

SECTION
SCALE: 1/4"=1'-0"

3
WGS-101A

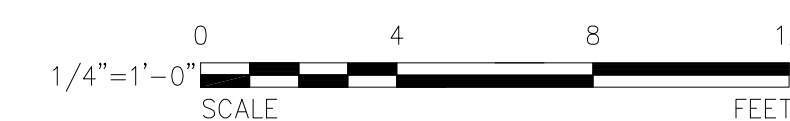
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RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 05/16 PER: RCF

NOTE:
1. REFER TO STRUCTURAL DRAWINGS FOR REQUIRED DOWELS FOR FUTURE INTERNAL PARTITION WALLS (NOT SHOWN FOR CLARITY).



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Heavy & Highway Contractors
Sitework - Concrete - Utilities - Pre-Engineered Buildings

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Consulting Engineers
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® (617) 374-0000 fax: (617) 374-0010

| DATE: | REVISIONS | No. |
|----------|--------------------|-----|
| 03/23/12 | CHANGE ORDER NO. 1 | 4 |
| 02/27/12 | | 3 |
| 02/06/12 | | 2 |
| 12/08/11 | | 1 |

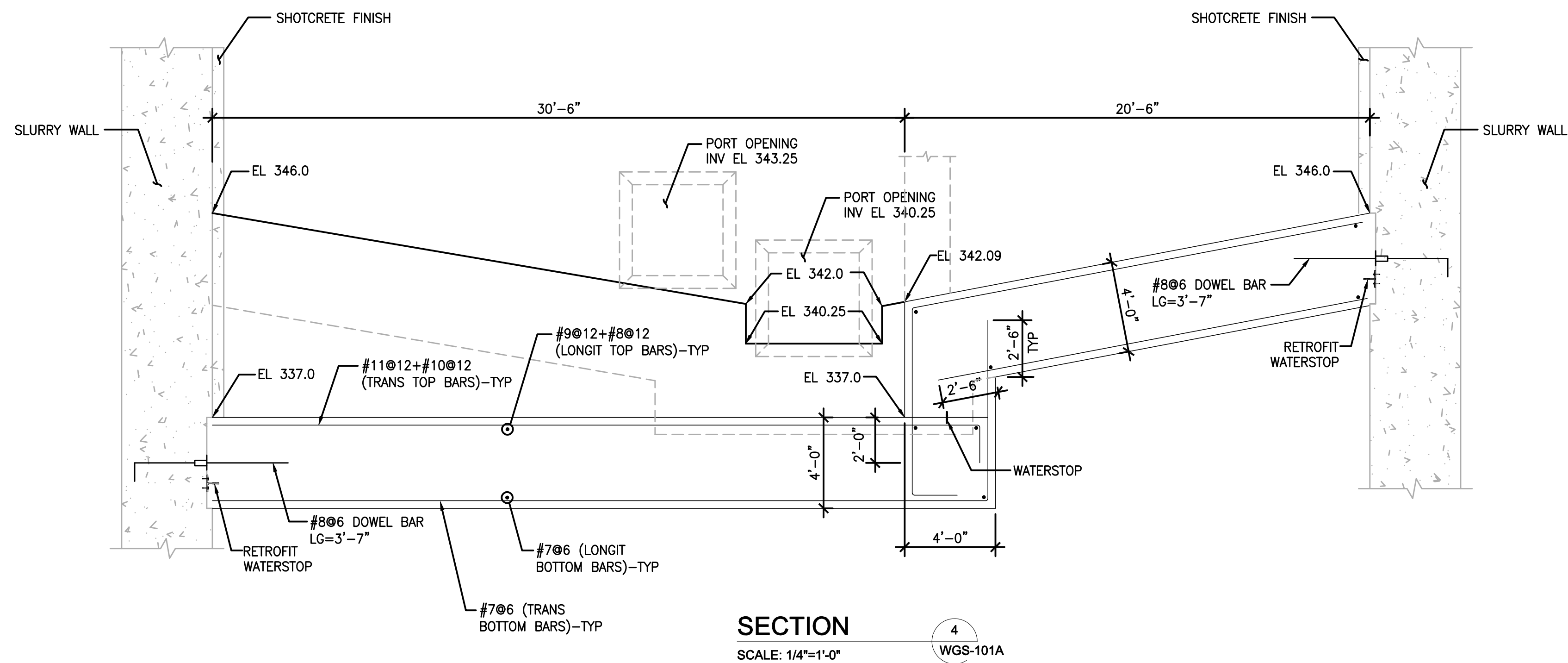
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H. AWAL
DRAWN BY:
N. BONDOC
CHECKED BY:
M. KIRMANI
APPROVED BY:
G. CHEN



ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

WEST CHAMBER
INVERT SLAB - SECTION 3

CONTRACT No.
SCALE: AS SHOWN
DATE: 10/31/11
DRAWING NO.
WS-122



SECTION
SCALE: 1/4"=1'-0"
4
WGS-101A

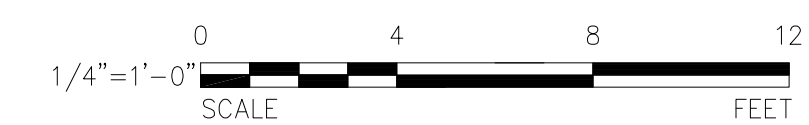
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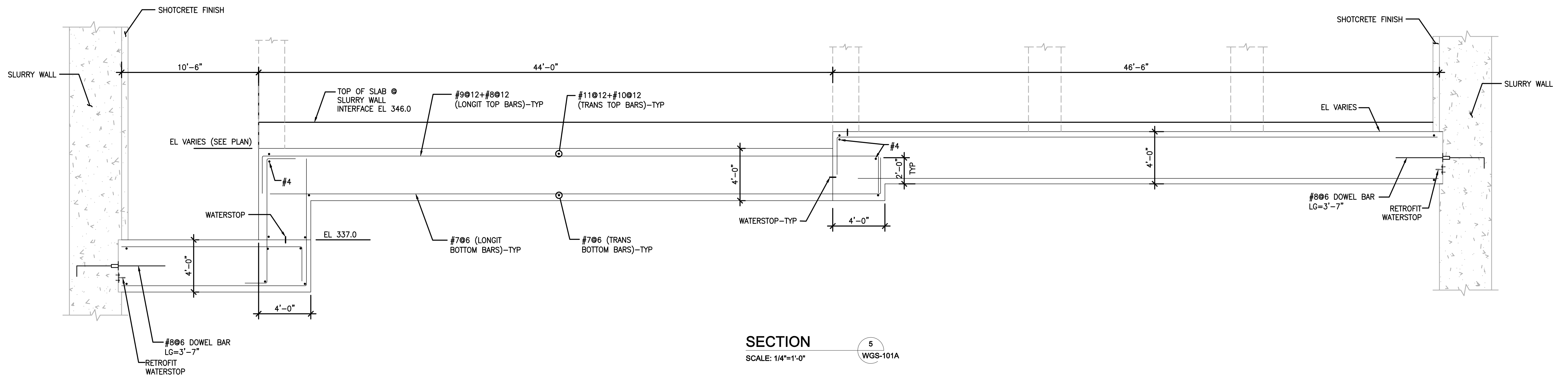
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| DESIGNED BY: | H. AWAL | |
| DRAWN BY: | N. BONDOC | |
| CHECKED BY: | M. KIRMANI | |
| APPROVED BY: | G. CHEN | |
| DATE: | REVISIONS | No. |
| 03/23/12 | CHANGE ORDER NO. 1 | 2 |
| 02/27/12 | | 1 |



ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

WEST CHAMBER
INVERT SLAB - SECTION 4

CONTRACT No.
SCALE: AS SHOWN
DATE: 02/06/12
DRAWING NO.
WS-123



SECTION
SCALE: 1/4"=1'-0"
5
WGS-101A

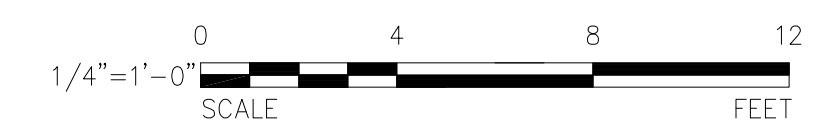
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RECORD DRAWING

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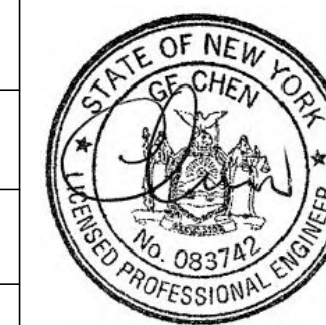
NOTE:
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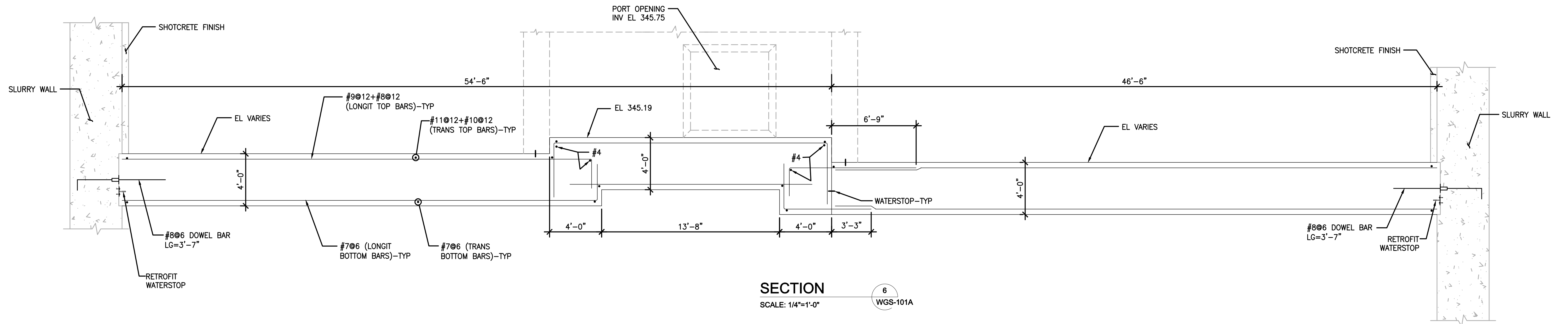
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| DRAWN BY: | N. BONDOC | |
| CHECKED BY: | M. KIRMANI | |
| APPROVED BY: | G. CHEN | |
| DATE: | REVISIONS | No. |
| 03/23/12 | CHANGE ORDER NO. 1 | 2 |
| 01/27/12 | | 1 |



ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

WEST CHAMBER
INVERT SLAB - SECTION 5

| | |
|--------------|----------|
| CONTRACT No. | |
| SCALE: | AS SHOWN |
| DATE: | 02/06/12 |
| DRAWING NO. | WS-124 |



SECTION
SCALE: 1/4"=1'-0"
6
WGS-101A

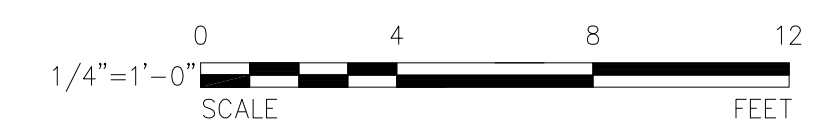
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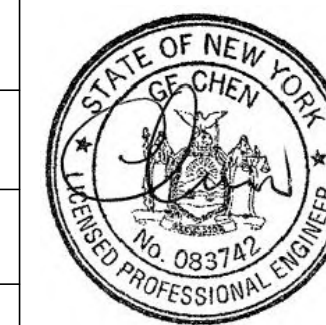
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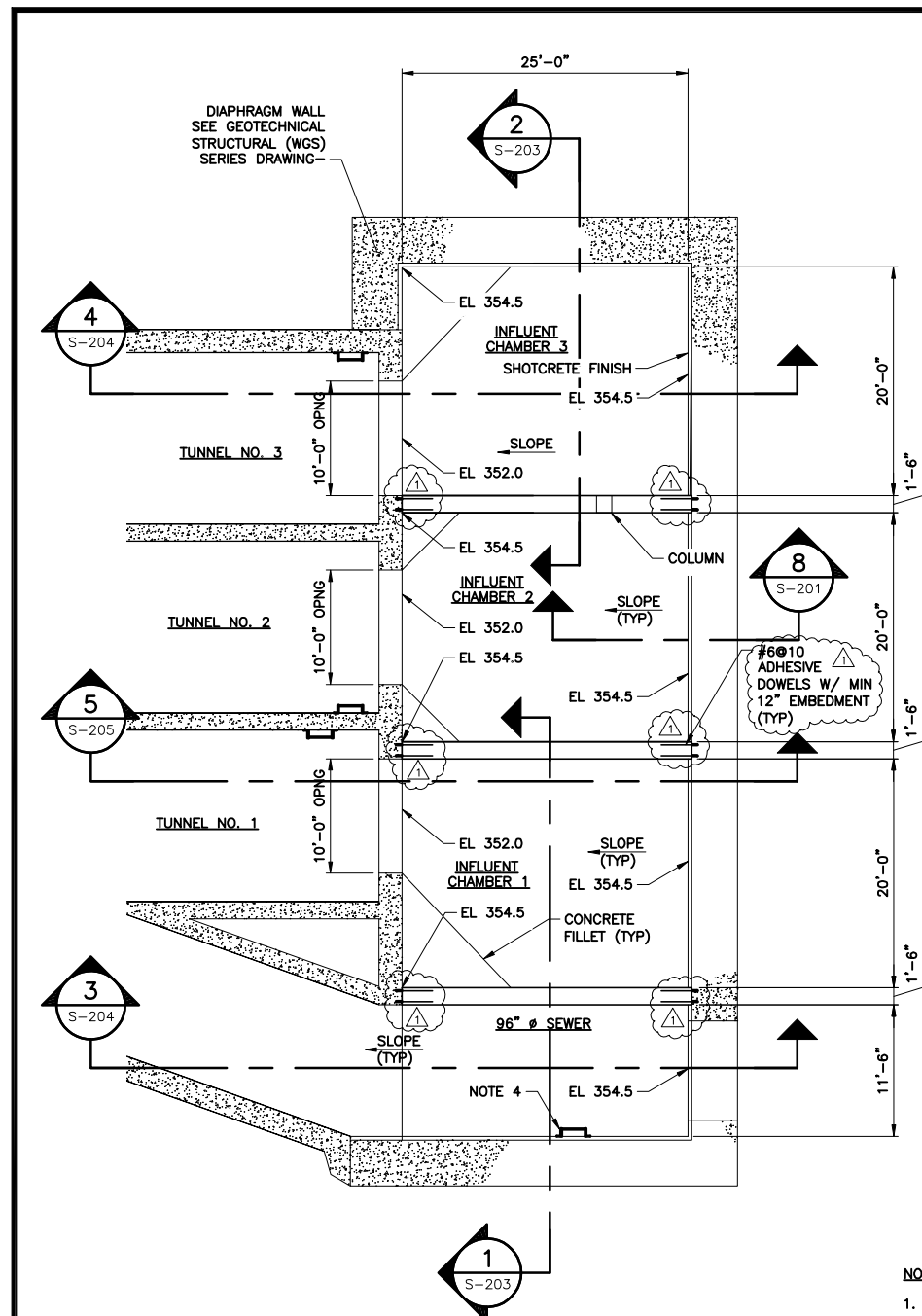
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|--------------|--------------------|-----|
| DESIGNED BY: | H. AWAL | |
| DRAWN BY: | N. BONDOC | |
| CHECKED BY: | M. KIRMANI | |
| APPROVED BY: | G. CHEN | |
| DATE: | REVISIONS | No. |
| 03/23/12 | CHANGE ORDER NO. 1 | 2 |
| 02/27/12 | | 1 |



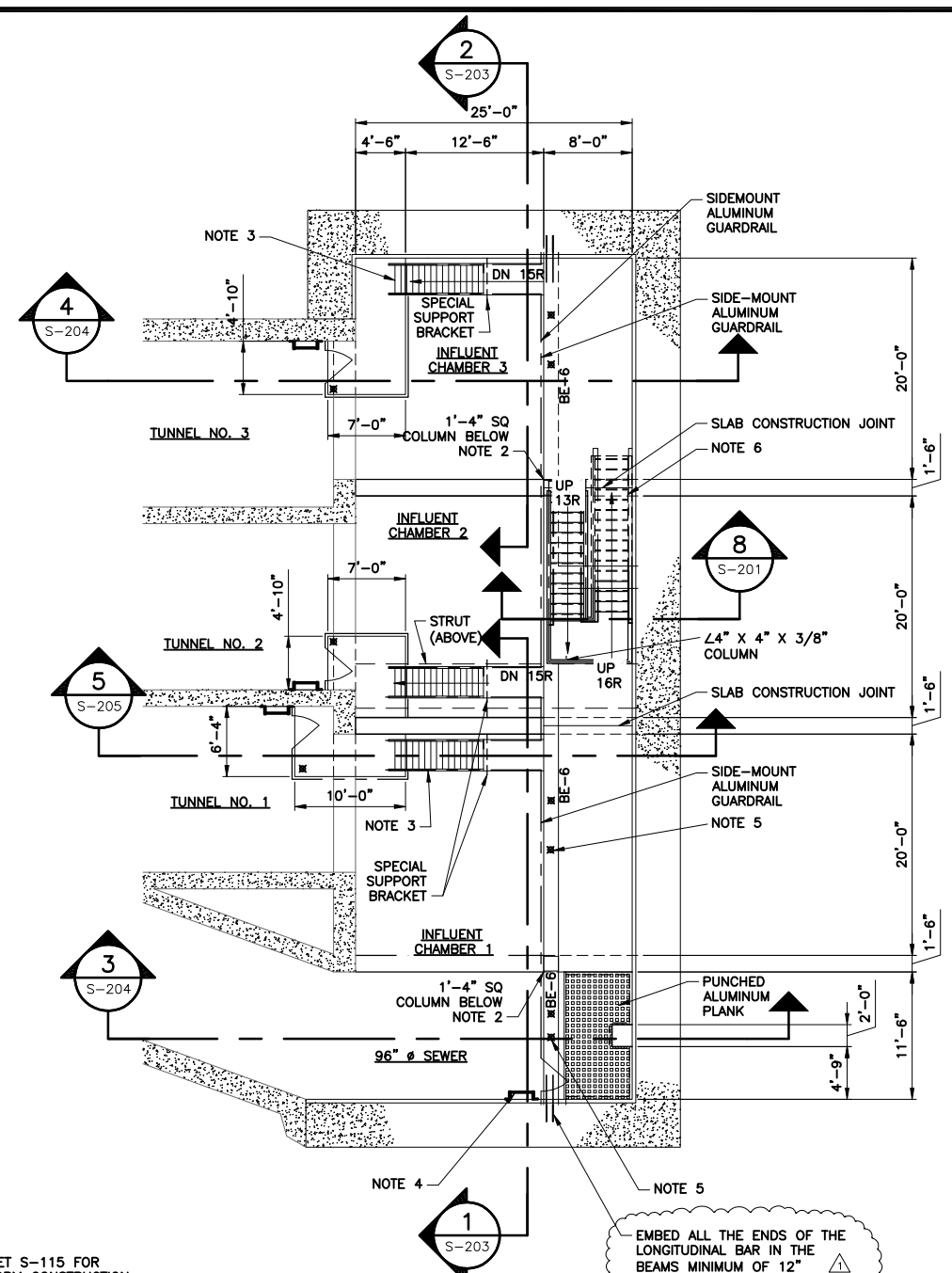
ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

WEST CHAMBER
INVERT SLAB - SECTION 6

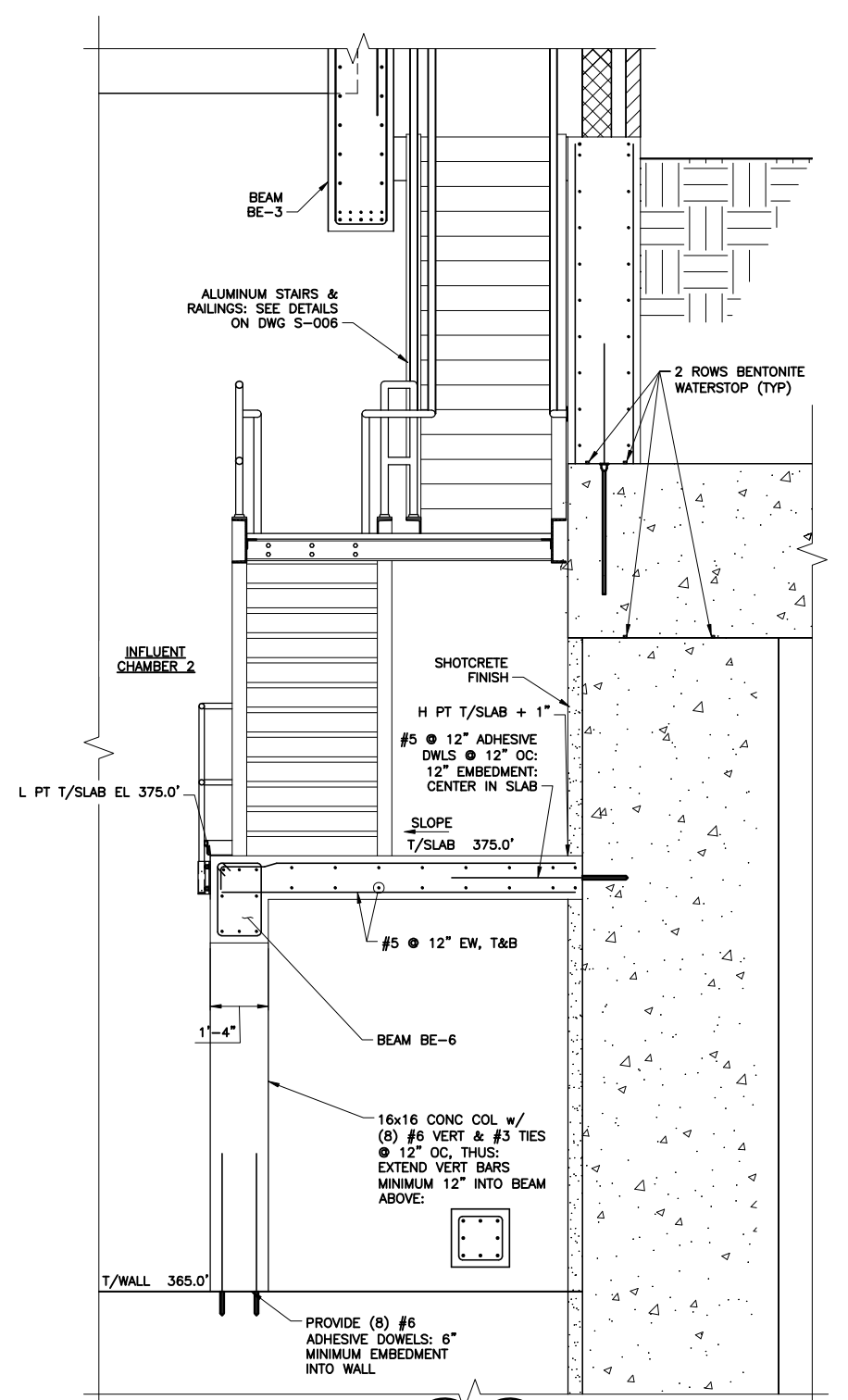
CONTRACT No.
SCALE: AS SHOWN
DATE: 02/06/12
DRAWING NO.
WS-125



EAST CHAMBER - LOWER PLAN
SCALE: 1/8"=1'-0"



EAST CHAMBER - INTERMEDIATE PLAN
SCALE: 1/8"=1'-0"

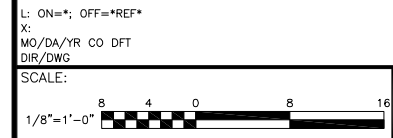


SECTION 8-8
1/2"=1'-0"

- NOTES:**
- REFER TO SHEET S-115 FOR TYPICAL PLATFORM CONSTRUCTION
 - 16x16 CONCRETE COLUMN BELOW (CENTERED ON WALL BELOW) REFERENCE DETAILS ON SECTION S-8 THIS SHEET.
 - ALUMINUM SHIPS LADDER: SEE DETAIL ON SHEET S-005. USE "SPECIAL" SUPPORT BRACKET AT PEP LOCATIONS DETAIL ON SHEET S-115. FOR SHIPS LADDER SUPPORT.
 - ALUMINUM LADDER: SEE DETAIL ON SHEET S-005
 - PEP: SEE NOTE 1 ON SHEET S-115 REGARDING PEP LOCATION
 - ALUMINUM STAIR & RAILINGS: SEE DETAILS ON SHEET S-006

F08
LADDERS AT THE EAST END OF TUNNELS NO. 1, 2 & 3 SHOULD NOT EXTEND TO THE TUNNEL INVERT AND SHOULD BE TERMINATED 10 INCHES ABOVE THE FLOOR TO MINIMIZE HANG-UP OF MATERIAL DURING TUNNEL FLUSHING. THESE LADDERS ARE REFERENCED ON SHEET S-201, SECTION 4 SHEET S-204 AND SECTION S-205.

RFI 164
IT IS ACCEPTABLE TO INSTALL RETROFIT WATERSTOP TO INTERCONNECT THE EMBEDDED WATERSTOPS AT THE BASE OF WALLS IN THE TUNNEL TRANSITION DIVIDING WALLS AND EAST CHAMBER DIVIDING WALLS. NOTE THAT EMBEDDED WATERSTOP SHOULD HAVE ALSO BEEN CAST BELOW TO FLUSHING GATE OPENINGS. IF IT WASNT, THEN RETROFIT WAERSTOP SHALL BE INSTALLED AT THESE LOCATIONS AS WELLS.



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| 1 | 05/16 | RECORD DRAWINGS | |

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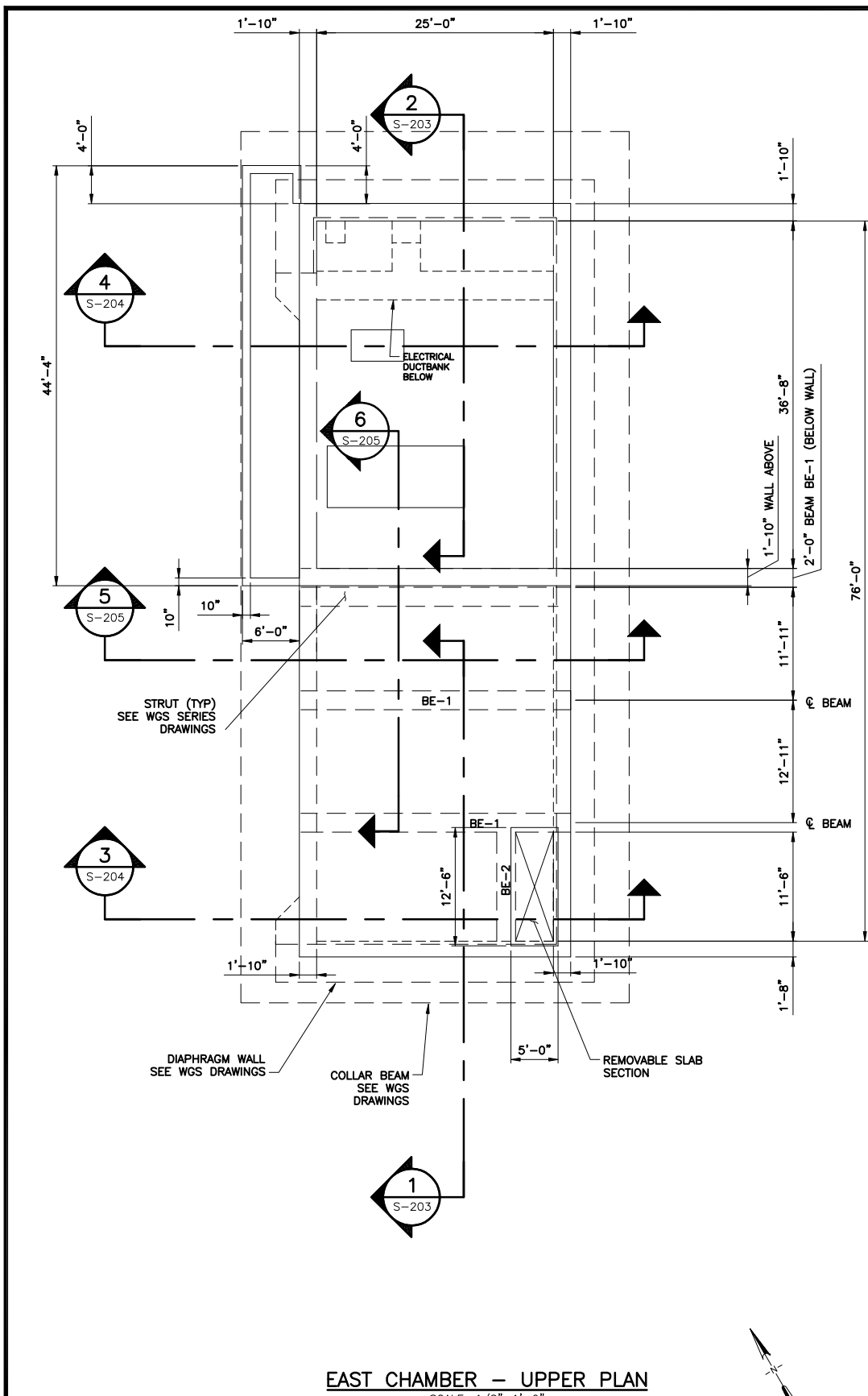
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EAST CHAMBER
LOWER AND INTERMEDIATE PLANS
STRUCTURAL

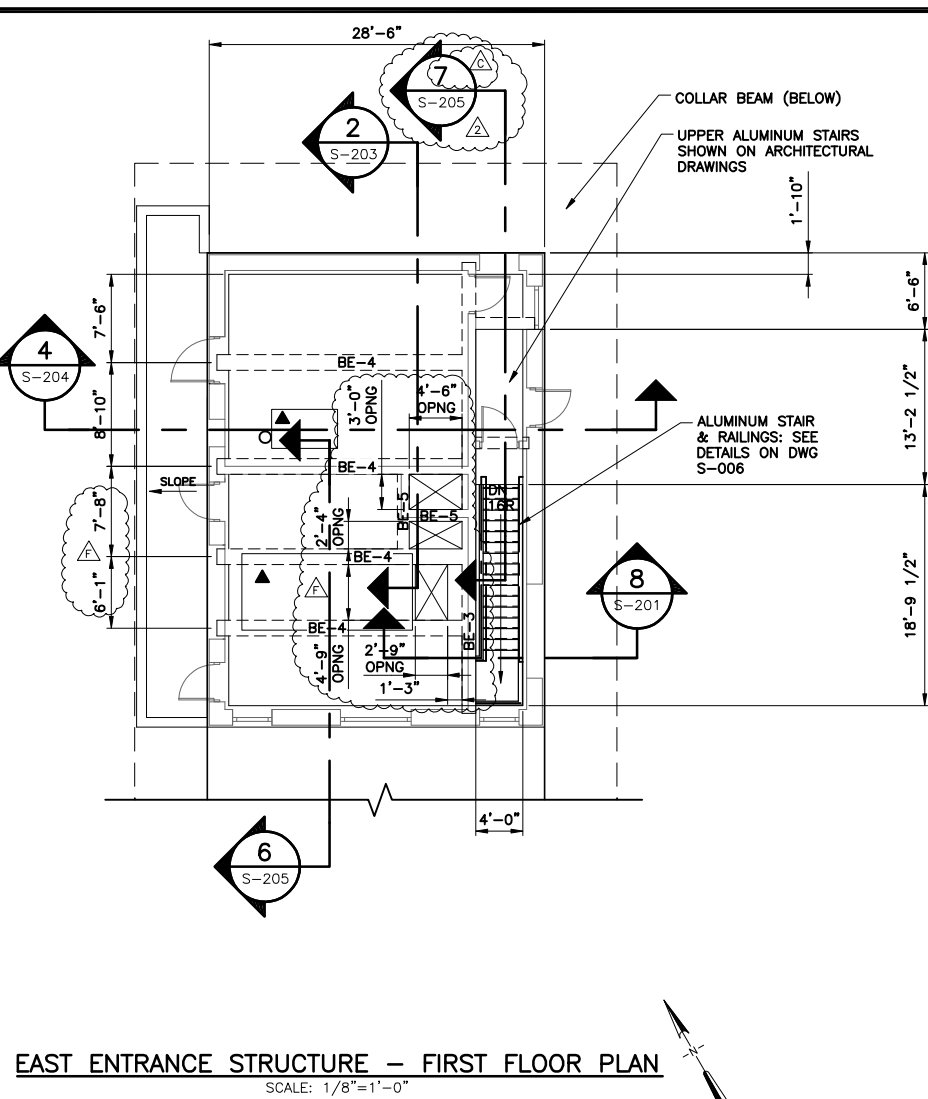
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RECORD DRAWING
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DATE: 05/16 PER: RCF

File Number: 00663
Date: 04/11

S-201



EAST CHAMBER - UPPER PLAN
SCALE: 1/8"=1'-0"



EAST ENTRANCE STRUCTURE - FIRST FLOOR PLAN
SCALE: 1/8"=1'-0"

FO 19
REFER TO DRAWINGS S-202, S-203, S-204 AND S-205. THE CONCRETE FOUNDATION WALLS THAT SUPPORT THE EAST ENTRANCE STRUCTURE (BUILDING) HAVE BEEN MODIFIED IN ORDER TO ACCOMMODATE THE PRECAST STONE PANELS INDICATED ON DRAWINGS A-202 AND A-204. REFER TO THE ATTACHED FIGURES 1 THROUGH 5.

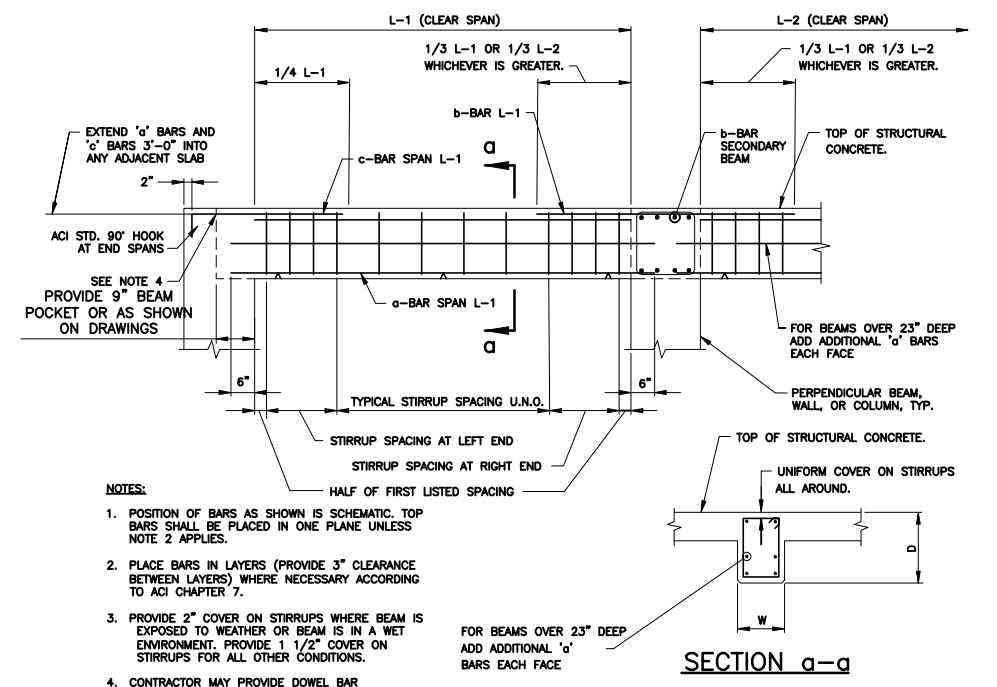
RFI 246
BEAMS BE-1 & BE-2 SHALL 24"x36"; 24"x38" AS INDICATED IN THE BEAM SCHEDULE ON CONTRACT DRAWING S-202.

RFI 250
IT WAS INTENDED TO HAVE ONE 1-1/2" DIAMETER PVC SLEEVE CAST-IN PLACE AT EACH OF THE FOUR CORNERS OF THE REMOVABLE SLAB SECTION; SET 1 FOOT IN FROM THE EDGES OF THE SLAB. NOTE THAT A 1/2" ISOLATION JOINT IS TO REMAIN AROUND THE PERIMETER OF THE REMOVABLE SLAB SECTION (AS INDICATED IN THE PREVIOUS "NON-CONFORMED" CONTRACT DRAWINGS). THIS JOINT DOES NOT NEED TO CONTAIN FILLER MATERIAL, BUT SHALL BE FILLED WITH SEALANT.

THE LIFTING AND REMOVAL OF THIS SLAB SECTION IS TO BE ACCOMPLISHED BY TEMPORARILY INSTALLING EYE-BOLTS THROUGH THE SLEEVES AND FASTENED TO AN OVERSIZED PLATE ON THE BOTTOM SIDE OF THE SLAB SECTION. ONCE IN PLACE, THESE EYE-BOLTS AND OVERSIZED PLATES ARE TO BE REMOVED AND THE PVC SLEEVES ARE TO BE PLUGGED WITH SEALANT.

| BEAM SCHEDULE EAST FACILITY | | | | | | | | | | |
|-----------------------------|-----------|-----------|--------------------|--------|---------|---------------------------------|------------------|--------------|----------------------|--|
| BEAM MARK | BEAM SIZE | BEAM TYPE | MAIN REINFORCEMENT | | | STIRRUPS & SPACING (SEE NOTE 2) | | | REMARKS | |
| | | | a | b | c | LEFT END | TYPICAL STIRRUPS | RIGHT END | | |
| BE-1 | 24 36 | P | (8) #10 | | (6) #10 | (13) #4 @ 6" | #4 @ 10" | (13) #4 @ 6" | #7 @ 8" SKIN REIN EF | |
| BE-2 | 24 36 | S | (5) #8 | (4) #8 | (4) #8 | (7) #4 @ 8" | #4 @ 10" | (7) #4 @ 8" | #3 @ 8" SKIN REIN EF | |
| BE-3 | 18 68 | P | (10) #9 | | (6) #9 | (16) #4 @ 8" | #4 @ 12" | (16) #4 @ 8" | #4 @ 8" SKIN REIN EF | |
| BE-4 | 16 30 | P | (5) #8 | | (4) #8 | (5) #4 @ 6" | #4 @ 16" | (5) #4 @ 6" | #4 @ 8" SKIN REIN EF | |
| BE-5 | 12 30 | S | (4) #5 | (4) #5 | (4) #5 | | #4 @ 16" | | #4 @ 8" SKIN REIN EF | |
| BE-6 | 16 24 | P | (3) #6 | (3) #6 | (3) #6 | | #4 @ 16" | | #4 @ 8" SKIN REIN EF | |

NOTES:
 1. DETAIL ALL BARS AS SHOWN ON THE BEAM BAR PLACING DIAGRAM.
 2. INSTALL "TYPICAL" STIRRUPS THROUGHOUT ENTIRE LENGTH OF BEAM IF STIRRUP SPACING IS NOT INDICATED FOR LEFT END AND/OR RIGHT END.
 3. BEAM TYPE INDICATES (P) PRIMARY BEAM OR (S) SECONDARY BEAM. NOTE THAT TOP REINFORCEMENT IN SECONDARY BEAMS SHALL BE LOCATED BELOW TOP REINFORCING IN PRIMARY BEAMS.



BEAM BAR PLACING DIAGRAM
NOT TO SCALE

NOTES:
 1. POSITION OF BARS AS SHOWN IS SCHEMATIC. TOP BARS SHALL BE PLACED IN ONE PLANE UNLESS NOTE 2 APPLIES.
 2. PLACE BARS IN LAYERS (PROVIDE 3" CLEARANCE BETWEEN LAYERS) WHERE NECESSARY ACCORDING TO ACI CHAPTER 7.
 3. PROVIDE 2" COVER ON STIRRUPS WHERE BEAM IS EXPOSED TO WEATHER OR BEAM IS IN A WET ENVIRONMENT. PROVIDE 1 1/2" COVER ON STIRRUPS FOR ALL OTHER CONDITIONS.
 4. CONTRACTOR MAY PROVIDE DOWEL BAR SUBSTITUTES AT BEAM POCKETS.

L: ON=*; OFF=REF*
 X:
 MO/DA/YR CO DFT
 DIR/DWG

SCALE:
 1/8"=1'-0"

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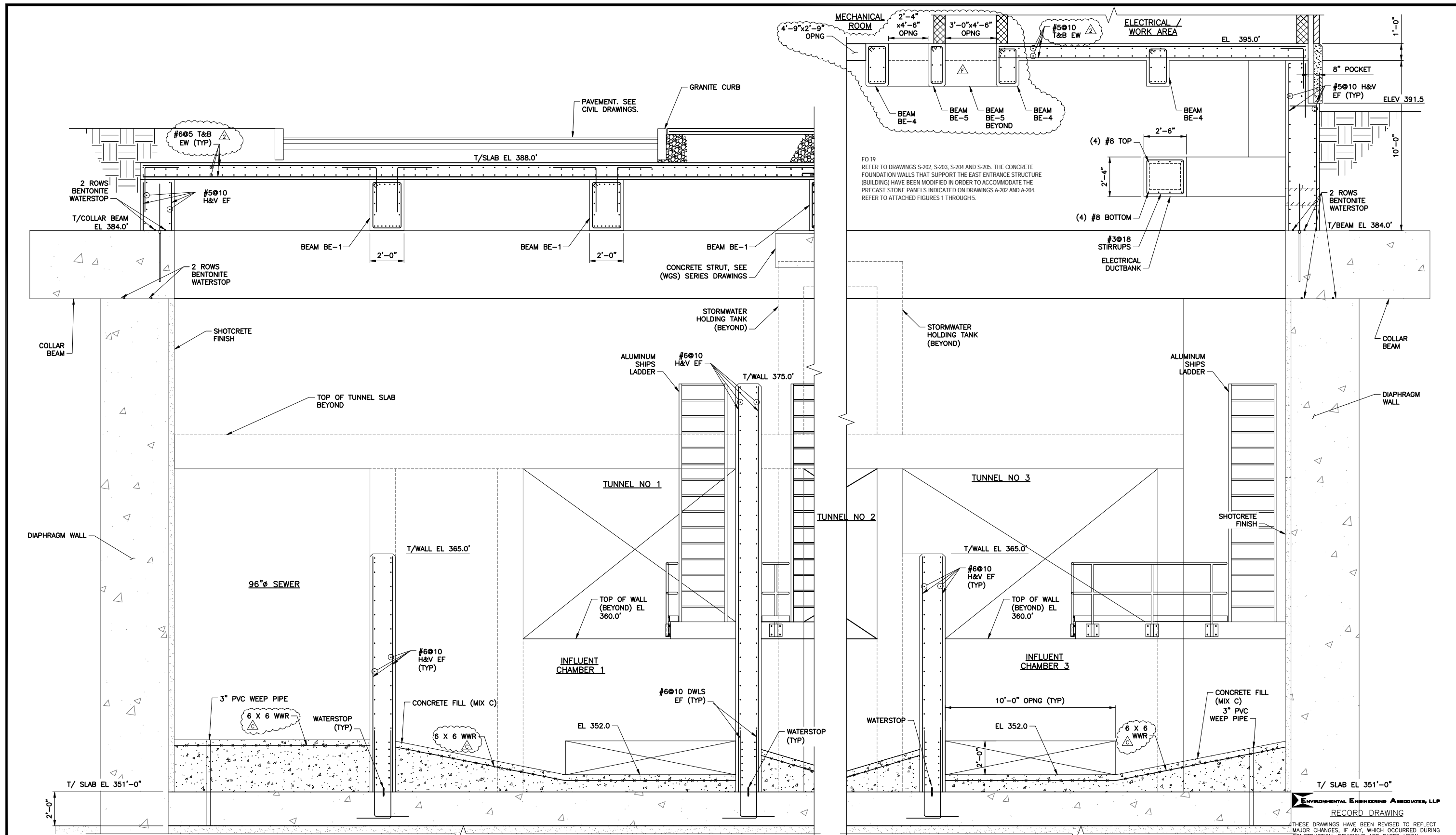
**EAST CHAMBER
 FIRST FLOOR PLAN**
 STRUCTURAL

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 RECORD DRAWING

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DATE: 05/16 PER: RCF

File Number: 00663
 Date: 04/11
 S-202



FD 19
 REFER TO DRAWINGS S-202, S-203, S-204 AND S-205. THE CONCRETE FOUNDATION WALLS THAT SUPPORT THE EAST ENTRANCE STRUCTURE (BUILDING) HAVE BEEN MODIFIED IN ORDER TO ACCOMMODATE THE PRECAST STONE PANELS INDICATED ON DRAWINGS A-202 AND A-204. REFER TO ATTACHED FIGURES 1 THROUGH 5.

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 RECORD DRAWING
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 DATE: 05/16 PER: RCF

L: ON=*; OFF=*REF*
 X:
 MO/DA/YR CO DFT
 DIR/DWG
 SCALE:
 3/8"=1'-0"

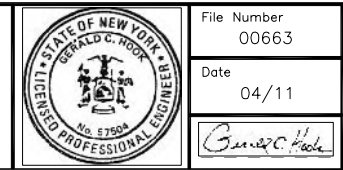
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 Checked by BTM



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 CLINTON CSO STORAGE FACILITY PROJECT

EAST CHAMBER
 SECTIONS
 STRUCTURAL



File Number
 00663

Date
 04/11

S-203

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FO 8
LADDERS AT THE EAST OF TUNNELS NO. 1, 2 & 3 SHOULD NOT EXTEND TO THE TUNNEL INVERT AND SHOULD BE TERMINATED 10 INCHES ABOVE THE FLOOR TO MINIMIZE HANG-UP OF MATERIAL DURING TUNNEL FLUSHING. THESE LADDERS ARE REFERENCED ON SHEET S-201, SECTION 4 SHEET S-204 AND SECTION S-205.

