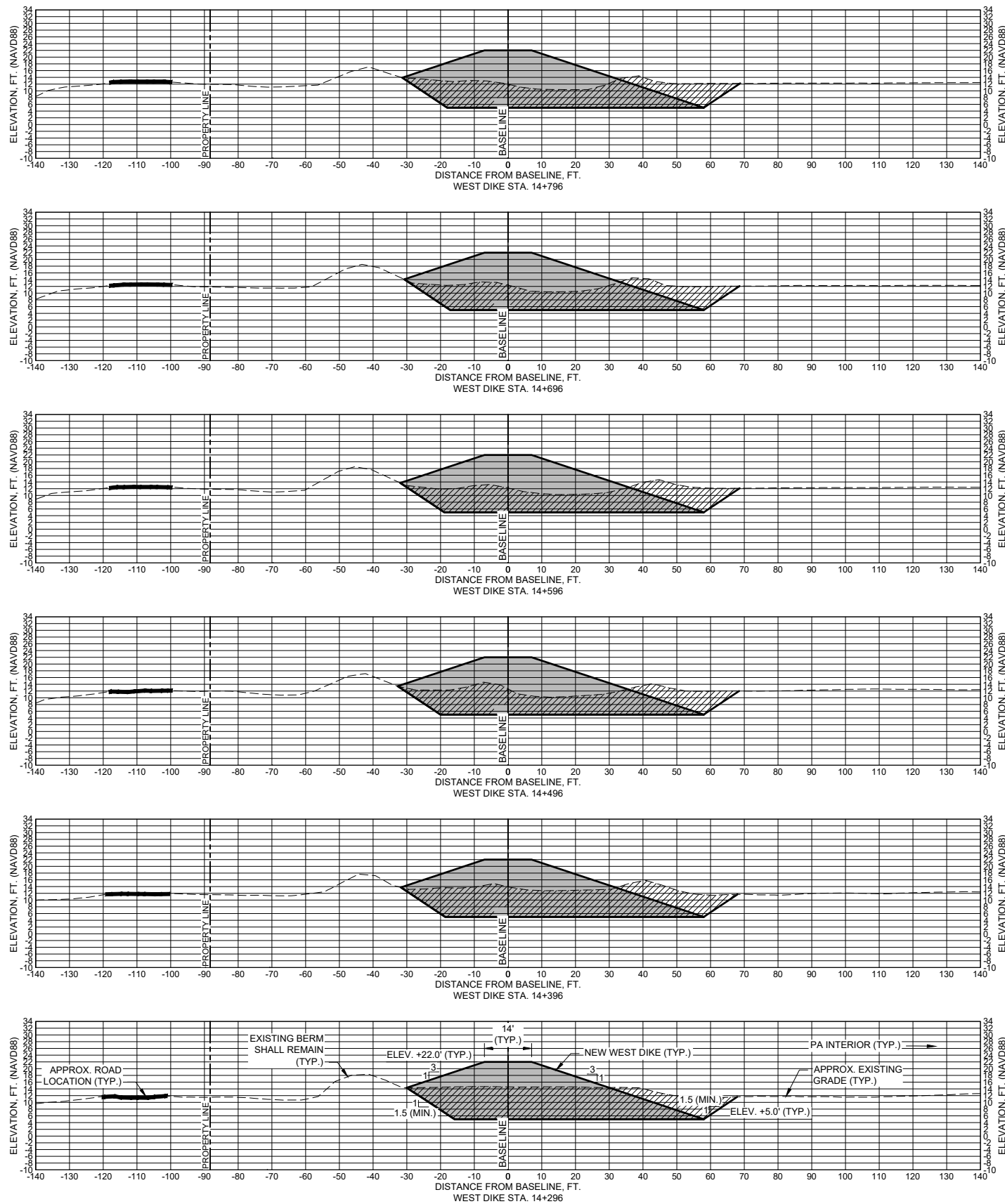
LEGEND:



0	01/17/2025	ISSUED FOR BIDS
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PROJECT NUMBER	10376072

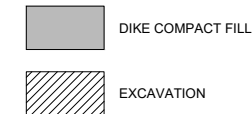




NOTES:

