

# A d d e n d u m

Iowa Department of Transportation  
Office of Contracts

Date of Letting: December 20, 2016  
Date of Addendum: December 15, 2016

<b>B.O.</b>	<b>Proposal ID</b>	<b>Proposal Work Type</b>	<b>County</b>	<b>Project Number</b>	<b>Addendum</b>
103	07-0636-078	PCC PAVEMENT- GRADE & REPLACE	BLACK HAWK	NHSX-063-6(78)--3H-07 NHSX-063-6(91)--3H-07 NHSN-063-6(95)--2R-07	20DEC103A08

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Add Proposal Line No. 1615 2528-9290050 PORTABLE DYNAMIC MESSAGE SIGN  
(PDMS): 240.000 CDAY

If the above changes are not made, they will be made as shown here.

Please add the following note to the ESTIMATE REFERENCE INFORMATION. SHEET C.1  
NHSX-063-6(91)--3H-07

2528-9290050 PORTABLE DYNAMIC MESSAGE SIGN (PDMS)  
Two PDMS boards will be required. Refer to Sheets J.45, J.46 and J.47

Please make the following correction to the SP-105106a

In Section 40 05 62 of SP-150160a please revise the frame type for gates SLD-2-1-1 and SLD2-2-1  
shown in the Schedule 1 table to Surface Mounted from Cast-In-Place

Replace the following plans sheets M.208, M.209, M.212, M.215A, M.307, M.317, M.318,  
M.319, M.320, M.321, M.325 and M.328A with the attached:

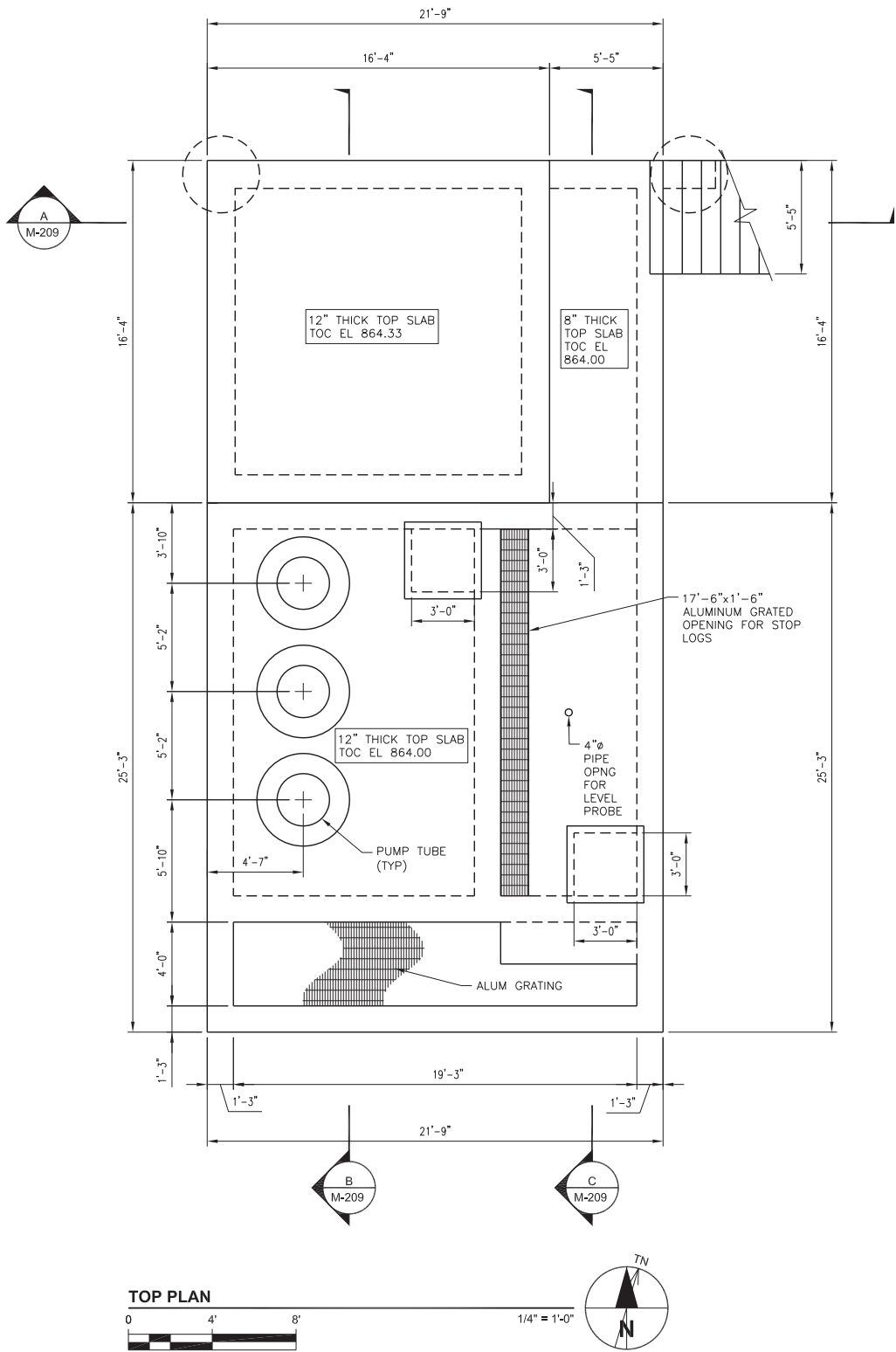
Summary of change the plans to the follow following plan sheets: NHSX-063-6(78)--3H-07

Sheet M.208	Plan Sheet Change	Revised dimension and showed aluminum grating.
Sheet M.209	Plan Sheet Change	Added note concerning caisson installation and testing under "Section A".

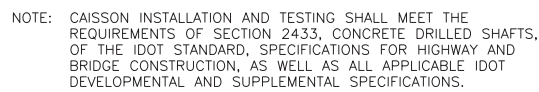
Sheet M.212	Plan Sheet Change	Added information on stop log height under “Bottom Plan”, added note about removal and replacement of outlet gate on “Top Plan” and added note about discharge pipe size and wall supports on “Section A”.
Sheet M.215A	Plan Sheet Addition	Added a new plan sheet showing the electrical service for the North Pump Station.
Sheet M.307	Plan Sheet Change	Revised waterstop note on “New RCB to New Concrete Structure” detail.
Sheet M.317	Plan Sheet Change	Added dimension for foundation overhang on “Foundation Plan”.
Sheet M.318	Plan Sheet Change	Showed Aluminum Grating in “Foundation Plan”.
Sheet M.319	Plan Sheet Change	Added “Fiber Reinforced Concrete Fill” callout on “Section A” and “Section B” and callouts for box out sizes on “Section B”.
Sheet M.320	Plan Sheet Change	Added “Fiber Reinforced Concrete Fill” callout on “Section C” and “Section D” and revised internal vertical wall height and added internal vertical wall dimension on “Section C”.
Sheet M.321	Plan Sheet Change	Added note concerning caisson installation and testing under “Section E”.
Sheet M.325	Plan Sheet Change	Added pump tube wall supports and revised pump tube wall support note on “Section C”.
Sheet M.328A	Plan Sheet Addition	Added a new plan sheet showing the electrical service for the South Pump Station.

