

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

DESIGN DESIGNATION - INTERSTATE  
CURRENT TRAFFIC DATA  
F.A.I. 55  
POSTED SPEED LIMIT: 65 MPH  
ADT = 23,000 (2011)

STATE OF ILLINOIS 02-28-14 LETTING ITEM 017

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	FUNKS GROVE RA IMP 2014-1	MC LEAN	17	1
		ILLINOIS	CONTRACT NO. 70A53	

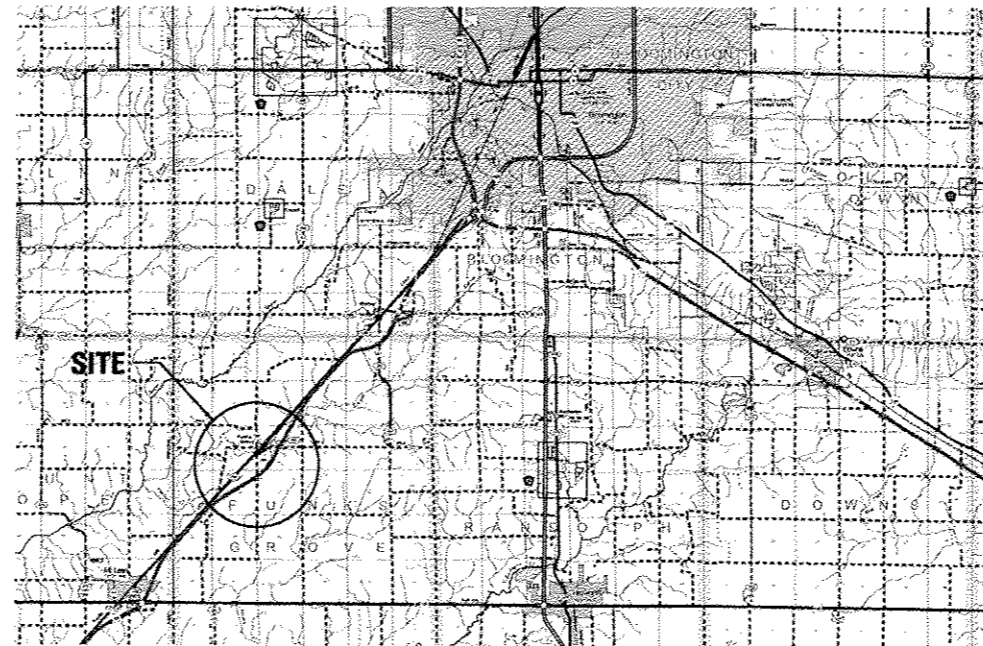
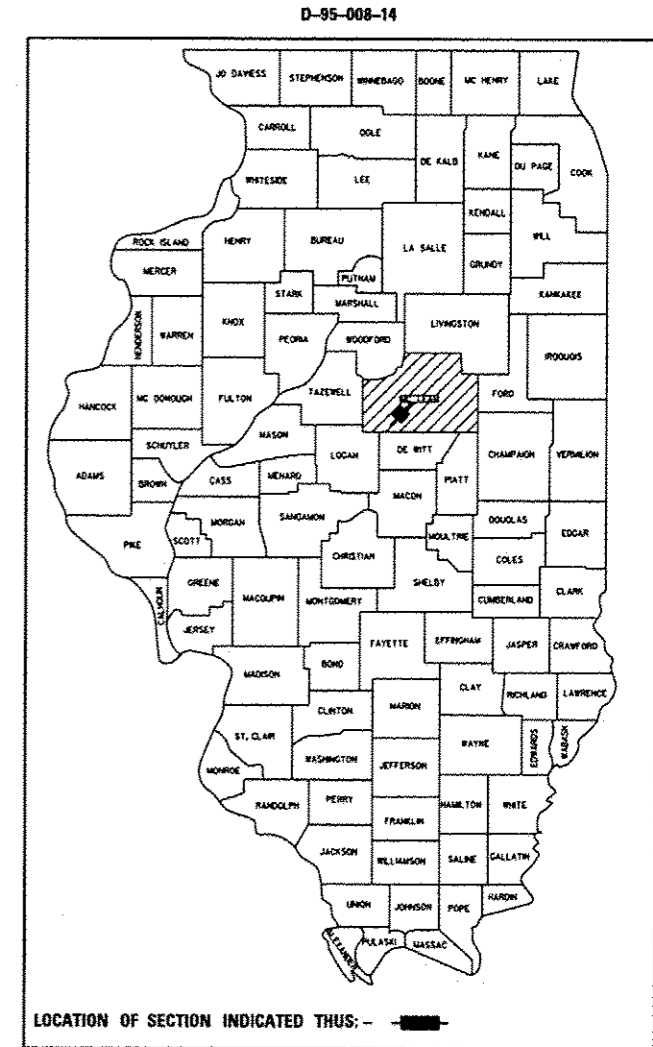
### DEPARTMENT OF TRANSPORTATION

### DIVISION OF HIGHWAYS

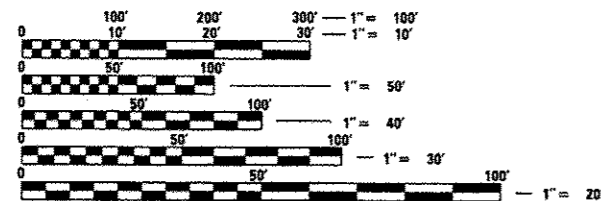
# PROPOSED REST AREA IMPROVEMENT PLANS

FAI ROUTE 55 (I-55)  
SECTION: FUNKS GROVE RA IMP 2014-1  
FUNKS GROVE REST AREA  
MC LEAN COUNTY, IL

REST AREA IMPROVEMENT  
C-95-008-14



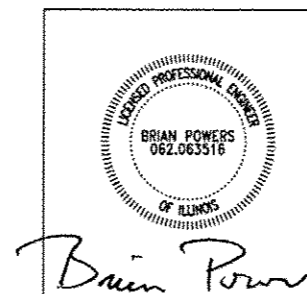
LOCATION MAP  
1" = 10,000'



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811  
FUNKS GROVE TOWNSHIP

PROJECT ENGINEER: JASON W. STULTS  
PROJECT MANAGER: RUSTIN B. KEYS  
PHONE NUMBER: (217)-465-4181  
CONTRACT NO. 70A53



DATE: 12-13-2013  
SEAL EXPIRES: 11-30-2015

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED DECEMBER 19 20 13

Joseph E. Casore  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER *CAP*

John D. Baranzelli *PE* *br*  
ENGINEER OF DESIGN AND ENVIRONMENT

Jan 24 20 14

Omer Osman *PE* *br*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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**INDEX OF SHEETS**

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**HIGHWAY STANDARDS**

- 000001-06 STANDARDS SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL EQUIVALENTS OF AN INCH AND FOOT
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- 602401-03 MANHOLE, TYPE A
- 602601-03 FLAT SLAB TOP, PRECAST REINFORCED CONCRETE
- 602701-02 MANHOLE STEPS
- 664001-02 CHAIN LINK FENCE

**GENERAL NOTES**

1. G.N. 100:  
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.
2. G.N. 100A  
ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION, INCLUDING CAD FILES WILL NOT BE AVAILABLE TO THE CONTRACTOR.
3. G.N. 280  
TEMPORARY EROSION CONTROL SEEDING IS INCLUDED IN THE CONTRACT TO SEED DISTURBED AREAS DURING TIMES WHEN PERMANENT SEEDING IS NOT ALLOWED. SOME OR ALL OF THE TEMPORARY EROSION CONTROL SEEDING WILL BE DETELED IF IT IS POSSIBLE TO PLACE THE PERMANENT SEEDING AS THE WORK IS COMPLETED.
4. G.N. 550  
THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PIPE LENGTHS AND INVERTS PRIOR TO DEMOLITION. DISCREPANCIES FROM THE DRAWINGS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
5. G.N. 1004J  
COARSE AGGREGATE CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARDS SPECIFICATIONS.
6. EXISTING UTILITY LINES, SHOWN ON THE PLANS BASED ON RECORD INFORMATION, ARE LOCATED TO INDICATE THEIR PRESENCE AND APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL NOTIFY THE DISTRICT OPERATIONS ENGINEER TWO WEEKS PRIOR TO COMMENCING ANY EXCAVATION THE STATE WILL LOCATE AND MARK THE HORIZONTAL LOCATION AND INDICATE THE DEPTH, WHERE THIS INFORMATION IS AVAILABLE. SHOULD ANY OF THE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE STATE.
7. THE EXISTING VERTICAL DATUM IS TEMPORARY BENCH MARK (TBM), FROM THE 1998 PROJECT. IT IS AN "X" CHISELED INTO THE TOP OF THE EXISTING SAND FILTER DOSING STRUCTURE AT REFERENCE GRADE 100.00. THE CONTRACTOR SHALL LOCATE A NEW TBM (RELATIVE TO THIS REFERENCE GRADE) PRIOR TO THE START OF ANY DEMOLITION TO AN AREA OUTSIDE OF THE DISTURBANCE LIMITS.
8. GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH AS TO PRESERVE IN THE ORIGINAL STATE AS MUCH AREA OF TEMPORARY EASEMENTS AS POSSIBLE. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE AS DIRECTED BY THE ENGINEER.  
  
THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
9. CLEARING OF VEGETATION PRIOR TO THE REMOVAL OF ANY EARTH EXCAVATION SHALL BE DONE IN ACCORDANCE WITH SECTION 201 OF THE STANDARD SPECIFICATIONS.
10. PRIOR TO THE PLACEMENT OF ANY EARTH EXCAVATION OR FURNISHED EXCAVATION, EXISTING GROUND SURFACES SHALL BE PREPARED IN ACCORDANCE WITH SECTION 205.03 OF THE STANDARD SPECIFICATIONS.



FILE NAME = 0570053-shu-gennote.dgn	USER NAME = tkoo	DESIGNED - WWS	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS, GENERAL NOTES AND HIGHWAY STANDARDS</b>	P.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 1:3000' / in.	DRAWN - TDK	REVISED -			55	FUNKS GROVE RA IMP. 2014-	MC LEAN	17	2	
	PLOT DATE = 1/15/2014	CHECKED - BEP	REVISED -			CONTRACT NO. 70A53					
		DATE - 12-13-2013	REVISED -			SCALE:	SHEET 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	



## SUMMARY OF QUANTITIES

LOCATION OF WORK:                   FAI 55 (I-55)  
   MCLEAN COUNTY  
   FUNKS GROVE REST AREA  
   RURAL  
 FUNDING:                               100% STATE  
 CONSTRUCTION TYPE CODE:           0044

CODE NO	ITEM	UNIT	TOTAL QUANTITY
X0327715	BY-PASS / FLOW CONTROL VALVES - 8" DIAMETER WITH RISERS	EACH	3.0
X0327716	REPLACE EXISTING 8" PLUG VALVES IN MANHOLES	EACH	3.0
X0327717	LAGOON 2 COVER SYSTEM COMPLETE	L SUM	1.0
X0327718	SANITARY CLEANOUT 8"	EACH	3.0
20101000	TEMPORARY FENCE	FOOT	30.0
20200100	EARTH EXCAVATION	CU YD	490.0
20400800	FURNISHED EXCAVATION	CU YD	90.0
25000100	SEEDING, CLASS 1	ACRE	1.0
25100105	MULCH, METHOD 1	ACRE	1.0
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	90.0
28100105	STONE RIPRAP, CLASS A3	SQ YD	140.0
28200200	FILTER FABRIC	SQ YD	140.0
60100080	FRENCH DRAINS	CU YD	60.0
60107600	PIPE UNDERDRAINS 4"	FOOT	570.0

• SPECIALTY ITEMS

FILE NAME: c:\p\work\p\dot\dawsonkb\2373282\053\053-ent-500.dgn	USER NAME: dawsonkb	DESIGNED: -	REVISED: -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>	F.A.I. RTE. 55	SECTION FUNKS GROVE RA IMP.2014-I	COUNTY MCLEAN	TOTAL SHEETS 17	SHEET NO. 4
PLOT SCALE: 48.0000' / in.	PLOT DATE: 12/13/2013	CHECKED: -	REVISED: -	SCALE: _____ SHEET _____ OF _____ SHEETS STA. _____ TO STA. _____		CONTRACT NO. 70A53 ILLINOIS FED. AID PROJECT				

## SUMMARY OF QUANTITIES

LOCATION OF WORK: FAI 55 (I-55)

MCLEAN COUNTY

FUNKS GROVE REST AREA

RURAL

FUNDING: 100% STATE

CONSTRUCTION TYPE CODE: 0044

TOTAL

CODE NO	ITEM	UNIT	TOTAL QUANTITY
66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	490.0
67100100	MOBILIZATION	L SUM	1.0
X0320374	PLUG EXISTING SANITARY SEWERS	EACH	4.0
X0325279	CLASS SI CONCRETE (MISCELLANEOUS)	CU YD	8.0
X6026055	SANITARY MANHOLE, SPECIAL	EACH	4.0
XX000372	TEMPORARY AGGREGATE	TON	410.0
XX003470	SANITARY CLEANOUT 6"	EACH	2.0
XX005498	SANITARY CLEANOUT 4"	EACH	6.0
XX006247	SANITARY SEWER REMOVAL	FOOT	400.0
XX006377	SEPTIC TANK TO BE PUMPED	EACH	2.0
XX007026	FENCE REMOVAL AND REINSTALLATION	FOOT	30.0
XX008550	REMOVE AND REPLACE STONE RIPRAP	50 YD	140.0
Z0056800	SANITARY SEWER 6"	FOOT	100.0

• SPECIALTY ITEMS

FILE NAME =	USER NAME = dawsnkb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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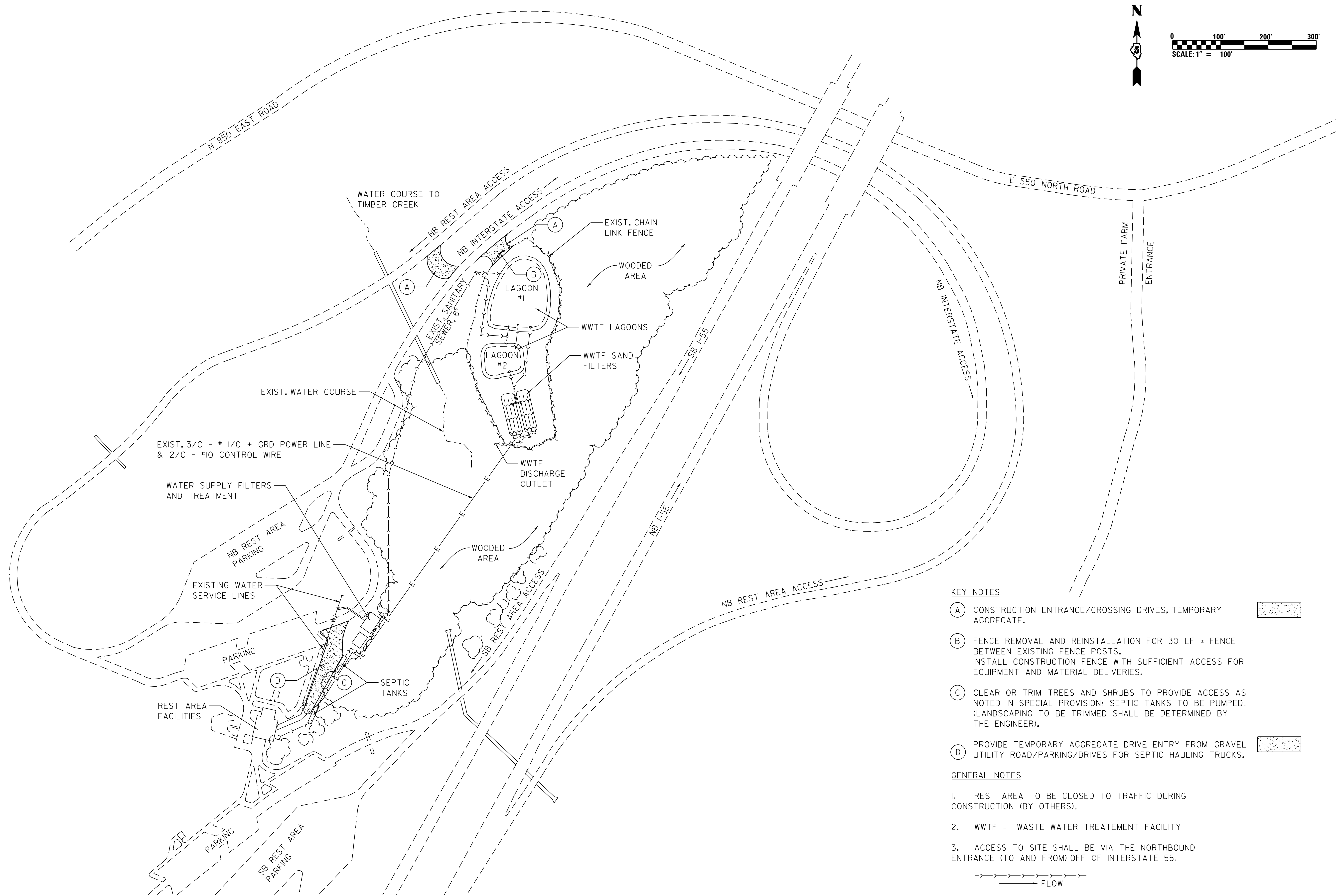
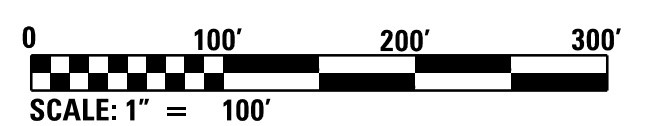
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### SUMMARY OF QUANTITIES