1. REFER TO NOTES ON SHEET 07C-01.

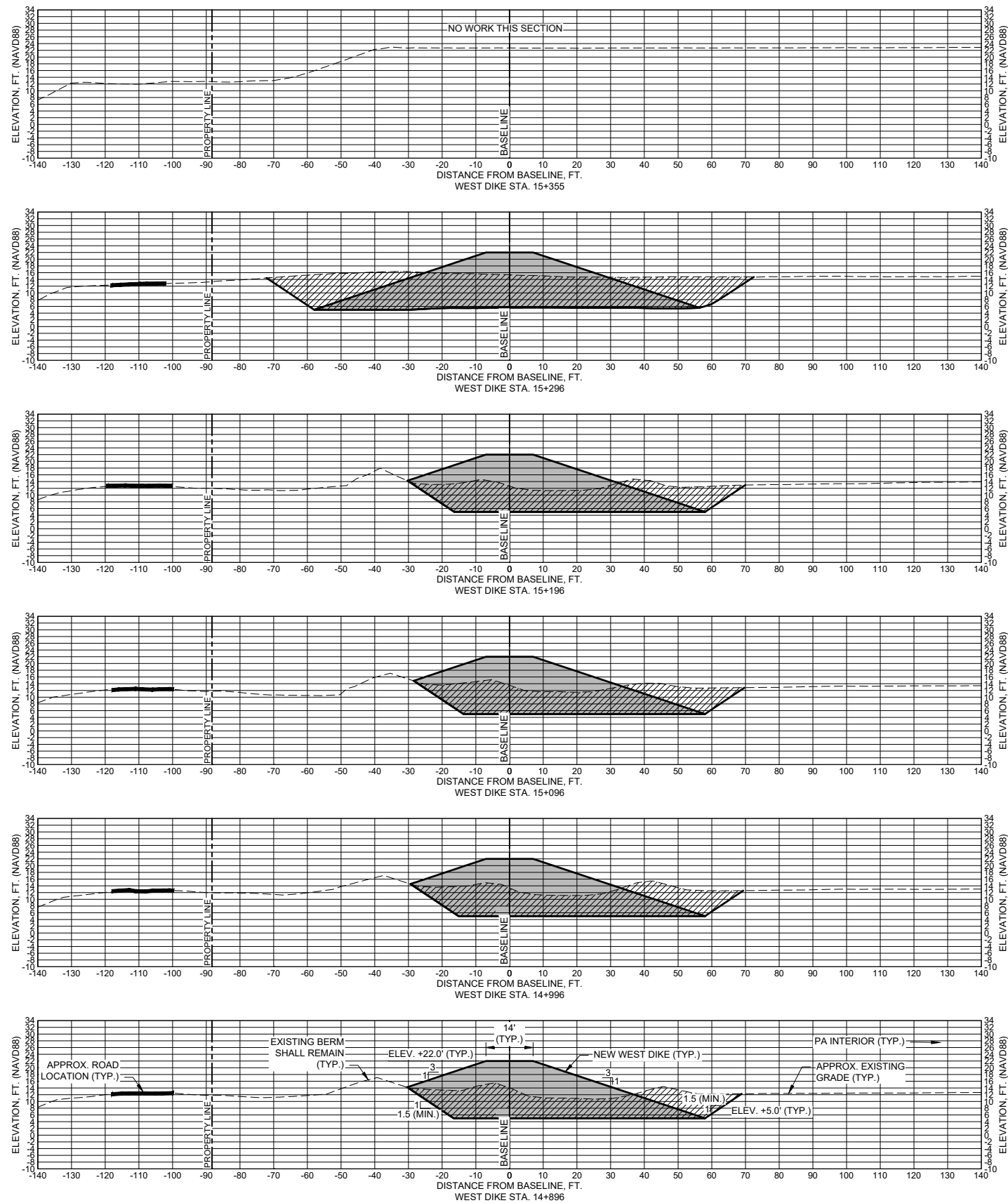
LEGEND:



0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	DANIEL GARZA
DESIGNED BY	D. GARZA
DRAWN BY	M. MORALES
CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072





NOTES:

1. REFER TO NOTES ON SHEET 07C-01.

LEGEND:

DIKE COMPACT FILL

 EXCAVATION

1

1.

1

1



Texas P.E. Firm
Registration No. F-754

0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	DANIEL GARZA
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CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072