FO 19
REFER TO DRAWINGS S-202, S-203, S-204 AND S-205. THE CONCRETE FOUNDATION WALLS THAT SUPPORT THE EAST ENTRANCE STRUCTURE (BUILDING) HAVE BEEN MODIFIED IN ORDER TO ACCOMMODATE THE PRECAST STONE PANELS INDICATED ON DRAWINGS A-S202 AND A-204.

RF1267
EEA HAS NO OBJECTION TO THE CONTRACTOR PLACING THIS SLOPED CONCRETE FILL IN TWO LIFTS AS PROPOSED. HOWEVER, THE FOLLOWING THREE CONDITIONS SHALL BE MET:
THE THICKNESS OF EACH LIFT SHALL BE GREATER THAN 4 INCHES TO BE SURE THE CONCRETE IS PROPERLY PLACED AND VIBRATED.

THE TOP SURFACE OF THE FIRST LIFT SHALL RECEIVE A SCRATCHED FINISH AND BONDING AGENT TO BE SURE THE SECOND LIFT PROPERLY BONDS WITH THE FIRST LIFT.

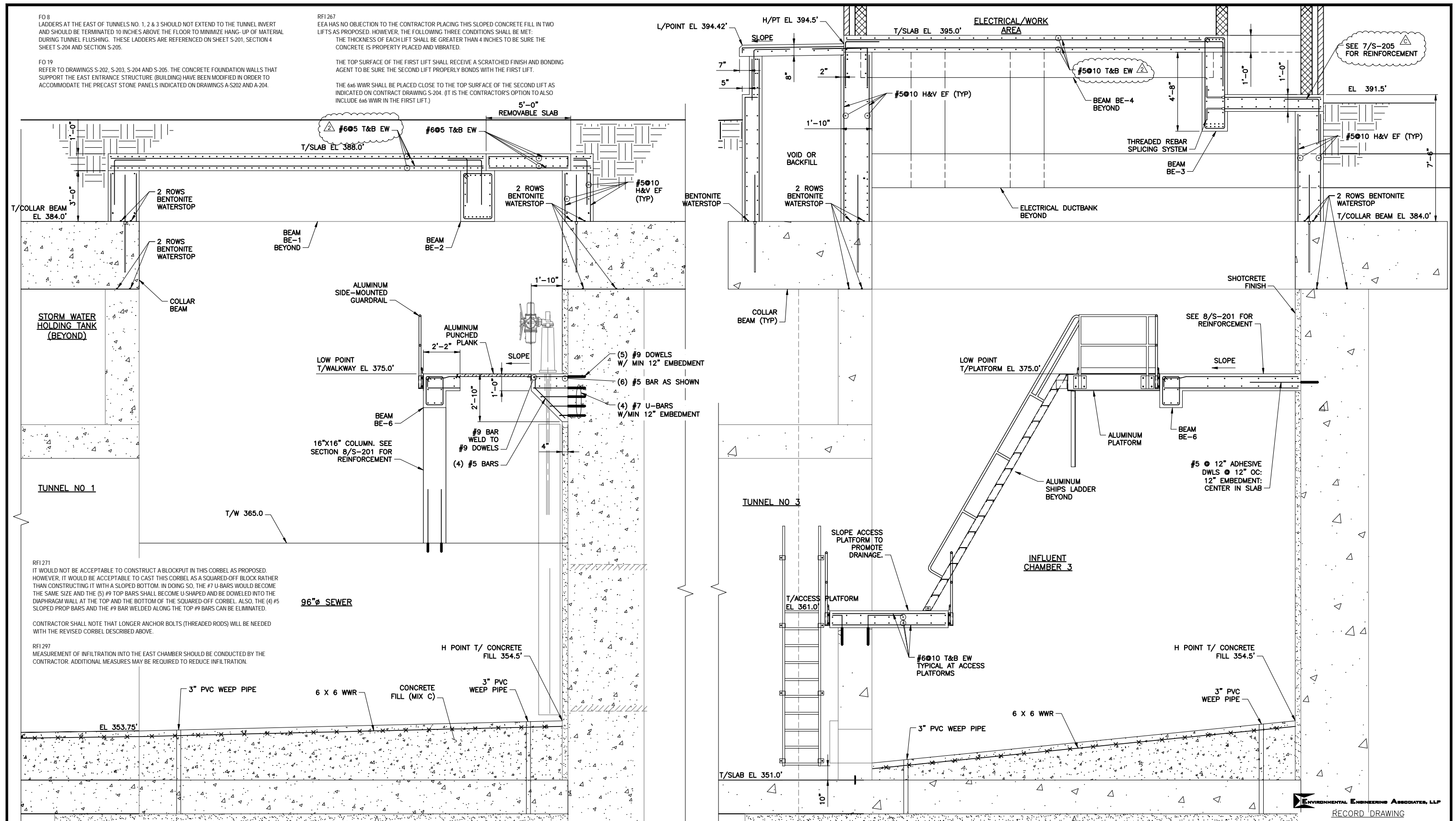
THE 6x6 WWR SHALL BE PLACED CLOSE TO THE TOP SURFACE OF THE SECOND LIFT AS INDICATED ON CONTRACT DRAWING S-204. (IT IS THE CONTRACTOR'S OPTION TO ALSO INCLUDE 6x6 WWR IN THE FIRST LIFT.)

96" Ø SEWER

RF1271
IT WOULD NOT BE ACCEPTABLE TO CONSTRUCT A BLOCKPUT IN THIS CORBEL AS PROPOSED. HOWEVER, IT WOULD BE ACCEPTABLE TO CAST THIS CORBEL AS A SQUARED-OFF BLOCK RATHER THAN CONSTRUCTING IT WITH A SLOPED BOTTOM. IN DOING SO, THE #7 U-BARS WOULD BECOME THE SAME SIZE AND THE (5) #9 TOP BARS SHALL BECOME U-SHAPED AND BE DOWELED INTO THE DIAPHRAGM WALL AT THE TOP AND THE BOTTOM OF THE SQUARED-OFF CORBEL. ALSO, THE (4) #5 SLOPED PROP BARS AND THE #9 BAR WELDED ALONG THE TOP #9 BARS CAN BE ELIMINATED.

CONTRACTOR SHALL NOTE THAT LONGER ANCHOR BOLTS (THREADED RODS) WILL BE NEEDED WITH THE REVISED CORBEL DESCRIBED ABOVE.

RF1297
MEASUREMENT OF INFILTRATION INTO THE EAST CHAMBER SHOULD BE CONDUCTED BY THE CONTRACTOR. ADDITIONAL MEASURES MAY BE REQUIRED TO REDUCE INFILTRATION.



SECTION 3
3/8"=1'-0" S-201 S-202

SECTION 4
3/8"=1'-0" S-201 S-202

L: ON=; OFF=REF*
X:
MO/DA/YR CO DFT
DIR/DWG
SCALE:
3/8"=1'-0"

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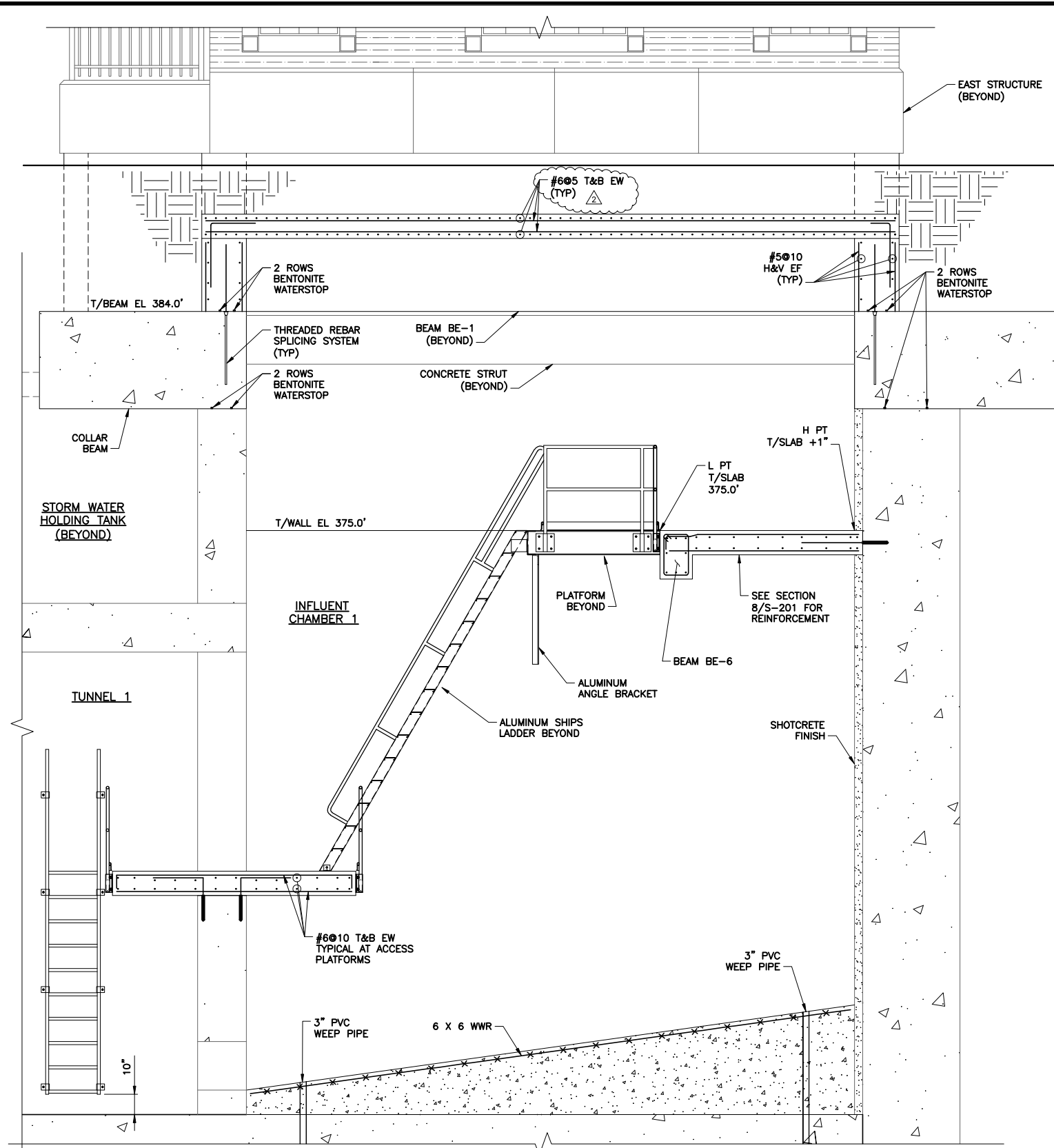
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| 1 | 05/16 | RECORD DRAWINGS | |

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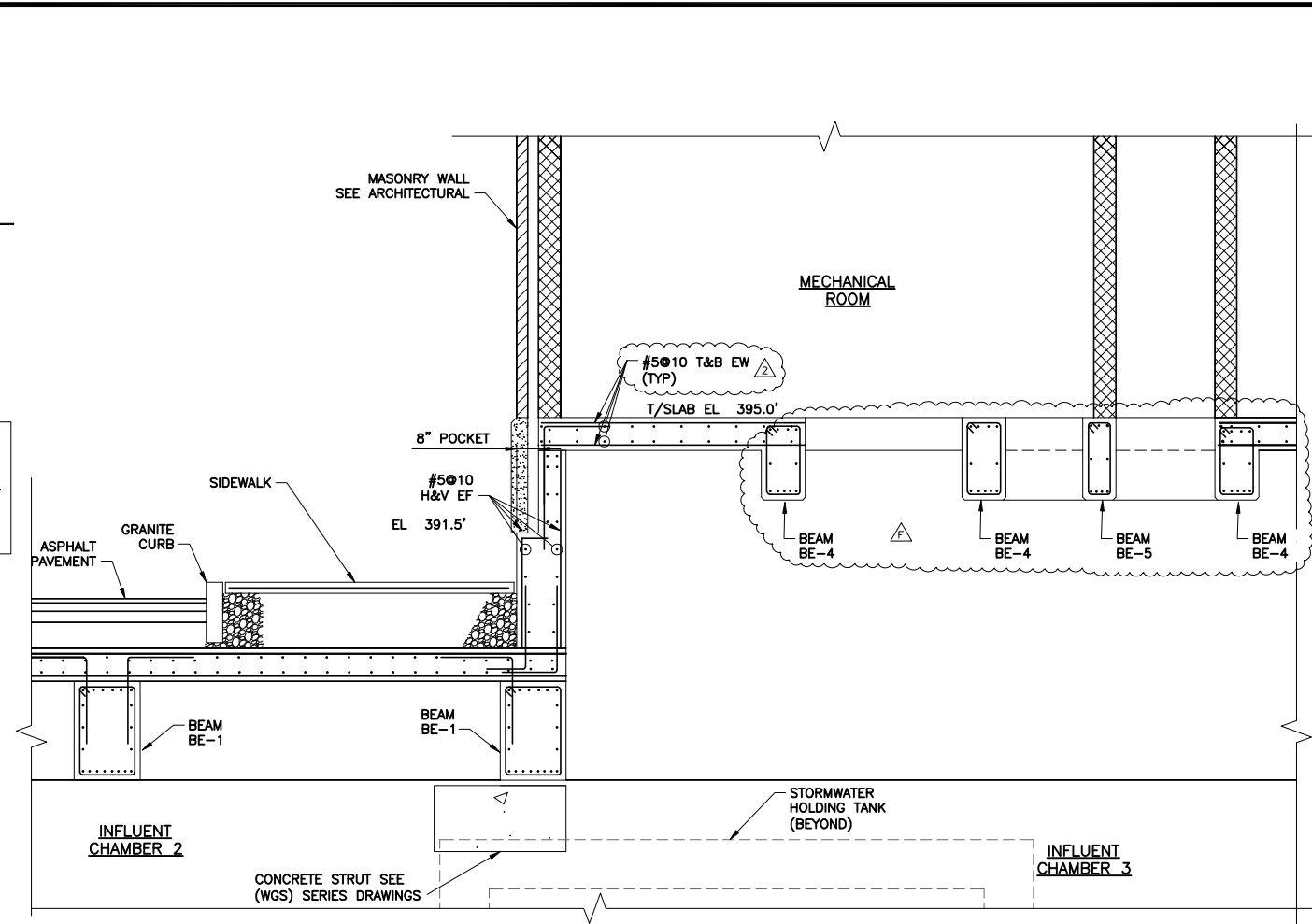
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CLINTON CSO STORAGE FACILITY PROJECT
EAST CHAMBER SECTIONS
STRUCTURAL

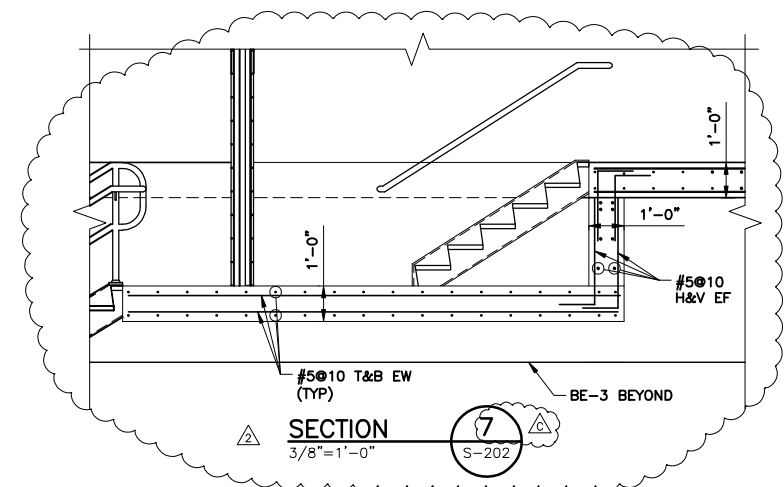
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DATE: 05/16 PER: RCF
File Number 00663
Date 01/11
S-204



SECTION 5-5
3/8"=1'-0"



SECTION 6
3/8"=1'-0"



SECTION 7
3/8"=1'-0"

FO8
LADDERS AT THE EAST END OF TUNNELS NO. 1, 2 & 3 SHOULD NOT EXTEND TO THE TUNNEL INVERT AND SHOULD BE TERMINATED 10 INCHES ABOVE THE FLOOR TO MINIMIZE HANG-UP OF MATERIAL DURING TUNNEL FLUSHING. THESE LADDERS ARE REFERENCED ON SHEET S-201, SECTION 4 SHEET S-204 AND SECTION 5 SHEET S-205.

FO19
REFER TO DRAWINGS S-202, S-203, S-204 AND S-205. THE CONCRETE FOUNDATION WALLS THAT SUPPORT THE EAST ENTRANCE STRUCTURE (BUILDING) HAVE BEEN MODIFIED IN ORDER TO ACCOMMODATE THE PRECAST STONE PANELS INDICATED ON DRAWINGS A-202 AND A-S204.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.
DATE: 05/16 PER: RCF

L: ON=*; OFF=REF*
X:
MO/DA/YR CO DFT
DIR/DWG
SCALE:
3/8"=1'-0"

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

| No. | Date | Revisions | Init |
|-----|-------|-----------------|------|
| 1 | 05/16 | RECORD DRAWINGS | |

In charge of CMK
Designed by CMK
Drawn by MJL/TML
Checked by BTM

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT
EAST CHAMBER SECTIONS
STRUCTURAL

File Number 00663
Date 04/11
S-205

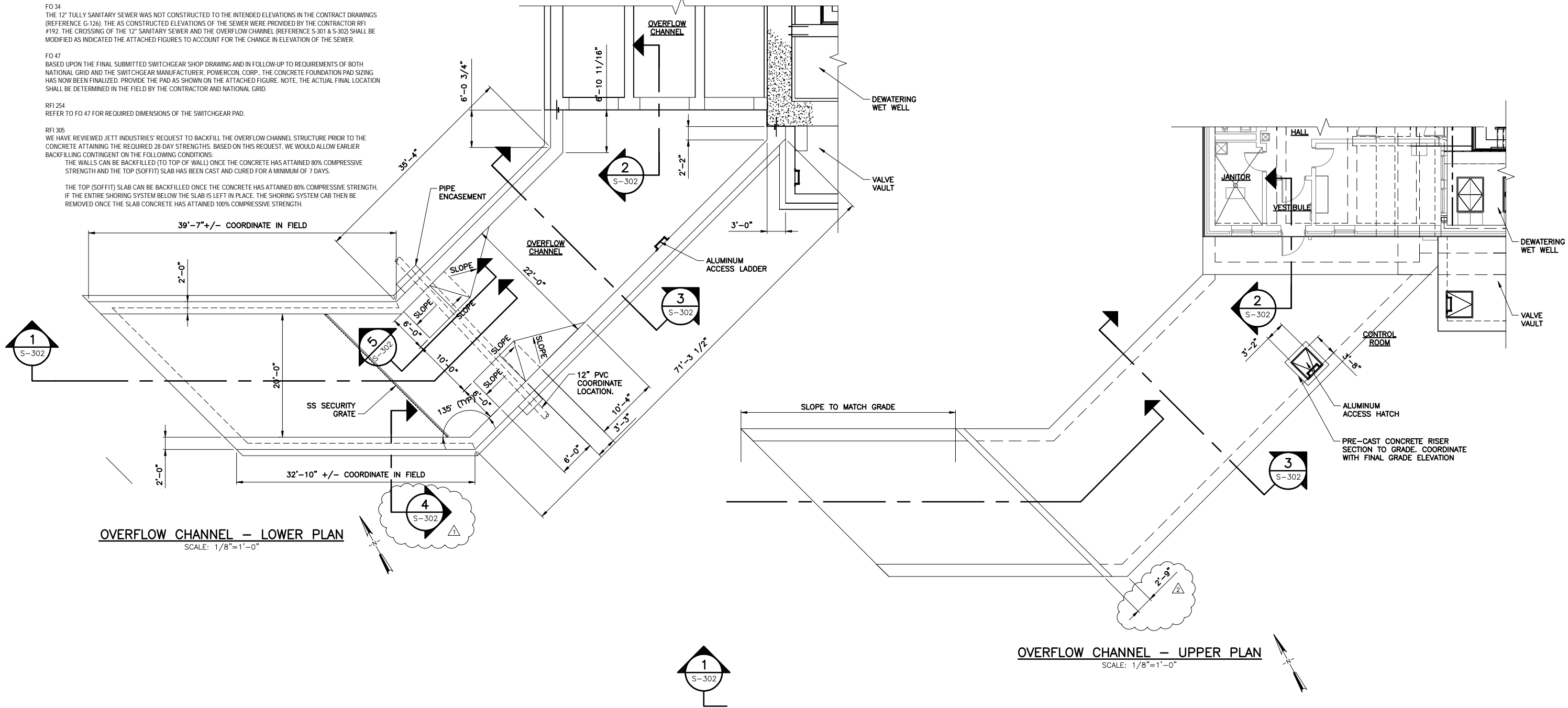
FO 34
 THE 12" TULLY SANITARY SEWER WAS NOT CONSTRUCTED TO THE INTENDED ELEVATIONS IN THE CONTRACT DRAWINGS (REFERENCE G-126). THE AS CONSTRUCTED ELEVATIONS OF THE SEWER WERE PROVIDED BY THE CONTRACTOR RFI #192. THE CROSSING OF THE 12" SANITARY SEWER AND THE OVERFLOW CHANNEL (REFERENCE S-301 & S-302) SHALL BE MODIFIED AS INDICATED THE ATTACHED FIGURES TO ACCOUNT FOR THE CHANGE IN ELEVATION OF THE SEWER.

FO 47
 BASED UPON THE FINAL SUBMITTED SWITCHGEAR SHOP DRAWING AND IN FOLLOW-UP TO REQUIREMENTS OF BOTH NATIONAL GRID AND THE SWITCHGEAR MANUFACTURER, POWERCON, CORP., THE CONCRETE FOUNDATION PAD SIZING HAS NOW BEEN FINALIZED. PROVIDE THE PAD AS SHOWN ON THE ATTACHED FIGURE. NOTE, THE ACTUAL FINAL LOCATION SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND NATIONAL GRID.

RFI 254
 REFER TO FO 47 FOR REQUIRED DIMENSIONS OF THE SWITCHGEAR PAD.

RFI 305
 WE HAVE REVIEWED JETT INDUSTRIES' REQUEST TO BACKFILL THE OVERFLOW CHANNEL STRUCTURE PRIOR TO THE CONCRETE ATTAINING THE REQUIRED 28-DAY STRENGTHS. BASED ON THIS REQUEST, WE WOULD ALLOW EARLIER BACKFILLING CONTINGENT ON THE FOLLOWING CONDITIONS:
 THE WALLS CAN BE BACKFILLED (TO TOP OF WALL) ONCE THE CONCRETE HAS ATTAINED 80% COMPRESSIVE STRENGTH AND THE TOP (SOFFIT) SLAB HAS BEEN CAST AND CURED FOR A MINIMUM OF 7 DAYS.

THE TOP (SOFFIT) SLAB CAN BE BACKFILLED ONCE THE CONCRETE HAS ATTAINED 80% COMPRESSIVE STRENGTH. IF THE ENTIRE SHORING SYSTEM BELOW THE SLAB IS LEFT IN PLACE. THE SHORING SYSTEM CAN THEN BE REMOVED ONCE THE SLAB CONCRETE HAS ATTAINED 100% COMPRESSIVE STRENGTH.



L: ON=*; OFF=*REF*
 X:
 MO/DA/YR CO DFT
 DIR/DWG



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| No. | Date | Revisions | Init |
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| 1 | 05/16 | RECORD DRAWINGS | |

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

In charge of ___ CMK ___
 Designed by ___ CMK ___
 Drawn by ___ MJL ___
 Checked by ___ BTM ___

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

OVERFLOW CHANNEL PLANS
 STRUCTURAL

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 05/16 PER: RCF

File Number: 00663
 Date: 04/11

S-301

FO 34
 THE 12" TULLY SANITARY SEWER WAS NOT CONSTRUCTED TO THE INTENDED ELEVATIONS IN THE CONTRACT DRAWINGS (REFER G-126). THE AS CONSTRUCTED ELEVATIONS OF THE SEWER WERE PROVIDED BY THE CONTRACTOR RFI#192. THE CROSSING OF THE 12" SANITARY SEWER AND THE OVERFLOW CHANNEL (REFERENCES S-301 & S-302) SHALL BE MODIFIED AS INDICATED THE ATTACHED FIGURES TO ACCOUNT FOR THE CHANGE IN ELEVATION OF THE SEWER.

RFI 243
 EVEN THOUGH THE EXISTING CREEK BED (CHANNEL) IS CONSTRUCTED OF CONCRETE SLABS INSTEAD OF CONCRETE BLOCKS, THE CONCRETE FILL AT THE END OF THE OVERFLOW CHANNEL SLAB SHALL BE CONSTRUCTED AS INDICATED IN SECTION 1/S-302. IT SHOULD BE NOTED THAT THIS CONCRETE FILL IS EXPOSED TO PROCESS WATER, SO IT SHALL BE CONSTRUCTED OF 'MIX B' CONCRETE.

IF THE CONTRACTOR DESIRES TO CAST THIS CONCRETE FILL MONOLITHIC WITH THE END OF THE OVERFLOW CHANNEL SLAB, THEN SUBMIT A PROPOSED DETAIL ON HOW THIS WOULD BE CONSTRUCTED. THIS PROPOSED DETAIL SHALL INCLUDE ADDITIONAL REINFORCING BARS EXTENDING INTO THIS NEWLY ADDED MONOLITHIC SECTION.

RFI 285
 IT WOULD BE ACCEPTABLE TO PROVIDE A CONSTRUCTION JOINT (WITH WATERSTOP) IN THE INVERT SLAB OF THE OVERFLOW CHANNEL AS INDICATED IN THIS RFI. NOTE THAT THE PROPOSED ADDITIONAL 6 INCH PVC WATERSTOP SHALL BE TIED-IN (CONTINUOUS) WITH THE WATERSTOP THAT WILL BE INSTALLED ALONG THE BOTTOM OF WALL AND SLAB INTERFACE.

IT SHALL BE NOTED THAT THIS PROPOSED CHANGE PERTAINS TO THE CONTRACTOR'S MEANS AND METHODS AND SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.

RFI 305
 WE HAVE REVIEW JETT INDUSTRIES' REQUEST TO BACKFILL THE OVERFLOW CHANNEL STRUCTURE PRIOR TO THE CONCRETE ATTAINING THE REQUIRED 28-DAY STRENGTHS. BASED IN THIS REQUEST, WE WOULD ALLOW EARLIER BACKFILLING CONTINGENT ON THE FOLLOWING CONDITIONS:

THE WALLS CAN BE BACKFILLED (TO TOP OF WALL) ONCE THE CONCRETE HAS ATTAINED 80% COMPRESSIVE STRENGTH AND THE TOP (SOFFIT) SLAB HAS BEEN CAST AND CURED FOR A MINIMUM OF 7 DAYS.

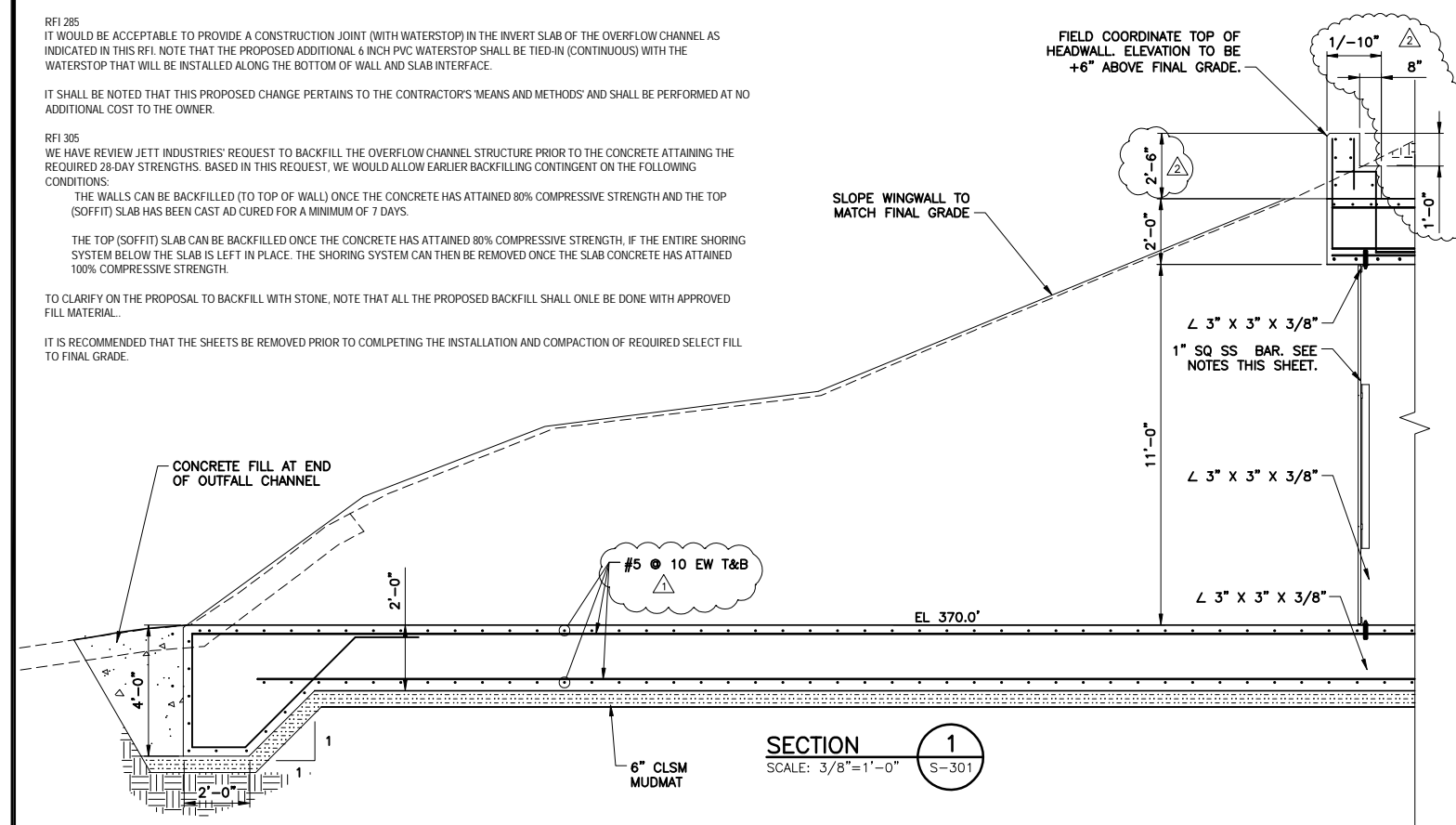
THE TOP (SOFFIT) SLAB CAN BE BACKFILLED ONCE THE CONCRETE HAS ATTAINED 80% COMPRESSIVE STRENGTH, IF THE ENTIRE SHORING SYSTEM BELOW THE SLAB IS LEFT IN PLACE. THE SHORING SYSTEM CAN THEN BE REMOVED ONCE THE SLAB CONCRETE HAS ATTAINED 100% COMPRESSIVE STRENGTH.

TO CLARIFY ON THE PROPOSAL TO BACKFILL WITH STONE, NOTE THAT ALL THE PROPOSED BACKFILL SHALL ONLY BE DONE WITH APPROVED FILL MATERIAL.

IT IS RECOMMENDED THAT THE SHEETS BE REMOVED PRIOR TO COMPLETING THE INSTALLATION AND COMPACTION OF REQUIRED SELECT FILL TO FINAL GRADE.

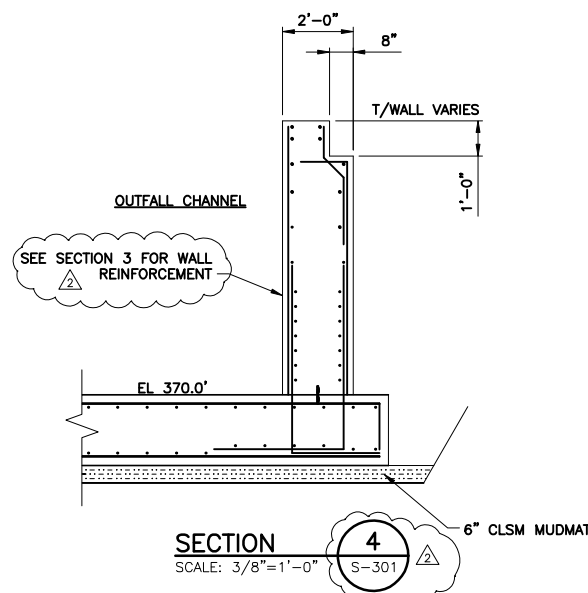
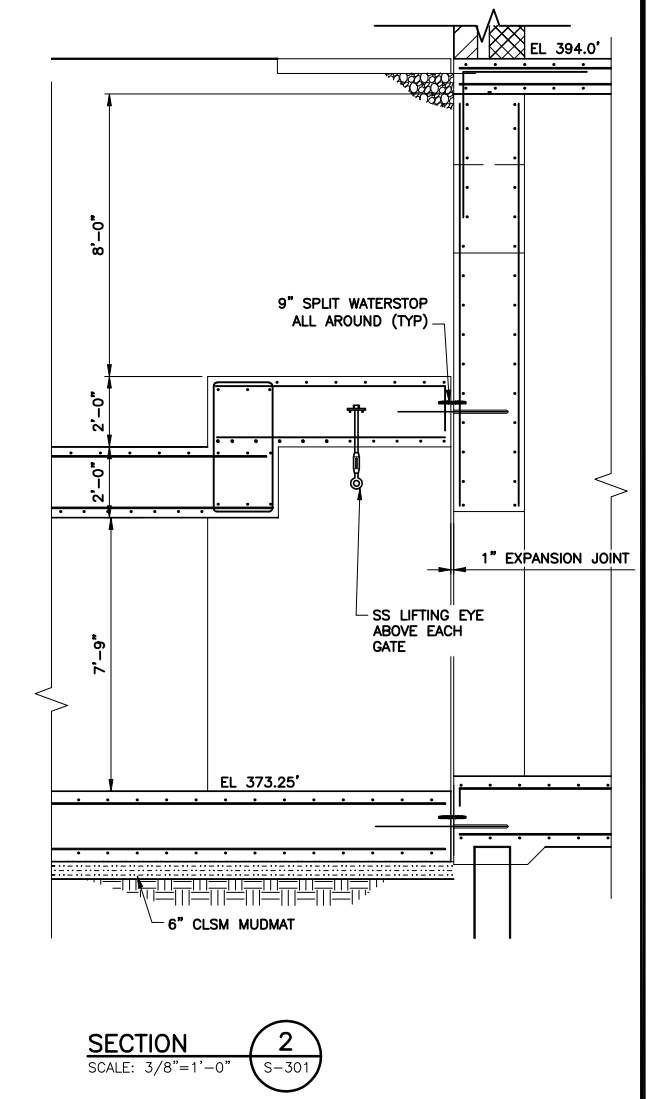
NOTES:

1. THE PROVIDED HEIGHT OF HEADWALL IS BASED ON FINAL GRADES INDICATED IN THE CONTRACT DRAWINGS, CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE DIMENSION OF THE HEADWALL SO THAT IT IS 6 INCHES ABOVE FINAL GRADE.



SECURITY GRATE NOTES:

1. ALL MATERIAL STAINLESS STEEL.
2. USE A 1/2" X 2" PLATE AT 1/3 POINTS HORIZONTAL.
3. USE CONTINUOUS L 3" X 3" X 3/8" TOP AND BOTTOM. USE 3/4" SS ADHESIVE ANCHORS @ 1'-0" OC (TYP). NOTCH AT 1/4 POINTS TO ALLOW FOR DRAINAGE.
4. USE L 3" X 3" X 3/8" AT SIDE WALLS, WITH 3/4" SS ADHESIVE ANCHORS. FIELD WELD TO HORIZONTAL BRACE BARS.
5. FIELD WELD ALL NUTS AFTER INSTALLATION IS COMPLETE TO PREVENT REMOVAL.



L: ON=*; OFF=*REF*
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| No. | Date | Revisions | Init |
|-----|-------|-----------------|------|
| 1 | 05/16 | RECORD DRAWINGS | |

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 Designed by ___ CMK
 Drawn by ___ MJL
 Checked by ___ BTM

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 SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

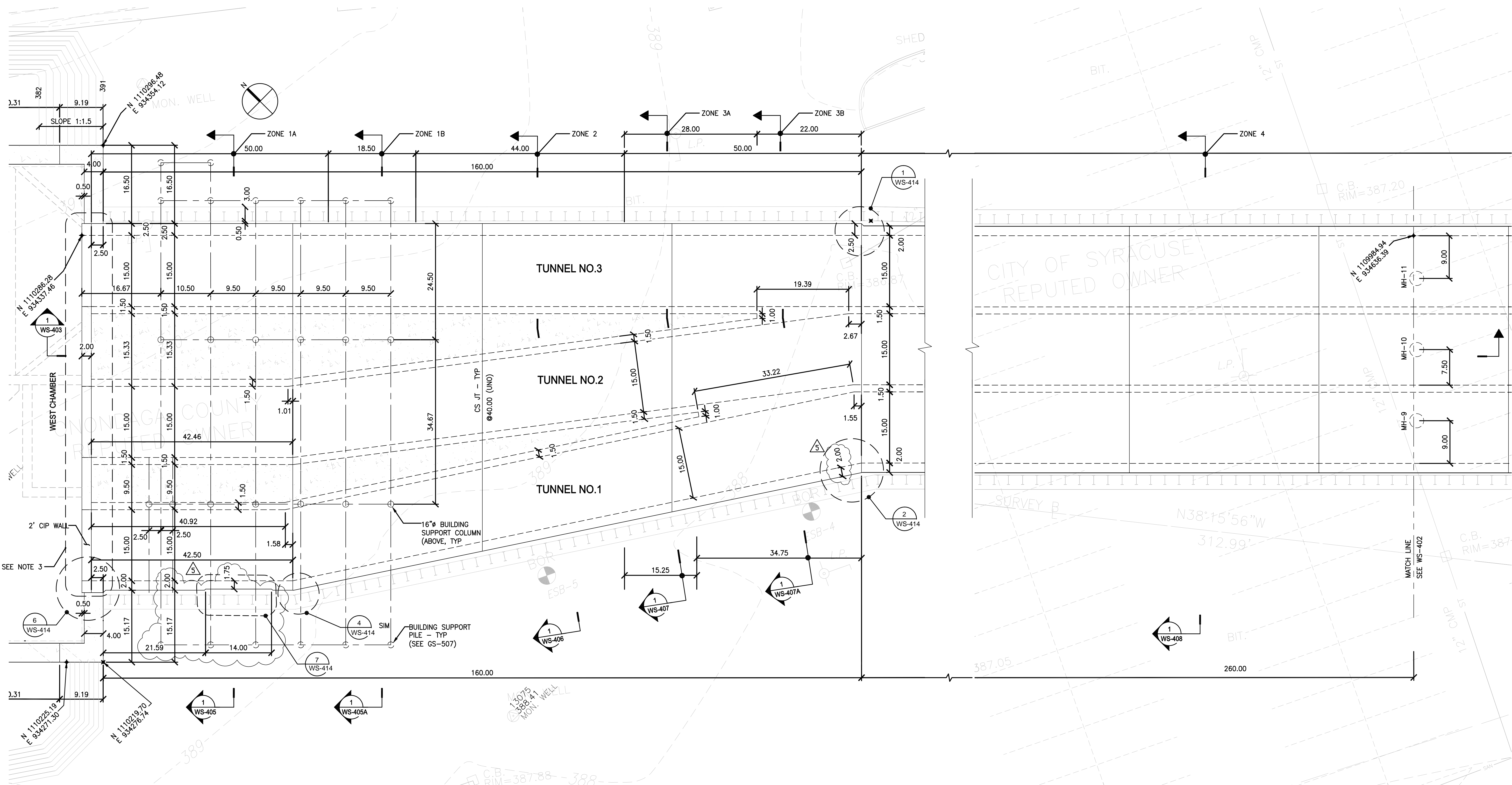
OVERFLOW CHANNEL SECTIONS
 STRUCTURAL

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 RECORD DRAWING

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DATE: 05/16 PER: RCF

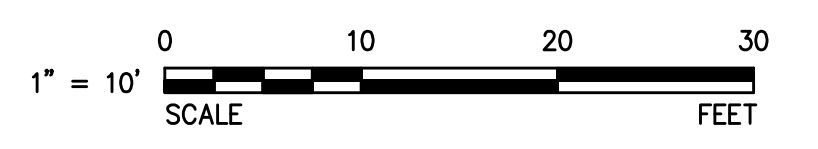
File Number: 00663
 Date: 04/11
 S-302



ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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 DATE: 05/16 PER: RCF

PLAN
 SCALE: 1"=10'
 A

- NOTES:**
1. FOR BOX CULVERT REINFORCING SEE WS-405 THRU WS-411.
 2. CONSTRUCTION JOINT SHALL BE LIMITED TO 40 FT OR LESS. (SEE TYPICAL DETAILS ON CONTRACT DRAWING S-002).
 3. FOR BOX CULVERT/TUNNELS INTERFACE WITH WEST CHAMBER SLURRY WALLS AND 2' CIP WALL SEE DETAIL 1/WGS-400, DETAIL 5 & SECTION 6/WGS-402 & DETAIL 5/WGS-413.
 4. ANY ADDITIONAL CONSTRUCTION JOINTS NEEDED TO FACILITATE CONSTRUCTION WILL BE SUBMITTED TO WAI AND ENGINEER FOR APPROVAL.



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 Heavy & Highway Contractors
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WAI WEIDLINGER ASSOCIATES INC.
 Consulting Engineers
 201 Broadway, Cambridge MA 02139
 (617) 374-0000 fax: (617) 374-0010

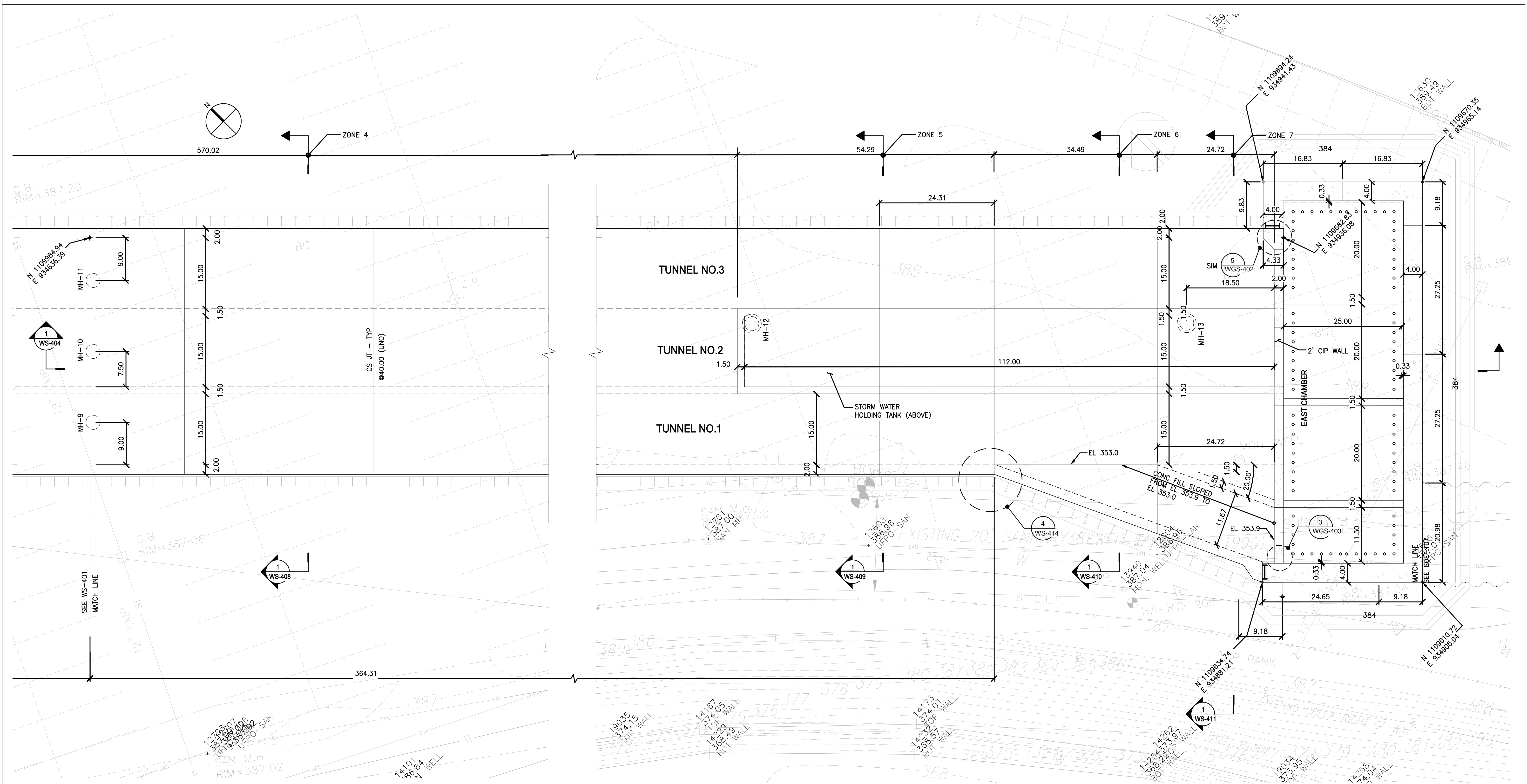
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|----------|-----------------------------|-----|
| 06/16/11 | | 5 |
| 03/25/11 | | 4 |
| 03/10/11 | | 3 |
| 02/25/12 | TUNNEL SOUTH WALL REVISIONS | 2 |
| 02/29/12 | CHANGE ORDER NO. 1 | 1 |
| DATE: | REVISIONS | No. |

DESIGNED BY:
H. AWAL
 DRAWN BY:
N. BONDOC
 CHECKED BY:
M. KIRMANI
 APPROVED BY:
G. CHEN



**ONONDAGA COUNTY - DWEP
 CLINTON CSO STORAGE FACILITY**
 BOX CULVERT/TUNNEL
 GENERAL LAYOUT

CONTRACT No.
 SCALE: 1"=10'
 DATE: 11/22/2011
 DRAWING NO.
WS-401

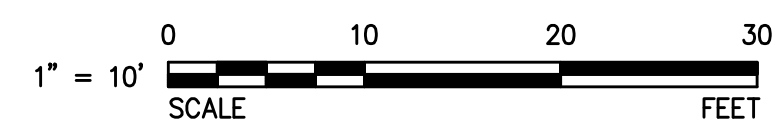


ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 RECORD DRAWING

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 DATE: 05/16 PER: RCF

PLAN @ EL 373.0
 SCALE: 1"=10'

- NOTES:
1. FOR BOX CULVERT REINFORCING SEE WS-405 THRU WS-411.
 2. CONSTRUCTION JOINT SHALL BE LIMITED TO 40 FT OR LESS. (SEE TYPICAL DETAILS ON CONTRACT DRAWING S-002).
 3. FOR BOX CULVERT/TUNNEL INTERFACE WITH EAST CHAMBER SLURRY WALLS AND THE 2' CIP WALL SEE DETAILS ON WS-412 AND WS-413.
 4. FOR STORMWATER HOLDING TANK PIPE PENETRATIONS/SLEEVES LOCATION ALONG THE TANK SEE MECHANICAL DRAWINGS.
 5. ANY ADDITIONAL CONSTRUCTION JOINTS NEEDED TO FACILITATE CONSTRUCTION WILL BE SUBMITTED TO WAI AND ENGINEER FOR APPROVAL.