LOCATION OF WORK:              FA1 55 (1-55)  
     MCLEAN COUNTY  
     FUNKS GROVE REST AREA  
     RURAL  
 FUNDING:                              100% STATE  
 CONSTRUCTION TYPE CODE:      0044

CODE NO	ITEM	UNIT	TOTAL QUANTITY
Z0056900	SANITARY SEWER 8"	FOOT	430.0

\* SPECIALTY ITEMS

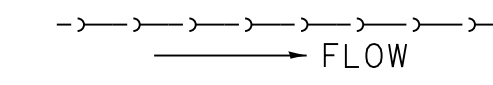


**KEY NOTES**

- (A) CONSTRUCTION ENTRANCE/CROSSING DRIVES, TEMPORARY AGGREGATE.
- (B) FENCE REMOVAL AND REINSTALLATION FOR 30 LF ± FENCE BETWEEN EXISTING FENCE POSTS. INSTALL CONSTRUCTION FENCE WITH SUFFICIENT ACCESS FOR EQUIPMENT AND MATERIAL DELIVERIES.
- (C) CLEAR OR TRIM TREES AND SHRUBS TO PROVIDE ACCESS AS NOTED IN SPECIAL PROVISION; SEPTIC TANKS TO BE PUMPED. (LANDSCAPING TO BE TRIMMED SHALL BE DETERMINED BY THE ENGINEER).
- (D) PROVIDE TEMPORARY AGGREGATE DRIVE ENTRY FROM GRAVEL UTILITY ROAD/PARKING/DRIVES FOR SEPTIC HAULING TRUCKS.

**GENERAL NOTES**

1. REST AREA TO BE CLOSED TO TRAFFIC DURING CONSTRUCTION (BY OTHERS).
2. WWTF = WASTE WATER TREATMENT FACILITY
3. ACCESS TO SITE SHALL BE VIA THE NORTHBOUND ENTRANCE (TO AND FROM) OFF OF INTERSTATE 55.



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		DATE - 12-13-2013	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXISTING SITE PLAN,  
ACCESS AND MAINTENANCE OF TRAFFIC PLAN**

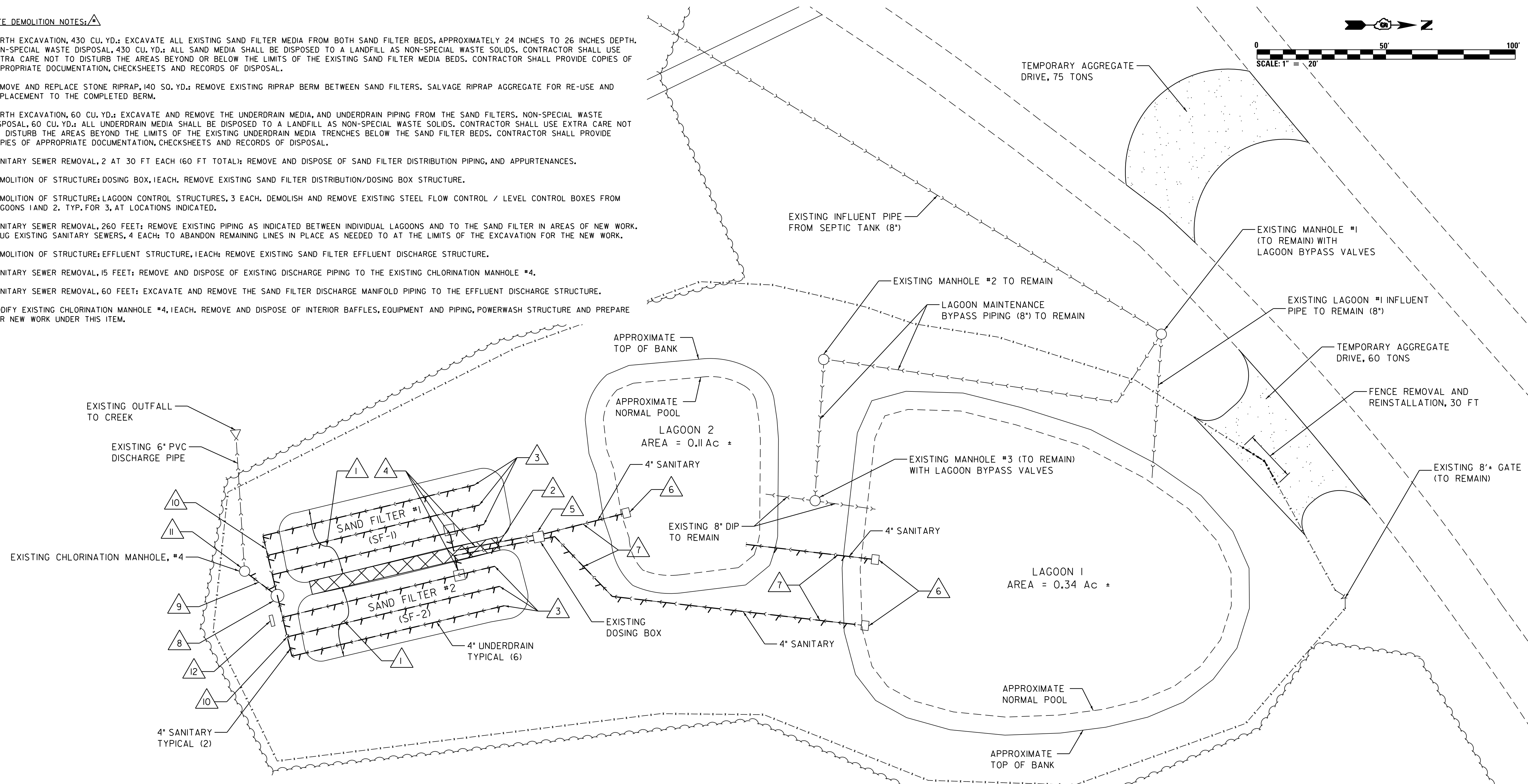
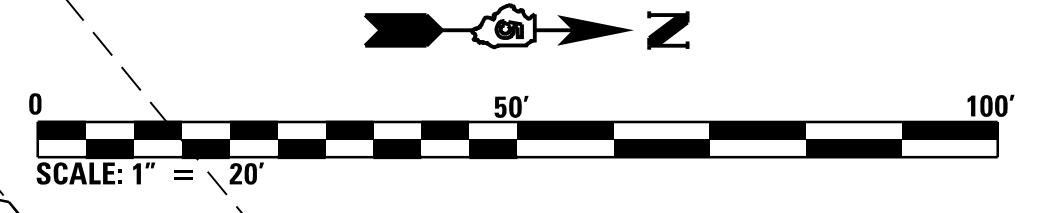
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	FUNKS GROVE RA IMP. 2014-	MC LEAN	17	7
				CONTRACT NO. 70A53
ILLINOIS FED. AID PROJECT				



**SITE DEMOLITION NOTES:**

1. EARTH EXCAVATION, 430 CU. YD.: EXCAVATE ALL EXISTING SAND FILTER MEDIA FROM BOTH SAND FILTER BEDS, APPROXIMATELY 24 INCHES TO 26 INCHES DEPTH. NON-SPECIAL WASTE DISPOSAL, 430 CU. YD.: ALL SAND MEDIA SHALL BE DISPOSED TO A LANDFILL AS NON-SPECIAL WASTE SOLIDS. CONTRACTOR SHALL USE EXTRA CARE NOT TO DISTURB THE AREAS BEYOND OR BELOW THE LIMITS OF THE EXISTING SAND FILTER MEDIA BEDS. CONTRACTOR SHALL PROVIDE COPIES OF APPROPRIATE DOCUMENTATION, CHECKSHEETS AND RECORDS OF DISPOSAL.
2. REMOVE AND REPLACE STONE RIPRAP, 140 SQ. YD.: REMOVE EXISTING RIPRAP BERM BETWEEN SAND FILTERS. SALVAGE RIPRAP AGGREGATE FOR RE-USE AND REPLACEMENT TO THE COMPLETED BERM.
3. EARTH EXCAVATION, 60 CU. YD.: EXCAVATE AND REMOVE THE UNDERDRAIN MEDIA, AND UNDERDRAIN PIPING FROM THE SAND FILTERS. NON-SPECIAL WASTE DISPOSAL, 60 CU. YD.: ALL UNDERDRAIN MEDIA SHALL BE DISPOSED TO A LANDFILL AS NON-SPECIAL WASTE SOLIDS. CONTRACTOR SHALL USE EXTRA CARE NOT TO DISTURB THE AREAS BEYOND THE LIMITS OF THE EXISTING UNDERDRAIN MEDIA TRENCHES BELOW THE SAND FILTER BEDS. CONTRACTOR SHALL PROVIDE COPIES OF APPROPRIATE DOCUMENTATION, CHECKSHEETS AND RECORDS OF DISPOSAL.
4. SANITARY SEWER REMOVAL, 2 AT 30 FT EACH (60 FT TOTAL): REMOVE AND DISPOSE OF SAND FILTER DISTRIBUTION PIPING, AND APPURTENANCES.
5. DEMOLITION OF STRUCTURE: DOSING BOX, 1 EACH. REMOVE EXISTING SAND FILTER DISTRIBUTION/DOSING BOX STRUCTURE.
6. DEMOLITION OF STRUCTURE: LAGOON CONTROL STRUCTURES, 3 EACH. DEMOLISH AND REMOVE EXISTING STEEL FLOW CONTROL / LEVEL CONTROL BOXES FROM LAGOONS 1 AND 2. TYP. FOR 3, AT LOCATIONS INDICATED.
7. SANITARY SEWER REMOVAL, 260 FEET: REMOVE EXISTING PIPING AS INDICATED BETWEEN INDIVIDUAL LAGOONS AND TO THE SAND FILTER IN AREAS OF NEW WORK. PLUG EXISTING SANITARY SEWERS, 4 EACH: TO ABANDON REMAINING LINES IN PLACE AS NEEDED TO AT THE LIMITS OF THE EXCAVATION FOR THE NEW WORK.
8. DEMOLITION OF STRUCTURE: EFFLUENT STRUCTURE, 1 EACH: REMOVE EXISTING SAND FILTER EFFLUENT DISCHARGE STRUCTURE.
9. SANITARY SEWER REMOVAL, 15 FEET: REMOVE AND DISPOSE OF EXISTING DISCHARGE PIPING TO THE EXISTING CHLORINATION MANHOLE #4.
10. SANITARY SEWER REMOVAL, 60 FEET: EXCAVATE AND REMOVE THE SAND FILTER DISCHARGE MANIFOLD PIPING TO THE EFFLUENT DISCHARGE STRUCTURE.
11. MODIFY EXISTING CHLORINATION MANHOLE #4, 1 EACH. REMOVE AND DISPOSE OF INTERIOR Baffles, EQUIPMENT AND PIPING, POWERWASH STRUCTURE AND PREPARE FOR NEW WORK UNDER THIS ITEM.



**LEGEND**

- PIPE TO REMOVE
- RIP RAP BERM TO REMOVE. RIP RAP TO BE STOCKPILED FOR RE-USE.
- TEMP. AGGREGATE ACCESS DRIVE
- SANITARY PIPE
- FLOW

**GENERAL SITE PREPARATION NOTES**

1. INSTALL TEMPORARY AGGREGATE, 410 TONS, FOR SITE ACCESS DRIVES. FENCE REMOVAL AND REINSTALLATION, 30 +/- FEET, TO REMOVE AND STORE EXISTING FENCE MATERIALS. INSTALL TEMPORARY FENCE, 30 +/- FEET, FOR CONSTRUCTION FENCE AND GATES.
2. THE EXISTING VERTICAL DATUM IS TEMPORARY BENCH MARK (TBM), FROM THE 1998 RENOVATION PROJECT. THE MARKER IS AN 66X99 CHISELED INTO THE TOP OF THE EXISTING SAND FILTER DOSING STRUCTURE AT REFERENCE GRADE 100.00. THE CONTRACTOR SHALL LOCATE A NEW TBM MONUMENT OUTSIDE OF THE DISTURBED AREA OF THIS PROJECT, AND RELATIVE TO THIS REFERENCE GRADE, PRIOR TO THE START OF ANY DEMOLITION OR EXCAVATION.
3. PRIOR TO ANY DEMOLITION, THE CONTRACTOR SHALL VERIFY ALL APPLICABLE EXISTING GRADES. A REPORT OF ALL NOTED GRADES AND THEIR LOCATIONS, AS WELL AS THE RELOCATED REFERENCE TBM GRADE AND LOCATION, SHALL BE SUBMITTED TO THE ENGINEER.
4. LAGOON DEWATERING, SLUDGE PUMPING AND DISPOSAL, 2 EACH: PUMP AND DISPOSE OF WASTEWATER AND SLUDGE CONTENTS OF LAGOON 1 AND LAGOON 2, AS WELL AS ANY STANDING WATER OR SLUDGE ON THE SURFACE OF THE SAND FILTERS. WASTEWATER SHALL BE DISPOSED TO A WASTEWATER TREATMENT FACILITY BY A LICENSED SEPTIC HAULER. CONTRACTOR SHALL COMPLETE AND PROVIDE DOCUMENTATION OF ALL REQUIRED PAPERWORK FOR DISPOSAL. THE LEVEL WITHIN THE LAGOONS SHALL BE REDUCED SAFELY BELOW THE REQUIRED ELEVATION TO COMPLETE THE DEMOLITION AND NEW WORK WITHIN THE LAGOONS. (2 EACH; TOTAL VOLUME ESTIMATED ~ 288,000 GALLONS)
5. SEPTIC TANKS TO BE PUMPED, 2 EACH: PUMP AND DISPOSE OF ALL SEPTIC TANK WASTEWATER AND SLUDGE CONTENTS TO A WASTEWATER TREATMENT FACILITY. WASTES SHALL BE TRANSPORTED BY A LICENSED SEPTIC HAULER. CONTRACTOR SHALL COMPLETE AND PROVIDE DOCUMENTATION OF ALL REQUIRED PAPERWORK FOR DISPOSAL. (2 EACH; TOTAL TANK VOLUMES: 22,000 GALLONS + 8,000 GALLONS = 30,000 GALLONS TOTAL)

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Default	PLOT DATE = 12/13/2013	DATE - 12-13-2013	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WASTEWATER TREATMENT SYSTEM  
EXISTING AND DEMOLITION PLAN**

