

**Contract Plans**  
**for**  
**SAFETY RAILING AROUND TANKS**  
**CALUMET WATER RECLAMATION PLANT**

**Chicago, Illinois**

**Contract 15-265-3D**



**Room 508, 100 East Erie Street**

**Chicago, Illinois 60611**

**Volume 3 of 3**

**JUL 2016**


**Board of Commissioners**

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Hon. Barbara J. McGowan.....Vice President  
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Contract 15-265-3D  
Signature and Engineer Seals




Exp. Date: 11-30-2016

*Vijai P. Gupta*  
Managing Structural Engineer

LIST OF DRAWING SHEETS:

G-001  
G-002  
LP-001  
S-001  
S-002  
S-003  
S-101  
S-102  
S-103  
S-104  
S-105  
S-201  
S-202  
S-301  
S-302  
S-303

APPROVED:




Exp. Date: 11-30-2016

*Vijai P. Gupta*  
Managing Engineer of Structural-Architectural Design

THE PLANS LISTED AND BOUND HEREIN ARE PART OF THE CONTRACT FOR:


SAFETY RAILING AROUND TANKS  
CALUMET WATER RECLAMATION PLANT

CHICAGO, ILLINOIS  
JUL 2016



Exp. Date: 11/30/17

APPROVED: *Rachella Volini*  
Assistant Director of Engineering



Exp. Date: 11/30/17

APPROVED: *Catherine A. Connor*  
Director of Engineering

**NOTE:**  
THE SCALES WHICH MAY APPEAR ON SOME OF THE CONTRACT PLANS ARE THOSE TO WHICH THE ORIGINAL, FULL SIZE PLANS WERE DRAWN. THEY ARE NOT CORRECT FOR REDUCED-SIZE PLANS. REDUCED CONTRACT PLANS SHOULD NOT BE SCALED FOR DIMENSIONS. TO SCALE DIMENSIONS USE GRAPHIC SCALES WHERE THEY APPEAR ON THE PLANS.

Contract 15-265-3D

LIST OF CONTRACT PLANS

Rev.	Description	Appr.	Date

PAGE NO.	SHEET NO.	ADDENDUM NO.	SHEET TITLE
GENERAL DRAWINGS			
-	TC-001	-	COVER SHEET
-	TS-001	-	SIGNATURE AND ENGINEER SEALS
-	TL-001	-	LIST OF CONTRACT PLANS
1	G-001	-	GENERAL REFERENCE SYMBOLS
2	G-002	-	ABBREVIATIONS
3	LP-001	-	LOCATION PLAN
STRUCTURAL DRAWINGS			
4	S-001	-	STRUCTURAL NOTES
5	S-002	-	ENLARGED SITE PLAN
6	S-003	-	STAGING AND HAUL ROAD PLAN
7	S-101	-	BATTERY 'A' AERATION TANKS - SAFETY RAILING PLAN & SECTIONS
8	S-102	-	BATTERY 'B' AERATION TANKS - SAFETY RAILING PLAN & SECTIONS
9	S-103	-	BATTERY 'C' AERATION TANKS - SAFETY RAILING PLAN & SECTIONS
10	S-104	-	PRELIMINARY SETTLING TANKS - SAFETY RAILING PLAN
11	S-105	-	BATTERY 'A' AERATION TANKS - PARTIAL PLAN & DETAILS
12	S-201	-	DETAILS
13	S-202	-	CONCRETE REPAIRS
14	S-301	-	PHOTOGRAPHS
15	S-302	-	PHOTOGRAPHS
16	S-303	-	PHOTOGRAPHS



**GROUND FLOOR PLAN**  
SCALE: 1/4"=1'-0"

**LOCATION PLAN**  
CALUMET WATER RECLAMATION PLANT  
SCALE: 1/4"=1'-0"

**1 GROUND LEVEL FLOOR PLAN**  
SCALE: 1/4"=1'-0"

**1 DETAIL TITLE**  
SCALE: 3/4"=1'-0"  
(S-101, S-201)

**1 NORTH ELEVATION**  
SCALE: 1/4"=1'-0"



**MWRD NORTH ARROW**  
PLACED ON EACH PLAN VIEW AT  
UPPER LEFT CORNER OF DRAWING  
LAYER: G-ANNO-NRTH

**DRAWING TITLE**  
FOR LOCATION PLAN OR PLAN VIEW  
DRAWINGS ONLY  
IF DRAWING IS NOT TO SCALE  
SCALE = NOT TO SCALE  
LAYER: G-ANNO-TITL

**DRAWING TITLE**  
FOR FLOOR PLAN OR PLAN VIEW  
DRAWINGS ONLY  
IF DRAWING IS NOT TO SCALE  
SCALE = NOT TO SCALE  
LAYER: G-ANNO-TITL

**DETAIL TITLE**  
NUMBER IS DETAIL NUMBER OF  
VIEW ON SAME SHEET  
LAYER: G-ANNO-TITL

OPTIONAL (S-101) (S-201)  
REFERENCE SHEET ON WHICH  
DETAIL APPEARS

**ELEVATION TITLE**  
NUMBER IS ELEVATION NUMBER OF  
VIEW ON SAME SHEET  
LAYER: G-ANNO-TITL

**ELEVATION REFERENCE**  
TOP NUMBER IS ELEVATION DRAWING  
NUMBER, BOTTOM NUMBER IS  
SHEET ON WHICH ELEVATION VIEW  
APPEARS  
LAYER: G-ANNO-SYMB

**ELEVATION REFERENCE**  
REFERENCING FOUR ELEVATIONS ON  
ONE SHEET  
LAYER: G-ANNO-SYMB

**WALL SECTION DETAIL**  
TOP NUMBER IS WALL SECTION  
NUMBER, BOTTOM NUMBER IS SHEET  
ON WHICH WALL SECTION APPEARS.  
LAYER: G-ANNO-SYMB

**MATCH LINE REFERENCE**  
LAYER: G-ANNO-MATC

**BUILDING AND/OR PLAN DRAWING CROSS  
SECTION REFERENCE**  
LETTER IN CIRCLE IS DRAWING SECTION ON  
SAME SHEET  
LAYER: G-ANNO-SYMB

**BUILDING AND/OR PLAN DRAWING CROSS  
SECTION TITLE**  
LETTERS ARE SECTIONS ON SAME SHEET  
LAYER: G-ANNO-TITL

**BUILDING AND/OR PLAN DRAWING CROSS  
SECTION REFERENCE**  
TOP LETTERS ARE DRAWING SECTION  
LETTERS, BOTTOM LETTER AND NUMBER IS  
SHEET ON WHICH SECTION APPEARS. USE  
"PHANTOM" LINETYPE THRU STRUCTURE -  
MAY BE BROKEN FOR CLARITY OF DRAWING  
DETAIL. LAYER: G-ANNO-SYMB

**BUILDING AND/OR PLAN DRAWING CROSS  
SECTION TITLE**  
LETTERS ARE DRAWING SECTION  
LAYER: G-ANNO-TITL

IF DRAWING IS NOT TO SCALE  
SCALE = NOT TO SCALE

**OFFICE**

101

9'-0"

X

101

1

P

ROOM OR SPACE NUMBER

CEILING HEIGHT OR EQUIPMENT  
NUMBER.

EQUIPMENT NUMBER.

DOOR NUMBER

WINDOW NUMBER

WALL PARTITION TYPE

ELEVATION REFERENCE

**COLUMN REFERENCE**  
USE NUMBERS ON HORIZONTAL GRID  
LINES AND LETTERS ON VERTICAL  
GRID LINES  
USE "CENTER" LINETYPE FOR GRID  
LINES THRU COLUMNS

**BUILDING AND/OR PLAN DRAWING CROSS  
SECTION REFERENCE**  
TOP LETTERS ARE DRAWING SECTION  
LETTERS, BOTTOM LETTER AND NUMBER IS  
SHEET ON WHICH SECTION APPEARS. USE  
"PHANTOM" LINETYPE THRU STRUCTURE -  
MAY BE BROKEN FOR CLARITY OF DRAWING  
DETAIL  
LAYER: G-ANNO-SYMB

**BUILDING AND/OR PLAN DRAWING  
CROSS SECTION TITLE**  
LETTERS ARE DRAWING SECTION

IF DRAWING IS NOT TO SCALE  
SCALE = NOT TO SCALE  
LAYER: G-ANNO-TITL

**DETAIL REFERENCE**  
TOP NUMBER IS DETAIL NUMBER  
BOTTOM NUMBER IS SHEET ON  
WHICH DETAIL APPEARS.  
DENOTE REFERENCED AREA WITH  
"DASHED" LINETYPE  
LAYER: G-ANNO-SYMB

**DETAIL REFERENCE**  
NUMBER IS DETAIL NUMBER  
DENOTES DETAIL APPEARS ON SAME  
SHEET.  
DENOTE REFERENCED AREA WITH  
"DASHED" LINETYPE  
LAYER: G-ANNO-SYMB

TOP OF STEEL  
EL. +10'-0"  
EL. +12.00

1  
A

A  
S-104

A  
S-104

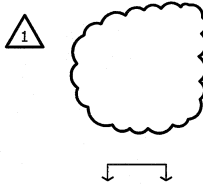
**SECTION A-A**  
SCALE: 3/4"=1'-0"

1  
A-101

2  
A-104

1

2



ALIGN

**ADDENDUM NO. 1** XX 0/00/00

**1 ISSUE FOR REVIEW** xx 0/00/00

**REVISION TARGET AND CLOUD**  
REVISION AREA CIRCLED  
REVISION TAG LAYER G-ANNO-REVS  
REVISION CLOUD LAYER G-ANNO-REVC

**REVISION ISSUE**  
NUMBER IN TRIANGLE DENOTES  
REVISION NUMBER ON SHEET  
ADDENDUM NO 1 DENOTES ADDENDA  
RELEASE NUMBER XX DENOTES  
ENGINEER INITIALS 00/00/00  
DENOTES ISSUE DATE

**ISSUE**  
NUMBER IN DENOTES SEQUENCE  
NUMBER ON SHEET. ISSUE FOR  
REVIEW DENOTES RELEASE  
DESCRIPTION XX DENOTES ENGINEER  
INITIALS 00/00/00 DENOTES ISSUE  
DATE

1

50 0 50 100  
SCALE: 1" = 50'

**STANDARD DIMENSIONS**

1'-0" FEET AND INCHES  
3 1/4" INCHES

6"Ø MEANS 6" DIAMETER

MWRD STANDARD MULTILINE  
TEXT WITH LEADER

MWRD STANDARD MULTILINE TEXT  
WITH CIRCLE (ORIGON)

MWRD STANDARD MULTILINE  
TEXT WITH DOT

SEE NOTE 1 **NOTES AND GENERAL NOTES REFERENCE**  
NUMBER DENOTES NOTE REFERENCE

**DEMOLITION KEYNOTE REFERENCE**  
NUMBER DENOTES KEYNOTE  
REFERENCE

USE APPLICABLE SYMBOL BELOW FOR KEY NOTE DESIGNATION

**KEYNOTE REFERENCE**  
NUMBER DENOTES KEYNOTE  
REFERENCE

**KEYNOTE REFERENCE**  
NUMBER DENOTES KEYNOTE  
REFERENCE

**KEYNOTE REFERENCE**  
NUMBER DENOTES KEYNOTE  
REFERENCE

**GENERAL NOTES:**

- XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXX

**NOTES:**

- XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXX

**1 KEY NOTES:**

- XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXX

**LEGEND:**

- NEW OR EXISTING BACKGROUND
- EXISTING WORK TO REMAIN (OR NEW WORK  
FURNISHED AND INSTALLED UNDER OTHER  
CONTRACT ITEMS)
- NEW WORK
- FUTURE WORK
- REMOVAL WORK