Project Management Initials: Designer: Checked: Approver:

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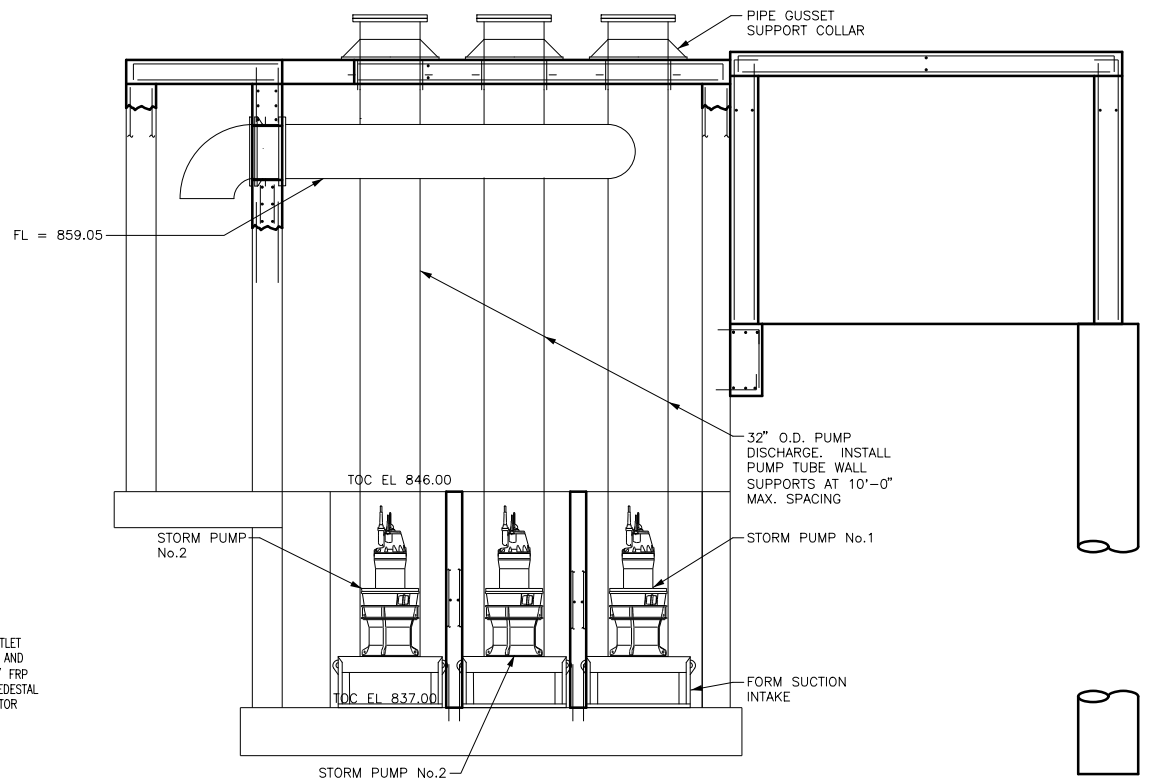
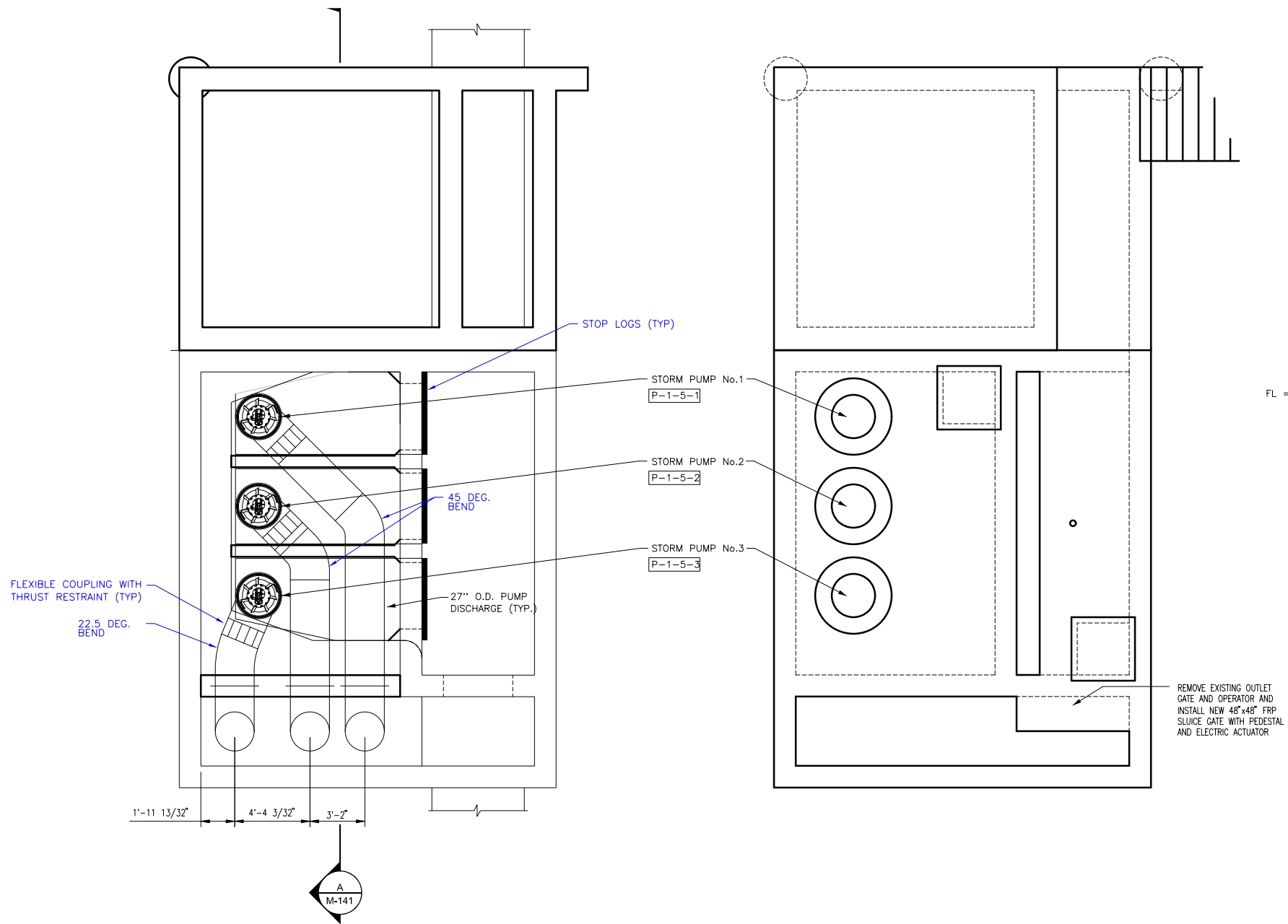