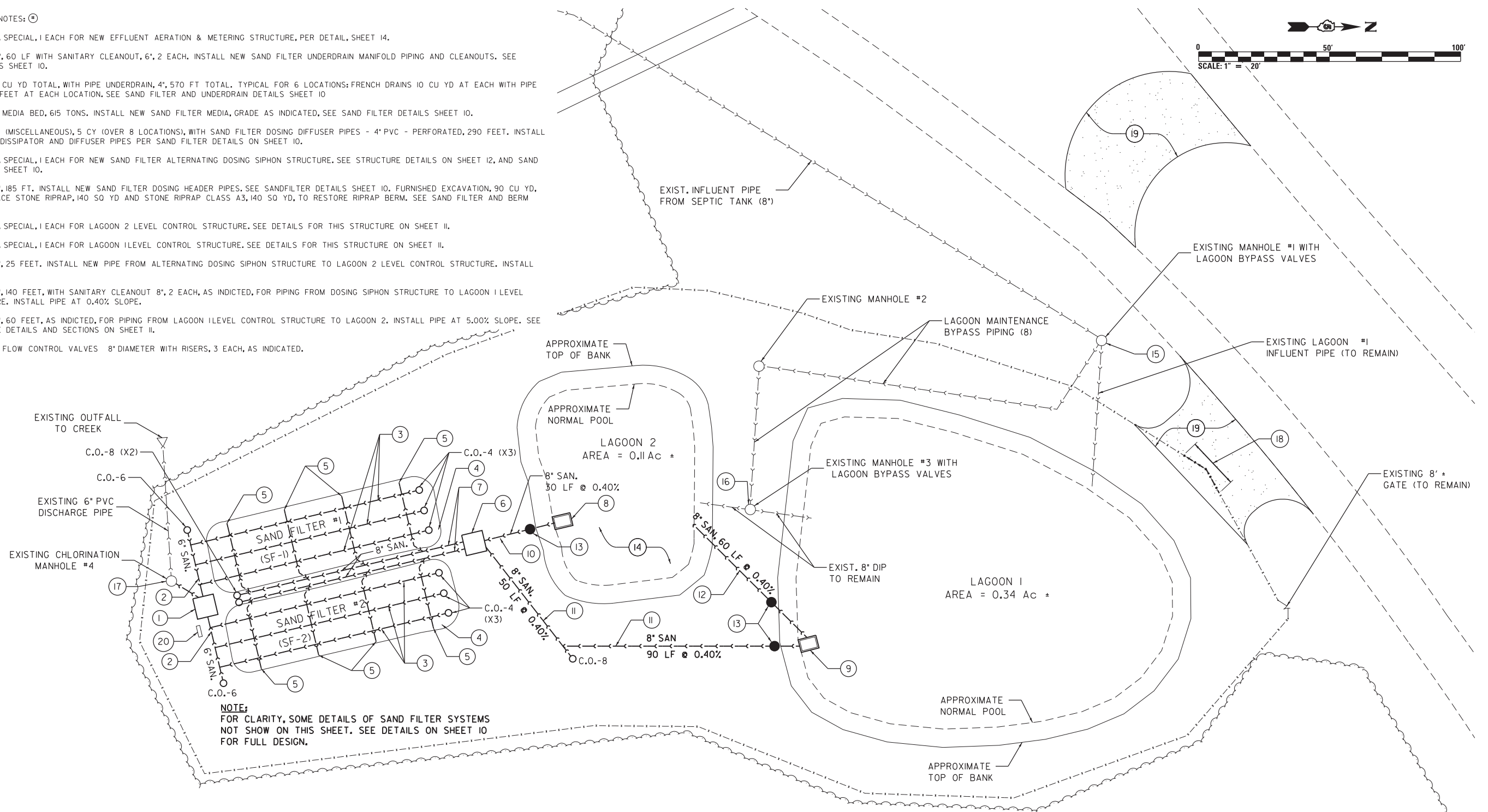
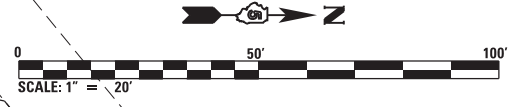
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	FUNKS GROVE RA IMP. 2014-	MC LEAN	17	8
				CONTRACT NO. 70A53
ILLINOIS FED. AID PROJECT				



SITE RENOVATION PLAN NOTES: (1)

- (1) SANITARY MANHOLE, SPECIAL, 1 EACH FOR NEW EFFLUENT AERATION & METERING STRUCTURE, PER DETAIL, SHEET 14.
- (2) SANITARY SEWER, 6", 60 LF WITH SANITARY CLEANOUT, 6", 2 EACH. INSTALL NEW SAND FILTER UNDERDRAIN MANIFOLD PIPING AND CLEANOUTS. SEE SANDFILTER DETAILS SHEET 10.
- (3) FRENCH DRAINS, 60 CU YD TOTAL, WITH PIPE UNDERDRAIN, 4", 570 FT TOTAL. TYPICAL FOR 6 LOCATIONS: FRENCH DRAINS 10 CU YD AT EACH WITH PIPE UNDERDRAIN, 4", 95 FEET AT EACH LOCATION. SEE SAND FILTER AND UNDERDRAIN DETAILS SHEET 10.
- (4) SAND FILTER SAND MEDIA BED, 615 TONS. INSTALL NEW SAND FILTER MEDIA, GRADE AS INDICATED, SEE SAND FILTER DETAILS SHEET 10.
- (5) CLASS SI CONCRETE (MISCELLANEOUS), 5 CY (OVER 8 LOCATIONS), WITH SAND FILTER DOSING DIFFUSER PIPES - 4" PVC - PERFORATED, 290 FEET. INSTALL CONCRETE ENERGY DISSIPATOR AND DIFFUSER PIPES PER SAND FILTER DETAILS ON SHEET 10.
- (6) SANITARY MANHOLE, SPECIAL, 1 EACH FOR NEW SAND FILTER ALTERNATING DOSING SIPHON STRUCTURE. SEE STRUCTURE DETAILS ON SHEET 12, AND SAND FILTER DETAILS ON SHEET 10.
- (7) SANITARY SEWER, 8", 185 FT. INSTALL NEW SAND FILTER DOSING HEADER PIPES. SEE SANDFILTER DETAILS SHEET 10. FURNISH EXCAVATION, 90 CU YD. REMOVE AND REPLACE STONE RIPRAP, 140 SQ YD AND STONE RIPRAP CLASS A3, 140 SQ YD, TO RESTORE RIPRAP BERM. SEE SAND FILTER AND BERM DETAILS, SHEET 10.
- (8) SANITARY MANHOLE, SPECIAL, 1 EACH FOR LAGOON 2 LEVEL CONTROL STRUCTURE. SEE DETAILS FOR THIS STRUCTURE ON SHEET 11.
- (9) SANITARY MANHOLE, SPECIAL, 1 EACH FOR LAGOON 1 LEVEL CONTROL STRUCTURE. SEE DETAILS FOR THIS STRUCTURE ON SHEET 11.
- (10) SANITARY SEWER, 8", 25 FEET. INSTALL NEW PIPE FROM ALTERNATING DOSING SIPHON STRUCTURE TO LAGOON 2 LEVEL CONTROL STRUCTURE. INSTALL AT 0.40% SLOPE.
- (11) SANITARY SEWER, 8", 140 FEET, WITH SANITARY CLEANOUT 8", 2 EACH, AS INDICATED, FOR PIPING FROM DOSING SIPHON STRUCTURE TO LAGOON 1 LEVEL CONTROL STRUCTURE. INSTALL PIPE AT 0.40% SLOPE.
- (12) SANITARY SEWER, 8", 60 FEET, AS INDICATED, FOR PIPING FROM LAGOON 1 LEVEL CONTROL STRUCTURE TO LAGOON 2. INSTALL PIPE AT 5.00% SLOPE. SEE LAGOON STRUCTURE DETAILS AND SECTIONS ON SHEET 11.
- (13) INSTALL BYPASS / FLOW CONTROL VALVES 8" DIAMETER WITH RISERS, 3 EACH, AS INDICATED.



**NOTE:**  
FOR CLARITY, SOME DETAILS OF SAND FILTER SYSTEMS NOT SHOW ON THIS SHEET. SEE DETAILS ON SHEET 10 FOR FULL DESIGN.

**LEGEND**

- C.O.-#                      SANITARY CLEAN OUT, # INCH
- VALVE WITH RISER BOX, SEE PLAN NOTES.
- SANITARY PIPE

SITE RENOVATION PLAN NOTES (CONT.): \*

- (14) INSTALL LAGOON 2 COVER SYSTEM COMPLETE, 1 LUMP SUM. SEE LAGOON COVER PLAN AND DETAILS ON SHEET 13. COORDINATE INSTALLATION WITH MANUFACTURER'S REQUIREMENTS.
- (15) REPLACE EXISTING 8" PLUG VALVES IN MANHOLES, 2 EACH. REPLACE 2 VALVES IN EXISTING MANHOLE #1.
- (16) REPLACE EXISTING 8" PLUG VALVES IN MANHOLES, 1 EACH. REPLACE VALVE IN EXISTING MANHOLE #3.
- (17) MODIFY EXISTING CHLORINATION MANHOLE, 1 EACH. SEE DETAILS ON SHEET 15.
- (18) FENCE REMOVAL AND REINSTALLATION, 30 FEET. AFTER REMOVAL, OPENING SHALL BE SECURED BY TEMPORARY FENCE, ALSO 30 FEET.
- (19) SEEDING, CLASS I, AND MULCH, METHOD I. APPLY TO ABOUT 0.15 ACRES TO AREAS WHERE TEMPORARY AGGREGATE (DRIVEWAYS) HAS BEEN REMOVED AT THE COMPLETION OF THE WORK.
- (20) FLOW METER, 1 EACH; AERATION SYSTEM, 1 EACH; AND ELECTRICAL SYSTEM UPGRADE, 1 LUMP SUM.



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		DATE - 12-13-2013	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WASTEWATER TREATMENT SYSTEM  
RENOVATION PLAN**