BROWNSVILLE NAVIGATION DISTRICT
PLACEMENT AREA 8
DIKE RELOCATION

PORT OF 
BROWNSVILLE
the port that works

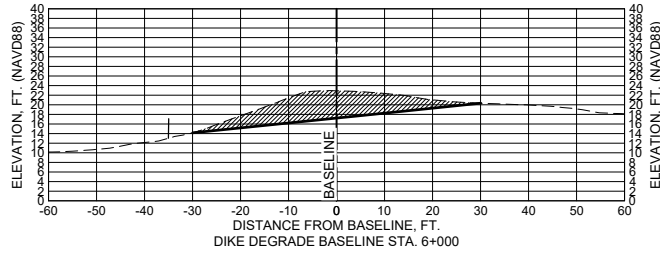
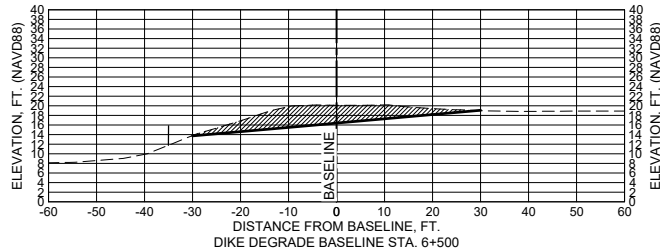
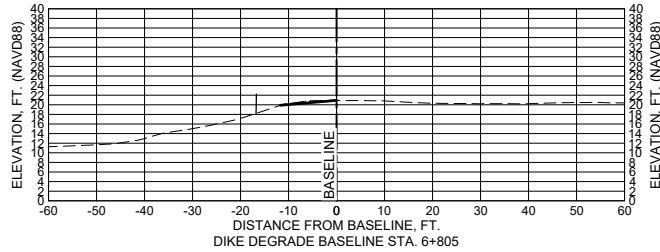
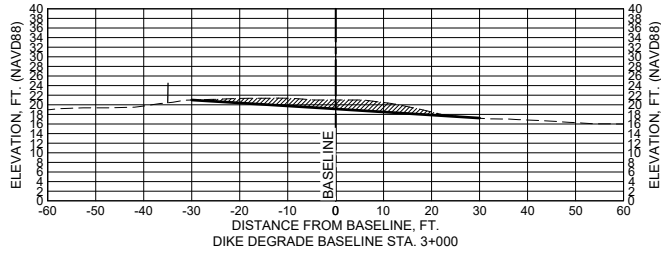
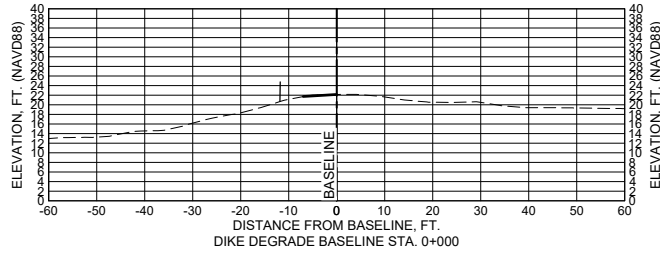
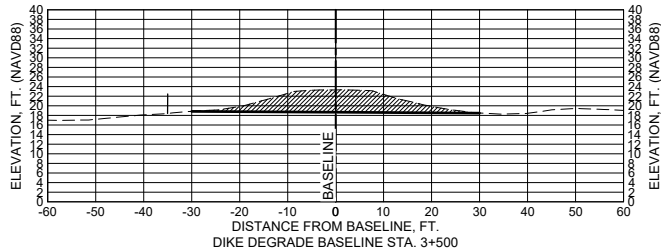
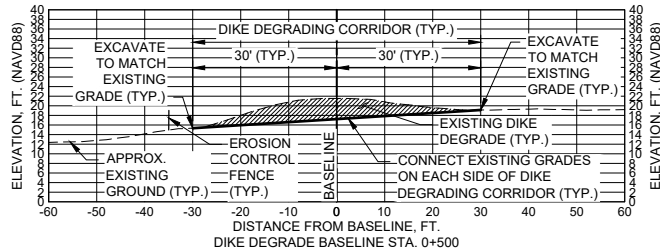
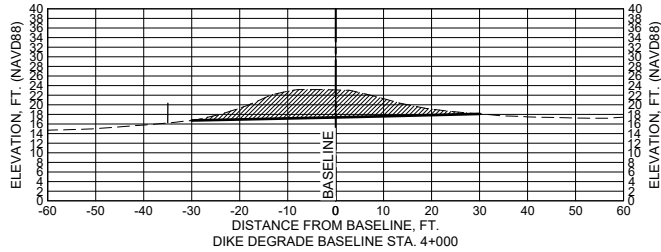
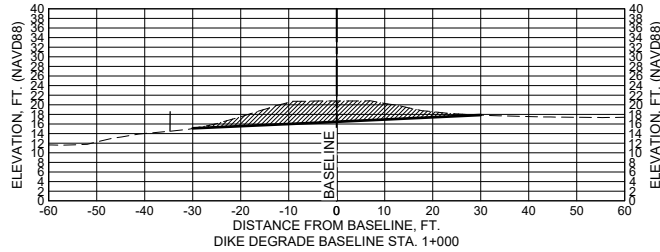
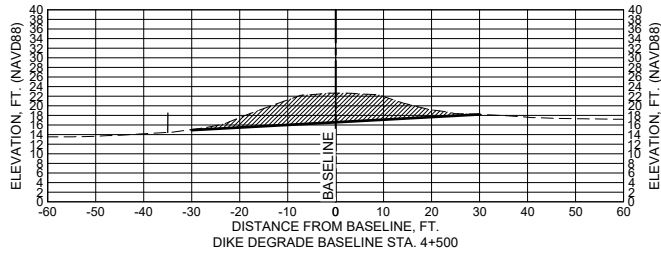
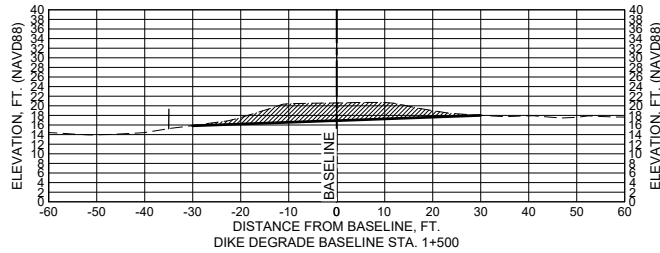
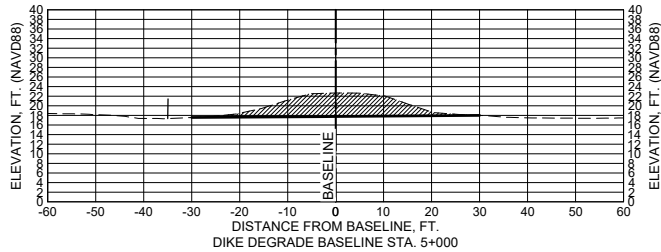
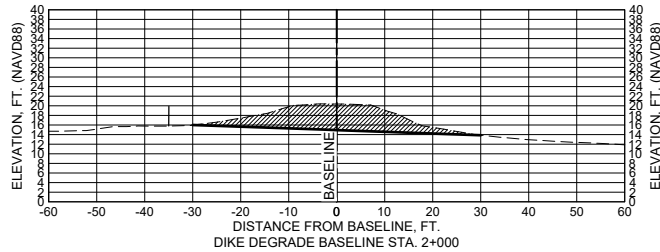
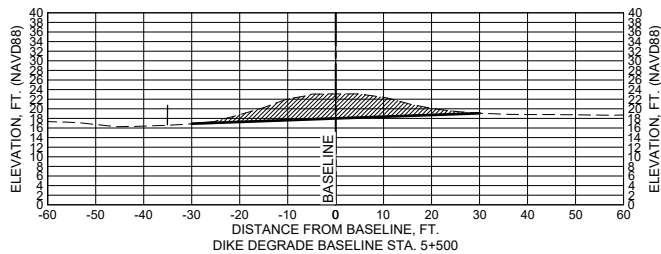
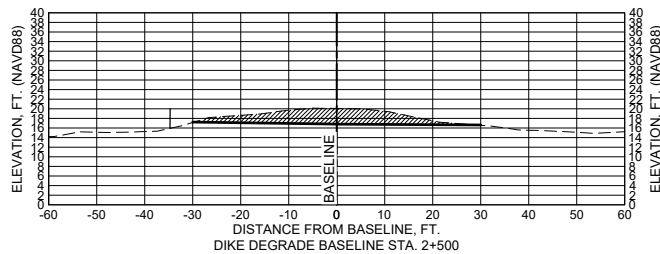
NEW DIKE - CROSS-SECTIONS 09

