

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

2379 BROAD STREET, BROOKSVILLE, FL 34604



SWFWMD GATE REFURBISHMENT SUPPORT, S-160 & S-162

HILLSBOROUGH COUNTY, FLORIDA

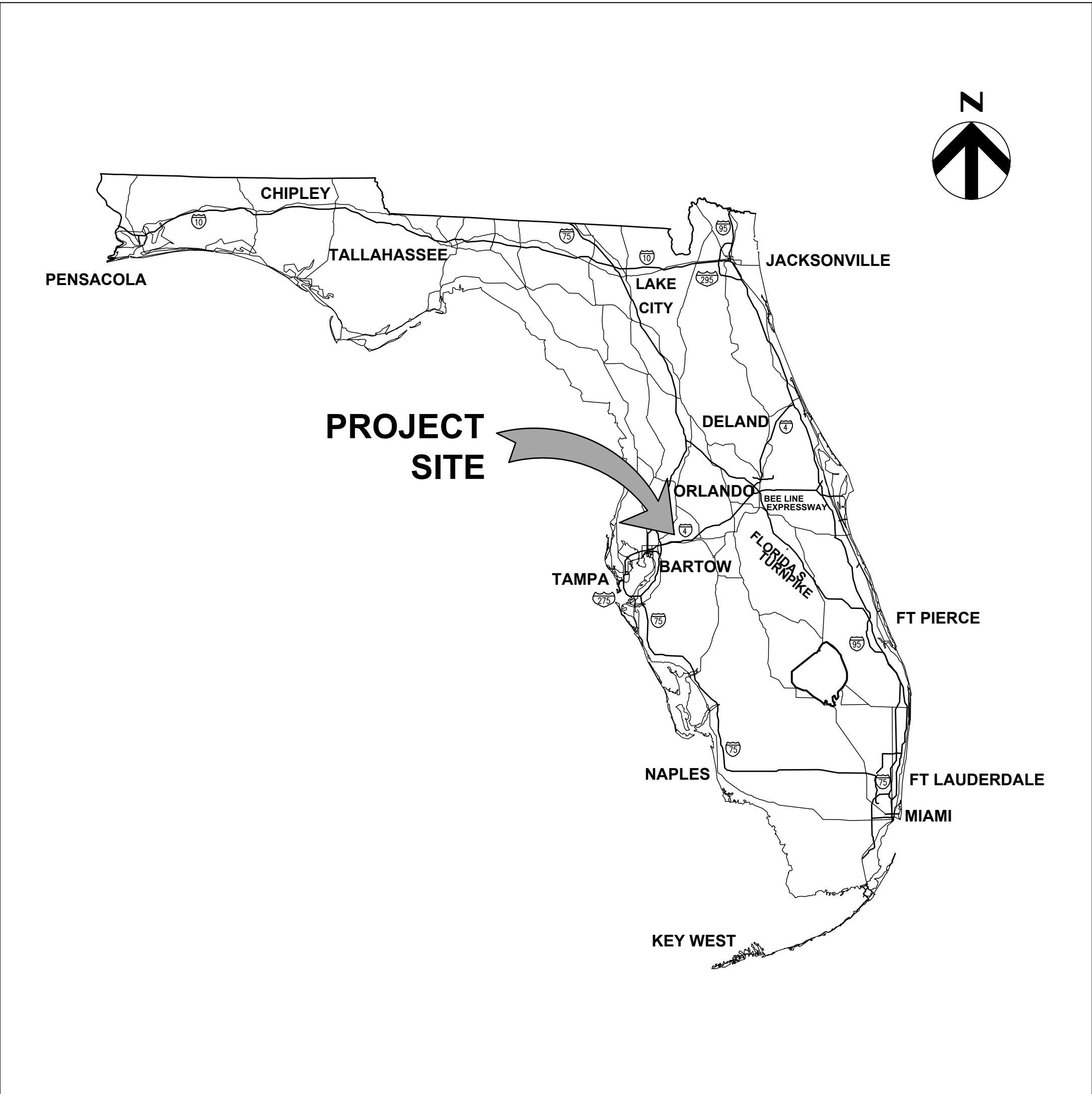
TWA 19TW0002769, Agreement No. 19CN0002032

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VICINITY MAP

SCALE: NOT TO SCALE



HEATHER MANGANIELLO, PE
FL PE #68385
2601 CATTLEMEN ROAD, STE 400
SARASOTA, FL 34232

[GENERAL SHEETS AND REFURBISHMENT NOTES]

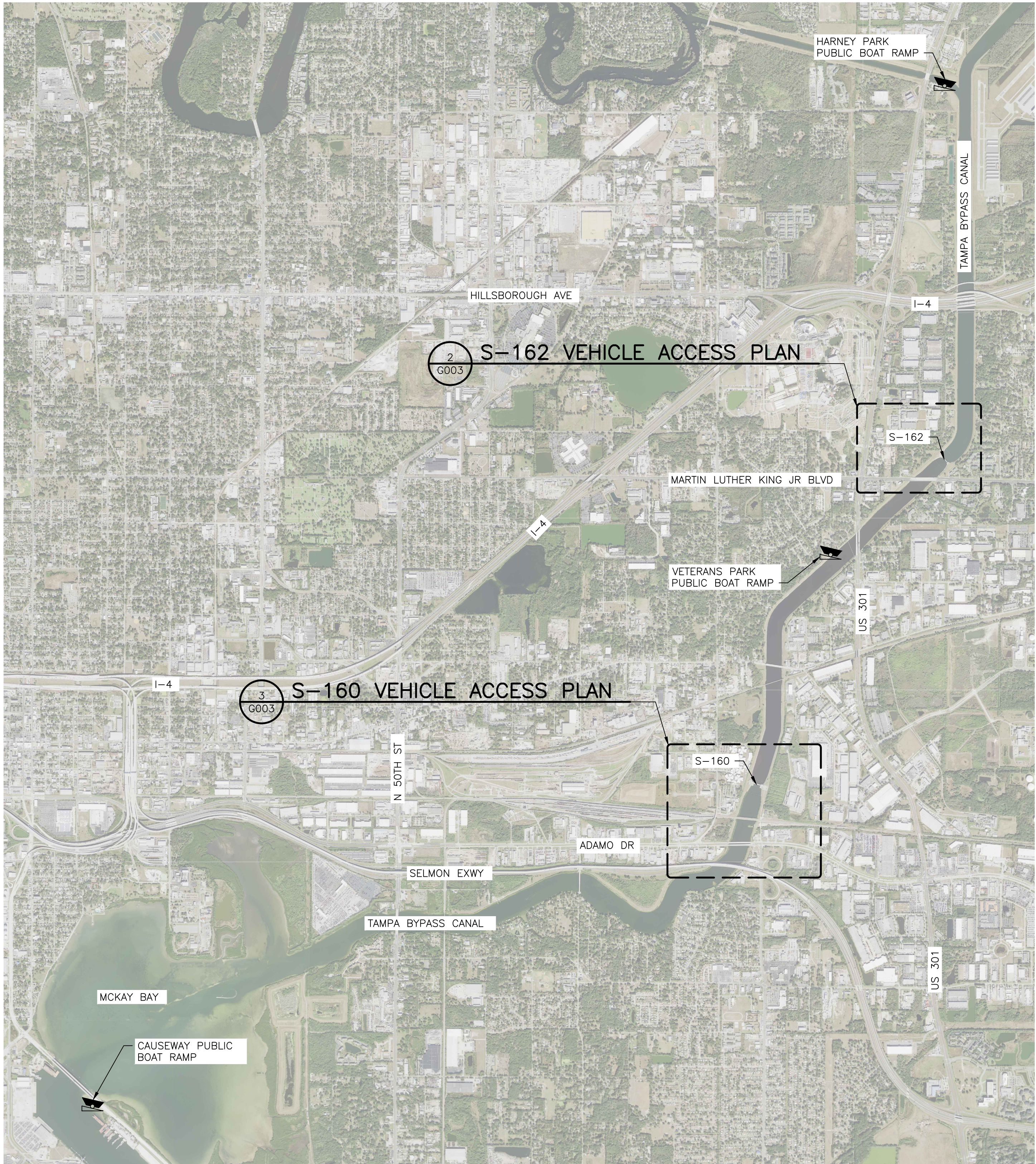
The official record of this package has been electronically signed and sealed using a Digital Signature as required by 61G15-23.004 F.A.C. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

HDR Project No. 10220470
SEPTEMBER 2020



CALL BEFORE YOU DIG

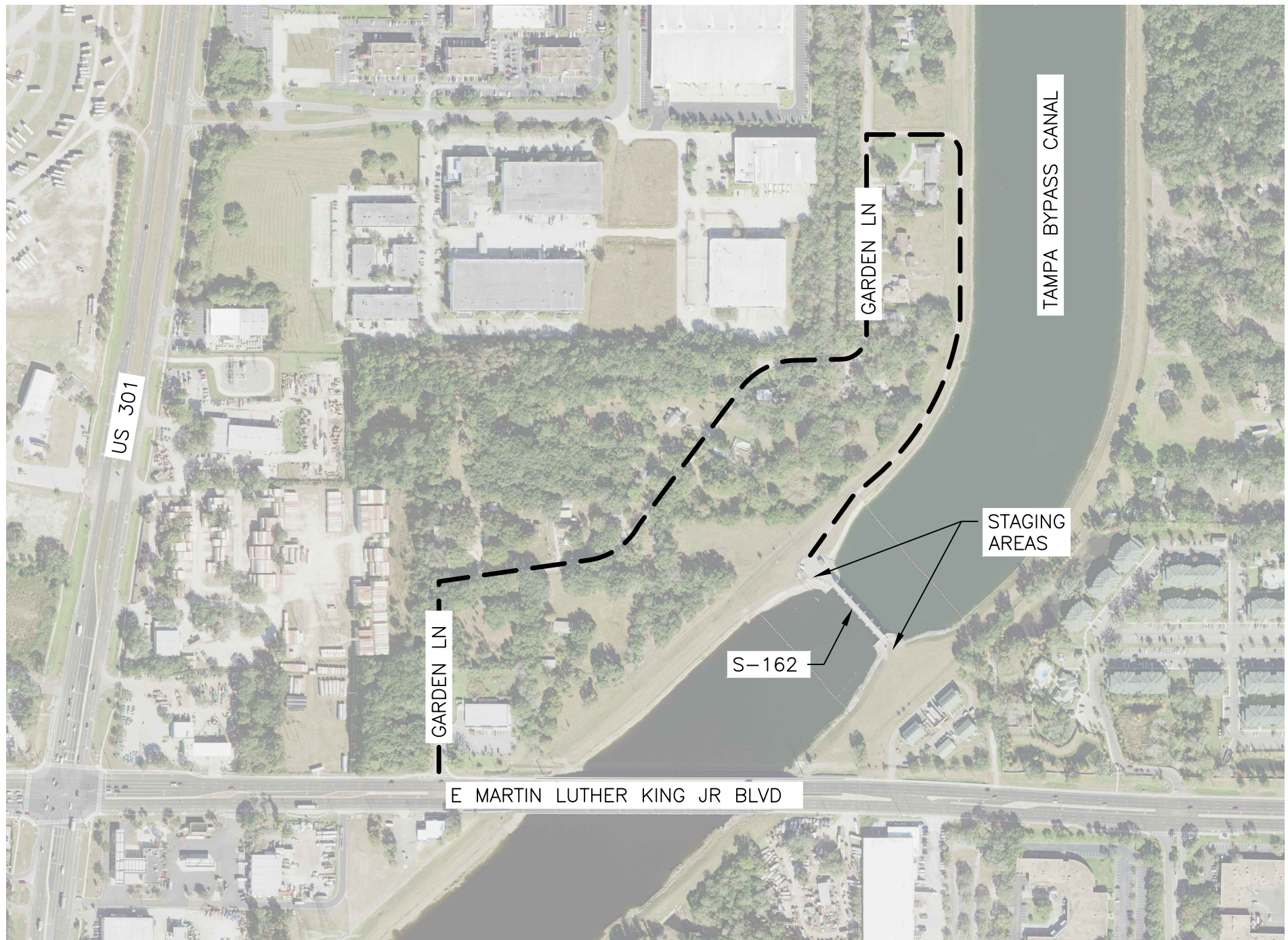
IT IS THE CONTRACTORS RESPONSIBILITY TO PLACE A CALL TO SUNSHINE STATE ONE CALL OF FLORIDA TO PREVENT THE DAMAGE OF UTILITIES THAT MAY EXIST WITHIN THE CONSTRUCTION AREA. DIAL 811 OR (800) 432-4770 TO REQUEST A LOCATE TICKET A MINIMUM OF 2 FULL BUSINESS DAYS DAYS IN ADVANCE OF BEGINNING CONSTRUCTION.



1
G003

OVERALL ACCESS PLAN

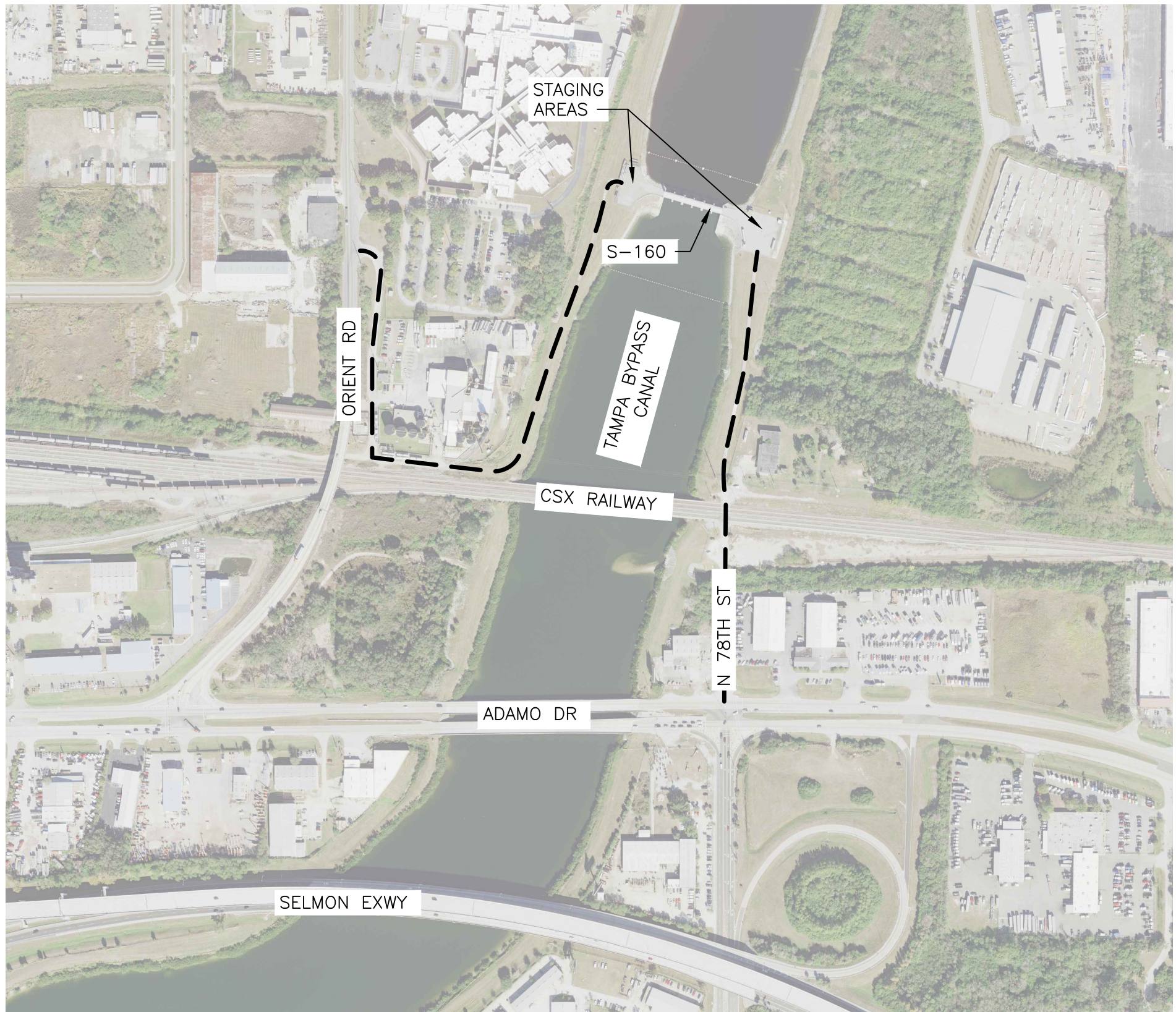
1" = 2000'



2
G003

S-162 VEHICLE ACCESS PLAN

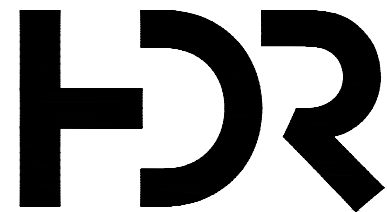
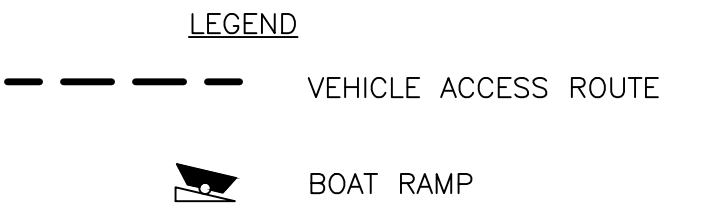
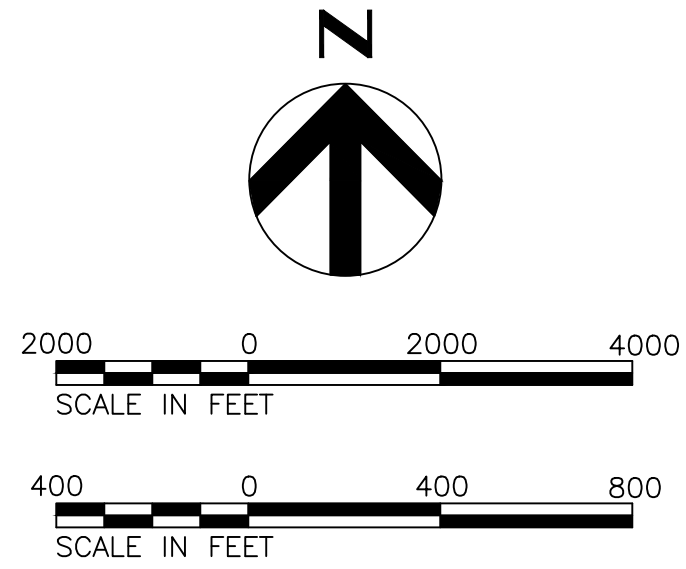
1" = 400'



3
G003

S-160 VEHICLE ACCESS PLAN

1" = 400'



4830 W. KENNEDY BLVD, STE 400
TAMPA, FL 33609
CA 4213

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER KATIE DUTY, P.E.