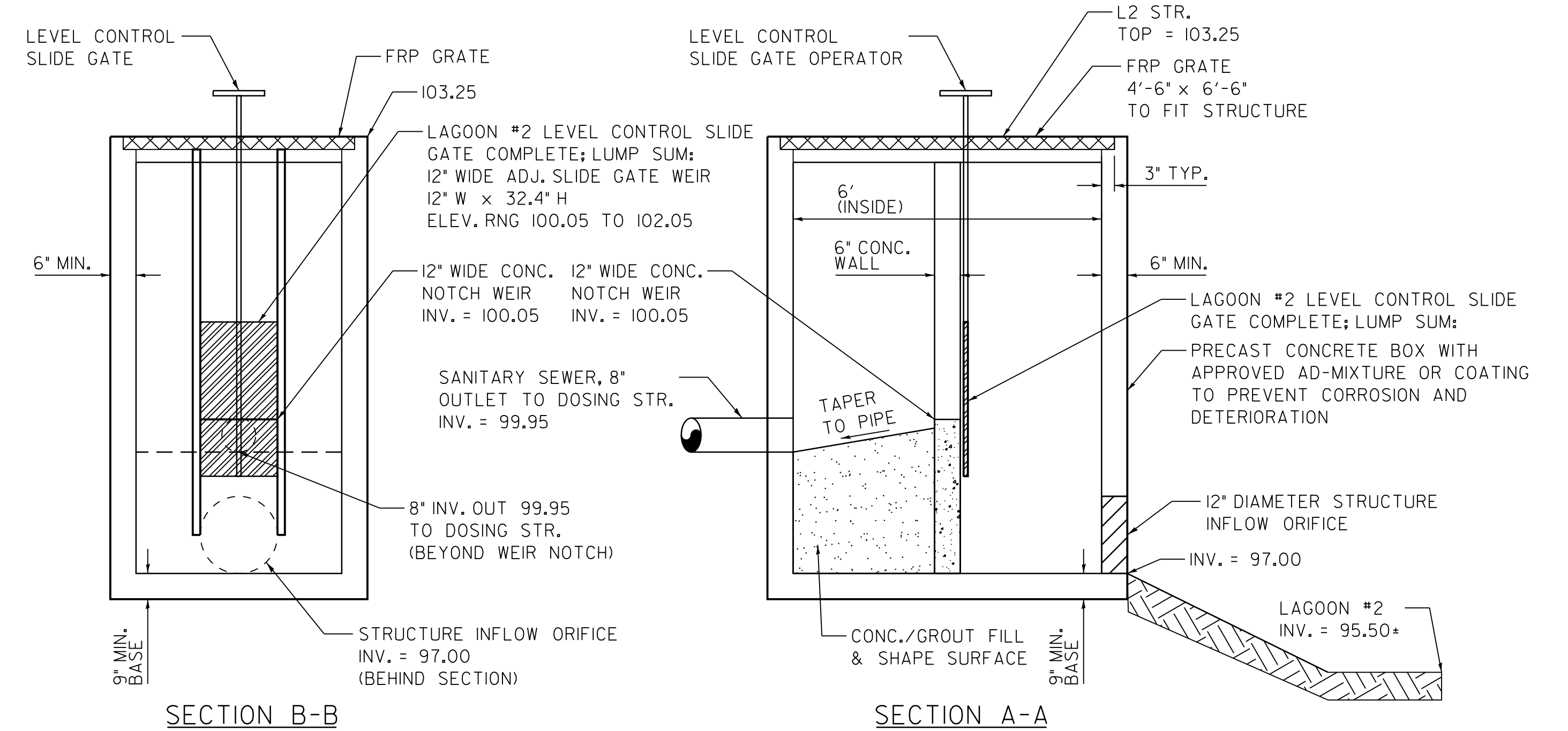
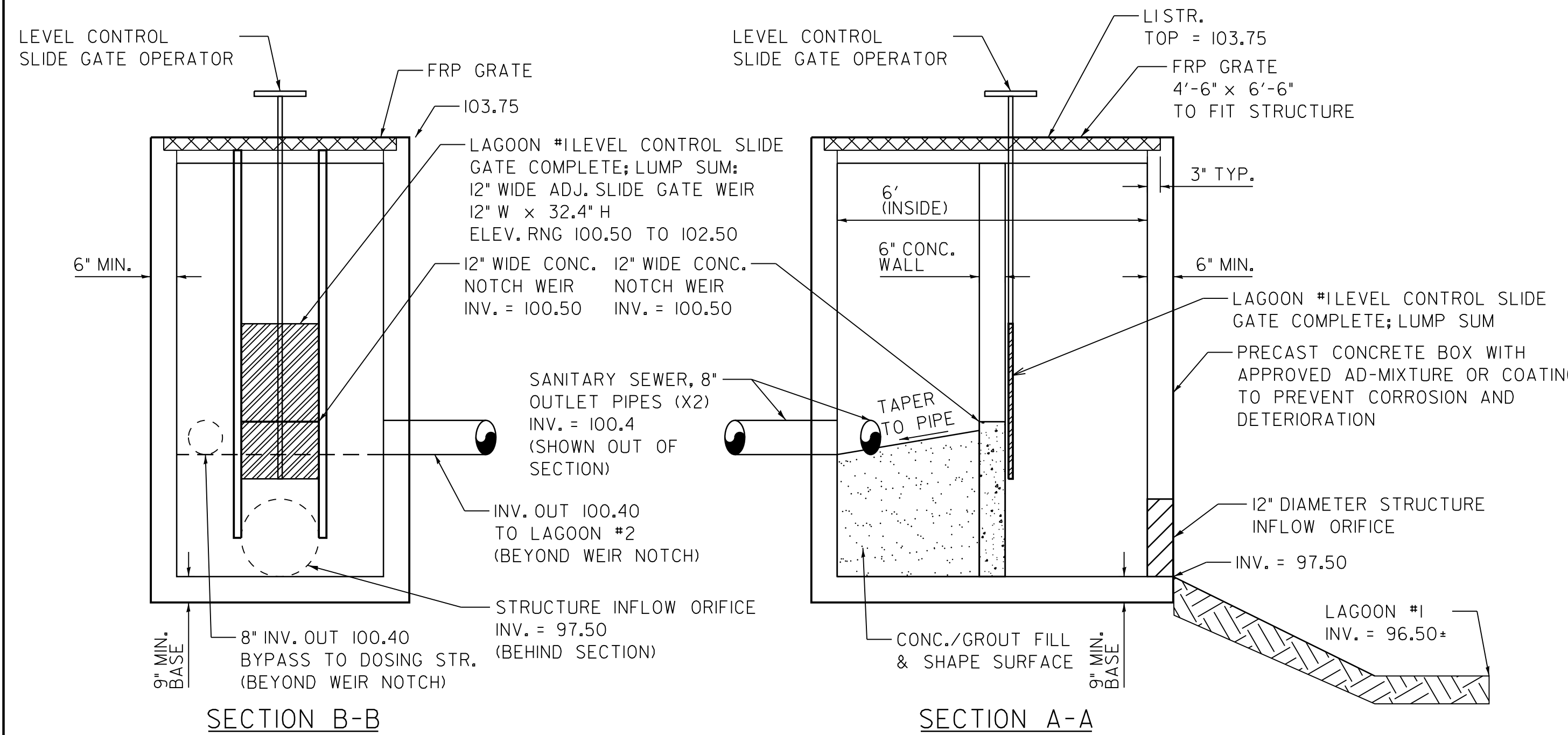
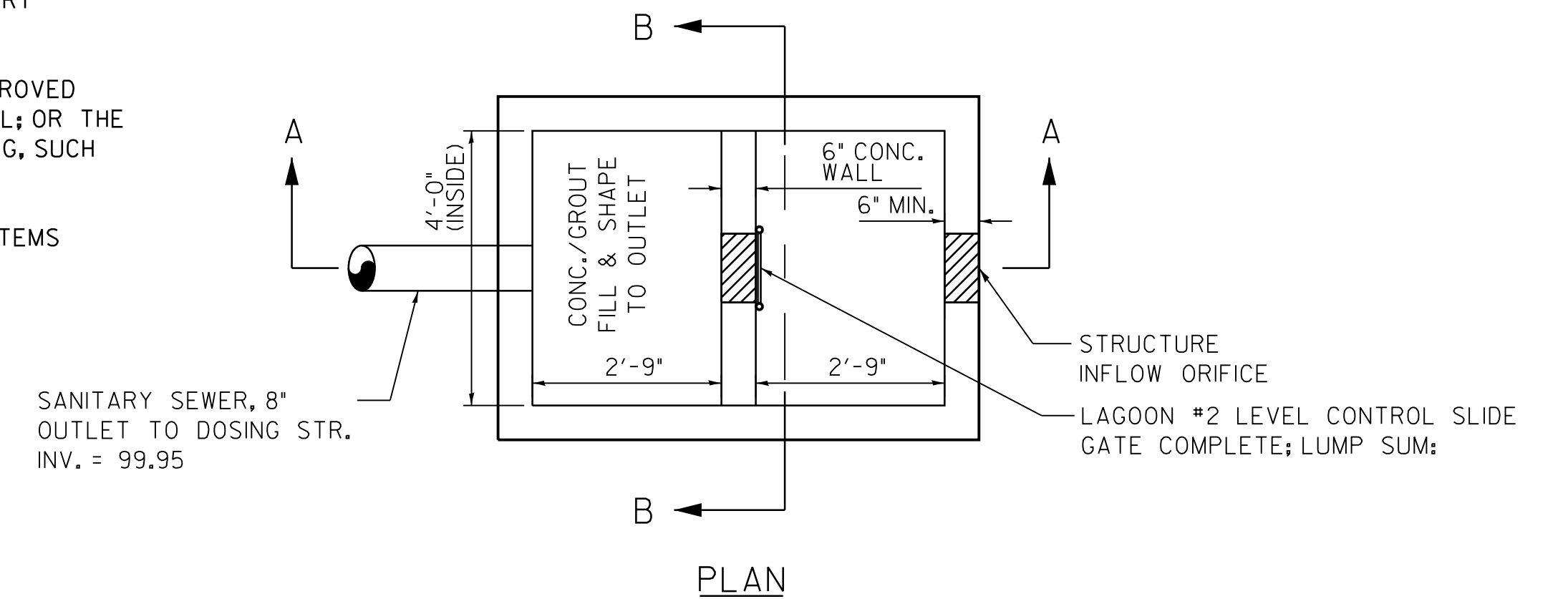
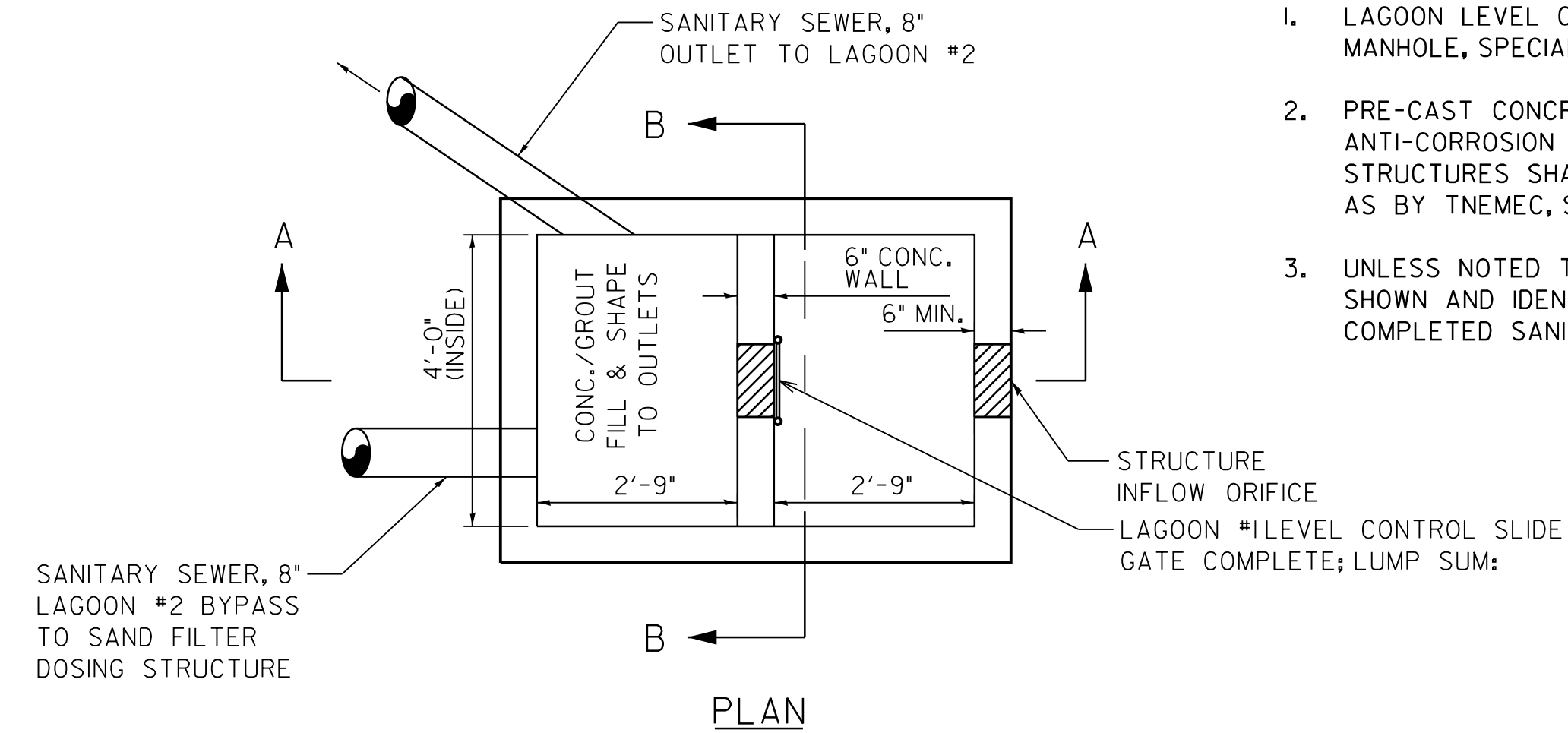
SCALE: 1" = 20'      SHEET 1 OF 1 SHEETS      STA.      TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	FUNKS GROVE RA IMP. 2014-	MC LEAN	17	9
CONTRACT NO. 70A53			ILLINOIS FED. AID PROJECT	



GENERAL NOTES FOR LAGOON LEVEL CONTROL STRUCTURE DETAILS:

- LAGOON LEVEL CONTROL STRUCTURES SHALL BE PAID AS SANITARY MANHOLE, SPECIAL, IEACH PER STRUCTURE.
- PRE-CAST CONCRETE STRUCTURES SHALL BE CAST WITH AN APPROVED ANTI-CORROSION ADMIXTURE, SUCH AS XYPEX OR APPROVED EQUAL; OR THE STRUCTURES SHALL BE COATED WITH AN ANTI-CORROSION COATING, SUCH AS BY TNEMEC, SPECTRASHIELD OR OTHER APPROVED EQUAL.
- UNLESS NOTED TO BE PAID UNDER A SEPARATE PAY ITEM, ALL ITEMS SHOWN AND IDENTIFIED SHALL BE INCLUDED IN THE COST OF THE COMPLETED SANITARY MANHOLE, SPECIAL.

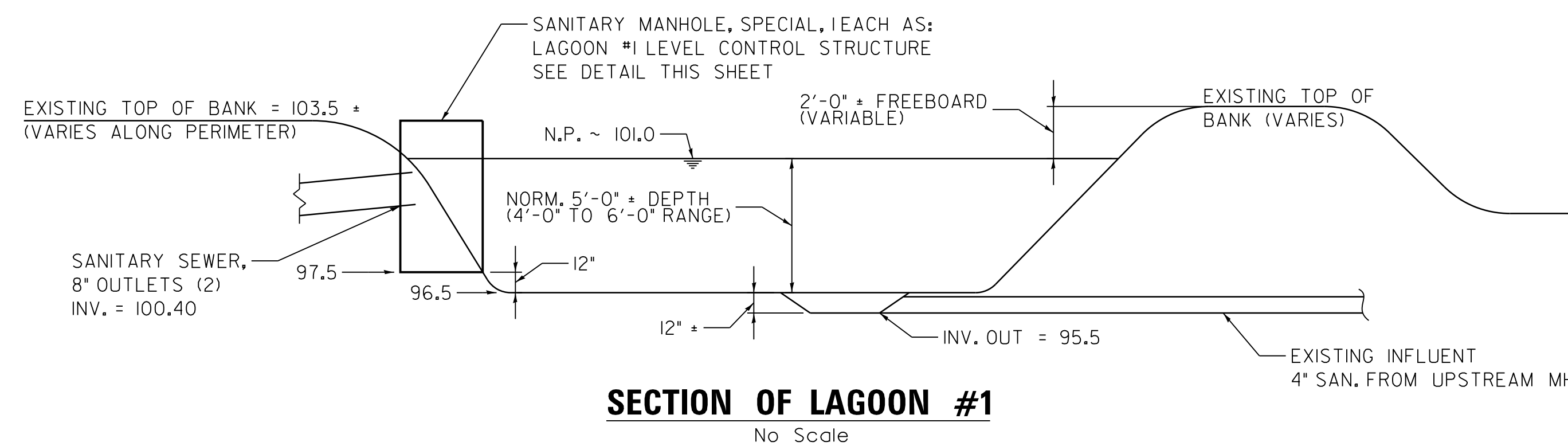


**LAGOON #1 LEVEL CONTROL STRUCTURE DETAIL**

No Scale  
PAY AS: SANITARY MANHOLE, SPECIAL

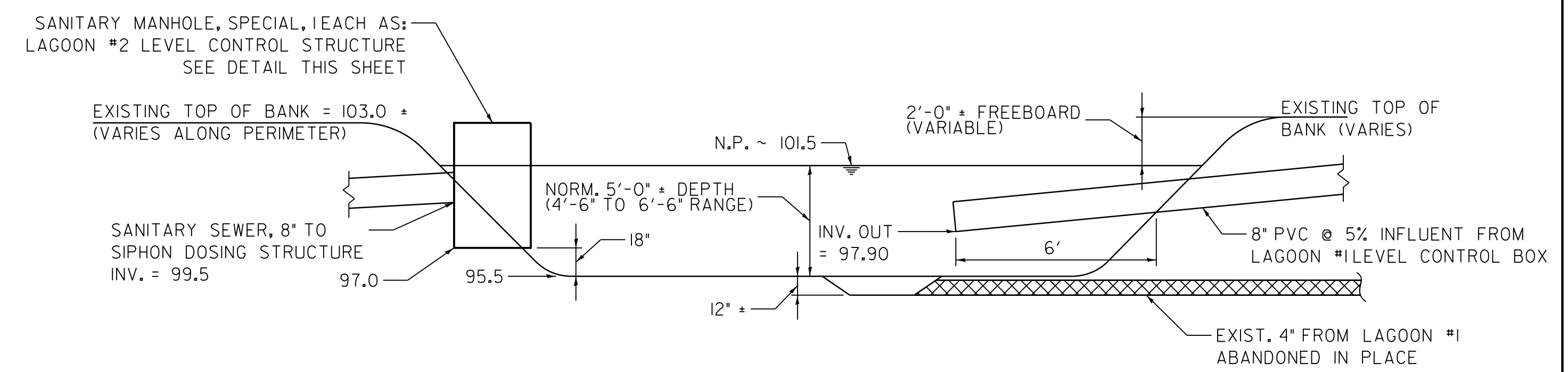
**LAGOON #2 LEVEL CONTROL STRUCTURE DETAIL**

No Scale  
PAY AS: SANITARY MANHOLE, SPECIAL



**SECTION OF LAGOON #1**

No Scale



**SECTION OF LAGOON #2**

No Scale

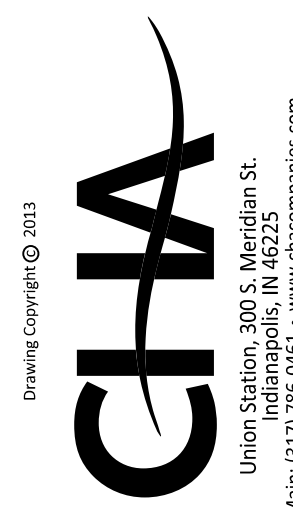
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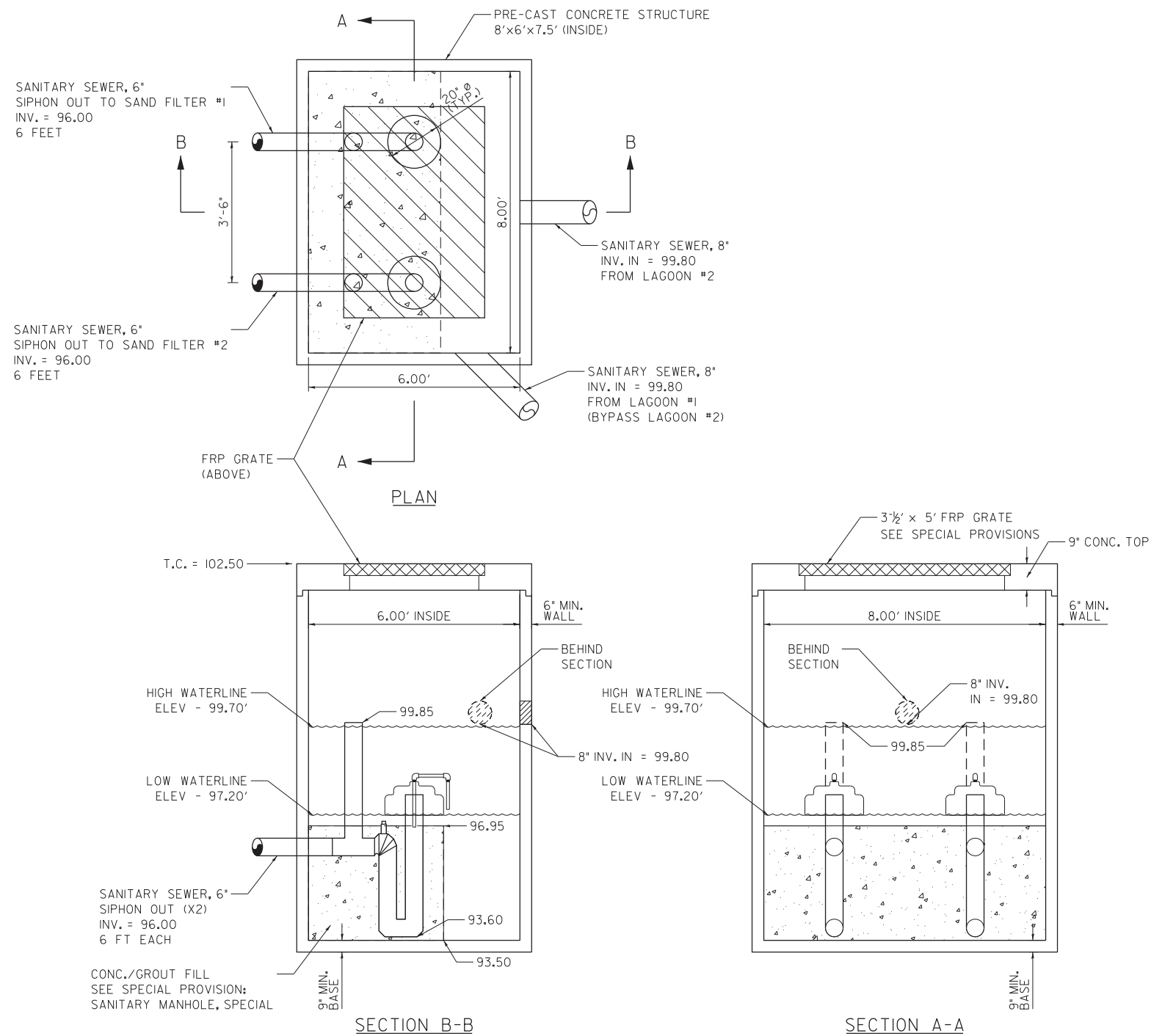
LAGOON AND SAND FILTER  
STRUCTURE DETAILS