FILENAME	07C-09.DWG
SCALE	AS NOTED

SCALE AS NOTED

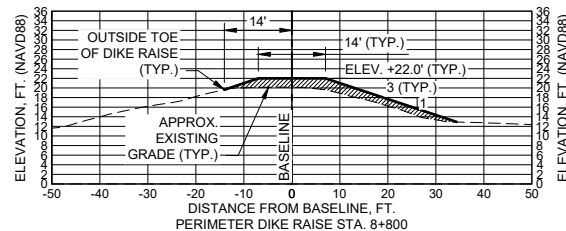
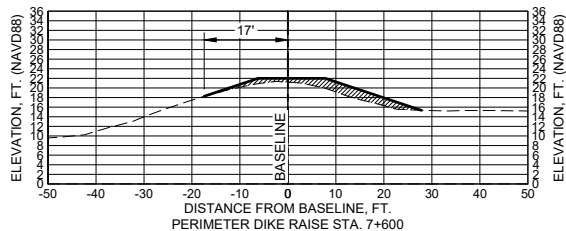
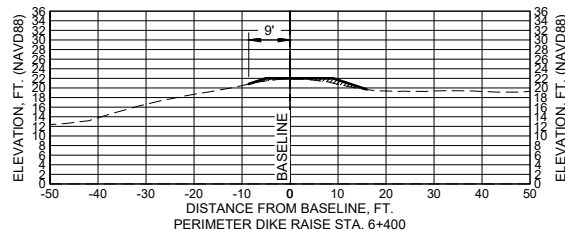
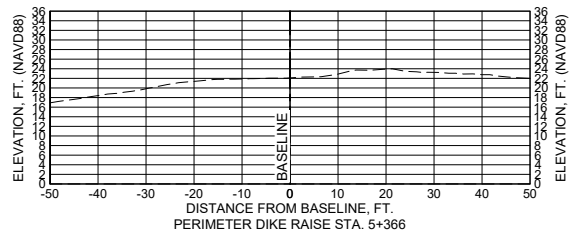
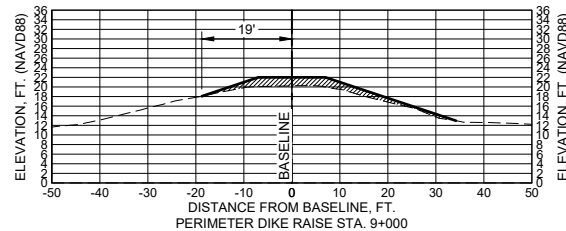
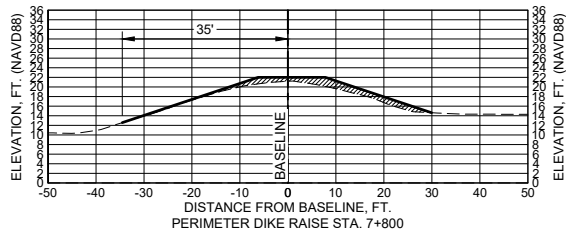
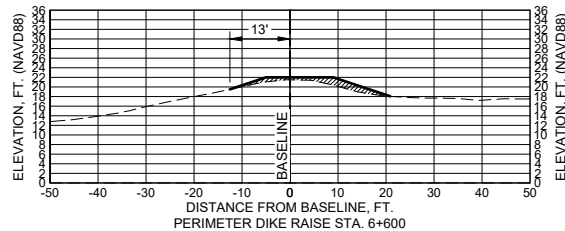
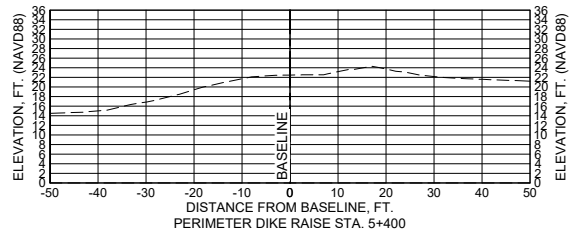
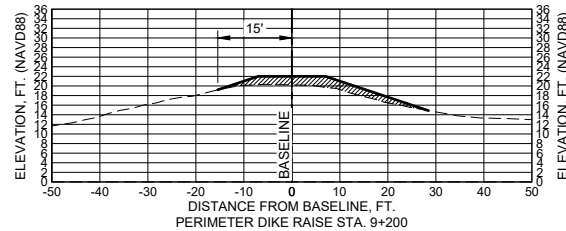
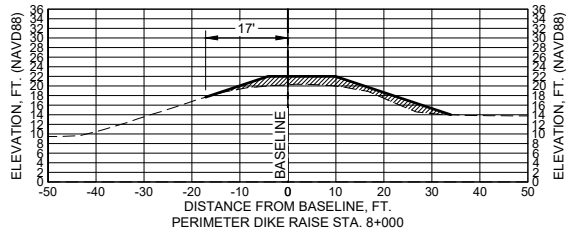
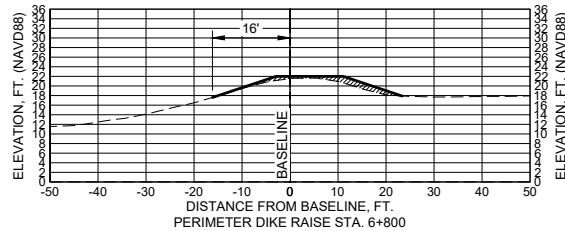