PROJECT NUMBER	10220470

HEATHER MANGANIELLO, PE
FL PE #68385
2601 CATTLEMEN ROAD, STE 400
SARASOTA, FL 34232

**SWFWMD GATE REFURBISHMENT SUPPORT
S-160 AND S-162**

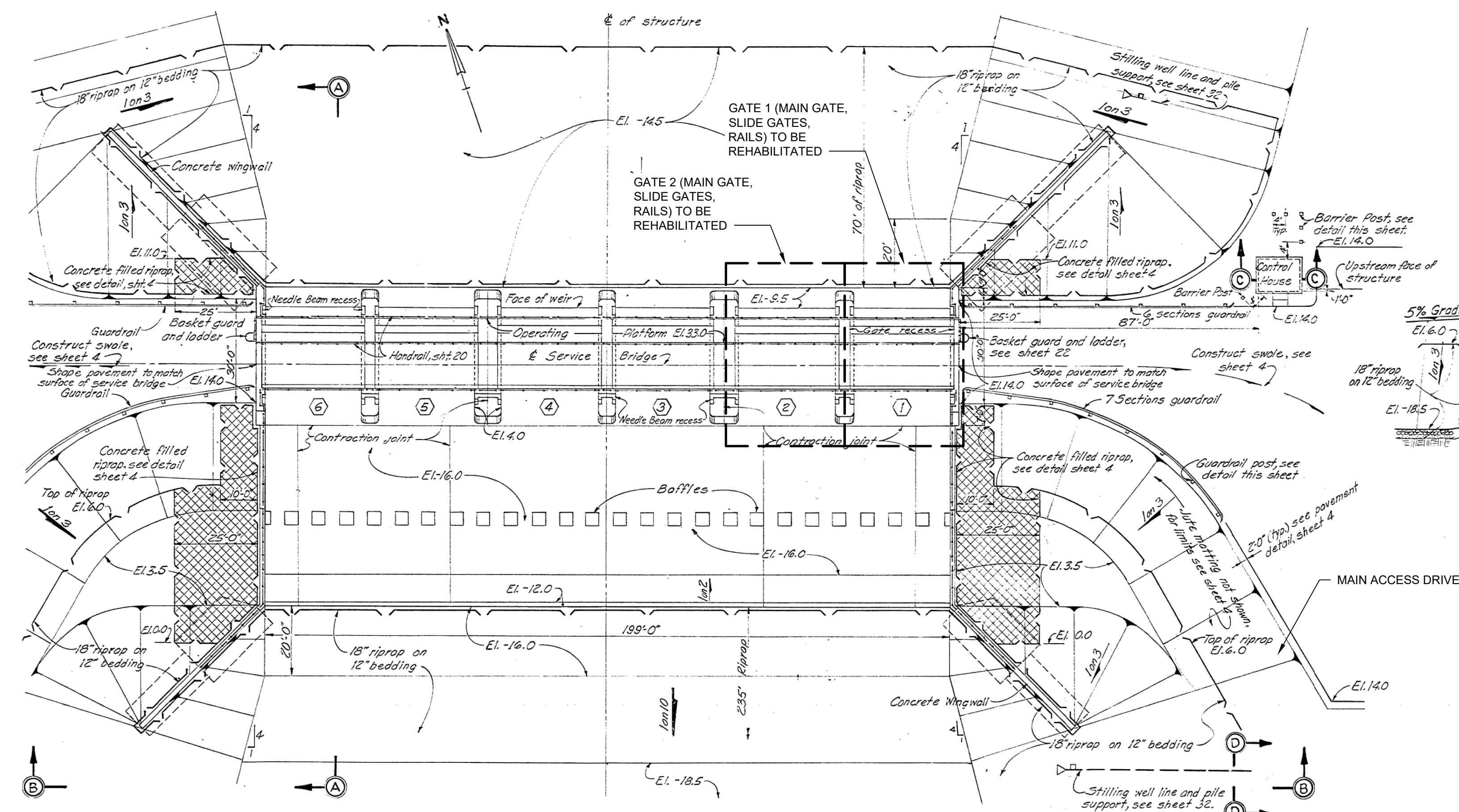
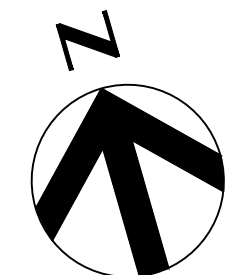
SOUTHWEST FLORIDA WATER
MANAGEMENT DISTRICT
2379 BROAD STREET
BROOKSVILLE, FL 34604

**GENERAL
SITE ACCESS PLAN**

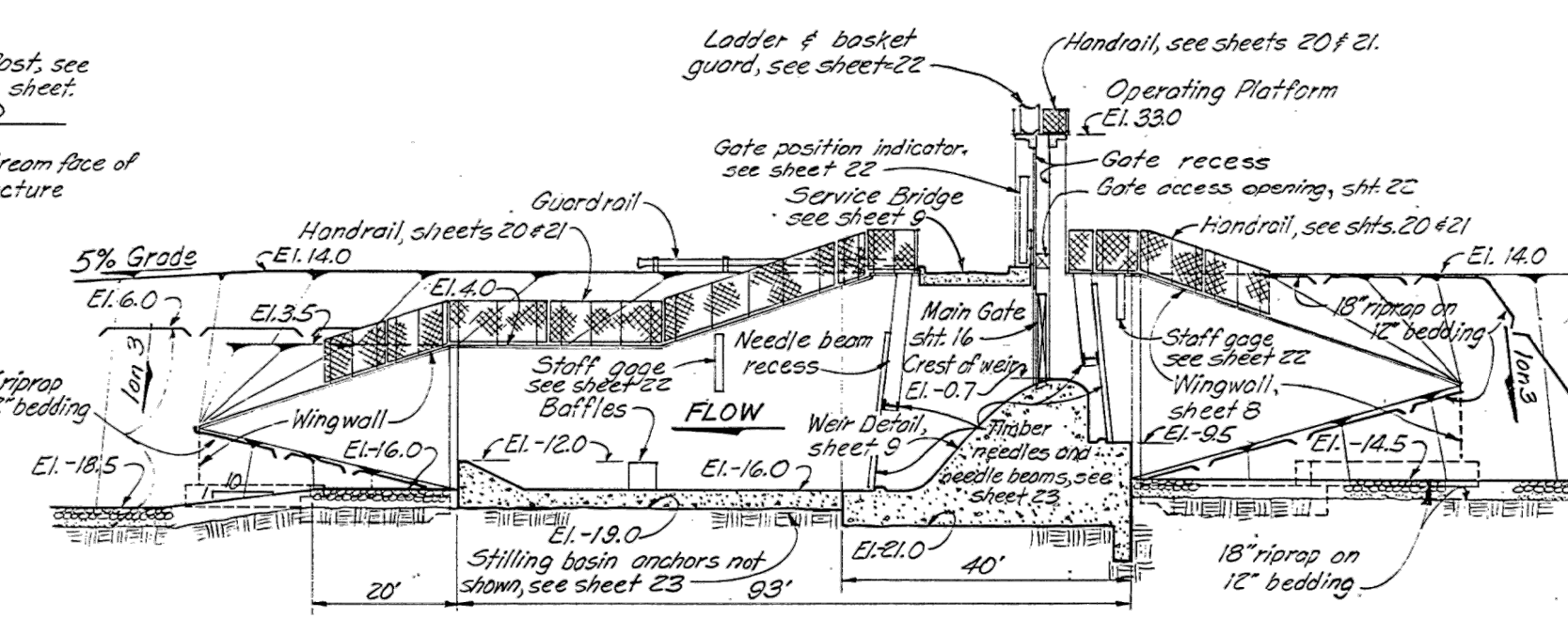
0 1" 2"
NOT FOR CONSTRUCTION

SHEET 3 of 14
SCALE VARIES

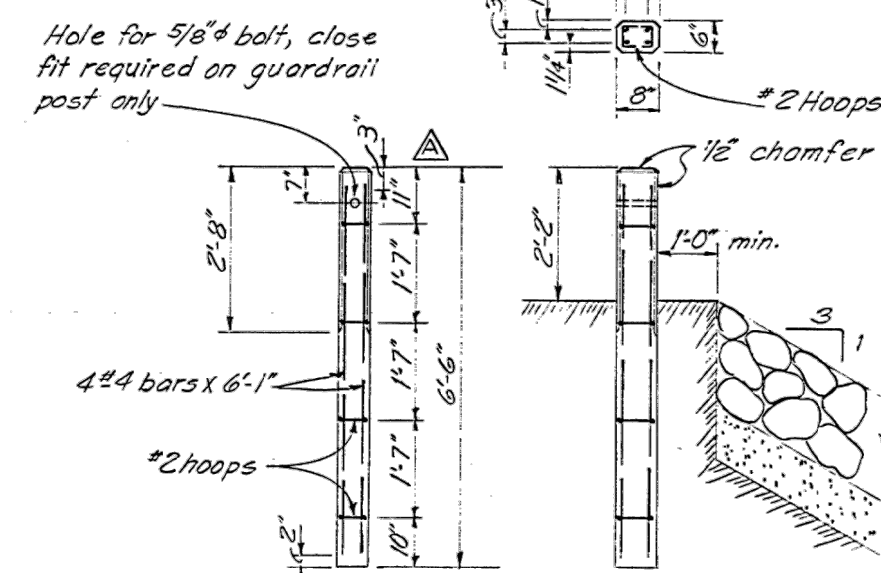
DRAWING
G003



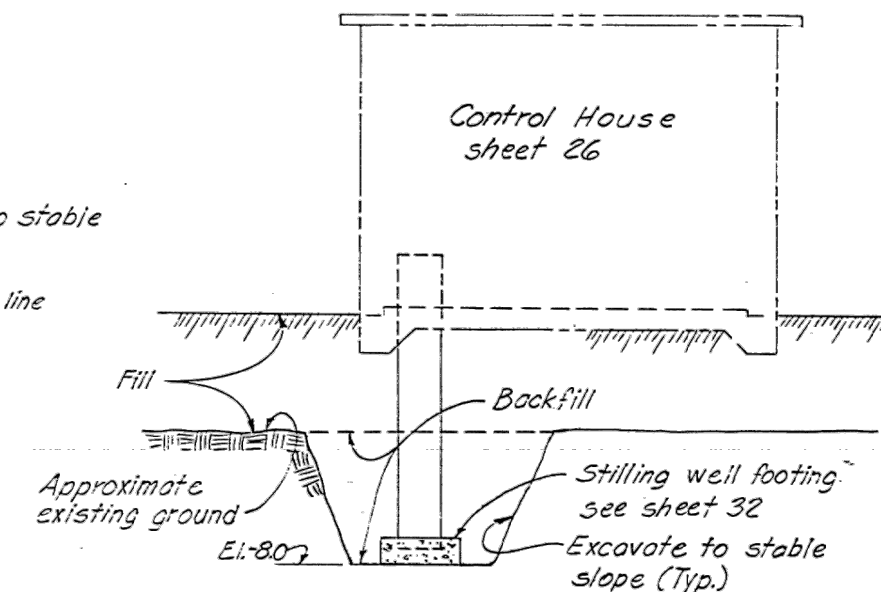
PLAN
SCALE: 1"=40'



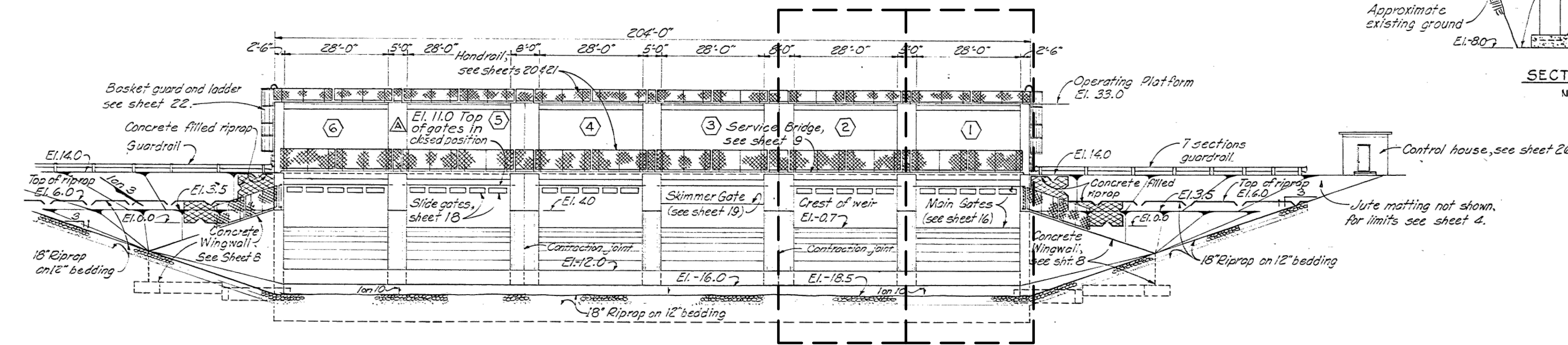
SECTION A-A'



SECTION C-C
NO SCALE



SECTION D-D
NO SCALE

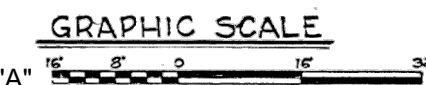


ELEVATION B-B
SCALE: 1"=40'

GENERAL MASONRY AND DESIGN NOTES:

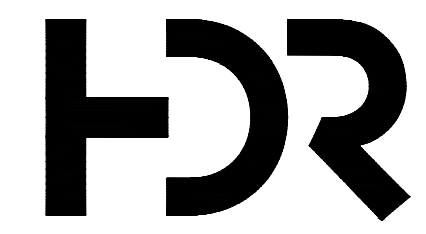
1. PROVIDE 3/16" CHAMFER ON ALL EXPOSED CONCRETE CORNERS AND EDGES, UNLESS OTHERWISE SHOWN.
2. CONSTRUCTION JOINTS SHALL BE AS SHOWN OR AS APPROVED BY THE CONTRACTING OFFICER.
3. FOR GENERAL REINFORCEMENT NOTES, SEE SHEET 10.
4. FINISH FOR CONCRETE SURFACES SHALL BE AS FOLLOWS:
(1) CLASS B - ALL FORMED SURFACES, EXCEPT AS NOTED IN (2).
(2) CLASS D - SURFACES AGAINST WHICH CONCRETE OR FILL IS TO BE PLACED.
5. ALL EXPOSED UNFORMED SURFACES TO BE WOOD FLOAT FINISHED, UNLESS OTHERWISE NOTED.
6. WORKING STRESSES FOR STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE A.I.S.C., USING 95% OF THE A.I.S.C. ALLOWABLE STRESS, UNLESS OTHERWISE SHOWN OR SPECIFIED.

RECORD DRAWING NOTE
"Shall be," "Provide," "Install,"
"Remove," etc., indicates work
was accomplished under the
contract.



REFURBISHMENT NOTES:

1. THIS SHEET PROVIDES DIRECTION AS TO WHICH GATES AND ASSOCIATED APPURTENANCES ARE TO BE REHABILITATED AS PART OF THIS PROJECT. THE INFORMATION PROVIDED ON THIS SHEET ARE FROM ASBULTS AND NOT CONFIRMED. CONTRACTOR TO VERIFY INFORMATION IN THE FIELD PRIOR TO CONSTRUCTION.
2. SEE SPECIFICATIONS FOR REHABILITATION REQUIREMENTS AND HISTORIC WATER LEVELS.
3. COMPLETE ASBULT DRAWINGS ARE INCLUDED AS PART OF THE CONTRACT DOCUMENTS FOR REFERENCE.
4. DOWNSTREAM SIDE OF S-160 IS SALT/BRACKISH WATER.
5. TO BRING ATTENTION TO CONTRACTOR, MAIN (ROLLER) GATE AT S-160 IS TWO (2) PIECE GATE. SEE M001.
6. STOPLOGS WILL REQUIRE CABLE TO BE RUN THROUGH TOP HOLES TO PREVENT MOVEMENT IN THE EVENT TIDAL SURGE IS ENCOUNTERED.



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CA 4213

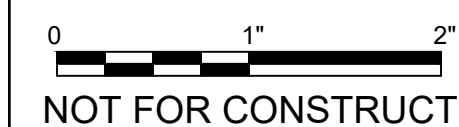
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	KATIE DUTY, P.E.
PROJECT NUMBER	10220470

SWFWMD GATE REFURBISHMENT SUPPORT
S-160 AND S-162

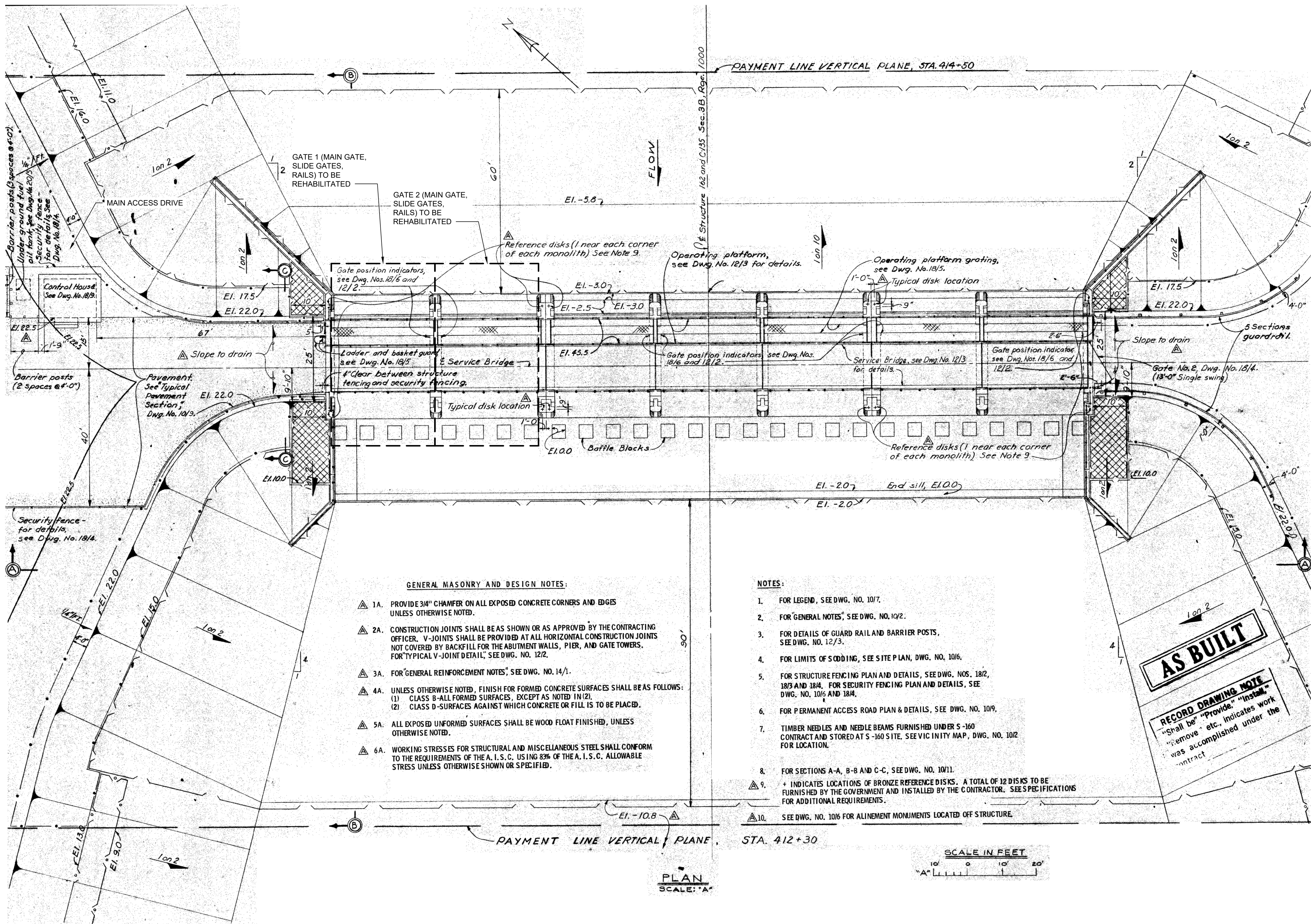
SOUTHWEST FLORIDA WATER
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2379 BROAD STREET
BROOKSVILLE, FL 34604

CIVIL
S-160 LAYOUT AND PLAN VIEW

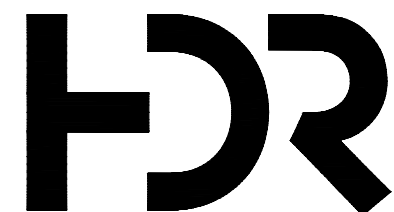


SHEET 4 of 14
SCALE NOT TO SCALE

DRAWING
C001



- REFURBISHMENT NOTES:
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 2. SEE SPECIFICATIONS FOR REHABILITATION REQUIREMENTS AND HISTORIC WATER LEVELS.
 3. COMPLETE ASBUILT DRAWINGS ARE INCLUDED AS PART OF THE CONTRACT DOCUMENTS FOR REFERENCE.