- NOTES:
- BUILDING FLOOR DESIGN LIVE LOAD 250 PSF
  - ALL OTHER FLOOR DESIGN LIVE LOAD 100 PSF



FILE NO.	ENGLISH	DESIGN TEAM	AECOM/CITY OF WATERLOO	BLACK HAWK COUNTY	PROJECT NUMBER	NHSX-063-6(078)--3H-07	SHEET NUMBER	M.209	REVISED
SYSTEMTIME	SYSTEMDATE	USERNAME	DGNSPEC	Changed by Addenda					

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NOTE:  
CHANNELS FOR STOP LOGS SHALL BE SURFACE MOUNTED ON ENDS OF WALLS PER MANUFACTURER'S  
RECOMMENDATIONS. STOP LOGS TO EXTEND FROM EL 837.00 TO EL 846.00. EACH STOP LOG SHALL BE  
1'-0" IN HEIGHT

# NORTH PUMP STATION - PROCESS PIPING

FILE NO.	ENGLISH	DESIGN TEAM	AECOM/CITY OF WATERLOO	BLACK HAWK COUNTY	PROJECT NUMBER	NHSX-063-6(078)--3H-07	SHEET NUMBER	M.212
SYSTEMTIME	SYSTEMDATE	USERNAME	DGNSPEC	Changed by Addenda				







GENERAL NOTES:

- 1. THE RCB CULVERT SECTIONS ARE DESIGNED FOR HL-93 LIVE LOAD AND EARTH FILLS OF VARYING HEIGHTS.
- 2. THE RCB CULVERT SECTIONS ARE DESIGNED FOR CLASS I EXPOSURE CONDITIONS EXCEPT: CLASS 2 EXPOSURE CONDITION IS UTILIZED FOR THE SLAB DESIGN IN O'FILL INSTANCES.
- 3. ALL SLAB AND FLOOR REINFORCING STEEL IS TO BE SUPPORTED AT INTERVALS OF NOT MORE THAN 3'-0 IN EITHER DIRECTION AS OUTLINED IN THE STANDARD SPECIFICATIONS.
- 4. THE CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR EDGE OR END OF REINFORCING BAR TO BE 2" UNLESS OTHERWISE NOTED.
- 5. EXCEPT FOR DOWEL BARS 5r1 IN SLAB, LONGITUDINAL REINFORCING IS NOT TO EXTEND THRU THE CONSTRUCTION JOINTS.
- 6. FLOOR OF BARREL IS TO BE FINISHED SMOOTH. SIDES OF FOOTING ARE TO BE FORMED TO INSURE CORRECT LINE AND GRADE.
- 7. THE PERMISSIBLE CONSTRUCTION JOINT AT THE TOP OF THE WALLS MAY BE LOWERED AT THE CONTRACTOR'S OPTION WITH ENGINEER'S APPROVAL.
- 8. THE REINFORCEMENT SUPPLIED FOR THIS STRUCTURE SHALL BE GRADE 60 REINFORCEMENT IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE DESIGN STRESSES ARE BASED ON GRADE 60 REINFORCEMENT.
- 9. THE VERTICAL BARS IN THE WALLS MAY BE SPLICED ABOVE THE FOOTING AT THE CONTRACTOR'S OPTION AS FOLLOWS:

BAR SIZE NUMBER	4	5	6	7	8	9
MINIMUM SPLICE LENGTH	17"	21"	25"	31"	41"	51"

- THIS SPLICE, IF USED, WILL BE AT THE CONTRACTOR'S EXPENSE.
10. REINFORCING BAR CLEARANCES WILL BE AS FOLLOWS:  
EDGE CLEARANCES: 2" EXCEPT  
TOP OF FLOOR 2 1/4" TO NEAR TRANSVERSE REINFORCING BAR  
BOTTOM OF FLOOR 3 1/2" TO NEAR TRANSVERSE REINFORCING BAR  
END CLEARANCES:  
VERTICAL TOP 2"  
VERTICAL BOTTOM 3" OR 3 1/2" IF OVERALL HEIGHT OF THE CULVERT IS NOT TO A FULL INCH  
TRANSVERSE 2"
11. ALL CONSTRUCTION JOINTS SHALL BE FORMED WITH A BEVELED KEYWAY EXCEPT AT BELL JOINTS.
12. ALL BEVELED KEYWAYS SHALL BE CENTERED.
13. KEYWAY SIZE SHALL BE 2x4 EXCEPT AS FOLLOWS:  
KEYWAY BETWEEN THE FLOOR AND WALL SHALL BE 2x6 WHEN THE WALL IS GREATER THAN 10 INCHES WIDE.
14. KEYWAY DIMENSIONS SHOWN ON THE PLANS ARE BASED ON NOMINAL DIMENSIONS UNLESS STATED OTHERWISE. IN ADDITION, THE BEVEL USED ON THE KEYWAY SHALL BE LIMITED TO A MAXIMUM OF 10 DEGREES FROM VERTICAL.
15. IF O'OF FILL IS SPECIFIED, DETAILS FOR PAVING NOTCH AND REFERENCE TO EPOXY COATING OF SLAB REINFORCING STEEL, IF APPLICABLE, SHALL BE INCLUDED IN THE FINAL PLANS.
16. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED OR SHOWN.
17. SEE CURRENT STANDARD SPECIFICATIONS REGARDING CONCRETE FORM REMOVAL.
18. THESE CULVERT STANDARDS LABEL ALL REINFORCING STEEL WITH ENGLISH NOTATION (5d1 IS 5/8 INCH DIAMETER BAR). ENGLISH REINFORCING STEEL RECEIVED IN THE FIELD MAY DISPLAY THE FOLLOWING "BAR DESIGNATION". THE "BAR DESIGNATION" IS THE STAMPED IMPRESSION ON THE REINFORCING BARS, AND IS EQUIVALENT TO THE BAR DIAMETER IN MILLIMETERS.

ENGLISH SIZE	4	5	6	7	8	9
BAR DESIGNATION	13	16	19	22	25	29

19. IN THE EVENT THE SLAB THICKNESS AT THE BARREL END SECTION EXCEEDS 20 INCHES, THE CULVERT PARAPET SHALL EXTEND A MINIMUM OF 6 INCHES ABOVE THE TOP OF THE CULVERT SLAB. REFER TO THE CULVERT DESIGN MANUAL FOR INSTRUCTIONS. THESE DETAILS ARE TO BE INCLUDED IN THE DESIGN PLANS TO ADDRESS THESE SITUATIONS.