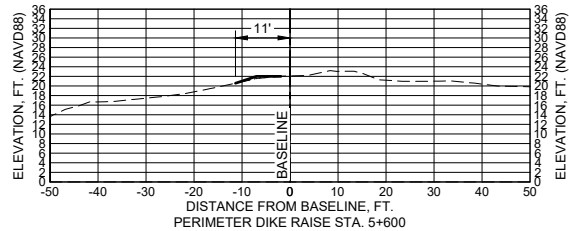
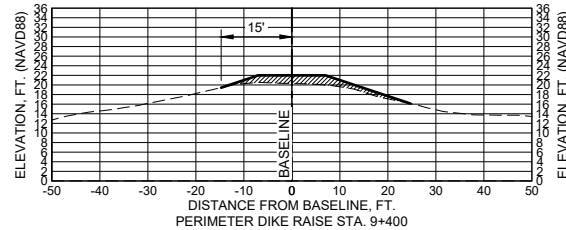
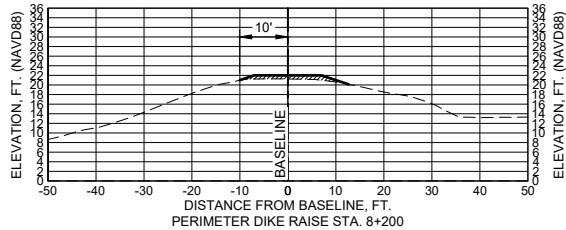
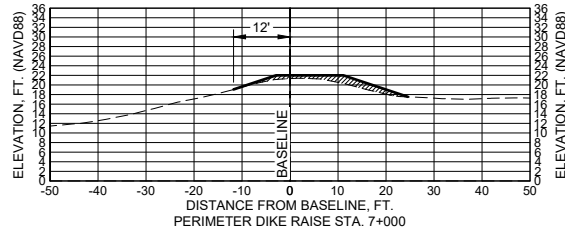
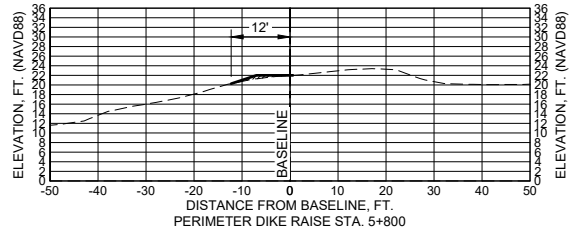
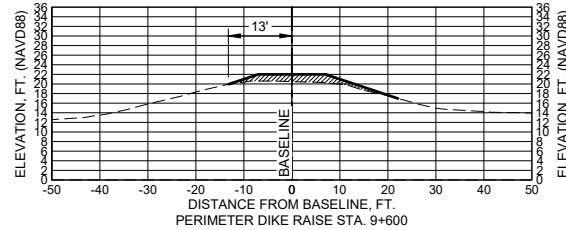
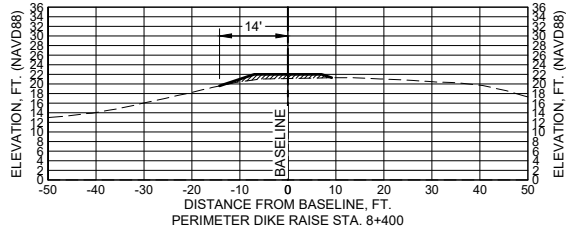
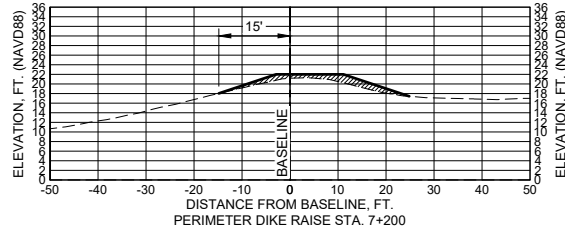
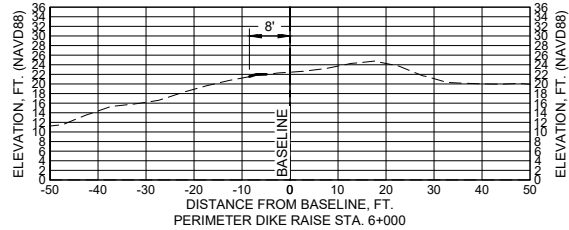
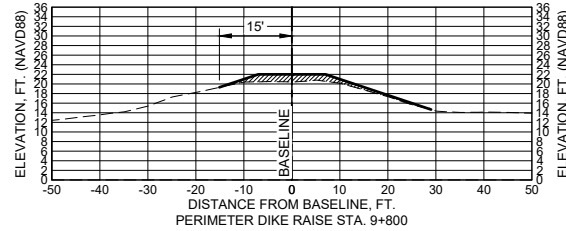
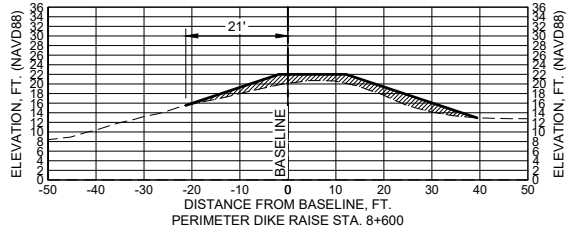
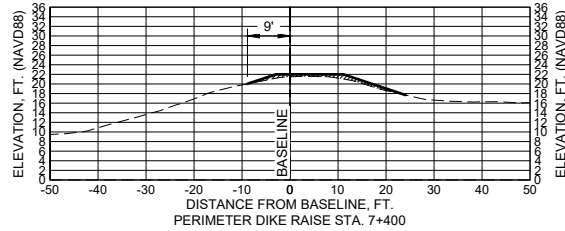
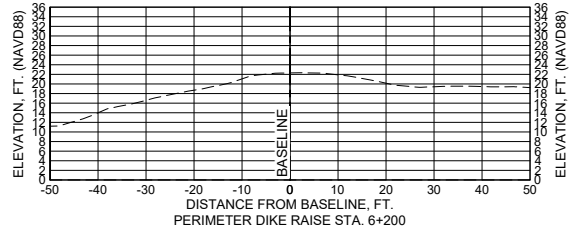
| SHEET