**MATERIAL DESIGNATION**

- EARTH/COMPACT FILL
- GRAVEL/POROUS FILL
- ROCK
- CONCRETE
- SAND/MORTAR/PLASTER
- CONCRETE MASONRY UNIT
- FACE BRICK
- STONE
- MARBLE
- STEEL
- ROUGH WOOD
- FINISH WOOD
- PLYWOOD
- PARTICLE BOARD
- BATT INSULATION
- RIGID INSULATION
- SAFING
- SPRAYED-ON FIREPROOFING
- SEALANT WITH BACKER ROD
- GYPSUM DRYWALL
- CERAMIC TILE
- ACOUSTICAL TILE

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

Designed by: VP  
Checked by: SCP  
Date: JUL 2016  
Corrected by: P. G. J. J.  
Engineer of Structural - Architectural Design  
Drawn by: A/JW  
Reviewed by: VPG  
Scale: AS SHOWN  
Assistant Director of Engineering  
Drawing code:

**CONTRACT 15-265-3D**  
SAFETY RAILING AROUND TANKS  
CALUMET WATER RECLAMATION PLANT

**GENERAL REFERENCE SYMBOLS**

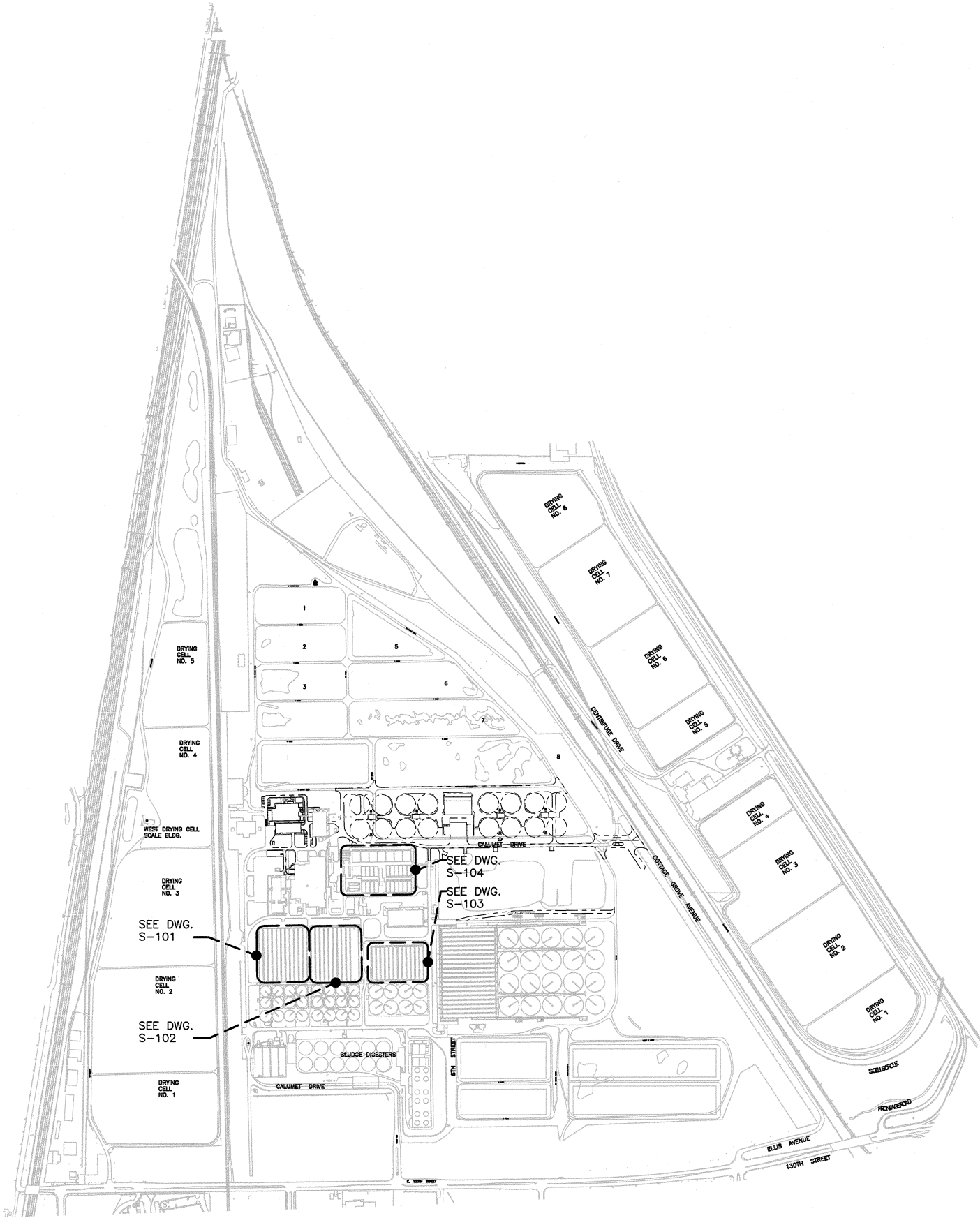
Seal

Sheet Number:  
**G-001**  
Page Number: 1



[illegible]

Sheet Number:  
G-002  
Page Number: 2



LOCATION PLAN - CALUMET WATER RECLAMATION PLANT  
SCALE: NOT TO SCALE

CONTRACT 15-265-3D  
SAFETY RAILING AROUND TANKS  
CALUMET WATER RECLAMATION PLANT

LOCATION PLAN

METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO

Designed by: VP  
Checked by: SCP  
Date: JUL 2016  
Correct: *W. R. G. W.*  
Engineer of Structural = Architectural Design

Drawn by: MGM  
Reviewed by: VPG  
Scale: AS SHOWN

Drawing code:

Rev.	Description	Appr.	Date

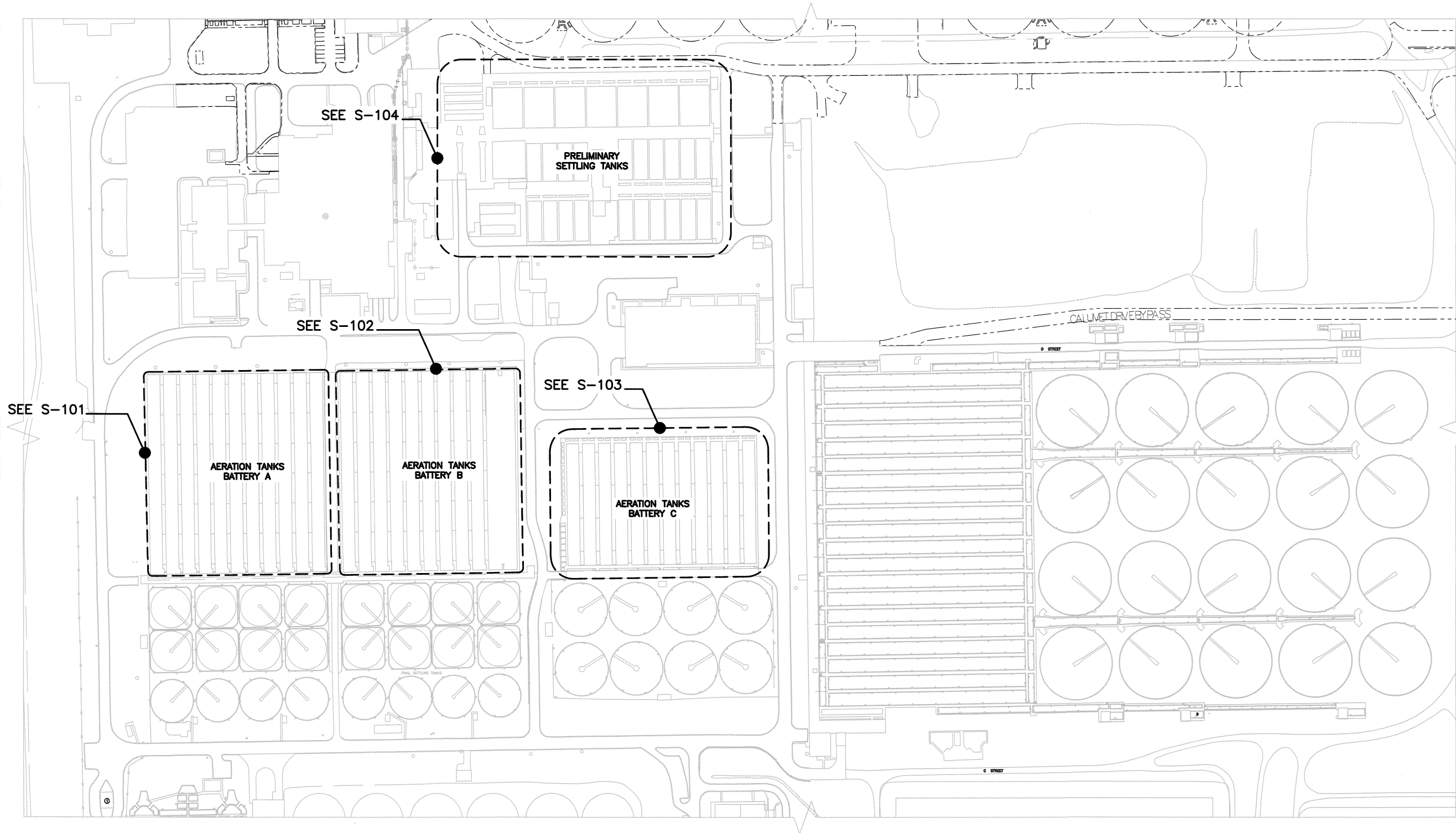
## GENERAL NOTES

1. THESE NOTES SHALL APPLY TO ALL DRAWINGS AND THEY ARE SUPPLEMENTED BY NOTES ON INDIVIDUAL SHEETS AS REQUIRED.
2. THE CONTRACTOR SHALL VISIT AND INSPECT THE SITE TO ASSESS THE EXTENT OF WORK.
3. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING STRUCTURES, UTILITIES, AND EQUIPMENT, AND TO MAINTAIN UNINTERRUPTED PLANT OPERATION. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SUPPORTS, BRACING, SHEETING, AND SHORING AS NECESSARY TO PROTECT AND MAINTAIN ALL STRUCTURES, PIPING, EQUIPMENT AND APPURTENANCES. ANY DAMAGE TO THE EXISTING FACILITIES RESULTING FROM THE ACTIONS OR LACK OF ACTION BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT HIS EXPENSE.
4. WHERE WORK APPEARS TO BE VAGUE ON THE CONTRACT DOCUMENTS OR IN CONFLICT BETWEEN CONTRACT DOCUMENTS (DRAWINGS & SPECIFICATIONS), THE CONTRACTOR IS TO REQUEST CLARIFICATION AND OBTAIN WRITTEN EXPLANATION AND/OR INTERPRETATION FROM THE ENGINEER PRIOR TO THE START OF WORK. CONTINUED CONSTRUCTION OF THE AREA IN VAGUENESS OR CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK.
5. INSTALL SAFETY RAILING AT LOCATIONS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH THE NOTES ON THE DRAWINGS, THESE GENERAL NOTES AND THE SPECIFICATIONS.
6. INSTALL SWING GATES AND DAVIT BASES AT LOCATIONS SHOWN ON THE DRAWINGS.
7. SAFETY RAILING LENGTHS INDICATED ON DRAWINGS AND IN SPECIFICATIONS FOR THE FABRICATION, INSTALLATION, COATING, PAINTING, DEMOLITION AND/OR UNIT PRICE PAYMENT ARE LINEAR FEET OF A COMPLETE STEEL SAFETY RAILING SYSTEM INCLUDING A TOP HORIZONTAL RAIL, AN INTERMEDIATE HORIZONTAL RAIL, POSTS, POST BASES, POST ANCHORS, SPECIAL CONDITIONS, END RAIL EXTENSIONS AND ALL RELATED SAFETY RAILING APPURTENANCES.
8. ALL DIMENSIONS, LOCATIONS AND ARRANGEMENTS OF SAFETY RAILING SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED WHERE NEEDED FOR LAY OUT OF THE SAFETY RAILING.
9. DIMENSIONS SHALL NOT BE SCALED OFF OF THE DRAWINGS.
10. ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED BEFORE FABRICATION OF SAFETY RAILING, INCLUDING BUT NOT LIMITED TO RELEVANT DIMENSIONS, ELEVATIONS AND ARRANGEMENT OF THE STRUCTURES, WALKWAYS, STEPS, EXISTING SAFETY RAILING, EXPANSION JOINTS, EQUIPMENT, OBSTRUCTIONS AND TYPICAL AND NON-TYPICAL CONDITIONS.
11. ALL CONDITIONS ARE NOT SHOWN ON THE DRAWINGS OR PHOTOGRAPHS. CONTRACTOR SHALL PREPARE LAYOUT FOR THESE CONDITIONS FOR APPROVAL BY ENGINEER.
12. ALL CONCRETE ANCHOR BOLTS ARE TO BE INSTALLED IN SOUND CONCRETE. REPAIR CONCRETE PER DRAWING S-202 AS REQUIRED OR DIRECTED FOR THE INSTALLATION OF SAFETY RAILING AND AS DIRECTED BY THE DISTRICT ENGINEER ON A UNIT PRICE BASIS.
13. SAFETY RAILING SHALL BE PROVIDED ALONG ALL OPEN SIDES OF WALKWAYS, ROADWAYS, PLATFORMS, AND STEPS SHOWN ON THE DRAWINGS.
14. EXISTING SAFETY RAILING SHALL NOT BE MODIFIED UNDER THIS CONTRACT, UNLESS NOTED OTHERWISE.
15. EXISTING SAFETY RAILING SHALL REMAIN IN PLACE UNLESS NOTED OTHERWISE.
16. SHOP DRAWINGS SHALL BE FIELD VERIFIED FOR COMPLETENESS AND ACCURACY BEFORE FABRICATION OF THE SAFETY RAILING.
17. PROVIDE SMOOTH TRANSITIONS BETWEEN SAFETY RAILING SECTIONS.
18. DO NOT EXTEND SAFETY RAILING ENDS INTO WALKWAYS WHERE PROJECTION WOULD CREATE A HAZARD.
19. TERMINATE SAFETY RAILING WHERE THE SAFETY RAILING WOULD PREVENT OPERATION OF EQUIPMENT, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
20. TERMINATE SAFETY RAILINGS AT EQUIPMENT WHERE THE EQUIPMENT PROVIDES AN EFFECTIVE FALL PROTECTION BARRIER, OR AS DIRECTED BY THE ENGINEER.
21. SAFETY RAILING SECTIONS SHALL BE FULLY WELDED CONSTRUCTION AND FABRICATED OF 1-1/2 INCH DIAMETER SCHEDULE 40 STEEL PIPE (1.9" O.D.).
22. SAFETY RAILING SHALL BE HOT-DIP-GALVANIZED AFTER FABRICATION.
23. DISCONTINUE SAFETY RAILING SECTIONS AT EXPANSION JOINTS IN THE CONCRETE STRUCTURE AND CONTINUE THE SAFETY RAILING AFTER THE EXPANSION JOINTS.
24. PROVIDE MAXIMUM OF 4 INCH GAP BETWEEN THE ENDS OF SAFETY RAILING SECTIONS.
25. DO NOT USE EXPANSION SLEEVES BETWEEN SECTIONS.
26. SHOP ASSEMBLE SAFETY RAILING SECTIONS IN LARGEST PRACTICAL SIZES FOR DELIVERY TO SITE.
27. REMOVE PLANTS AND VEGETATION AS REQUIRED FOR INSTALLATION OF SAFETY RAILING.
28. THE SITE SHALL BE RESTORED AS FOUND.
29. THE SUM OF THE SAFETY RAILING LENGTHS ON THE PLAN DRAWINGS ADD UP TO APPROXIMATELY 18,455 LINEAR FEET. THE LUMP SUM BID SHALL BE FOR 18,455 LINEAR FEET OF SAFETY RAILING. ANY SAFETY RAILING REQUIRED BEYOND THAT LENGTH WILL BE PAID ON A UNIT PRICE BASIS.

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11. ALL CONDITIONS ARE NOT SHOWN ON THE DRAWINGS OR PHOTOGRAPHS. CONTRACTOR SHALL PREPARE LAYOUT FOR THESE CONDITIONS FOR APPROVAL BY ENGINEER.
12. ALL CONCRETE ANCHOR BOLTS ARE TO BE INSTALLED IN SOUND CONCRETE. REPAIR CONCRETE PER DRAWING S-202 AS REQUIRED OR DIRECTED FOR THE INSTALLATION OF SAFETY RAILING AND AS DIRECTED BY THE DISTRICT ENGINEER ON A UNIT PRICE BASIS.
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Sheet Number: S-001

Page Number: 4



ENLARGED SITE PLAN  
SCALE: 1" = 100'-0"

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

Designed by:  
VP

Checked by:  
SCP

Date:  
JUL 2016

Correct  
Engineer of Structural  
Architectural Design

Drawn by:  
MGM

Reviewed by:  
VPG

Scale:  
AS SHOWN

Drawing code:

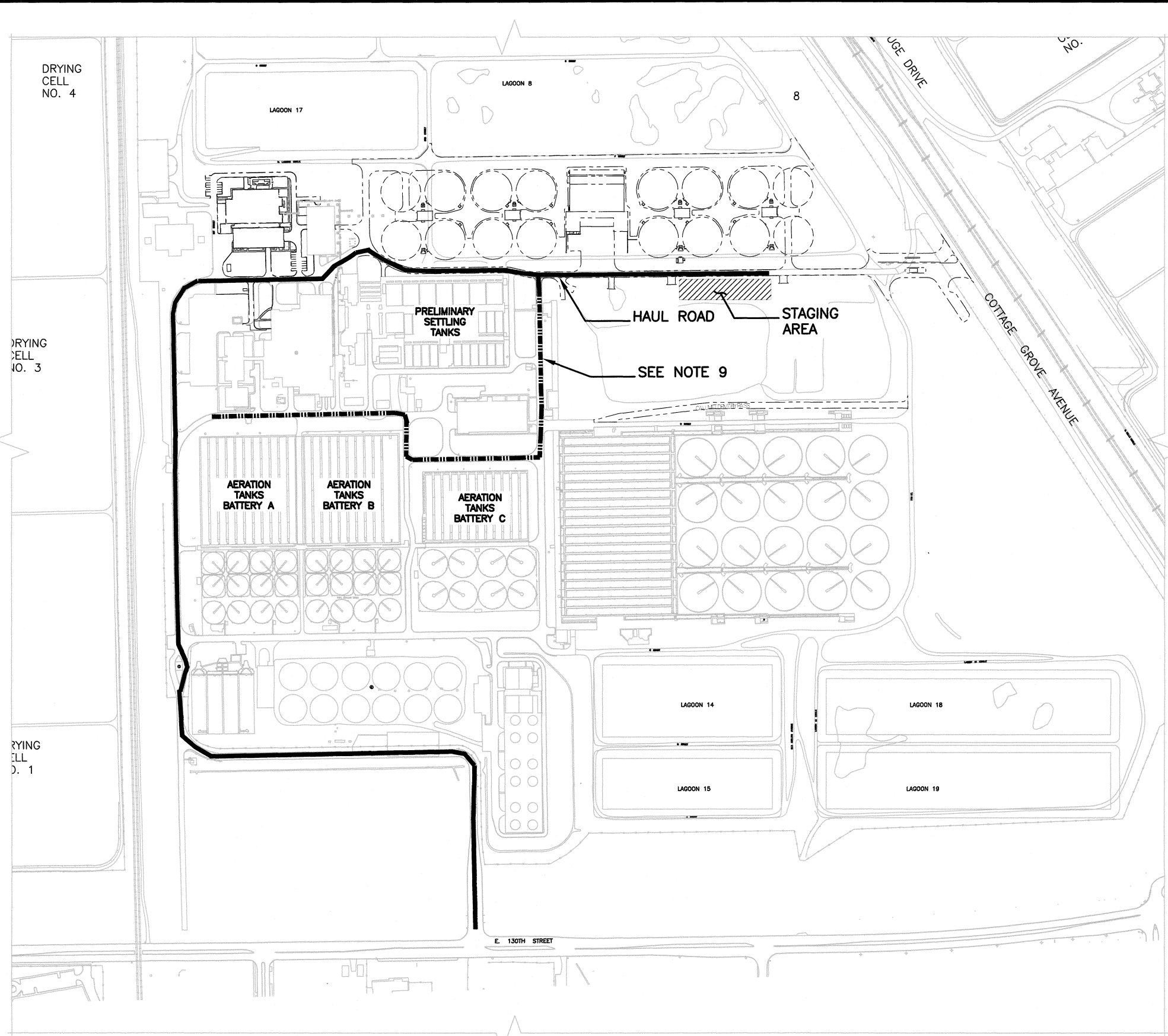
**CONTRACT 15-265-3D**  
SAFETY RAILING AROUND TANKS  
CALUMET WATER RECLAMATION PLANT

**ENLARGED SITE PLAN**

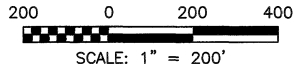


### NOTES

1. THE CONTRACTOR MUST PLAN HIS CONSTRUCTION OPERATION SO THAT MATERIAL, EQUIPMENT, SUPPLIES AND WORKING PERSONNEL NECESSARY TO DO THE WORK MUST ENTER AND LEAVE THE SITE VIA GATE AND ROUTES AS DIRECTED BY THE DISTRICT.
2. CONSTRUCTION OF HAUL ROADS AND USE OF EXISTING ROADS REQUIRE APPROVAL OF THE DISTRICT.
3. STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED IF NEEDED AT POINTS OF CONSTRUCTION INGRESS.
4. PRIOR TO CONSTRUCTION OF HAUL ROADS IF REQUIRED CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURE PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL KEEP ALL ACCESS ROADWAYS FREE OF OBSTRUCTIONS AND DEBRIS AT ALL TIMES, DUST CONTROL SHALL BE PROVIDED AT ALL TIMES.
6. MAINTENANCE OF HAUL ROADS IS INCIDENTAL TO THE CONTRACT.
7. HEAVY EQUIPMENT SHALL NOT BE OPERATED WITHIN 20 FEET OF THE AERATION TANKS AND CHANNELS.
8. THE CONTRACTOR'S FIELD OFFICES, FACILITIES, AND STAGING AREA SHALL BE LOCATED ONLY AS APPROVED BY THE ENGINEER.
9. ONLY USE DASHED ROUTE AS SHOWN FOR MATERIAL AND/OR LABORER TRANSPORT BETWEEN STAGING AREA AND AERATION TANKS. ALL OTHER TRANSPORT SHALL USE HAUL ROAD AS SHOWN UNLESS NOTED OTHERWISE.