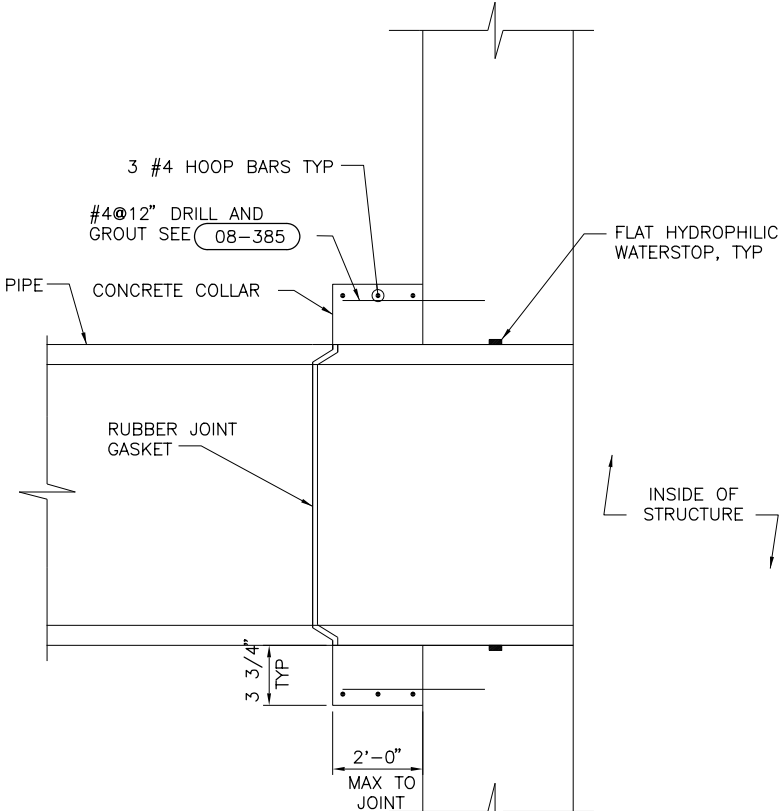
SPECIFICATIONS:

DESIGN:  
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH ED., SERIES OF 2010.

CONSTRUCTION:  
IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, CURRENT SERIES, PLUS APPLICABLE GENERAL SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS

DESIGN STRESSES:

DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH ED., SERIES OF 2010:  
REINFORCING STEEL IN ACCORDANCE WITH AASHTO LRFD SECTION 5, GRADE 60.  
CONCRETE IN ACCORDANCE WITH AASHTO LRFD SECTION 5, f'c = 4.0 KSI.

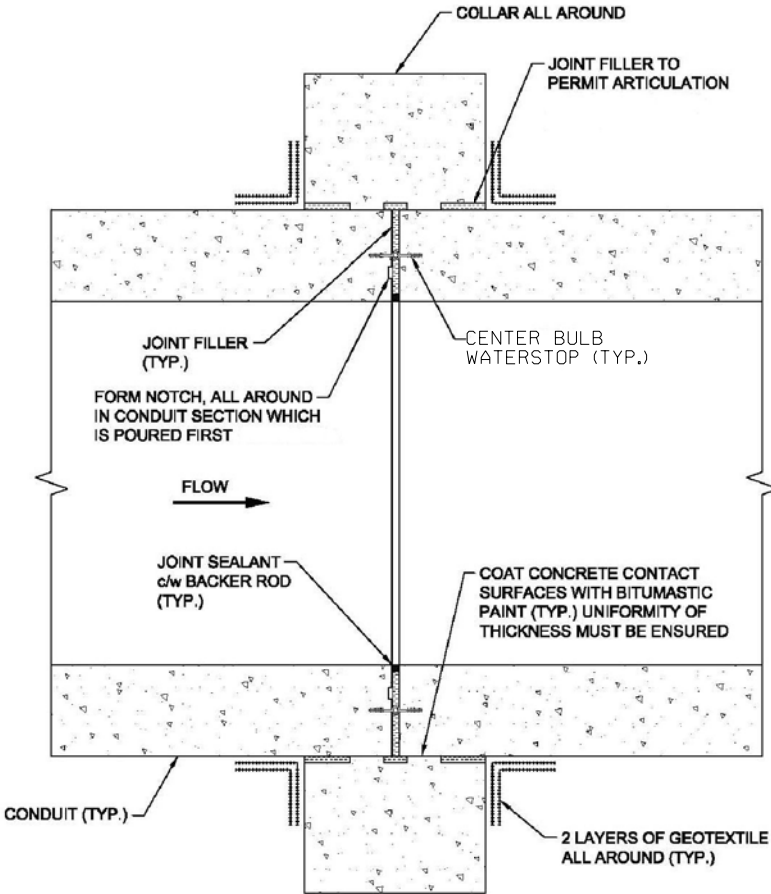


NEW RCB TO  
NEW CONCRETE STRUCTURE

NTS

08-010

BAR MINIMUM REINFORCEMENT SPLICE AND ANCHORAGE LENGTH (INCHES)							
BAR SIZE IN-POUND	BAR SIZE METRIC mm	LAPPED SPLICE LENGTH		DEVELOPMENT LENGTH		STANDARD HOOK DEVELOPMENT LENGTH	COMPRESSION LAP LENGTH
		TOP BARS	OTHERS	TOP BARS	OTHERS		
3	10	25	19	19	15	6	12
4	13	33	25	25	19	7	15
5	16	41	31	31	24	9	19
6	19	49	37	37	29	11	23
7	22	71	54	54	42	12	27
8	25	81	62	62	48	14	30
9	29	91	70	70	54	16	34
10	32	101	78	78	60	17	38
11	36	111	85	85	66	19	42
NOTES: 1. TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR. 2. FOR BARS SPACED LESS THAN 6 BAR DIAMETERS OC INCREASE LENGTH BY 25%. 3. WHEN LAPPING TWO DIFFERENT SIZE BARS USE THE LAP LENGTH OF THE SMALLER BAR UNLESS NOTED OTHERWISE. 4. DEVELOPMENT LENGTH IS MINIMUM LENGTH OF EMBEDMENT FOR STRAIGHT DOWELS WHERE END HOOK IS NOT SHOWN, UNLESS OTHERWISE NOTED. 5. COMPRESSION LAP LENGTH FOR VERTICAL COLUMN BARS ONLY. 6. HOOKS SHALL BE ACI STANDARD UNLESS OTHERWISE NOTED. 7. f'c = 4,000 PSI MIN 8. fy = 60,000 PSI MIN							