07C-09



NOTES:

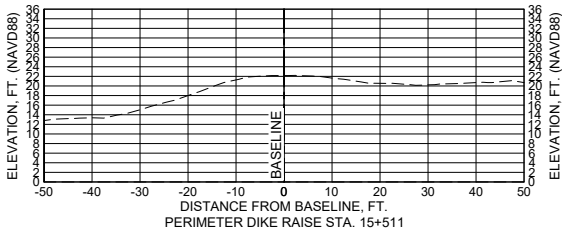
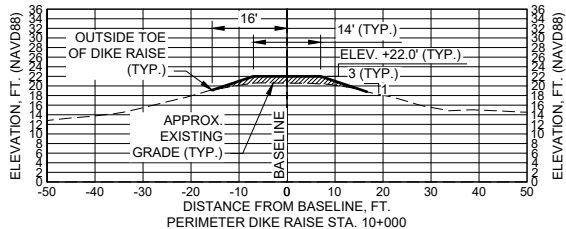
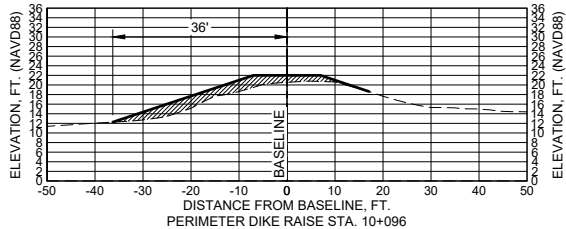
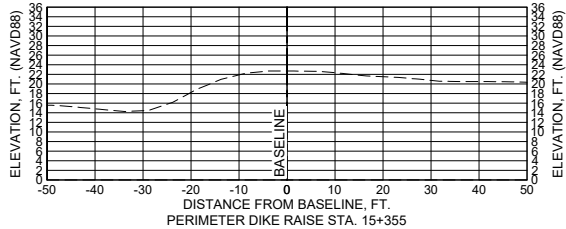
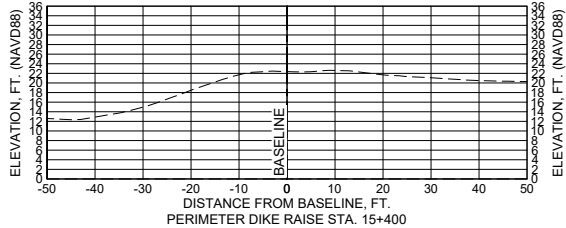
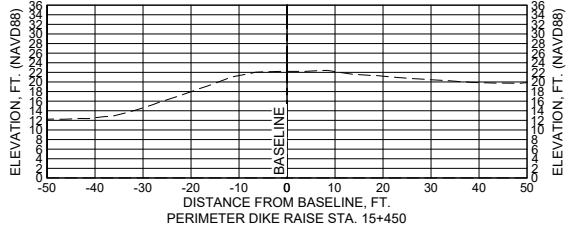
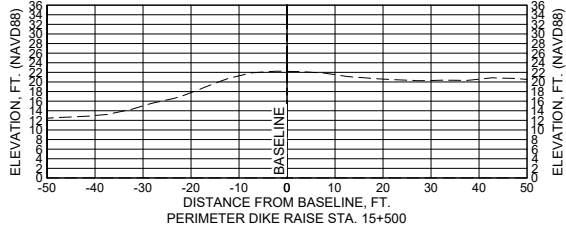
1. SECTIONS VIEWED LOOKING INCREASING STATIONS.



NOTES:

1. SECTIONS VIEWED LOOKING TOWARDS INCREASING STATIONS.
2. REFER TO SHEET 10C-01 TYPICAL SECTIONS FOR BORROW AREA REQUIREMENTS.

NOTES:
1. REFER TO NOTES ON SHEET 09C-01.