STAGING AND HAUL ROAD PLAN  
SCALE: 1" = 200'-0"

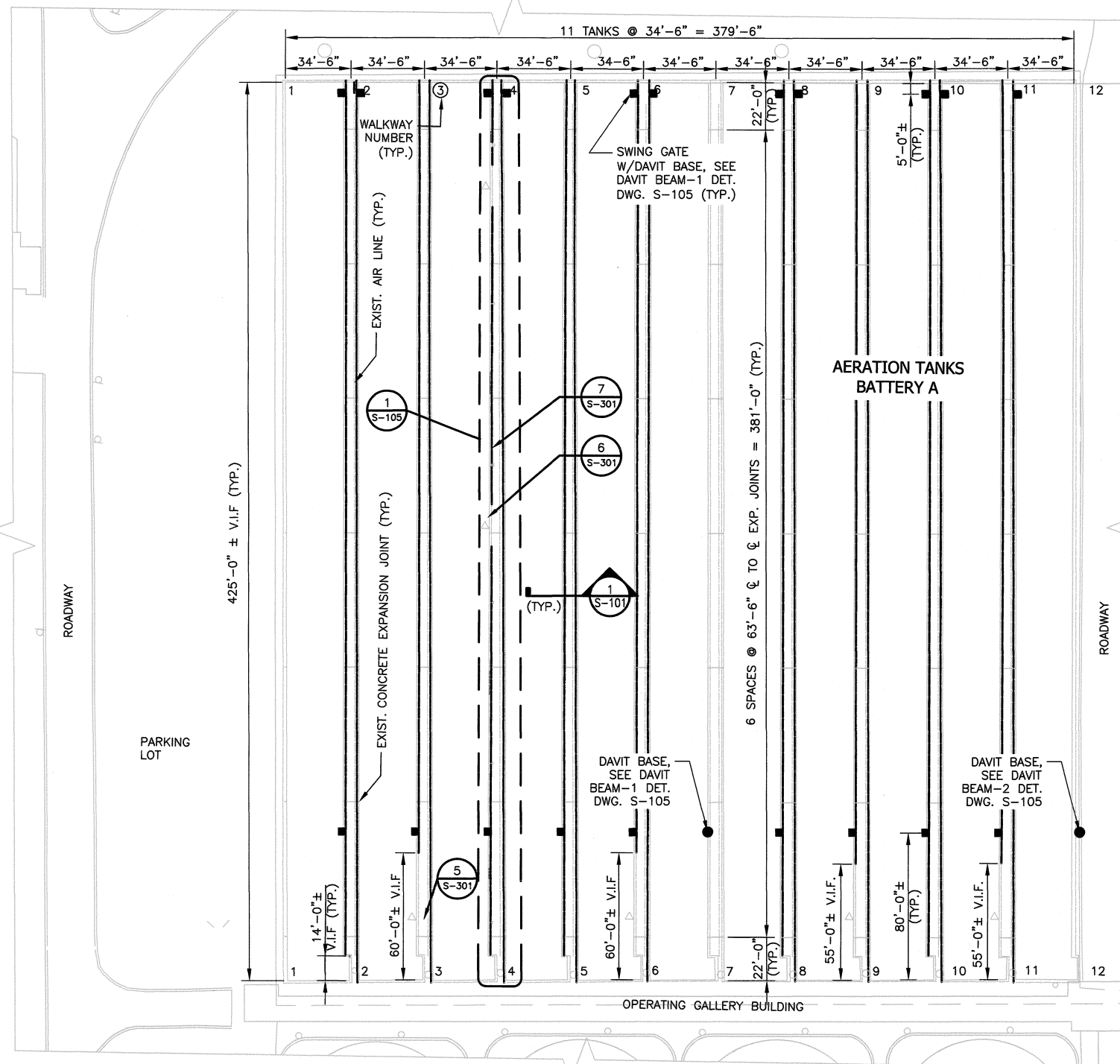


METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO				
Designed by:	Checked by:	Date:	Correct:	Architectural Design
VP	SCP	JUL 2016	Engineer of <del>Structure</del>	
Drawn by:	Reviewed by:	Scale:		
MGM	VPG		AS SHOWN	
Drawing code:				












CONTRACT 15-265-3D	
SAFETY RAILING AROUND TANKS	
CALUMET WATER RECLAMATION PLANT	
STAGING AND HAUL ROAD PLAN	

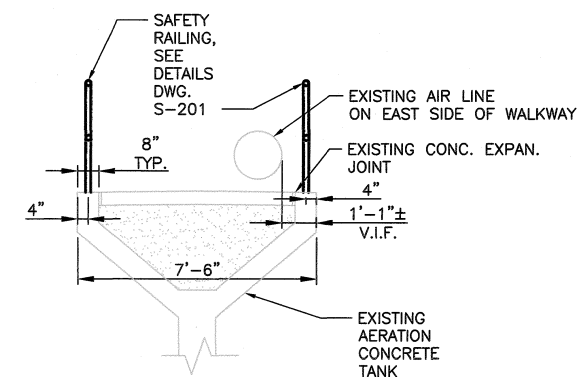
Sheet Number:	S-003
Page Number:	6





**LEGEND:**

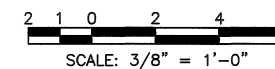
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|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------|
|  | NEW OR EXISTING BACKGROUND                                                               |  | EXISTING METER STATION TO REMAIN          |
|  | EXISTING WORK TO REMAIN (OR NEW WORK FURNISHED AND INSTALLED UNDER OTHER CONTRACT ITEMS) |  | EXISTING POWER RECEPTACLE TO REMAIN       |
|  | NEW WORK                                                                                 |  | NEW SWING GATE WITH DAVIT BASE ON WALKWAY |
|  | FUTURE WORK                                                                              |  | NEW DAVIT BASE                            |
|  | REMOVAL WORK                                                                             |                                                                                     |                                           |
|  | EXISTING SAFETY RAILING                                                                  |                                                                                     |                                           |
|  | NEW SAFETY RAILING                                                                       |                                                                                     |                                           |



**SECTION 1 (TYPICAL WALKWAY)**  
SCALE: 3/8"=1'-0"

BATTERY "A" NOTES:

1. TOTAL LENGTH OF SAFETY RAILING, INCLUDING SWING GATES, TO BE FABRICATED & INSTALLED AT BATTERY "A" IS 7,310 LINEAR FEET.
2. TOTAL LENGTH OF EXISTING ANGLE RAILING TO BE REMOVED AT BATTERY "A" IS 31 LINEAR FEET.
3. TOTAL NUMBER OF SWING GATE WITH DAVIT BASE LOCATIONS IS 20.
4. TOTAL NUMBER OF DAVIT BASE WITHOUT SWING GATE LOCATIONS IS 2.
5. ALL DAVIT BASES SHALL BE FLUSH MOUNTED TYPE.
6. FLUSH MOUNTED DAVIT BASES ARE TO BE CAST IN NEW CONCRETE DAVIT BEAMS PER DETAILS ON DRAWING S-105.
7. TOTAL NUMBER OF NEW CONCRETE DAVIT BEAMS TO BE INSTALLED IS 17 CONSISTING OF 16 BEAM-1 AND 1 BEAM-2.
8. EXISTING ELECTRICAL OUTLETS, ELECTRICAL CONDUITS AND METER STATIONS SHALL REMAIN UNLESS NOTED OTHERWISE.
9. SEE GENERAL SAFETY RAIL NOTES ON DRAWING S-001.
10. SEE TYPICAL SAFETY RAIL AND SWING GATE DETAILS ON DRAWING S-201.
11. SEE DRAWING S-301 FOR PHOTOGRAPHS OF EXISTING CONDITIONS.

[illegible]

**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

Designed by:	Checked by:	Date:	Correct:
VP	SCP	JUL 2016	Engineer of Structural = Architectural Design
Drawn by:	Reviewed by:	Scale:	
MGM	VPG	AS SHOWN	
Drawing code:			

**CONTRACT 15-265-3D**

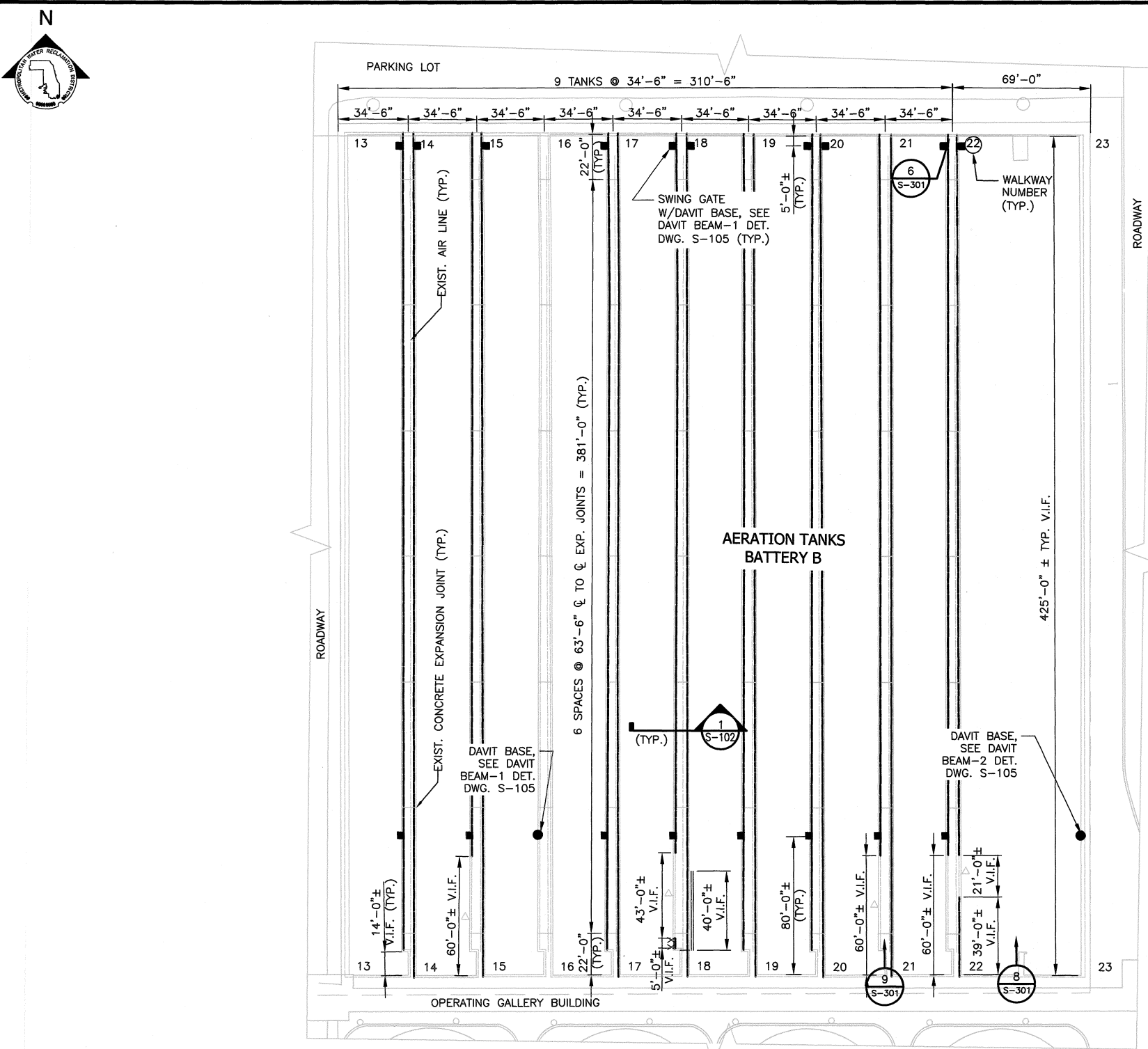
SAFETY RAILING AROUND TANKS  
CALUMET WATER RECLAMATION PLANT

BATTERY 'A' AERATION TANKS -  
SAFETY RAILING PLAN & SECTIONS

Sheet Number:

S-101

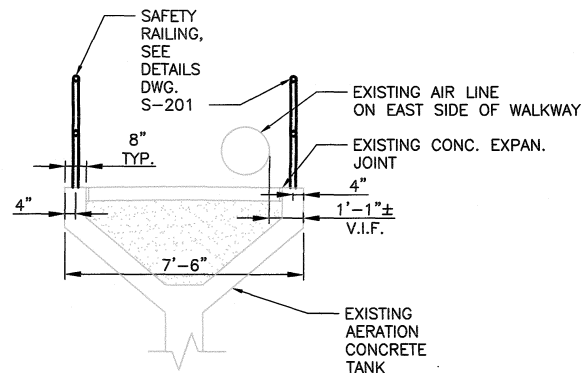
Page Number: 7



**LEGEND:**

- NEW OR EXISTING BACKGROUND
- EXISTING WORK TO REMAIN (OR NEW WORK FURNISHED AND INSTALLED UNDER OTHER CONTRACT ITEMS)
- NEW WORK
- FUTURE WORK
- REMOVAL WORK
- EXISTING SAFETY RAILING
- NEW SAFETY RAILING
- \*\*\*\*\* POST & CHAIN RAILING REMOVAL WORK
- (2) EXISTING CONDUITS ON TOP OF 8" WIDE CONCRETE TANK WALL - RELOCATE TO NEW SAFETY RAILING
- △ EXISTING METER STATION TO REMAIN
- EXISTING POWER RECEPTACLE TO REMAIN
- NEW SWING GATE WITH DAVIT BASE ON WALKWAY
- NEW DAVIT BASE