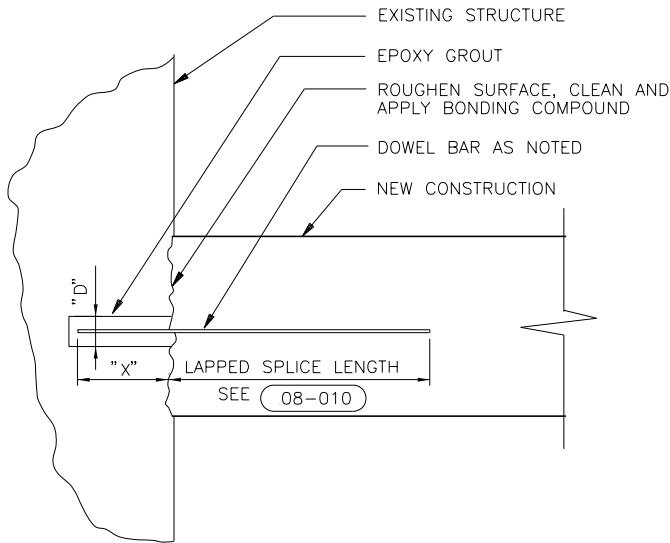


RCB JOINT COLLAR

NTS

NOTES

1. USE RCB JOINT COLLAR FOR ALL JOINTS IN RCB ALONG WITH JOINT BETWEEN RCB AND HEADWALL.



DRILLED IN DOWEL DETAIL 08-385

NTS

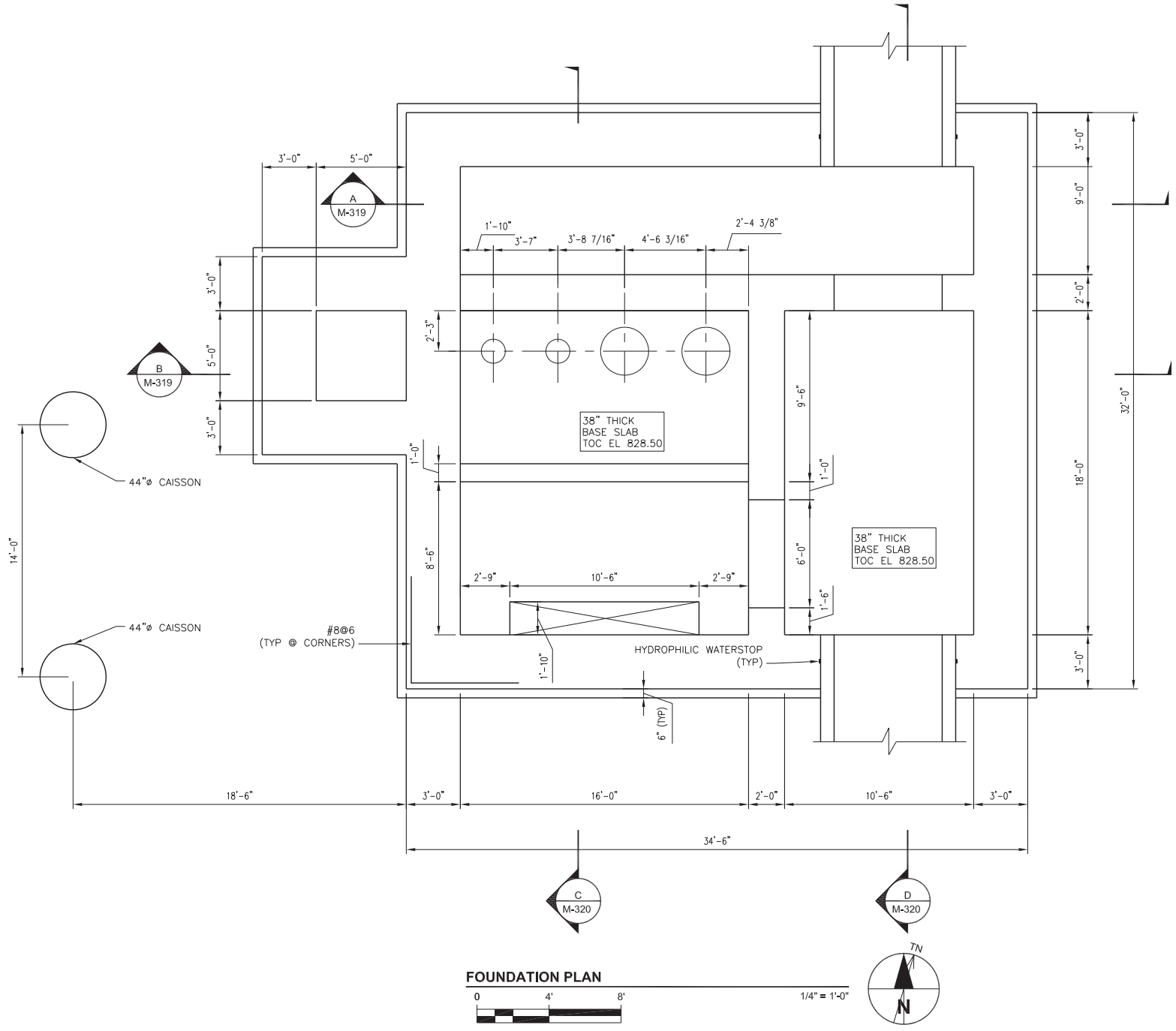
- NOTES:  
1. EMBEDMENT "X" = 16 BAR DIAMETERS MIN.  
2. HOLE DIAMETER "D" = AS RECOMMENDED BY EPOXY GROUT MFR.

RCB  
GENERAL NOTES

RCB GI-12

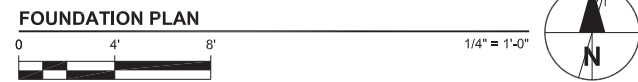
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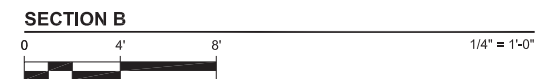
NOTE:  
1. NET ALLOWABLE BEARING PRESSURE AT  
ROCK 6,000 PSF.