0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

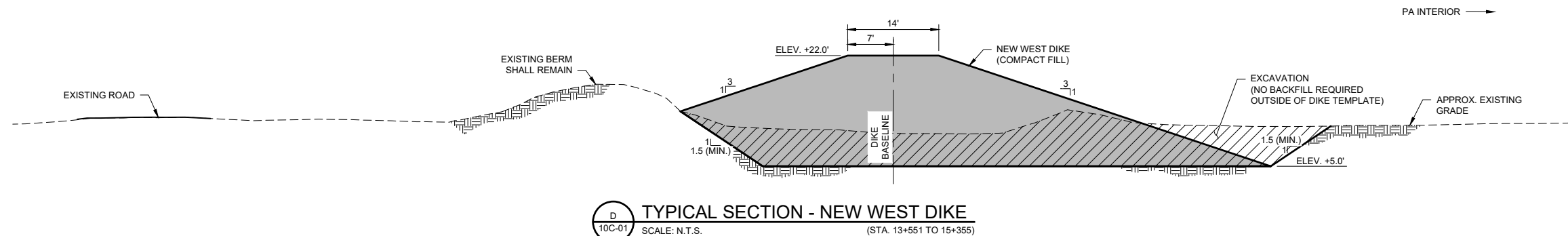
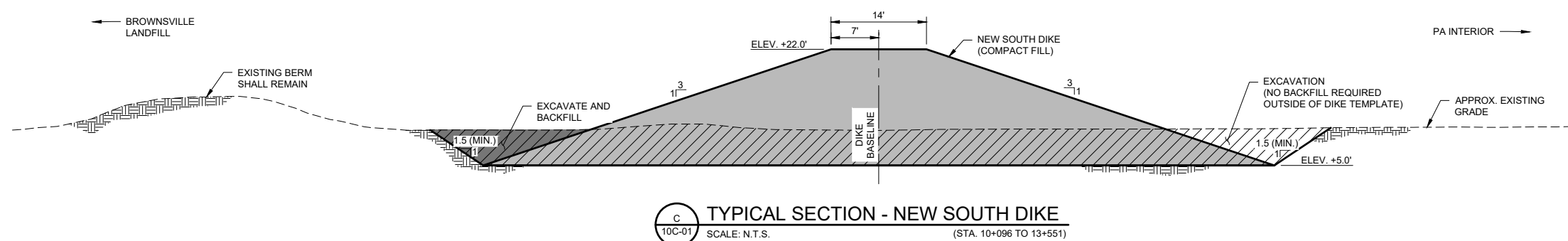
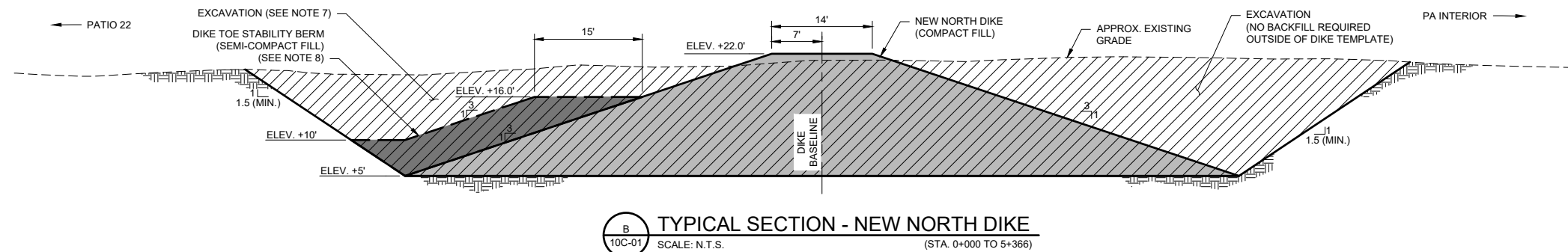
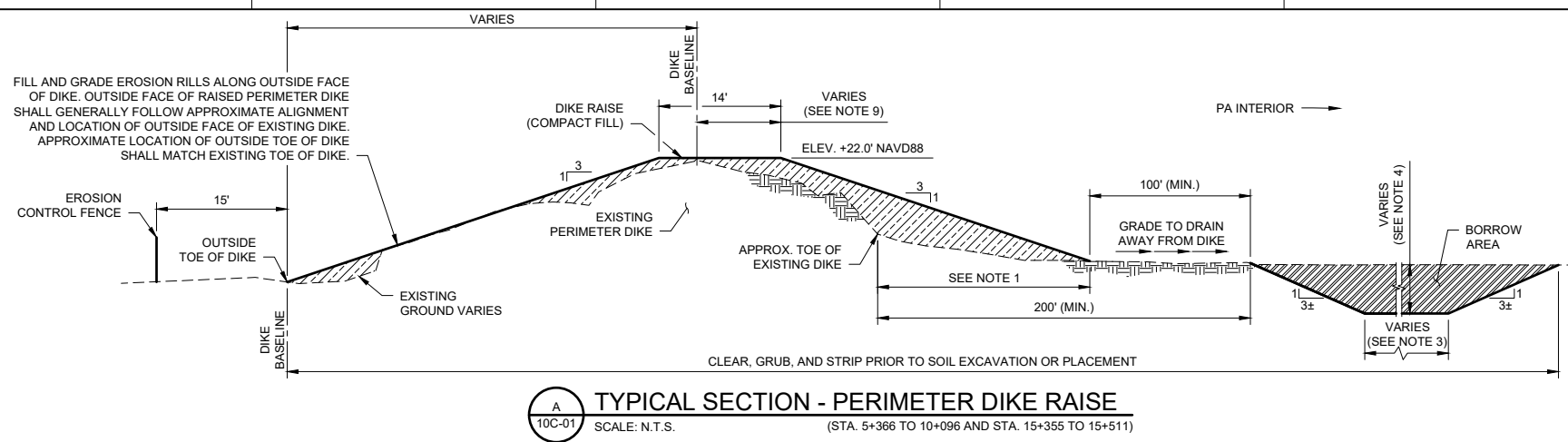
PROJECT MANAGER	DANIEL GARZA
DESIGNED BY	D. GARZA
DRAWN BY	M. MORALES
CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072