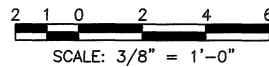
**SAFETY RAILING PLAN - BATTERY "B" AERATION TANKS**  
SCALE: NOT TO SCALE



**SECTION 1 (TYPICAL WALKWAY)**  
SCALE: 3/8" = 1'-0"

**BATTERY "B" NOTES:**

1. TOTAL LENGTH OF SAFETY RAILING, INCLUDING SWING GATES, TO BE FABRICATED & INSTALLED AT BATTERY "B" IS 6,481 LINEAR FEET.
2. TOTAL NUMBER OF SWING GATE WITH DAVIT BASE LOCATIONS IS 18.
3. TOTAL NUMBER OF DAVIT BASE WITHOUT SWING GATE LOCATIONS IS 2.
4. ALL DAVIT BASES SHALL BE FLUSH MOUNTED TYPE.
5. FLUSH MOUNTED DAVIT BASES ARE TO BE CAST IN NEW CONCRETE DAVIT BEAMS PER DETAILS ON DRAWING S-105.
6. TOTAL NUMBER OF NEW CONCRETE DAVIT BEAMS TO BE INSTALLED IS 16 CONSISTING OF 15 BEAM-1 AND 1 BEAM-2.
7. SEE GENERAL SAFETY RAIL NOTES ON DRAWING S-001.
8. EXISTING ELECTRICAL OUTLETS, ELECTRICAL CONDUITS AND METER STATIONS SHALL REMAIN UNLESS NOTED OTHERWISE.
9. PROVIDE TEMPORARY SUPPORTS FOR ELECTRICAL OUTLETS, ELECTRICAL CONDUITS AND METER STATIONS SUPPORTED BY RAILING TO BE REMOVED AND REPLACED. ATTACH TO REPLACEMENT SAFETY RAILING.
10. SEE TYPICAL SAFETY RAILING DETAILS ON DRAWING S-201.
11. SEE DRAWING S-301 FOR PHOTOGRAPHS OF EXISTING CONDITIONS.

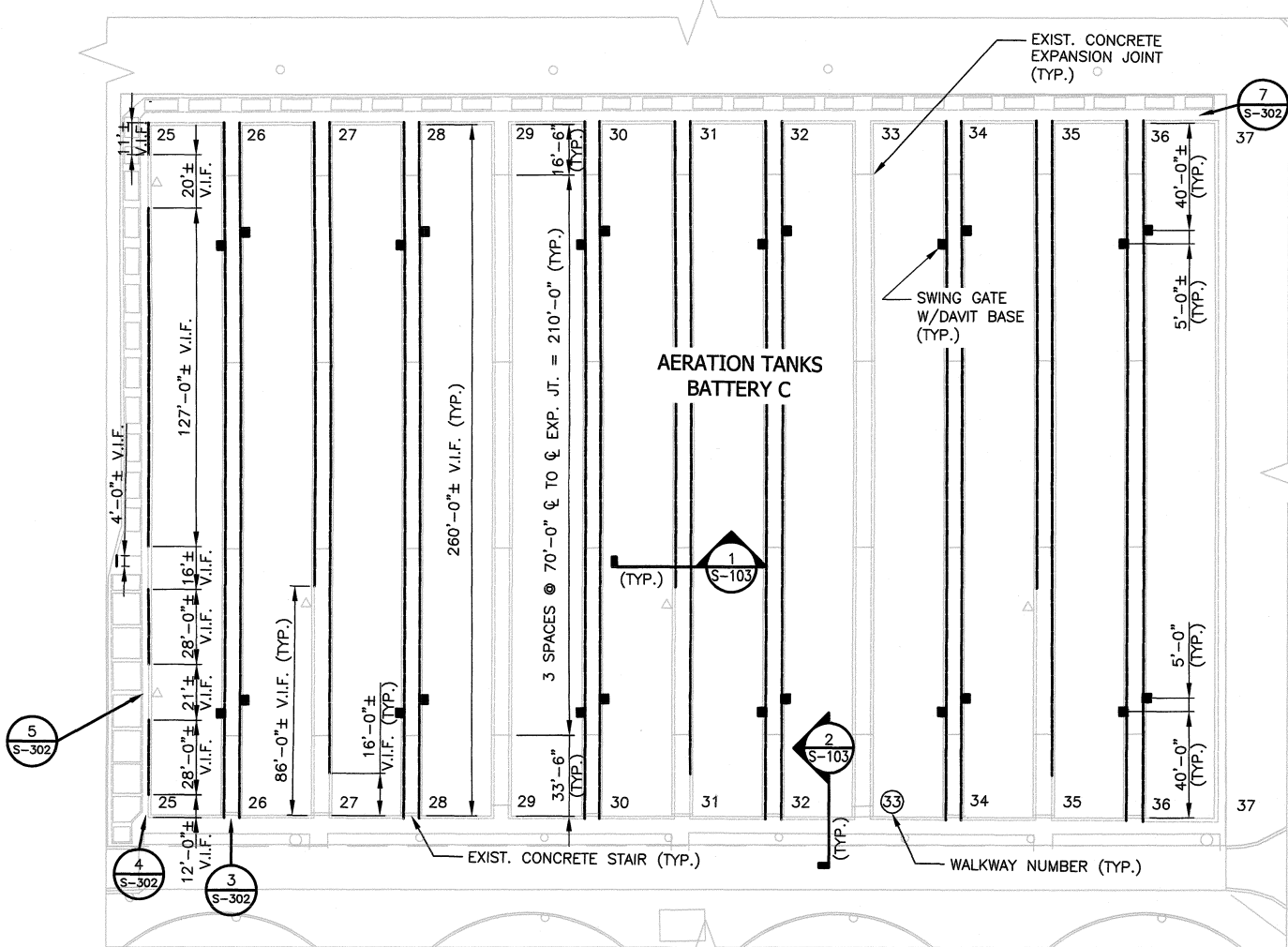


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METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO			
Designed by: VP	Checked by: SCP	Date: JUL 2016	Correct: Engineer of Structural - Architectural Design
Drawn by: MGM	Reviewed by: VGP	Scale: AS SHOWN	
Drawing code:			

CONTRACT 15-265-3D SAFETY RAILING AROUND TANKS CALUMET WATER RECLAMATION PLANT BATTERY 'B' AERATION TANKS - SAFETY RAILING PLAN & SECTIONS
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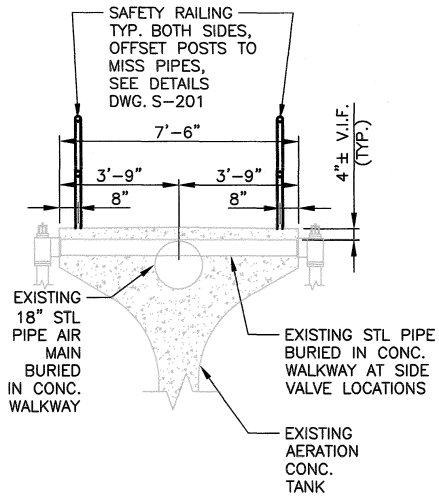
Sheet Number: <b>S-102</b>
Page Number: 8



**SAFETY RAILING PLAN - BATTERY "C" AERATION TANKS**  
SCALE: NOT TO SCALE

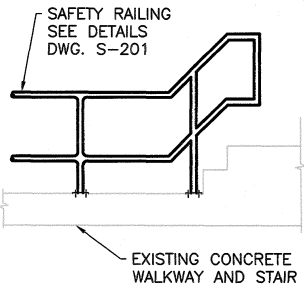
**LEGEND:**

- NEW OR EXISTING BACKGROUND
- EXISTING WORK TO REMAIN (OR NEW WORK FURNISHED AND INSTALLED UNDER OTHER CONTRACT ITEMS)
- NEW WORK
- FUTURE WORK
- XXXXX REMOVAL WORK
- EXISTING SAFETY RAILING
- NEW SAFETY RAILING
- △ EXISTING METER STATION TO REMAIN
- EXISTING POWER RECEPTACLE TO REMAIN
- NEW SWING GATE WITH DAVIT BASE ON WALKWAY



**SECTION 1 (TYPICAL WALKWAY)**  
SCALE: 3/8"=1'-0"

WALKWAY NUMBERS: 26, 27, 28, 30, 31, 32, 34, 35, 36

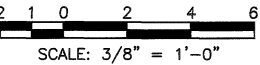


**SECTION 2 (TYPICAL STAIR AT SOUTH END)**  
SCALE: 3/8"=1'-0"

WALKWAY NUMBERS: 26, 28, 30, 32, 34, 36

**BATTERY "C" NOTES:**

1. TOTAL LENGTH OF SAFETY RAILING, INCLUDING SWING GATES, TO BE FABRICATED & INSTALLED AT BATTERY "C" IS 4,568 LINEAR FEET.
2. TOTAL NUMBER OF SWING GATE WITH DAVIT BASE LOCATIONS IS 24.
3. ALL DAVIT BASES SHALL BE TOP MOUNTED TYPE.
4. TOP MOUNTED DAVIT BASES ARE TO BE ANCHORED ON TOP OF EXISTING CONCRETE WALKWAY AS SHOWN ON DWG. S-201.
5. EXISTING ELECTRICAL OUTLETS, ELECTRICAL CONDUITS AND METER STATIONS SHALL REMAIN UNLESS NOTED OTHERWISE.
6. EXISTING PIPING, VALVES, PLATES, GRATES, FLANGES SHALL REMAIN, UNLESS NOTED OTHERWISE.
7. SEE GENERAL SAFETY RAIL NOTES ON DRAWING S-001.
8. SEE TYPICAL SAFETY RAIL AND SWING GATE DETAILS ON DRAWING S-201.
9. SEE DRAWING S-302 FOR PHOTOGRAPHS OF EXISTING CONDITIONS.



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Designed by: VP	Checked by: SCP	Date: JUL 2016	Correct: Engineer of Structural - Architectural Design
Drawn by: MGM	Reviewed by: VGP	Scale: AS SHOWN	
Drawing code:			

CONTRACT 15-265-3D SAFETY RAILING AROUND TANKS CALUMET WATER RECLAMATION PLANT BATTERY 'C' AERATION TANKS - SAFETY RAILING PLAN & SECTIONS
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Sheet Number: <b>S-103</b>
Page Number: 9





-  NEW OR EXISTING BACKGROUND  
 EXISTING WORK TO REMAIN (OR NEW WORK FURNISHED AND INSTALLED UNDER OTHER CONTRACT ITEMS)  
 NEW WORK  
 FUTURE WORK  
 REMOVAL WORK  
 EXISTING SAFETY RAILING  
 NEW SAFETY RAILING

PRELIMINARY SETTLING TANKS NOTES:

1. TOTAL LENGTH OF HANDRAILS TO BE FABRICATED & INSTALLED AT PRELIMINARY SETTLING TANKS IS 96 LINEAR FEET.
2. TOTAL LENGTH OF CHAINS TO BE FABRICATED & INSTALLED AT PRELIMINARY SETTLING TANKS IS 400 LINEAR FEET.
3. SEE GENERAL SAFETY RAIL NOTES ON DRAWING S-001.
4. INSTALL DOUBLE CHAIN ACROSS OPENING UNLESS NOTED OTHERWISE.
5. DIMENSIONS NEXT TO INDICATED CHAIN LOCATIONS ARE APPROXIMATE OPENING WIDTHS.
6. SEE TYPICAL SAFETY RAIL AND CHAIN DETAILS ON DRAWING S-201.
7. SEE DRAWING S-303 FOR PHOTOGRAPHS OF EXISTING CONDITIONS.