1. BUILDING FLOOR DESIGN LIVE LOAD 250 PSF
2. ALL OTHER FLOOR DESIGN LIVE LOAD 100 PSF

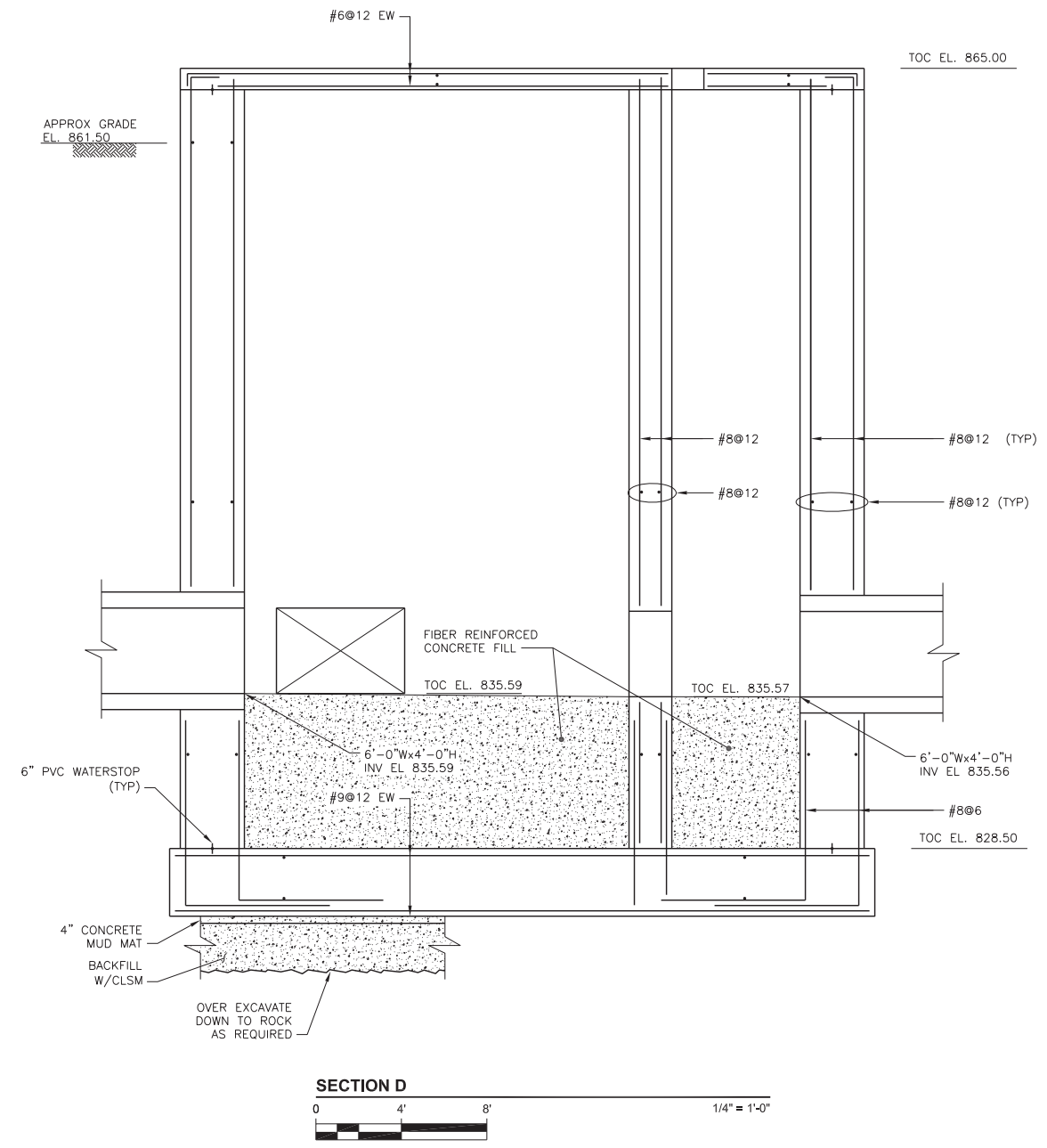
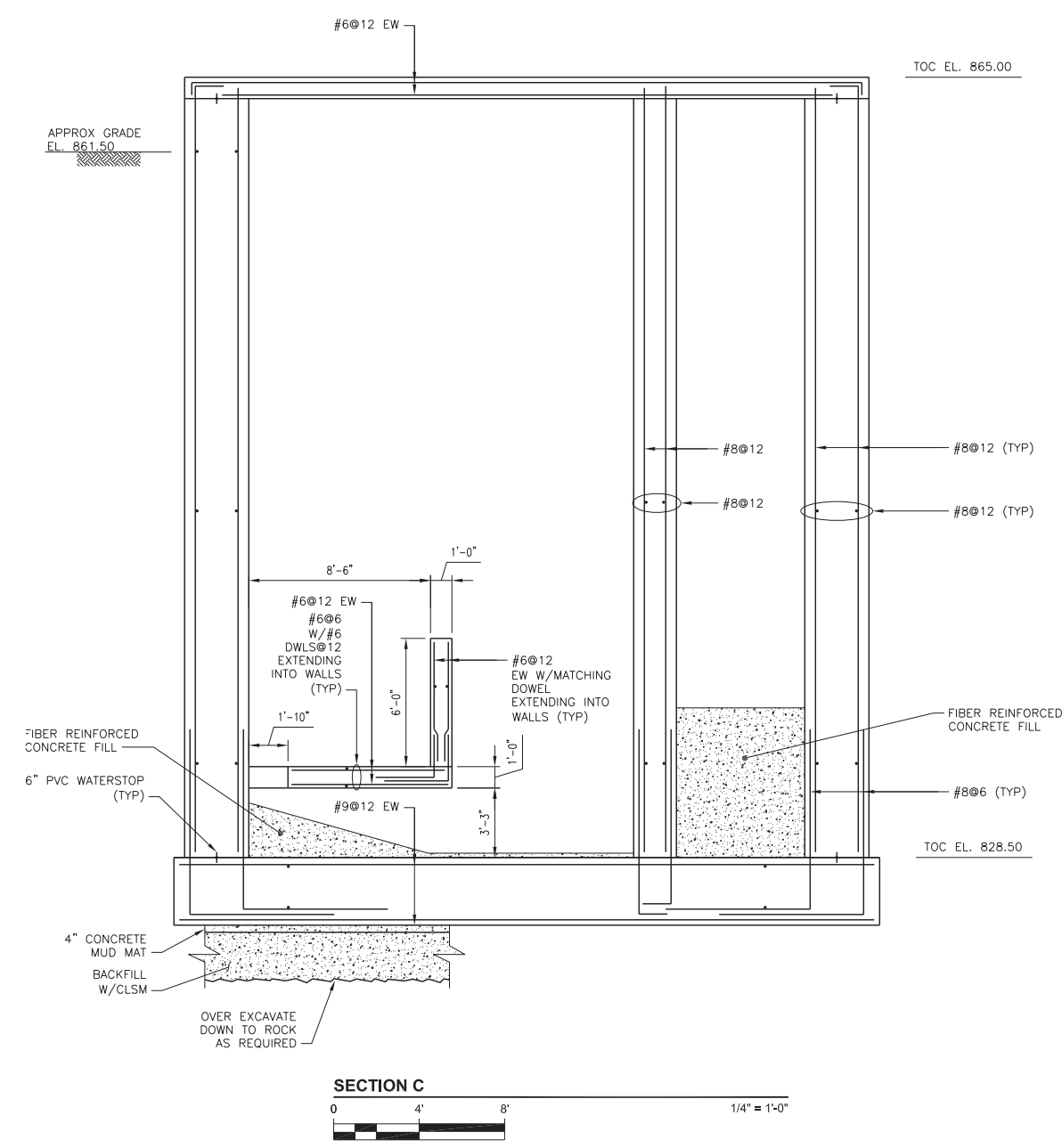
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FILE NO.	ENGLISH	DESIGN TEAM	AECOM/CITY OF WATERLOO	BLACK HAWK COUNTY	PROJECT NUMBER	NHSX-063-6(078)--3H-07	SHEET NUMBER	M.319	REVISED
SYSTEMTIME	SYSTEMDATE	USERNAME	DGNSPEC	Changed by Addenda					