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	FUNKS GROVE RA IMP. 2014-	McLEAN	17	11
CONTRACT NO. 70A53				
ILLINOIS FED. AID PROJECT				



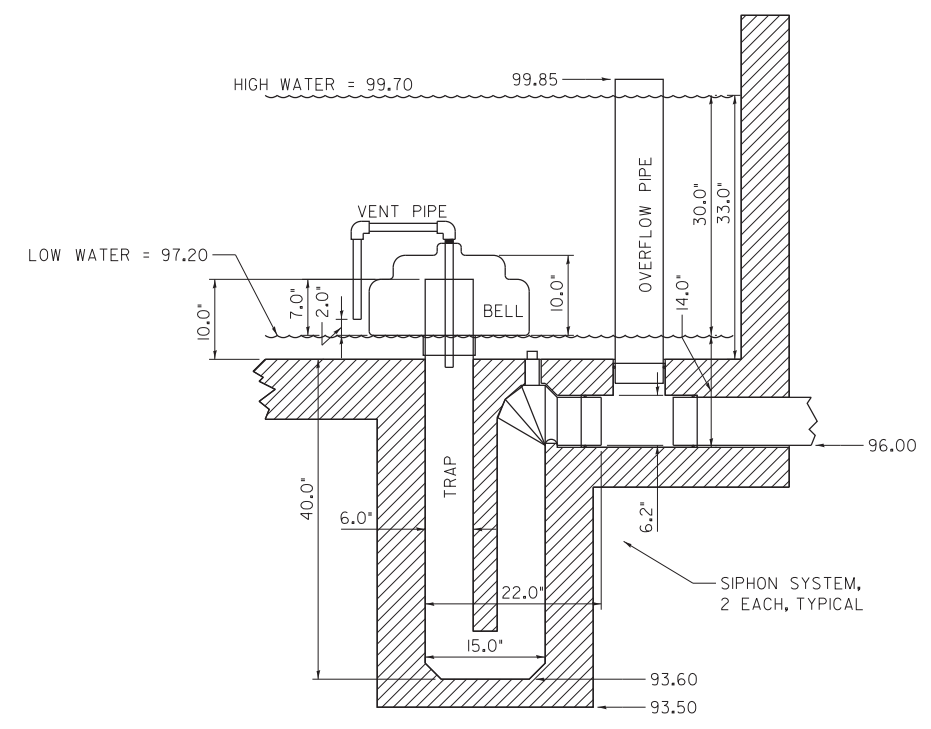
Drawing Copyright © 2013



**ALTERNATING DOSING SIPHON STRUCTURE**  
 No Scale

GENERAL NOTES FOR ALTERNATING DOSING SIPHON STRUCTURE AND SIPHON SYSTEM DETAILS:

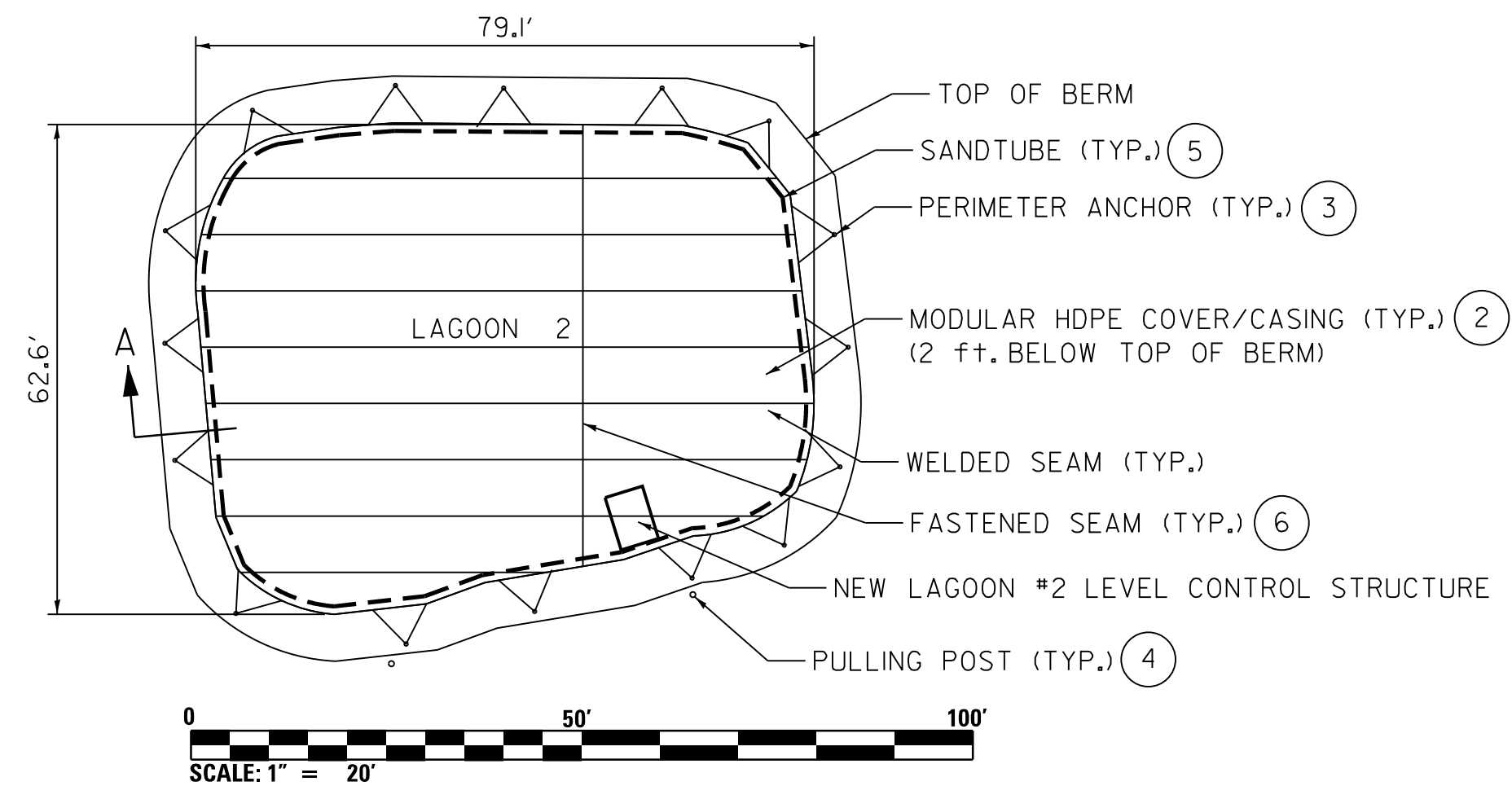
1. ALTERNATING DOSING SIPHON STRUCTURE SHALL BE PAID AS SANITARY MANHOLE, SPECIAL, 1 EACH.
2. DUAL SIPHON SYSTEMS SHALL BE PAID AS SIPHON SYSTEM, 2 EACH.
3. PRE-CAST CONCRETE STRUCTURE SHALL BE CAST WITH AN APPROVED ANTI-CORROSION ADMIXTURE, SUCH AS XYPEX OR APPROVED EQUAL; OR THE STRUCTURES SHALL BE COATED WITH AN ANTI-CORROSION COATING, SUCH AS BY TNEC, SPECTRASHIELD OR OTHER APPROVED EQUAL.
4. THE CAST IN PLACE CONCRETE / GROUT FILL SHALL BE PAID AS A PART OF THE SANITARY MANHOLE, SPECIAL. THE CONCRETE SHALL INCLUDE THE SAME ANTI-CORROSION ADMIXTURE OR COATING REQUIREMENTS AS THE PRECAST STRUCTURE, AS IDENTIFIED IN NOTE 3, ABOVE.
5. UNLESS NOTED TO BE PAID UNDER A SEPARATE PAY ITEM, ALL ITEMS SHOWN AND IDENTIFIED SHALL BE INCLUDED IN THE COST OF THE COMPLETED SANITARY MANHOLE, SPECIAL.



**SIPHON SYSTEM**  
 No Scale

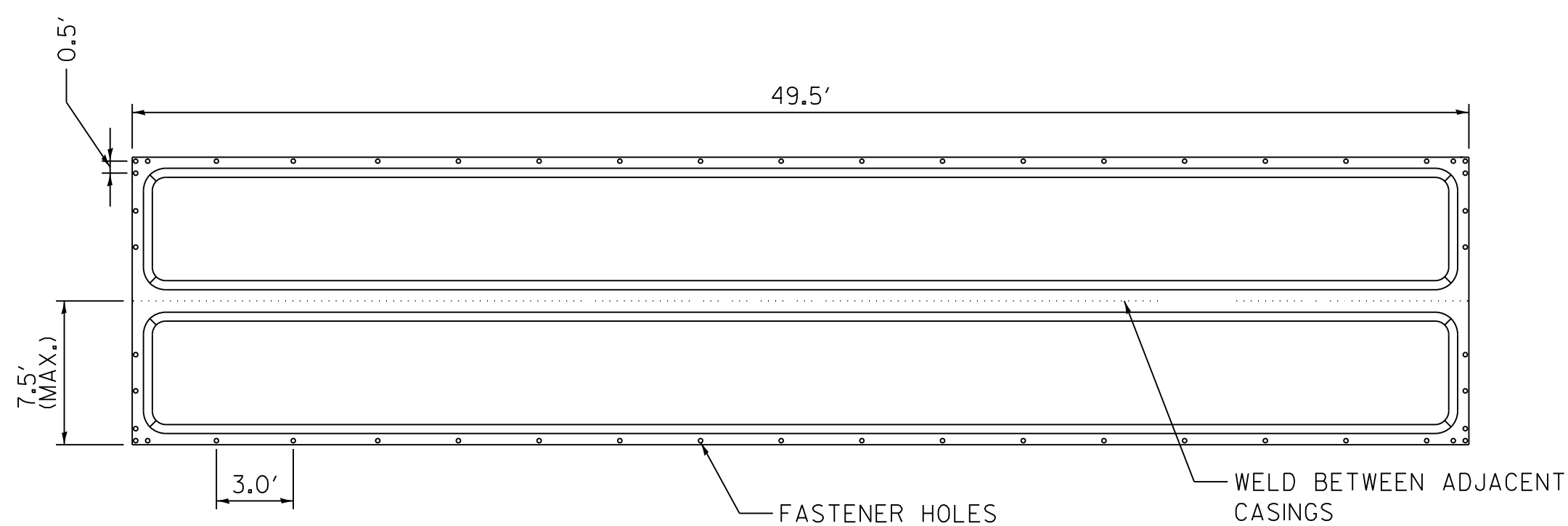
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	PLOT DATE = 1/15/2014	CHECKED - BEP	REVISED -										
		DATE - 12-13-2013	REVISED -										
								<b>CONTRACT NO. 70A53</b>		ILLINOIS FED. AID PROJECT			



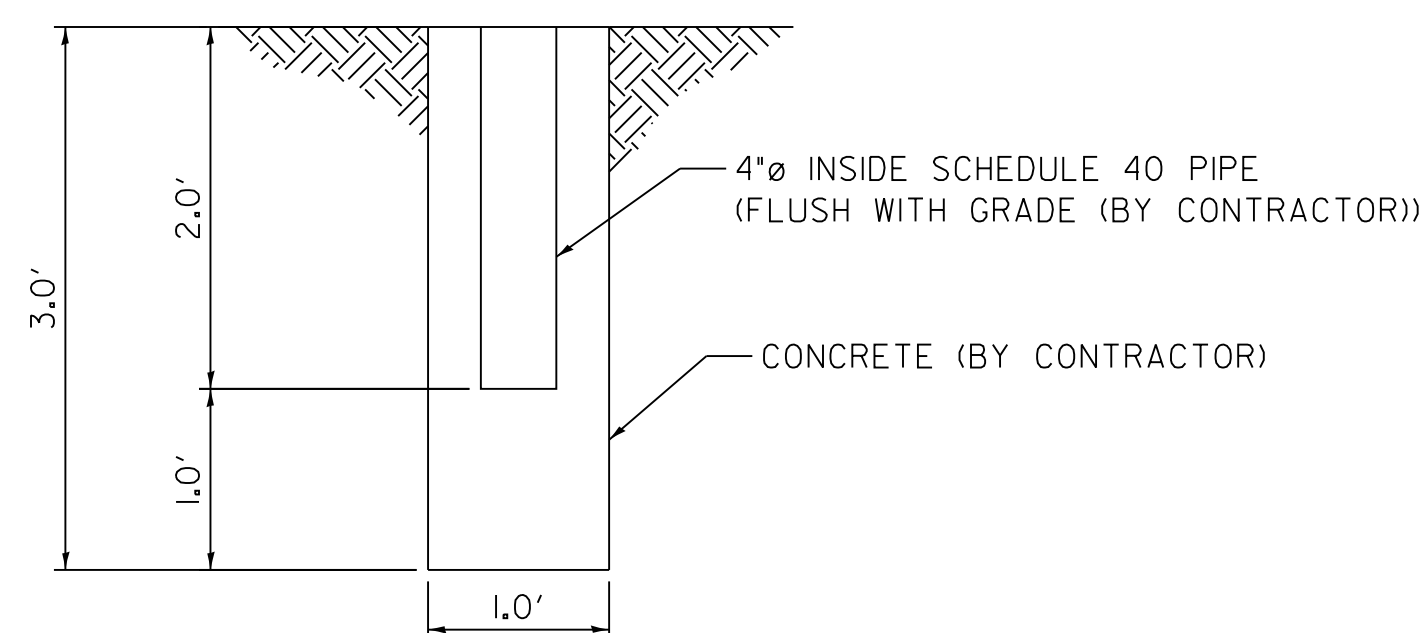


- NOTES:
- COVER: R-5 INSULATION, 40mil HDPE.
  - FINAL COVER DIMENSIONS AND COVER FABRICATION LAYOUT WILL BE VERIFIED BY SHOP DRAWING SUBMITTAL.
  - ALL PERSONNEL SHALL WEAR OSHA APPROVED PERSONAL FLOTATION DEVICE WHEN WORKING ON WASTEWATER PONDS.
  - SEE PERIMETER ANCHOR SECTION DETAIL AND DETAILS 1 THROUGH 6.
  - PAY AS INSTALL LAGOON #2 COVER SYSTEM, COMPLETE, ILUMP SUM.