[illegible]

signed by:	checked by:	Date:	Contract:
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Designed by: VP	Checked by: SCP	Date: JUL 2016	Correct: Engineer of <i>W.P. Ganga</i> Architectural Design
Drawn by: MGM	Reviewed by: VPG	Scale: AS SHOWN	

Drawing code:

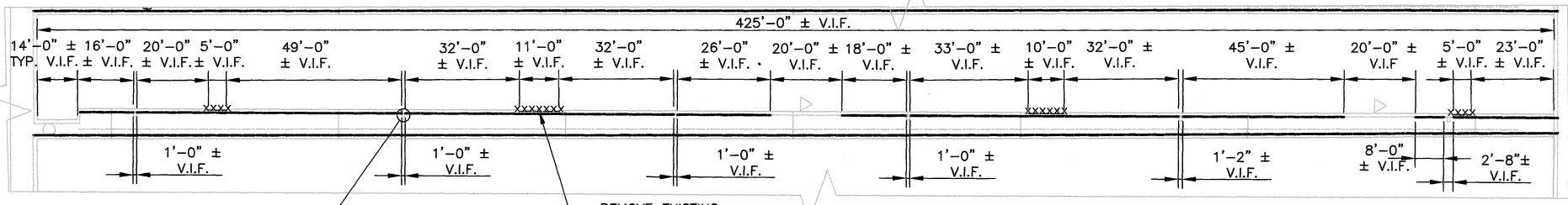
**CONTRACT 15-265-3D**  
SAFETY RAILING AROUND TANKS  
CALUMET WATER RECLAMATION PLANT

**PRELIMINARY SETTLING TANKS -  
SAFETY RAILING PLAN**

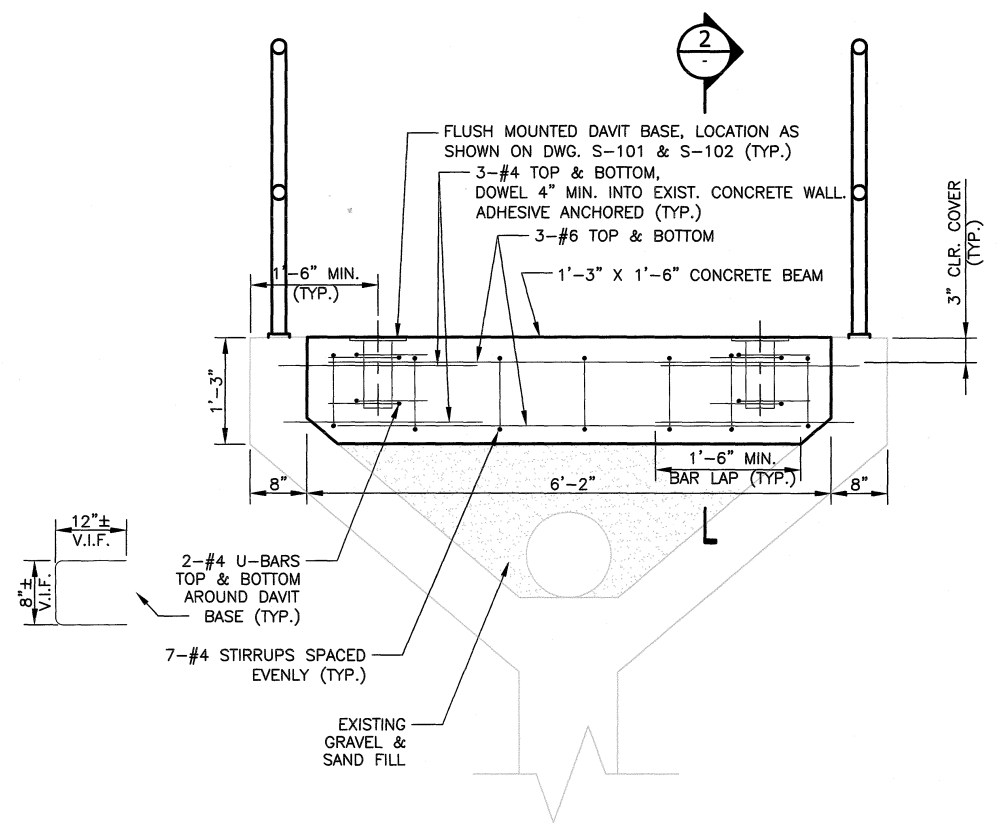
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S-104

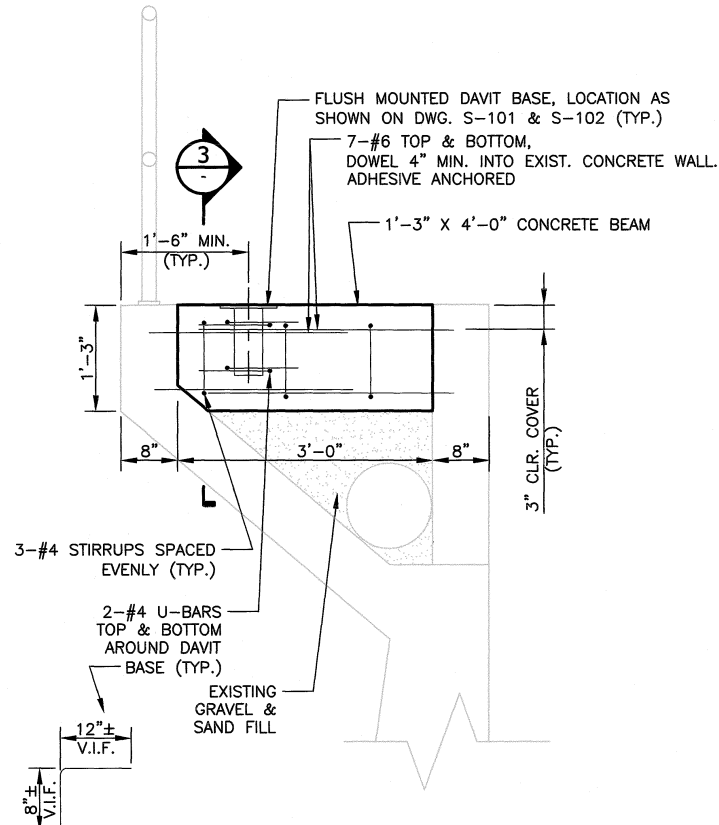
Page Number: 10



**1 WALKWAY NUMBER 4 PARTIAL PLAN @ AERATION TANK BATTERY "A"**  
SEE DWG. S-101 FOR LOCATION  
SCALE: NOT TO SCALE



**2 SECTION THRU DAVIT BEAM-1**  
SCALE: 1" = 1'-0"



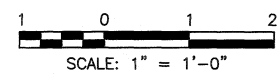
**3 SECTION THRU DAVIT BEAM-2**  
SCALE: 1" = 1'-0"

**NOTES:**

1. SEE DRAWING S-101 FOR TOTAL LENGTH OF SAFETY RAILING TO BE FABRICATED, INSTALLED, OR TO BE REMOVED AT BATTERY "A".
2. EXISTING ELECTRICAL OUTLETS, ELECTRICAL CONDUITS AND METER STATIONS SHALL REMAIN AT WALKWAY 4 OF BATTERY "A", UNLESS NOTED OTHERWISE.
3. SEE GENERAL SAFETY RAIL NOTES ON DRAWING S-001.
4. SEE TYPICAL SAFETY RAIL DETAILS ON DRAWING S-201.
5. SEE DRAWING S-301 FOR PHOTOGRAPHS OF EXISTING CONDITIONS.
6. PROVIDE CONCRETE BEAM-1 OR BEAM-2 PER DWG. S-101 & S-102 AT EACH DAVIT BASE LOCATION AS SHOWN.
7. SAW CUT AND REMOVE EXISTING CONCRETE SIDEWALK AS REQUIRED FOR INSTALLATION OF BEAM-1 OR BEAM-2.
8. EXCAVATE FILL UNDER EXIST. SIDEWALK SLAB AS REQUIRED FOR INSTALLATION OF BEAM-1 OR BEAM-2.
9. INSTALL 1 OR 2 TOTAL FLUSH MOUNTED DAVIT BASES PER EACH BEAM-1 AS SHOWN ON DWG. S-101 & S-102.
10. HAND COMPACT DISTURBED GRAVEL & SAND FILL PRIOR TO INSTALLING BEAM.
11. KEEP EXCAVATION FOR INSTALLATION OF BEAM-1 OR BEAM-2 DRY AS DIRECTED BY THE ENGINEER.

**LEGEND:**

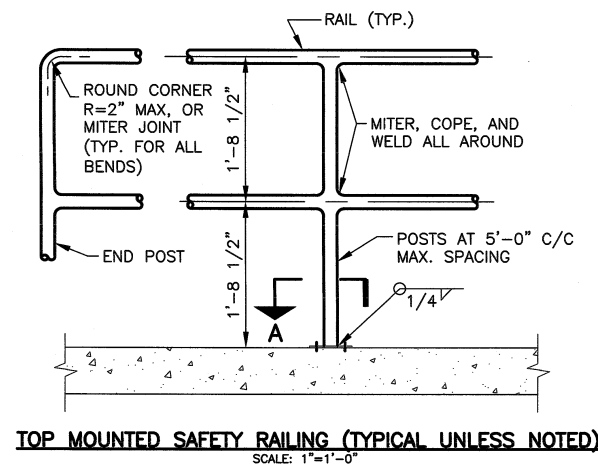
- NEW OR EXISTING BACKGROUND
- EXISTING WORK TO REMAIN (OR NEW WORK FURNISHED AND INSTALLED UNDER OTHER CONTRACT ITEMS)
- NEW WORK
- FUTURE WORK
- REMOVAL WORK
- EXISTING SAFETY RAILING
- NEW SAFETY RAILING
- ANGLE RAILING REMOVAL WORK
- EXISTING METER STATION TO REMAIN
- EXISTING POWER RECEPTACLE TO REMAIN



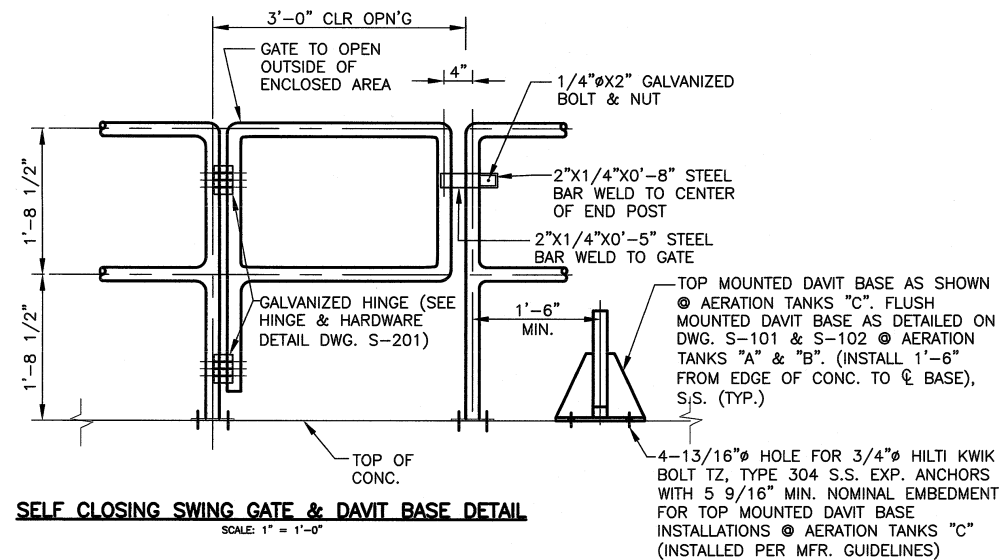
Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO			
Designed by:	Checked by:	Date:	Correct:
VP	SCP	JUL 2016	Engineer of Structural Design
Drawn by:	Reviewed by:	Scale:	AS SHOWN
MGM	VP	AS SHOWN	AS SHOWN
Drawing code:			