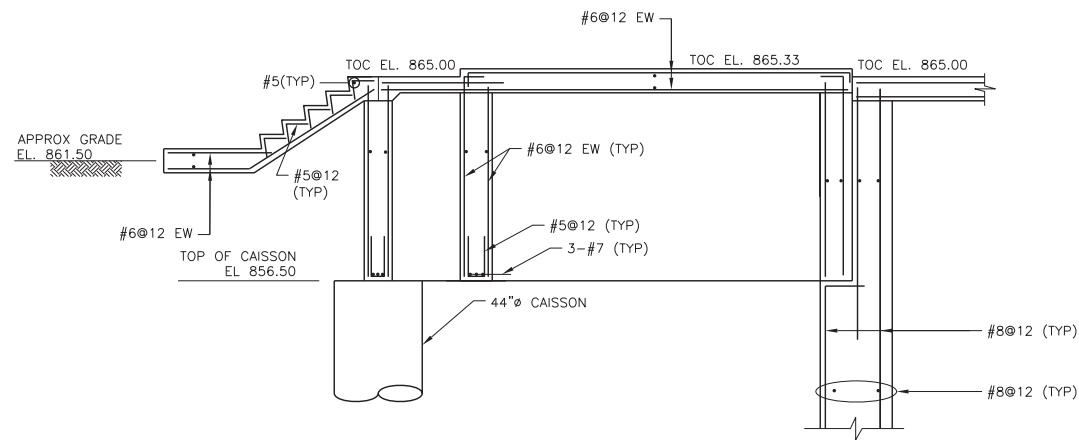
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Project Management Initials: \_\_\_\_\_ Designer: \_\_\_\_\_ Checked: \_\_\_\_\_ Approved: \_\_\_\_\_



SOUTH PUMP STATION - SECTIONS					BLACK HAWK COUNTY		PROJECT NUMBER		SHEET NUMBER		REVISED	
FILE NO.	ENGLISH	DESIGN TEAM	AECOM/CITY OF WATERLOO				NHSX-063-6(078)--3H-07		M.320			
SYSTEMTIME	SYSTEMDATE	USERNAME	DGN SPEC				Changed by Addenda					

Project Management Initials: \_\_\_\_\_ Designer: \_\_\_\_\_ Checked: \_\_\_\_\_ Approved: \_\_\_\_\_



SECTION E



NOTE: CAISSON INSTALLATION AND TESTING SHALL MEET THE REQUIREMENTS OF SECTION 2433, CONCRETE DRILLED SHAFTS, OF THE IDOT STANDARD, SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, AS WELL AS ALL APPLICABLE IDOT DEVELOPMENTAL AND SUPPLEMENTAL SPECIFICATIONS.

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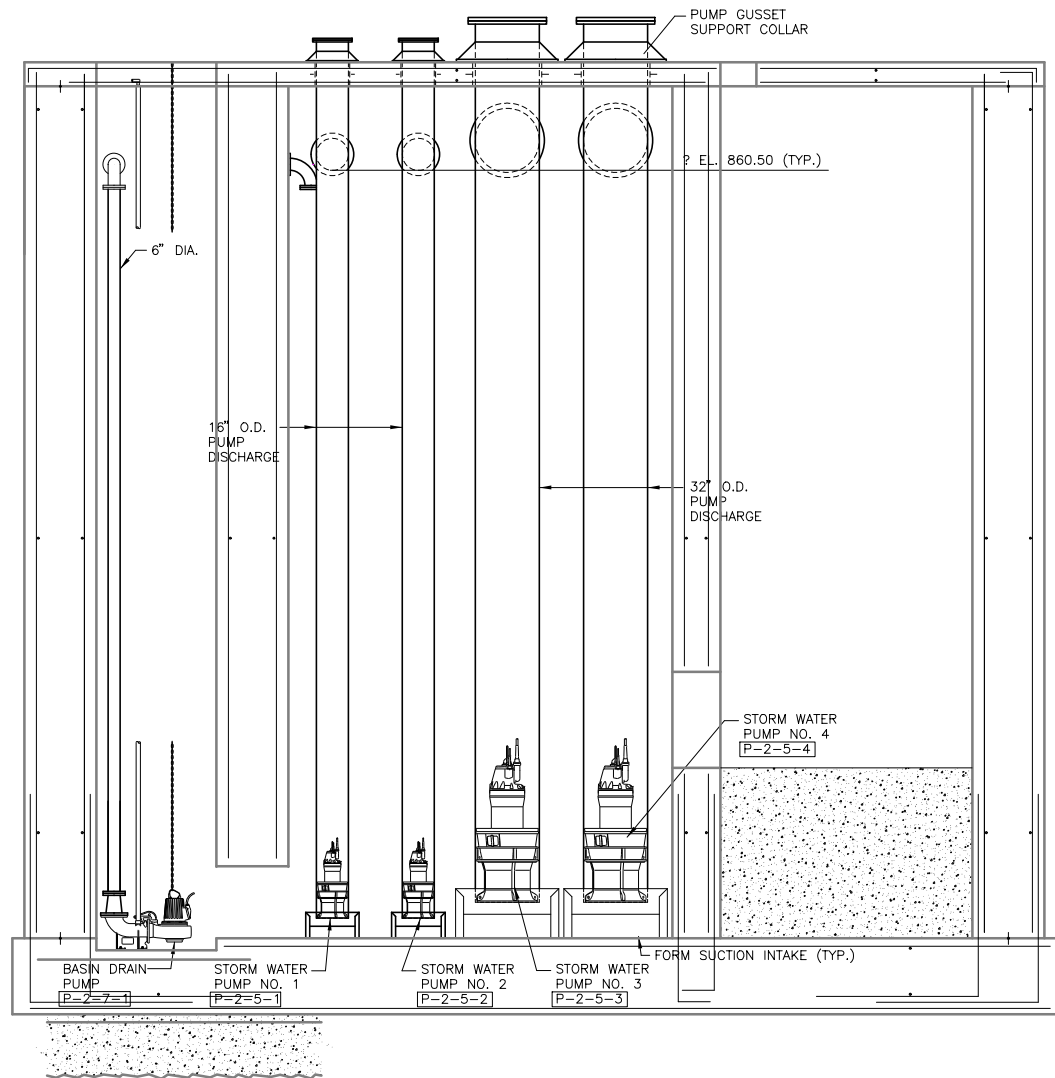
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SYSTEMTIME	SYSTEMDATE	USERNAME	DGNSPEC																			