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ISSUE	DATE	DESCRIPTION

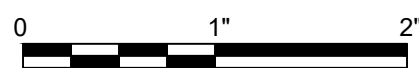
PROJECT MANAGER KATIE DUTY, P.E.

PROJECT NUMBER	10220470

SWFWMD GATE REFURBISHMENT SUPPORT
S-160 AND S-162

SOUTHWEST FLORIDA WATER
MANAGEMENT DISTRICT
2379 BROAD STREET
BROOKSVILLE, FL 34604

CIVIL
S-162 LAYOUT AND PLAN VIEW

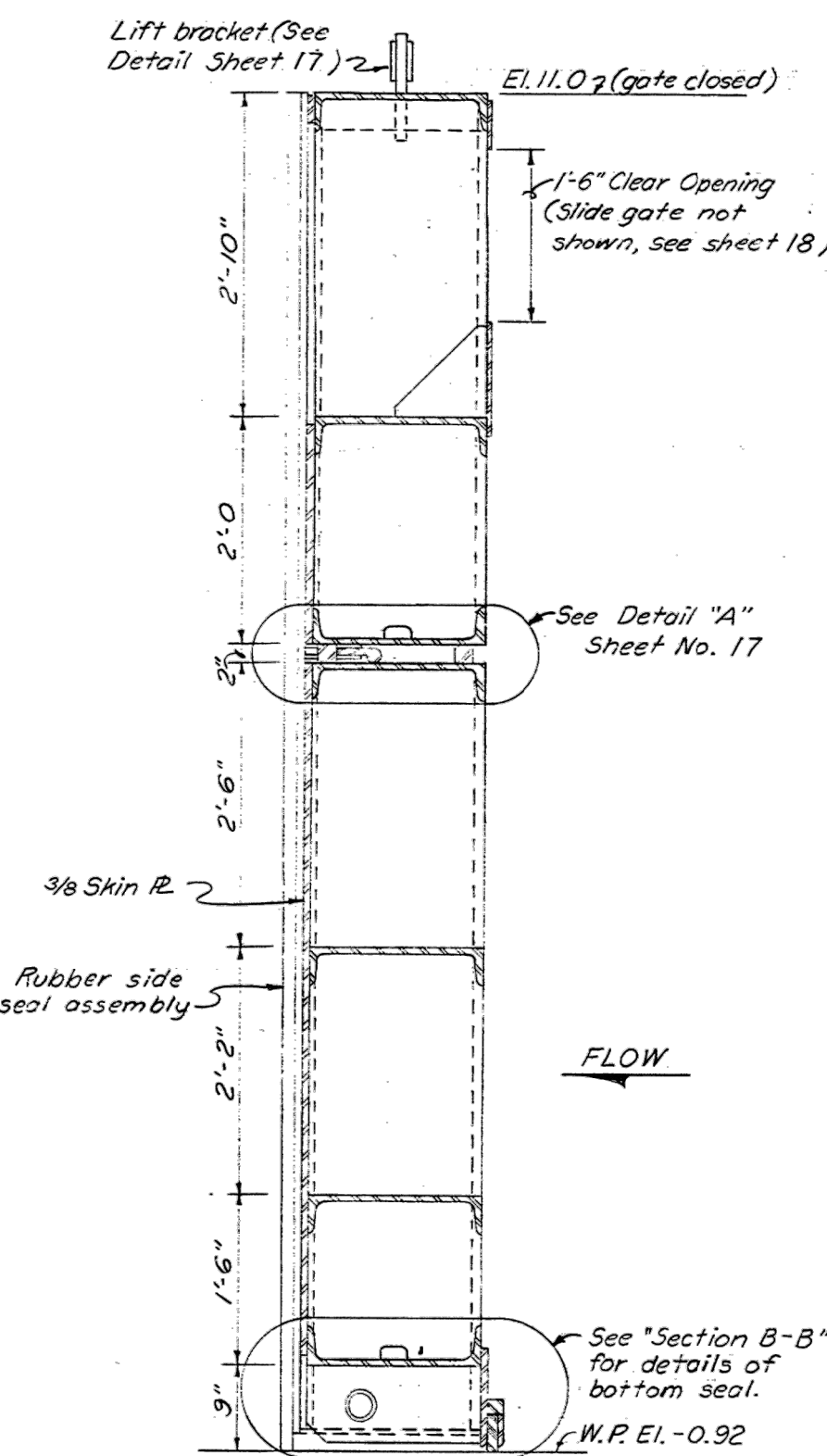
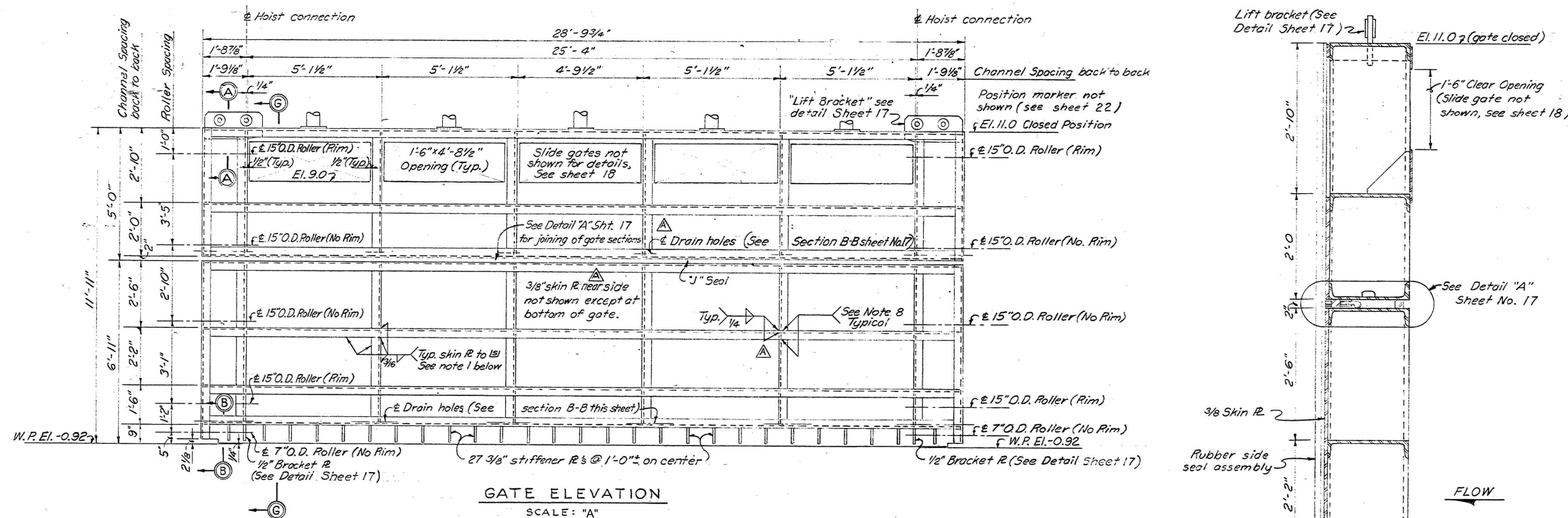


NOT FOR CONSTRUCTION SCALE NOT TO SCALE

SHEET 5 of 14

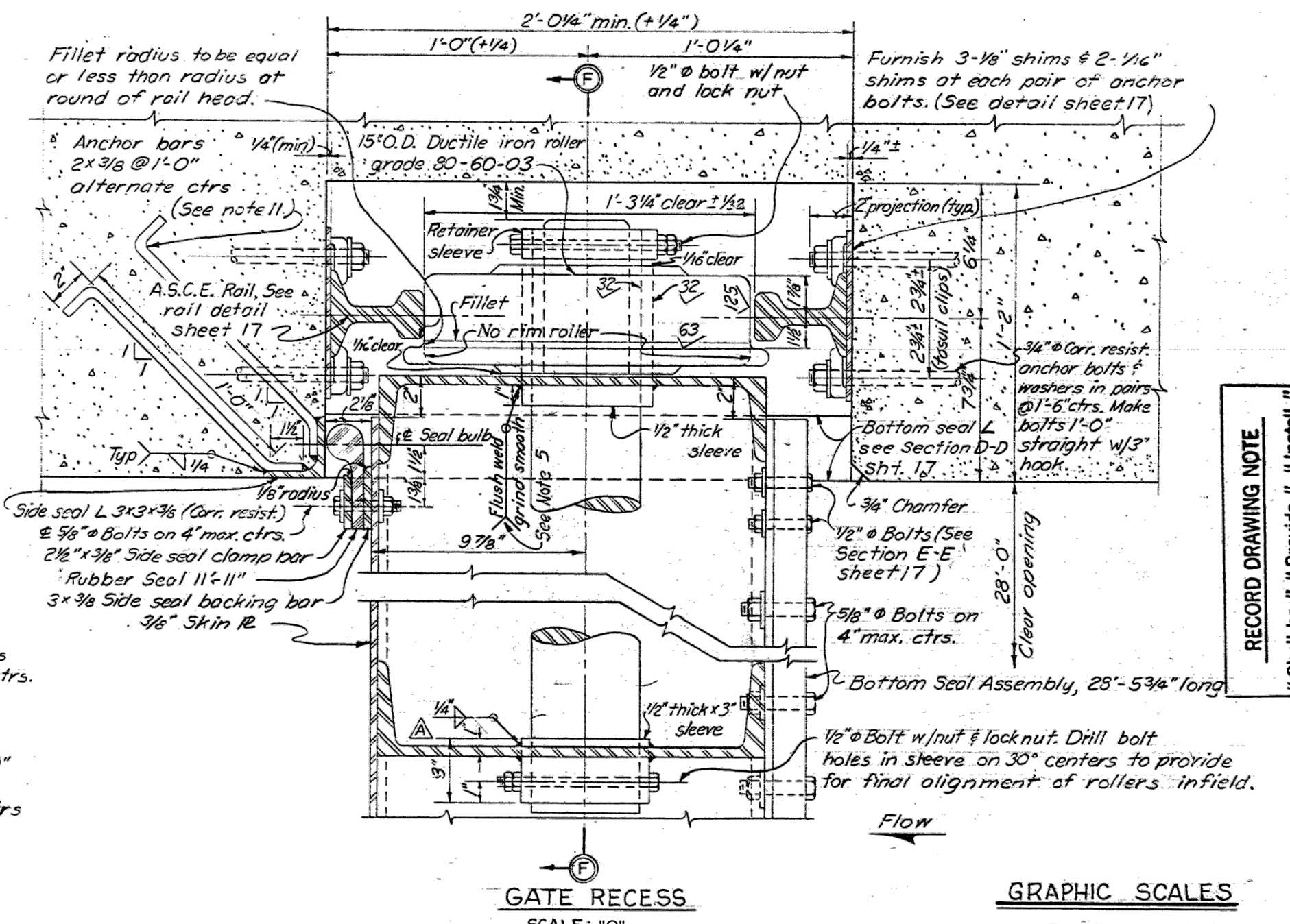
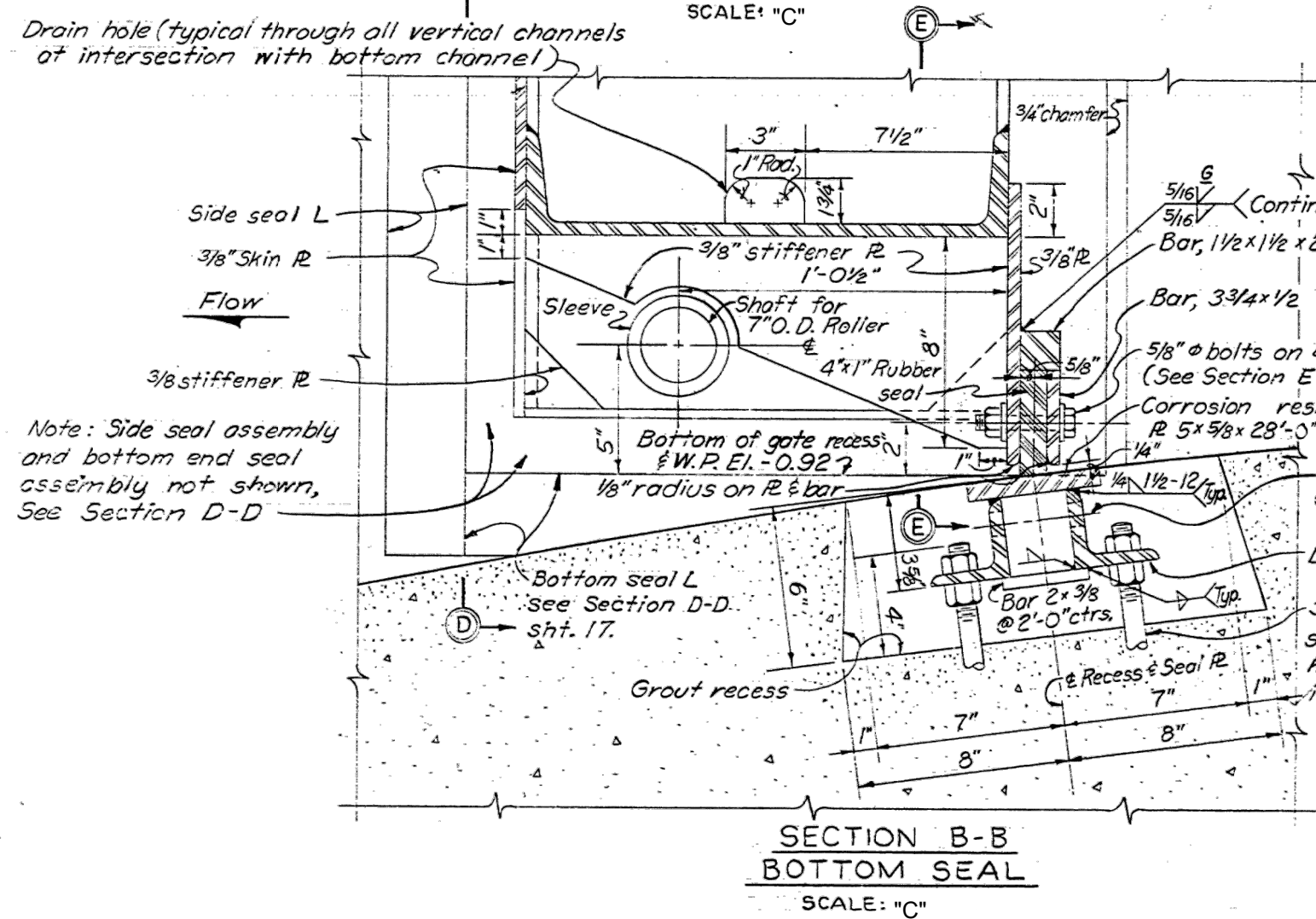
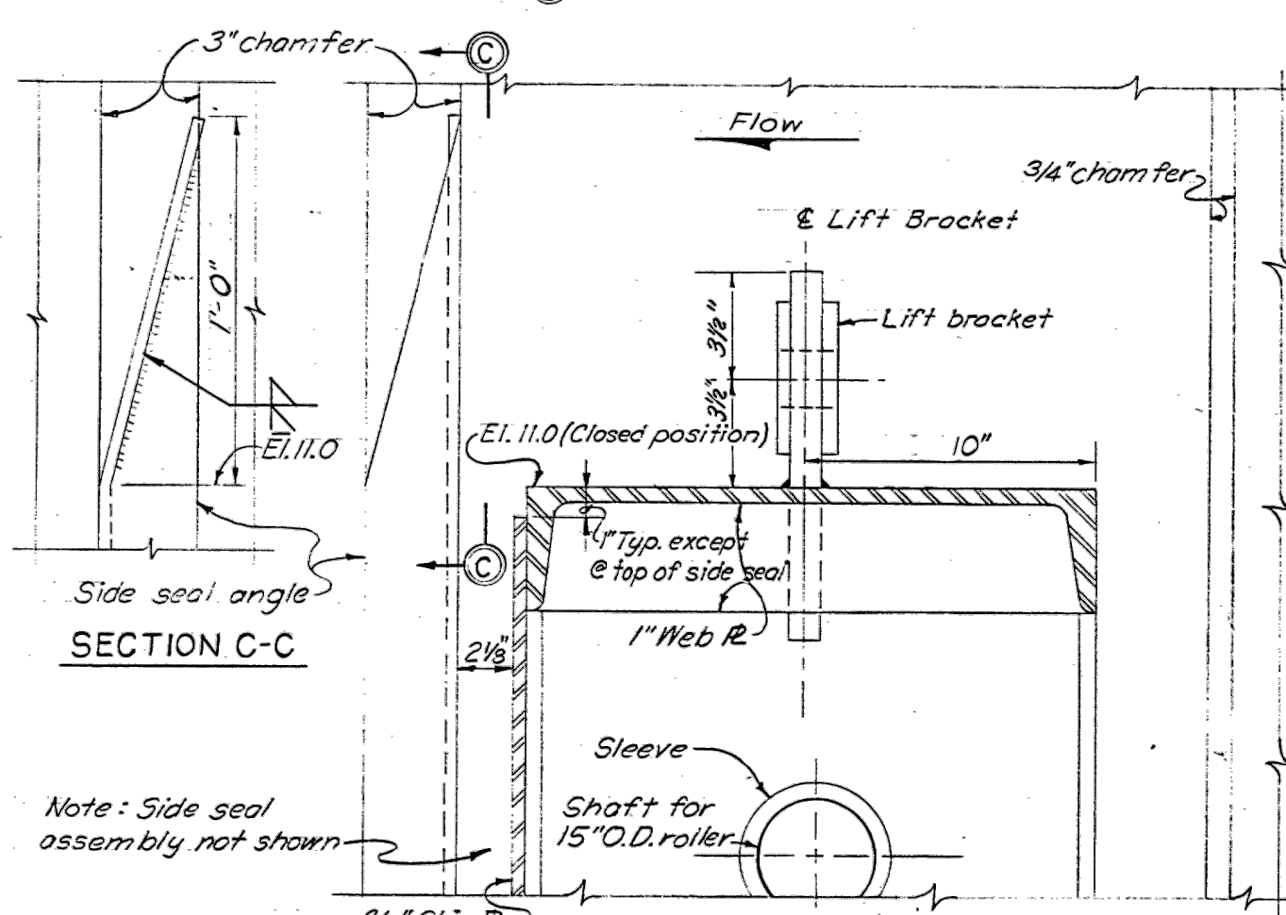
DRAWING

C002



GATE NOTES:

- 3/8" SKIN R. TO BE ATTACHED TO FRAME MEMBERS WITH CONTINUOUS 3/16" FILLET WELDS ON BOTH SIDES OF EACH CONTACT FLANGE.
- 15" O.D. ROLLERS ARE TO HAVE A RIM, AS SHOWN IN THE "GATE RECESS" DETAIL. WHERE A RIM IS INDICATED IN THE "GATE ELEVATION", ALL OTHER ROLLERS ARE NOT TO HAVE A RIM OR FILLET.
- VERTICAL CHANNELS 18LJ 42.7 - HORIZONTAL CHANNELS 18LJ 51.9.
- 3/8" SKIN R. FAR SIDE NOT SHOWN EXCEPT AT BOTTOM OF GATE.