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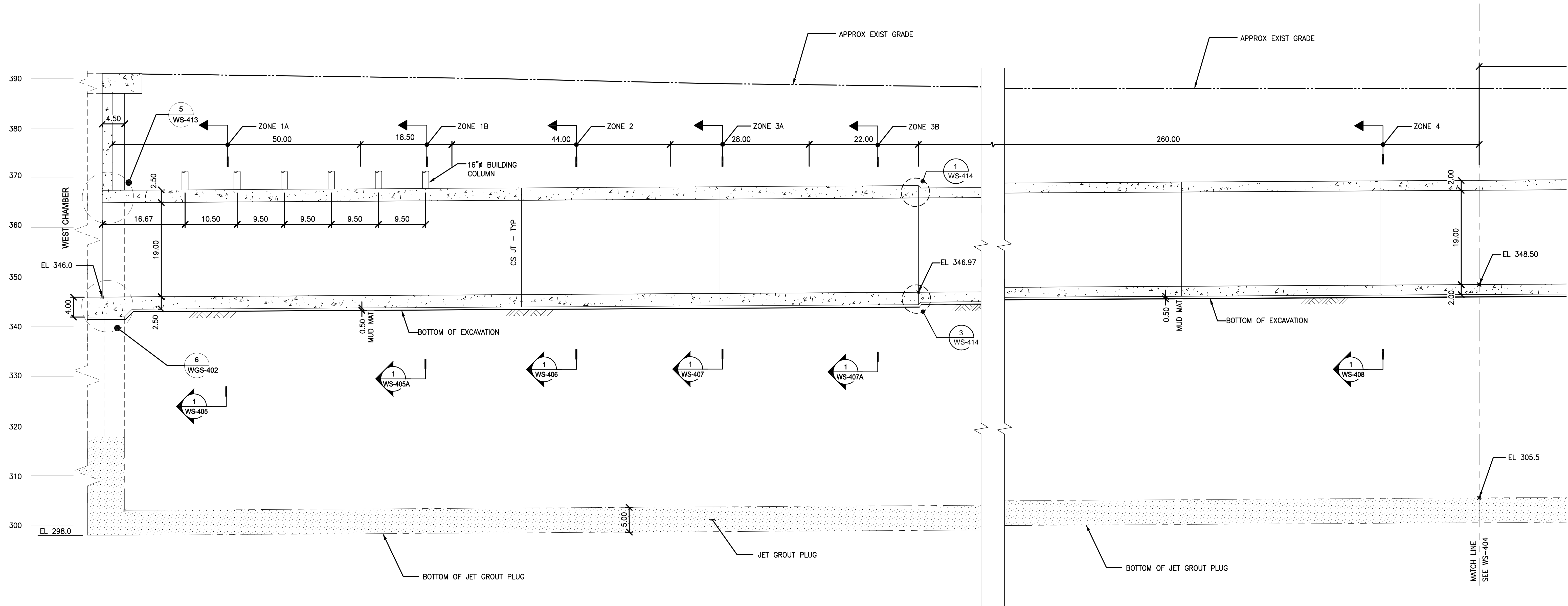
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|----------|--------------------|-----|
| 06/16/11 | | 5 |
| 03/25/12 | CHANGE ORDER NO. 1 | 4 |
| 03/20/12 | | 3 |
| 02/05/12 | | 2 |
| 01/29/12 | | 1 |

| | |
|--------------|------------|
| DESIGNED BY: | H. AWAL |
| DRAWN BY: | N. BONDOC |
| CHECKED BY: | M. KIRMANI |
| APPROVED BY: | G. CHEN |



**ONONDAGA COUNTY - DWEP
 CLINTON CSO STORAGE FACILITY**
 BOX CULVERT/TUNNEL
 GENERAL LAYOUT

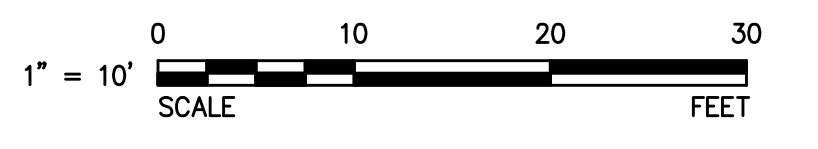
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| CONTRACT No. | |
| SCALE: | 1"=10' |
| DATE: | 11/22/2011 |
| DRAWING No. | WS-402 |



SECTION 1
SCALE: 1"=10'

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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DATE: 05/16 PER: RCF

- NOTES:
1. FOR BOX CULVERT REINFORCING SEE WS-405 THRU WS-411.
2. CONSTRUCTION JOINT SHALL BE LIMITED TO 40 FT OR LESS. (SEE TYPICAL DETAILS ON CONTRACT DRAWING S-002).
3. FOR BOX CULVERT/TUNNEL INTERFACE WITH WEST CHAMBER WALLS AND SLAB SEE DETAILS ON WGS-400, WGS-402, WS-120 AND WS-413.



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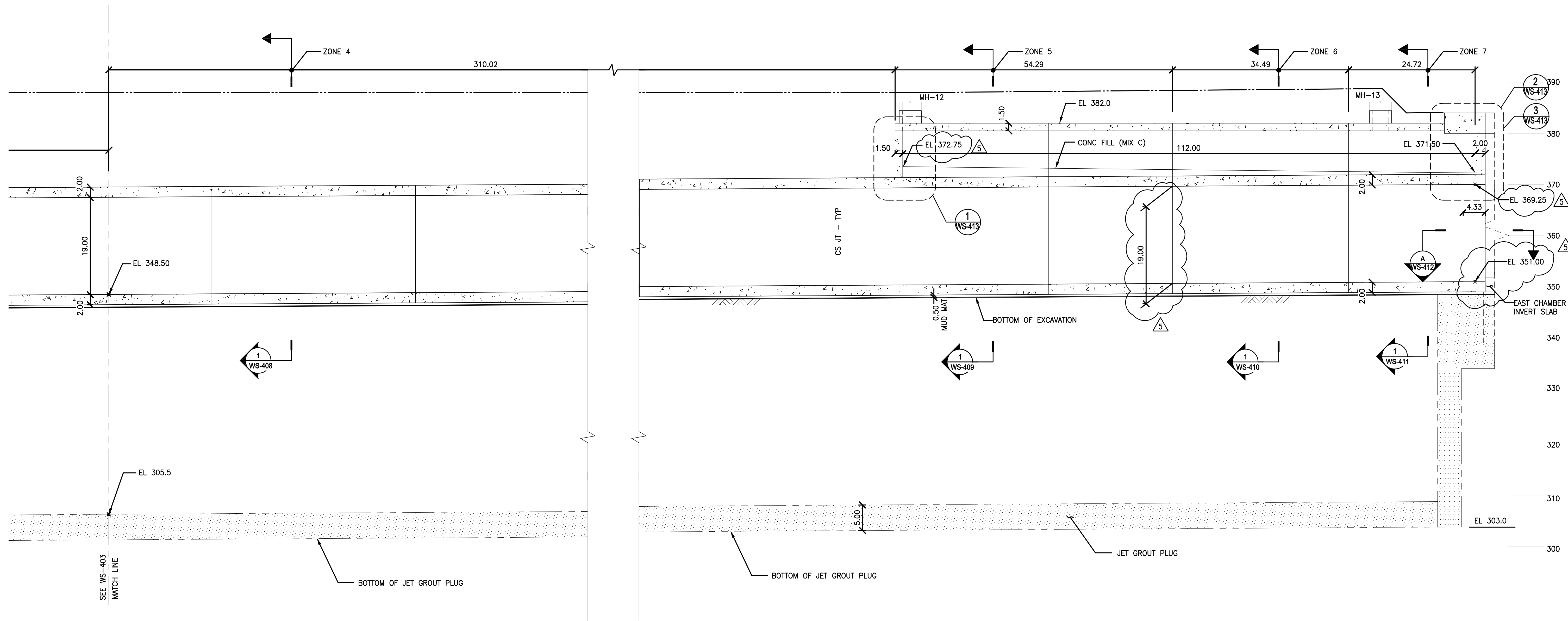
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|----------|--------------------|-----|--------------|------------|
| 06/16/11 | | 5 | DESIGNED BY: | H. AWAL |
| 03/25/11 | CHANGE ORDER NO. 1 | 4 | DRAWN BY: | N. BONDOC |
| 03/10/11 | | 3 | CHECKED BY: | M. KIRMANI |
| 02/15/11 | | 2 | APPROVED BY: | G. CHEN |
| 01/20/11 | | 1 | | |
| DATE: | REVISIONS | No. | | |



ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

BOX CULVERT/TUNNEL
LONGITUDINAL SECTION

CONTRACT No.
SCALE: 1"=10'
DATE: 11/22/2011
DRAWING NO.
WS-403



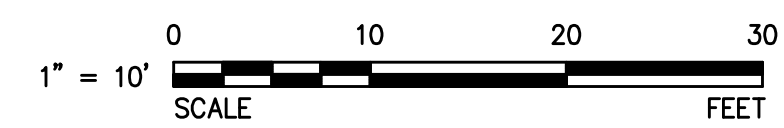
SECTION 1
SCALE: 1"=10'

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DATE: 05/16 PER: RCF

- NOTES:**
1. FOR BOX CULVERT REINFORCING SEE WS-405 THRU WS-411.
 2. CONSTRUCTION JOINT SHALL BE LIMITED TO 40 FT OR LESS. (SEE TYPICAL DETAILS ON CONTRACT DRAWING S-002).
 3. FOR BOX CULVERT/TUNNEL INTERFACE WITH EAST CHAMBER WALLS AND SLAB SEE DETAILS ON WS-412 AND WGS-404..



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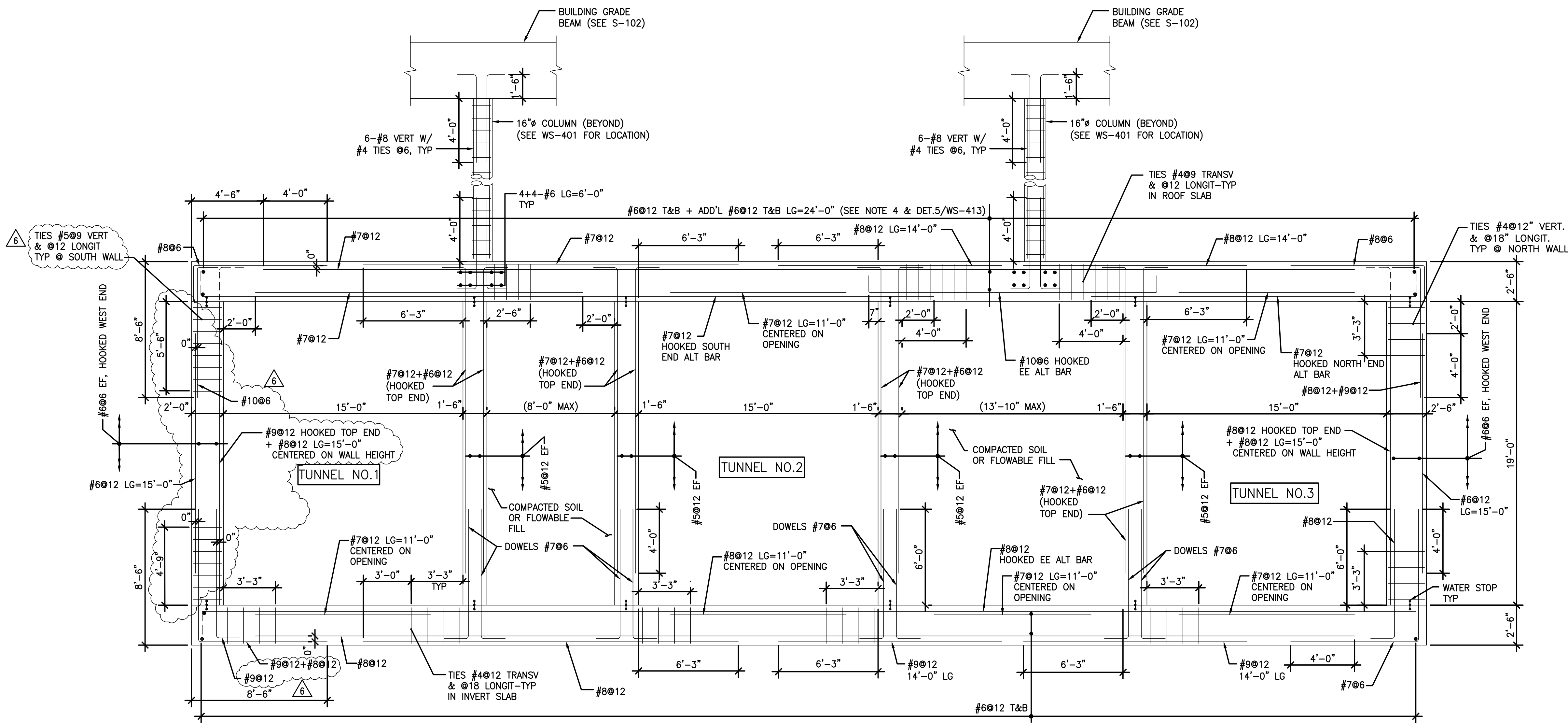
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|----------|--------------------|-----|--------------|------------|
| 12/05/12 | | 5 | DESIGNED BY: | H. AWAL |
| 11/20/12 | | 4 | DRAWN BY: | N. BONDOC |
| 03/23/12 | CHANGE ORDER NO. 1 | 3 | CHECKED BY: | M. KIRMANI |
| 02/27/12 | | 2 | APPROVED BY: | G. CHEN |
| 01/27/12 | | 1 | | |
| DATE: | REVISIONS | No. | | |



ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

BOX CULVERT/TUNNEL
LONGITUDINAL SECTION

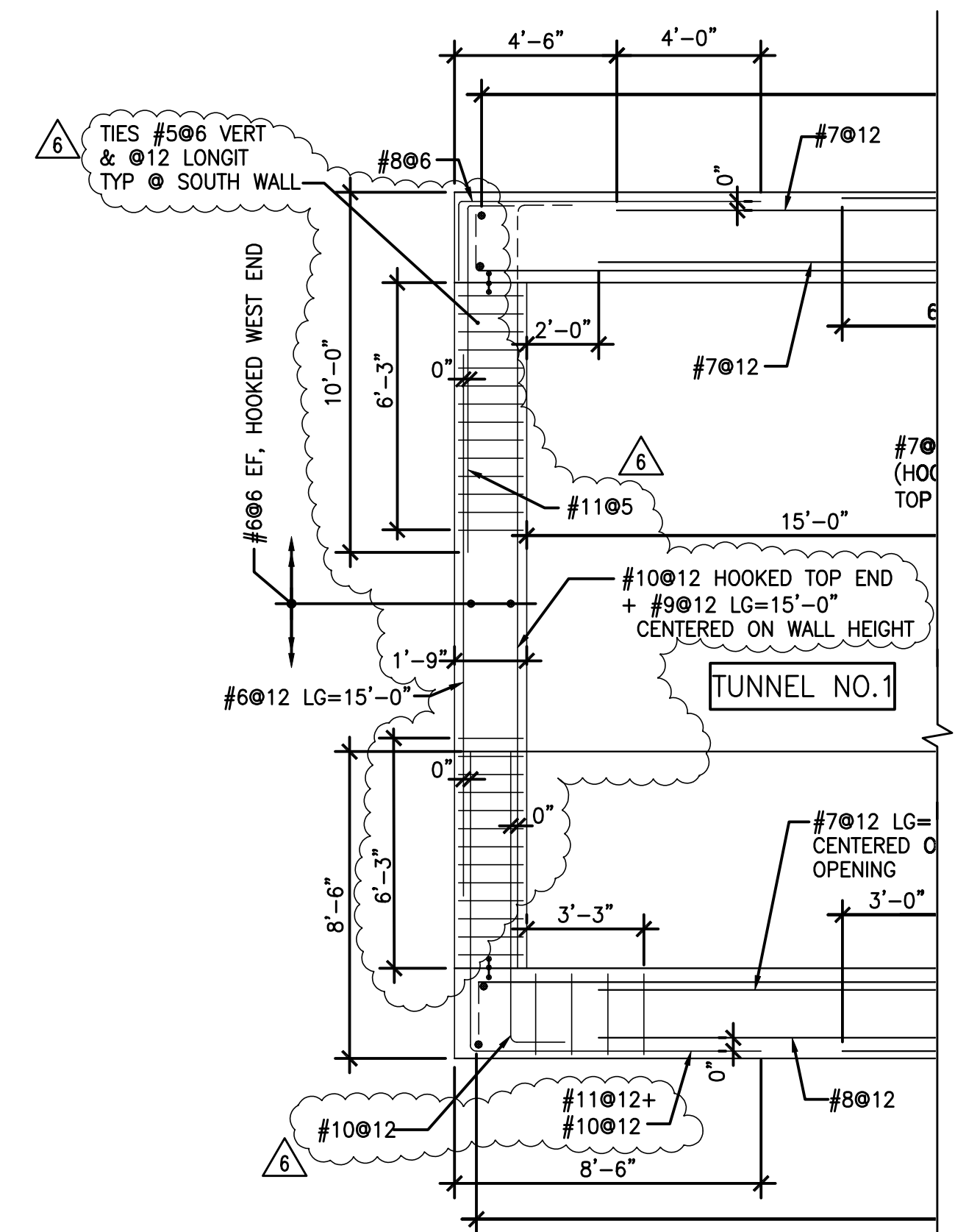
CONTRACT No.
SCALE: 1"=10'
DATE: 11/22/2011
DRAWING NO.
WS-404



TUNNEL AT WEST CHAMBER - PARTIAL ZONE 1A
@ 24" THICKNESS SOUTH WALL

SCALE: 1/4"=1'-0"

1



NOTE: THIS REPRESENTS CHANGES TO SOUTH WALL REINFORCING ONLY. FOR REST OF REINFORCING IN SLABS AND WALLS SEE SECTION 1 THIS DRAWING.

TUNNEL AT WEST CHAMBER - PARTIAL ZONE 1A
@ 21" THICKNESS SOUTH WALL

SCALE: 1/4"=1'-0"

2

- NOTES:
- REFER TO DRAWINGS WS-401 AND WS-402 FOR APPLICABLE TUNNEL ZONE.
 - JET GROUT PLUG NOT SHOWN.
 - MATERIALS:
 - DESIGN CONCRETE STRENGTH AT 28 DAYS, $f'c=5000$ PSI.
 - REBAR STRENGTH, $f_y=60$ KSI.
 - ADDITIONAL BARS TO BE PLACED AT WEST CHAMBER/TUNNEL INTERFACE.
 - EXTERIOR WALLS TO BE CAST DIRECTLY AGAINST AS/SP WALL. THE REINF WILL BE AS DETAILED ON THIS DRAWING.
 - #8@12 + #9@12 MEANS THAT THESE BARS SHALL BE AN ALTERNATING PLACEMENT WITH 6" SPACING BETWEEN #8 AND #9 ADJACENT BARS.
 - FOR TIE DETAIL SEE WGS-001.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DATE: 05/16 PER: RCF

0 4 8 12
1/4"=1'-0" SCALE FEET

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| DATE: | REVISIONS | No. |
|----------|----------------------------|-----|
| 07/20/12 | TUNNEL SOUTH WALL REVISION | 6 |
| 03/23/12 | CHANGE ORDER NO. 1 | 5 |

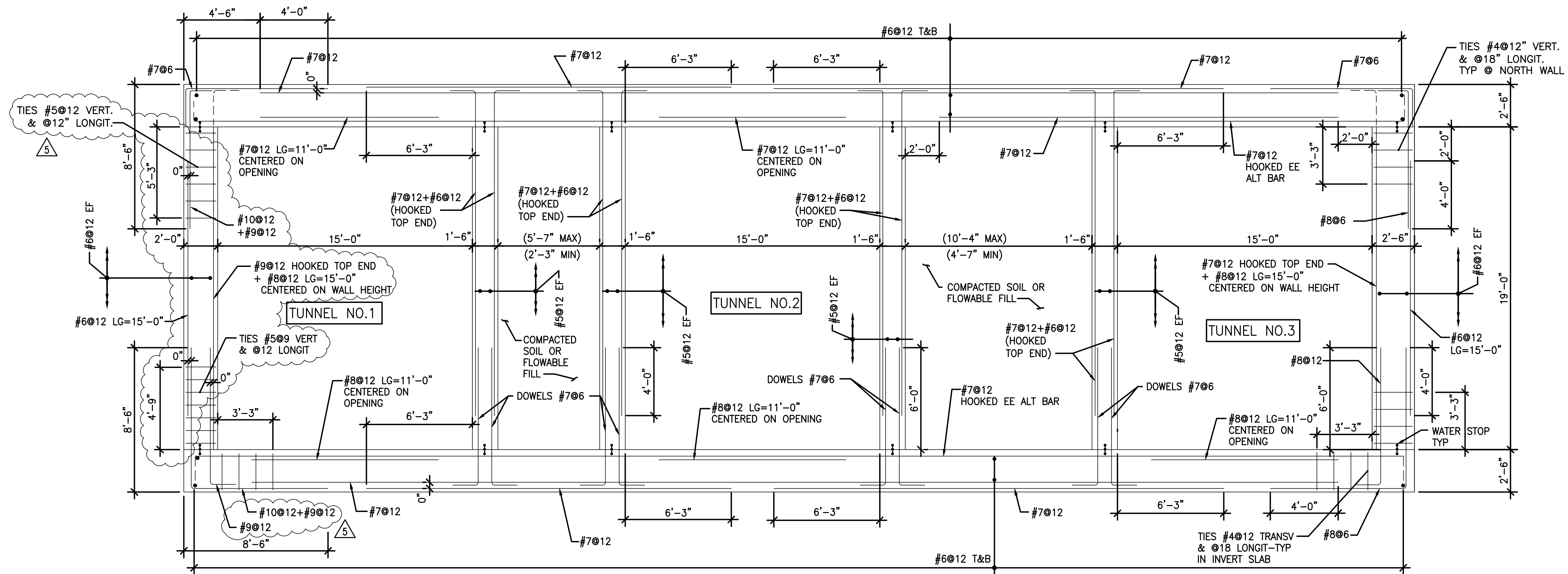
| | |
|--------------|------------|
| DESIGNED BY: | H. AWAL |
| DRAWN BY: | N. BONDOC |
| CHECKED BY: | M. KIRMANI |
| APPROVED BY: | G. CHEN |



ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

TUNNEL REINFORCING ZONE 1A

| | |
|--------------|----------|
| CONTRACT No. | |
| SCALE: | |
| DATE: | 11/22/11 |
| DRAWING No. | WS-405 |



TUNNEL AT WEST CHAMBER - ZONE 2

SCALE: 1/4"=1'-0"

1

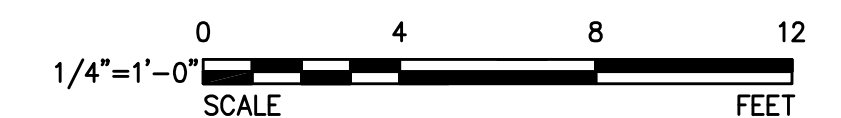
ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DATE: 05/16 PER: RCF

NOTES:

- REFER TO DRAWINGS WS-401 AND WS-402 FOR APPLICABLE TUNNEL ZONE.
- JET GROUT PLUG NOT SHOWN.
- MATERIALS:
 - DESIGN CONCRETE STRENGTH AT 28 DAYS, $f'_c=5000$ PSI.
 - REBAR STRENGTH, $f_y=60$ KSI.
- EXTERIOR WALL TO BE CAST DIRECTLY AGAINST AS/SP WALL. THE REINFORCING WILL BE AS DETAILED ON THIS DRAWING.
- #7@12 + #8@12 MEANS THAT THESE BARS SHALL BE AN ALTERNATING PLACEMENT WITH 6" SPACING BETWEEN #7 AND #8 ADJACENT BARS.
- FOR TIE DETAIL SEE WGS-001.



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201 Broadway, Cambridge MA 02139
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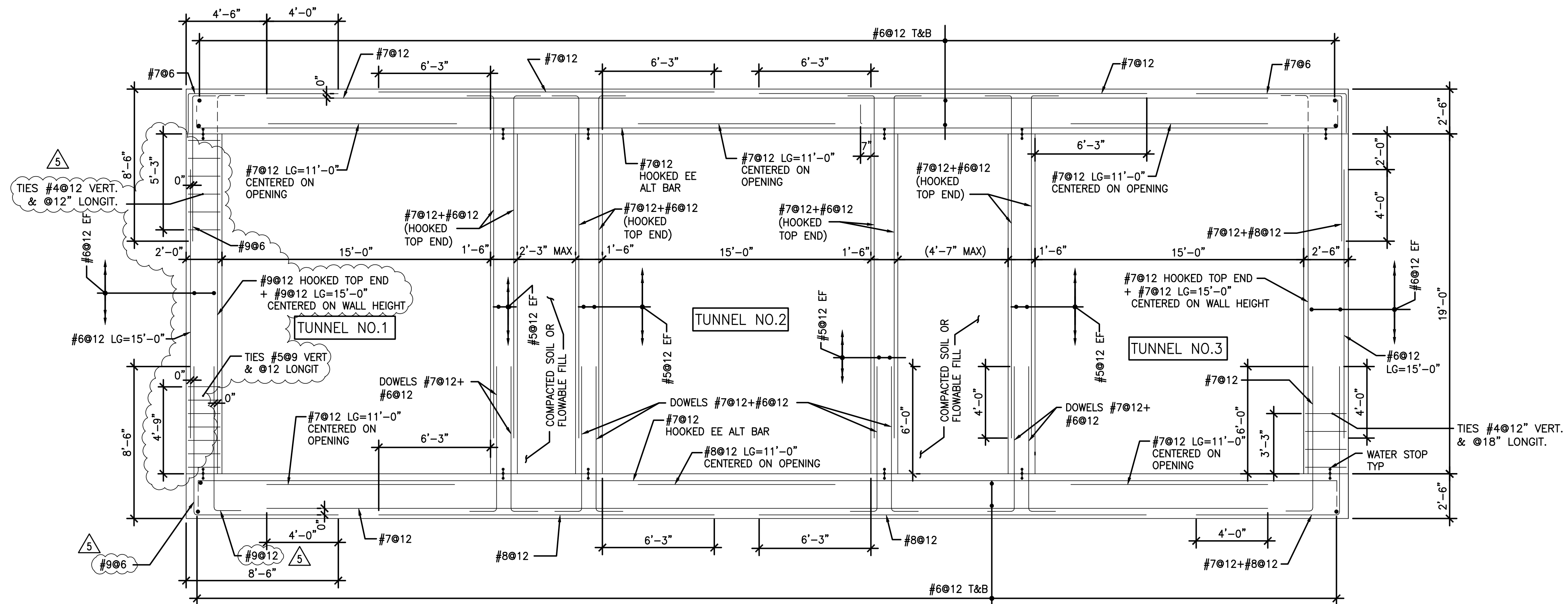
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|--------------|------------------------------|
| DESIGNED BY: | H. AWAL |
| DRAWN BY: | N. BONDOC |
| CHECKED BY: | M. KIRMANI |
| APPROVED BY: | G. CHEN |
| DATE: | REVISIONS |
| 07/20/12 | TUNNEL SOUTH WALL REVISION 5 |
| 03/23/12 | CHANGE ORDER NO. 1 4 |



ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

TUNNEL REINFORCING ZONE 2

| | |
|--------------|----------|
| CONTRACT No. | |
| SCALE: | |
| DATE: | 11/22/11 |
| DRAWING NO. | WS-406 |



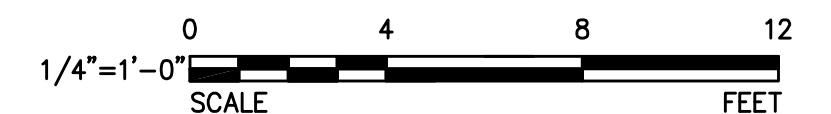
TRANSITIONING TUNNEL AT WEST CHAMBER - ZONE 3A ①
 SCALE: 1/4"=1'-0"

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 05/16 PER: RCF

- NOTES:
- REFER TO DRAWINGS WS-401 AND WS-402 FOR APPLICABLE TUNNEL ZONE.
 - JET GROUT PLUG NOT SHOWN.
 - MATERIALS:
 - DESIGN CONCRETE STRENGTH AT 28 DAYS, $f'c=5000$ PSI.
 - REBAR STRENGTH, $f_y=60$ KSI.
 - EXTERIOR WALL TO BE CAST DIRECTLY AGAINST AS/SP WALL. THE REINFORCING WILL BE AS DETAILED ON THIS DRAWING.
 - #7@12 + #8@12 MEANS THAT THESE BARS SHALL BE AN ALTERNATING PLACEMENT WITH 6" SPACING BETWEEN #7 AND #8 ADJACENT BARS.
 - FOR TIE DETAIL SEE WGS-001.



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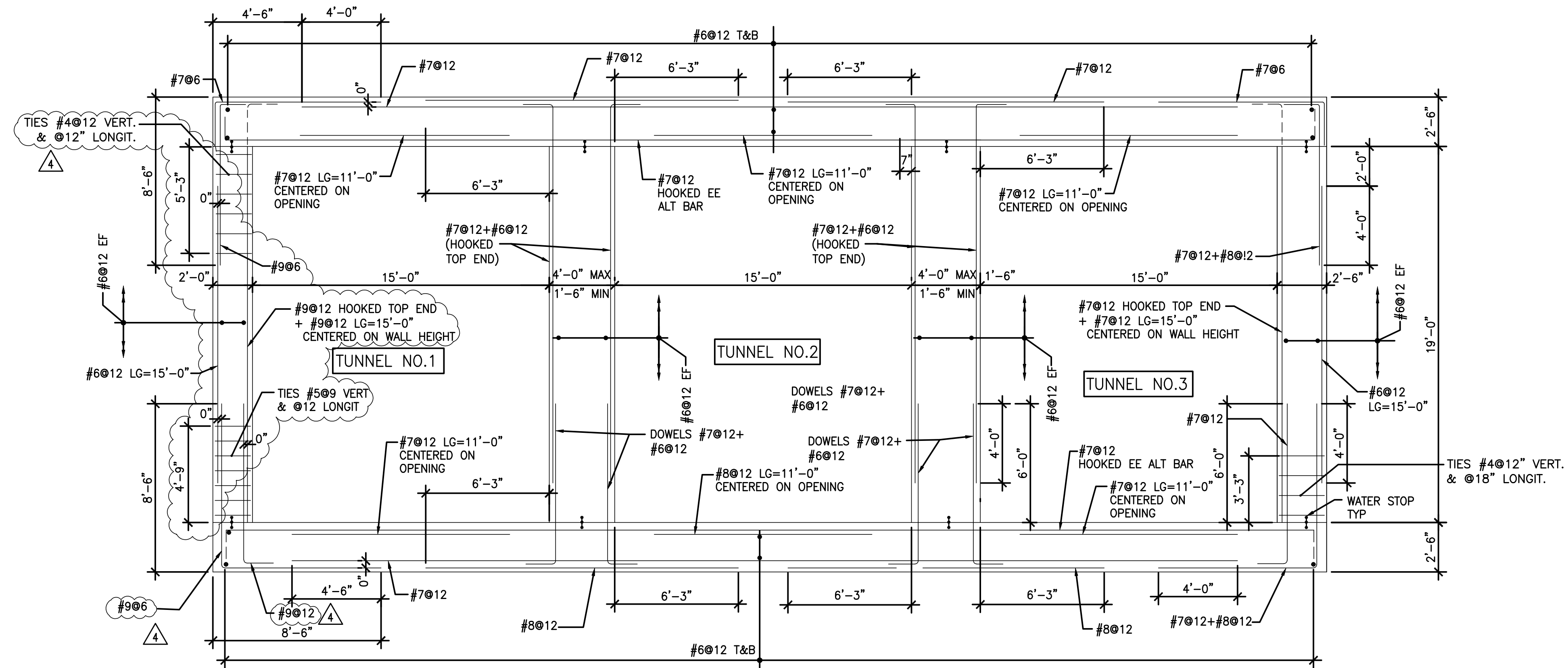
| | |
|--------------|------------------------------|
| DESIGNED BY: | H. AWAL |
| DRAWN BY: | N. BONDOC |
| CHECKED BY: | M. KIRMANI |
| APPROVED BY: | G. CHEN |
| DATE: | REVISIONS |
| 07/20/12 | TUNNEL SOUTH WALL REVISION 5 |
| 03/23/12 | CHANGE ORDER NO. 1 4 |



ONONDAGA COUNTY - DWEP
 CLINTON CSO STORAGE FACILITY

TUNNEL REINFORCING ZONE 3A

| | |
|--------------|----------|
| CONTRACT No. | |
| SCALE: | |
| DATE: | 11/22/11 |
| DRAWING NO. | WS-407 |



TRANSITIONING TUNNEL AT WEST CHAMBER - ZONE 3B

1

SCALE: 1/4"=1'-0"

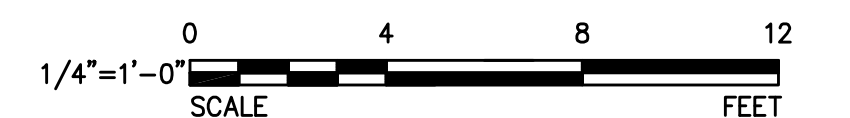
ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 05/16 PER: RCF

NOTES:

1. REFER TO DRAWINGS WS-401 AND WS-402 FOR APPLICABLE TUNNEL ZONE.
2. JET GROUT PLUG NOT SHOWN.
3. MATERIALS:
 - DESIGN CONCRETE STRENGTH AT 28 DAYS, f'c=5000 PSI.
 - REBAR STRENGTH, fy=60 KSI.
4. EXTERIOR WALL TO BE CAST DIRECTLY AGAINST AS/SP WALL. THE REINFORCING WILL BE AS DETAILED ON THIS DRAWING.
5. #7@12 + #8@12 MEANS THAT THESE BARS SHALL BE AN ALTERNATING PLACEMENT WITH 6" SPACING BETWEEN #7 AND #8 ADJACENT BARS.
6. FOR TIE DETAIL SEE WGS-001.



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| DATE: | REVISIONS | No. |
|----------|----------------------------|-----|
| 07/20/12 | TUNNEL SOUTH WALL REVISION | 4 |
| 03/23/12 | CHANGE ORDER NO. 1 | 3 |
| 02/27/12 | | 2 |
| 02/03/12 | | 1 |

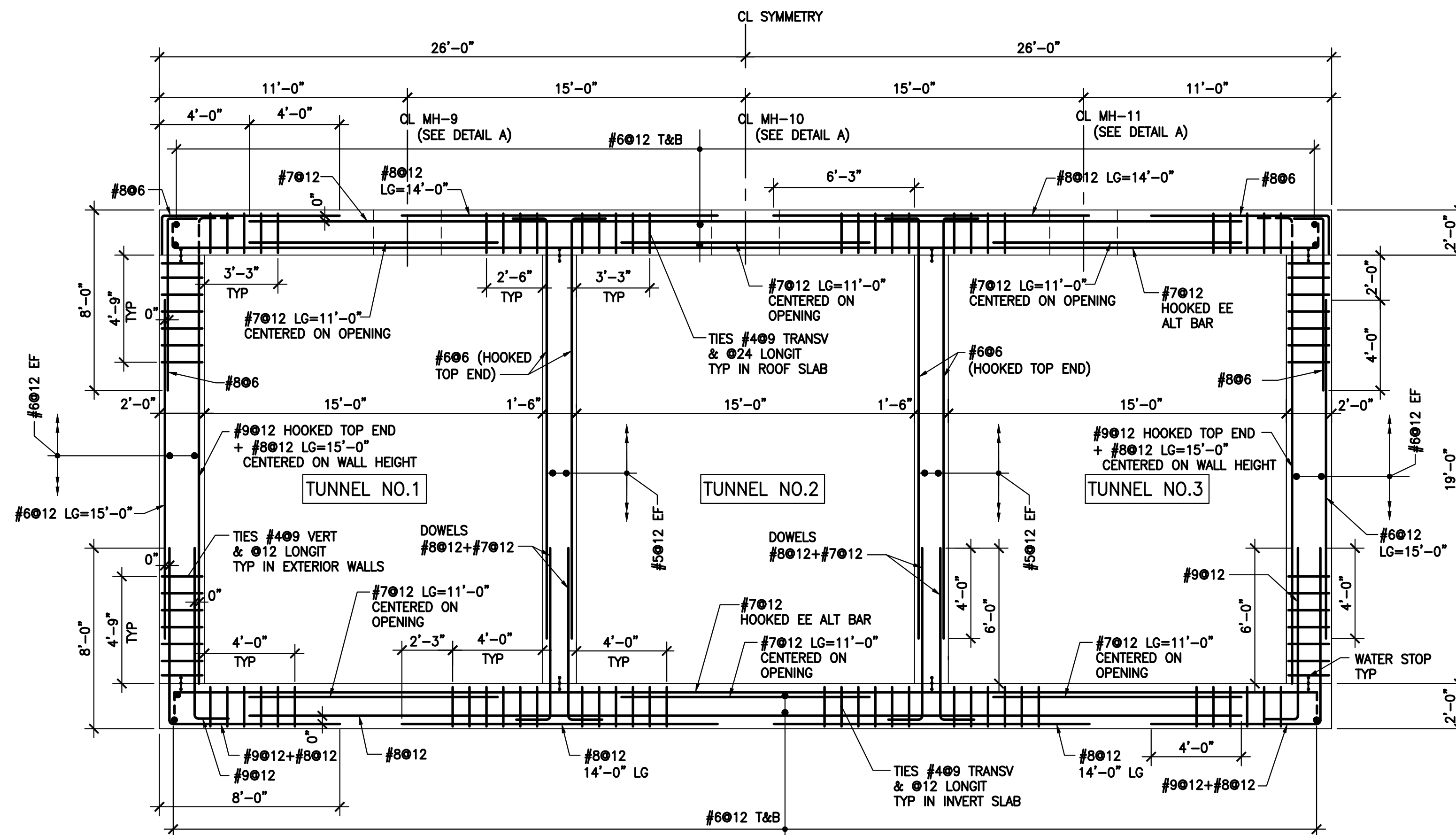
DESIGNED BY:
H. AWAL
 DRAWN BY:
N. BONDOC
 CHECKED BY:
M. KIRMANI
 APPROVED BY:
G. CHEN



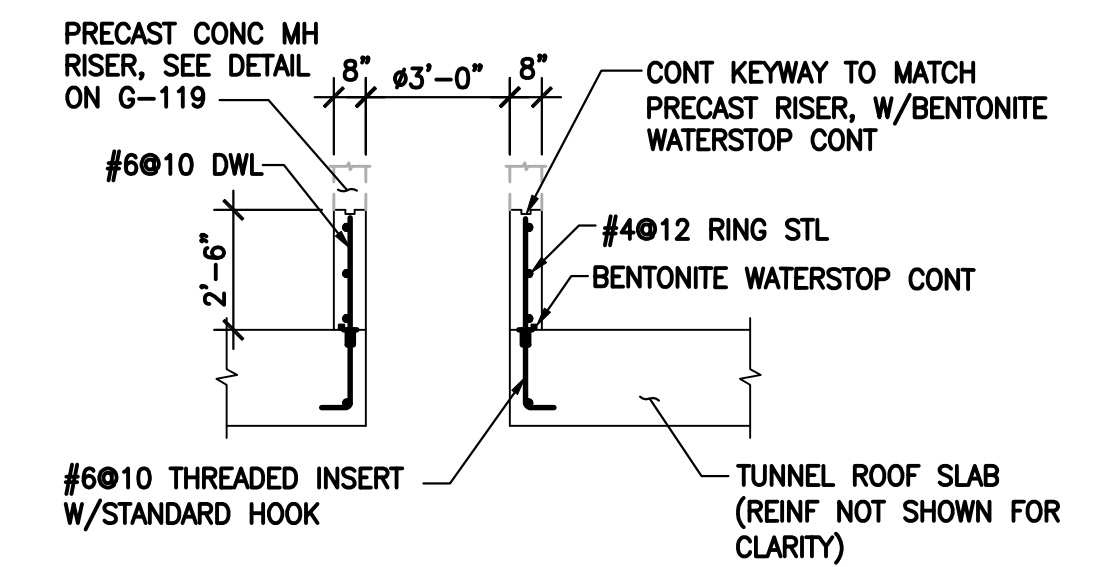
ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

TUNNEL REINFORCING ZONE 3B

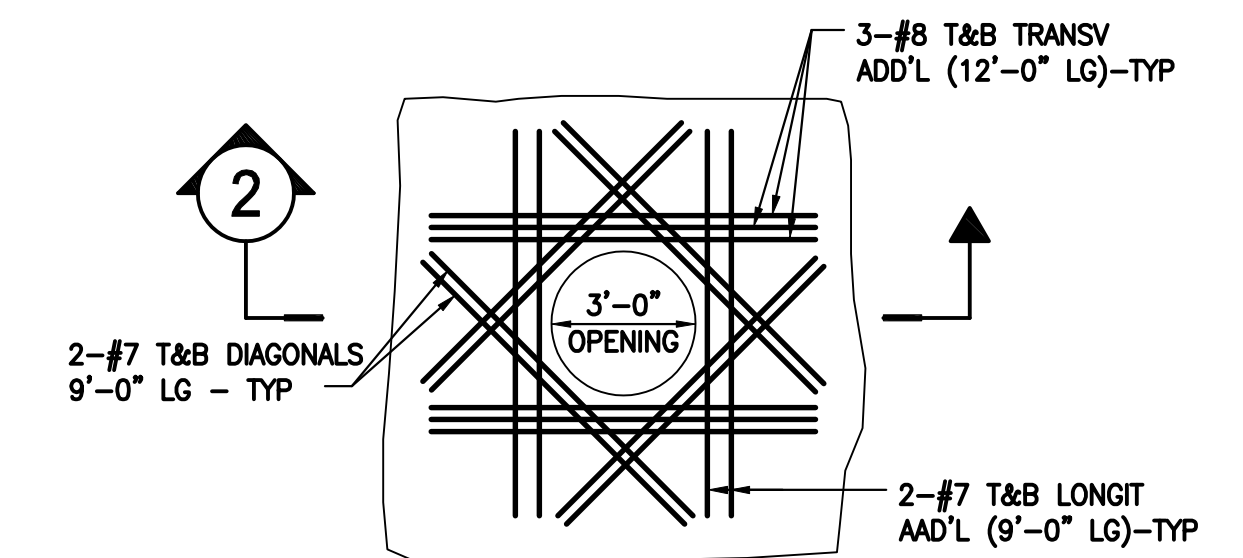
CONTRACT No.
SCALE:
DATE: 01/27/12
DRAWING NO.
WS-407A



TYPICAL TUNNEL SECTION - ZONE 4
SCALE: 1/4"=1'-0" 1



SECTION 2
SCALE: NTS



PLAN-DETAIL AT MANHOLE OPENING A
SCALE: NTS

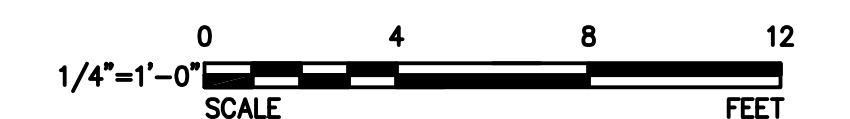
- NOTES:
- REFER TO DRAWINGS WS-401 AND WS-402 FOR APPLICABLE TUNNEL ZONE.
 - JET GROUT PLUG NOT SHOWN.
 - MATERIALS:
 - DESIGN CONCRETE STRENGTH AT 28 DAYS, $f'c=5000$ PSI.
 - REBAR STRENGTH, $f_y=60$ KSI.
 - REFER TO G-122, GS-506 AND G-119 FOR ADDITIONAL MANHOLE INFORMATION.
 - EXTERIOR WALL TO BE CAST DIRECTLY AGAINST AS/SP WALL. THE REINFORCEMENT WILL BE AS DETAILED ON THIS DRAWING.
 - #8@12 + #9@12 MEANS THAT THESE BARS SHALL BE AN ALTERNATING PLACEMENT WITH 6" SPACING BETWEEN #8 AND #9 ADJACENT BARS.
 - FOR TIE DETAIL SEE WGS-001.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP

RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

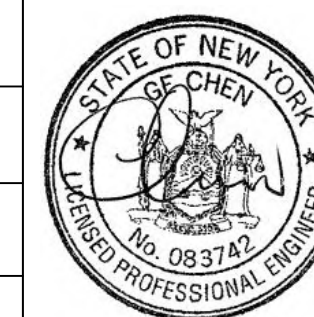
DATE: 05/16 PER: RCF



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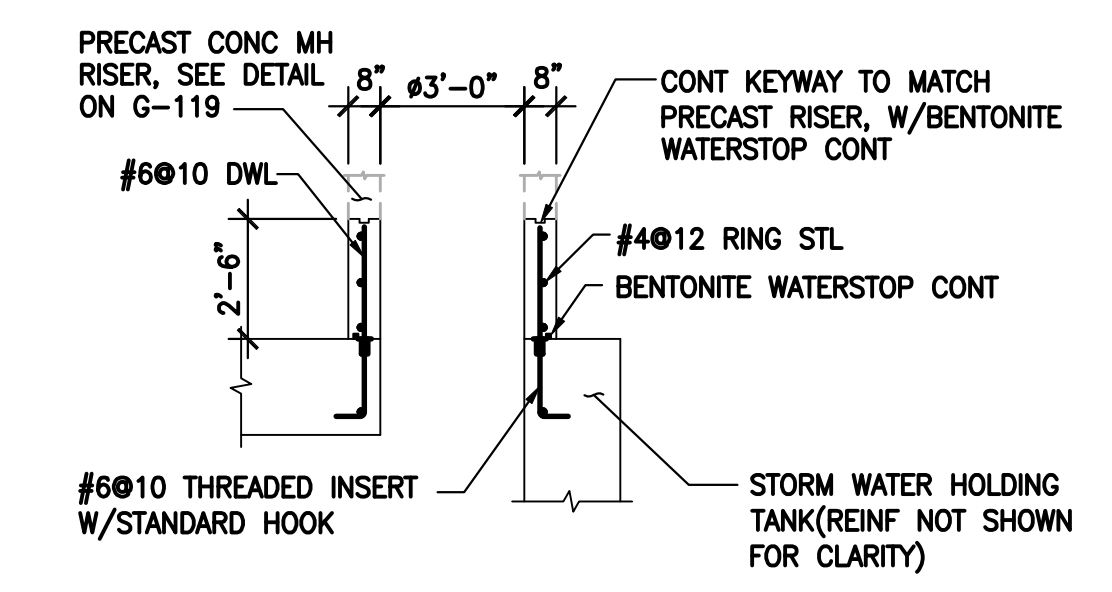
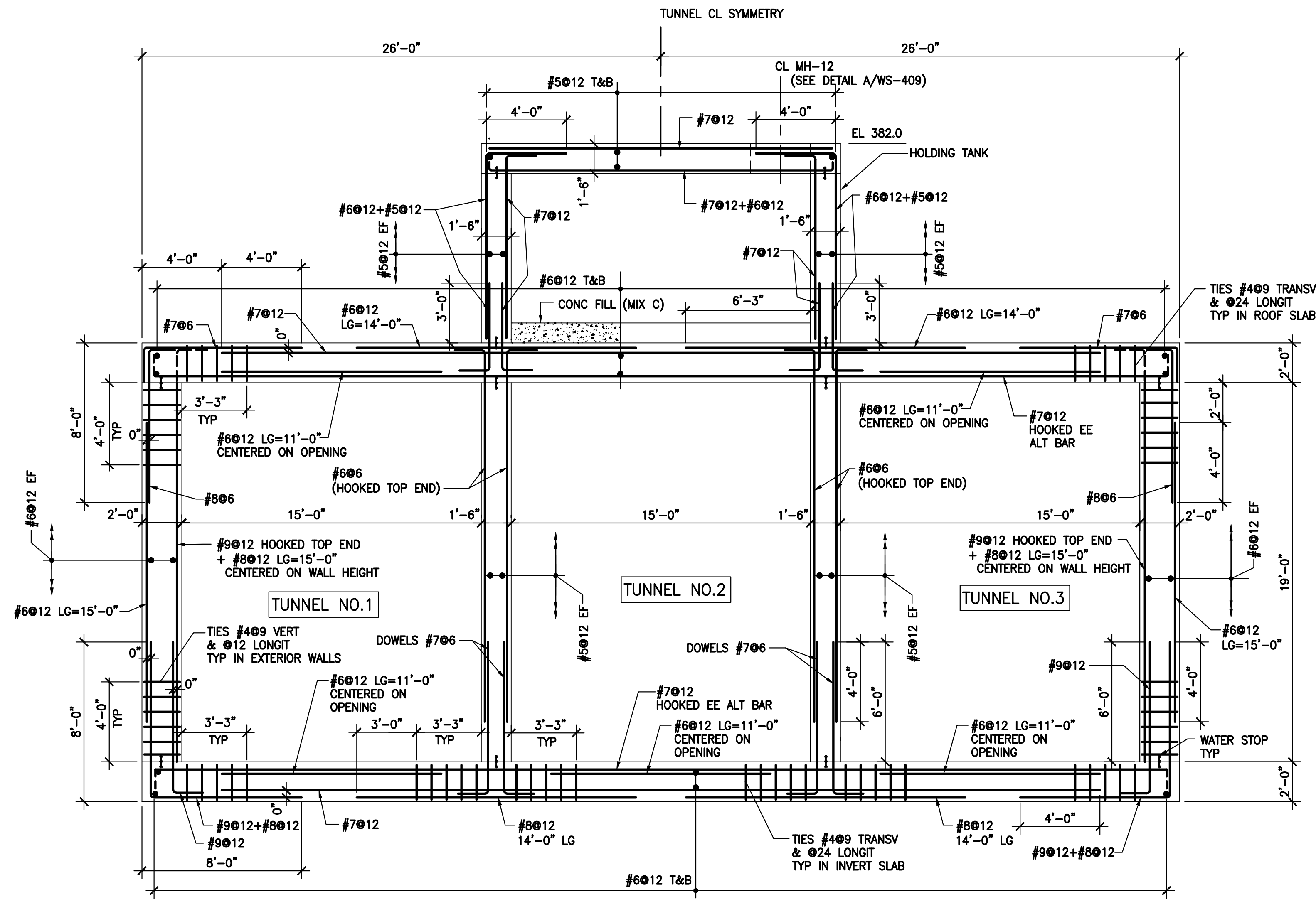
| DATE | REVISIONS | No. | APPROVED BY: |
|----------|--------------------|-----|--------------|
| 03/23/12 | CHANGE ORDER NO. 1 | 4 | H. AWAL |
| 02/27/12 | | 3 | N. BONDOC |
| 02/03/12 | | 2 | M. KIRMANI |
| 01/27/12 | | 1 | G. CHEN |



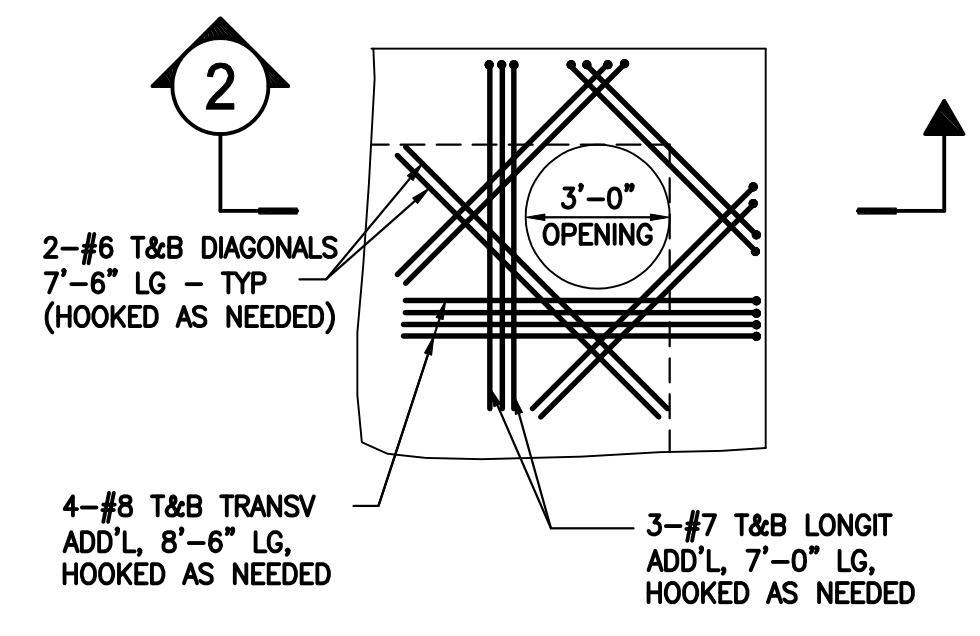
ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

TUNNEL REINFORCING ZONE 4

| | |
|--------------|----------|
| CONTRACT No. | |
| SCALE: | |
| DATE: | 11/22/11 |
| DRAWING NO. | WS-408 |



SECTION 2
SCALE: NTS

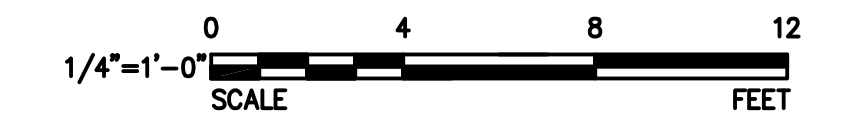


PLAN-DETAIL AT MANHOLE OPENING A
SCALE: NTS

TYPICAL TUNNEL SUPPORTING HOLDING TANK - ZONE 5
SCALE: 1/4"=1'-0" 1

- NOTES:
- REFER TO DRAWINGS WS-401 AND WS-402 FOR APPLICABLE TUNNEL ZONE.
 - JET GROUT PLUG NOT SHOWN.
 - MATERIALS:
 - DESIGN CONCRETE STRENGTH AT 28 DAYS, $f'_c=5000$ PSI.
 - REBAR STRENGTH, $f_y=60$ KSI.
 - EXTERIOR WALLS OF TUNNEL 1 AND TUNNEL 3 TO BE CAST DIRECTLY AGAINST AS/SP WALL. THE REINFORCEMENT WILL BE AS DETAILED ON THIS DRAWING.
 - #8012 + #9012 MEANS THAT THESE BARS SHALL BE AN ALTERNATING PLACEMENT WITH 6" SPACING BETWEEN #8 AND #9 ADJACENT BARS.
 - FOR TIE DETAIL SEE WGS-001.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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DATE: 05/16 PER: RCF



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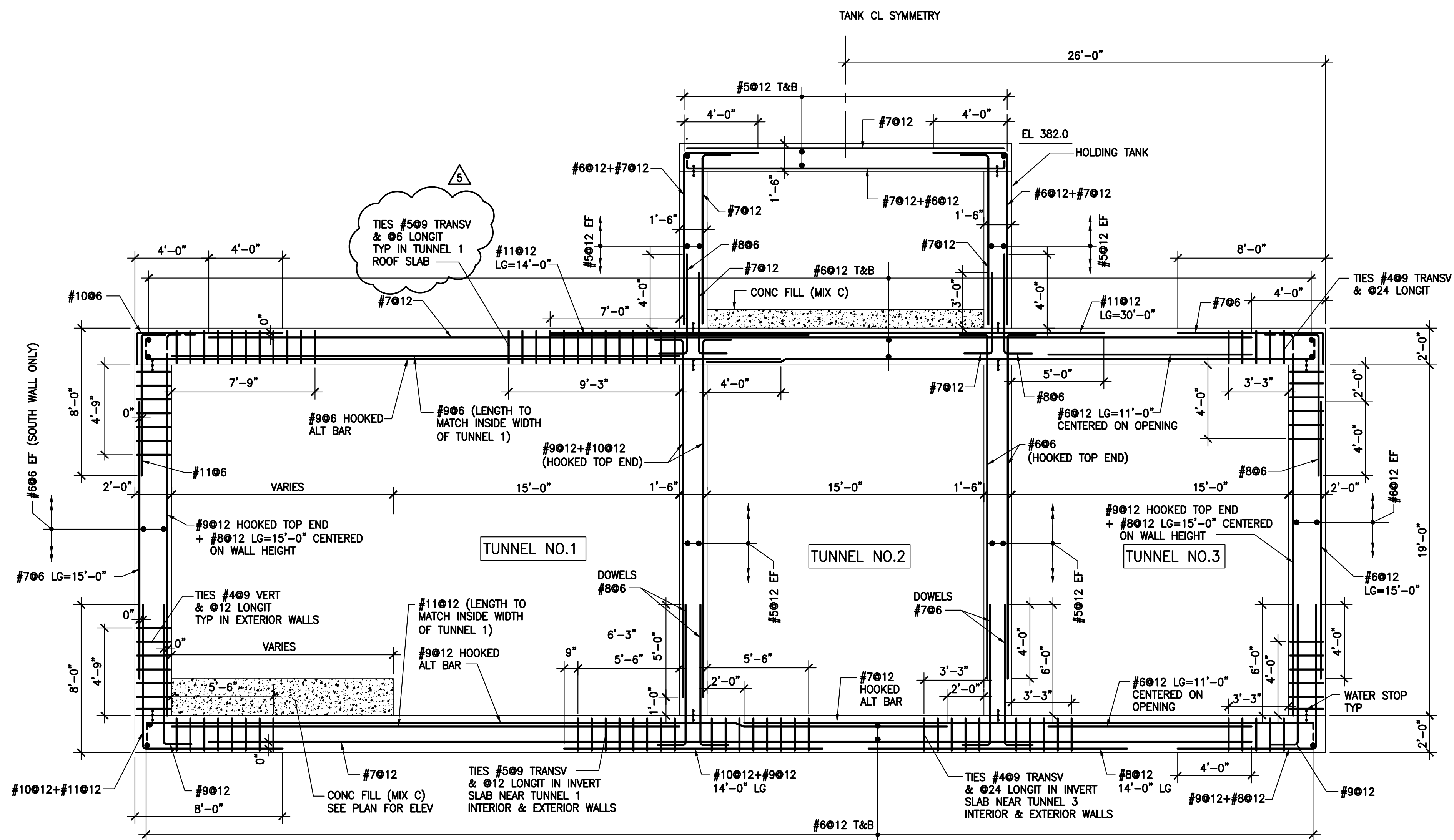
| DATE | REVISIONS | No. | APPROVED BY: |
|----------|--------------------|-----|--------------|
| 03/23/12 | CHANGE ORDER NO. 1 | 4 | H. AWAL |
| 02/27/12 | | 3 | N. BONDOC |
| 02/03/12 | | 2 | M. KIRMANI |
| 01/27/12 | | 1 | C. CHEN |



ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

TUNNEL REINFORCING ZONE 5

| | |
|--------------|----------|
| CONTRACT No. | |
| SCALE: | |
| DATE: | 11/22/11 |
| DRAWING NO. | WS-409 |



TUNNEL SUPPORTING HOLDING TANK - ZONE 6

SCALE: 1/4"=1'-0"

1

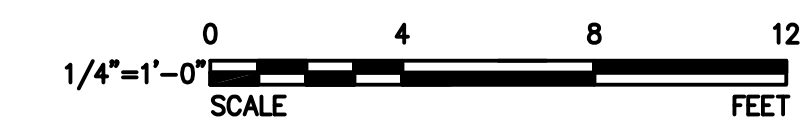
ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DATE: 05/16 PER: RCF

NOTES:

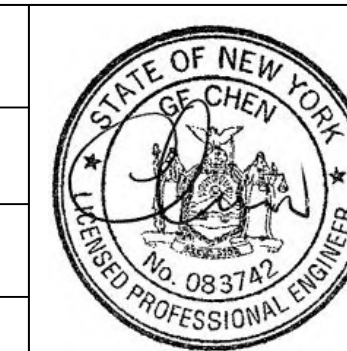
- REFER TO DRAWINGS WS-401 AND WS-402 FOR APPLICABLE TUNNEL ZONE.
- JET GROUT PLUG NOT SHOWN.
- MATERIALS:
 - DESIGN CONCRETE STRENGTH AT 28 DAYS, $f'_c=5000$ PSI.
 - REBAR STRENGTH, $f_y=60$ KSI.
- EXTERIOR WALLS OF TUNNEL 1 AND TUNNEL 3 TO BE CAST DIRECTLY AGAINST AS/SP WALL. THE REINFORCEMENT WILL BE AS DETAILED ON THIS DRAWING.
- #8@12 + #9@12 MEANS THAT THESE BARS SHALL BE AN ALTERNATING PLACEMENT WITH 6" SPACING BETWEEN #8 AND #9 ADJACENT BARS.
- FOR TIE DETAIL SEE WGS-001.



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| | | | |
|----------|----------------------------|-----|---------------------------|
| 10/08/12 | ROOF SLAB SHEAR TIE CHANGE | 5 | DESIGNED BY: H. AWAL |
| 03/23/12 | CHANGE ORDER NO. 1 | 4 | DRAWN BY: N. BONDOC |
| 02/27/12 | | 3 | CHECKED BY: M. KIRMANI |
| 02/03/12 | | 2 | APPROVED BY: C. CHEN |
| 01/27/12 | | 1 | |
| DATE: | REVISIONS | No. | |



ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

TUNNEL REINFORCING ZONE 6

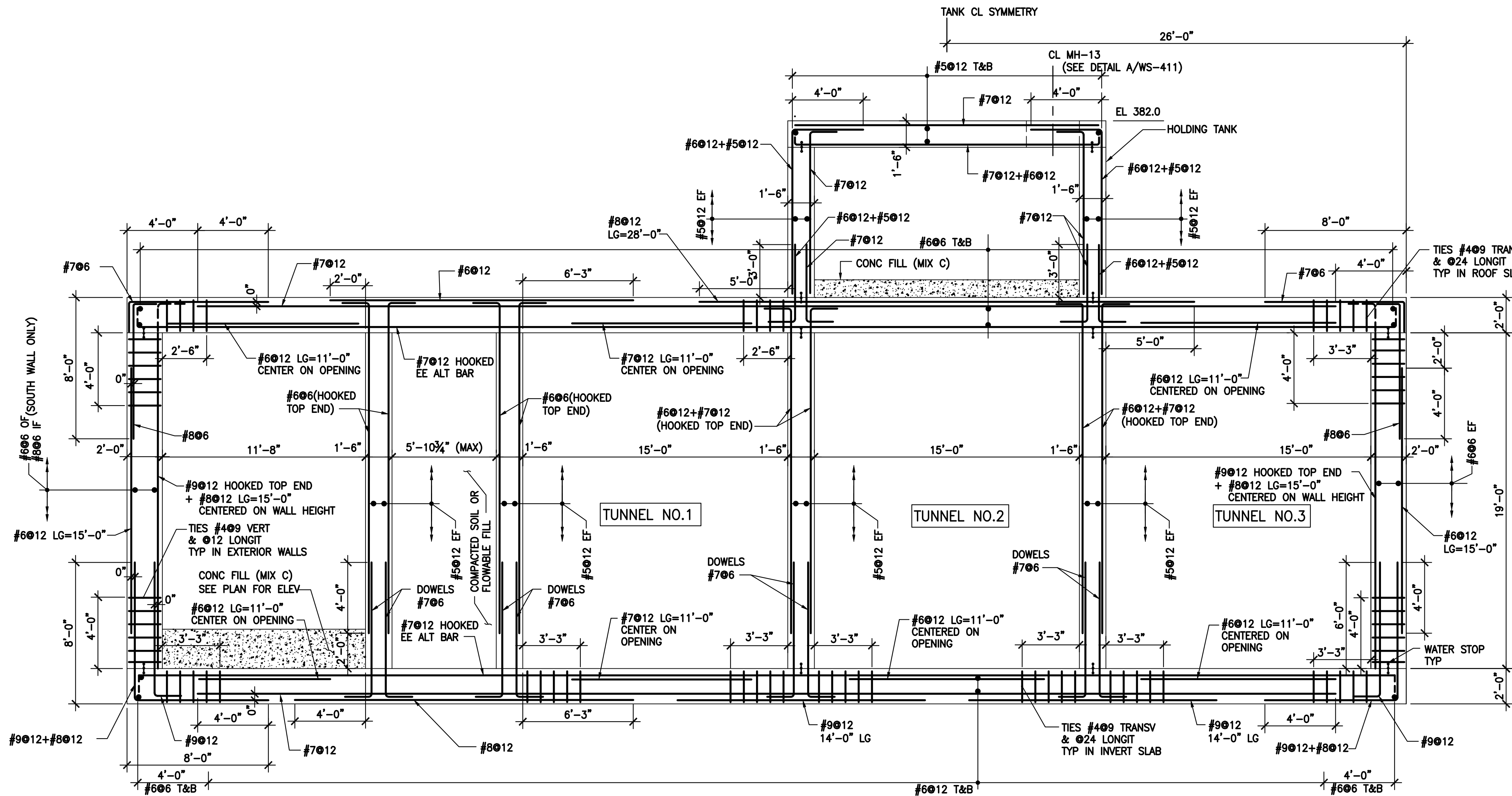
CONTRACT No.

SCALE:

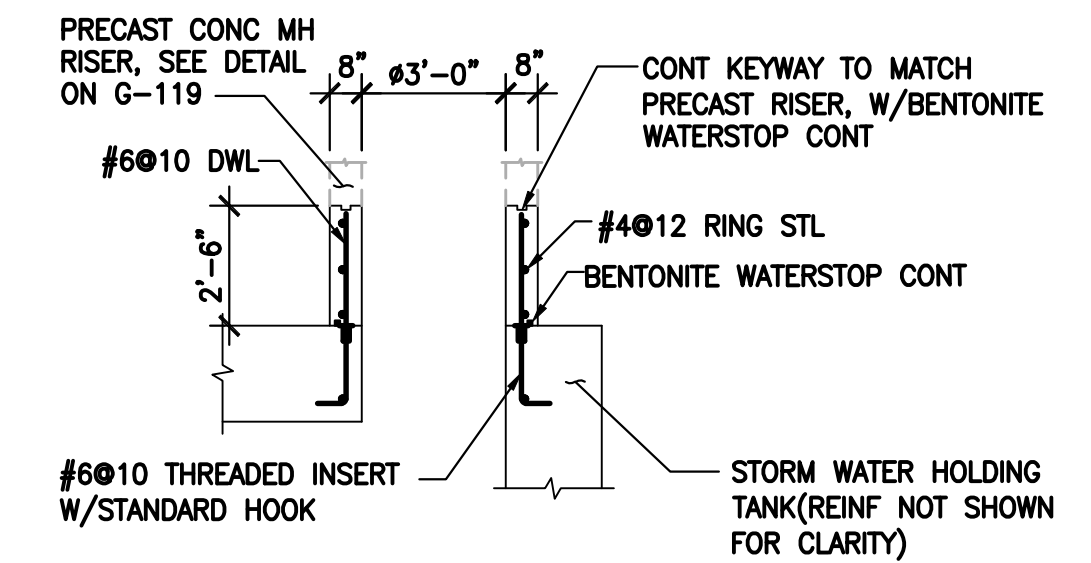
DATE: 11/22/11

DRAWING NO.

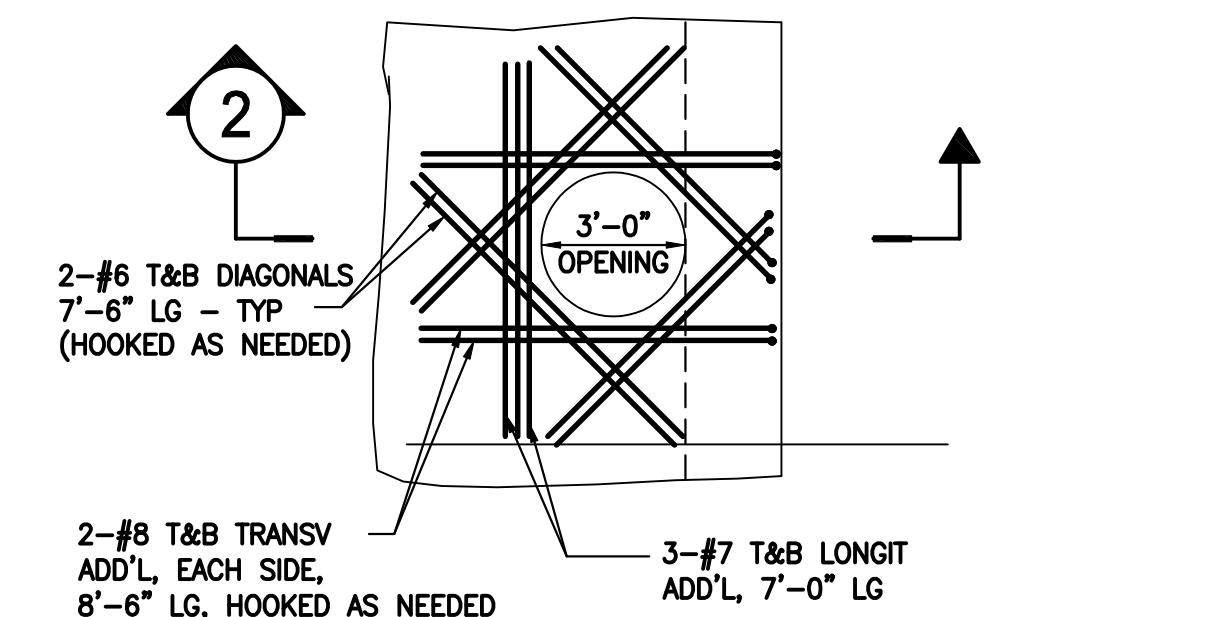
WS-410



TUNNEL SUPPORTING HOLDING TANK - ZONE 7
SCALE: 1/4"=1'-0" ①



SECTION 2
SCALE: NTS



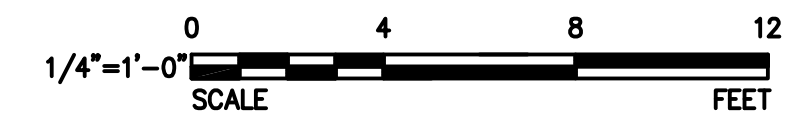
PLAN-DETAIL AT MANHOLE OPENING A
SCALE: NTS

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DATE: 05/16 PER: RCF

- NOTES:
- REFER TO DRAWINGS WS-401 AND WS-402 FOR APPLICABLE TUNNEL ZONE.
 - JET GROUT PLUG NOT SHOWN.
 - MATERIALS:
 - DESIGN CONCRETE STRENGTH AT 28 DAYS, $f'c=5000$ PSI.
 - REBAR STRENGTH, $f_y=60$ KSI.
 - EXTERIOR WALLS OF TUNNEL 1 AND TUNNEL 3 TO BE CAST DIRECTLY AGAINST AS/SP WALL. THE REINFORCEMENT WILL BE AS DETAILED ON THIS DRAWING.
 - #8@12 + #9@12 MEANS THAT THESE BARS SHALL BE AN ALTERNATING PLACEMENT WITH 6" SPACING BETWEEN #8 AND #9 ADJACENT BARS.
 - FOR TIE DETAIL SEE WGS-001.



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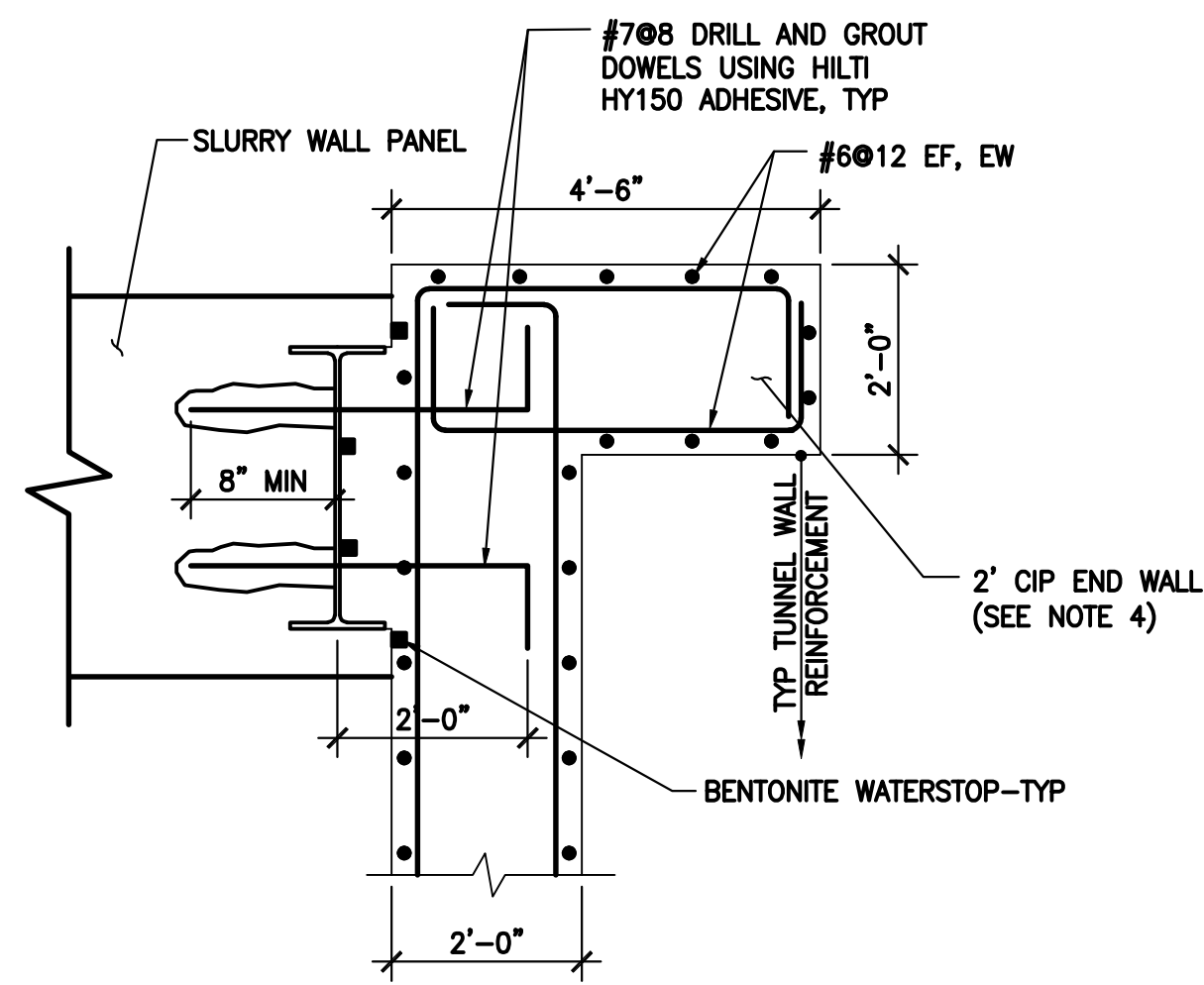
| DATE | REVISIONS | No. | APPROVED BY: |
|----------|--------------------|-----|------------------------|
| 03/23/12 | CHANGE ORDER NO. 1 | 5 | DESIGNED BY: H. AWAL |
| 03/13/12 | | 4 | DRAWN BY: N. BONDOC |
| 02/27/12 | | 3 | CHECKED BY: M. KIRMANI |
| 02/03/12 | | 2 | APPROVED BY: G. CHEN |
| 01/27/12 | | 1 | |



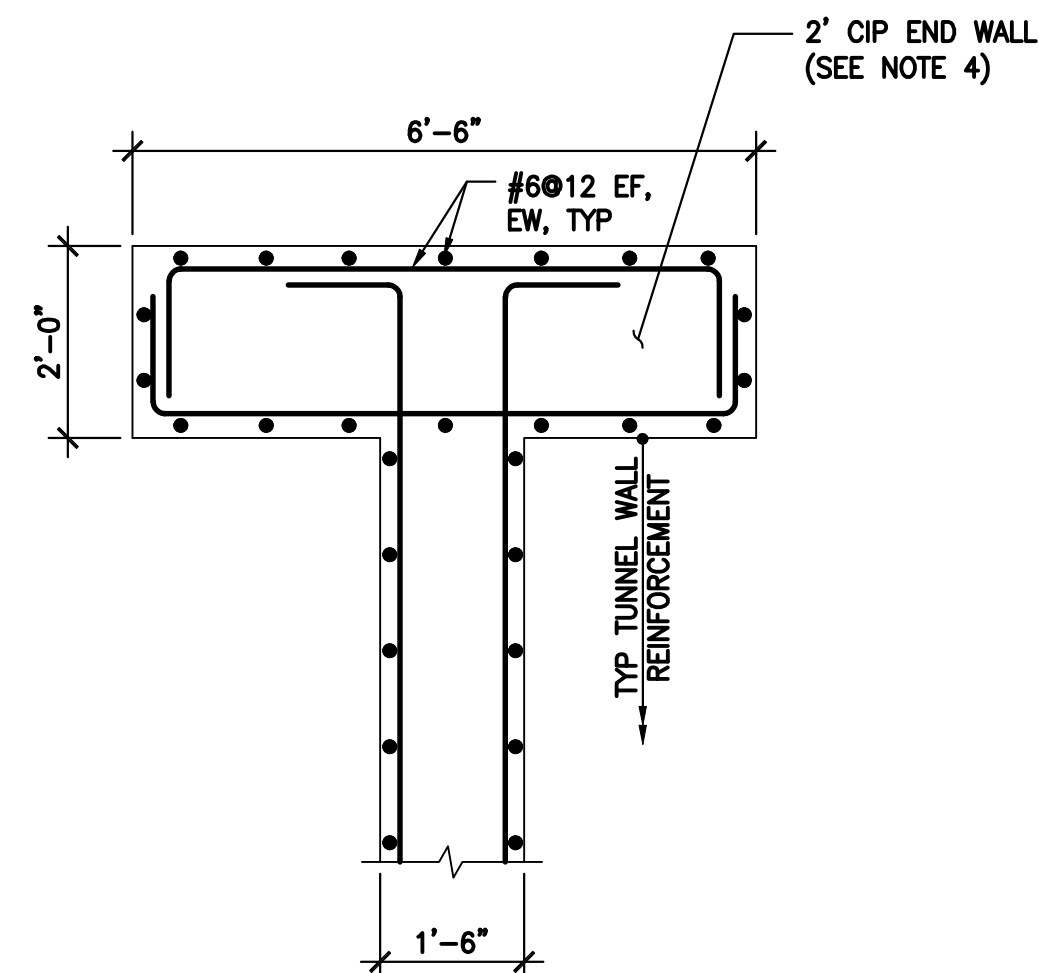
ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY

TUNNEL REINFORCING ZONE 7

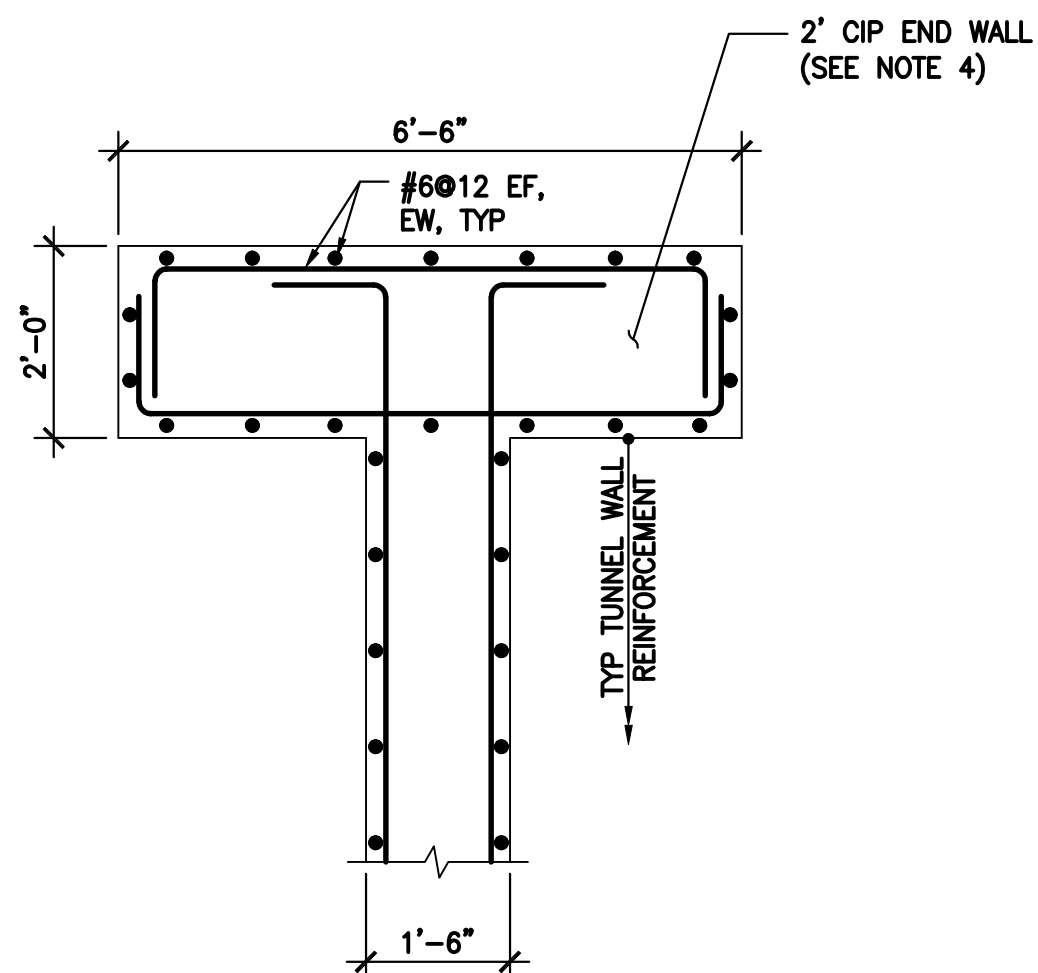
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|--------------|----------|
| CONTRACT No. | |
| SCALE: | |
| DATE: | 11/22/11 |
| DRAWING No. | WS-411 |



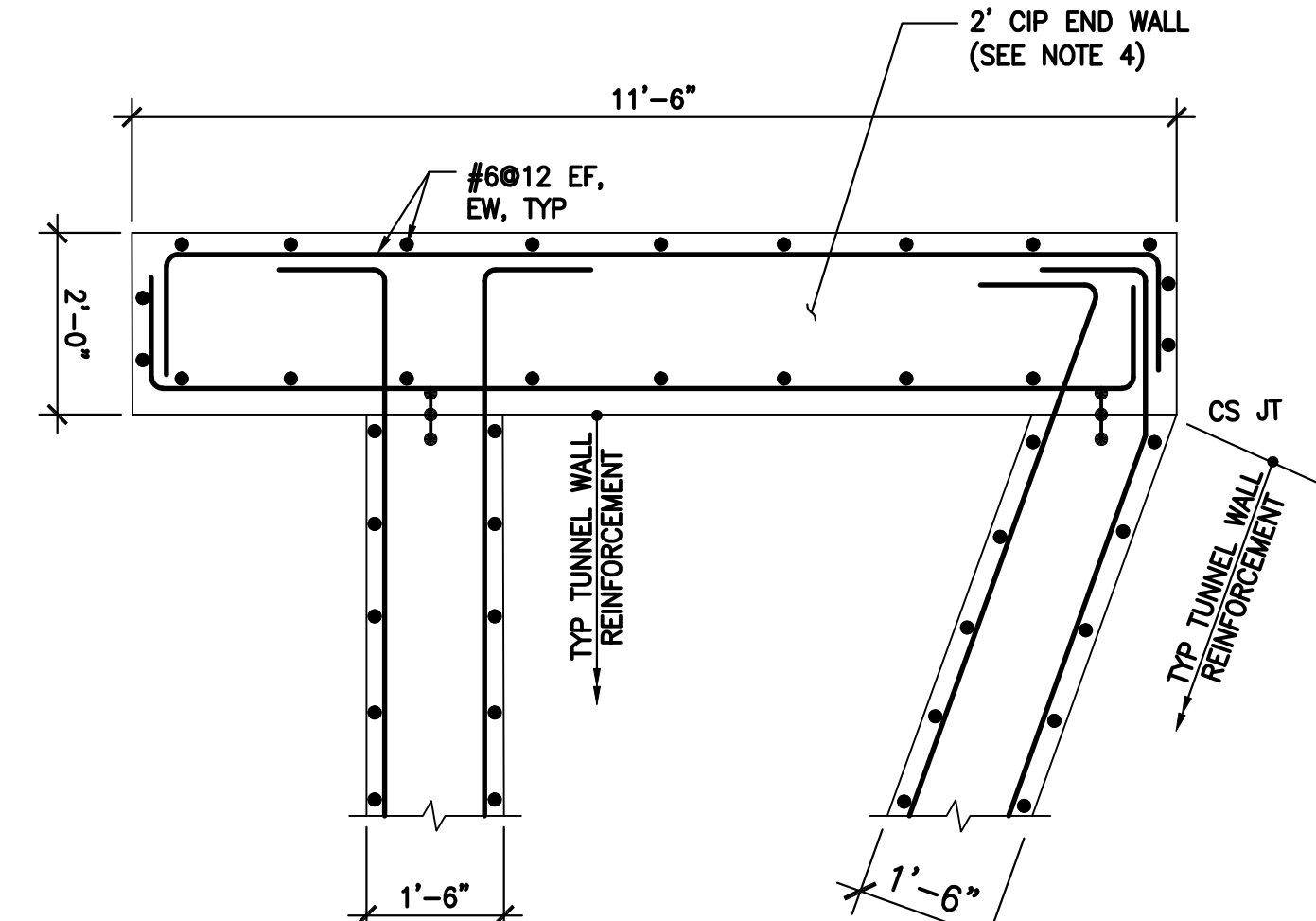
DETAIL 1
SCALE: 1/2"-1'-0"



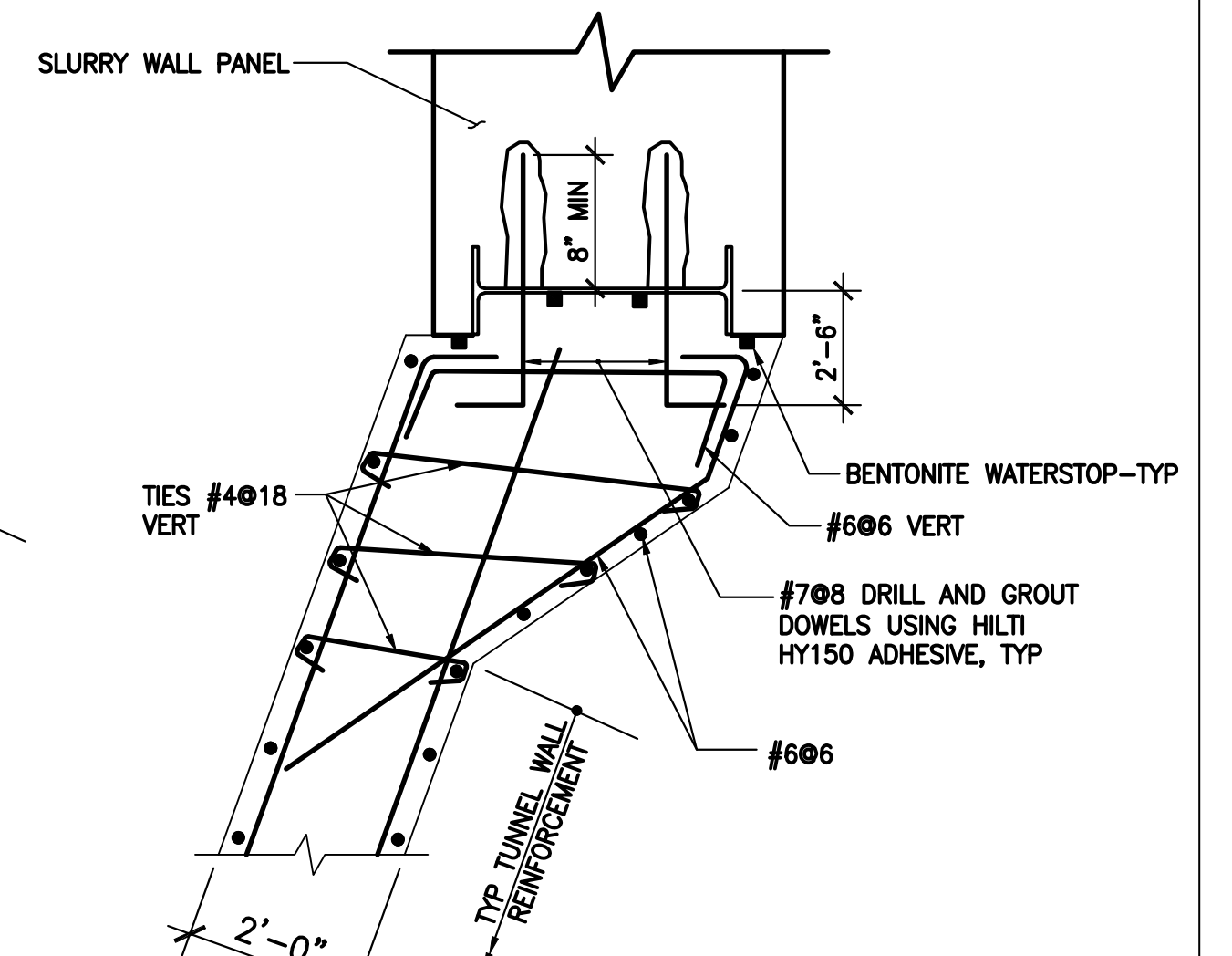
DETAIL 2
SCALE: 1/2"-1'-0"



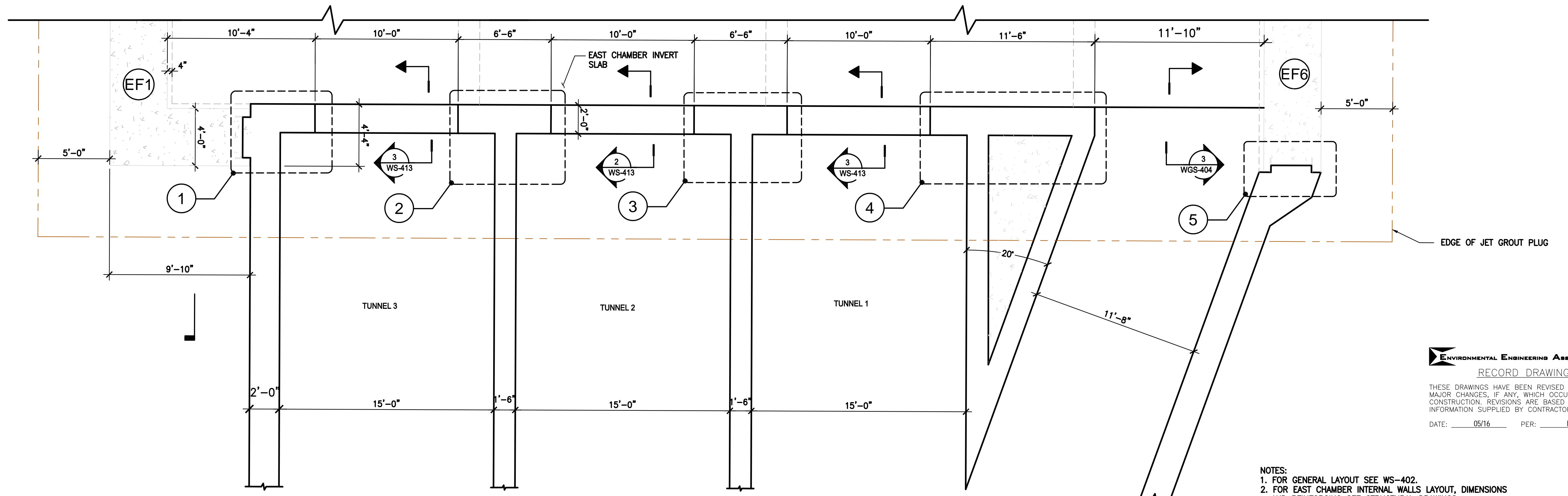
DETAIL 3
SCALE: 1/2"-1'-0"



DETAIL 4
SCALE: 1/2"-1'-0"



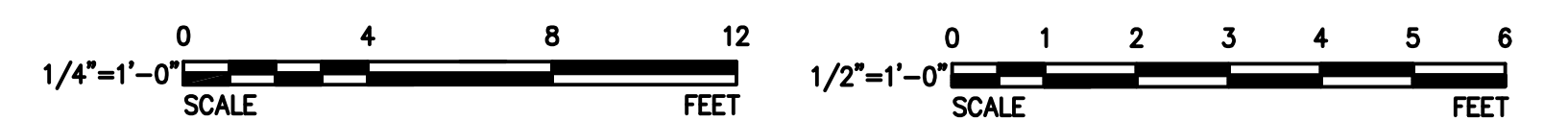
DETAIL 5
SCALE: 1/2"-1'-0"



EAST CHAMBER / TUNNEL PART PLAN @ EL 352.0
SCALE: 1/4"=1'-0"

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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DATE: 05/16 PER: RCF

- NOTES:
1. FOR GENERAL LAYOUT SEE WS-402.
2. FOR EAST CHAMBER INTERNAL WALLS LAYOUT, DIMENSIONS AND REINFORCING SEE STRUCTURAL DRAWINGS.
3. FOR EAST CHAMBER INVERT SLAB REINF SEE WGS-404.
4. PROVIDE #6012 "L" DOWELS FOR VERTICAL REINF OF 2' CIP END WALL INTO INVERT SLAB WITH 2'-6" LAP WITH VERTICAL BARS SHOWN IN DETAILS 1 THRU 4.