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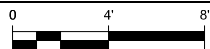
SOUTH PUMP STATION - SECTIONS



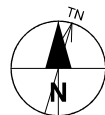
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SECTION B

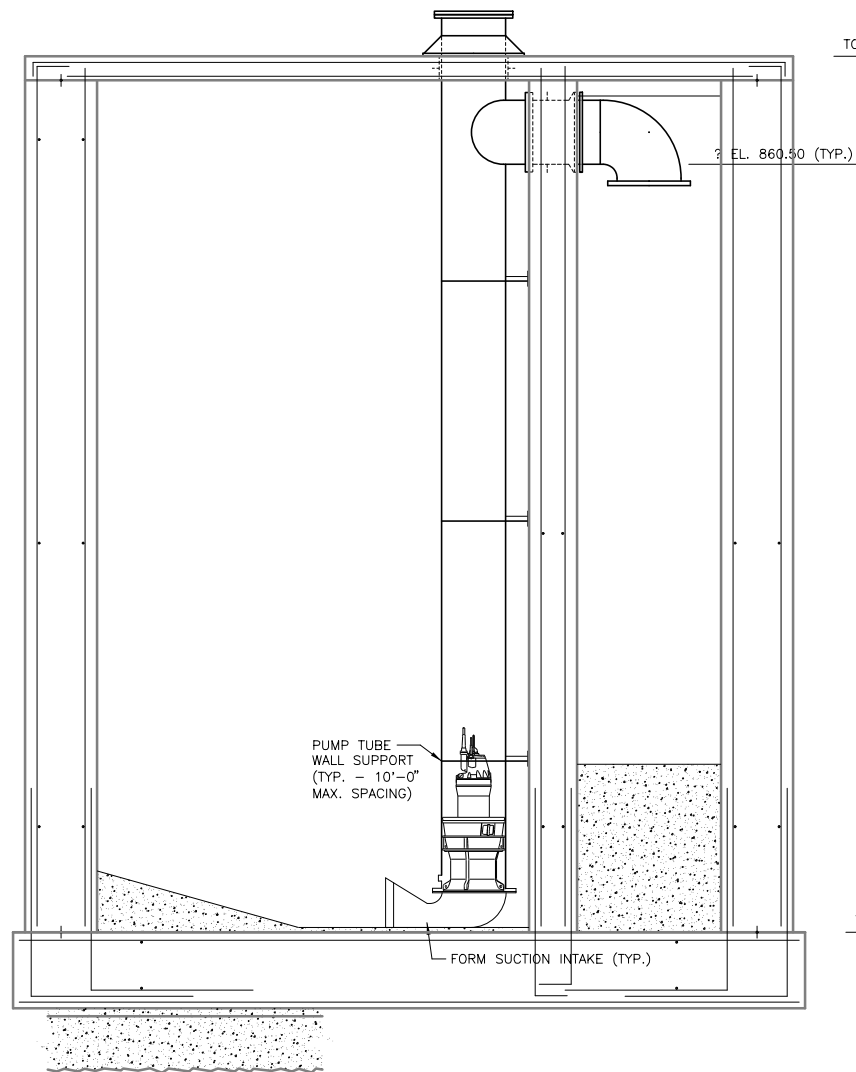


1/4" = 1'-0"

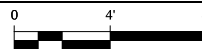


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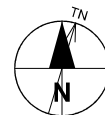
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SECTION C



1/4" = 1'-0"



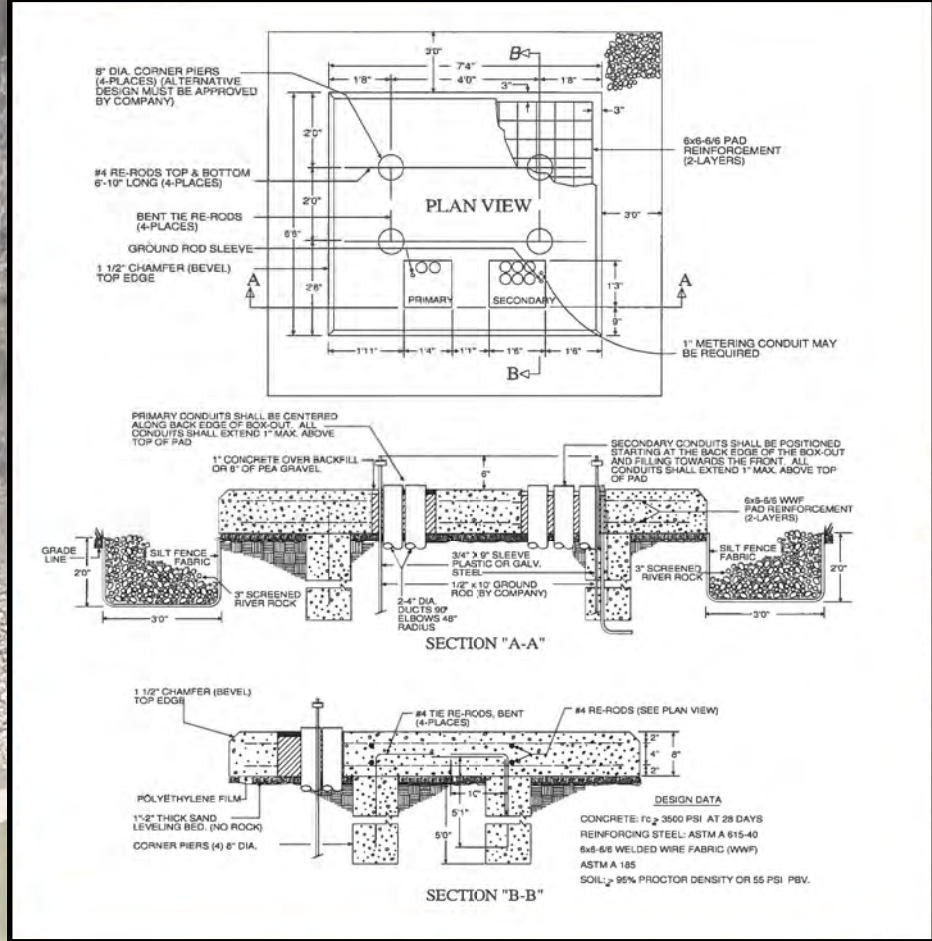
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TOC EL. 828.50

SOUTH PUMP STATION - PROCESS PIPING

FILE NO.	ENGLISH	DESIGN TEAM	AECOM/CITY OF WATERLOO	BLACK HAWK COUNTY	PROJECT NUMBER	NHSX-063-6(078)--3H-07	SHEET NUMBER	M-325
SYSTEMTIME	SYSTEMDATE	USERNAME	DGNSPEC	Changed by Addenda				





SOUTH PUMP STATION - ELECTRICAL SERVICE PLANS