GRAPHIC SCALES



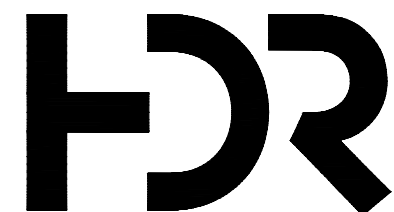
GENERAL WELDING NOTES:

- WELDING SYMBOLS ARE THOSE ADOPTED BY THE AMERICAN WELDING SOCIETY AND INDICATE ONLY SIZE AND TYPE OF WELDS REQUIRED. DETAILED INFORMATION SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL.
- THE CONTRACTOR'S SHOP DRAWINGS SHALL CLEARLY DISTINGUISH BETWEEN SHOP AND FIELD WELDS. LENGTH OF WELD CALLED FOR ON THE DRAWINGS SHALL BE THE EFFECTIVE LENGTH.
- WHERE CORROSION RESISTING STEEL IS WELDED, FILLER MATERIAL SHALL BE CORROSION RESISTING.
- WELDING SYMBOL SHOWN THUS, MEANS THAT ALL SIMILAR JOINTS IN THIS VIEW SHALL BE WELDED IN THIS MANNER.
- WELDING SYMBOL SHOWN THUS, INDICATES EXTERIOR FINISH OF WELD ONLY. COMPLETE PENETRATION WELD REQUIRED. SEE SPECIFICATIONS.
- ALL JOINTS IN CONTACT WITH OTHER SURFACES (I.E., SKIN PLATE, GUSSET, ETC.) SHALL BE FLUSH WELDED.
- "GENERAL WELDING NOTES" APPLY TO ALL DETAILS AND CONNECTIONS AS SHOWN ON SH. NOS. 16 THROUGH 25 INCLUSIVE.
- COMPLETE PENETRATION WELD REQUIRED. SEE SPECIFICATIONS.

NOTES:

- ALL MATERIAL STRUCTURAL STEEL UNLESS OTHERWISE NOTED.
- ALL MATERIAL NOTED ON THIS SHEET AS CORR. RESIST. SHALL BE CORROSION RESISTING STEEL TYPE 316. UNLESS SHOWN OR SPECIFIED OTHERWISE.
- IRREGULARITIES AND THE PLANE OF THE EXPOSED SURFACES OF EMBEDDED METAL SEALS IN CONTACT WITH THE RUBBER SHALL NOT VARY MORE THAN 1/16" FROM POSITIONS SHOWN.
- SHIMS INDICATED TO BE FURNISHED ARE TO BE INSTALLED AS REQUIRED TO OBTAIN NECESSARY CLEARANCES.
- THE ROLLER BUSHING I.D. IS TO BE 1/64" GREATER THAN THE SHAFT BUSHING O.D.
- OPTIONS ON EMBEDDED METAL SEALS ARE AS FOLLOWS:
 - THE 3/8" THICK CORROSION RESISTING SIDE SEAL ANGLES MAY BE REPLACED WITH 1/2" THICK BENT CHROME CLAD PLATES
 - THE 5/8" THICK CORROSION RESISTING BOTTOM SEAL PLATES MAY BE REPLACED WITH 5/8" THICK CHROME CLAD PLATES.
- ALL BOLTS SHALL BE FURNISHED WITH ONE NUT AND WASHER UNLESS OTHERWISE NOTED.
- ALL BOLTS, NUTS, AND WASHERS SHALL BE CORROSION RESISTING STEEL, TYPE 316.
- SEE SPECIFICATIONS FOR QUALITY OF FINISH REQUIRED BY SYMBOLS 13, 32, AND 63.
- FURNISH AND INSTALL FIVE MAIN GATES COMPLETE, AS SHOWN ON THIS SHEET AND SHEET 17 WITH FIVE SLIDE GATES EACH DETAILED ON SHEET 18. ALSO FURNISH AND INSTALL ONE SKIMMER GATE AS DETAILED ON SHEET 19.
- AT THE OPTION OF THE CONTRACTOR, 5/8" Ø X 3/8" ANCHOR STUDS MAY GENERALLY BE SUBSTITUTED FOR 2" X 3/8" ANCHOR BARS, HOW EVER SPECIFIC APPROVAL OF THE SUBSTITUTION FOR EACH INDIVIDUAL EMBEDDED ITEM IS REQUIRED PRIOR TO FABRICATION.
- SPACE ALL BOLTS CONNECTING RUBBER SEAL ASSEMBLIES TO THE GATE SUCH THAT BOLTS FALL ON THE GAGE LINE OF THE FRAMING MEMBERS ± 1/16" BEVEL WASHERS SHALL BE FURNISHED AT BOLTED CONNECTIONS TO ALL CHANNEL FLANGES.
- FOR CATHODIC PROTECTION DETAILS SEE ELECTRICAL SHEETS.
- FURNISH AND INSTALL A POSITION INDICATOR AND POSITION MARKER AT EAST END OF EACH GATE. SEE SHEET 22 FOR DETAILS.
- THE O.D. OF SHAFT SLEEVES AND THE 1" Ø OF ROLLER BUSHING TO BE FINISHED REMOVE ALL SHARP CORNERS.
- AT THE OPTION OF THE CONTRACTOR, RUBBER SEAL CORNERS MAY BE (1) STANDARD MOULDED CORNERS, (2) CORNERS SPLICED, CAREFULLY FITTED, AND VULCANIZED BY THE RUBBER MANUFACTURER.
- SEE SHEET 17 FOR SECTION D-D, E-E AND F-F. AND DETAIL "A".
- GATE DETAILS, AS SHOWN ON THIS SHEET AND SHEET 17, APPLY TO SKIMMER GATE ALSO, UNLESS OTHERWISE INDICATED.

RECORD DRAWING NOTE
"Shall be," "Provide," "Install," "Remove," etc., indicates work was accomplished under the contract.



4830 W. KENNEDY BLVD, STE 400
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CA 4213

ISSUE DATE DESCRIPTION

PROJECT MANAGER KATIE DUTY, P.E.

PROJECT NUMBER 10220470

SWFWMD GATE REFURBISHMENT SUPPORT S-160 AND S-162

SOUTHWEST FLORIDA WATER
MANAGEMENT DISTRICT

2379 BROAD STREET
BROOKSVILLE, FL 34604

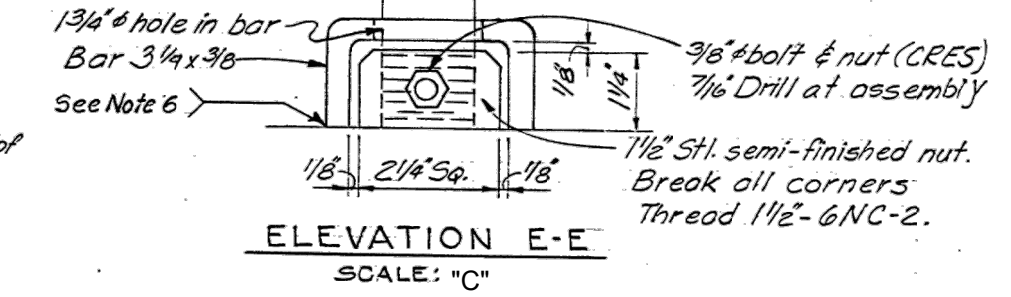
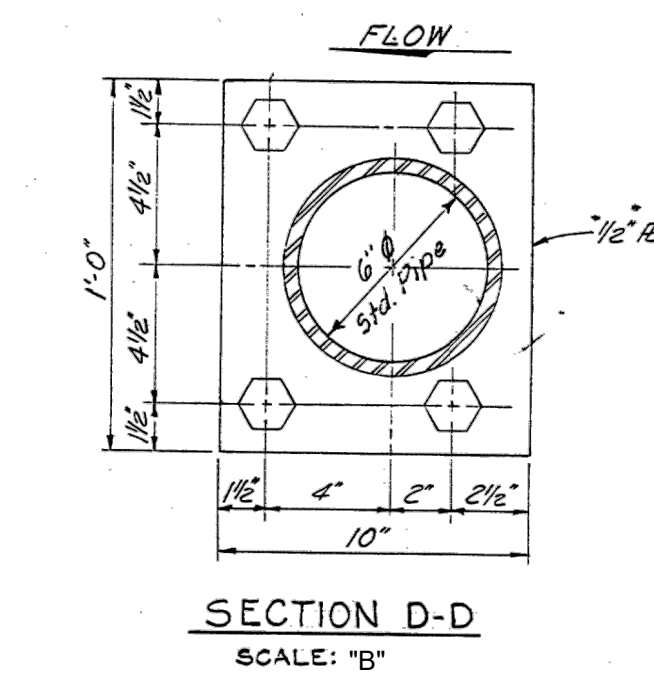
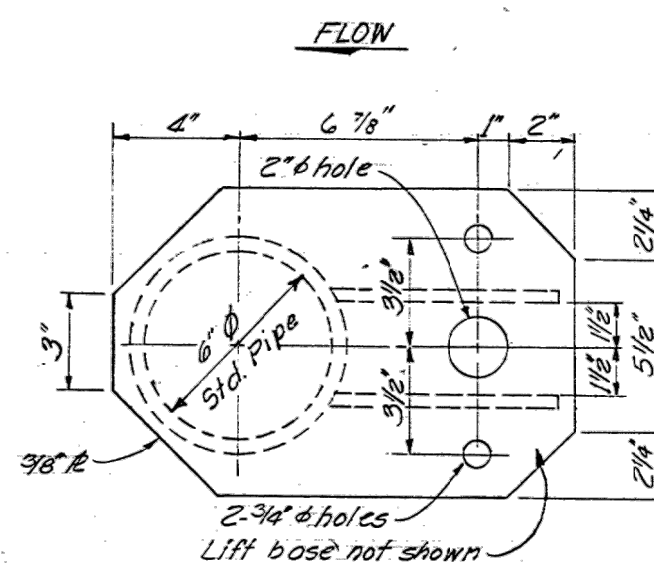
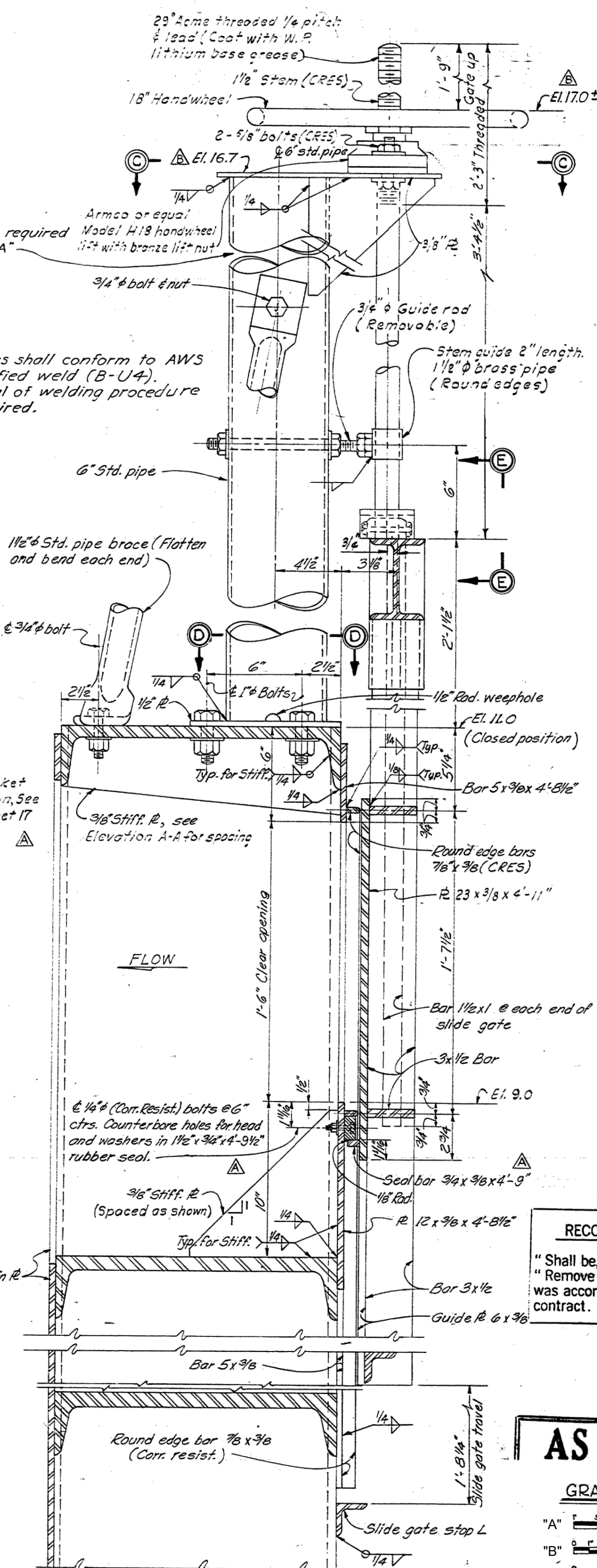
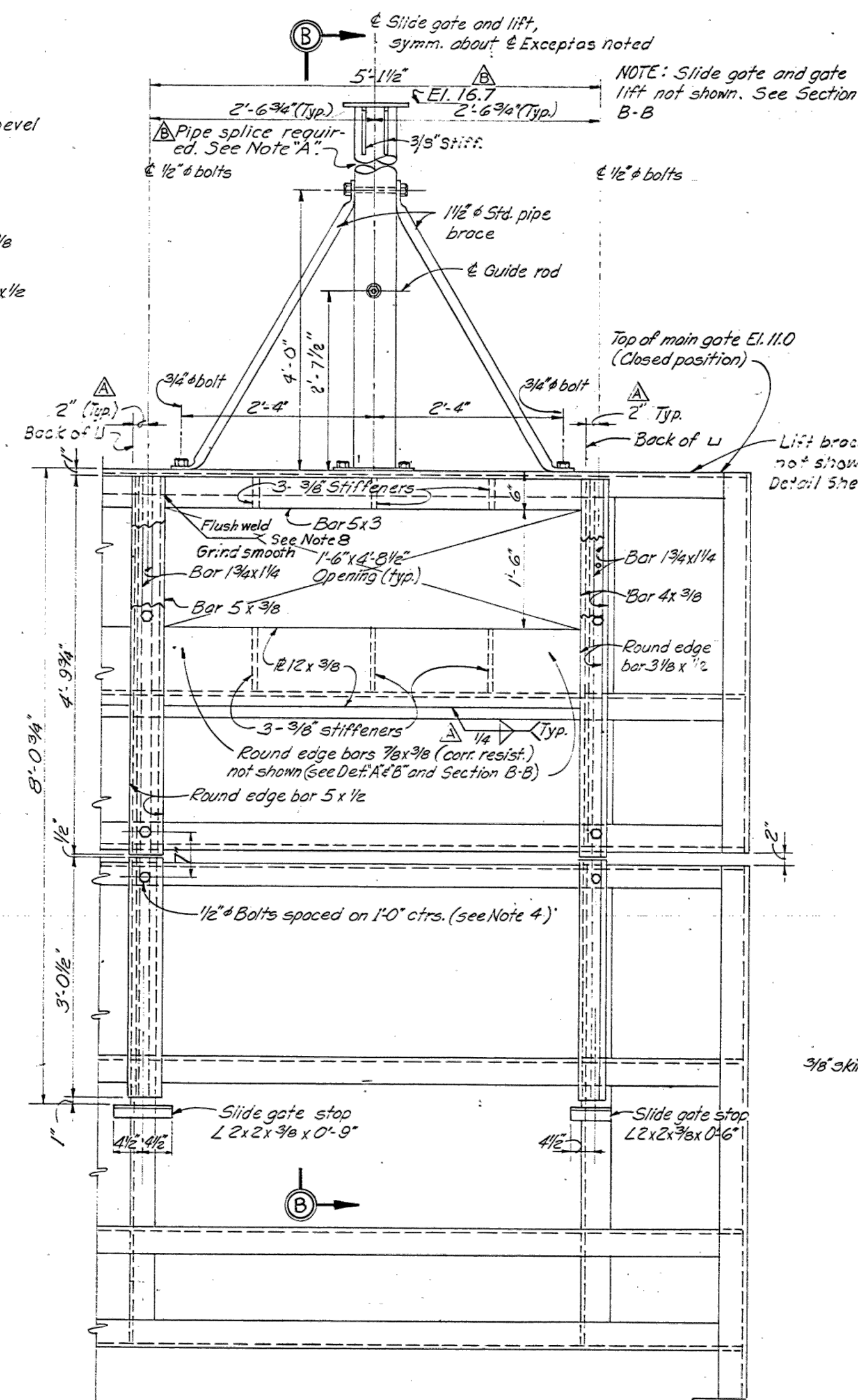
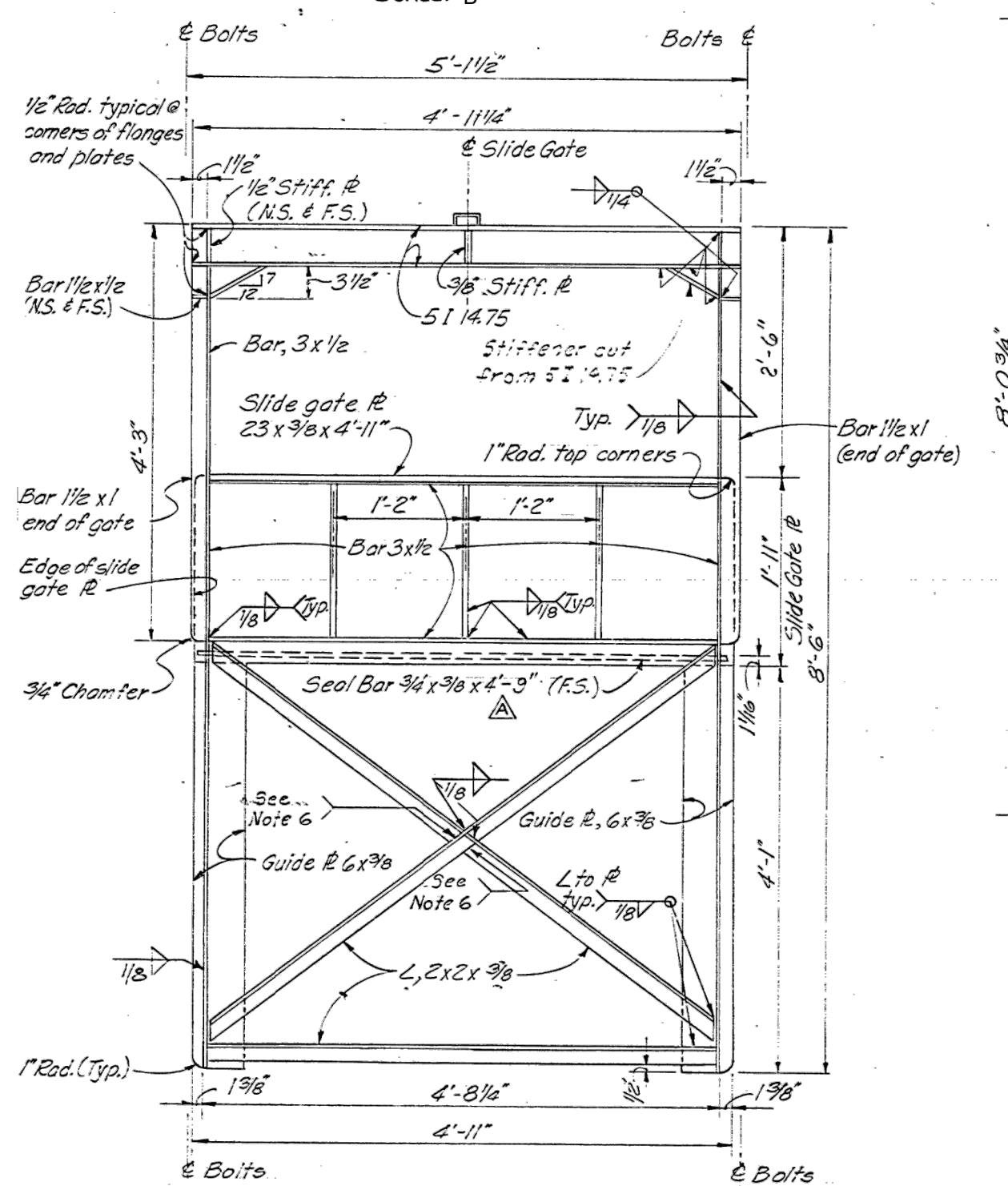
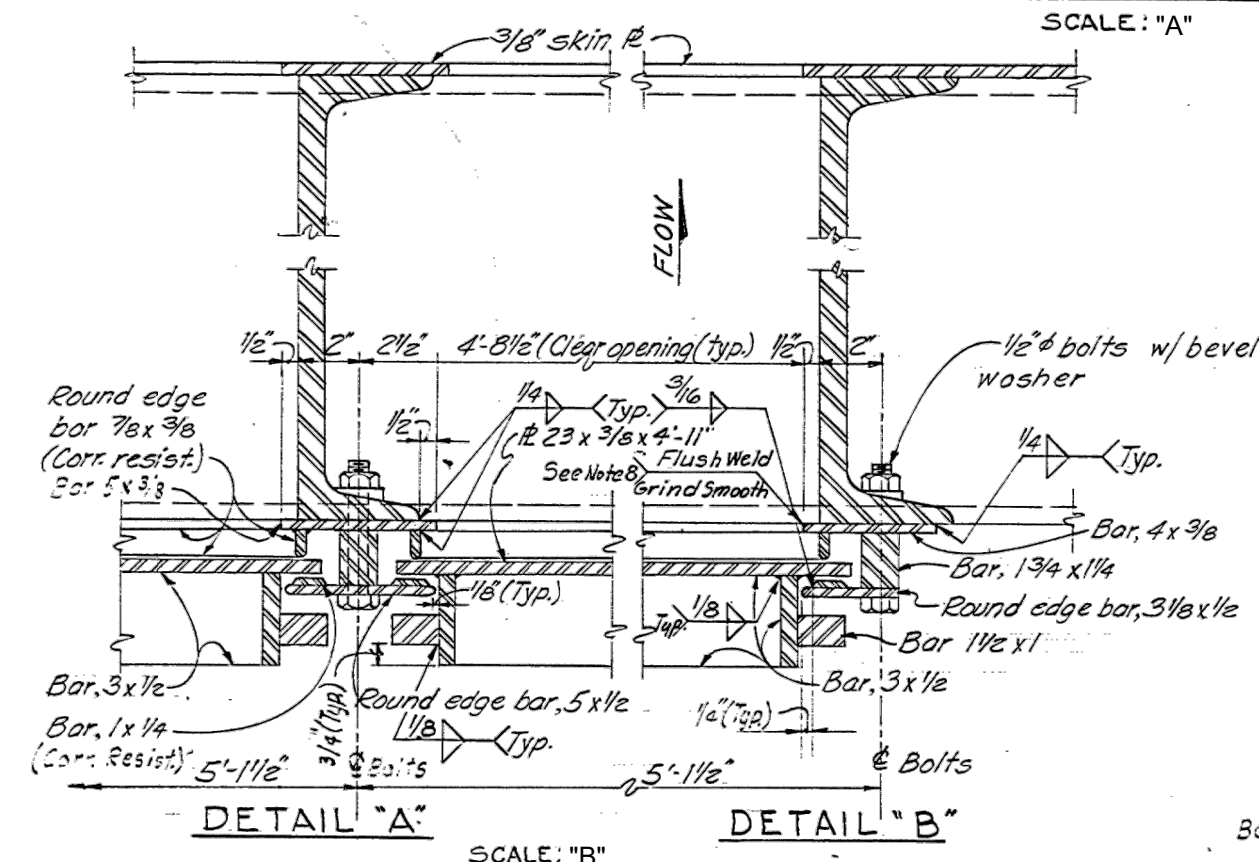
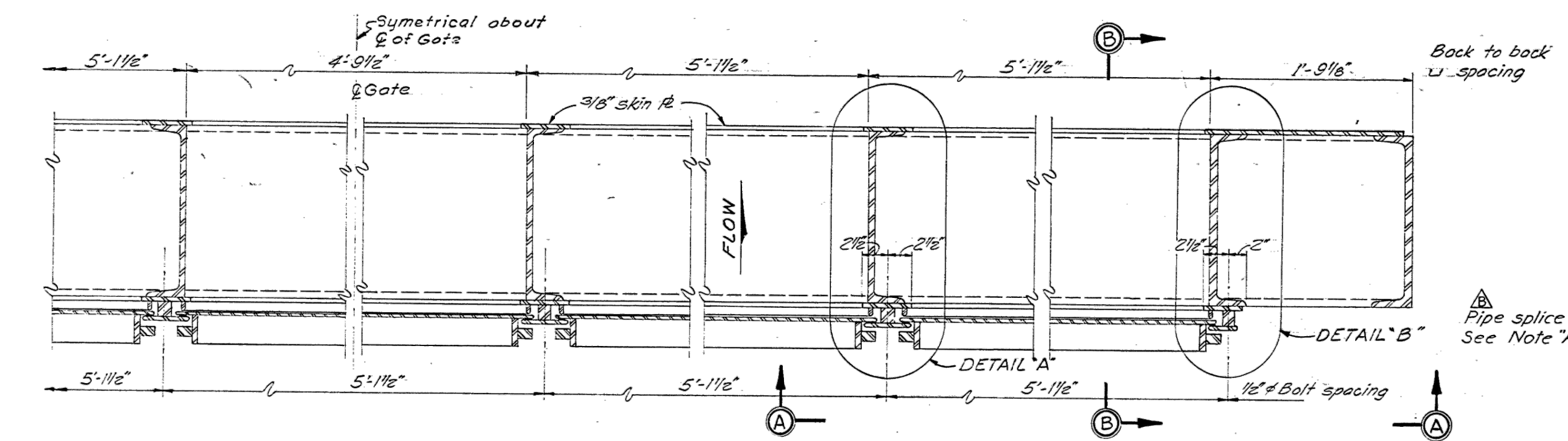
MECHANICAL S-160 MAIN GATE DETAILS