DIKE RAISE - CROSS-SECTIONS 02

FILENAME | 09C-02.DWG
SCALE | AS NOTED

SHEET
09C-02



- NOTES:**
1. REFER TO DREDGED MATERIAL PLACEMENT AREAS NOTE 7 ON SHEET 00G-03 FOR COMPACTION REQUIREMENTS FOR PERIMETER DIKE FOUNDATION CONSTRUCTION.
 2. REFER TO SHEET 00G-03 FOR CONSTRUCTION TOLERANCES.
 3. WIDTH OF BORROW AREAS SHALL BE SELECTED BY CONTRACTOR TO ACQUIRE ENOUGH SUITABLE MATERIAL FOR DIKE CONSTRUCTION. A UNIFORM WIDTH IS NOT REQUIRED.
 4. CONTRACTOR IS RESPONSIBLE FOR LOCATING SUITABLE BORROW MATERIAL FOR DIKE CONSTRUCTION. DEPTH OF BORROW AREAS MAY VARY ACROSS THE SITE BUT MUST REMAIN WITHIN THE LIMITS STATED ON SHEET 02C-01. CONTRACTOR SHOULD EXPECT TO ENCOUNTER SEEPAGE AND GROUNDWATER IN EXCAVATIONS. WATER MAY CAUSE SLOUGHING OF SIDE SLOPES. CONTRACTOR IS RESPONSIBLE FOR CARE AND CONTROL OF GROUNDWATER AND SURFACE WATER, AND SHALL MANAGE SITE ACCORDINGLY.
 5. DIKE CROSS SECTIONS ARE SHOWN ON SHEETS 06C-01 THRU 06C-10 AND 07C-01 THRU 07C-09.
 6. ALL SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WITHIN PA INTERIOR A MINIMUM OF 100 FT FROM DIKE BASELINE. STOCKPILES SHALL BE GRADED AND SPACED TO AVOID OBSTRUCTING DRAINAGE AND PREVENT PONDING.
 7. CONSTRUCTION OF NEW NORTH DIKE ADJACENT TO PATIO EXPANSION AREA REQUIRES A TOE STABILITY BERM. THE EXCAVATION FOR THE TOE STABILITY BERM SHALL NOT BE BACKFILLED. TO ALLOW DRAINAGE FROM THIS EXCAVATION, EXCAVATE A SWALE TO ALLOW WATER TO FLOW TO EAST AWAY FROM DIKE AND PATIO EXPANSION AREA. BOTTOM OF SWALE SHALL BE 2 FT WIDE (MIN) AND ELEV +10 FT. APPROXIMATE LOCATION OF SWALE IS SHOWN ON SHEET 02C-01.
 8. DIKE STABILITY BERM SHALL CONSIST OF SEMI-COMPACTED FILL. THIS BERM IS INTEGRAL TO THE NEW DIKE AND REQUIRED FOR DIKE STABILITY. ANY FUTURE DEGRADING THAT IS PERFORMED BY OTHERS ON THE NORTH (PATIO 22) SIDE OF THIS DIKE SHALL NOT REMOVE OR MODIFY THIS TOE STABILITY BERM.
 9. ALIGNMENT OF EXISTING DIKE IS NOT PERFECTLY STRAIGHT. DESIGN INTENT IS FOR DIKE RAISE TO FOLLOW EXISTING ALIGNMENT IN A "BEST-FIT" FASHION DETERMINED IN THE FIELD DURING CONSTRUCTION. OUTSIDE FACE OF RAISED DIKE SHALL GENERALLY FOLLOW OUTSIDE FACE OF EXISTING DIKE.
 10. DESIGN INTENT IS TO CONSTRUCT NEW DIKES ON NATURAL/ORIGINAL INSITU SOILS, NOT ON FILL MATERIAL. UPON EXCAVATING SOIL TO PREPARE DIKE SUBGRADE, CONTRACTOR SHALL NOTIFY ENGINEER IF TRANSITION TO NATURAL INSITU SOILS APPEARS TO BE LOWER THAN ELEV +5 FT. ADDITIONAL EXCAVATION MAY BE REQUIRED.
 11. EXCAVATIONS SHOWN WITH A SLOPE OF 1.5H:1V REPRESENT OSHA MINIMUM. ACTUAL EXCAVATION MAY BE FLATTER AS NEEDED TO MAINTAIN SAFE EXCAVATION.
 12. CONTRACTOR IS RESPONSIBLE FOR ALL STRIPPING, CLEARING, AND GRUBBING NEEDED FOR DIKE CONSTRUCTION AND BORROW AREA EXCAVATION. COST FOR STRIPPING, CLEARING, AND GRUBBING SHALL BE SUBSIDIARY TO COST OF DIKE CONSTRUCTION.



0	01/17/2025	ISSUED FOR BIDS
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	DANIEL GARZA
DESIGNED BY	D. GARZA
DRAWN BY	M. MORALES
CHECKED BY	D. HEILMAN
PROJECT NUMBER	10376072



BROWNSVILLE NAVIGATION DISTRICT
PLACEMENT AREA 8
DIKE RELOCATION

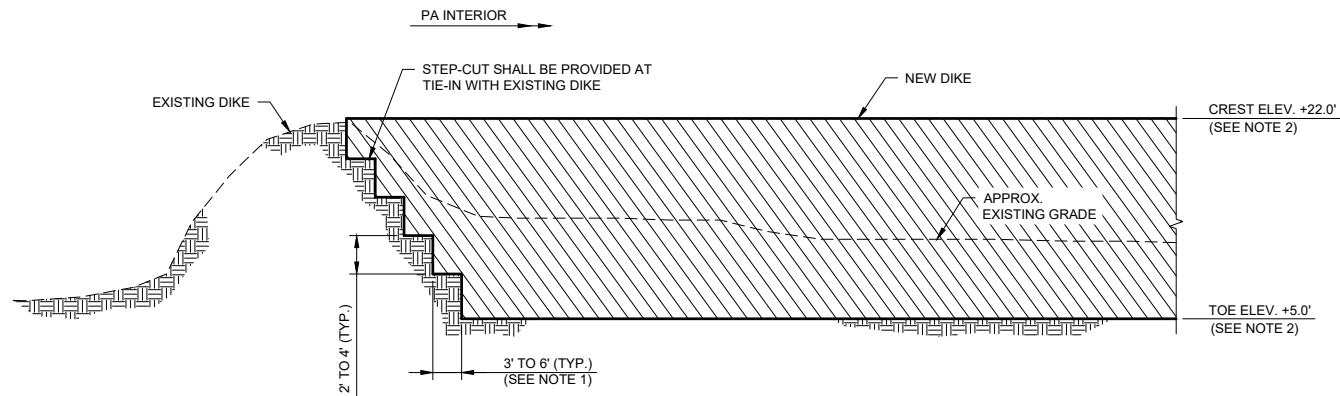


TYPICAL SECTIONS 01

FILENAME	10C-01.DWG	SHEET
SCALE	AS NOTED	10C-01

NOTES:

1. AT TIE-IN BETWEEN NEW DIKE AND EXISTING DIKE, HORIZONTAL DIMENSION OF STEP CUT SHALL BE GREATER THAN VERTICAL DIMENSION. THE EFFECTIVE SLOPE OF THE STEP CUT SHALL BE APPROXIMATELY 1.5H:1V. FOR EXAMPLE, IF THE HORIZONTAL STEP IS 3 FT, THE VERTICAL STEP SHALL BE 2 FT, AND IF THE HORIZONTAL STEP IS 6 FT, THE VERTICAL STEP SHALL BE 4 FT.
2. REFER TO SHEET 00G-03 FOR CONSTRUCTION TOLERANCES.

**TYPICAL SECTION - NEW DIKE CONNECTION TO EXISTING DIKE**

SCALE: N.T.S.

(STA. 0+000, 5+366, 10+096, 15+355)

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**TYPICAL SECTIONS 02**