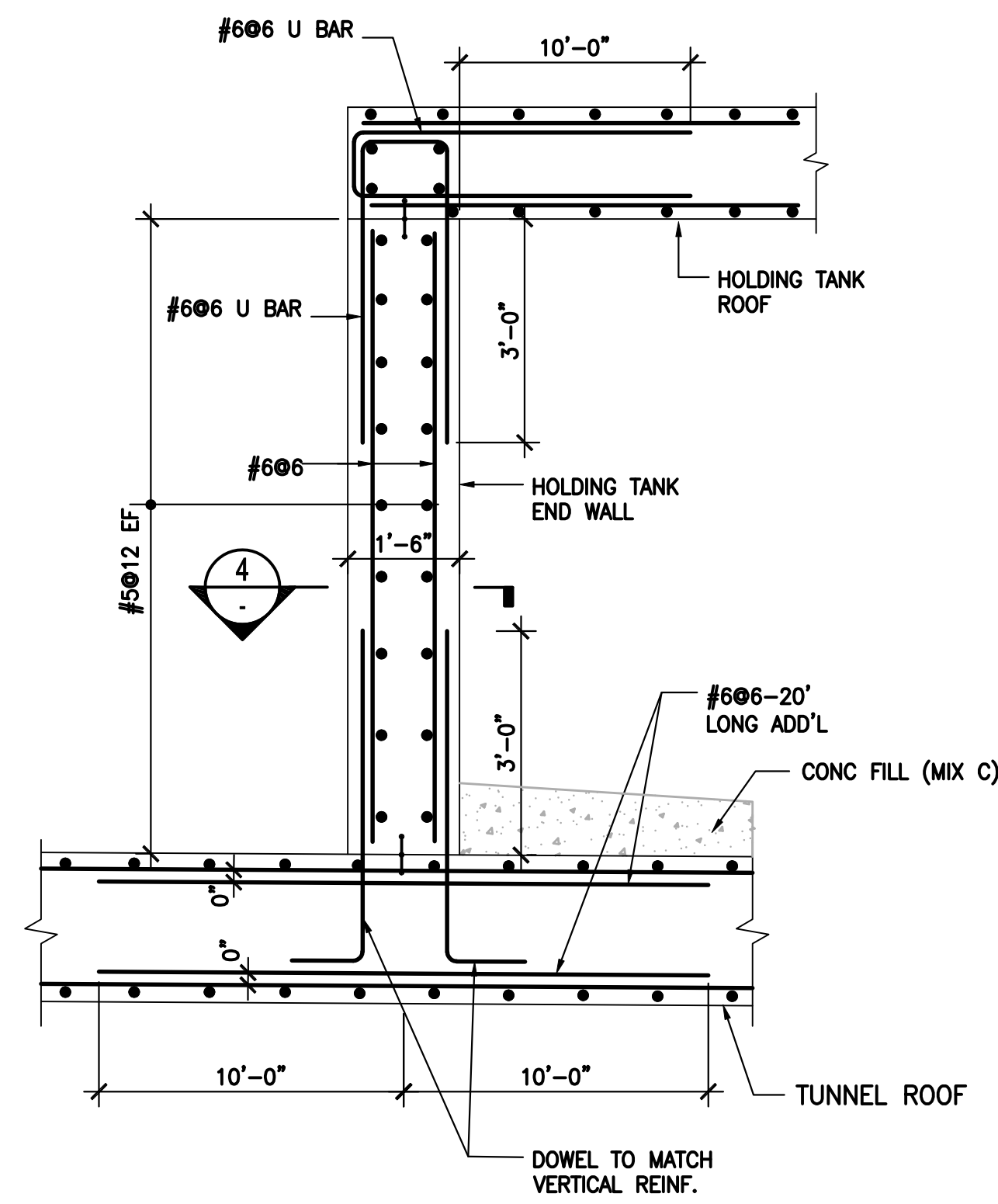
Jett Industries, Inc.
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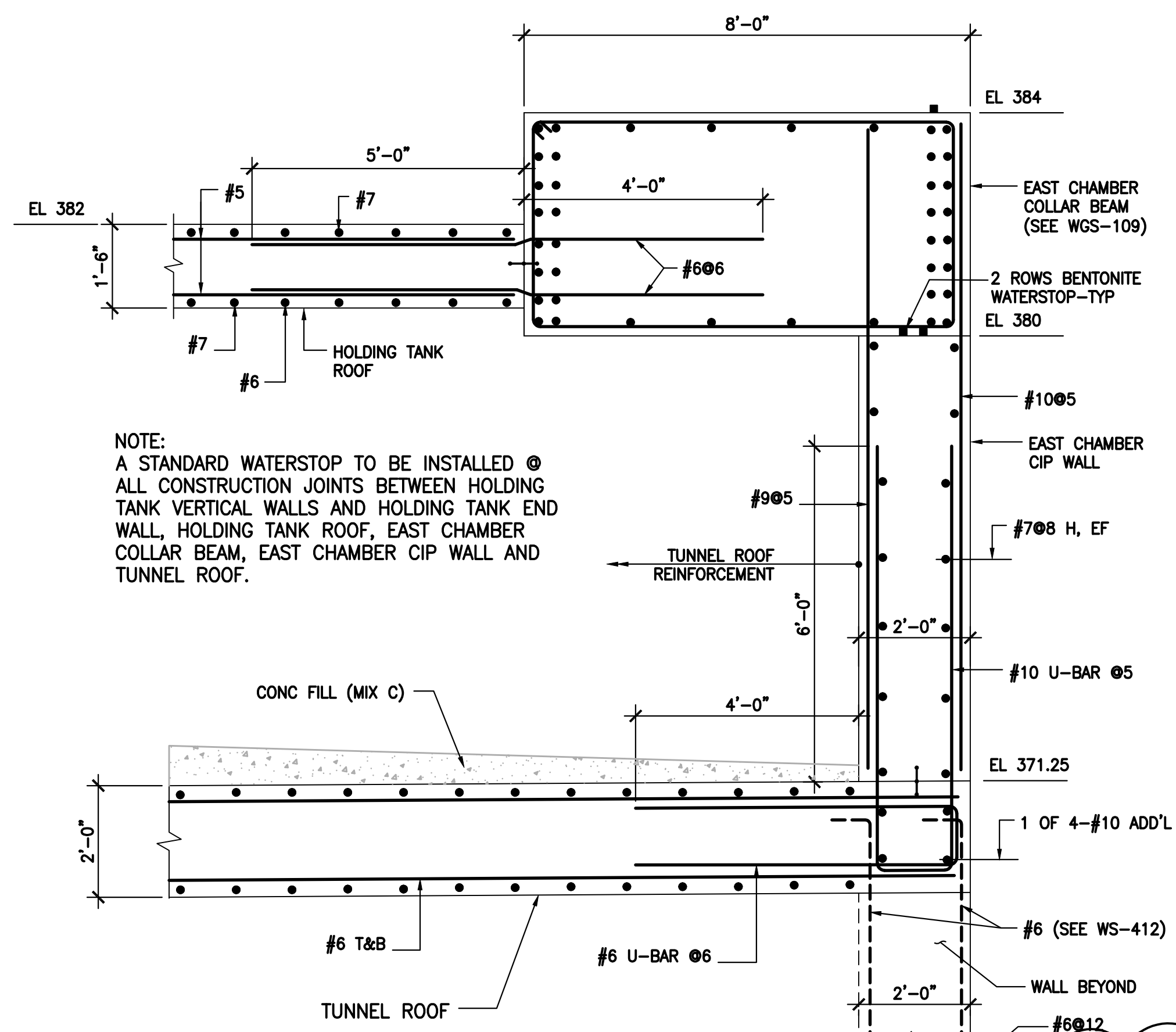
| DATE | REVISIONS | No. | APPROVED BY: |
|----------|--------------------|-----|--------------|
| 03/23/12 | CHANGE ORDER NO. 1 | 4 | H. AWAL |
| 02/27/12 | | 3 | N. BONDOC |
| 02/03/12 | | 2 | M. KIRMANI |
| 01/27/12 | | 1 | G. CHEN |



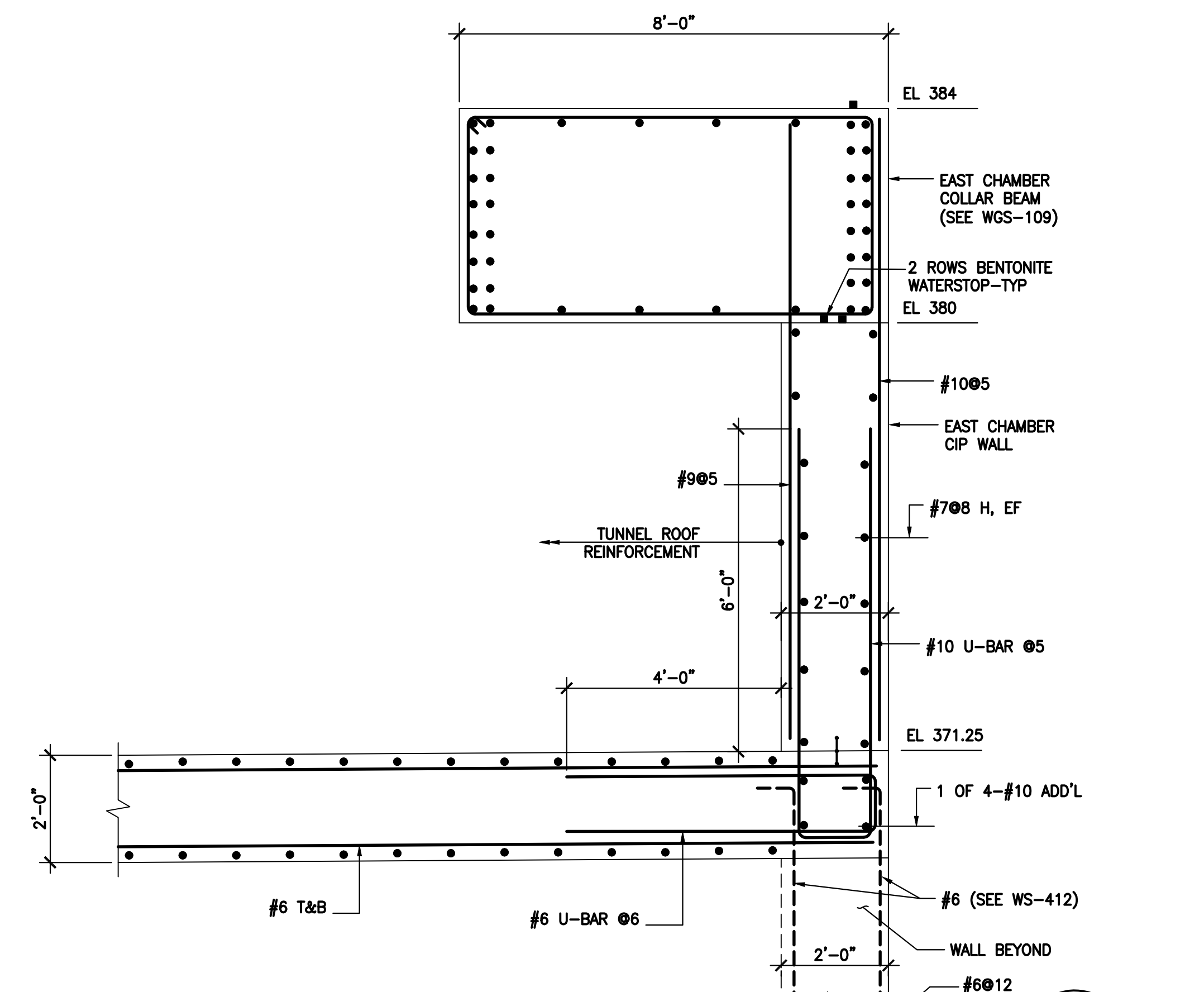
ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY
EAST CHAMBER / TUNNEL - PART PLAN @ EL 352.0
CONTRACT No. _____
SCALE: 3/16"=1'-0"
DATE: 11/22/11
DRAWING No. WS-412



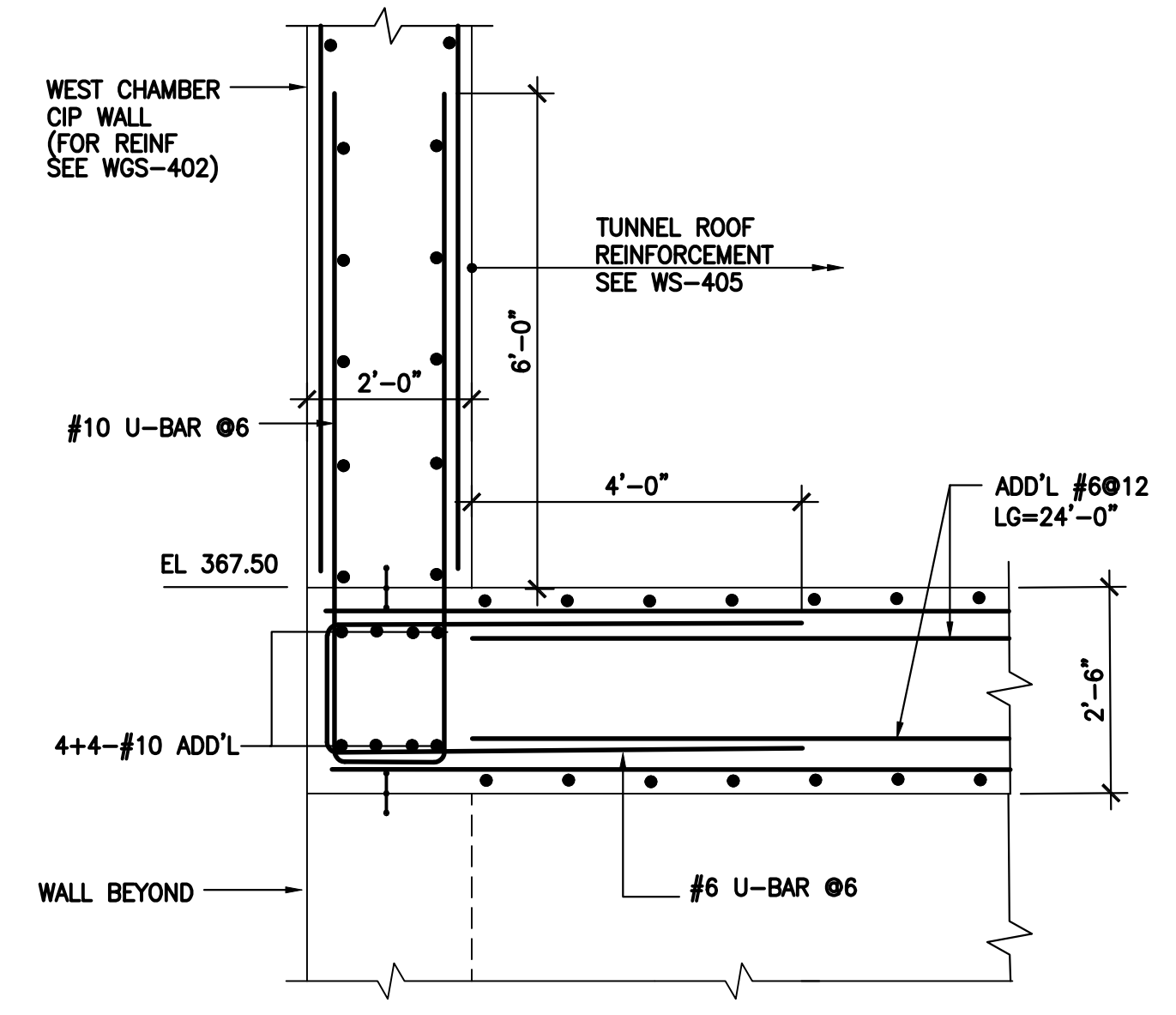
DETAIL HOLDING TANK END WALL (1)
SCALE: 1/2"=1'-0"



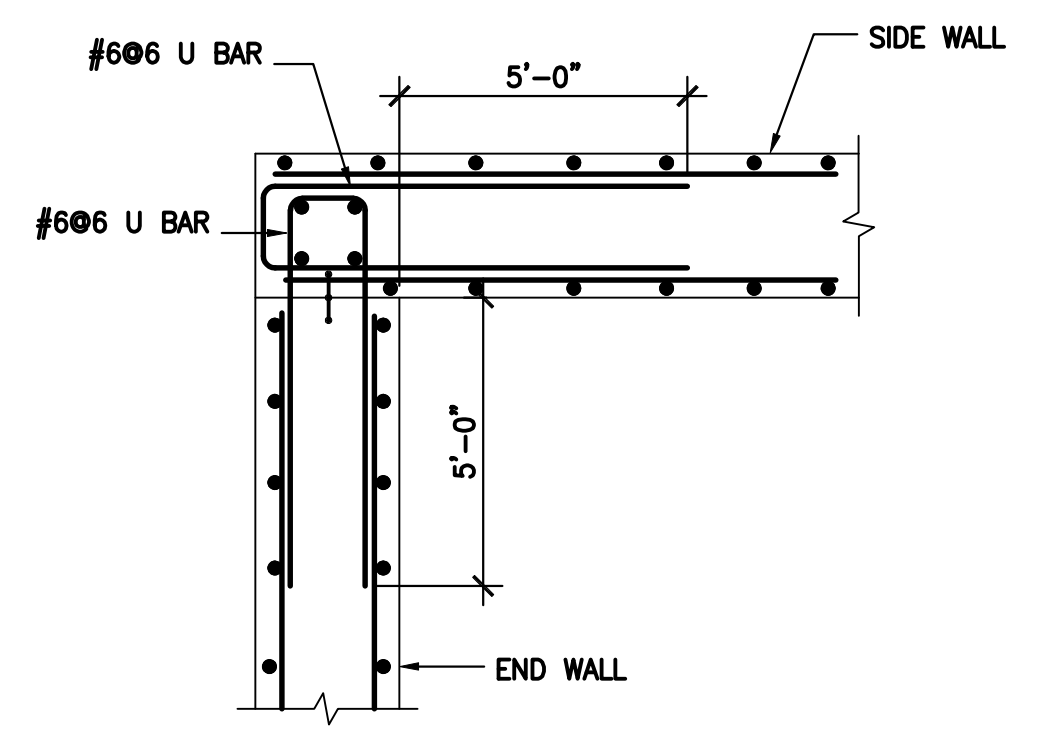
DETAIL TUNNEL/EAST CHAMBER AT HOLDING TANK (2)
SCALE: 1/2"=1'-0"



DETAIL TUNNEL/EAST CHAMBER TYPICAL (3)
SCALE: 1/2"=1'-0"

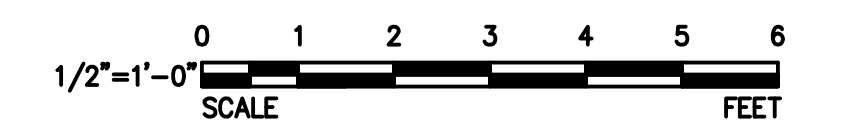


DETAIL TYPICAL (5)
SCALE: 1/2"=1'-0"



SECTION-TYPICAL (4)
SCALE: NTS

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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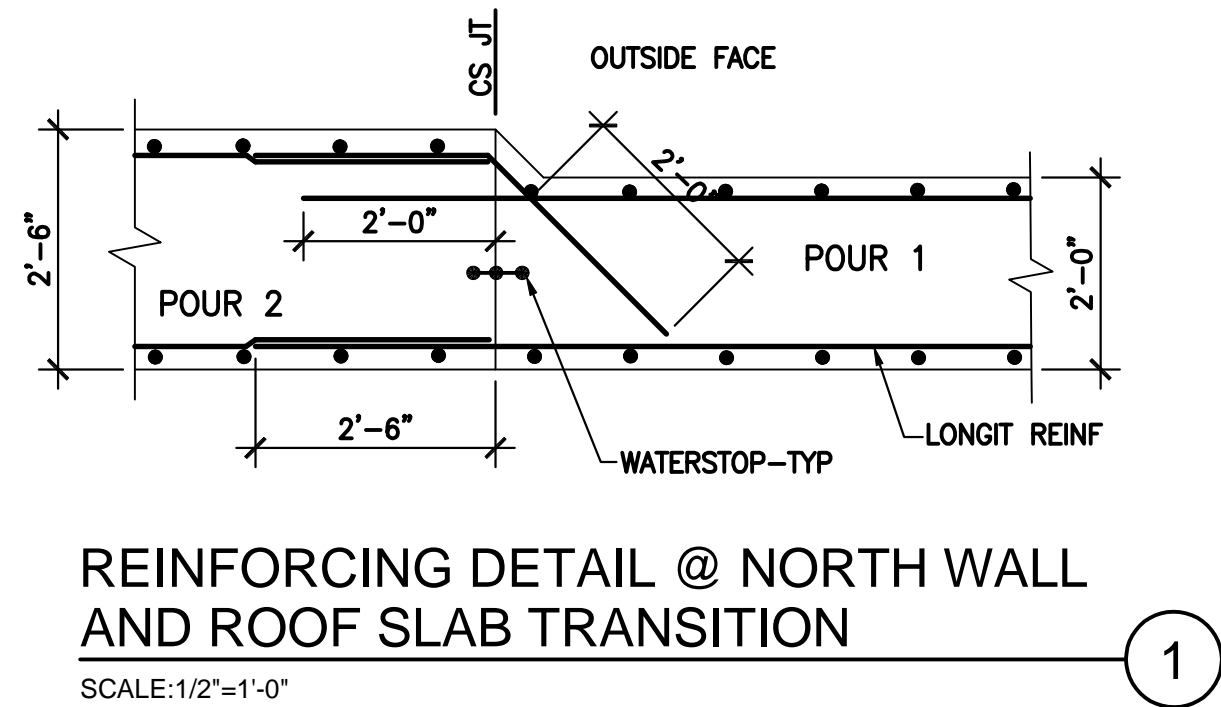
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| 12/06/12 | | 7 | DESIGNED BY: | H. AWAL |
| 11/20/12 | | 6 | DRAWN BY: | N. BONDOC |
| 03/23/12 | CHANGE ORDER NO. 1 | 5 | CHECKED BY: | M. KIRMANI |
| 03/13/12 | | 4 | APPROVED BY: | G. CHEN |
| 02/27/12 | | 3 | | |
| DATE: | REVISIONS | No. | | |



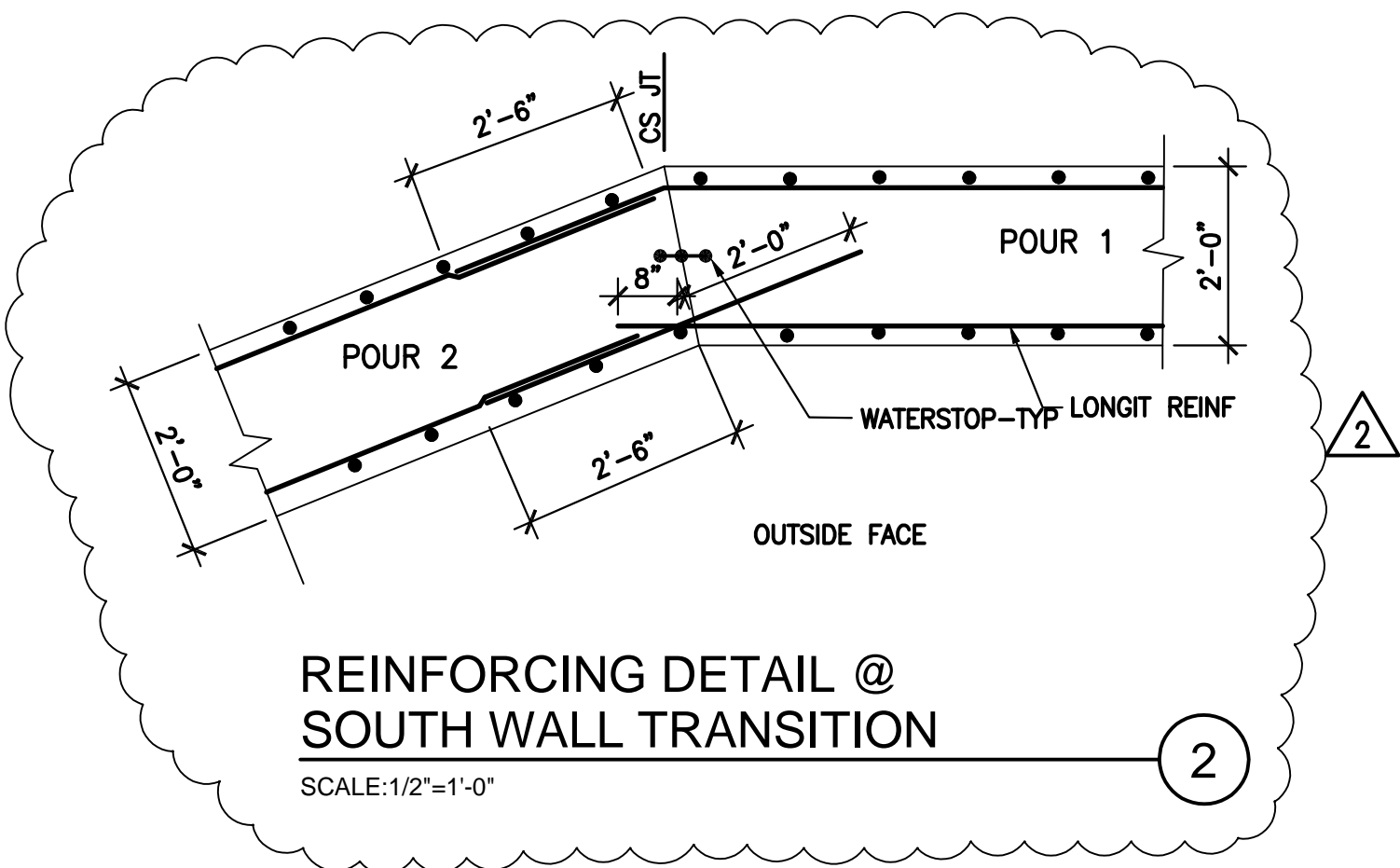
**ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY**

TUNNEL DETAILS

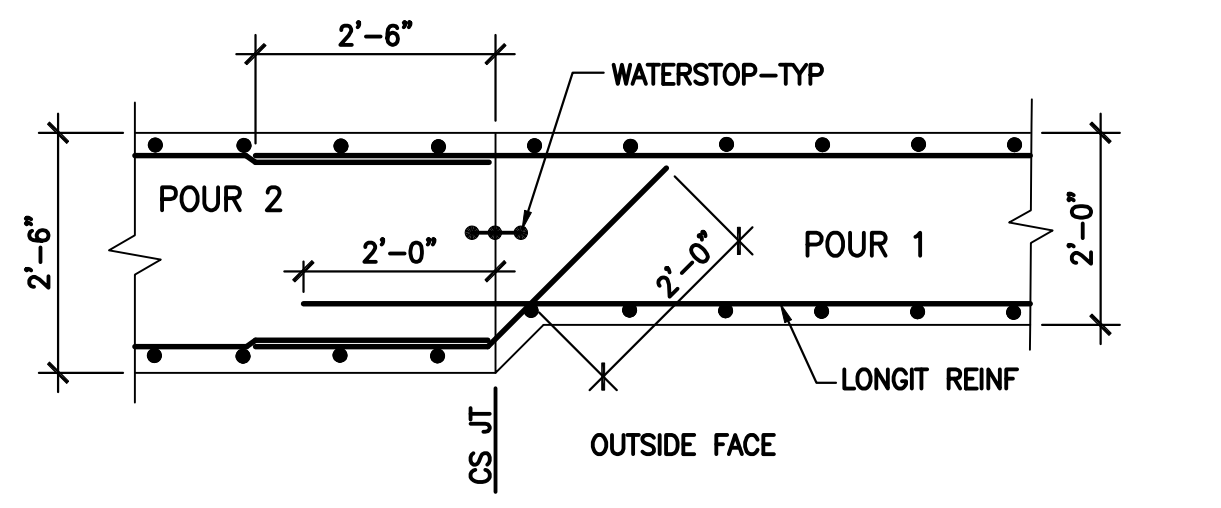
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| CONTRACT No. | |
| SCALE: | |
| DATE: | 11/22/11 |
| DRAWING NO. | WS-413 |



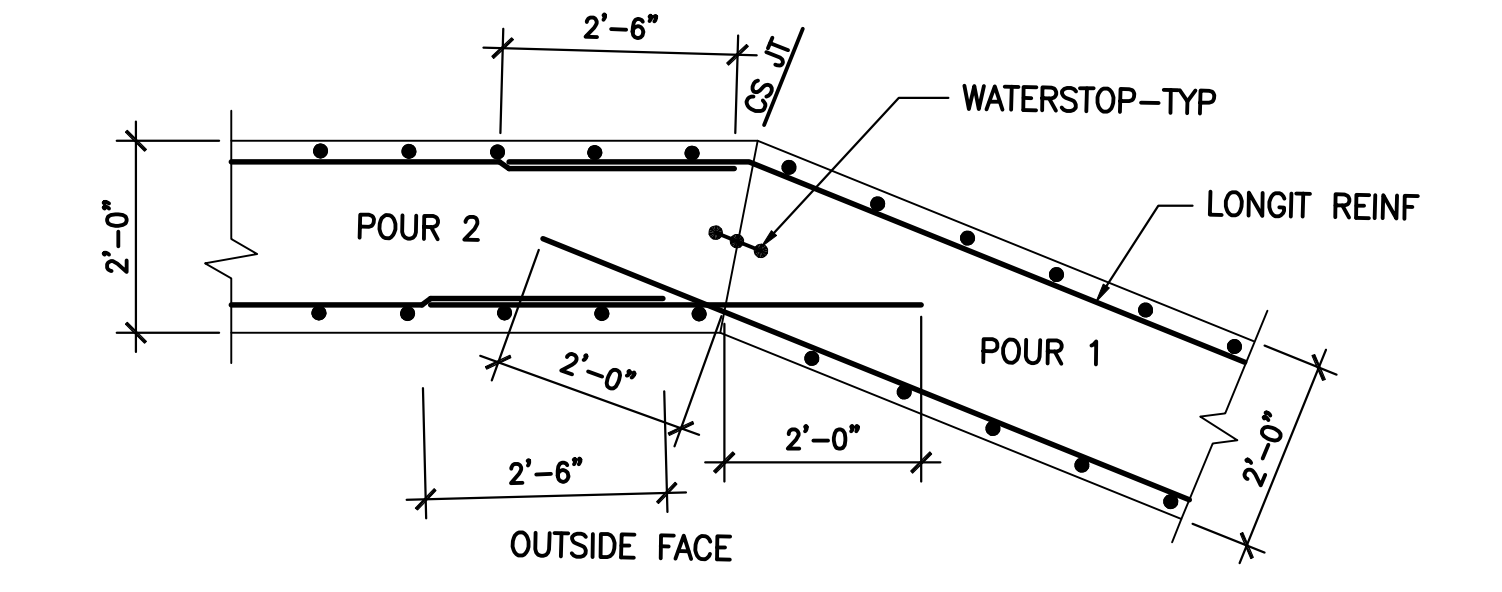
REINFORCING DETAIL @ NORTH WALL AND ROOF SLAB TRANSITION
SCALE: 1/2"=1'-0"



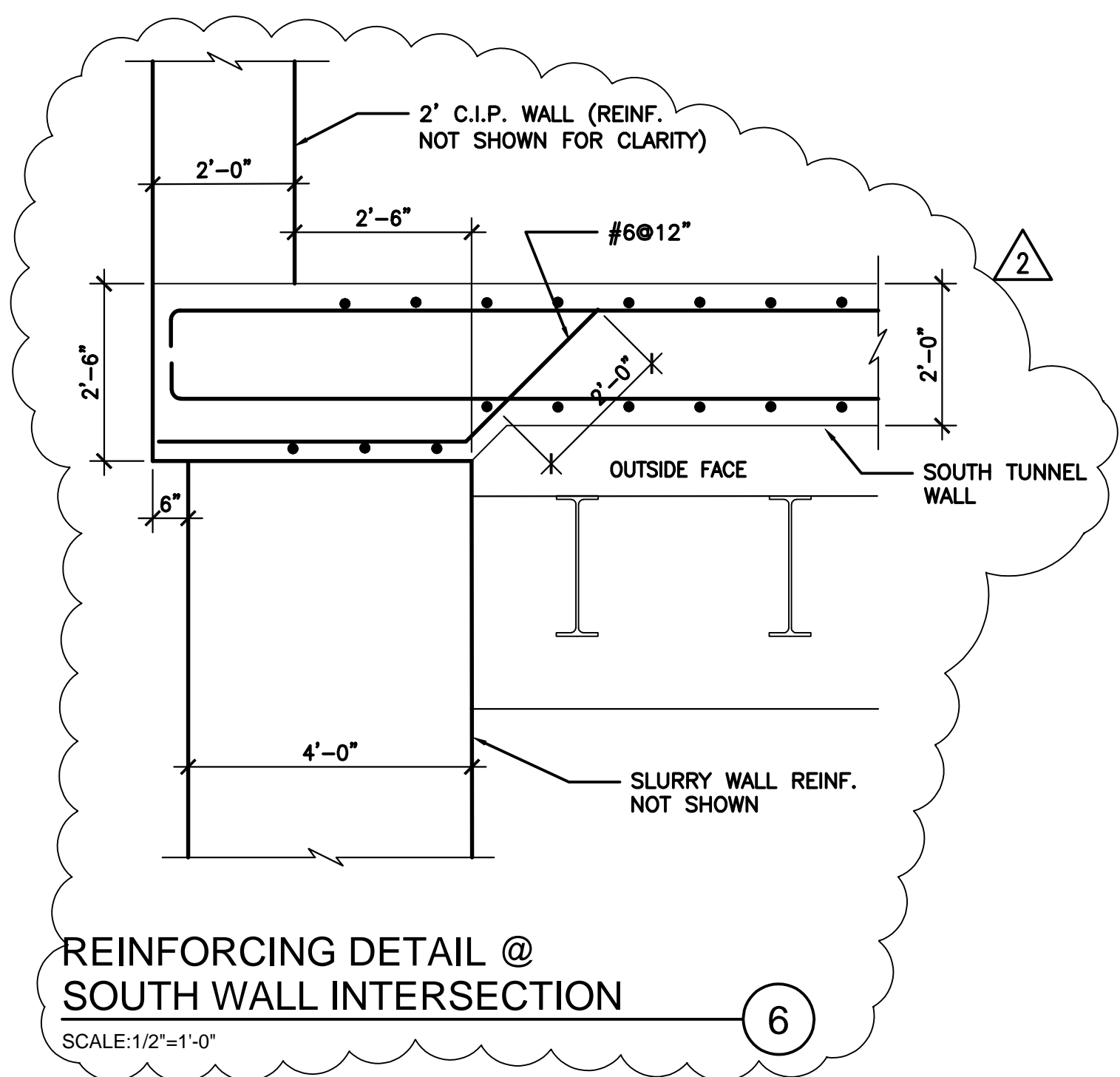
REINFORCING DETAIL @ SOUTH WALL TRANSITION
SCALE: 1/2"=1'-0"



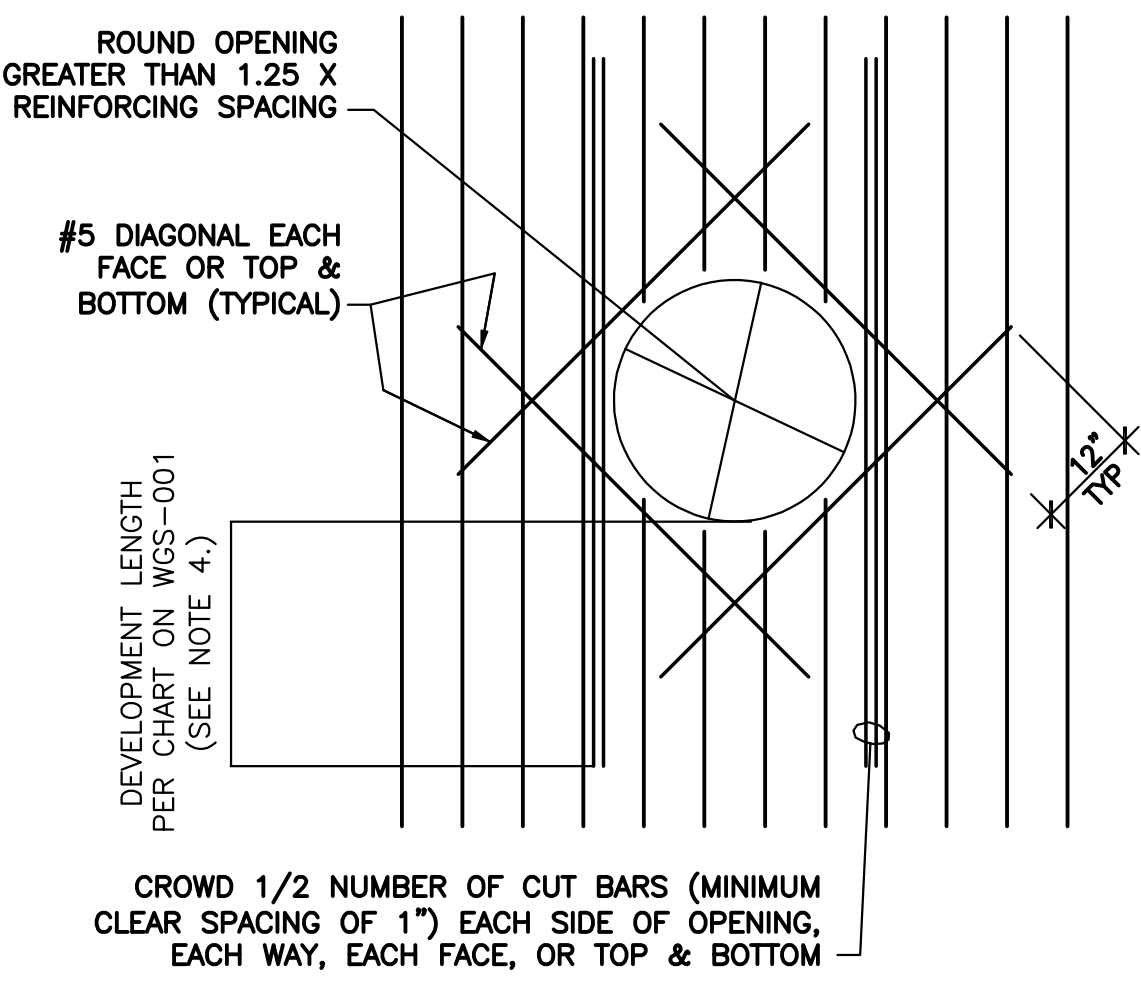
REINFORCING DETAIL @ INVERT SLAB TRANSITION
SCALE: 1/2"=1'-0"



REINFORCING DETAIL @ SOUTH WALL TRANSITION
SCALE: 1/2"=1'-0"

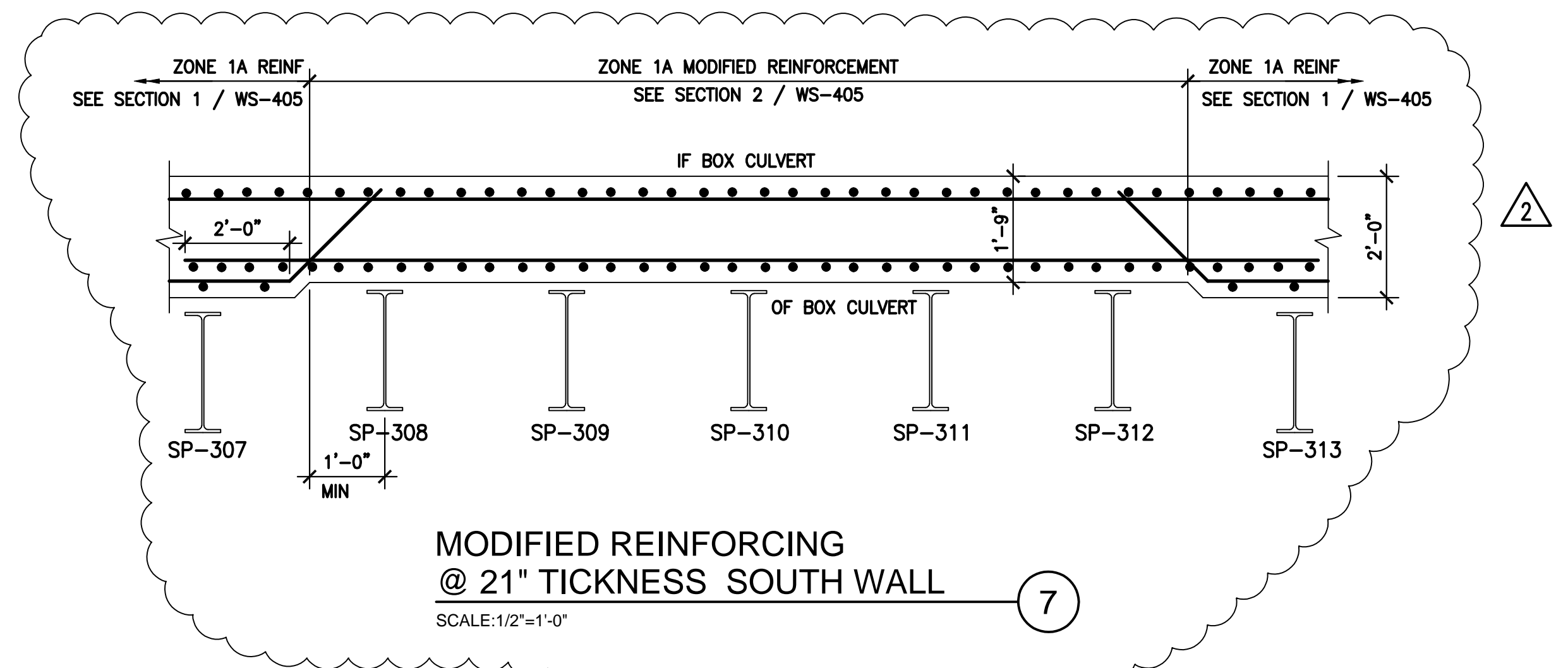


REINFORCING DETAIL @ SOUTH WALL INTERSECTION
SCALE: 1/2"=1'-0"

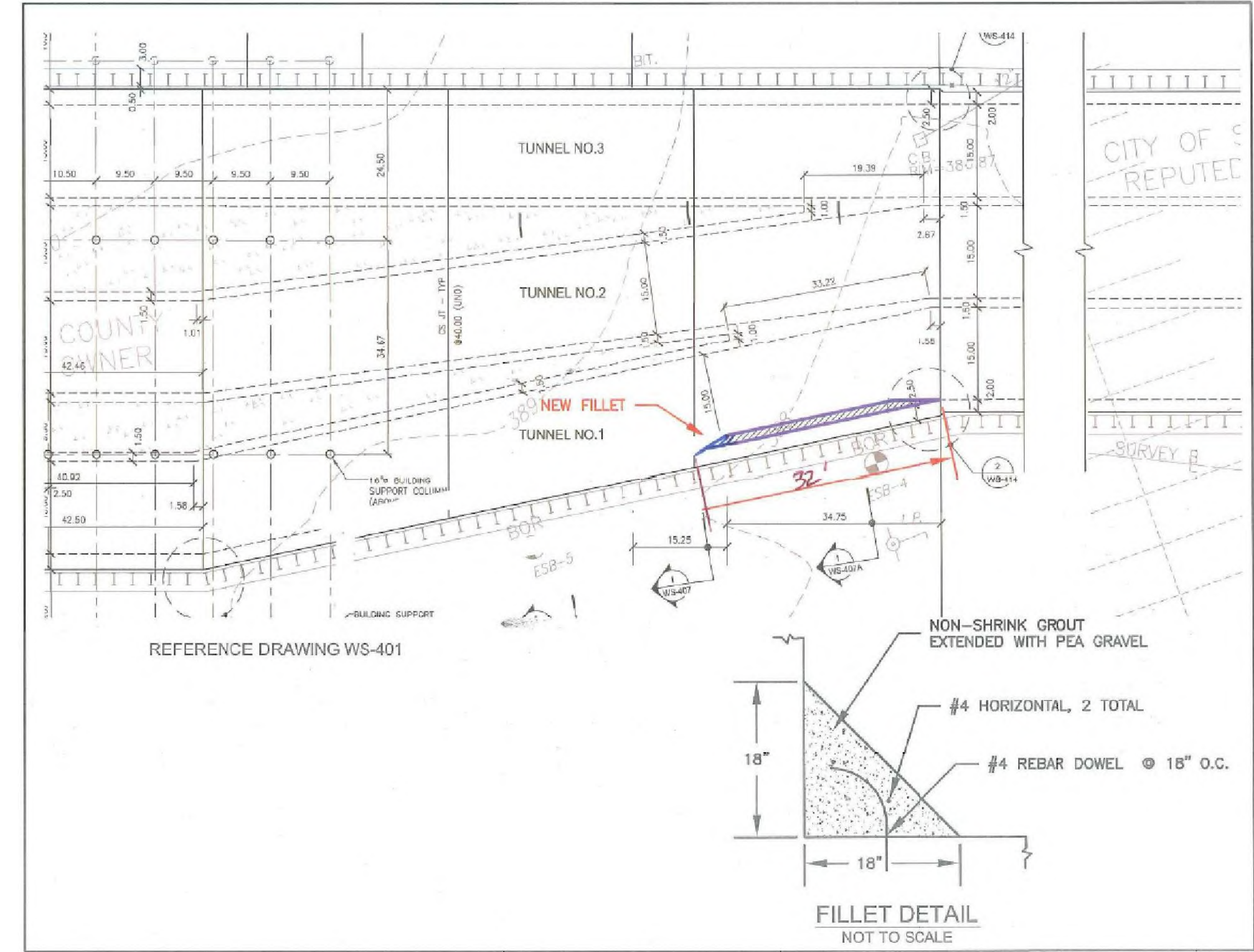


- NOTES:**
1. BARS SHOWN IN ONE DIRECTION FOR CLARITY. INSTALL BARS IN OTHER DIRECTION IN SAME MANNER.
 2. DETAIL TO BE USED AT ALL WALL/SLAB PENETRATIONS MEETING OPENING CRITERIA ABOVE. AT SMALLER OPENINGS, SPREAD REINFORCING AROUND OPENING.
 3. CROWDED BARS ARE NOT REQUIRED AT AN OPENING EDGE PARALLEL TO AND WITHIN 6 INCHES OF A WALL OR BEAM.
 4. PROVIDE STANDARD HOOK IF FULL DEVELOPMENT LENGTH IS NOT POSSIBLE.
 5. REINFORCING STEEL IS TO BE CARRIED ACROSS ALL CONSTRUCTION JOINTS.