0 1" 2"
NOT FOR CONSTRUCTION

SHEET 9 of 14
SCALE NOT TO SCALE

DRAWING

M001



- REFURBISHMENT NOTES:

1. THE INFORMATION PROVIDED ON THIS SHEET ARE FROM ASBULTS AND NOT CONFIRMED. CONTRACTOR TO VERIFY INFORMATION IN THE FIELD PRIOR TO CONSTRUCTION.
2. SEE SPECIFICATIONS FOR REHABILITATION REQUIREMENTS AND HISTORIC WATER LEVELS.
3. COMPLETE ASBULT DRAWINGS ARE INCLUDED AS PART OF THE CONTRACT DOCUMENTS FOR REFERENCE.
4. AT S-160, EACH GATE HAS FIVE (5) SLIDE GATES. ALL SLIDE GATES AND APPURTENANCES ASSOCIATED WITH EACH MAIN GATE TO BE REHABILITATED ARE TO BE REHABILITATED AS WELL.

RECORD DRAWING NOTE

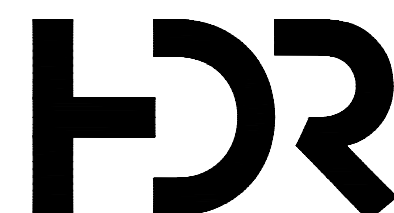
"Shall be," "Provide," "Install," "Remove," etc., indicates work was accomplished under the contract.

NOTES:

1. ALL MATERIAL STRUCTURAL STEEL, UNLESS OTHERWISE SHOWN.
2. ALL MATERIAL NOTED AS CORR. RESIST. OR CR.S SHALL BE CORROSION RESISTING STEEL TYPE 316, UNLESS SHOWN OR SPECIFIED OTHERWISE.
3. ALL BOLTS, NUTS AND WASHERS SHALL BE CORROSION RESISTING STEEL, TYPE 316. ALL BOLTS SHALL BE FURNISHED WITH O.D. NUT AND WASHER, UNLESS OTHERWISE INDICATED.
4. BOLTS FOR SLIDE GATE GUIDE BARS SHALL BE SPACED 1'-0" ON CENTERS, EXCEPT WHERE THEY PASS THROUGH VERTICAL CHANNEL, THEY ARE TO BE PLACED ON THE GAGE LINE.
5. FURNISH 25 SLIDE GADES COMPLETE WITH GUIDES, AS DETAILED ON THIS SHEET.
6. COMPLETE PENETRATION WELD REQUIRED. SEE SPECIFICATIONS.
7. FOR "GENERAL WELDING NOTES" SEE SHEET 16.
8. WELDING SYMBOL SHOWN THIS ^{PLASMA ARC} ONLY, ^{OR} ^{WELDING SYMBOL} EXTERIOR FINISH OF WELD JOINT. COMPLETE PENETRATION WELD REQUIRED. SEE SPECIFICATIONS.

AS BUILT

GRAPHIC SCALES



4830 W. KENNEDY BLVD, STE 400
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			PROJECT MANAGER		KATIE DUTY, P.E.
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER		10220470

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S-160 AND S-162**

**SOUTHWEST FLORIDA WATER
MANAGEMENT DISTRICT**
2379 BROAD STREET
BROOKSVILLE, FL 34604

MECHANICAL S-160 SLIDE GATE DETAILS

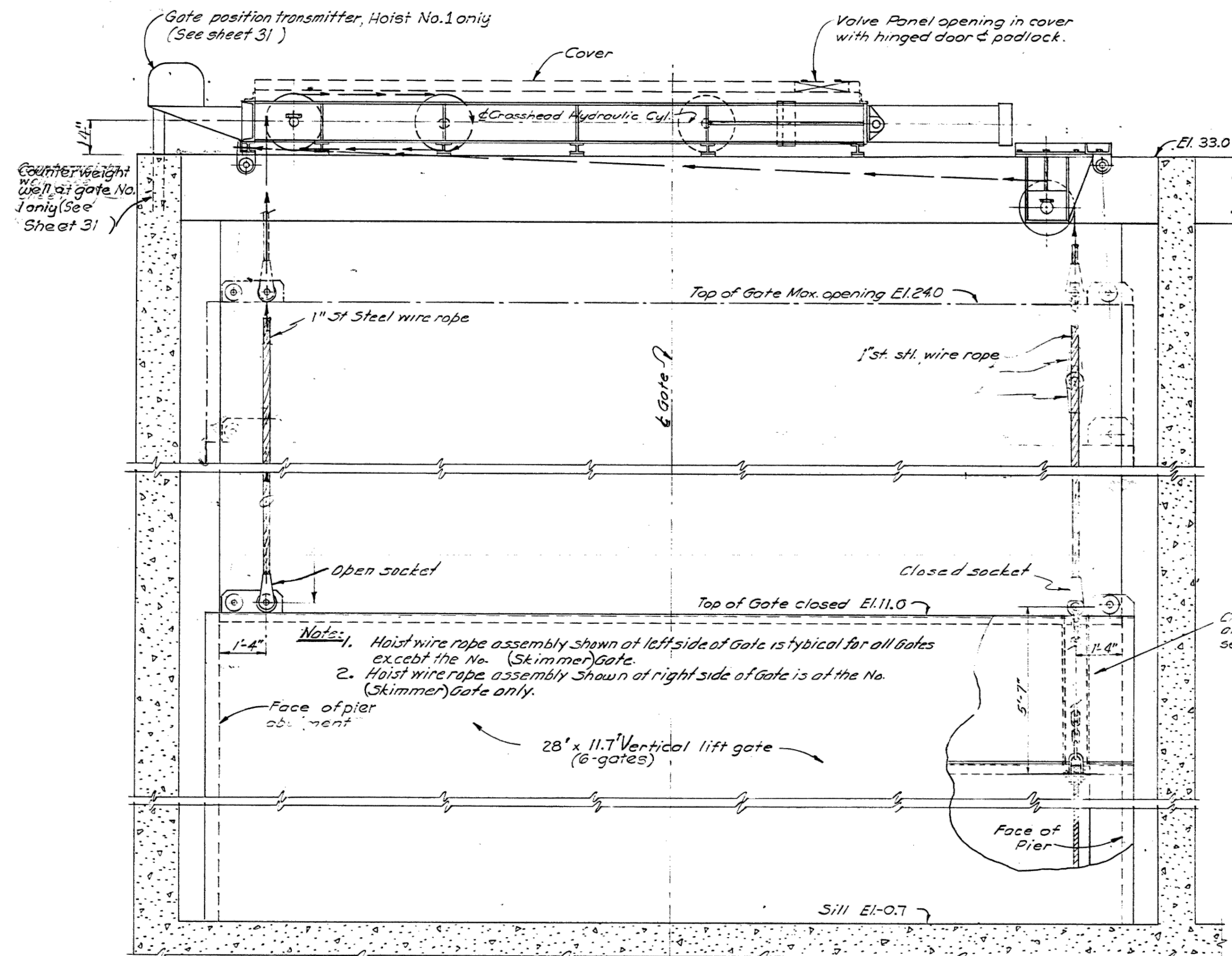
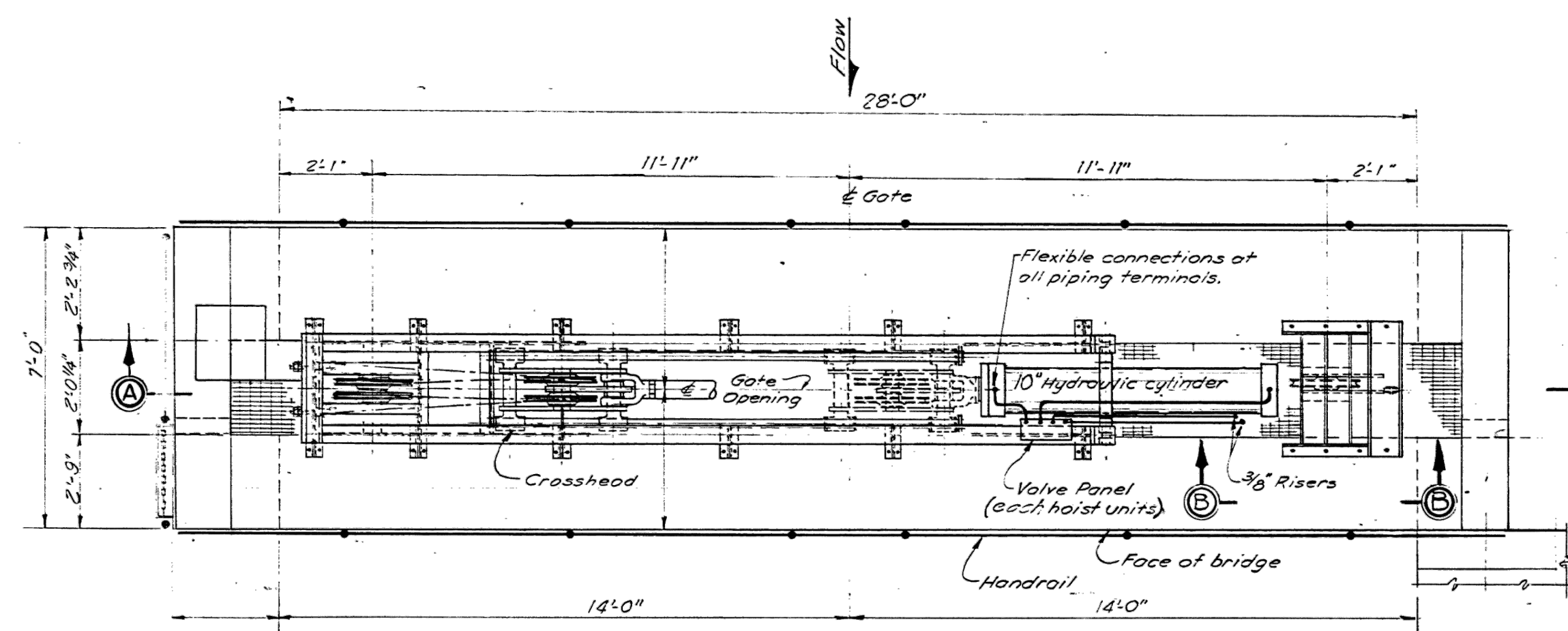
0 1" 2"

NOT FOR CONSTRUCTION

SHEET	10 of 14
SCALE	NOT TO SCALE

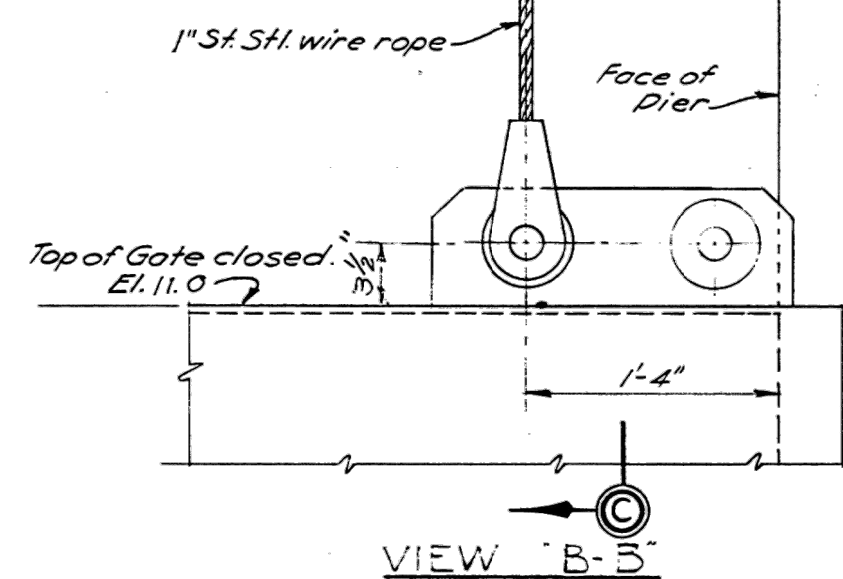
DRAWING

M002



SECTION "A-A"

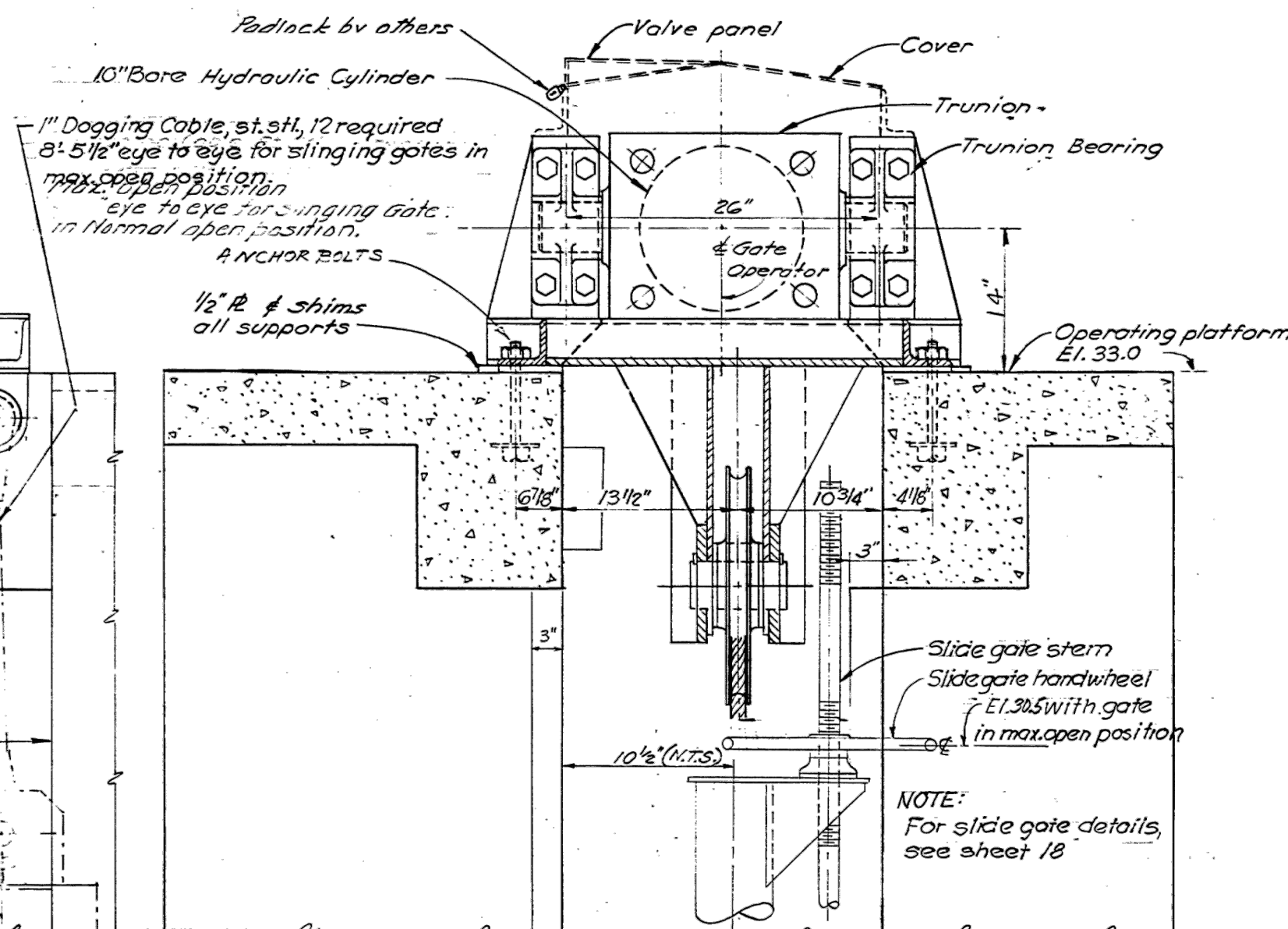
Top of Gate Max. opening position
Showing dogging arrangement
El.24.0



Chain & cable arrangement
of Gate No.3 (Skimmer) only
see sheet 19 & 31

Notes:

1. a. Estimated Gate weight 26,000 #
b. Estimated Hoist load 40,000 #
2. Gate Speed 6"/min. for simultaneous operation.
3. Working Pressure of estimated hoist load 1600 p.s.i. (80% eff.)
By positioning of Control Valves Gate will be self lowering by gravity and about 1/2 base of Power Unit



SECTION "C-C"

RECORD DRAWING NOTE

"Shall be," "Provide," "Install," "Remove," etc., indicates work was accomplished under the contract.