**1A HDPE COVER SYSTEM PLAN**

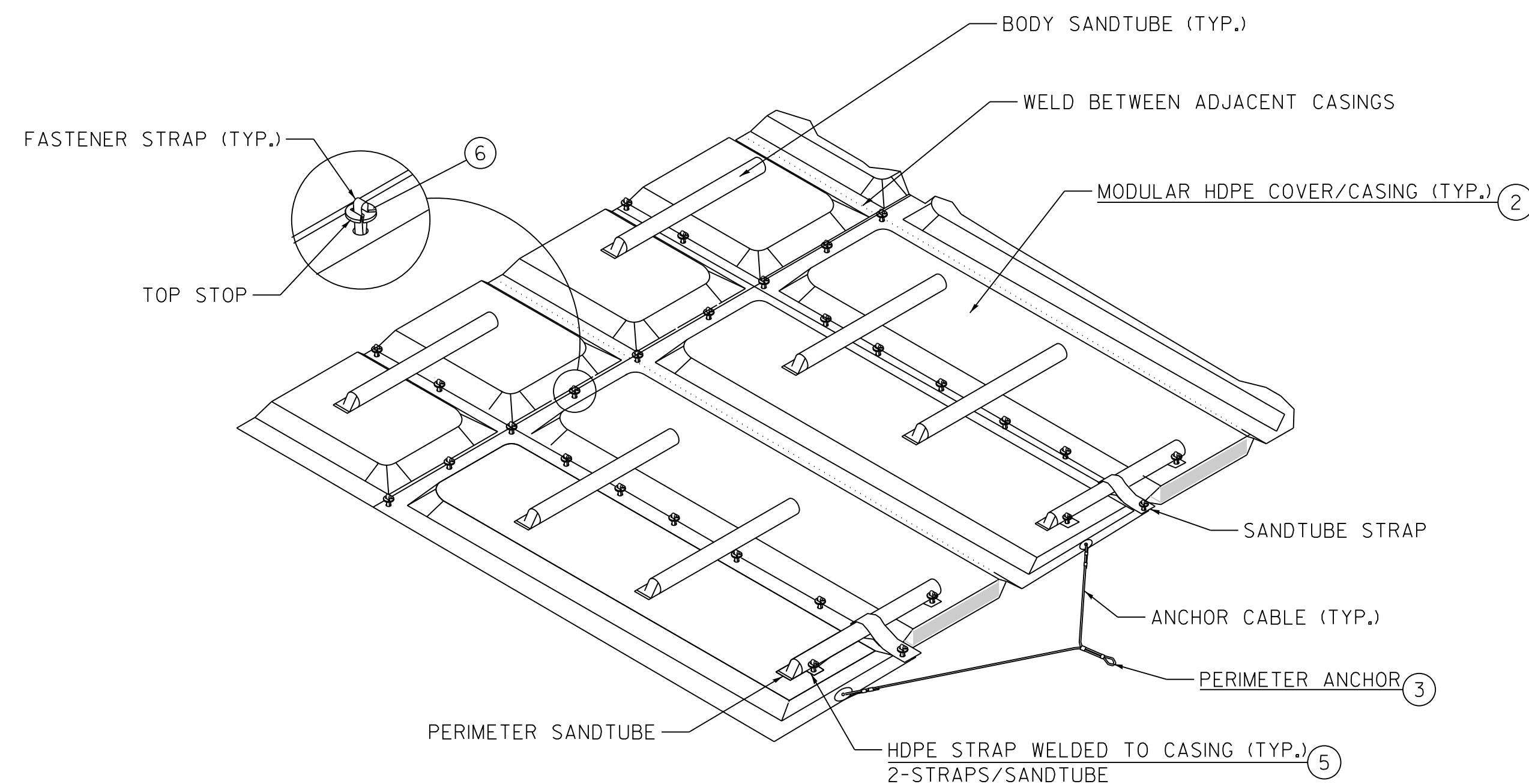


**2 MODULAR HDPE COVER/CASING**

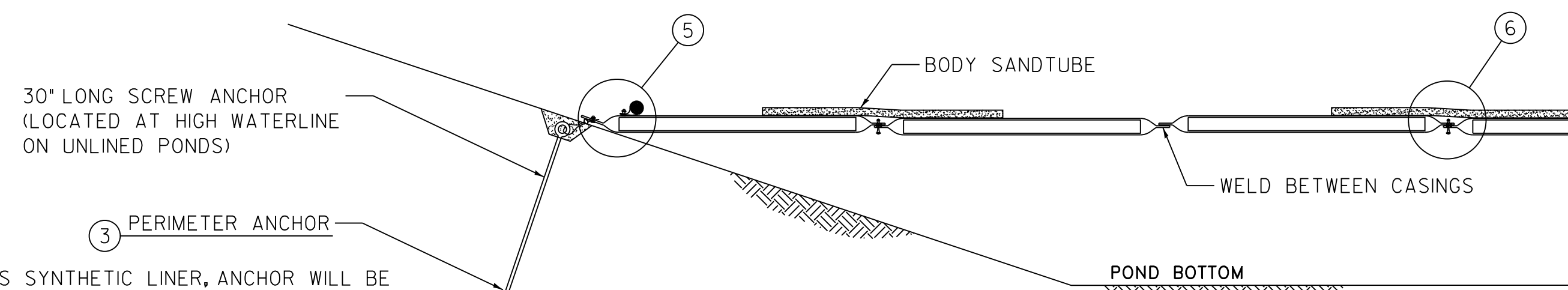


**4 PULLING POST ANCHOR SLEEVE DETAIL**

- NOTES:
- CAP BASE OF PIPE WITH PLASTIC SHEET TO PREVENT CONCRETE ENTERING PIPE. THE INSIDE OF THE PIPE SHOULD BE CLEAR OF MATERIAL OVER ITS FULL LENGTH.
  - LOCATIONS OF PULLING POSTS ARE DEPENDENT ON ASSEMBLY/INSTALL AREA.
  - PULLING POST LOCATIONS SHALL BE DETERMINED BY THE ENGINEER AND IN COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.



**1B MODULAR COVER ISOMETRIC VIEW**



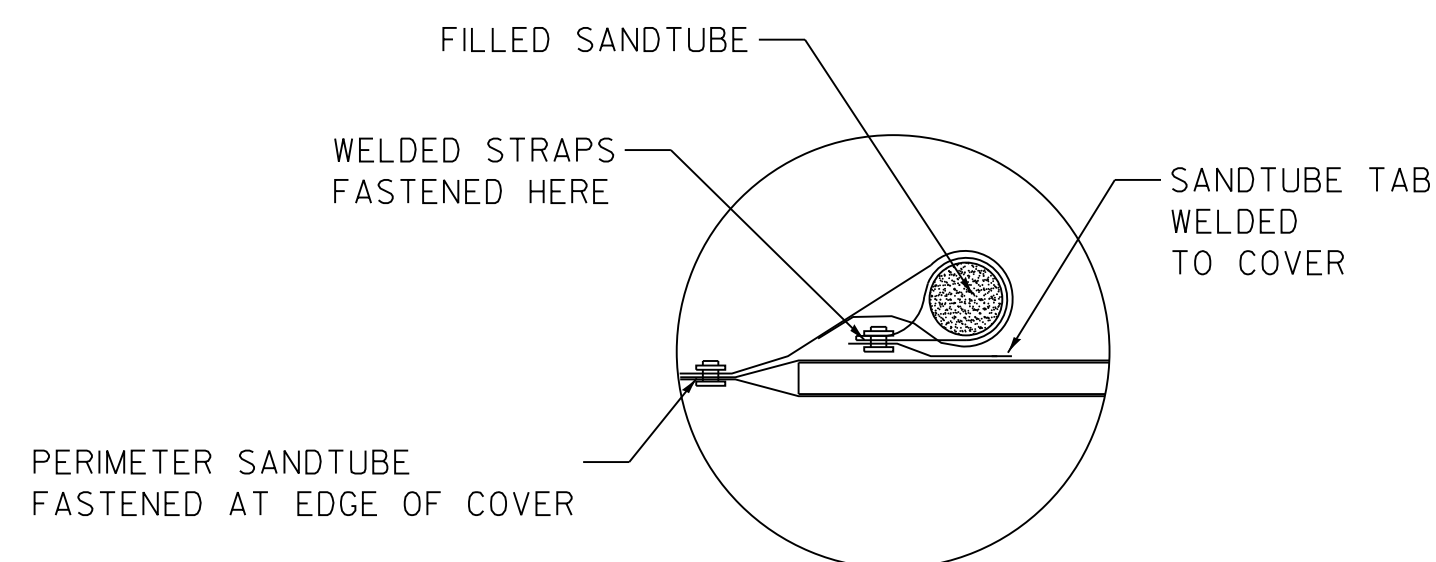
**A PERIMETER ANCHOR SECTION DETAIL**

- NOTES:
- IF POND HAS SYNTHETIC LINER, ANCHOR WILL BE LOCATED 1' BEYOND LINER ANCHOR TRENCH
  - IF POND IS UNLINED, ANCHOR WILL BE LOCATED AT THE HIGH WATER LINE.
  - COVER SHALL BE HDPE, MODULAR AS MANUFACTURED BY LEMTEC OR AN EQUAL SYSTEM APPROVED BY THE ENGINEER.
  - THE OPERATING LIMITS FOR LAGOON #2 ARE:

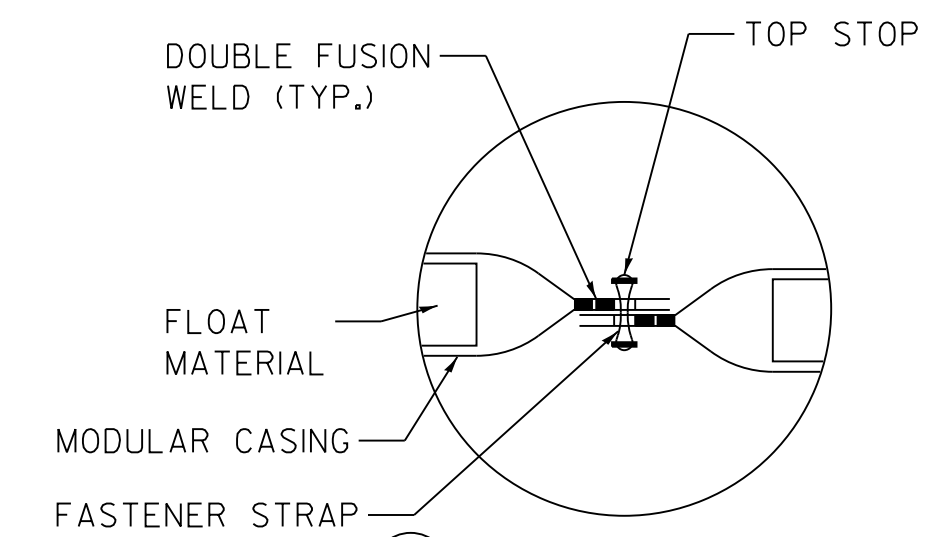
LOW LEVEL: 100.05

HIGH LEVEL: 102.05

- NOTES:
- ANCHOR CABLE IS PVC COATED 1/8" STAINLESS STEEL.
  - IF POND HAS AN EXPOSED SYNTHETIC LINER, ANCHOR CABLE & CABLE CLAMPS WILL BE ENCLOSED IN A EPDM SHEATH.