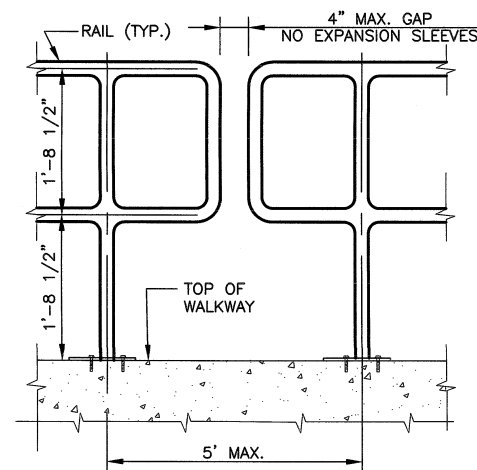
CONTRACT 15-265-3D  
SAFETY RAILING AROUND TANKS  
CALUMET WATER RECLAMATION PLANT  
  
BATTERY 'A' AERATION TANKS -  
PARTIAL PLAN & DETAILS



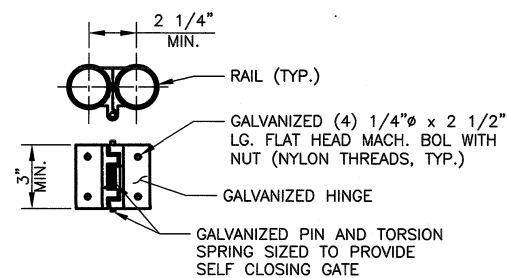
**TOP MOUNTED SAFETY RAILING (TYPICAL UNLESS NOTED)**  
SCALE: 1"=1'-0"



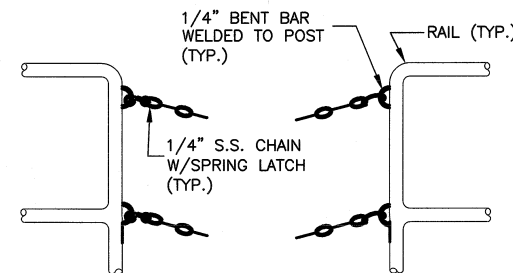
**SELF CLOSING SWING GATE & DAVIT BASE DETAIL**  
SCALE: 1" = 1'-0"



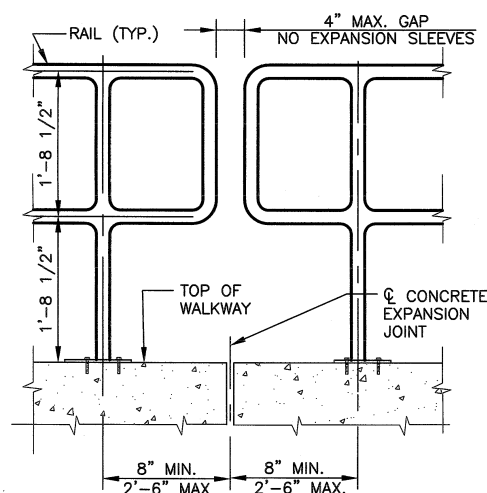
**SAFETY RAILING END**  
SCALE: NTS



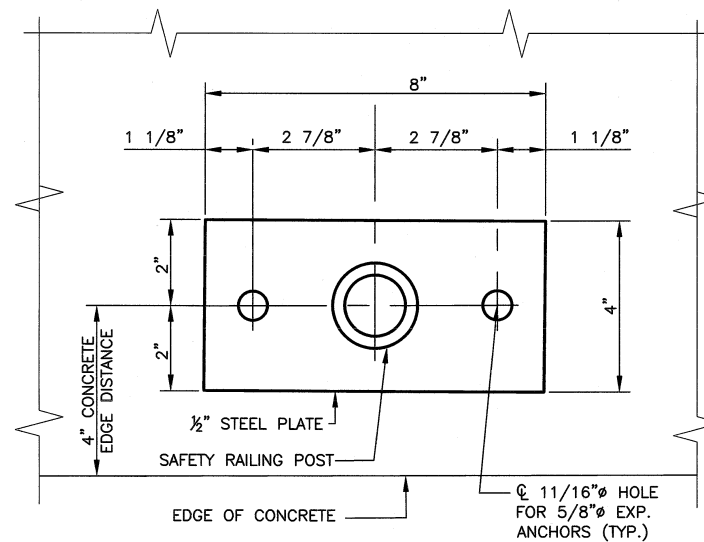
**HINGE & HARDWARE DETAILS**  
SCALE: 3"=1'-0"



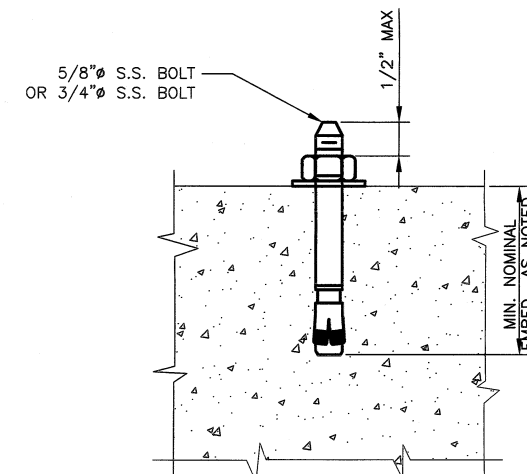
**CHAIN GATE DETAIL (TYP.)**  
SCALE: 1"=1'-0"



**SAFETY RAILING AT EXPANSION JOINT**  
SCALE: NTS



**SECTION A**  
SCALE: 6"=1'-0"



**BOLTS DETAIL**  
SCALE: 6" = 1'-0"

- NOTES:

1. ALL RAILS AND POSTS SHALL BE 1 1/2" NOMINAL DIAMETER PIPE SCHEDULE 40 STEEL PIPE, 1.9" OUTSIDE DIAMETER, UNLESS NOTED OTHERWISE.
2. ALL PLATES AND BARS SHALL BE ASTM A36 STEEL.
3. ALL SAFETY RAILING ASSEMBLIES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
4. ALL SAFETY RAILING SHALL BE UNIFORM IN APPEARANCE AND LOOK LIKE THEY COME FROM SAME MANUFACTURER.
5. EXPANSION ANCHORS SHALL BE 5/8"Ø HILTI KWIK BOLT TZ, TYPE 304 STAINLESS STEEL WITH 4 7/16" MINIMUM NOMINAL EMBEDMENT, INSTALLED PER MANUFACTURER GUIDELINES, UNLESS NOTED OTHERWISE.
6. MAXIMUM AMOUNT OF EXPOSED THREAD ABOVE ANCHOR BOLT NUT SHALL NOT EXCEED 1/2".
7. ALL WELDING SHALL COMPLY WITH THE PROVISIONS OF CODE FOR WELDING IN BUILDING CONSTRUCTION D1.0 OF THE AMERICAN WELDING SOCIETY, LATEST EDITION. TYPE E60 WELD RODS SHALL BE USED IN THE WELDING OPERATIONS
8. ALL EXPOSED PIPE ENDS SHALL BE CAPPED.
9. WHERE POSSIBLE, THE MINIMUM SHOP FABRICATED LENGTH SHALL BE 20 FEET.
10. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DETAIL AND ERECTION DRAWING FOR APPROVAL BY THE ENGINEER.
11. SEE PLANS AND/OR SPECIFICATIONS FOR TYPE OF MOUNTING.
12. ALL RAILINGS SHALL HAVE A MINIMUM OF 3" CLEARANCE BETWEEN RAILING AND ANY OTHER OBJECT.
13. SAFETY RAILING ARE SHOWN ON PLANS ONLY EXCEPT SOME SECTIONS MAY ALSO SHOW HANDRAILS IN ELEVATIONS.
14. RAILING SHALL ALWAYS BE TOP MOUNTED UNLESS NOTED OTHERWISE.
15. PROVIDE CHAIN GATES AS DIRECTED BY THE ENGINEER.
16. SEE GENERAL NOTES ON DRAWING S-001.
17. 90 DEGREE MITER JOINTS MAY BE USED IN LIEU OF ROUND CORNERS AT SAFETY RAILING ENDS.
18. PROVIDE APPROVED GALVANIZED HINGE AND HARDWARE TO MAKE SWING GATE SELF CLOSING. GATE SHALL SWING OPEN TOWARD WALKWAY.
19. PROVIDE 1/16" NEOPRENE GASKET BETWEEN STAINLESS STEEL SURFACES IN CONTACT WITH OTHER DISSIMILAR METALS.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO				
Designed by: VP	Checked by: SCP	Date: JUL 2016	Correct: Engineer of Structural	W. P. Sca
Drawn by: EAI	Reviewed by: VPG	Scale: AS SHOWN	Architectural Design	
Drawing code:				

Signature of:	Checked by:	Date:	Correct:
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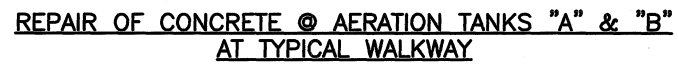
**CONTRACT 15-265-3D**  
SAFETY RAILING AROUND TANKS  
CALUMET WATER RECLAMATION PLANT

## DETAILS

Sheet Number:

S-201

Page Number: 12



1. CONCRETE REPAIR SHALL BE PERFORMED AS REQUIRED FOR INSTALLING SAFETY RAILING AND AS DIRECTED BY THE ENGINEER ON A UNIT PRICE BASIS.
2. PROTECT UTILITIES FROM DAMAGE.
3. ALL CONCRETE SURFACES WITHIN 12" OF SPALLED AREAS SHALL BE CLEANED WITH HIGH PRESSURE AIR.
4. THE CONTRACTOR SHALL REMOVE ALL LOOSE, DISINTEGRATED, SCALED AND SPALLED CONCRETE WITH LIGHTWEIGHT, HAND HELD, PNEUMATIC, CHIPPING HAMMER OF 25 LBS. OR LESS. ALL UNSOUND CONCRETE MUST BE REMOVED.
5. CONCRETE SHALL BE REMOVED IN GEOMETRIC PATTERN, PREFERABLY WITH SQUARE CORNERS.
6. CONCRETE EDGES SHALL BE SAW CUT FOR A MINIMUM DEPTH OF 1". FEATHER EDGING WILL NOT BE PERMITTED.
7. REBARS SHALL NOT BE NICKED OR CUT DURING SAWING, OR VIBRATED WITH CHIPPING HAMMER. CHIPPING SHALL BE DONE SUCH THAT BOND BETWEEN THE SOUND CONCRETE AND REINFORCING BARS IS NOT BROKEN.
8. CONCRETE AROUND EXPOSED REBARS SHALL BE REMOVED FOR A DEPTH OF 1" OR MORE TO FACILITATE CLEAN UP OF REBARS AND FOR PLACEMENT OF FRESH CONCRETE AGAINST THE BARS.
9. EXPOSED REBARS AND CONCRETE SURFACES SHALL BE SAND BLASTED. STEEL SHALL BE SAND BLASTED TO WHITE METAL. COAT SURFACES OF STEEL AND CONCRETE WITH SIKATOP ARMATEC 110, OR APPROVED EQUAL.
10. REBARS WHICH HAVE LOST 15 OR MORE PERCENT OF CROSS SECTION AREA BY CORROSION SHALL BE SPLICED. LAP LENGTHS WILL BE AS PER ACI 318.
11. SHORING AND FORMS SHALL BE PROVIDED WHEN SPECIFIED OR REQUIRED TO SUPPORT EXISTING STRUCTURES UNDER REPAIR.
12. 28 DAY COMPRESSIVE STRENGTH OF NEW CONCRETE SHALL BE 4000 PSI MINIMUM U.N.O.
13. FINISHED CONCRETE SURFACES SHALL BE EVEN AND FLUSH WITH ADJACENT CONCRETE SURFACES. ALL CORNERS AND EDGES SHALL MATCH THE EXISTING CONCRETE IN THE AREA.
14. APPLY CONCRETE SEALANT ON FINISHED CONCRETE.