CIRCULAR OPENING IN WALL/SLAB
SCALE: NTS

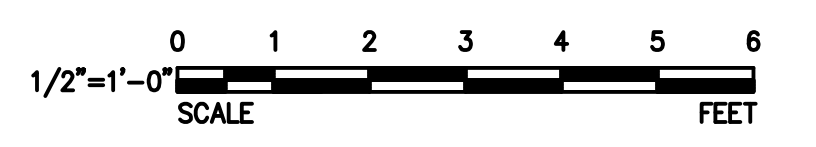


MODIFIED REINFORCING @ 21" THICKNESS SOUTH WALL
SCALE: 1/2"=1'-0"



TUNNEL NO.1 FILLET DETAIL
SCALE: NTS

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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DATE: 05/16 PER: RCF



Jett Industries, Inc.
PO Box 219 - Colliersville, New York 13747
Phone: (607) 433-2100 Fax: (607) 433-2430
Heavy & Highway Contractors
Sitework - Concrete - Utilities - Pre-Engineered Buildings

WAI WEIDLINGER ASSOCIATES INC
Consulting Engineers
201 Broadway, Cambridge MA 02139
(617) 374-0000 fax: (617) 374-0010

| DATE | REVISIONS | No. |
|----------|----------------------------|-----|
| 07/20/12 | TUNNEL SOUTH WALL REVISION | 2 |
| 03/23/12 | CHANGE ORDER NO. 1 | 1 |

DESIGNED BY: H. AWAL
DRAWN BY: N. BONDOC
CHECKED BY: M. KIRMANI
APPROVED BY: G. CHEN



**ONONDAGA COUNTY - DWEP
CLINTON CSO STORAGE FACILITY**

TUNNEL DETAILS

CONTRACT No.
SCALE:
DATE: 02/27/12
DRAWING NO.
WS-414

PIPE AND FITTING SYMBOLS

| | |
|--|---------------------------------|
| | EXISTING PIPING |
| | NEW PIPING |
| | CONTAINMENT AND FEED PIPING |
| | FLANGED JOINT |
| | WELDED JOINT |
| | MECHANICAL JOINT |
| | SLEEVE-TYPE MECHANICAL COUPLING |
| | ARCHED BAND TYPE PIPE COUPLING |
| | ELBOW UP |
| | ELBOW DOWN |
| | 90° ELBOW IN PLANE |
| | 45° ELBOW IN PLANE |
| | TEE UP |
| | TEE DOWN |
| | TEE IN PLANE |
| | CROSS |
| | LATERAL WYE IN PLANE |
| | CONCENTRIC REDUCER |
| | ECCENTRIC REDUCER |
| | UNION |
| | WYE |
| | WYE STRAINER |
| | SEDIMENT TRAP |
| | TRAP |
| | CLEANOUT |
| | DRAIN |
| | QUICK CONNECTION |

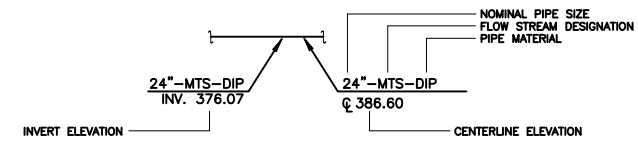
VALVE AND GATE SYMBOLS

| | |
|--|-------------------------|
| | FLEX CONNECTION |
| | BUTTERFLY VALVE |
| | CHECK VALVE |
| | BALL VALVE |
| | GLOBE VALVE |
| | WYE CHECK VALVE |
| | GATE VALVE |
| | PLUG VALVE |
| | COCK VALVE |
| | NEEDLE VALVE |
| | KNIFE GATE VALVE |
| | BALANCING VALVE |
| | DIAPHRAGM VALVE |
| | PINCH VALVE |
| | PRESSURE REDUCING VALVE |
| | BACK PRESSURE VALVE |
| | ANGLE VALVE |
| | ANGLE GATE VALVE |
| | ANGLE GLOBE VALVE |
| | 3 WAY VALVE |
| | 3 WAY GLOBE VALVE |
| | TELESCOPING VALVE |
| | RELIEF SAFETY VALVE |
| | BACKFLOW VALVE |
| | RPZ BACKFLOW VALVE |
| | MUD VALVE |
| | HOSE BIBB |
| | FLUSHING CONNECTION |
| | SAMPLE TAP |
| | SLUICE GATE |
| | SLIDE GATE |
| | MOTOR OPERATED |
| | SOLENOID OPERATED |
| | CYLINDER-HYDRAULIC |
| | CYLINDER-PNEUMATIC |

MISCELLANEOUS SYMBOLS

| | |
|--|-----------------------------------|
| | FLEXIBLE HOSE |
| | PRESSURE GAUGE WITH SEAL |
| | CALIBRATION COLUMN |
| | POINT OF CONNECTION |
| | AIR VENT-AUTO |
| | AIR VENT-MANUAL |
| | ROTOMETER |
| | RUPTURE DISK |
| | FLOW DIRECTION - SINGLE LINE PIPE |
| | FLOW DIRECTION - DOUBLE LINE PIPE |
| | FLOW STREAM CONTINUATION |
| | CONNECTING LINES |
| | NON-CONNECTING LINES |
| | COMPRESSED AIR |
| | CENTRIFUGAL PUMP |
| | DIAPHRAGM PUMP |
| | BLOWER |
| | POSITIVE DISPLACEMENT COMPRESSOR |
| | METERING PUMP |
| | SUMP PUMP |
| | MIXERS |
| | PRESSURE RELIEF VALVE |
| | MAGNETIC FLOWMETER |
| | PULSATION DAMPENERS |

PIPE DESIGNATIONS



FLOW STREAM DESIGNATIONS

| | |
|-----|--|
| ACS | WEST ONONDAGA STREET - EAST CONVEYANCE SEWER |
| DFM | UNDERFLOW/DEWATERING FORCE MAIN |
| DR | DRAIN |
| EFF | EFFLUENT |
| JCS | WEST JEFFERSON STREET CONVEYANCE SEWER |
| MIS | MAIN INTERCEPTOR SEWER |
| MTS | MIS TAP SEWER |
| PLW | PLANT WATER |
| PW | POTABLE WATER |
| SAN | SANITARY SEWER |
| SD | STORM DRAIN |
| SW | STORM WATER |
| SPD | SUMP PUMP DISCHARGE |
| TCS | TULLY STREET CONVEYANCE SEWER |

ABBREVIATIONS

| | |
|--------|---|
| AE | ANALYTIC ELEMENT |
| A.F.F. | ABOVE FINISHED FLOOR |
| AIT | ANALYTIC INDICATOR/TRANSMITTER |
| A.R. | RELIEF VALVE (MANUAL) |
| BFV | BUTTERFLY VALVE |
| BPV | BACK PRESSURE VALVE |
| BV | BALL VALVE |
| C | CENTER LINE |
| COORD | COORDINATE |
| CTR | CONTRACT |
| CSO | COMBINED SEWER OVERFLOW |
| D | DISCHARGE |
| DP | DEWATERING PUMP |
| DR | DRAIN (LOW POINT IN A PIPE) |
| EL | ELEVATION |
| FC | FLUSH CONNECTION |
| FE | FLOW ELEMENT |
| FI | FLOW INDICATOR |
| FIT | FLOW INDICATOR/TRANSMITTER |
| FL | FLANGE JOINT |
| FLG | FLUSHING GATE |
| FM | FLOW METER |
| HP | HORSEPOWER |
| HR | HOSE REEL |
| HVAC | HEATING, VENTILATING AND AIR CONDITIONING |
| INV | INVERT |
| LG | LONG |
| LT | LEVEL TRANSMITTER |
| MFR | MANUFACTURER |
| MH | MANHOLE |
| MJ | MECHANICAL JOINT |
| NPT | NATIONAL PIPE THREAD |
| PE | PLAIN END |
| PIT | PRESSURE INDICATOR/TRANSMITTER |
| PRV | PRESSURE RELIEF VALVE |
| PS | PRESSURE SWITCH |
| PSH | PRESSURE SWITCH HIGH |
| PSL | PRESSURE SWITCH LOW |
| PV | PLUG VALVE |
| ORP | OXYGEN REDUCTION POTENTIAL |
| QTY | QUANTITY |
| REQ'D | REQUIRED |
| S | SUCTION |
| SG | SLUICE GATE |
| SP | SUMP PUMP |
| SQ | SQUARE |
| SS | STAINLESS STEEL |
| TI | TEMPERATURE INDICATOR/TRANSMITTER |
| TM | TRADEMARK |
| T.O.W. | TOP OF WALL |
| T/S | TOP OF SLAB |
| TY | TYPICAL |
| UTIL | UTILITY |
| VFD | VARIABLE FREQUENCY DRIVE |
| XLPE | CROSS-LINKED POLYETHYLENE |
| Ø | DIAMETER |

PIPE MATERIAL

| | |
|------|------------------------------------|
| BI | BLACK IRON |
| CIP | CAST IRON PIPE |
| CMP | CORRUGATED METAL PIPE |
| CPVC | CHLORINATED POLYVINYL CHLORIDE |
| CS | CARBON STEEL |
| CU | COPPER |
| DIP | DUCTILE IRON PIPE |
| FRP | FIBERGLASS REINFORCED PLASTIC |
| GS | GALVANIZED STEEL |
| HDPE | HIGH DENSITY POLYETHYLENE |
| PCCP | PRESTRESSED CONCRETE CYLINDER PIPE |
| PVC | POLYVINYL CHLORIDE |
| RCP | REINFORCED CONCRETE PIPE |
| SS | STAINLESS STEEL |
| WS | WELDED STEEL |

SPECIAL IDENTIFIERS

| | |
|----|-----------------------|
| HT | HEAT TRACE ELECTRIC |
| Ji | JACKET AND INSULATION |

L: ON=*, OFF=*REF*
 X:
 MO/DA/YR CO DFT
 DIR/DWG

SCALE:

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In charge of RCF
 Designed by RWS
 Drawn by RWS
 Checked by RCF



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

SYMBOLS AND ABBREVIATIONS

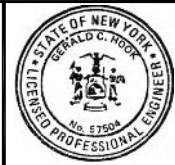
MECHANICAL

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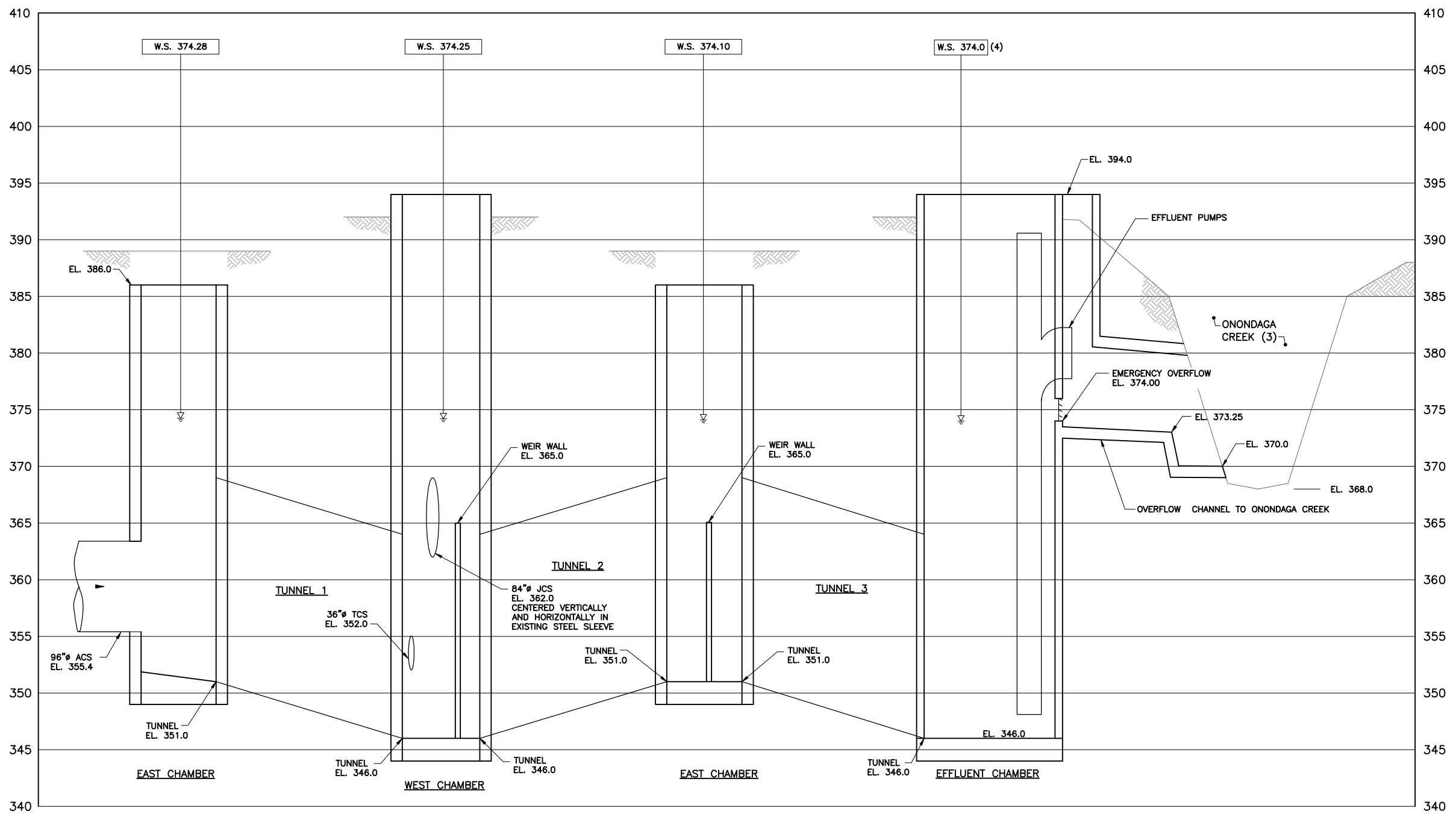
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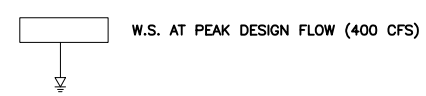
| | |
|-----------------------|-------|
| File Number | 00663 |
| Date | 04/11 |
| <i>Gerald C. Hook</i> | |

M-001



HYDRAULIC PROFILE

VERTICAL: 1"=0' = 5'
HORIZONTAL: NONE

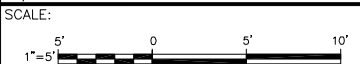


NOTES:

1. ELEVATIONS BASED ON NAVD 88 DATUM.
2. WATER SURFACE ELEVATIONS BASED ON ONE-YEAR, TWO-HOUR STORM EVENT.
3. HYDRAULIC PROFILE ASSUMES A CREEK WATER LEVEL LESS THAN OR EQUAL TO 380 FT.
4. MAXIMUM WET WELL ELEVATION.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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 Drawn by RWS
 Checked by RCF

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 SYRACUSE, NEW YORK

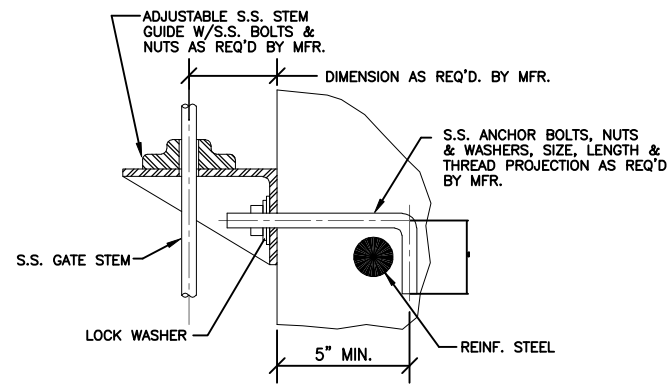
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 CLINTON CSO STORAGE FACILITY PROJECT

HYDRAULIC PROFILE

MECHANICAL

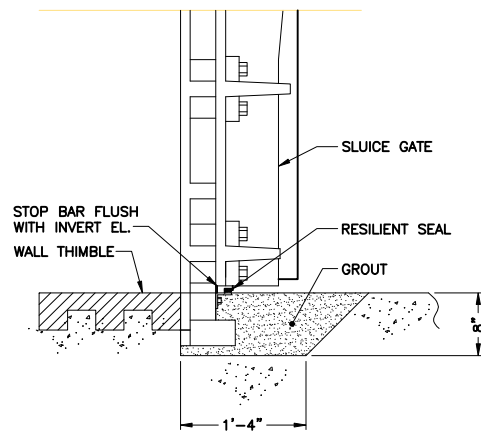
ONONDAGA COUNTY PROFESSIONAL ENGINEER

File Number 00663
 Date 04/11
 M-002



STEM GUIDE INSTALLATION DETAIL

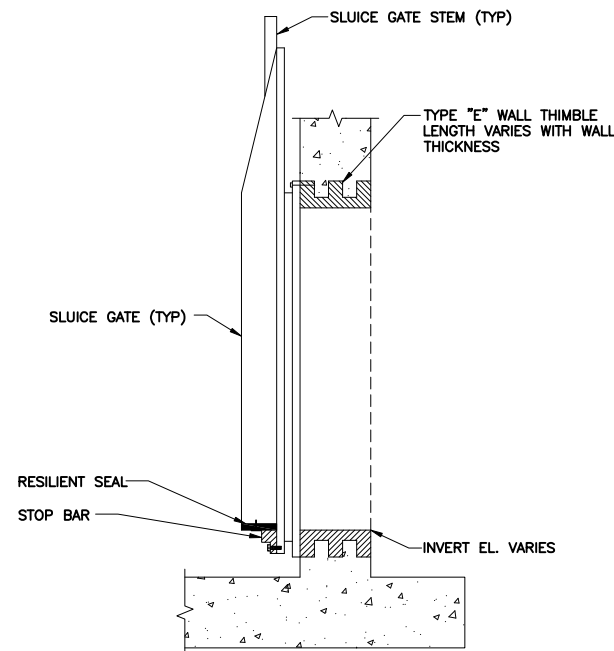
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SLUICE GATE FLUSH BOTTOM CLOSURE DETAIL

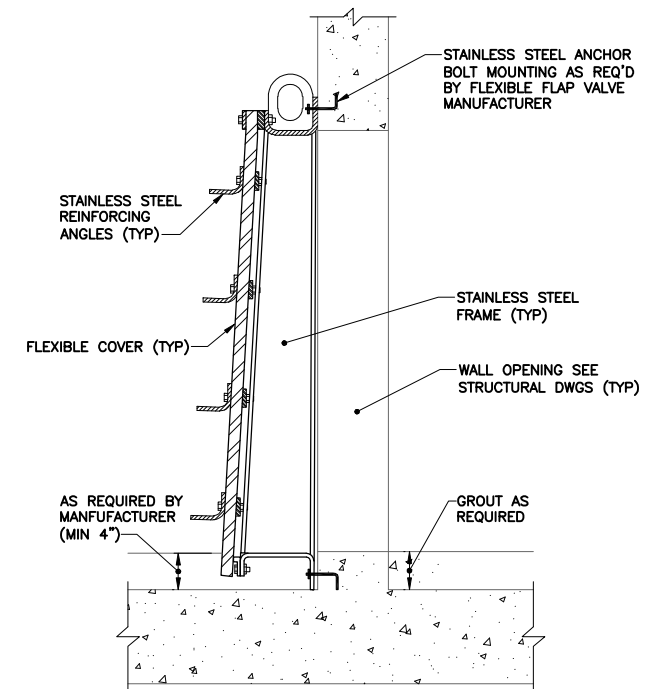
NOT TO SCALE

REGARDING THE EMBEDDED ANCHORS FOR ANCHORING SLUICE GATE SLG-112, SLG-116 AND SLG-215 FRAMES AND STEM GUIDELINES: THE REQUIRED LENGTH OF EMBEDMENT FOR ANCHORS AS DETERMINED BY RODNEY HUNT REPRESENTS THE LENGTH OF EMBEDMENT INTO THE D-WALL. THE PORTION OF ANCHORS PASSING THROUGH THE SHOTCRETE LAYER SHALL NOT BE COUNTED TOWARDS THIS LENGTH.



SLUICE GATE ELEVATED MOUNTING DETAIL

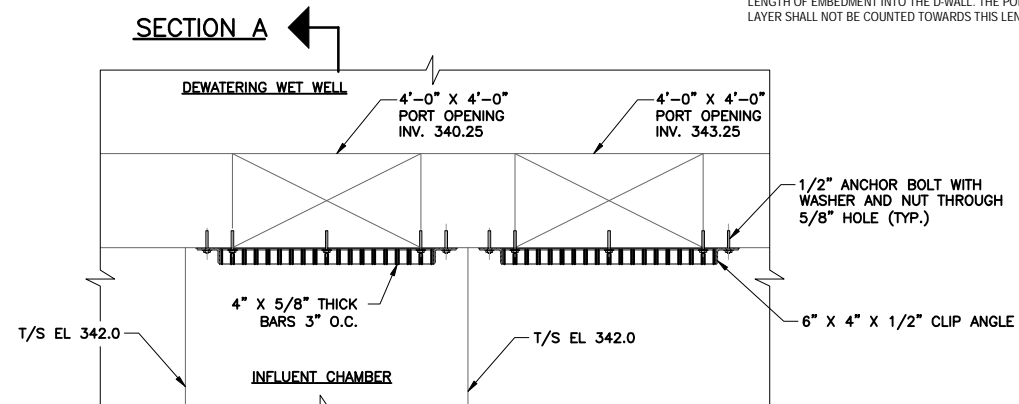
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FLEXIBLE FLAP VALVE MOUNTING DETAIL

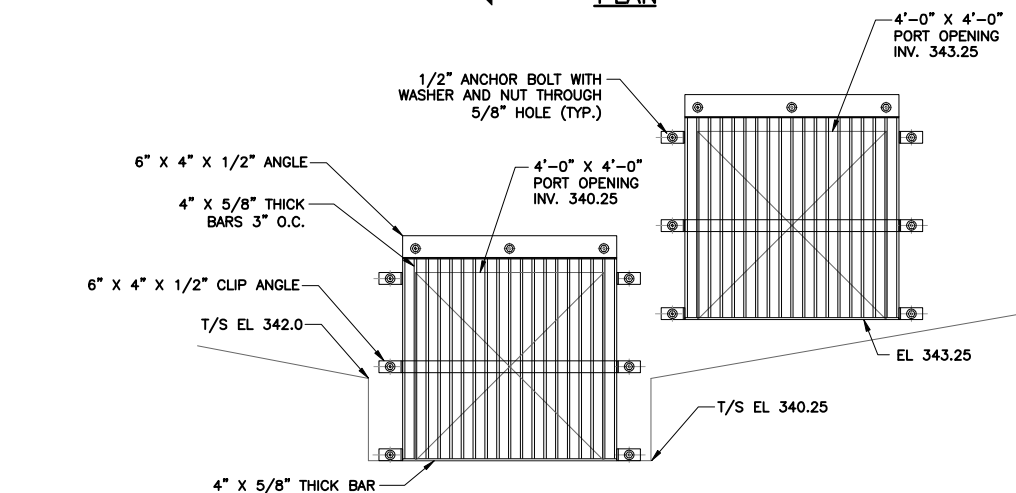
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NOTE: REFER TO SECTION 02667 FOR FLEXIBLE FLAP VALVE SCHEDULE.



SECTION A

PLAN

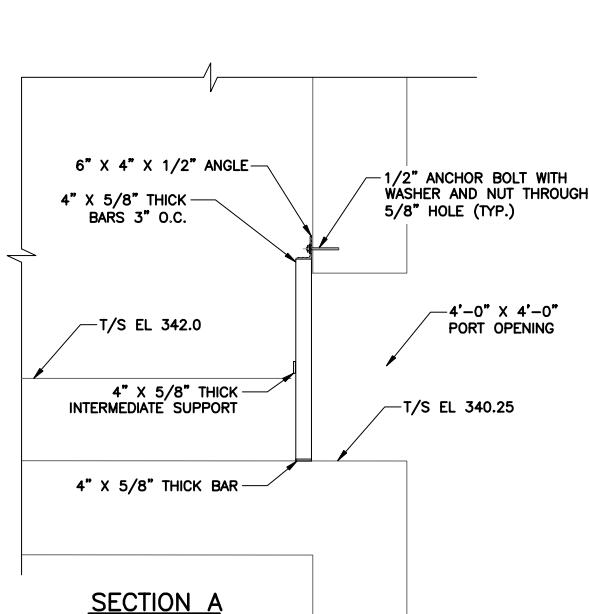


ELEVATION

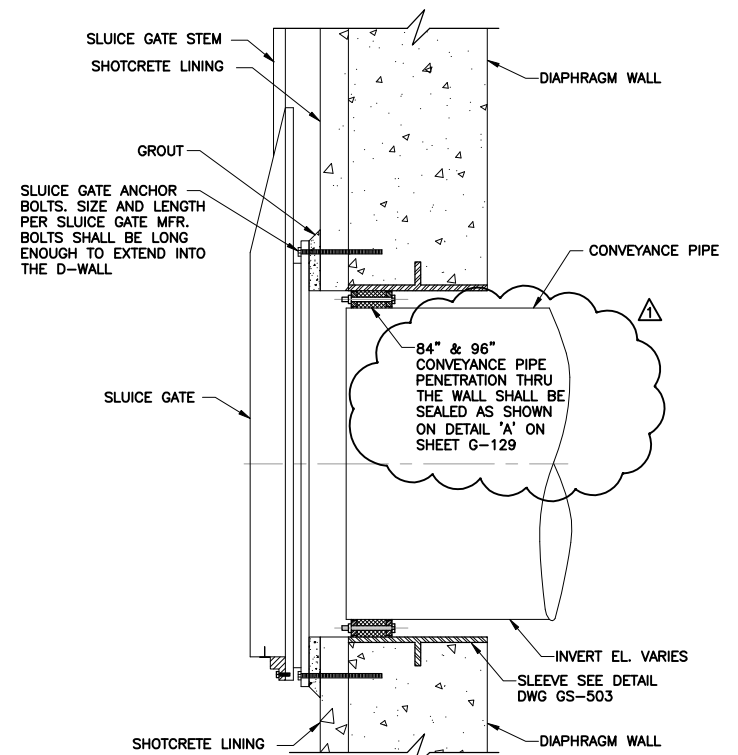
NOTES:
1. ALL MATERIAL SHALL BE STAINLESS STEEL.
2. ALL WELDED CONSTRUCTION.

TRASH RACK DETAIL

NOT TO SCALE



SECTION A



CONVEYANCE PIPE PENETRATION THRU DIAPHRAGM WALL DETAIL

NOT TO SCALE

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP

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SCALE: NONE

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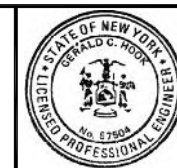
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Designed by RWS
Drawn by RWS
Checked by RCF

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

MISCELLANEOUS DETAILS

MECHANICAL

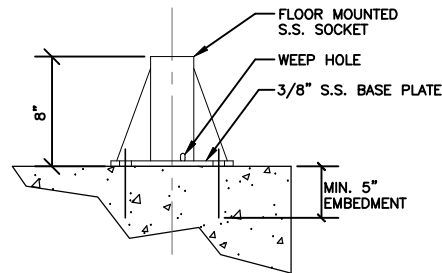
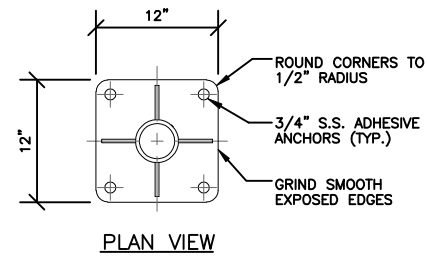


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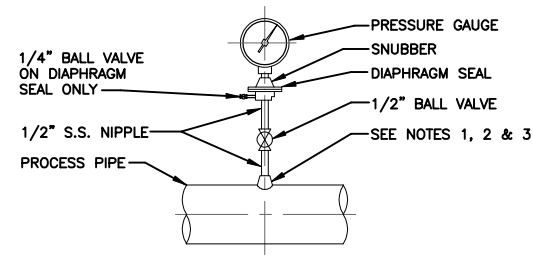
Date
04/11

Gerald C. Brown

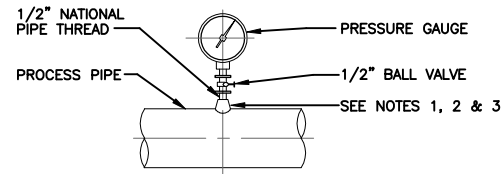
M-003



FLOOR MOUNTED HOIST SOCKET DETAIL
NOT TO SCALE



DIAPHRAGM PRESSURE GAUGE
(ALL WASTE WATER PROCESS LINES)



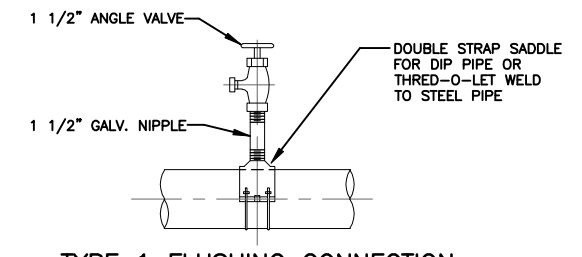
PRESSURE GAUGE

NOTES:

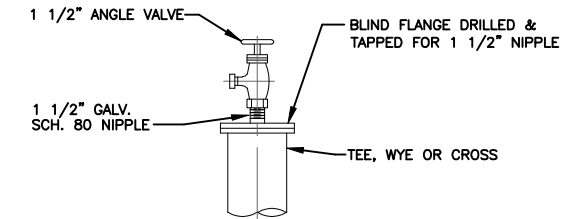
1. FOR STEEL, GALV. STEEL AND PVC 2 1/2" AND SMALLER USE A BUSHING IN A TEE.
2. FOR DUCTILE IRON AND FIBERGLASS REINFORCED PLASTIC PIPE, ALL SIZES, USE PIPE SADDLE WITH BUSHING.
3. FOR STEEL AND STAINLESS STEEL PIPES 3" AND LARGER, AND PRESSURE VESSELS, USE THRED-O-LET AS SHOWN.
4. PROVIDE SNUBBER FOR ALL INSTALLATIONS.
5. FIELD THREADING OF PIPELINE (TAPPING) IS NOT ACCEPTABLE.

PRESSURE GAUGE MOUNTING DETAIL

NOT TO SCALE



TYPE 1 FLUSHING CONNECTION



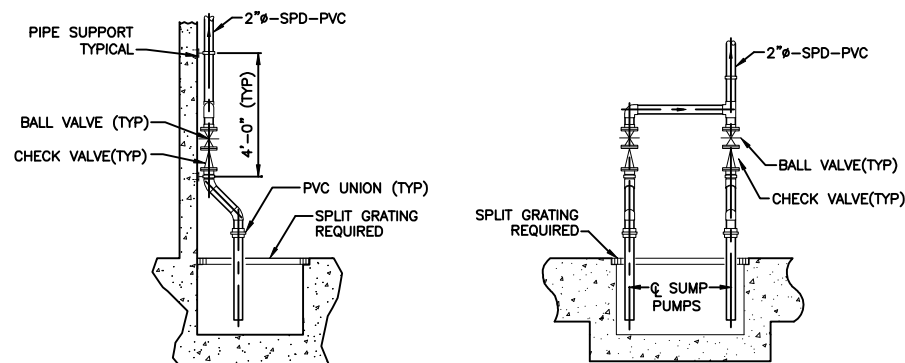
TYPE 2 FLUSHING CONNECTION

NOTES:

1. TAPPING OF FITTINGS IS NOT ALLOWED.

FLUSHING CONNECTION DETAILS

NOT TO SCALE

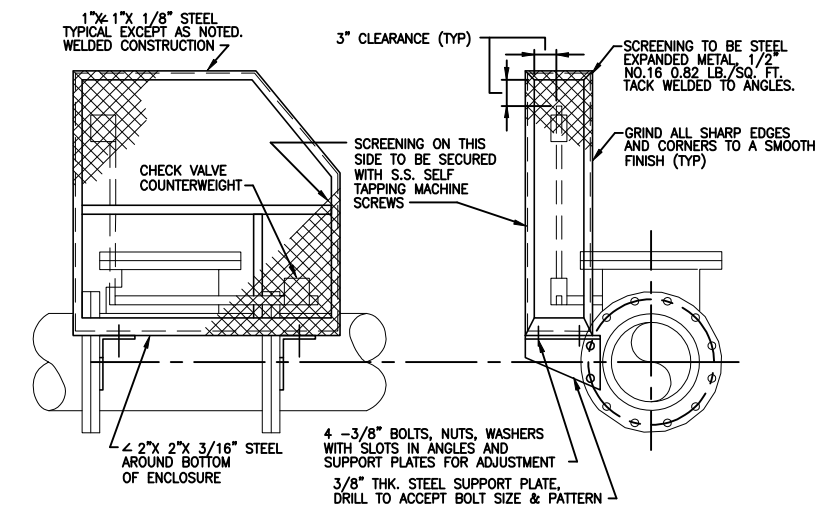


NOTES:

1. SEE PUMP LOCATIONS FOR SIZE OF PIPING.
2. SEE STRUCTURAL DRAWINGS FOR SIZE OF SUMPS.

TYPICAL SUMP PUMP DISCHARGE ELEVATIONS

NOT TO SCALE



- NOTES:**
1. ENCLOSURES REQUIRED ON ALL COUNTERWEIGHTS IN THE DOWN POSITION THAT ARE 7'-0" OR LESS IN HEIGHT ABOVE FIN. FLR.
 2. SIZE OF ENCLOSURE TO BE VERIFIED WITH CHECK VALVES INSTALLED.

COUNTERWEIGHT SAFETY ENCLOSURE

NOT TO SCALE

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
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X:

MO/DA/YR CO DFT

DIR/DWG

SCALE:

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Designed by RWS
Drawn by RWS
Checked by RCF



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

MISCELLANEOUS DETAILS

MECHANICAL



File Number
00663

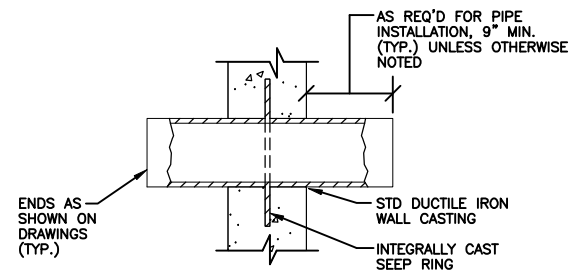
Date
04/11

M-004

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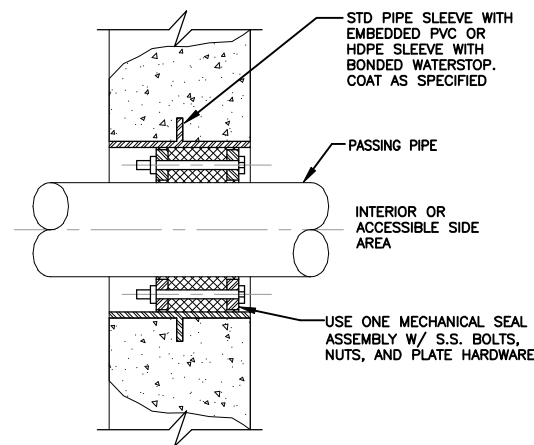


NOTES:

1. COAT WALL CASTING WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE REPLACEMENT (DUCTILE IRON ONLY).

WALL CASTING TYPE PENETRATION DETAIL

NOT TO SCALE

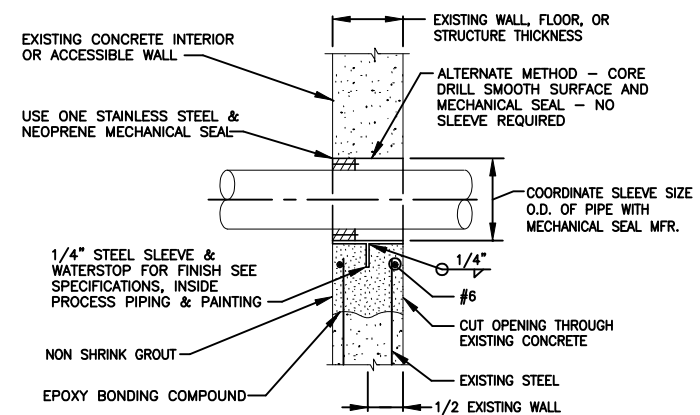


NOTES:

1. TYPICAL FOR "FLOOR SLEEVE" AND "WALL SLEEVE" WHERE INDICATED.

PIPE PENETRATION THRU NEW STRUCTURE DETAIL

NOT TO SCALE

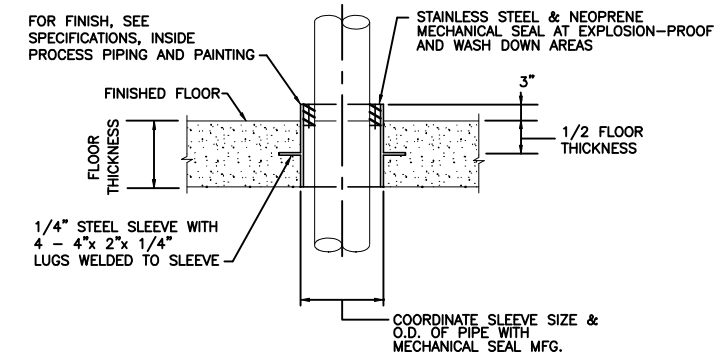


NOTES:

1. FOR BELOW GROUND APPLICATIONS USE TWO STAINLESS STEEL AND NEOPRENE MECHANICAL SEAL.

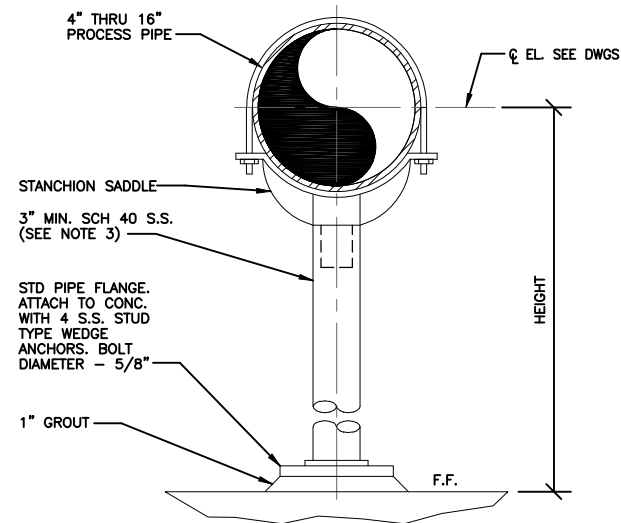
PIPE PENETRATION THRU EXISTING STRUCTURE DETAIL

NOT TO SCALE



TYPICAL FLOOR, DECK AND SLAB ON GRADE SLEEVE DETAIL

NOT TO SCALE

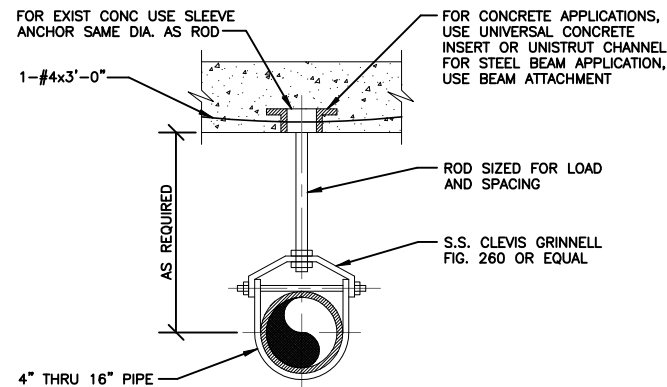


NOTES:

1. EMBEDMENT DEPTH, PER ANCHOR MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE BITUMASTIC COATING BETWEEN PIPE FLANGE AND GROUT.
3. THE PIPE SUPPORT DIAMETER SHALL BE NO LESS THAN 1/4 OF THE PROCESS PIPE DIAMETER.

STANCHION TYPE PIPE SUPPORT DETAIL

NOT TO SCALE

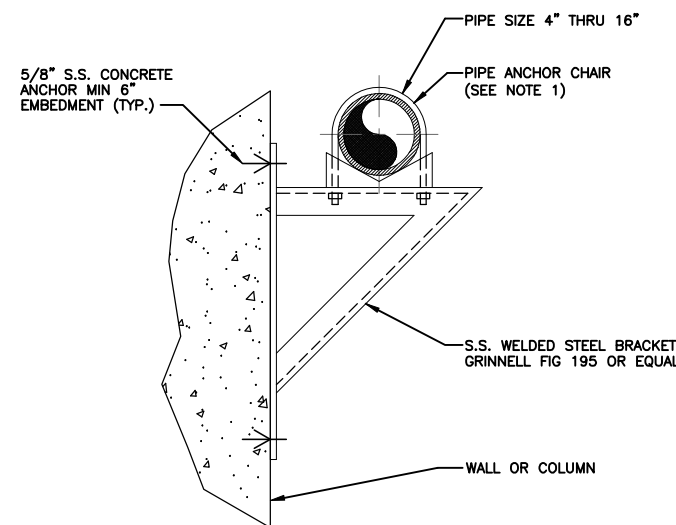


NOTES:

1. FOR INSULATED PIPES USE INSULATION PROTECTION SHIELD, GRINNELL FIGURE 167 OR EQUAL.
2. TOTAL LOADING SHALL NOT EXCEED MANUFACTURER'S RECOMMENDED LOADING.