AS BUILT

GRAPHIC SCALES

"A" 0 1 2

REFURBISHMENT NOTES:

1. THE INFORMATION PROVIDED ON THIS SHEET ARE FROM ASBUILTS AND NOT CONFIRMED. CONTRACTOR TO VERIFY INFORMATION IN THE FIELD PRIOR TO CONSTRUCTION.
2. SEE SPECIFICATIONS FOR REHABILITATION REQUIREMENTS AND HISTORIC WATER LEVELS.
3. COMPLETE ASBUILT DRAWINGS ARE INCLUDED AS PART OF THE CONTRACT DOCUMENTS FOR REFERENCE.
4. HYDRAULICS ARE TO BE REMOVED AND STORED OFFSITE BUT TO REMAIN ACCESSIBLE TO DISTRICT FOR INSPECTION.
5. HYDRAULIC ENCLOSURES TO BE RECOATED AS PART OF GATE REHABILITATION, SEE SPECIFICATIONS.
6. HYDRAULICS ARE TO BE PRESSURE TESTED AND LOAD TESTED AT DISTRICT APPROVED FACILITY. TESTS TO BE WITNESSED BY DISTRICT OR THEIR REPRESENTATIVE.



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**MECHANICAL
S-160 HYDRAULIC DETAILS**

0 1 2

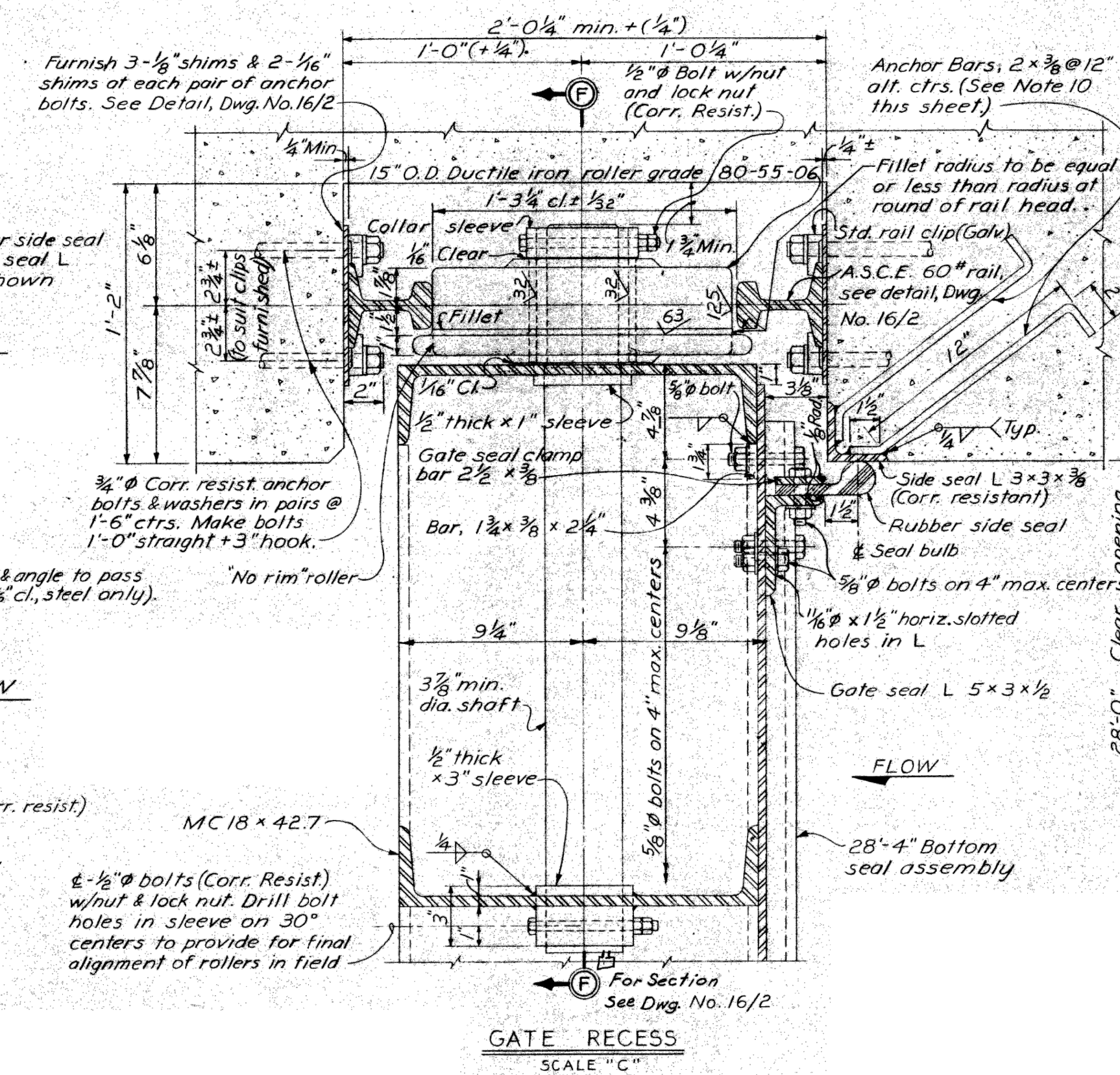
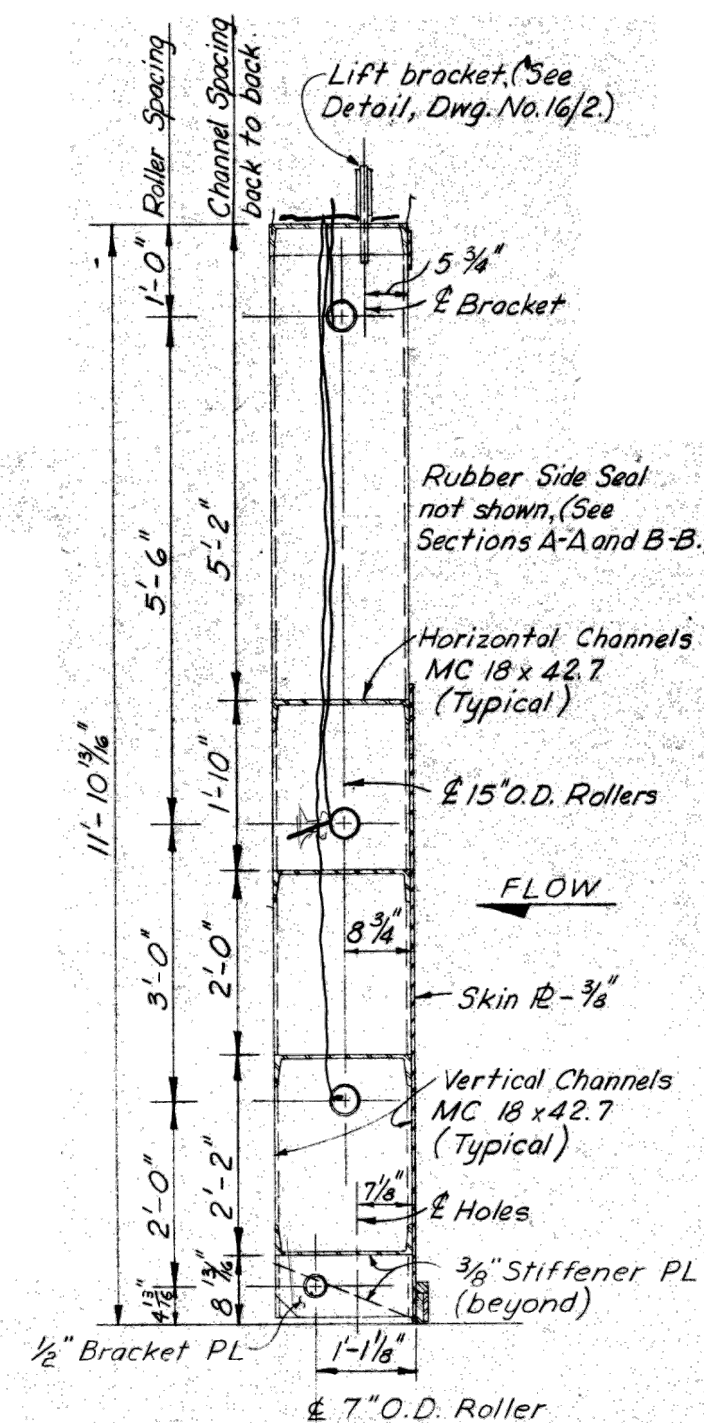
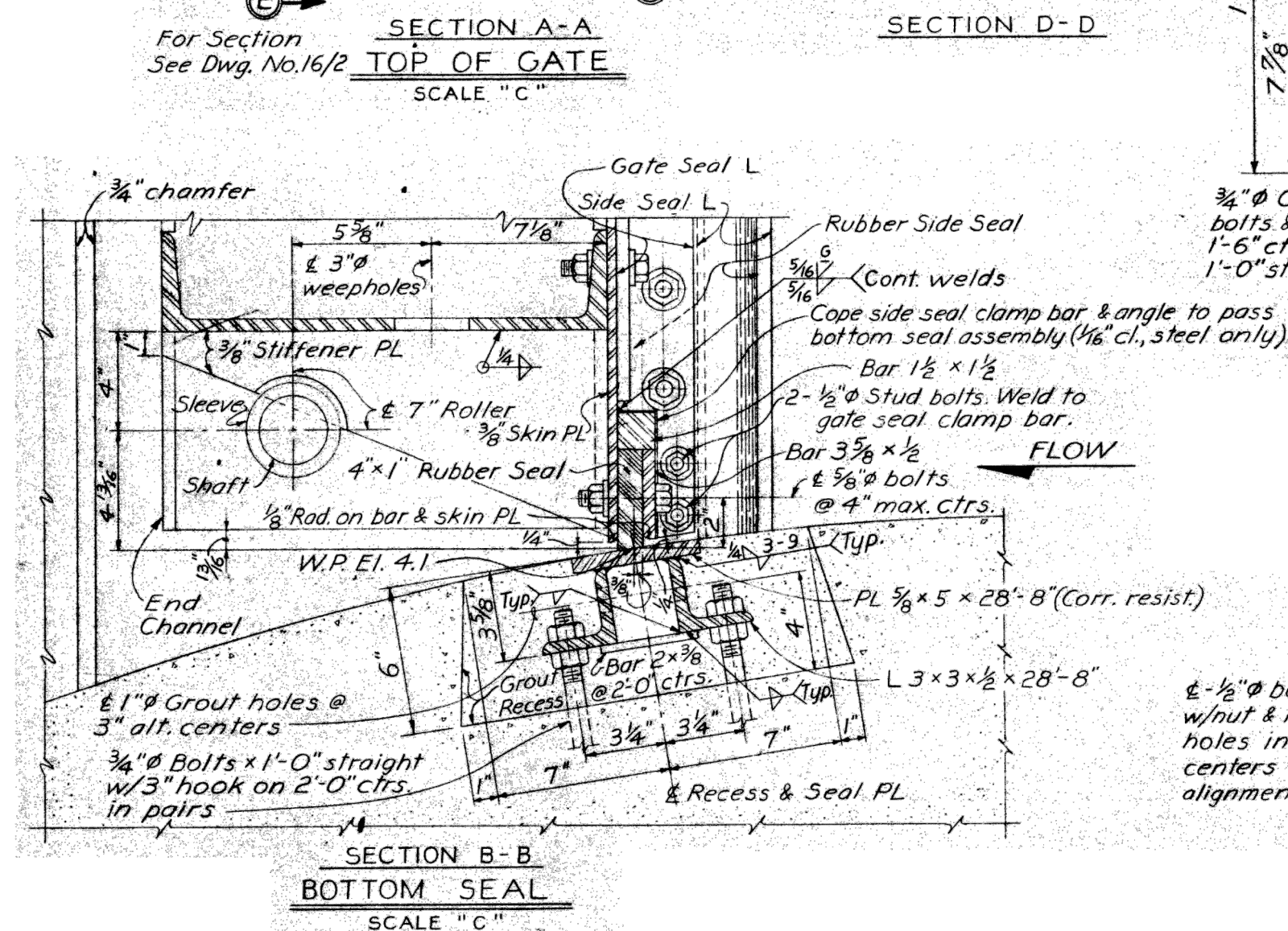
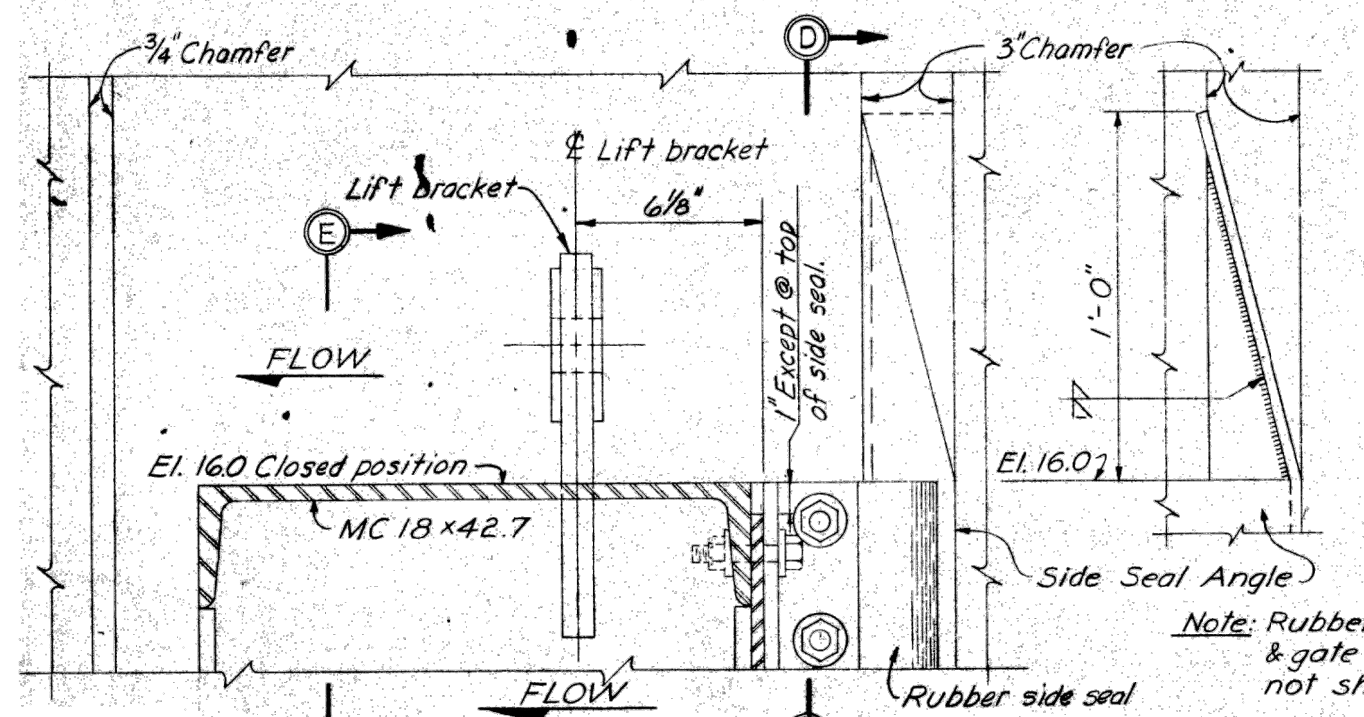
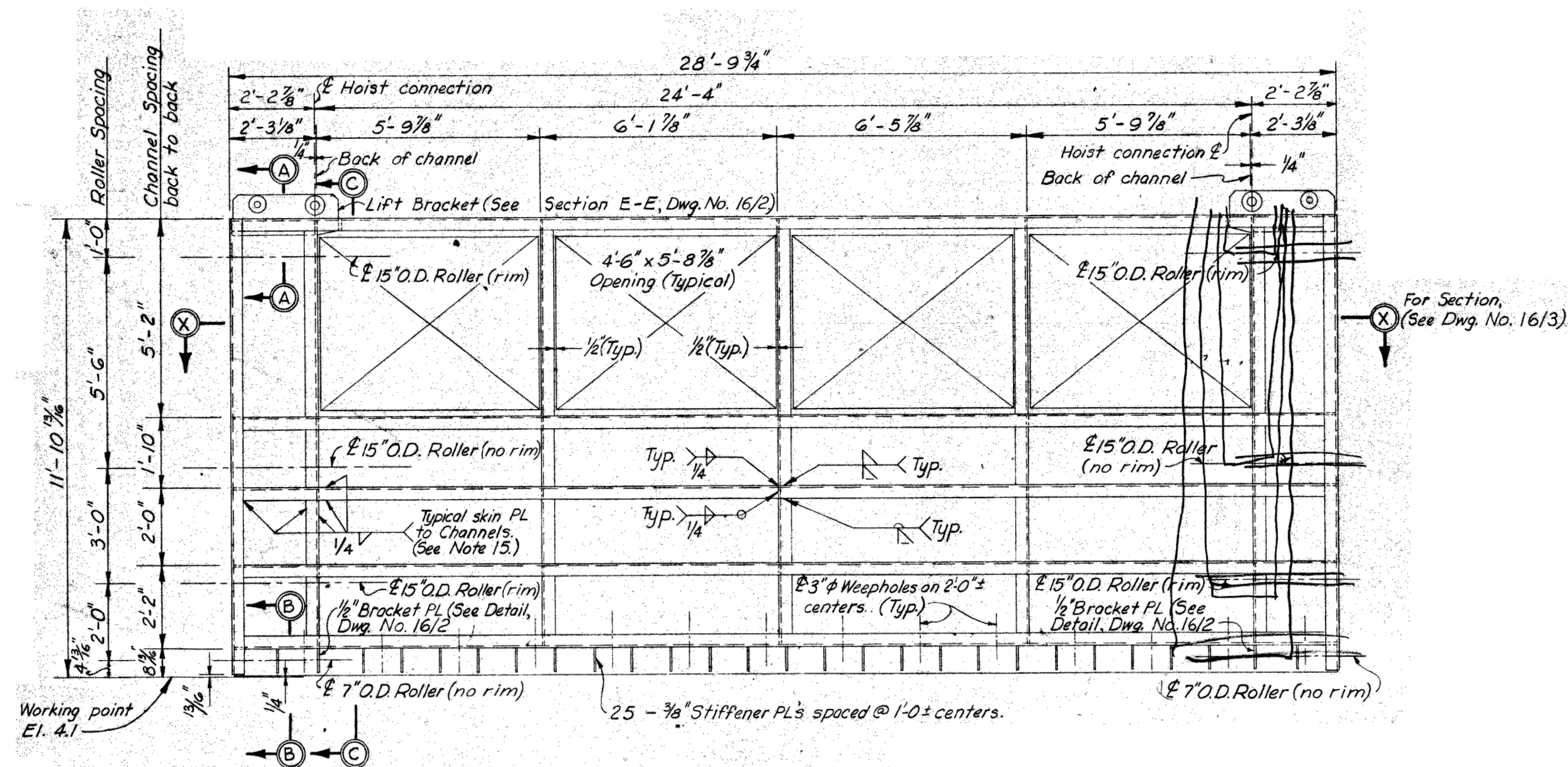
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SHEET 11 of 14