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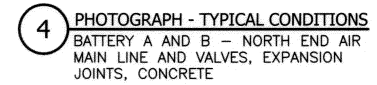
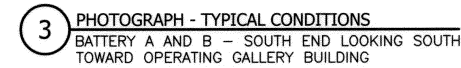
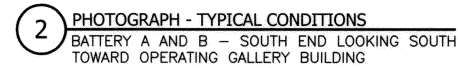
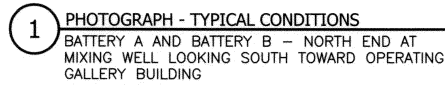
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Designed by: VP	Checked by: SCP	Date: JUL 2016	Correct: Engineer of <i>Structural</i> Architectural Design
Drawn by: EAI	Reviewed by: VPG	Scale: AS SHOWN	
Drawing code:			

**CONTRACT 15-265-3D**  
SAFETY RAILING AROUND TANKS  
CALLUMET WATER RECLAMATION PLANT

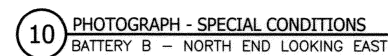
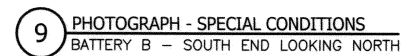
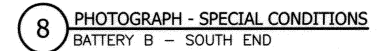
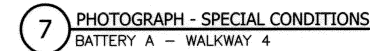
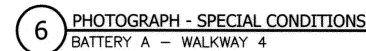
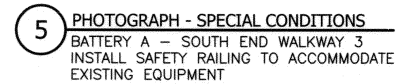
**CONCRETE REPAIRS**

Sheet Number:  
S-202  
Page Number: 13





NOT TO SCALE



NOT TO SCALE

1. SEE DRAWINGS S-101 & S-102 FOR LOCATIONS OF PHOTOGRAPHS.
2. PHOTOGRAPHS DO NOT SHOW ALL EXISTING CONDITIONS.
3. SEE GENERAL NOTES ON DRAWING S-001.

[illegible]

<b>METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO</b>			
Designed by: VP	Checked by: SCP	Date: JUL 2016	Correct: Engineer of <i>Structural</i> Architectural Design
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Drawing code:			

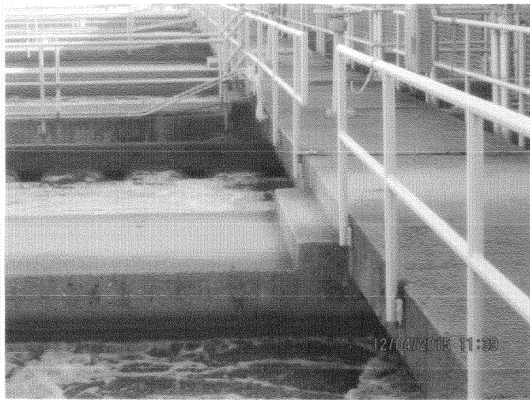
**CONTRACT 15-265-3D**  
SAFETY RAILING AROUND TANKS  
CALUMET WATER RECLAMATION PLANT

## PHOTOGRAPHS

Sheet Number:

S-301

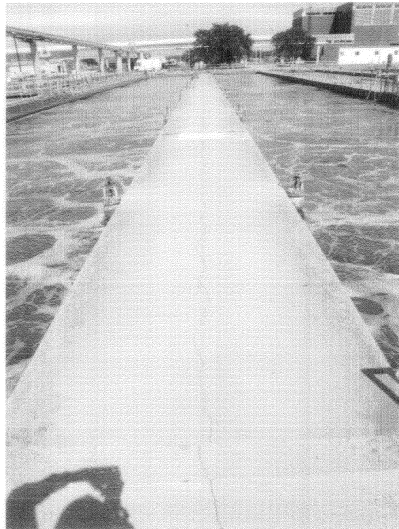
Page Number: 14



1 PHOTOGRAPH - TYPICAL CONDITIONS  
BATTERY C - SOUTH END



2 PHOTOGRAPH - TYPICAL CONDITIONS  
BATTERY C - SOUTH END

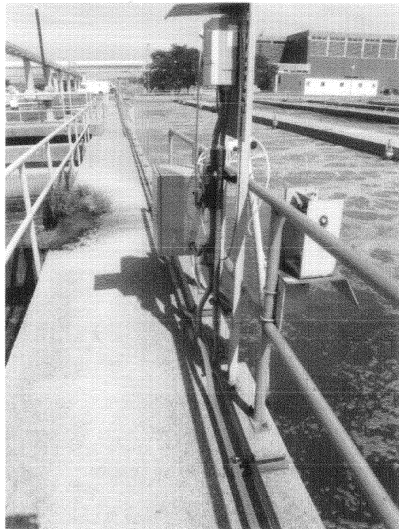


3 PHOTOGRAPH - TYPICAL CONDITIONS  
BATTERY C - SOUTH END LOOKING NORTH

**BATTERY C - TYPICAL CONDITIONS**  
NOT TO SCALE



4 PHOTOGRAPH - SPECIAL CONDITIONS  
BATTERY C - SOUTHWEST CORNER  
LOOKING NORTH

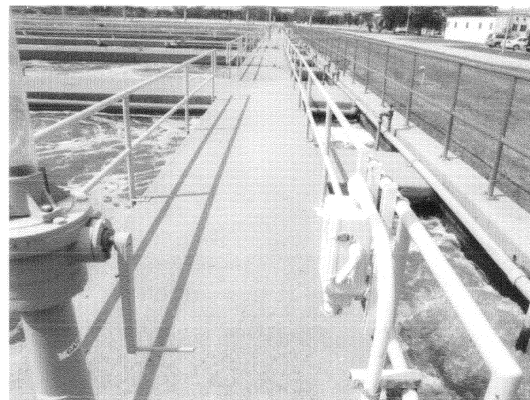


5 PHOTOGRAPH - SPECIAL CONDITIONS  
BATTERY C - WEST END



6 PHOTOGRAPH - SPECIAL CONDITIONS  
BATTERY C - SOUTH END LOOKING NORTH

**BATTERY C - SPECIAL CONDITIONS**  
NOT TO SCALE



7 PHOTOGRAPH - SPECIAL CONDITIONS  
BATTERY C - NORTHEAST END  
INSTALL SAFETY RAILING TO  
ACCOMMODATE EXISTING EQUIPMENT

**NOTES:**

1. SEE DRAWING S-103 FOR LOCATIONS OF PHOTOGRAPHS.
2. PHOTOGRAPHS DO NOT SHOW ALL EXISTING CONDITIONS.
3. SEE GENERAL NOTES ON DRAWING S-001.

Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO			
Designed by: VP	Checked by: SCP	Date: JUL 2016	Correct: Engineer of Structural Architectural Design
Drawn by: MGM	Reviewed by: VPG	Scale: AS SHOWN	
Drawing code:			

CONTRACT 15-265-3D  
SAFETY RAILING AROUND TANKS  
CALUMET WATER RECLAMATION PLANT

**PHOTOGRAPHS**

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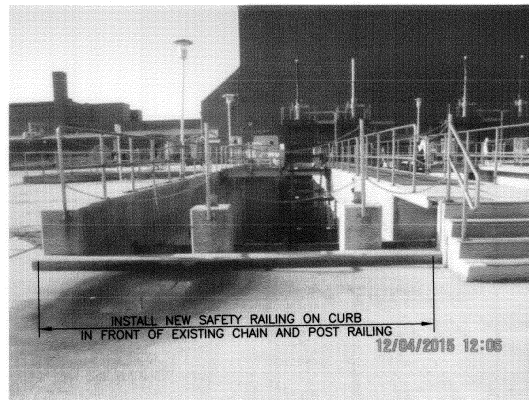




1 PHOTOGRAPH - TYPICAL CONDITIONS  
PRELIMINARY SETTLING TANKS - INSTALL NEW SAFETY RAILING IN FRONT OF EXISTING



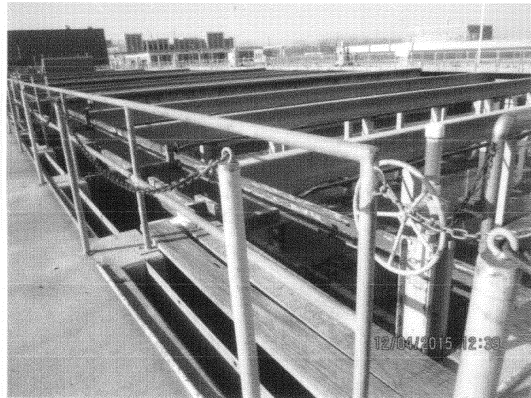
2 PHOTOGRAPH - TYPICAL CONDITIONS  
PRELIMINARY SETTLING TANKS - INSTALL NEW SAFETY RAILING IN FRONT OF EXISTING



3 PHOTOGRAPH - TYPICAL CONDITIONS  
PRELIMINARY SETTLING TANKS - INSTALL NEW SAFETY RAILING ON CURB



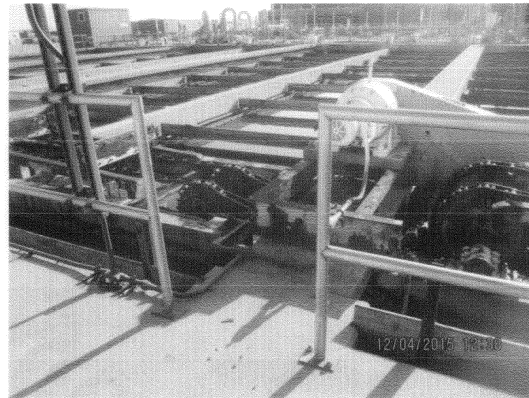
4 PHOTOGRAPH - TYPICAL CONDITIONS  
PRELIMINARY SETTLING TANKS - INSTALL NEW SAFETY RAILING ON CURB



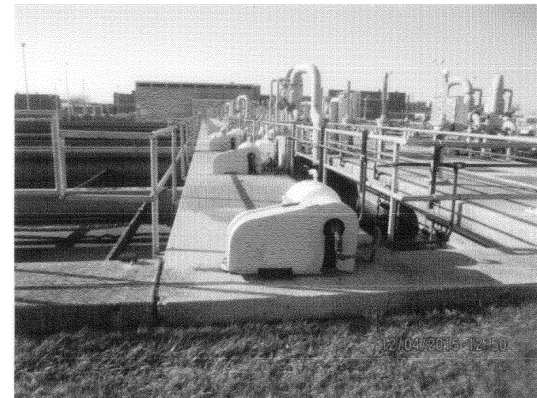
5 PHOTOGRAPH - TYPICAL CONDITIONS  
PRELIMINARY SETTLING TANKS - EXISTING CONDITIONS



6 PHOTOGRAPH - TYPICAL CONDITIONS  
PRELIMINARY SETTLING TANKS - EXISTING CONDITIONS



7 PHOTOGRAPH - TYPICAL CONDITIONS  
PRELIMINARY SETTLING TANKS - INSTALL DOUBLE CHAINS @ OPENING



8 PHOTOGRAPH - TYPICAL CONDITIONS  
PRELIMINARY SETTLING TANKS - INSTALL DOUBLE CHAINS TO BLOCK ACCESS TO WALKWAY



9 PHOTOGRAPH - TYPICAL CONDITIONS  
PRELIMINARY SETTLING TANKS - INSTALL DOUBLE CHAINS



10 PHOTOGRAPH - TYPICAL CONDITIONS  
PRELIMINARY SETTLING TANKS - INSTALL LOWER CHAIN SEE DETAIL DRAWING S-201

**PRELIMINARY SETTLING TANKS - TYPICAL CONDITIONS**  
NOT TO SCALE

**NOTES:**

1. SEE DRAWINGS S-104 FOR LOCATIONS OF PHOTOGRAPHS.
2. PHOTOGRAPHS DO NOT SHOW ALL EXISTING CONDITIONS.
3. SEE GENERAL NOTES ON DRAWING S-001.

Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO			
Designed by: VP	Checked by: SCP	Date: JUL 2016	Correct: Engineer of Structural Architectural Design
Drawn by: MGM	Reviewed by: VPG	Scale: AS SHOWN	
Drawing code:			

CONTRACT 15-265-3D SAFETY RAILING AROUND TANKS CALUMET WATER RECLAMATION PLANT	PHOTOGRAPHS
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