CLEVIS TYPE PIPE SUPPORT DETAIL

NOT TO SCALE



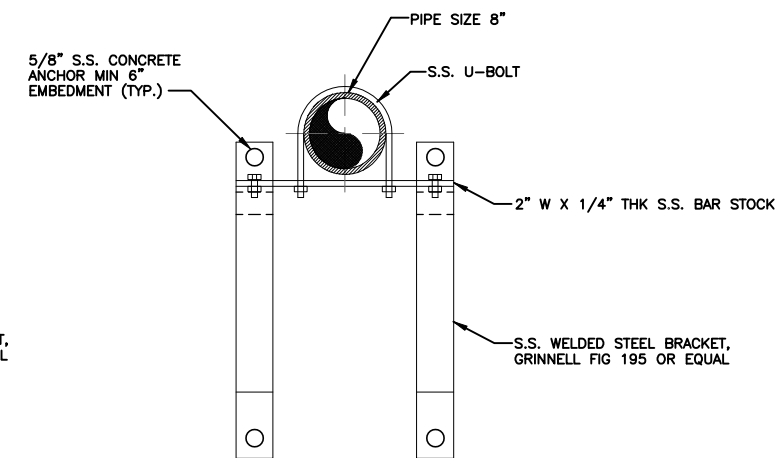
NOTES:

1. PROVIDE STAINLESS STEEL U-BOLT FOR ALL LOCATIONS.

WALL BRACKET TYPE PIPE SUPPORT DETAIL

NOT TO SCALE

FIG 199 BRACKET SHALL BE PROVIDED PER SPECIFICATIONS. MATERIALS SHALL BE STAINLESS STEEL PER HANGER AND SUPPORT APPLICATION SCHEDULE IN SPECIFICATION 15140.



GRIT PIPE SUPPORT DETAIL

NOT TO SCALE

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP

RECORD DRAWING

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DATE: 05/16 PER: RCF

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SCALE:

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SYRACUSE, NEW YORK

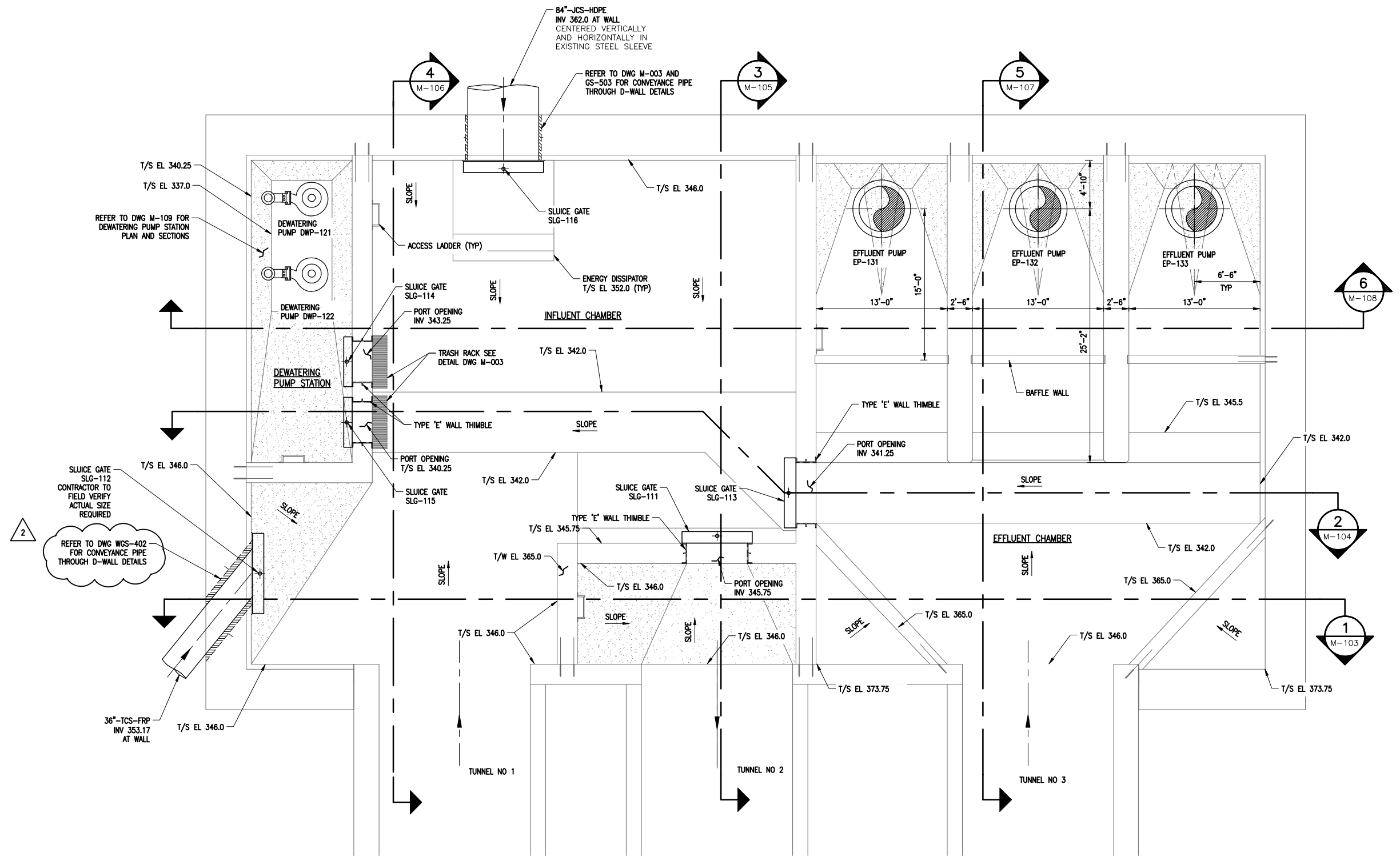
ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

MISCELLANEOUS DETAILS

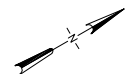
MECHANICAL

File Number: 00663
Date: 04/11
M-005

Professional Engineer Seal: STATE OF NEW YORK, GERALD C. HOOK, No. 57504, LICENSED PROFESSIONAL ENGINEER



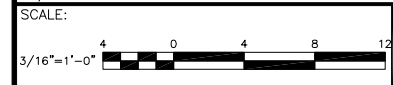
WEST CHAMBER - LOWER PLAN
SCALE: 3/16" = 1'-0"



NOTE:
1. SEE SLUICE GATE SPECIFICATION FOR MOUNTING TYPE.

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| 1 | 05/16 | RECORD DRAWINGS | |

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SYRACUSE, NEW YORK

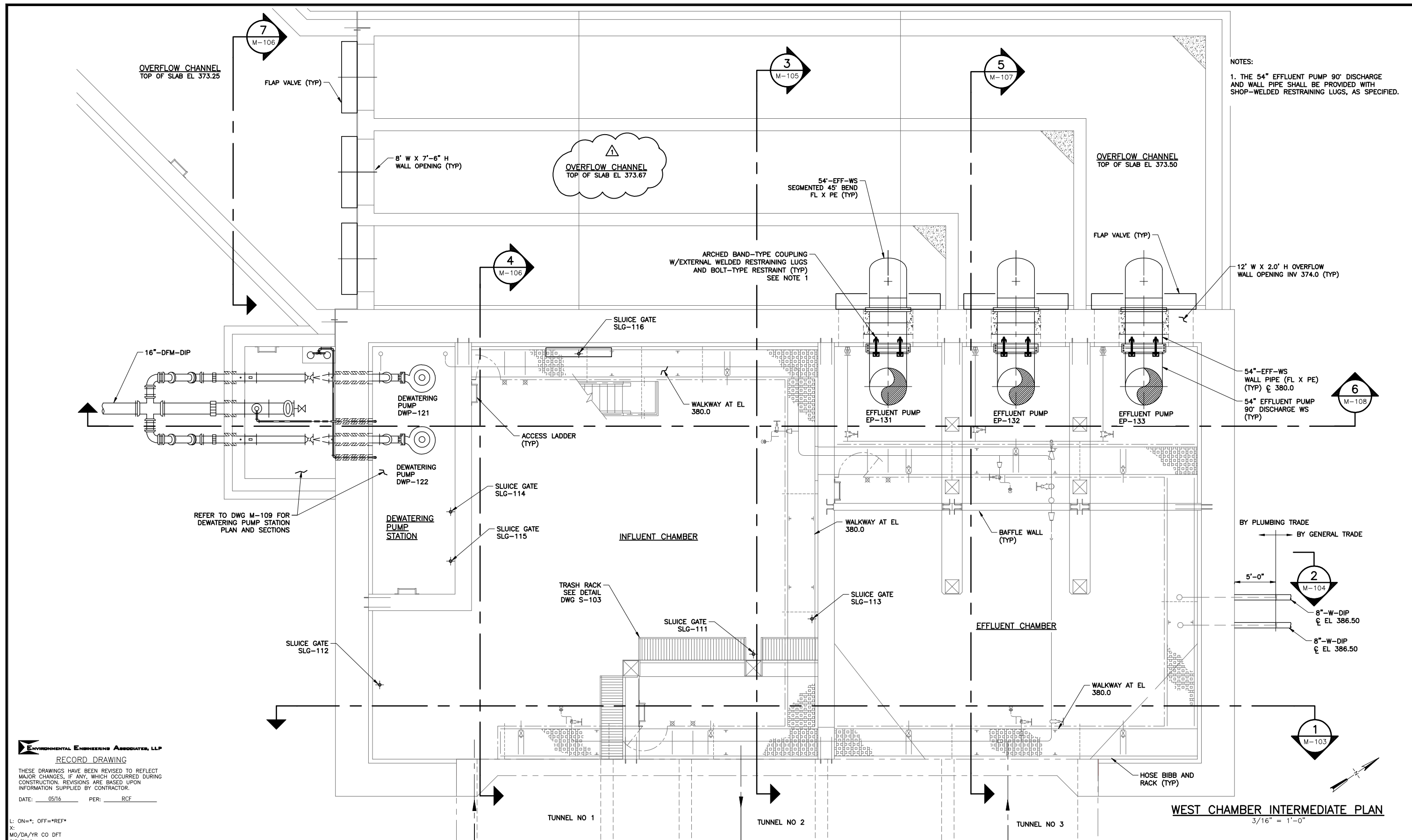
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CLINTON CSO STORAGE FACILITY PROJECT

**WEST CHAMBER
LOWER PLAN**
MECHANICAL

File Number
00663

Date
04/11

M-100



NOTES:
 1. THE 54" EFFLUENT PUMP 90° DISCHARGE AND WALL PIPE SHALL BE PROVIDED WITH SHOP-WELDED RESTRAINING LUGS, AS SPECIFIED.

WEST CHAMBER INTERMEDIATE PLAN
 3/16" = 1'-0"

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 SCALE:
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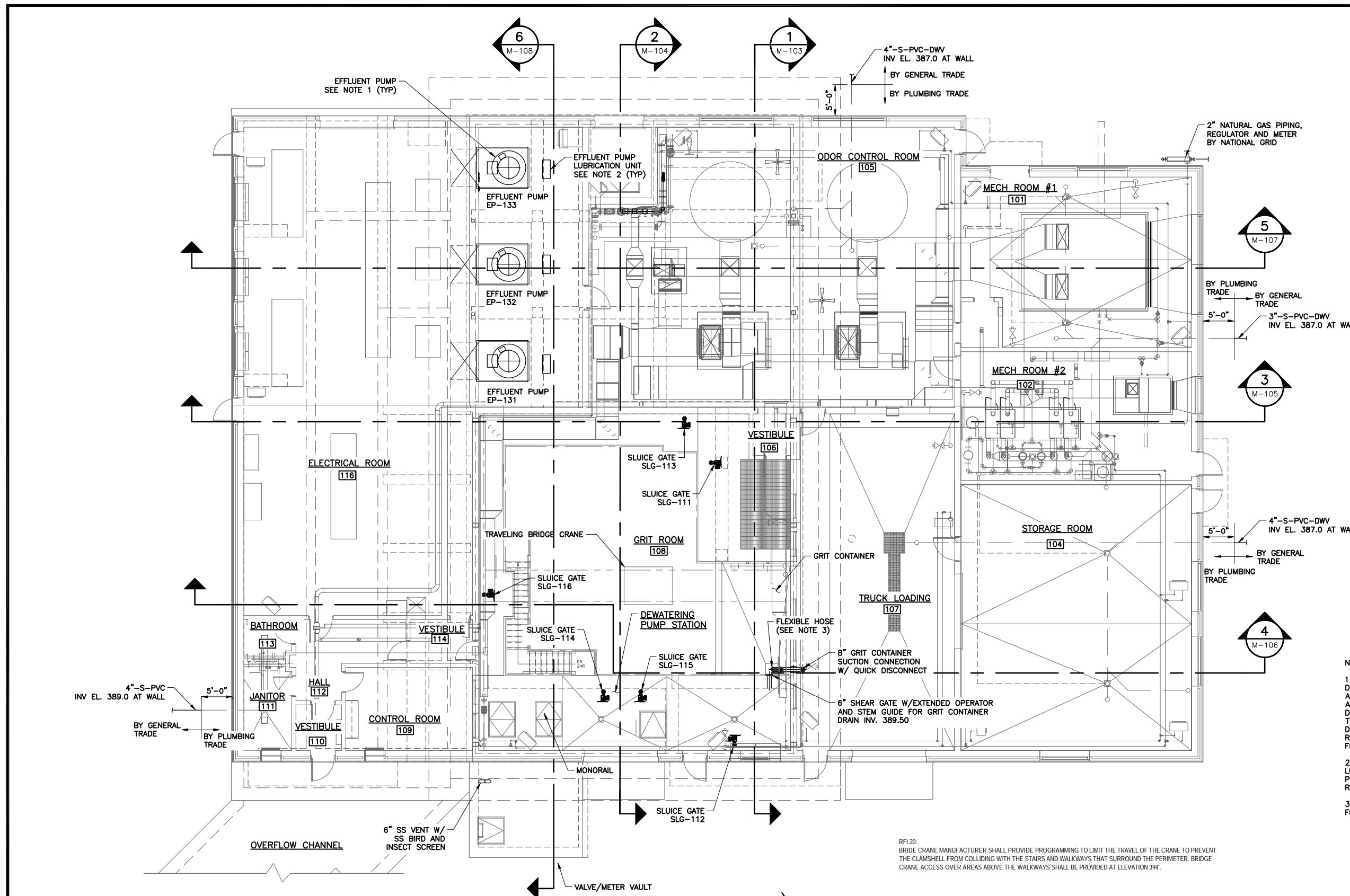
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 CLINTON CSO STORAGE FACILITY PROJECT
WEST CHAMBER INTERMEDIATE PLAN
 MECHANICAL

File Number: 00663
 Date: 04/11

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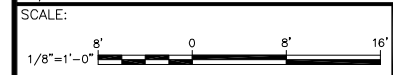
- NOTES:
1. THE EFFLUENT PUMP DESIGN PRESENTED ON THE DRAWINGS IS BASED UPON THE SPECIFIED PUMPING UNIT AS MANUFACTURED BY PATTERSON PUMP COMPANY. ACTUAL LAYOUT, DIMENSIONS, AND WEIGHTS MAY VARY DEPENDING UPON THE PUMP MANUFACTURER. THE CONTRACTOR SHALL VERIFY ACTUAL PUMP LAYOUT, DIMENSIONS, AND WEIGHTS AND COMPLY WITH THE REQUIREMENTS FOR EQUIVALENT PRODUCTS AS SET FORTH IN THE CONTRACT DOCUMENTS.
 2. COORDINATE THE LOCATION OF THE EFFLUENT PUMP LUBRICATION UNITS IN THE FIELD WITH THE OWNER. PROVIDE CONCRETE EQUIPMENT BASES AS REQUIRED. REFER TO THE DETAILS ON THE STRUCTURAL DRAWINGS.
 3. CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR FLEX HOSE SPECIFICATION.

RFI 20:
BRIDGE CRANE MANUFACTURER SHALL PROVIDE PROGRAMMING TO LIMIT THE TRAVEL OF THE CRANE TO PREVENT THE CLAMSHELL FROM COLLIDING WITH THE STAIRS AND WALKWAYS THAT SURROUND THE PERIMETER. BRIDGE CRANE ACCESS OVER AREAS ABOVE THE WALKWAYS SHALL BE PROVIDED AT ELEVATION 394.

FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

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RECORD DRAWING
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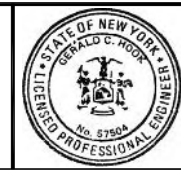
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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

CLINTON STORAGE FACILITY
FIRST FLOOR PLAN
MECHANICAL

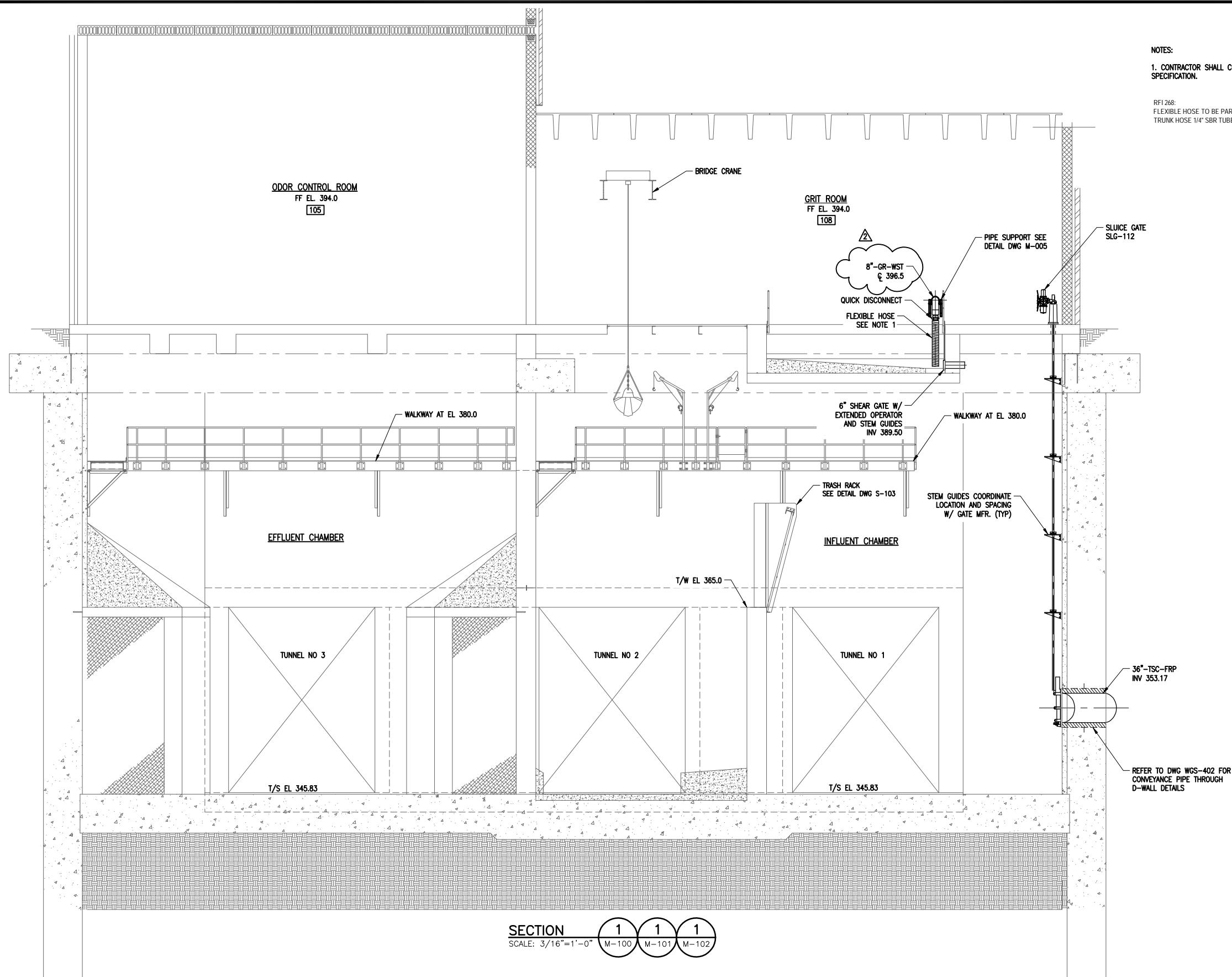


File Number
00663
Date
04/11
Gerald C. Ruffalo

M-102

NOTES:
 1. CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR FLEX HOSE SPECIFICATION.

RFI 268:
 FLEXIBLE HOSE TO BE PARKER / TITAN EWC 789 CORRUGATED VACUUM TRUNK HOSE 1/4" SBR TUBE.



SECTION 1-1-1
 SCALE: 3/16"=1'-0"

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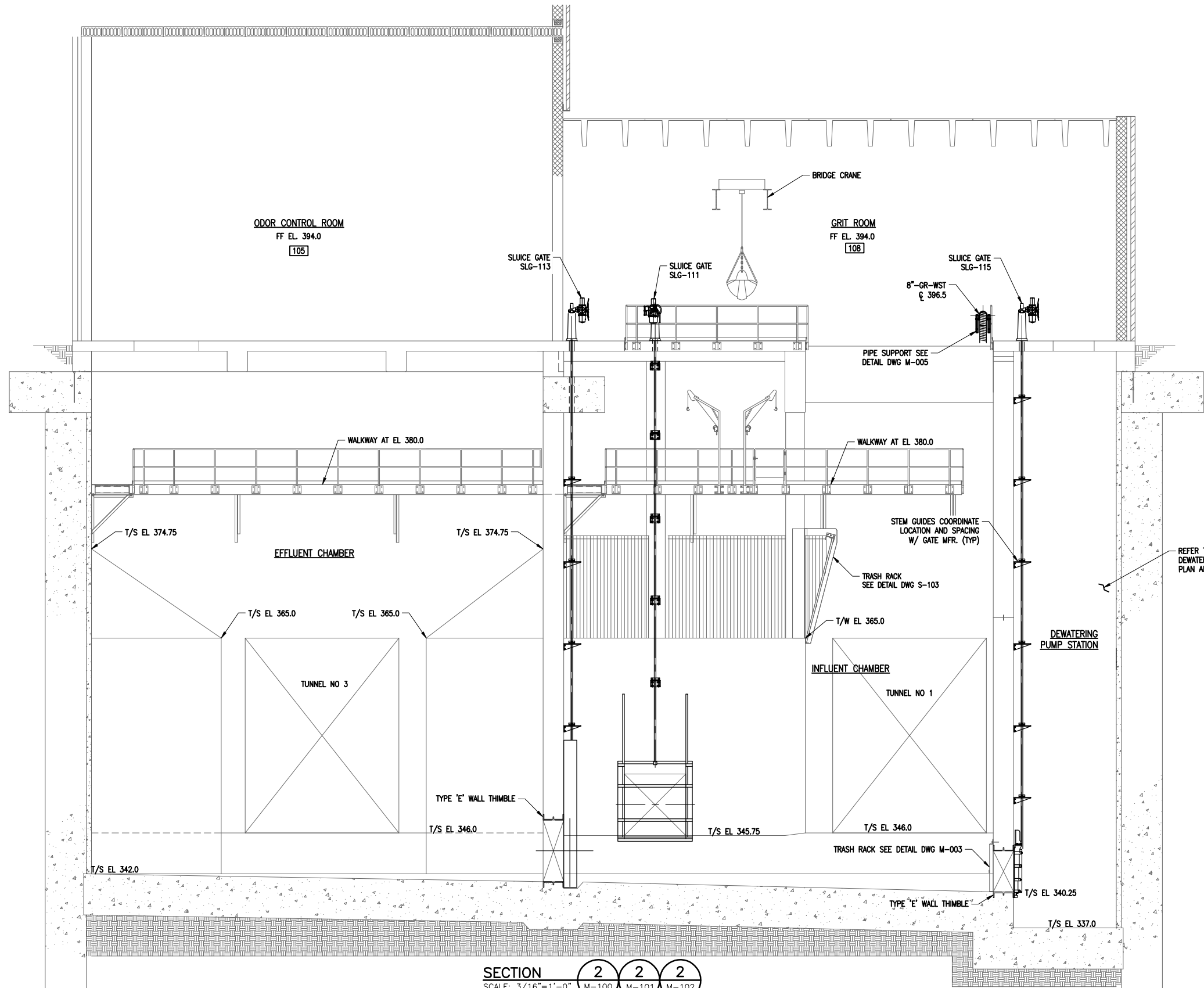
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 CLINTON CSO STORAGE FACILITY PROJECT

WEST CHAMBER SECTION
 MECHANICAL

STATE OF NEW YORK
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 No. 57504

File Number: 00663
 Date: 04/11
 M-103

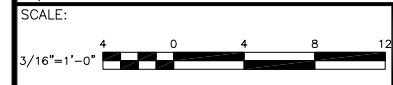


SECTION 2 2 2
 SCALE: 3/16"=1'-0" M-100 M-101 M-102

REFER TO DWG M-109 FOR DEWATERING PUMP STATION PLAN AND SECTIONS

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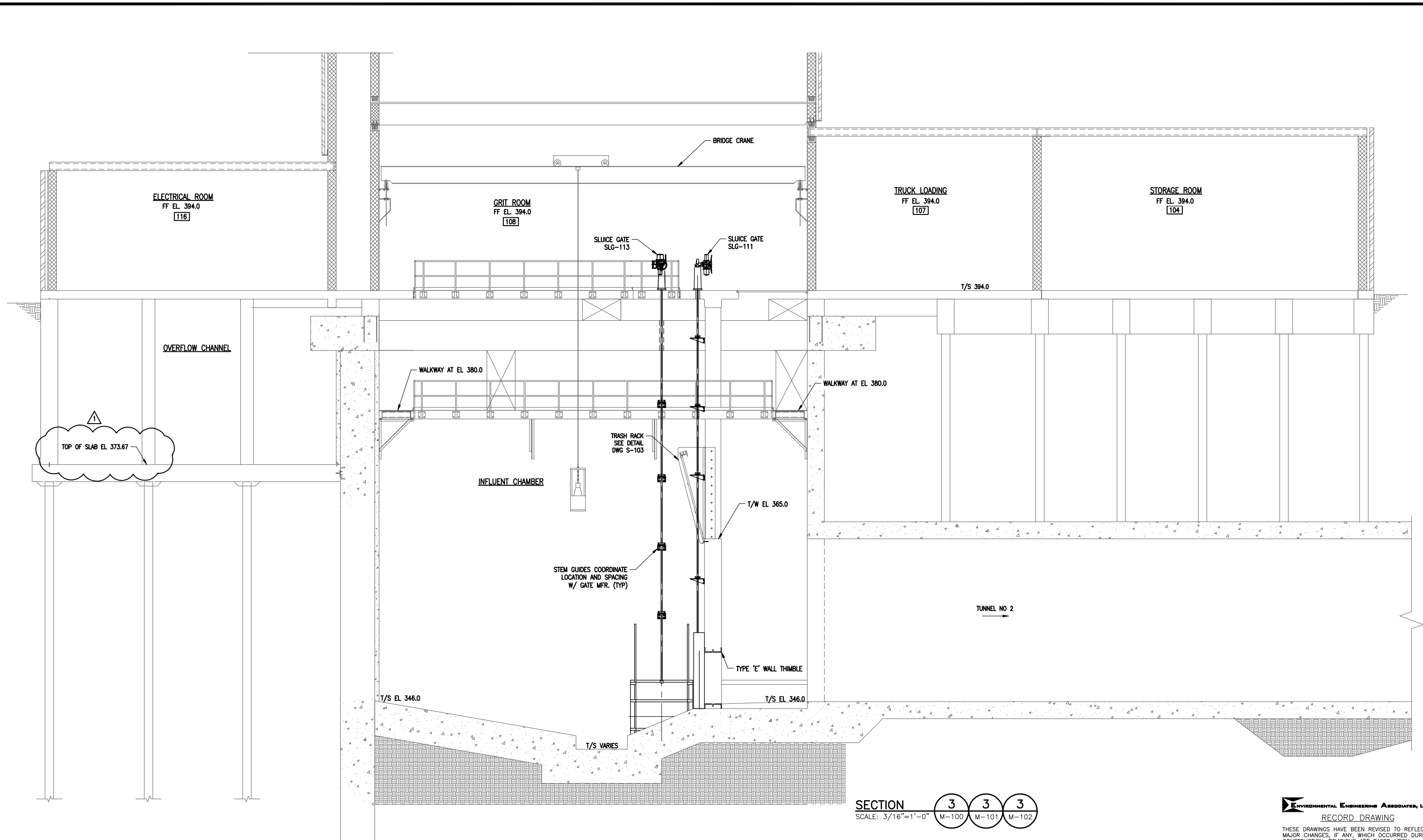
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 CLINTON CSO STORAGE FACILITY PROJECT

WEST CHAMBER SECTION
 MECHANICAL

File Number: 00663
 Date: 04/11

 M-104

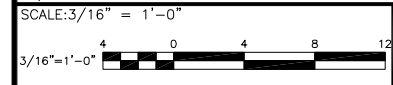


TOP OF SLAB EL. 373.67

SECTION 3 3 3
 SCALE: 3/16" = 1'-0" M-100 M-101 M-102

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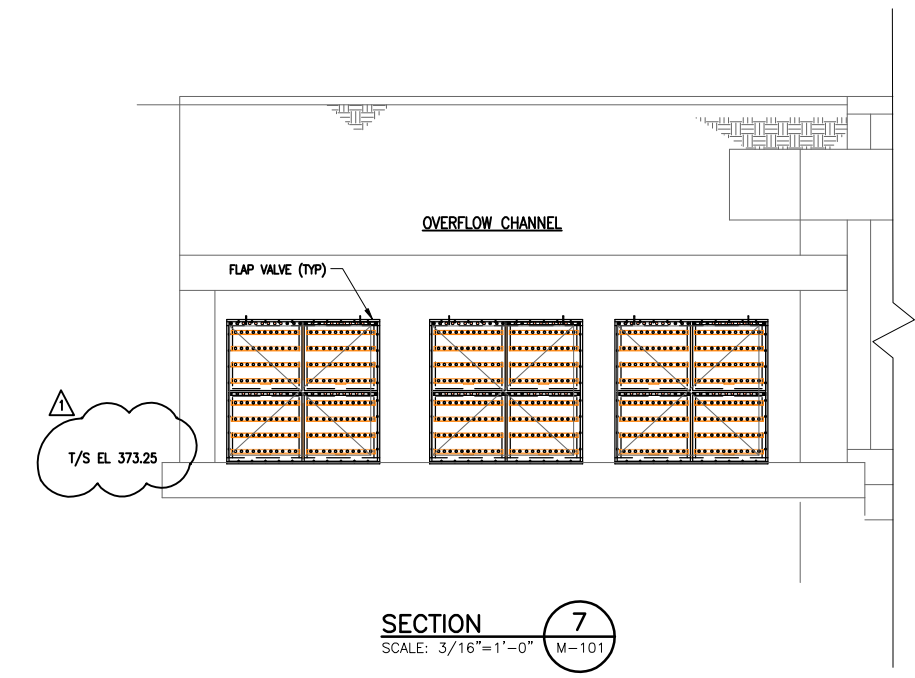
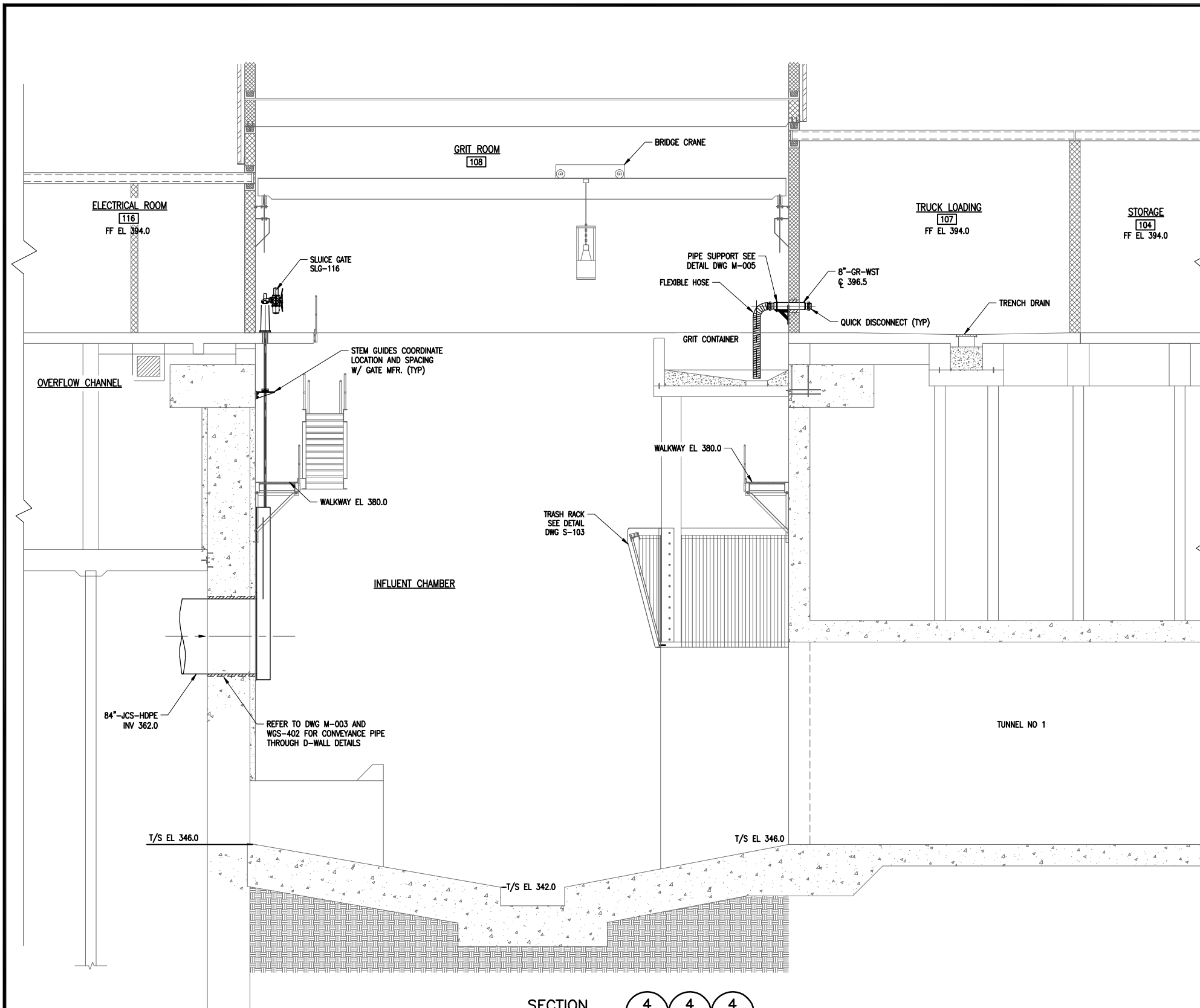
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 CLINTON CSO STORAGE FACILITY PROJECT

WEST CHAMBER SECTION
 MECHANICAL

File Number: 00663
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 M-105

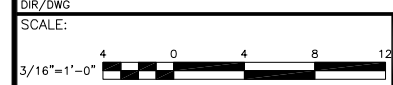


SECTION 4 4 4
SCALE: 3/16"=1'-0" M-100 M-101 M-102

RF1106
CONVEYANCE PIPE SHOULD BE CENTERED, BOTH VERTICALLY AND HORIZONTALLY IN THE EXISTING STEEL SLEEVE EMBEDDED IN THE WEST CHAMBER.

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RECORD DRAWING
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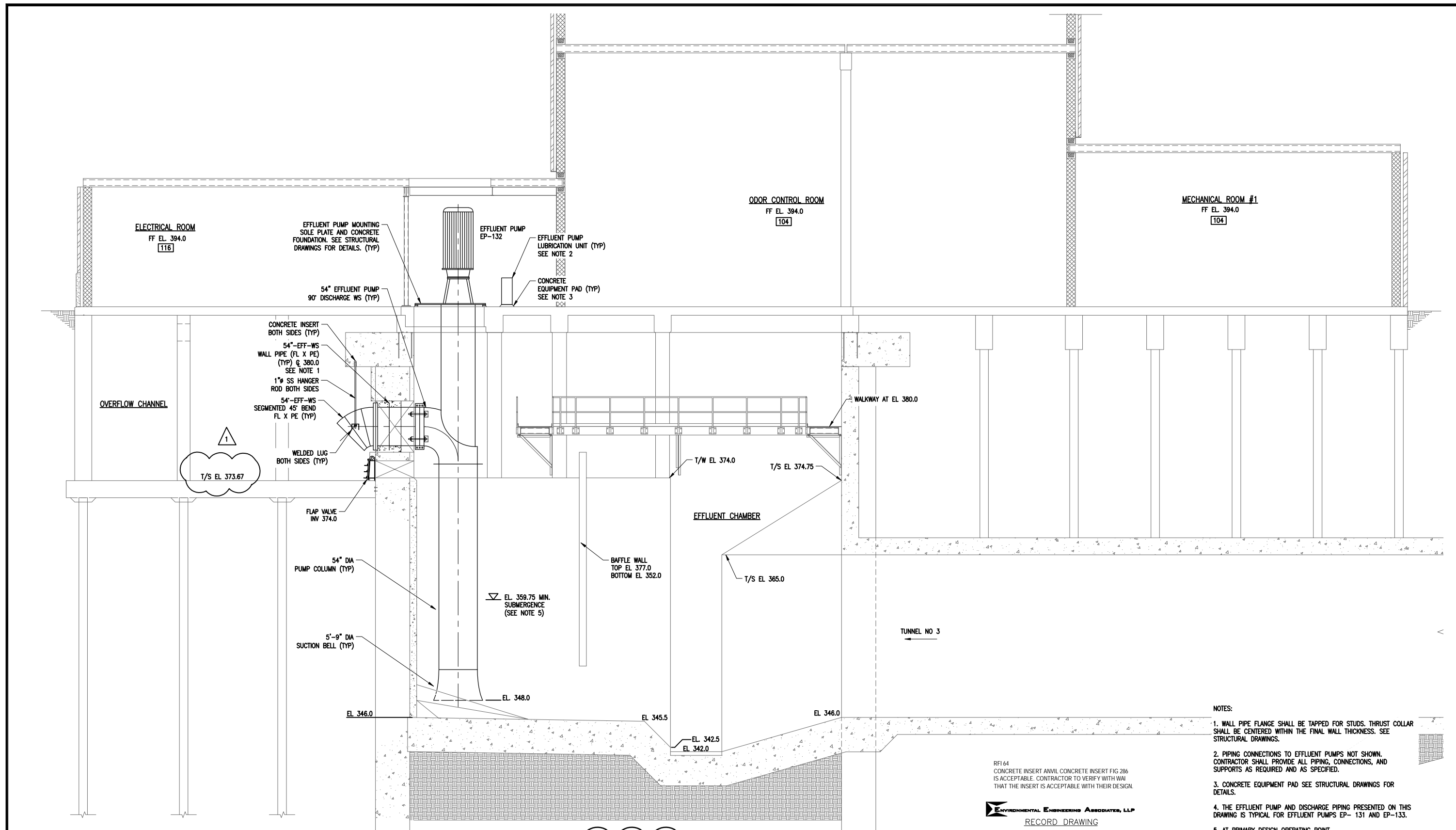
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CLINTON CSO STORAGE FACILITY PROJECT

WEST CHAMBER SECTIONS
MECHANICAL

STATE OF NEW YORK
SEAL OF PROFESSIONAL ENGINEER
No. 57504

File Number: 00663
Date: 04/11
M-106



SECTION 5 5 5
SCALE: 3/16"=1'-0" M-100 M-101 M-102

- NOTES:
1. WALL PIPE FLANGE SHALL BE TAPPED FOR STUDS. THRUST COLLAR SHALL BE CENTERED WITHIN THE FINAL WALL THICKNESS. SEE STRUCTURAL DRAWINGS.
 2. PIPING CONNECTIONS TO EFFLUENT PUMPS NOT SHOWN. CONTRACTOR SHALL PROVIDE ALL PIPING, CONNECTIONS, AND SUPPORTS AS REQUIRED AND AS SPECIFIED.
 3. CONCRETE EQUIPMENT PAD SEE STRUCTURAL DRAWINGS FOR DETAILS.
 4. THE EFFLUENT PUMP AND DISCHARGE PIPING PRESENTED ON THIS DRAWING IS TYPICAL FOR EFFLUENT PUMPS EP- 131 AND EP-133.
 5. AT PRIMARY DESIGN OPERATING POINT.

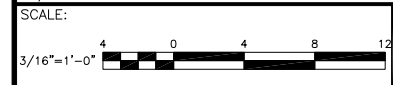
RFI 64
CONCRETE INSERT ANVIL CONCRETE INSERT FIG 286 IS ACCEPTABLE. CONTRACTOR TO VERIFY WITH WAI THAT THE INSERT IS ACCEPTABLE WITH THEIR DESIGN.

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RECORD DRAWING

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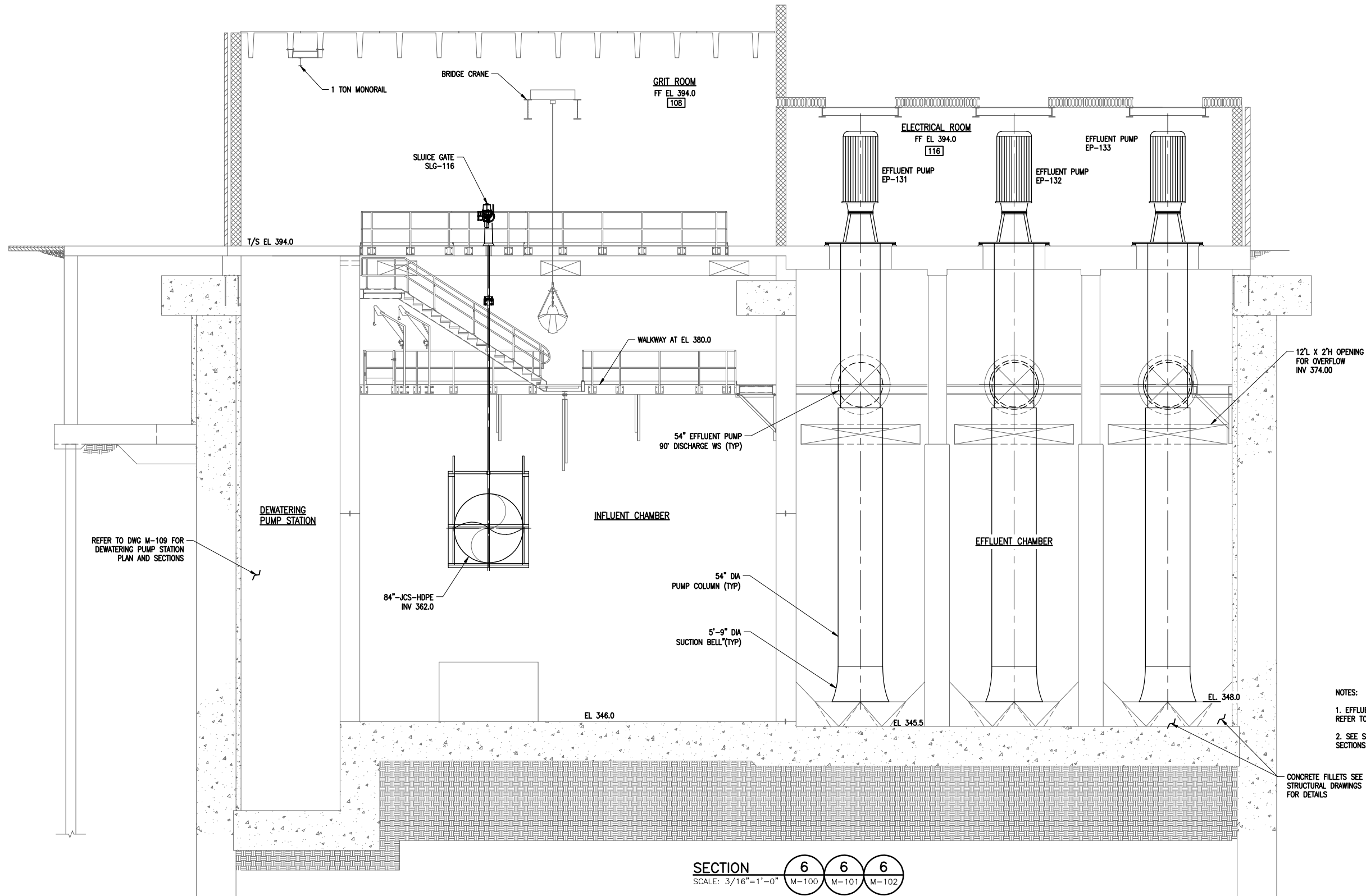
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CLINTON CSO STORAGE FACILITY PROJECT

WEST CHAMBER SECTION
MECHANICAL



File Number 00663
Date 04/11
Gerald C. Rook

M-107



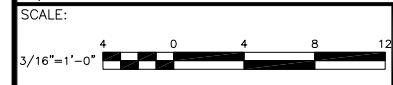
- NOTES:
1. EFFLUENT PUMP LUBRICATION UNITS ARE NOT SHOWN FOR CLARITY. REFER TO DWG M-102.
 2. SEE SHEET M-109 FOR DEWATERING PUMP STATION PLANS, SECTIONS AND DETAILS.