SCALE NOT TO SCALE

DRAWING

M003



GENERAL WELDING NOTES:

- 1A. WELDING SYMBOLS ARE THOSE ADOPTED BY THE AMERICAN WELDING SOCIETY AND INDICATE ONLY SIZE AND TYPE OF WELDS REQUIRED. DETAILED INFORMATION SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL.
- 2A. THE CONTRACTORS' SHOP DRAWINGS SHALL CLEARLY DISTINGUISH BETWEEN SHOP AND FIELD WELDS. LENGTH OF WELD CALLED FOR ON THE DRAWINGS SHALL BE THE EFFECTIVE LENGTH.
- 3A. WHERE CORROSION RESISTING STEEL IS WELDED, FILLER MATERIAL SHALL BE CORROSION RESISTING.
- 4A. WELDING SYMBOL SHOWN THUS,  TYPE, MEANS THAT ALL SIMILAR JOINTS IN THIS VIEW SHALL BE WELDED IN THIS MANNER.
- 5A. ALL JOINTS IN CONTACT WITH OTHER SURFACES (I.E., SKIN PLATE, GUSSET PL'S, ETC.) SHALL BE FLUSH WELDED.
- 6A. "GENERAL WELDING NOTES" APPLY TO ALL DETAILS AND CONNECTIONS AS SHOWN ON DWG. NOS. 16/1 THROUGH 16/3 INCLUSIVE.

GENERAL NOTES ON VERTICAL LIFT GATES:

1. ALL MATERIAL STRUCTURAL STEEL UNLESS OTHERWISE NOTED.
2. ALL MATERIAL NOTED AS CORR. RESIST. SHALL BE CORROSION RESISTING STEEL TYPE 304 OR 410 UNLESS SHOWN OR SPECIFIED OTHERWISE.
3. IRREGULARITIES IN THE PLANE OF THE EXPOSED SURFACES OF EMBEDDED METAL SEALS IN CONTACT WITH THE RUBBER SEALS SHALL NOT VARY MORE THAN 1/16" FROM POSITIONS SHOWN.
4. SHIMS INDICATED TO BE FURNISHED ARE TO BE INSTALLED AS REQUIRED TO OBTAIN NECESSARY CLEARANCES.
5. THE ROLLER BUSHING I.D. IS TO BE 1/32" GREATER THAN THE SHAFT SLEEVE O.D.
6. OPTIONS ON EMBEDDED METAL SEALS ARE AS FOLLOWS:
 - (A) THE 3/8" THICK CORROSION RESISTING SLATE ANGLES MAY BE REPLACED WITH 1/2" THICK BENT CHROME CLAD PLATES.
 - (B) THE 5/8" THICK CORROSION RESISTING BOTTOM SLATE PLATES MAY BE REPLACED WITH 5/8" THICK CHROME CLAD PLATES.
7. ALL BOLTS, NUTS, AND WASHERS (EXCEPT THOSE NOTED AS CORR. RESIST. OR CRCS , OR THOSE BOLTS AND NUTS FULLY EMBEDDED IN CONCRETE) SHALL BE GALVANIZED.
8. SEE SPECIFICATIONS FOR QUALITY OF FINISH REQUIRED BY SYMBOLS
125 *132* AND *63*.
9. FURNISH AND INSTALL SEVEN VERTICAL LIFT GATES, AS SHOWN ON THIS DRAWING AND DWG. NO. 16/2, COMPLETE WITH FOUR SLIDE GATES EACH, AS DETAILED ON DWG. NO. 16/3.
10. AT THE OPTION OF THE CONTRACTOR, 5/8"x6x3/8" OR EQUAL ANCHOR STUDS MAY BE SUBSTITUTED FOR 2"x3/8" ANCHOR BARS. SEE SPECIFICATIONS.
11. SPACE ALL BOLTS CONNECTING RUBBER SEAL ASSEMBLIES TO THE GATE SUCH THAT BOLTS FALL ON THE GAGE LINE OF THE FRAMING MEMBERS ± 1/4". BEVEL WASHERS SHALL BE FURNISHED AT BOLTED CONNECTIONS TO ALL CHANNEL FLANGES. ALL BOLTS SHALL BE FURNISHED WITH ONE NUT AND WASHER, UNLESS OTHERWISE INDICATED.
12. ALL GALVANIZED ITEMS SHALL BE GALVANIZED AFTER FABRICATION.
13. AT THE OPTION OF THE CONTRACTOR, RUBBER SEAL CORNERS MAY BE (1) STANDARD MOULDED CORNERS, (2) CORNERS SPLICED, CAREFULLY FITTED, AND VULCANIZED BY THE RUBBER SEAL MANUFACTURER.
14. FOR SECTIONS E-E, F-F, SEE DWG. NO. 16/2 . FOR SECTION X-X, SEE DWG. NO. 16/3.
15. 3/8" SKIN P.L. TO BE ATTACHED TO FRAME MEMBERS WITH CONTINUOUS 1/4" FILLET WELDS ON BOTH SIDES OF EACH CONTACT FLANGE AND STIFFENER PLATES.
16. 15" O.D. ROLLERS ARE TO HAVE A 17" O.D. RIM AS SHOWN IN THE "GATE RECESS" DETAIL, WHERE A RIM IS INDICATED IN THE "GATE ELEVATION," ALL OTHER ROLLERS ARE NOT TO HAVE A RIM OR FILLET.
17. POSITION INDICATORS ARE REQUIRED ON THE PIERS AND ABUTMENTS AT THE LOCATIONS SHOWN ON DWG. NOS. 10/10 AND 12/2. FOR POSITION INDICATOR AND POSITION MARKER DETAILS, SEE DWG. NO. 18/6.
18. SELF LUBRICATING ROLLER BUSHING SHALL CONFORM TO SPECIFICATIONS

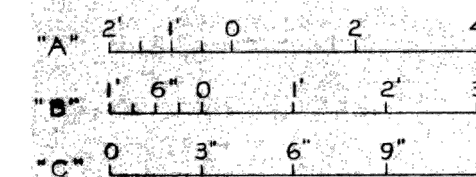
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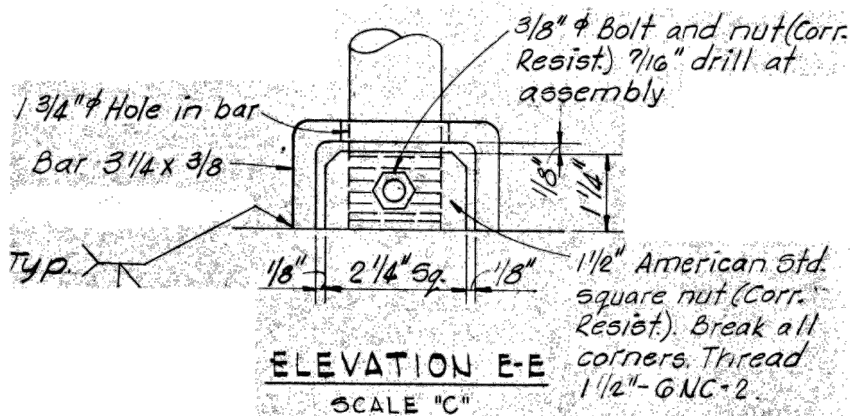
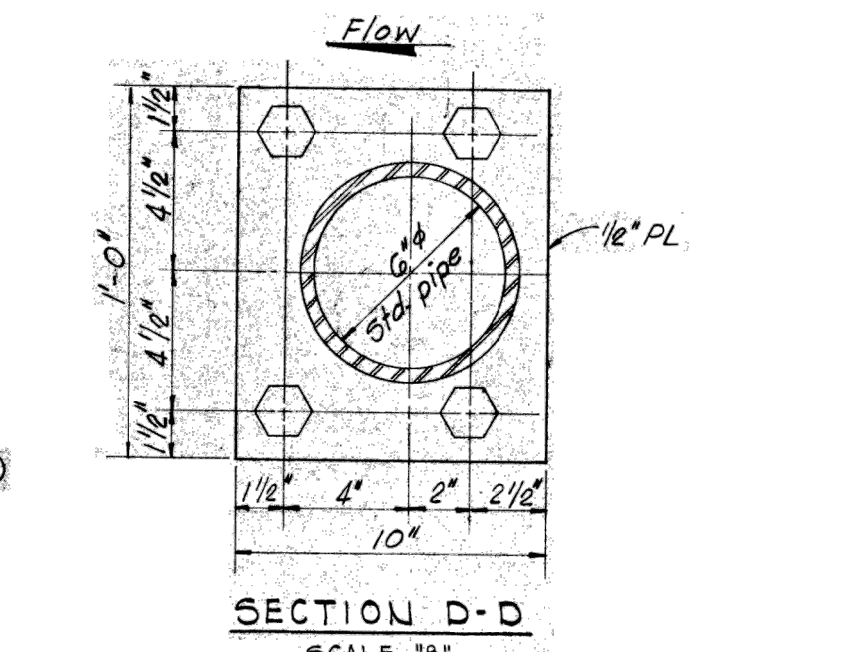
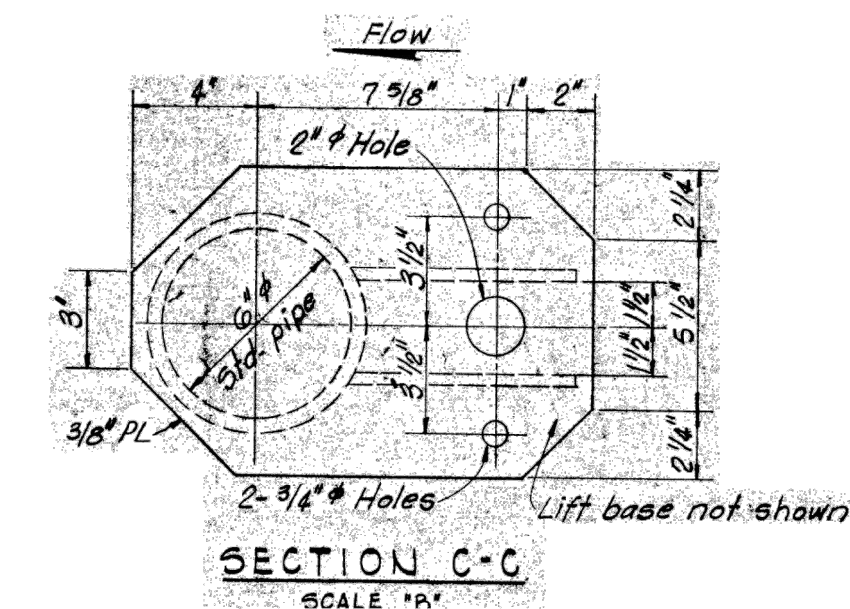
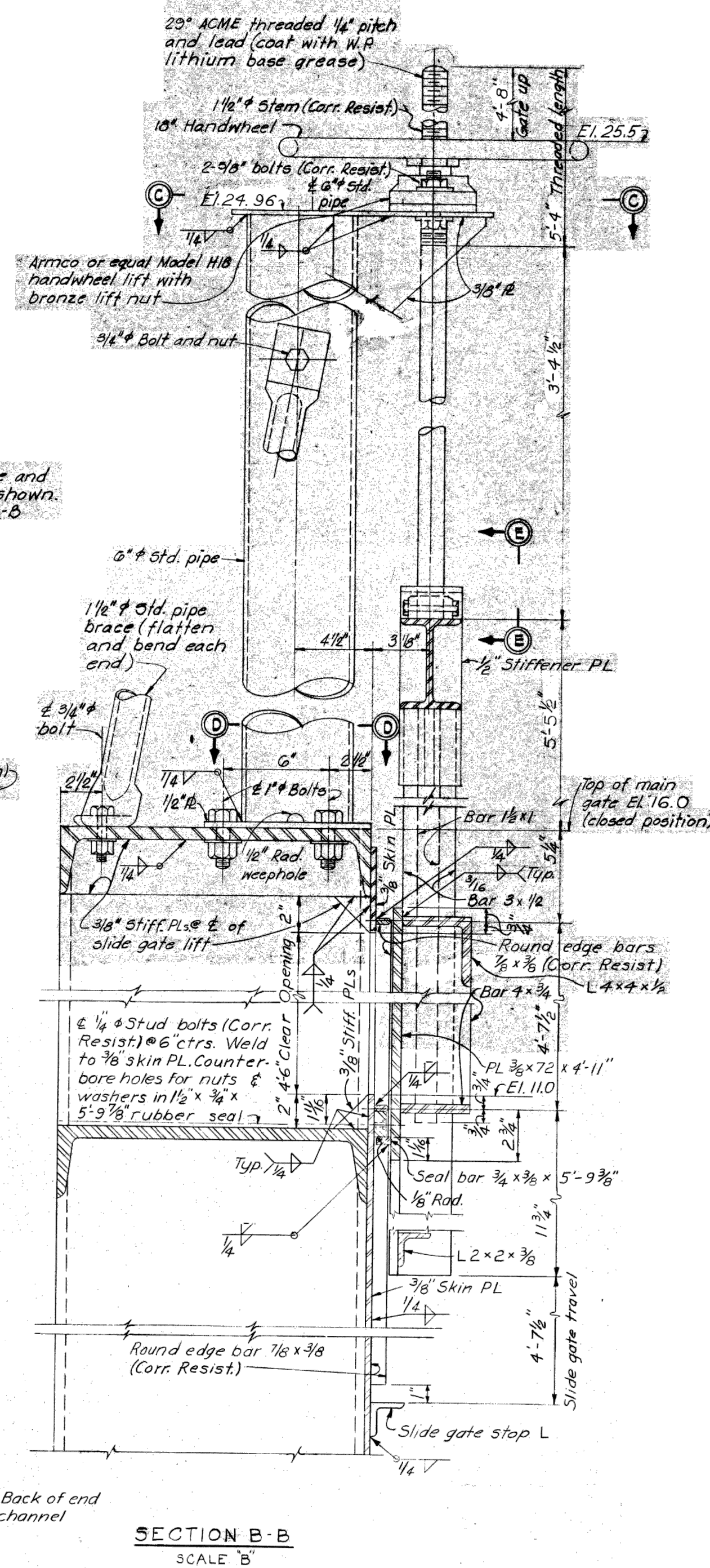
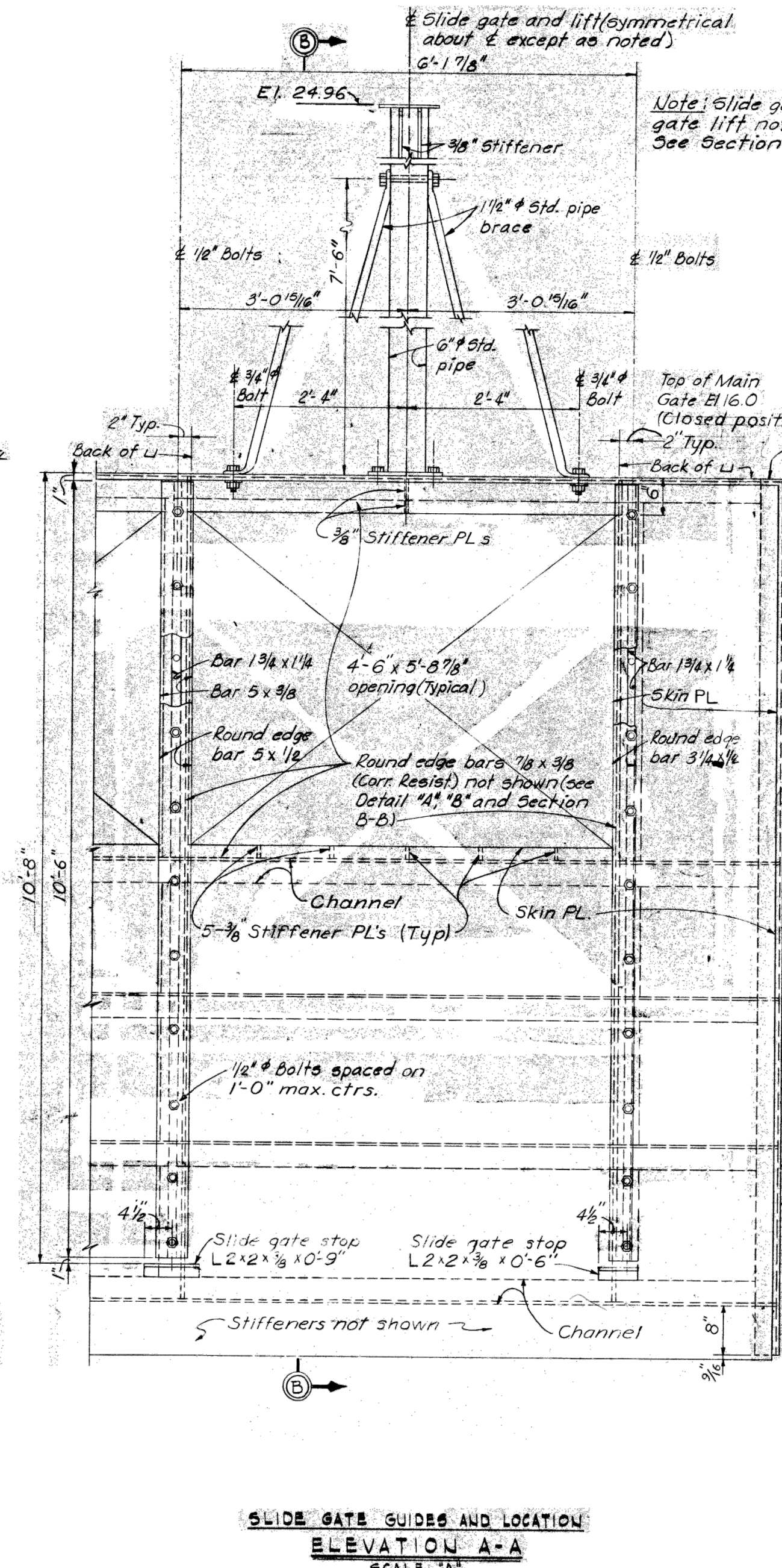
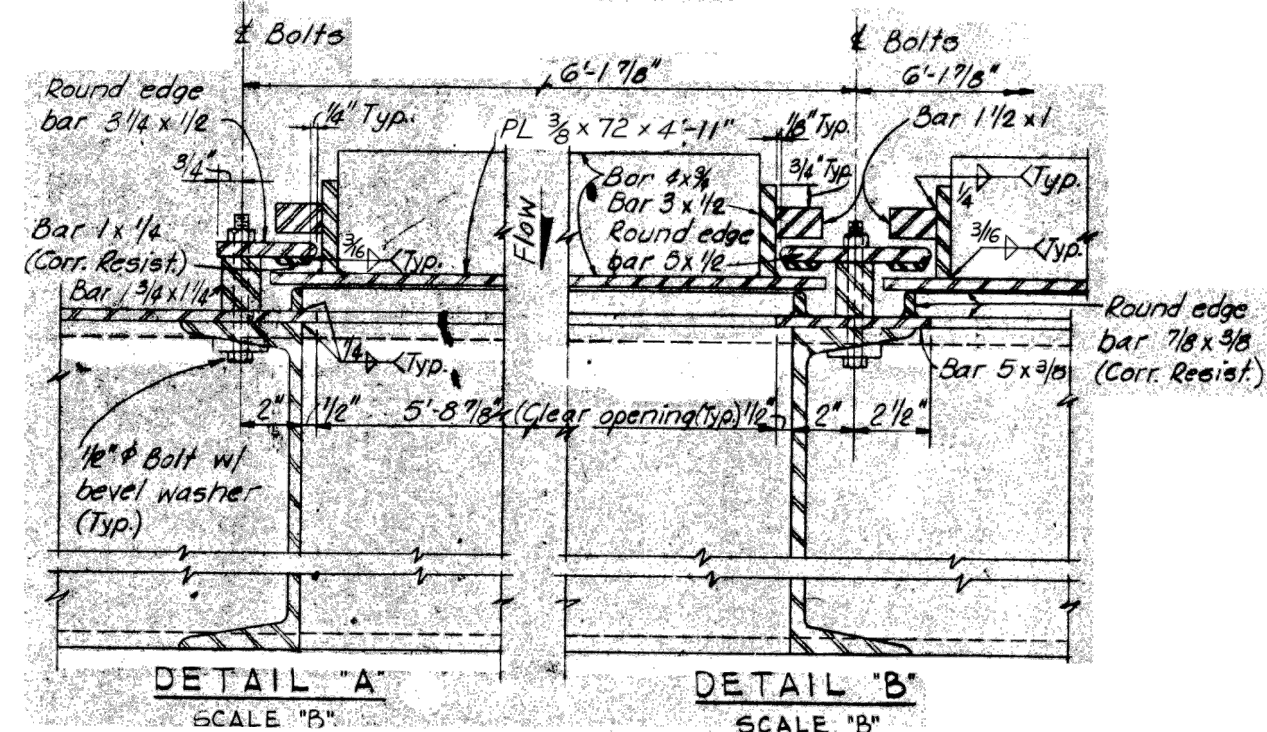
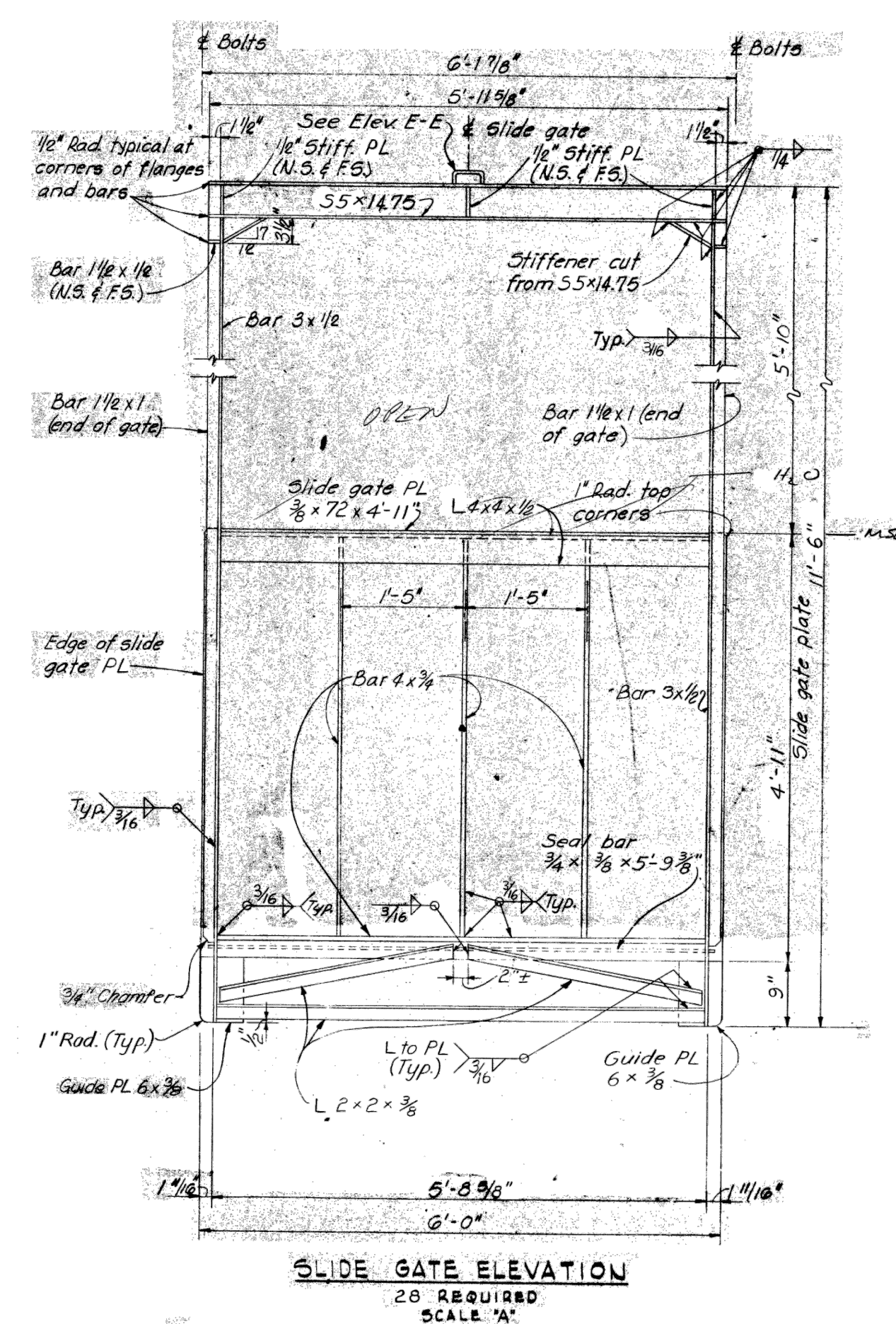
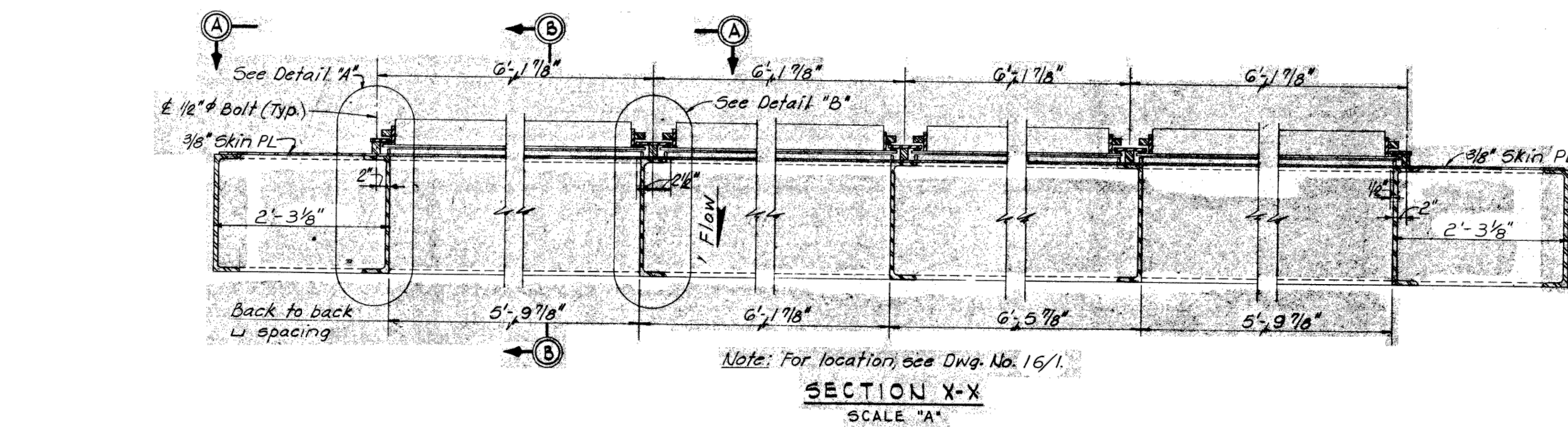
1. THE INFORMATION PROVIDED ON THIS SHEET ARE FROM ASBUILTS AND NOT CONFIRMED. CONTRACTOR TO VERIFY INFORMATION IN THE FIELD PRIOR TO CONSTRUCTION.
2. SEE SPECIFICATIONS FOR REHABILITATION REQUIREMENTS AND HISTORIC WATER LEVELS.
3. COMPLETE ASBUILT DRAWINGS ARE INCLUDED AS PART OF THE CONTRACT DOCUMENTS FOR REFERENCE.