**5 PERIMETER SANDTUBE DETAIL**



**6 FASTENER DETAIL**

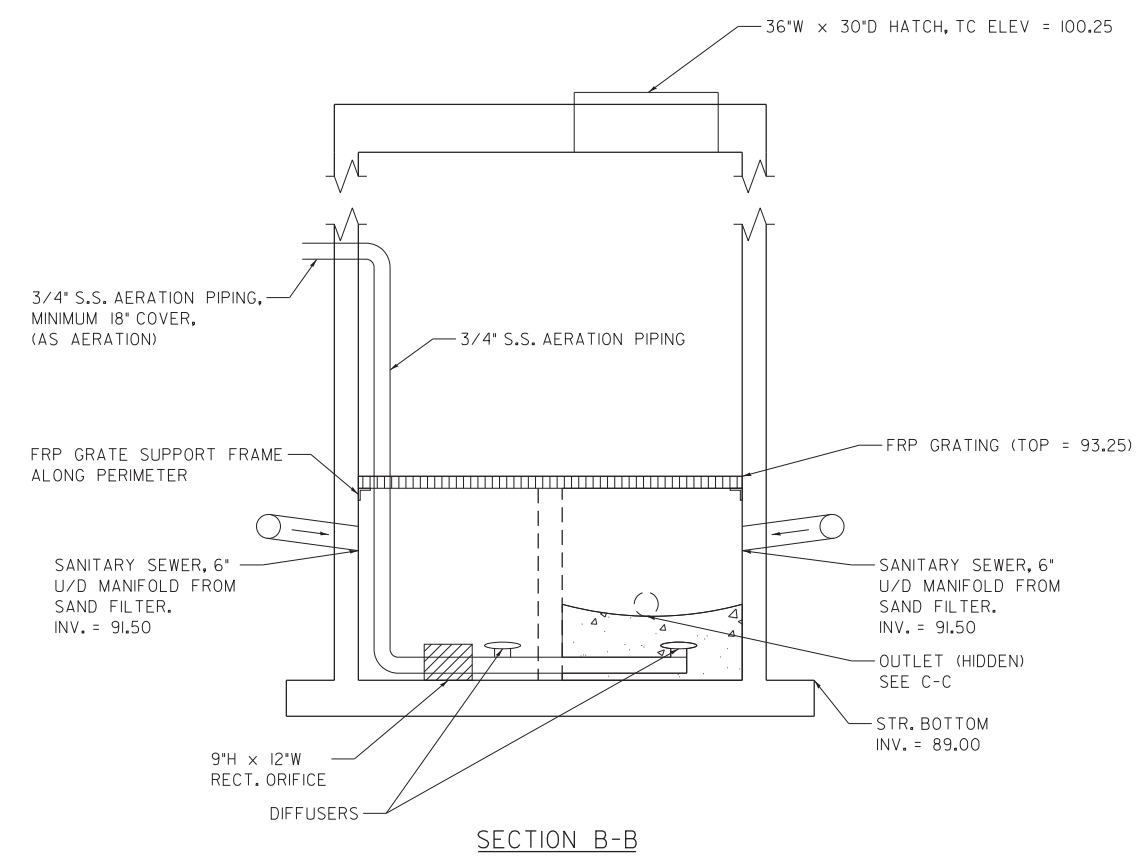
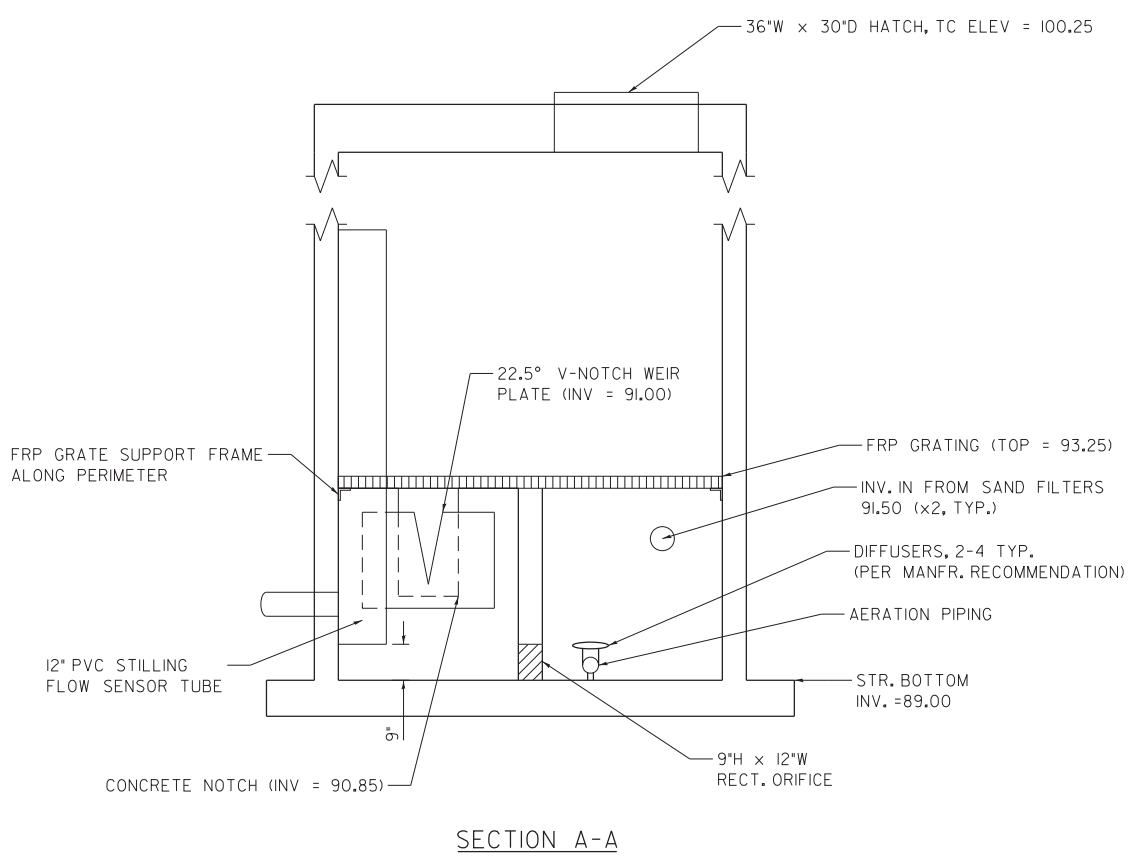
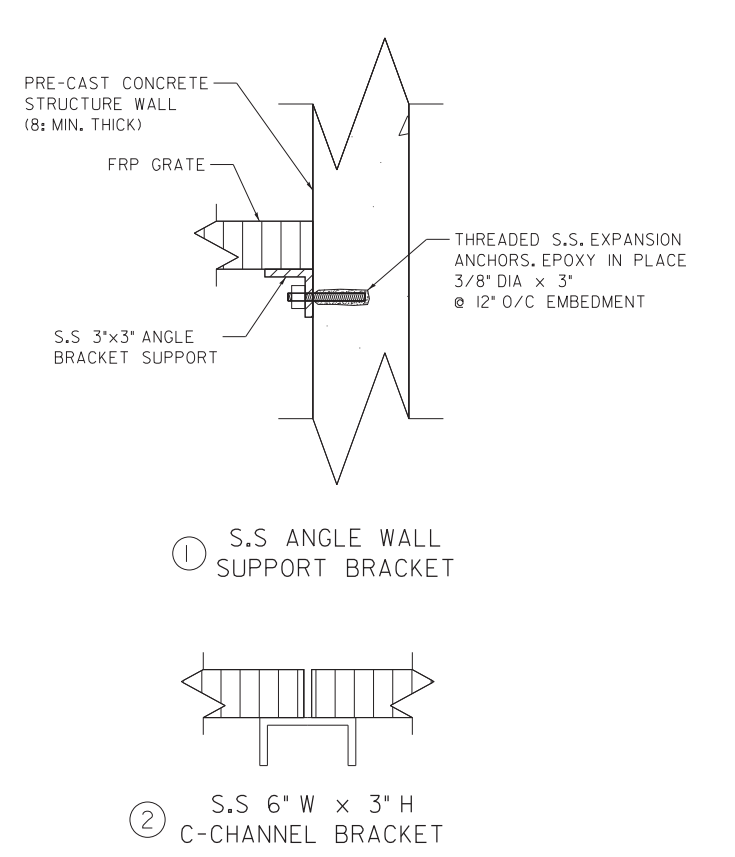
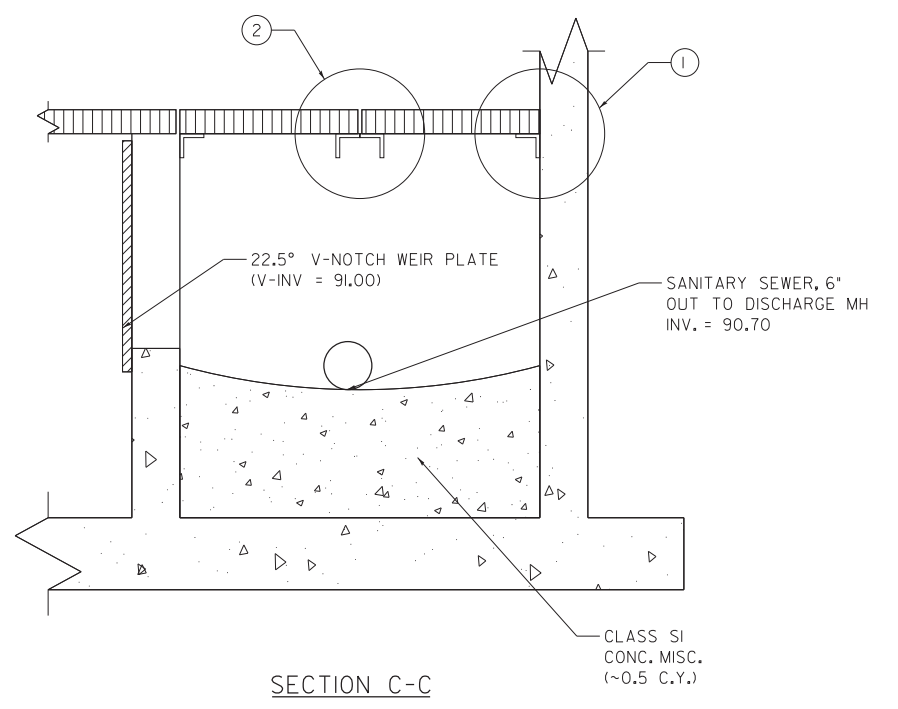
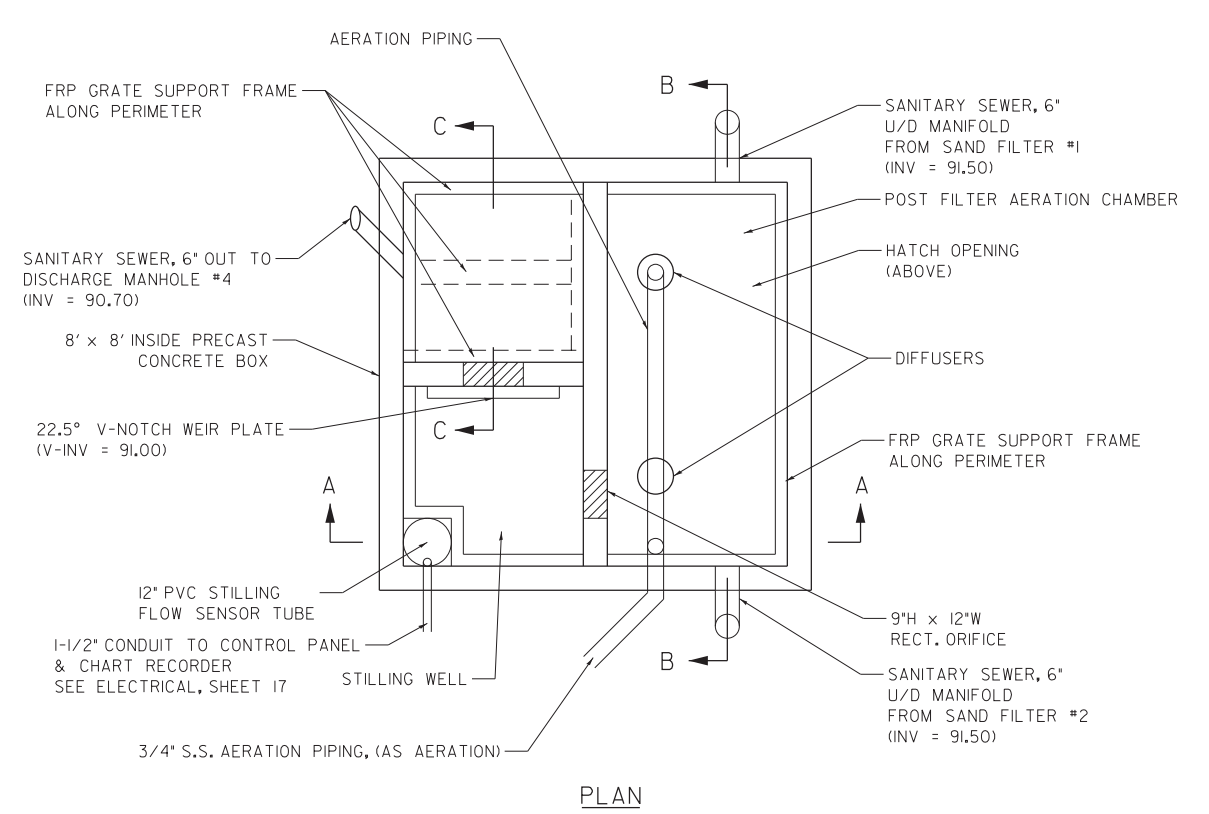
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LAGOON 2  
HDPE COVER SYSTEM DETAILS

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	FUNKS GROVE RA IMP. 2014-	MC LEAN	17	13
				CONTRACT NO. 70A53
ILLINOIS FED. AID PROJECT				



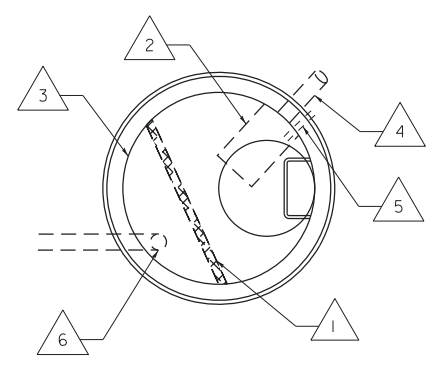
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		DATE - 12-13-2013	REVISED -

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**DEPARTMENT OF TRANSPORTATION**

**EFFLUENT, AERATION & METERING STRUCTURE DETAILS**

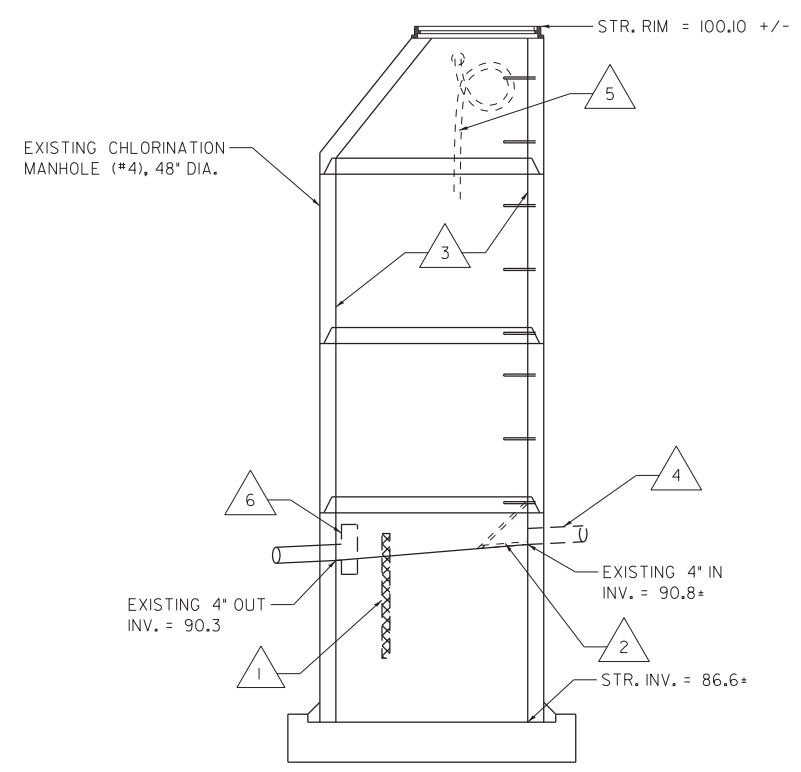
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	FUNKS GROVE RA IMP. 2014-	McLEAN	17	14
CONTRACT NO. 70A53			ILLINOIS FED. AID PROJECT	



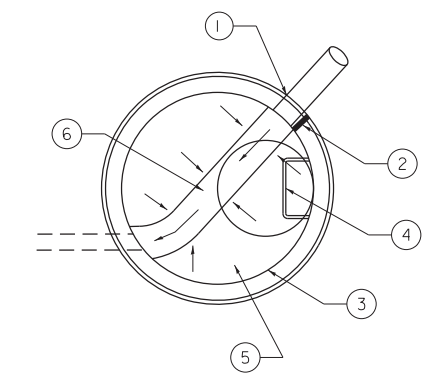
PLAN

- 1 REMOVE EXISTING BAFFLE & SEAL/GROUT WALL PENETRATIONS.
- 2 REMOVE EXISTING REMNANTS OF ABANDONED TABLET CHLORINATOR.
- 3 POWER WASH INTERIOR AND REMOVE ALL SEDIMENT AND DEBRIS.
- 4 REMOVE EXISTING INLET PIPE.
- 5 REMOVE EXISTING AERATION HOSE, PIPING AND EQUIPMENT.
- 6 REMOVE TEE/CLEANOUT FITTING.



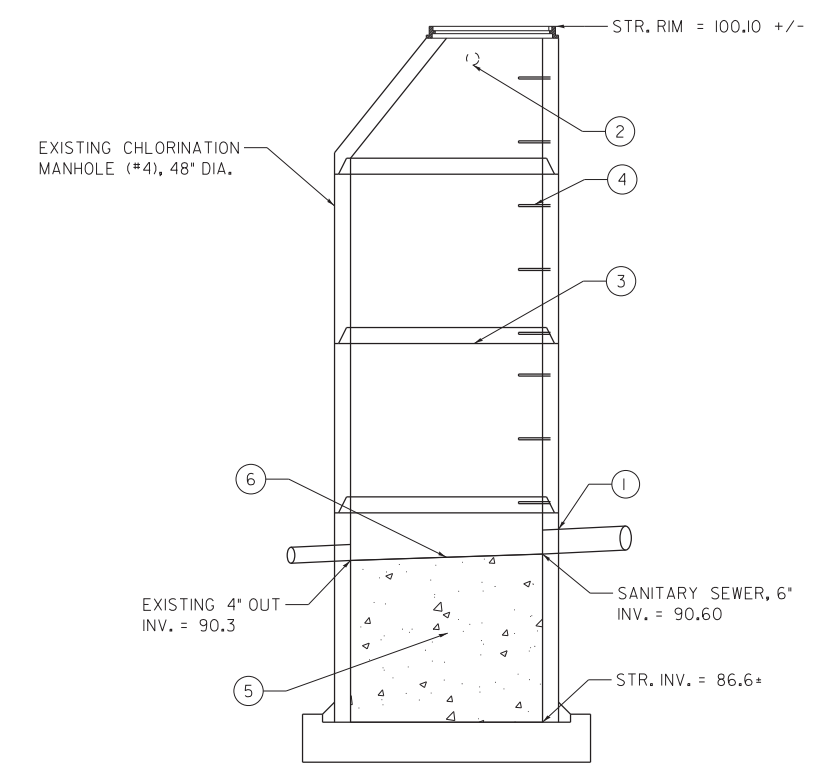
SECTION

**EXISTING CHLORINATION MANHOLE  
POWER WASHING AND DEMOLITION DETAIL**



PLAN

- 1 CORE-DRILL/EXPAND INLET FOR NEW SANITARY SEWER, 6".
- 2 GROUT AND SEAL EXISTING PENETRATIONS NO LONGER IN USE.
- 3 SEAL EXISTING MANHOLE SECTION JOINTS.
- 4 REPLACE ANY DAMAGED/LOOSE MANHOLE STEPS PER S.S. SECTION 104.
- 5 CLASS S1 CONCRETE (MISCELLANEOUS), ~ 2 CU. YD.
- 6 CREATE CONCRETE FLOW CHANNEL TO OUTLET WITH BENCH WALLS.



SECTION

**EXISTING CHLORINATION MANHOLE  
MODIFICATION DETAIL**



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		DATE - 12-13-2013	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>EXISTING CHLORINATION MANHOLE MODIFICATION DETAILS</b>			
SCALE: NTS	SHEET 1 OF 1 SHEETS	STA.	TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	FUNKS GROVE RA IMP. 2014-	MC LEAN	17	15
				CONTRACT NO. 70A53
ILLINOIS FED. AID PROJECT				



### PLAN SYMBOLS

	CONDUIT CONCEALED IN FINISHED AREAS, EXPOSED IN UNFINISHED AREAS.		MOTOR STARTER SWITCH.
	CONDUIT CONCEALED IN OR UNDER FLOOR SLAB.		MAGNETIC MOTOR STARTER, STARTER SIZE AS INDICATED.
	CONDUIT TURNING UP.		COMBINATION MAGNETIC STARTER AND DISCONNECT SWITCH, STARTER SIZE AND FUSE RATING AS INDICATED.
	CONDUIT TURNING DOWN.		ON/OFF PUSHBUTTON STATION.
	DUPLEX CONVENIENCE RECEPTACLE, 20A 125V.		MOTOR *3*-INDICATES HORSEPOWER.
	SPECIAL RECEPTACLE - TYPICAL NOTATION: I-INDICATES EXAMPLE *I* = __A, ___/___V, __ POLE, __ WIRE, __NEMA ___*2* = __A, ___/___V, __ POLE, __ WIRE, __NEMA ___*3* = __A, ___/___V, __ POLE, __ WIRE, __NEMA		LIGHTING OR POWER PANEL, SURFACE.
	JUNCTION BOX. *AxBxC* INDICATES DIMENSIONS OF JUNCTION BOX IN EITHER INCHES OR CENTIMETERS.		DISTRIBUTION PANEL.
	SINGLE POLE SWITCH.		DRY TYPE TRANSFORMER, REFER TO TRANSFORMER SCHEDULE, *T45*-INDICATES TRANSFORMER TYPE FLOOR MOUNTED, UNLESS OTHERWISE INDICATED.
	DISCONNECT SWITCH, UNFUSED TYPE, SIZE AS INDICATED ON DRAWINGS. *xxA* INDICATES AMPERAGE.		TRANSFORMER-PAD MOUNT.
	DISCONNECT SWITCH, FUSED TYPE, SIZE AS INDICATED ON DRAWINGS. *xxAF* INDICATES FRAME SIZE. *yyAT* INDICATES TRIP SIZE.		CURRENT TRANSFORMER CABINET.
	MAGNETIC CONTACTOR, SIZE AS INDICATED ON DRAWINGS.		METER AND SOCKET.
	ADJUSTABLE SPEED DRIVE.		

### ELECTRICAL ABBREVIATIONS

A	AMPERE	NTS	NOT TO SCALE
AFF	ABOVE FINISHED FLOOR	P	POLE
CU	COPPER	ø, PH	PHASE - ELECTRICAL
DIA	DIAMETER	RGS	RIGID GALVANIZED STEEL CONDUIT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TX	TRANSFORMER
GND	GROUND	TYP	TYPICAL
HOA	HAND-OFF-AUTO	UG	UNDERGROUND
HP	HORSEPOWER	U.O.N.	UNLESS OTHERWISE NOTED
KVA	KILOVOLT-AMPERES	V	VOLT
KW	KILOWATT	W	WIRE
LMFC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT	WP	WEATHERPROOF
NEC	NATIONAL ELECTRIC CODE		

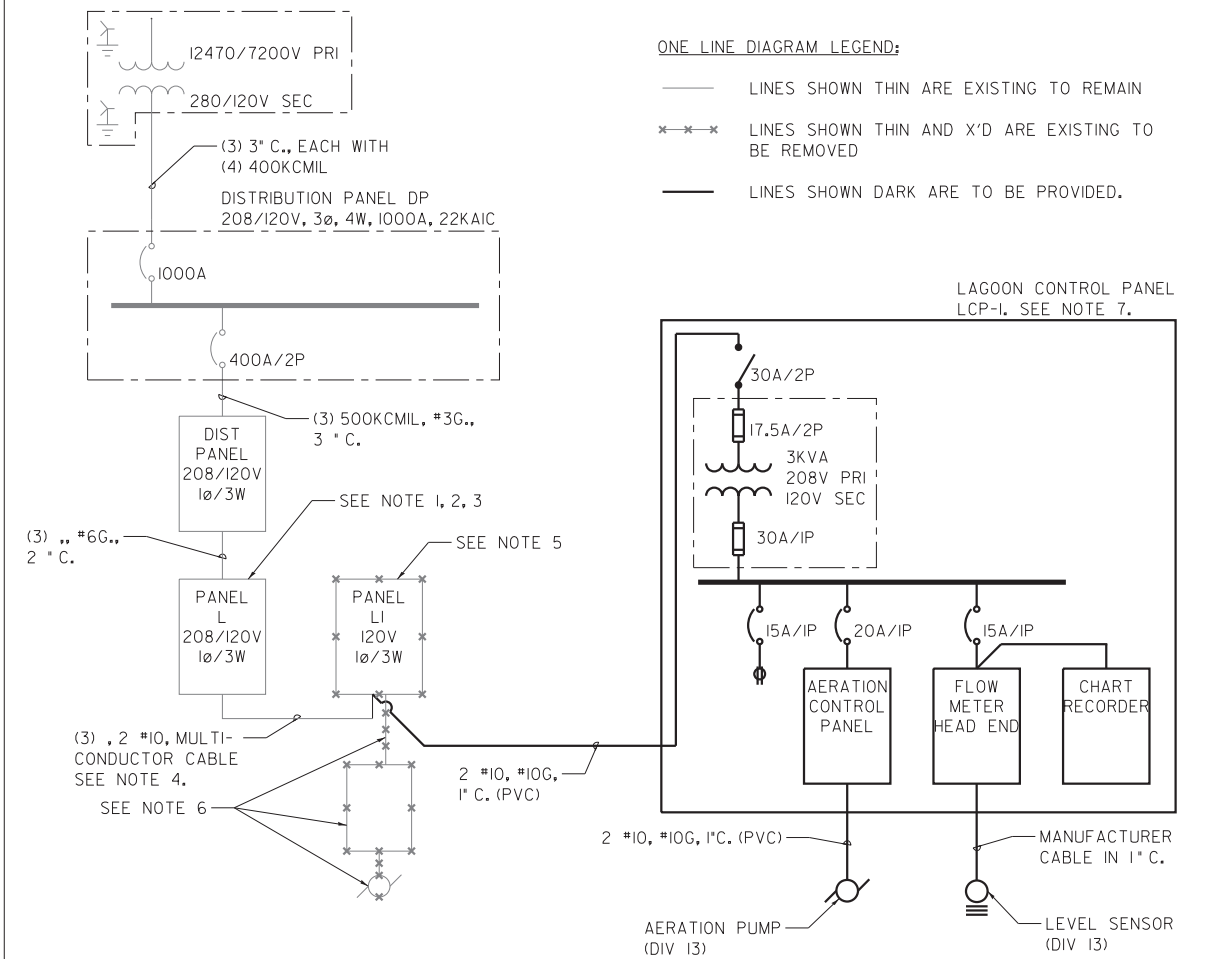
### GENERAL NOTES

- DRAWINGS ARE DIAGRAMMATIC. ALL DIMENSIONS ARE APPROXIMATE. ALL LOCATIONS SHALL BE FIELD VERIFIED.
- ALL WORK SHALL BE IN CONFORMANCE WITH THE AUTHORITY HAVING JURISDICTION REQUIREMENTS, INCLUDING CITY OF BLOOMINGTON CHAPTER 15 AND ELECTRICAL CODES. CODE BASED ON (NEC 2011).

### ONE LINE DIAGRAM SYMBOLS

	CIRCUIT BREAKER (OPEN). *xxAF* INDICATES FRAME SIZE. *yyAT* INDICATES TRIP SIZE.
	CONTACT, NORMALLY OPEN (NO). (*TC*-WITH TIMED CLOSING).
	CONTACT, NORMALLY CLOSED (NC). (*TO*-WITH TIMED OPENING).
	DISCONNECT SWITCH UNFUSED. *zza* INDICATES SWITCH RATING
	DISCONNECT SWITCH AIR BREAK WITH FUSE. *zza* INDICATES FUSE RATING. *yyA* INDICATES SWITCH RATING.
	FUSE. *zza* INDICATES FUSE RATING.
	GROUNDING CONNECTION-SYSTEM AND OR EQUIPMENT.
	MOTOR AND LABEL. *3* DENOTES HORSEPOWER.
	PANELBOARD. *NH1* INDICATES DESIGNATION. *xxKAIC* INDICATES SHORT CIRCUIT RATING.
	MAGNETIC STARTER WITH NEMA SIZE INDICATED. DIGITAL-TYPE OVERLOAD RELAYS.
	TRANSFORMER, DRY TYPE, UNLESS OTHERWISE INDICATED. RATINGS AS INDICATED.
	CURRENT TRANSFORMER. *3*-INDICATES QUANTITY, *400-5A* INDICATES RATIO.
	3-PHASE, 4-WIRE WYE CONNECTION (GROUNDED NEUTRAL).
	CUSTOMER METER, DIGITAL TYPE, FOR OWNER INFORMATION.
	PILOT LIGHT. LETTER INDICATES COLOR. R=RED, B=BLUE, A=AMBER, W=WHITE, G=GREEN.
	HAND-OFF-AUTO CONTROL SWITCH.

### ONE LINE DIAGRAM



**ONE LINE DIAGRAM LEGEND:**

- LINES SHOWN THIN ARE EXISTING TO REMAIN
- X—X— LINES SHOWN THIN AND X'D ARE EXISTING TO BE REMOVED
- LINES SHOWN DARK ARE TO BE PROVIDED.

### NOTES

- REMOVE (1) 20A 1P CIRCUIT BREAKER FROM POLE 37. PROVIDE (1) 20A 2P CIRCUIT BREAKER ON POLES 37, 39. CIRCUIT BREAKER SHAL BE SQUARE D, FOR APPLICATION IN THIS EXISTING SQUARE D NOOB PANELBOARD.
- DISCONNECT PHASE CONDUCTOR FROM POLE 37, AND ASSOCIATED NEUTRAL CONDUCTOR FROM NEUTRAL BUS. UPON INSTALLATION OF NEW 2 POLE CIRCUIT BREAKER, RECONNECT THE DISCONNECTED CONDUCTORS. PROVIDE CORRECT (RED, BLACK) COLOR CODED TAPE IDENTIFICATION FOR PHASE A, B.
- MAKE CORRECTION TO PANELBOARD SCHEDULE. IDENTIFY POLE 37, 39 AS "LAGOON AERATION CONTROL PANEL".
- EXISTING MULTI-CONDUCTOR CABLE TO REMAIN. APPROXIMATELY 800 FEET IN LENGTH.
- PANEL LI TO BE REMOVED. PANEL LI IS AN EXISTING 1PHASE, 3W, 100A 12 POLE MAIN LUG ONLY PANEL, OPERATING AT 120V. PROTECT INCOMING CONDUIT AND CONDUCTORS.
- REMOVE BRANCH CIRCUIT WIRING FROM PANEL LI TO EXISTING AERATOR CONTROL PANEL, AERATOR CONTROL PANEL, BRANCH CIRCUIT WIRING TO PUMP MOTOR, AND PUMP MOTOR.
- LAGOON CONTROL PANEL, LCP-1, NEMA 4X STAINLESS STEEL, EXTERIOR OPERABLE FLANGE MOUNT DISCONNECT SWITCH, CONTROL TRANSFORMER WITH PRIMARY / SECONDARY FUSING, POWER DISTRIBUTION BLOCKS, DIN-RAIL MOUNTED CIRCUIT BREAKERS, AND DIVISION 13 (AERATION AND FLOW METERING)EQUIPMENT AS SHOWN, LOCATE IN SAME LOCATION AS EXISTING PANEL LI.

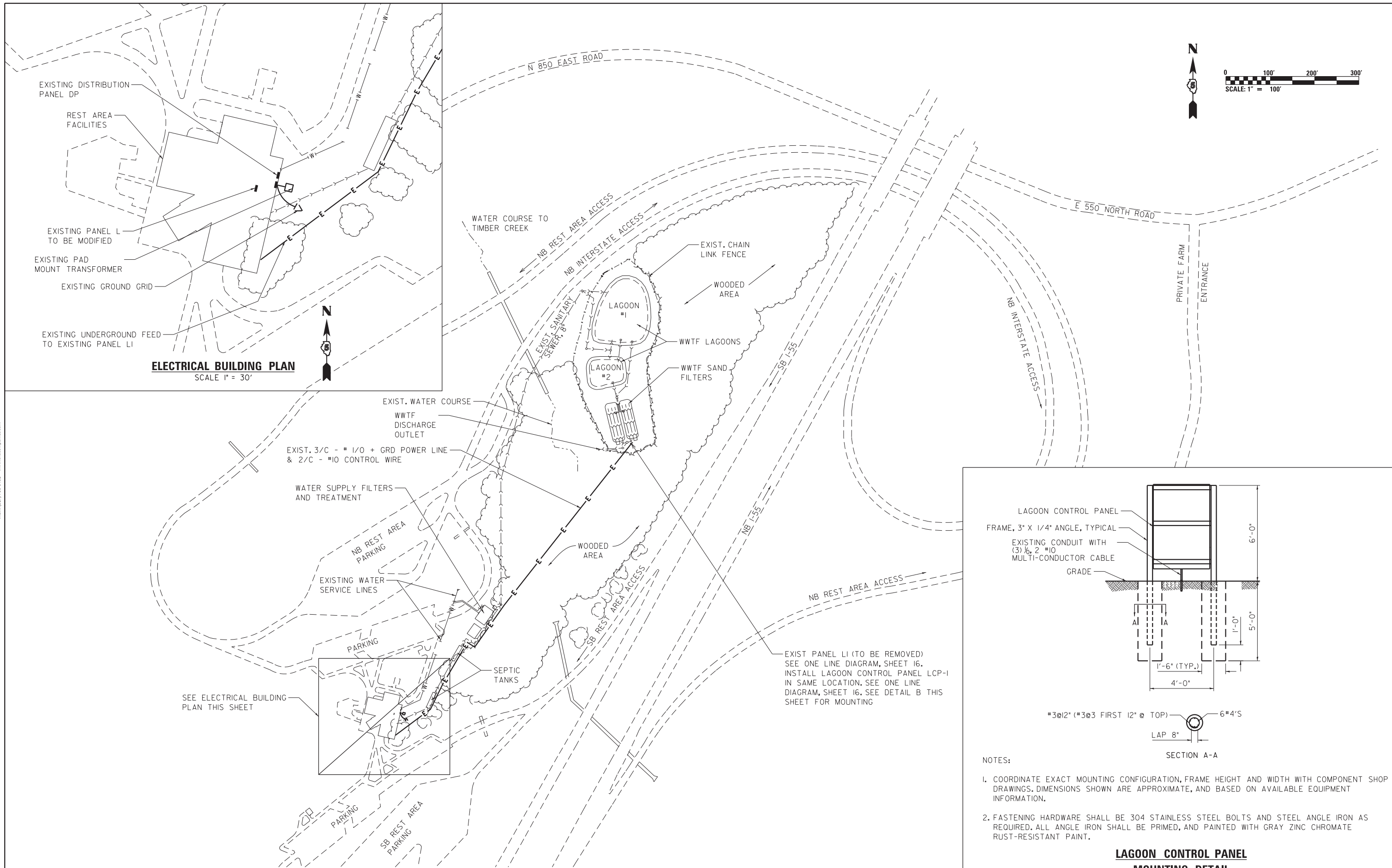
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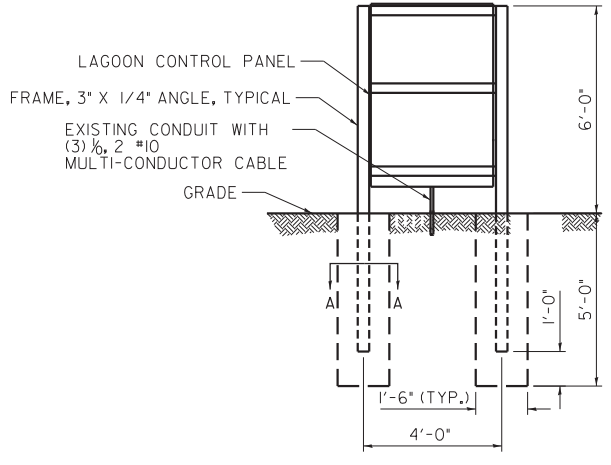
GENERAL ELECTRICAL INFORMATION  
AND ONE LINE DIAGRAM

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	FUNKS GROVE RA IMP. 2014-	MC LEAN	17	16
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ILLINOIS FED. AID PROJECT				



**ELECTRICAL BUILDING PLAN**  
SCALE 1" = 30'



#3@12" (#3@3 FIRST 12" @ TOP) 6\*4'S  
LAP 8"

- NOTES:
- COORDINATE EXACT MOUNTING CONFIGURATION, FRAME HEIGHT AND WIDTH WITH COMPONENT SHOP DRAWINGS. DIMENSIONS SHOWN ARE APPROXIMATE, AND BASED ON AVAILABLE EQUIPMENT INFORMATION.
  - FASTENING HARDWARE SHALL BE 304 STAINLESS STEEL BOLTS AND STEEL ANGLE IRON AS REQUIRED. ALL ANGLE IRON SHALL BE PRIMED, AND PAINTED WITH GRAY ZINC CHROMATE RUST-RESISTANT PAINT.

**LAGOON CONTROL PANEL MOUNTING DETAIL**  
N.T.S.



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	PLOT DATE = 1/15/2014	CHECKED - BEP	REVISED -
		DATE - 12-13-2013	REVISED -

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL SITE PLAN**

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	FUNKS GROVE RA IMP. 2014-	McLEAN	17	17
CONTRACT NO. 70A53				
ILLINOIS FED. AID PROJECT				