AS BUILT

RECORD DRAWING NOTE
 "Shall be" "Provide." "Install,"
 "Remove," etc., indicates work
 was accomplished under the
 tract

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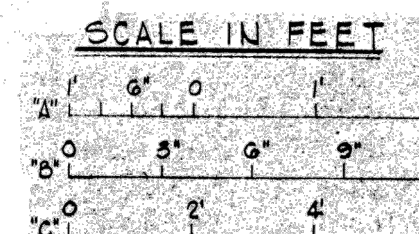




- NOTES:
- SEE DWG. NO. 16/1 FOR "GENERAL NOTES ON VERTICAL LIFT GATES" AND FOR "GENERAL WELDING NOTES."
 - FURNISH 4 SLIDE GATES COMPLETE WITH GUIDES, AS DETAILED ON THIS SHEET FOR EACH OF 7 VERTICAL GATES.
 - FOR MAIN GATE DETAILS, SEE DWG. NOS. 16/1 AND 16/2.

AS BUILT

RECORD DRAWING NOTE
"Shall be" "Provide," "Install," "Remove," etc., indicates work was accomplished under the contract



REFURBISHMENT NOTES:

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- SEE SPECIFICATIONS FOR REHABILITATION REQUIREMENTS AND HISTORIC WATER LEVELS.
- COMPLETE ASBUILT DRAWINGS ARE INCLUDED AS PART OF THE CONTRACT DOCUMENTS FOR REFERENCE.
- AT S-162, EACH GATE HAS FOUR (4) SLIDE GATES. ALL SLIDE GATES AND APPURTENANCES ASSOCIATED WITH EACH MAIN GATE TO BE REHABILITATED ARE TO BE REHABILITATED AS WELL.



4830 W. KENNEDY BLVD, STE 400
TAMPA, FL 33609
CA 4213

ISSUE DATE DESCRIPTION

PROJECT MANAGER KATIE DUTY, P.E.

PROJECT NUMBER 10220470

**SWFWMD GATE REFURBISHMENT SUPPORT
S-160 AND S-162**

SOUTHWEST FLORIDA WATER
MANAGEMENT DISTRICT

2379 BROAD STREET
BROOKSVILLE, FL 34604

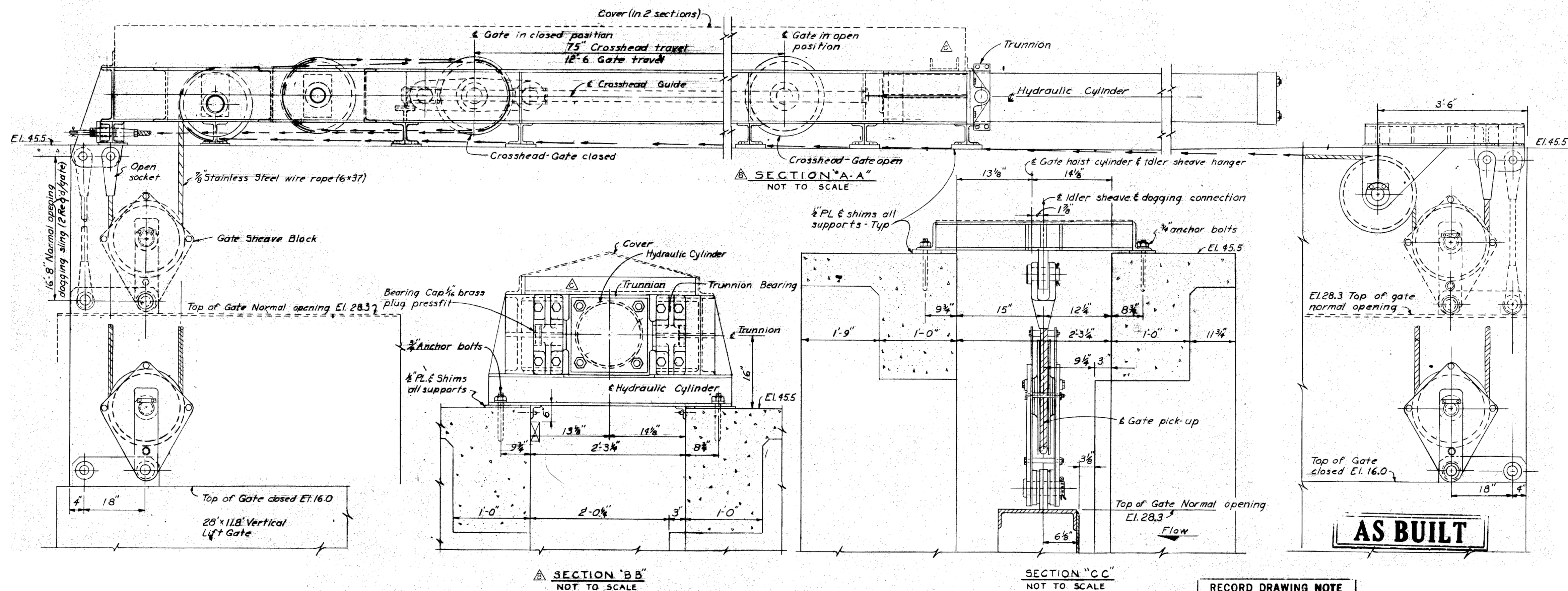
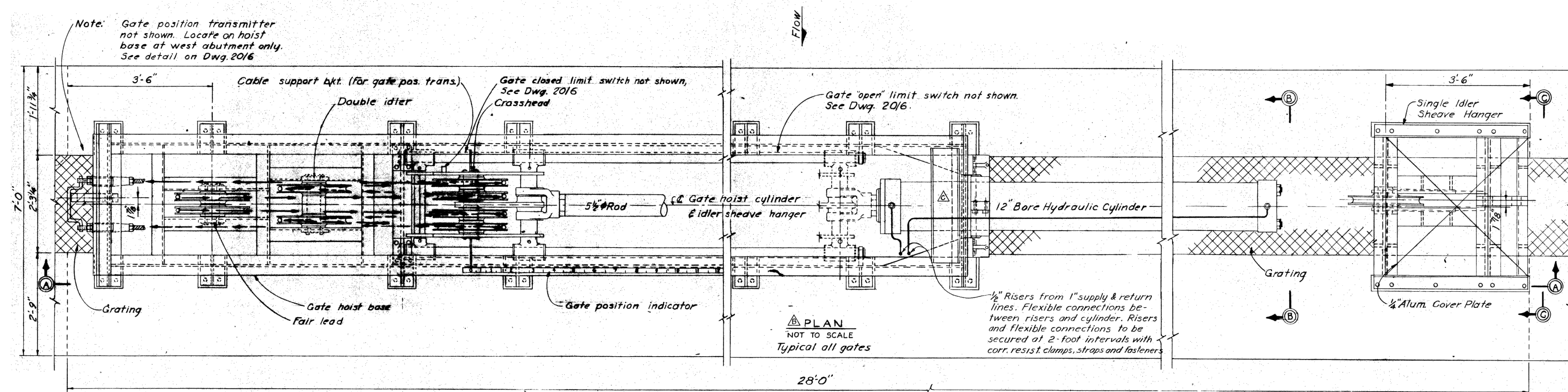
**MECHANICAL
S-162 SLIDE GATE DETAILS**



SHEET 13 of 14
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M005



- NOTES:
1. HOIST ASSEMBLY, SHEAVE BLOCKS, CABLE ARRANGEMENT AND LIMIT SWITCHES SHOWN ON THIS SHEET ARE TYPICAL FOR ALL GATES UNLESS OTHERWISE INDICATED.
 2. (a.) ESTIMATED GATE WEIGHT 28,000
(b.) ESTIMATED HOIST LOAD 48,000
(c.) ESTIMATED PISTON LOAD 120,000
 3. 12" BORE HYDRAULIC CYLINDER 5 1/2" ROD, 75" STROKE.
 4. OPERATING PRESSURE 1500 P.S.I.
 5. 7 GATES SHALL OPERATE SIMULTANEOUSLY AT 6 INCHES/MINUTE (± 10%) WHEN RAISING, 6 INCHES/MINUTE (± 10%) WHEN LOWERING.
 6. DOGGING SLINGS SAME SIZE AND TYPE AS HOIST ROPES.

RECORD DRAWING NOTE
"Shall be" "Provide" "Install,"
"Remove," etc., indicates work
was accomplished under the
contract

REFURBISHMENT NOTES:

1. THE INFORMATION PROVIDED ON THIS SHEET ARE FROM ASBUILTS AND NOT CONFIRMED. CONTRACTOR TO VERIFY INFORMATION IN THE FIELD PRIOR TO CONSTRUCTION.
2. SEE SPECIFICATIONS FOR REHABILITATION REQUIREMENTS AND HISTORIC WATER LEVELS.
3. COMPLETE ASBUILT DRAWINGS ARE INCLUDED AS PART OF THE CONTRACT DOCUMENTS FOR REFERENCE.
4. HYDRAULICS ARE TO BE REMOVED AND STORED OFFSITE BUT TO REMAIN ACCESSIBLE TO DISTRICT FOR INSPECTION.
5. HYDRAULIC ENCLOSURES TO BE RECOATED AS PART OF GATE REHABILITATION, SEE SPECIFICATIONS.
6. HYDRAULICS ARE TO BE PRESSURE TESTED AND LOAD TESTED AT DISTRICT APPROVED FACILITY. TESTS TO BE WITNESSED BY DISTRICT OR THEIR REPRESENTATIVE.



4830 W. KENNEDY BLVD, STE 400
TAMPA, FL 33609
CA 4213

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER KATIE DUTY, P.E.

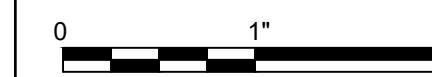
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SWFWMD GATE REFURBISHMENT SUPPORT S-160 AND S-162

SOUTHWEST FLORIDA WATER
MANAGEMENT DISTRICT

2379 BROAD STREET
BROOKSVILLE, FL 34604

MECHANICAL S-162 HYDRAULIC DETAILS



NOT FOR CONSTRUCTION

SHEET 14 of 14

SCALE NOT TO SCALE

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