CONCRETE FILLETS SEE STRUCTURAL DRAWINGS FOR DETAILS

SECTION **6 6 6**
 SCALE: 3/16"=1'-0" M-100 M-101 M-102

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| 1 | 05/16 | RECORD DRAWINGS | |

In charge of RCF
 Designed by EJP
 Drawn by RWS
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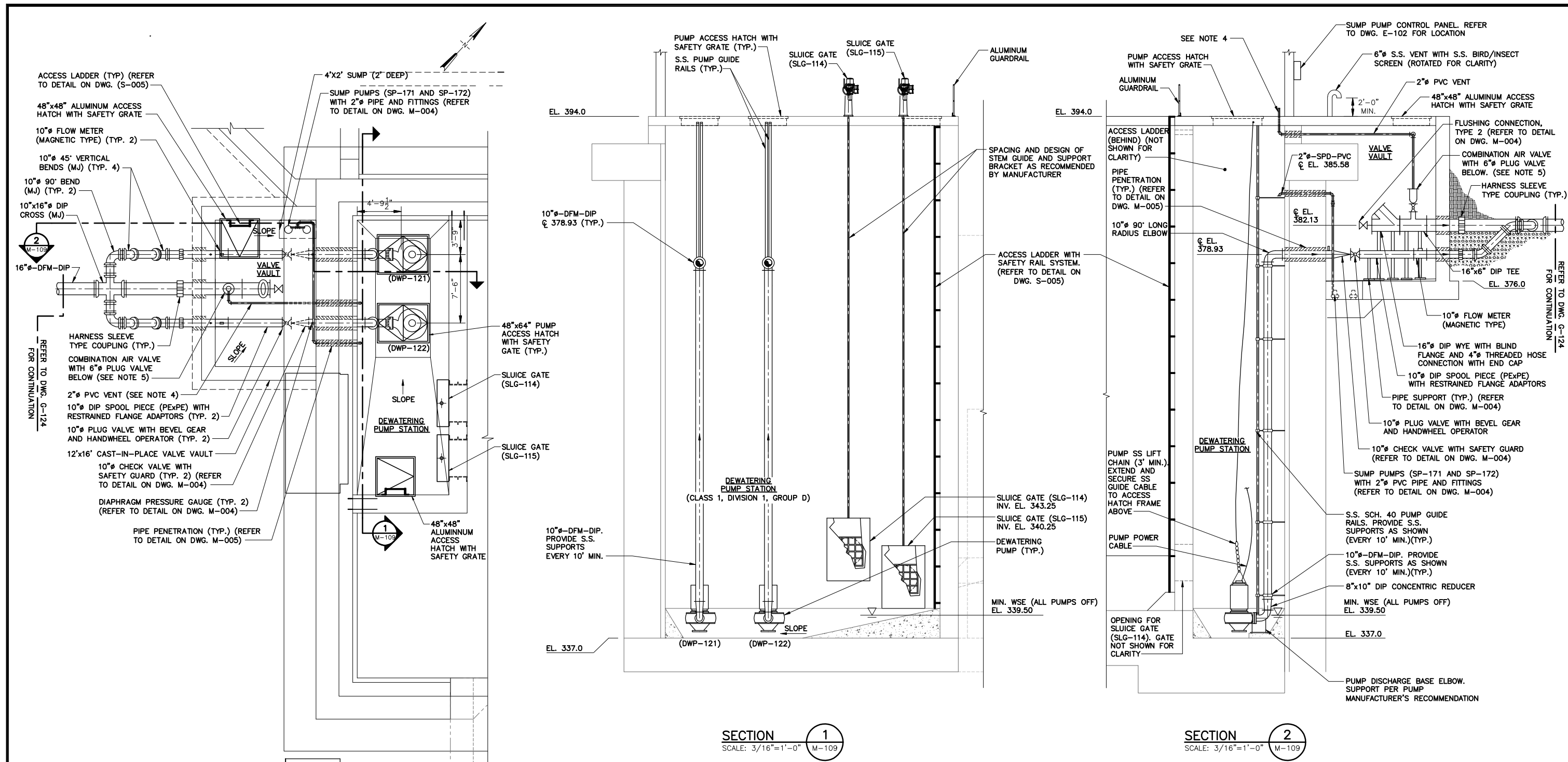
ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

WEST CHAMBER SECTION
 MECHANICAL

STATE OF NEW YORK
 SEAL OF THE PROFESSIONAL ENGINEER
 No. 67504

File Number: 00663
 Date: 04/11
 M-108



PLAN
SCALE: 3/16"=1'-0"

SECTION 1
SCALE: 3/16"=1'-0" M-109

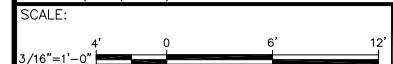
SECTION 2
SCALE: 3/16"=1'-0" M-109

- NOTE:**
- PUMP OPERATING ELEVATIONS SHOWN ARE FOR DEWATERING PUMP STATION.
 - ALL BURIED DUCTILE IRON PIPE AND FITTINGS SHALL HAVE RESTRAINED MECHANICAL JOINTS.
 - ALL NON-BURIED DUCTILE IRON PIPE SHALL HAVE FLANGED ENDS AND BE COATED IN ACCORDANCE WITH SECTION 09900.
 - ROUTE COMBINATION AIR VALVE VENT PIPING THROUGH ROOF AND TERMINATE 18" ABOVE FINISHED ROOF SYSTEM ELEVATION WITH 180° DOWNTURNED ELBOW AND 1/32" TYPE 316 SS INSECT SCREEN. COORDINATE PIPE PENETRATION WITH ROOF SYSTEM INSTALLER.
 - PROVIDE 6" PLUG VALVE ON 16"x6" DIP TEE. PROVIDE 6" BLIND FLANGE DRILLED AND TAPPED ON 6" PLUG VALVE. PROVIDE NECESSARY FITTINGS TO ADAPT 3-INCH NPT COMBINATION AIR VALVE TO BLIND FLANGE.

RF1245
THE HARNESS SLEEVE TYPE COUPLINGS DEPICTED AND CALLED OUT ON CONTRACT DRAWING M-109 SHALL ALLOW MOVEMENT/SETTLEMENT (NOT RESTRAINT) IN THE PIPING SYSTEM BETWEEN THE BUILDING (VALVE VAULT) AND THE PIPING SYSTEM/FORCE MAINS OUTSIDE OF THE BUILDING.

THE USE OF FLANGED END PIPING INSIDE AND PLAIN OUTSIDE OF THE VALVE VAULT IS ACCEPTABLE WHEN USED WITH HARNESS SLEEVE COUPLING (DRESSER STYLE / SMITH BLAIR OR EQUAL AS SPECIFIED IN SECTION 15060, PART 2.08).

L: ON*; OFF=REF*
X:
08/24/10 ARCADIS BKD
80002708\0000\00002 / DWG



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Drawn by BKD
Checked by JCP

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SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

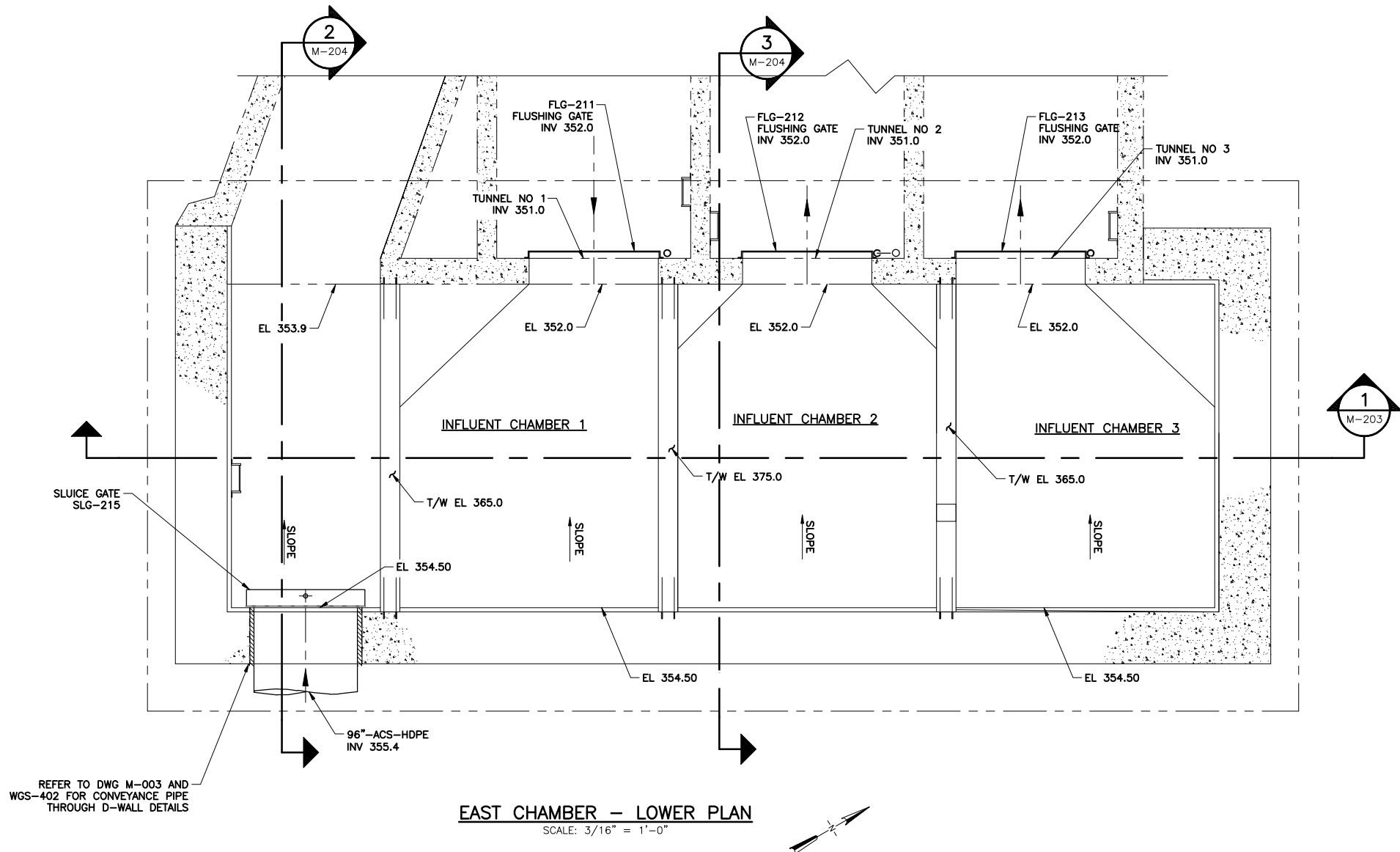
DEWATERING PUMP STATION
PLAN AND SECTIONS
MECHANICAL

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 05/16 PER: RCF

File Number: 00663
Date: 04/11
M-109



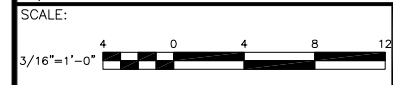
EAST CHAMBER - LOWER PLAN
SCALE: 3/16" = 1'-0"

REFER TO DWG M-003 AND WGS-402 FOR CONVEYANCE PIPE THROUGH D-WALL DETAILS

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DIR/DWG



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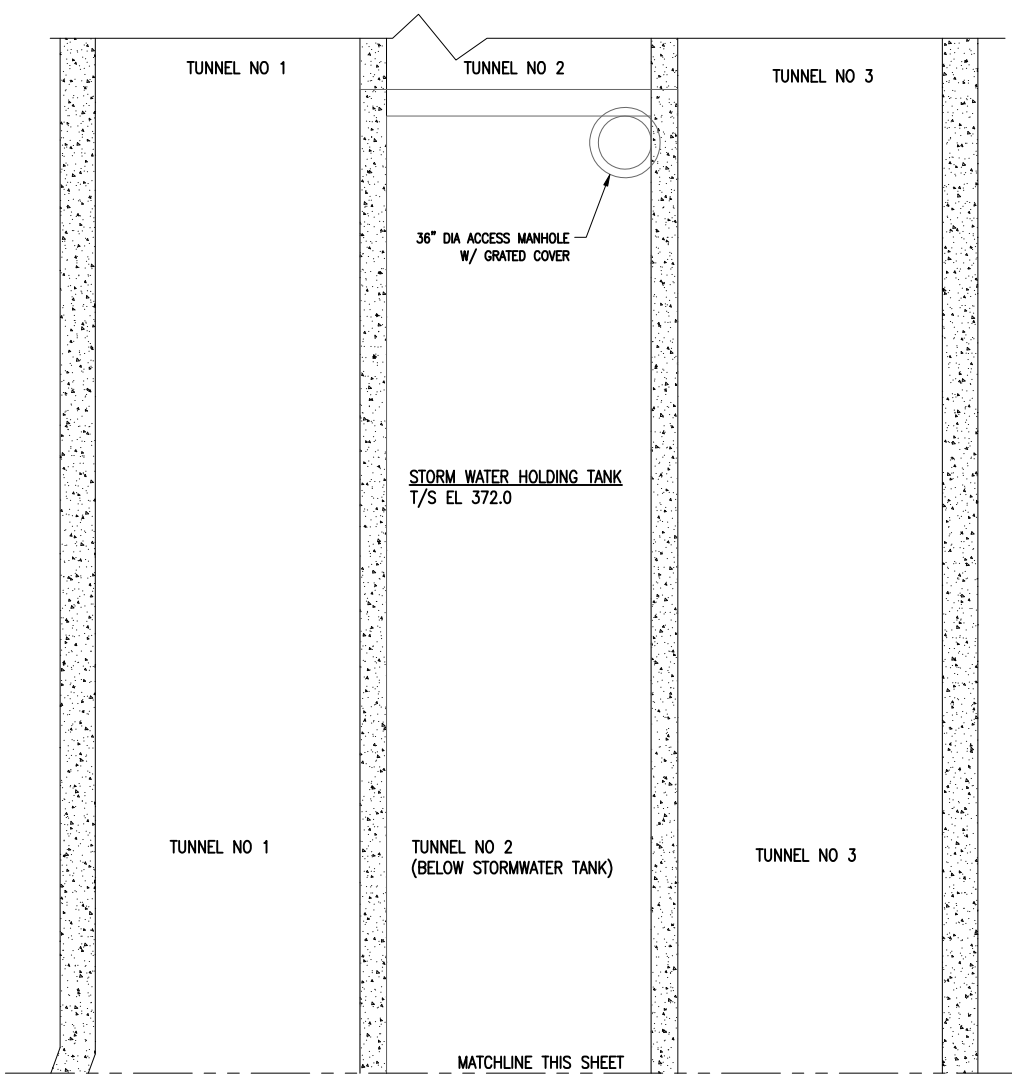
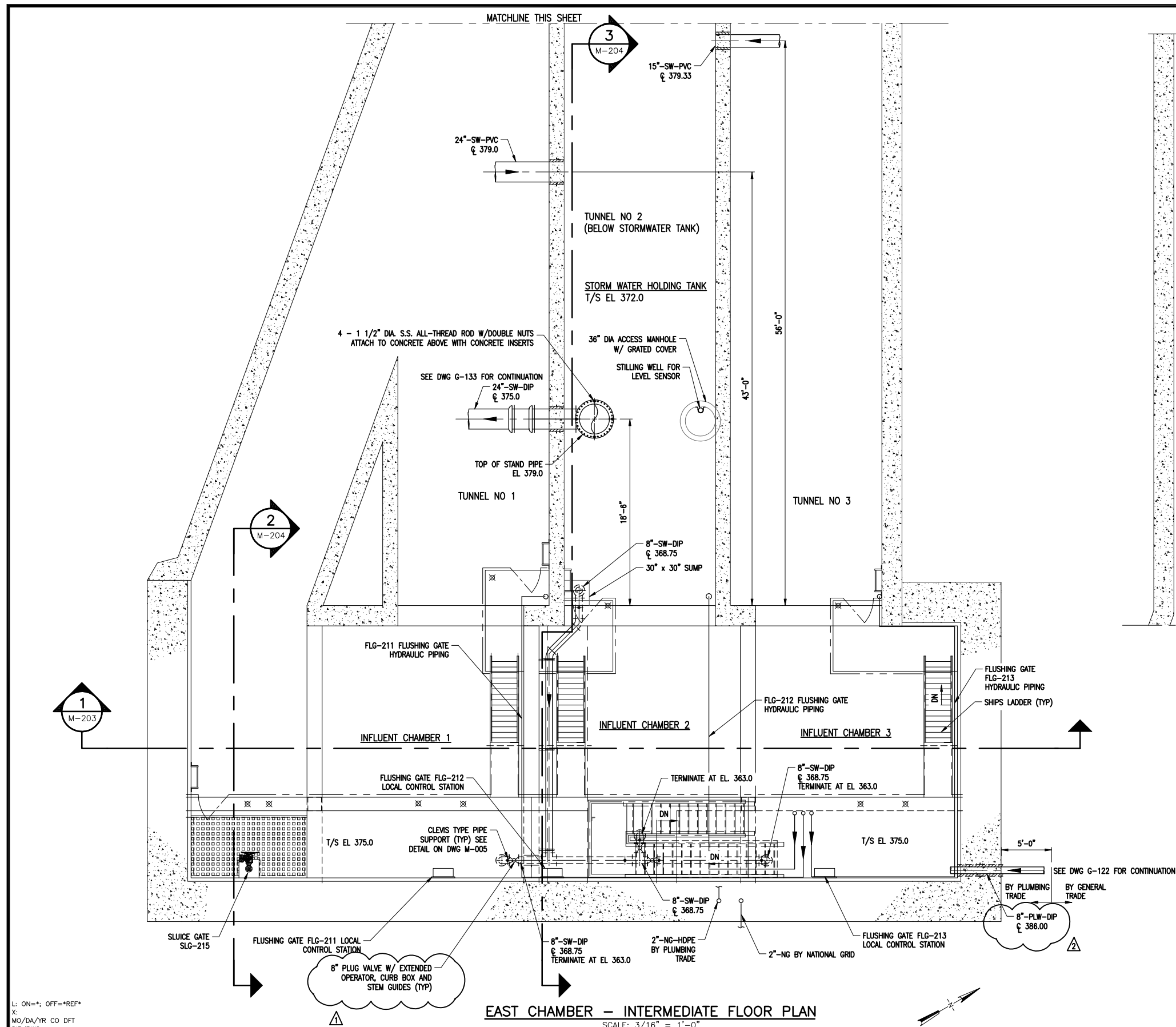
In charge of RCF
Designed by EJP
Drawn by RWS
Checked by RCF

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT
**EAST CHAMBER
LOWER PLAN**
MECHANICAL



File Number
00663
Date
04/11
Gerald C. Hood

M-200



EAST CHAMBER — INTERMEDIATE FLOOR PLAN
SCALE: 3/16" = 1'-0"

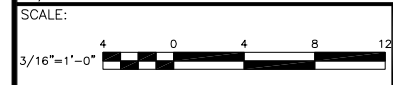
EAST CHAMBER — INTERMEDIATE FLOOR PLAN
SCALE: 3/16" = 1'-0"

NOTE:
1. SUPPORTS FOR STORMWATER PIPING MAXIMUM 5' OC.

FO 38
THE CENTERLINE ELEVATION OF 8" SW DIP PIPE AS SHOWN AT EL. 368 ON M-201 AND M-203 IS CORRECT. REVISE CENTERLINE ELEVATION OF 8" SW DIP PIPE AS SHOWN TO EL. 368.75 ON SHEET M-204 TO EL. 368. THE LOWERED PIPE ELEVATION IS NECESSARY DUE TO THE STORMWATER HOLDING TANK AS BUILT ELEVATION.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.
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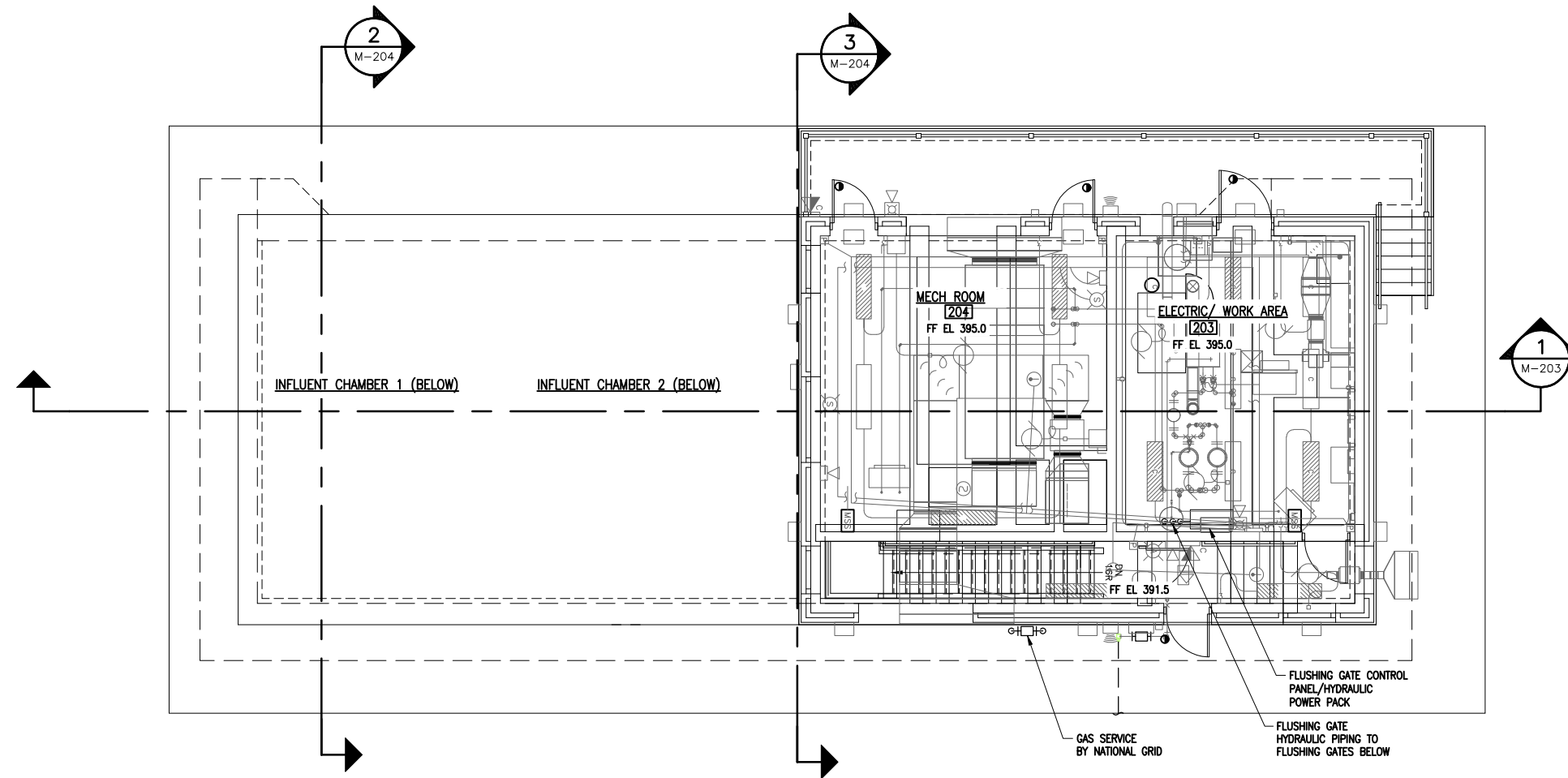
In charge of — RCF
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Drawn by — RWS
Checked by — RCF

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SYRACUSE, NEW YORK

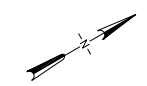
ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

**EAST CHAMBER
INTERMEDIATE PLAN**
MECHANICAL

File Number 00663
Date 04/11
M-201



EAST ENTRANCE STRUCTURE – FIRST FLOOR PLAN
 SCALE: 3/16" = 1'-0"



ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP

RECORD DRAWING

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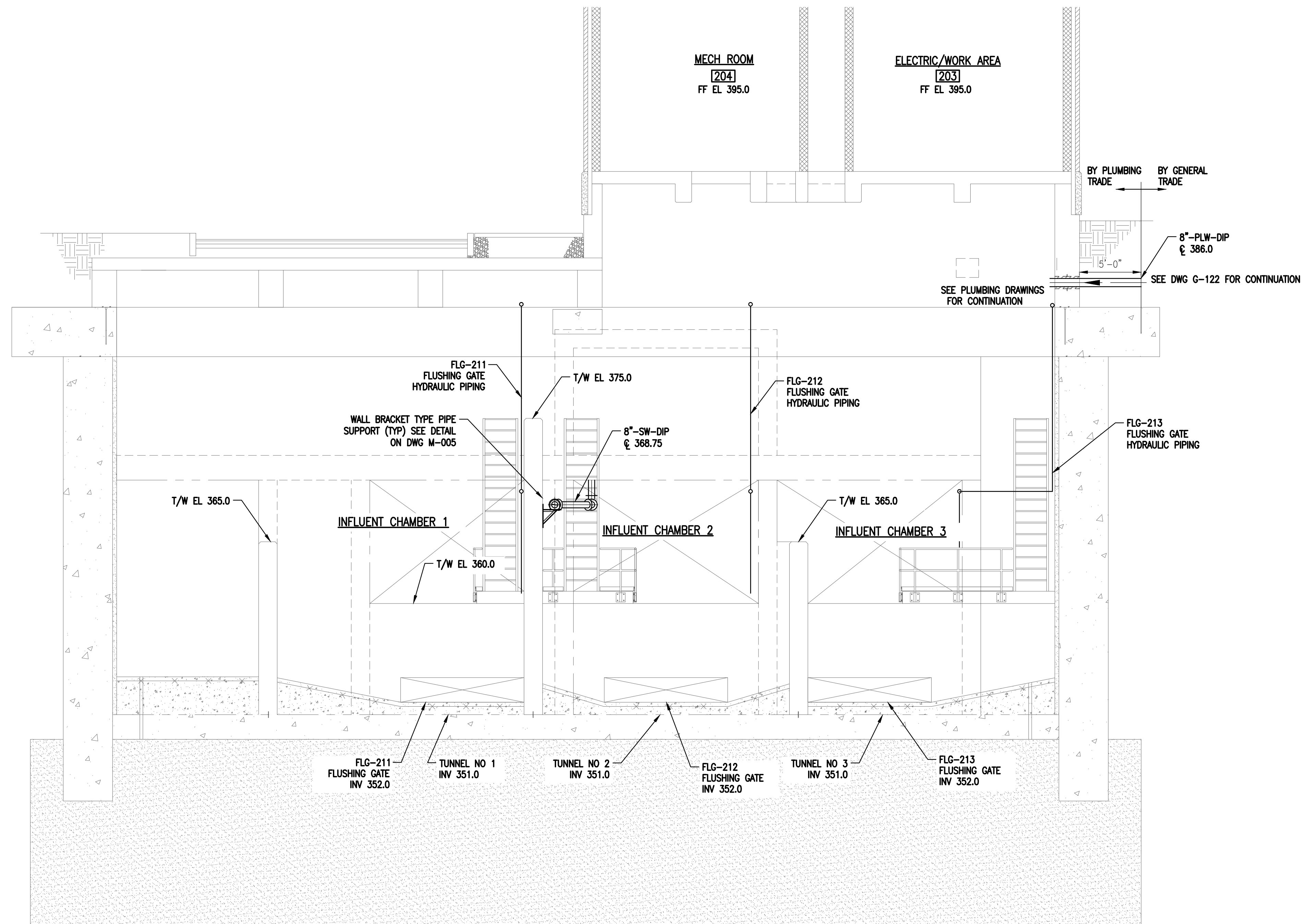
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In charge of — RCF
 Designed by — RWS
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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

**EAST ENTRANCE STRUCTURE
 FIRST FLOOR PLAN**
 MECHANICAL

File Number: 00663
 Date: 04/11
 M-202



SECTION 1 1 1
 SCALE: 3/16"=1'-0" M-200 M-201 M-202

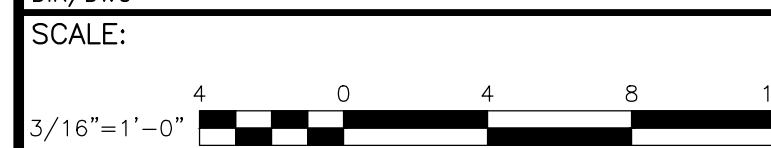
FO 38
 THE CENTERLINE ELEVATION OF 8" SW DIP PIPE AS SHOWN AT EL. 368 ON M-201 AND M-203 IS CORRECT. REVISE CENTERLINE ELEVATION OF 8" SW DIP PIPE AS SHOWN TO EL. 368.75 ON SHEET M-204 TO EL. 368. THE LOWERED PIPE ELEVATION IS NECESSARY DUE TO THE STORMWATER HOLDING TANK AS BUILT ELEVATION.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 RECORD DRAWING

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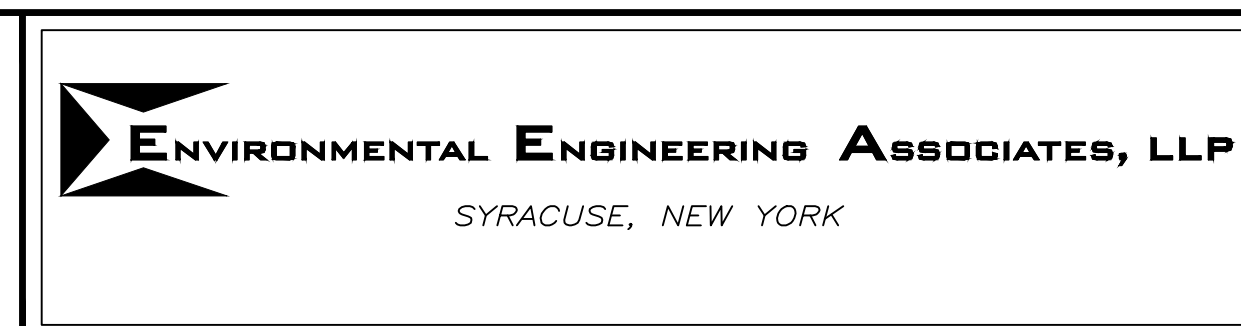


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 Designed by EJP
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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

EAST CHAMBER SECTION
 MECHANICAL

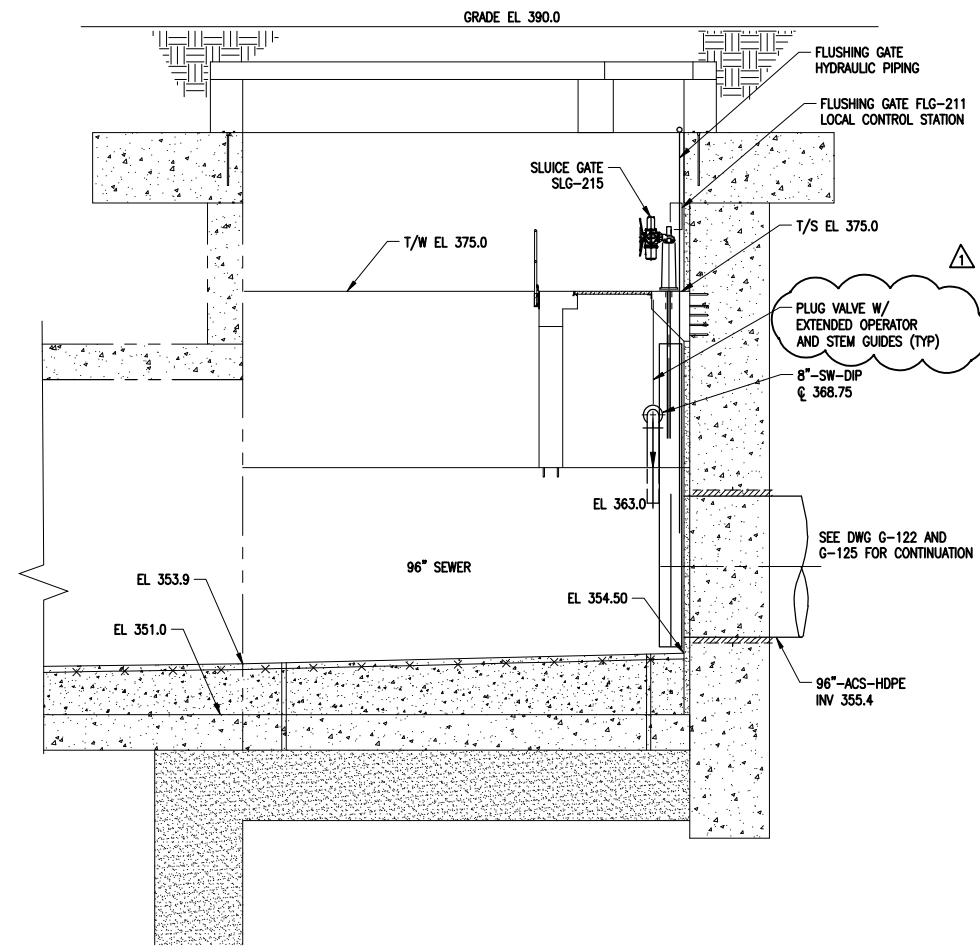


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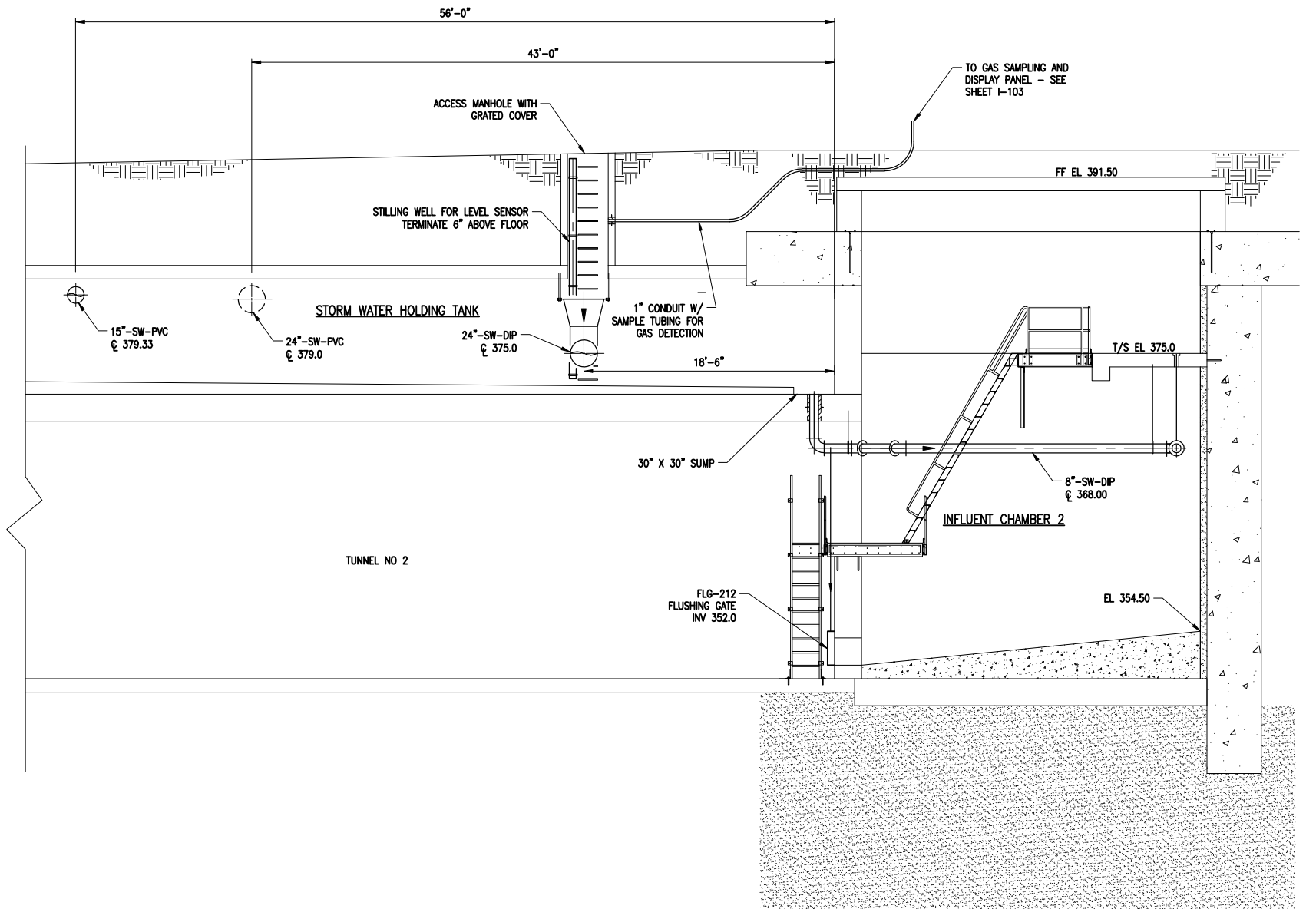
Date
04/11

Gerald C. Hook

M-203



SECTION 2 2
 SCALE: 3/16"=1'-0" M-200 M-201



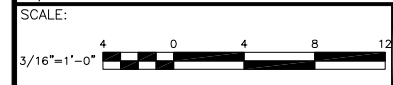
SECTION 3 3
 SCALE: 3/16"=1'-0" M-200 M-201

FO 38
 THE CENTERLINE ELEVATION OF 8" SW DIP PIPE AS SHOWN AT EL. 368 ON M-201 AND M-203 IS CORRECT. REVISE CENTERLINE ELEVATION OF 8" SW DIP PIPE AS SHOWN TO EL. 368.75 ON SHEET M-204 TO EL. 368. THE LOWERED PIPE ELEVATION IS NECESSARY DUE TO THE STORMWATER HOLDING TANK AS BUILT ELEVATION.

RFI 151
 CHANGE FLOOR SLEEVE WITH PENETRATING PIPE AND LINK SEAL TO A FLOOR PIPE WITH FLANGED BOTTOM TO CONNECT TO THE PIPING.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 RECORD DRAWING
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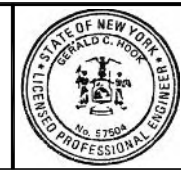
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 CLINTON CSO STORAGE FACILITY PROJECT





























EAST CHAMBER SECTIONS
 MECHANICAL



File Number 00663
 Date 04/11
Gerald C. Hood

M-204

INSTRUMENT SYMBOLS

| | | | |
|---|--|---|---|
|  | LEVEL TRANSDUCER |  | LOCAL INSTRUMENT FIELD MOUNTED INSTRUMENT |
|  | FLOW TRANSDUCER |  | PANEL INSTRUMENT (REMOTE LOCATION) PRIMARY LOCATION ACCESSIBLE TO OPERATOR |
| AS | AIR SUPPLY |  | REAR PANEL INSTRUMENT (REMOTE OR LOCAL) PRIMARY LOCATION NOT ACCESSIBLE TO OPERATOR |
| | |  | LOCAL PANEL INSTRUMENT INDICATION NOT INTEGRAL PART OF FIELD DEVICE |
| EXAMPLES | | | |
|  | SUBSCRIPT DENOTES TYPE OF ANALYZER |  | VENDOR SUPPLIED INSTRUMENT OR SUPPLIED WITH VENDOR PACKAGE |
|  | ORP CONTROLLER |  | PART OF DCS OR PLC SHARED DISPLAY OR SHARED CONTROL NORMALLY ACCESSIBLE TO OPERATOR |
|  | CHLORINE ANALYZER |  | PART OF DCS OR PLC SHARED DISPLAY OR SHARED CONTROL NOT NORMALLY ACCESSIBLE TO OPERATOR |
| | |  | INTERLOCK, BINARY OR SEQUENTIAL LOGIC FUNCTIONS PROGRAMMABLE LOGIC CONTROL NOT ACCESSIBLE TO OPERATOR |
| | |  | INTERLOCK, BINARY OR SEQUENTIAL LOGIC FUNCTIONS PROGRAMMABLE LOGIC CONTROL ACCESSIBLE TO OPERATOR EX.-SET POINT CONTROL |
| | |  | INTERLOCK HARD WIRED |
|  | MAGNETIC FLOW METER |  | TEMPERATURE ELEMENT WITH WELL |
|  | TEMPERATURE ELEMENT NO WELL |  | TEMPERATURE ELEMENT NO WELL |
|  | MOTOR OPERATED VALVE |  | TWO WAY SOLENOID VALVE |
|  | UNDEFINED INTERLOCK |  | VIBRATION SWITCH |
|  | FLOW SWITCH |  | HAND SWITCH |
|  | TEMPERATURE SWITCH/THERMOSTAT |  | TEMPERATURE CONTROL |
|  | SIGNAL DISTRIBUTION (WHERE x IS EITHER SPEED (S) OR LEVEL (L)) | | |

EQUIPMENT SYMBOLS






















| | |
|---|---|
|  | FREESTANDING EMERGENCY SAFETY SHOWER & EYEWASH |
|  | FREESTANDING AERATED EYE/FACE WASH, WITH FLOOR FLANGE STANCHION |
|  | MOTOR |
|  | ELECTRIC HEATER |
|  | CHEMICAL INDUCTOR UNIT |
|  | MAGNETIC DOOR SWITCH |
|  | PUMP (UNDEFINED) |
|  | RADAR (R) OR SONIC (S) TRANSDUCER |
|  | ELECTRONIC SUBMERSIBLE LEVEL TRANSDUCER |
|  | VALVE (UNDEFINED) |
|  | CENTRIFUGAL FAN |
|  | IN-LINE FAN |
|  | LOUVER/DAMPER |
|  | MECHANICAL LINKAGE |
|  | ALARM HORN/STROBE UNIT |
|  | UNIT HEATER |
|  | PNEUMATIC OPERATOR |
|  | ODOR CONTROL SYSTEM CONTROL PANEL (BY OTHERS) |
|  | UNIT HEATER STARTER PANEL |
|  | DOOR SWITCH |
|  | DOOR NUMBER |

TABLE II

| LETTER COMBINATION | DESCRIPTION |
|--------------------|--|
| AI | ANALYZER INDICATION |
| AIT | ANALYZER INDICATING TRANSMITTER |
| CC | OFF CONTROL |
| f(x) | CALCULATION PERFORMED |
| EAL | LOW BATTERY ALARM (UPS) |
| FC | FLOW CONTROL |
| FI | FLOW INDICATION |
| FIT | FLOW INDICATING TRANSMITTER |
| FT | FLOW TRANSMITTER |
| HS | HAND SWITCH |
| HSA | HAND SWITCH IN AUTO |
| HSH | HAND SWITCH IN HAND |
| KC | TIMING CONTROL |
| KQ | TOTALIZE RUNTIME |
| LA | LEVEL ALARM |
| LC | LEVEL CONTROL |
| LIT | LEVEL INDICATING TRANSMITTER |
| LE | LEVEL MEASURING ELEMENT |
| LR | LOCAL/REMOTE |
| LS | LEVEL SWITCH |
| LY | LEVEL SIGNAL RELAY |
| MA | MOISTURE ALARM |
| MS | MOISTURE SWITCH |
| OC | ON CONTROL |
| SC | SPEED CONTROL |
| SI | SPEED INDICATION |
| SY | SPEED SIGNAL RELAY |
| TI | TEMPERATURE INDICATION |
| TIT | TEMPERATURE INDICATING TRANSMITTER |
| VAH | VIBRATION ALARM HIGH |
| VS | VIBRATION SWITCH |
| YA | EVENT INDICATION (TYPICALLY FAIL INDICATION) |
| YAS | SURGE SUPPRESSER FAILURE |
| YC | MULTI PURPOSE CONTROL |
| YI | EVENT INDICATION (TYPICALLY RUN INDICATION) |
| ZI | POSITION INDICATION |
| ZIC | INDICATE POSITION CLOSED |
| ZIO | INDICATE POSITION OPEN |




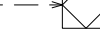
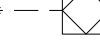
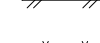
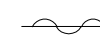
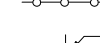

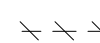


TABLE I

DEFINITION OF INSTRUMENT IDENTIFICATION LETTERS

| | FIRST LETTER | | SUCCEEDING LETTERS | | |
|---|------------------------------------|-----------------------|-----------------------------|--|------------------------|
| | MEASURED OR INITIATING VARIABLE | MODIFIER | READOUT OR PASSIVE FUNCTION | OUTPUT FUNCTION | MODIFIER |
| A | ANALYSIS | | ALARM | | |
| B | BURNER FLAME | | USER'S CHOICE | USER'S CHOICE | USER'S CHOICE |
| C | CONDUCTIVITY (ELECTRICAL) | | CLOSE OR OFF | CONTROL | CLOSE OR OFF |
| D | DENSITY (MASS) OR SPECIFIC GRAVITY | DIFFERENTIAL | | | |
| E | VOLTAGE (EMF) | | (SENSOR) | | |
| F | FLOW RATE | RATIO (FRACTION) | | | |
| G | GASING (DIMENSIONAL) | | GLASS | | |
| H | HAND (MANUALLY INITIATED) | | | | HIGH |
| I | CURRENT (ELECTRICAL) | | INDICATE | | |
| J | POWER | SCAN | | | |
| K | TIME OR TIME-SCHEDULE | | | CONTROL STATION | |
| L | LEVEL | | LIGHT (PILOT) | | LOW |
| M | MOISTURE OR HUMIDITY | | | | MIDDLE OR INTERMEDIATE |
| N | USER'S CHOICE | | USER'S CHOICE | USER'S CHOICE | USER'S CHOICE |
| O | USER'S CHOICE | | | | OPEN OR ON |
| P | PRESSURE OR QUANTITY OR EVENT | | POINT (TEST CONNECTION) | | |
| Q | QUANTITY OR EVENT | INTEGRATE OR TOTALIZE | | | |
| R | RADIOACTIVITY | | RECORD OR PRINT | | |
| S | SPEED OR FREQUENCY | SAFETY | | SWITCH | |
| T | TEMPERATURE | | | TRANSMIT | |
| U | MULTIVARIABLE | | MULTIFUNCTION | MULTIFUNCTION | MULTIFUNCTION |
| V | VISCOSITY | | | VALVE, DAMPER, OR LOUVER | |
| W | WEIGHT OR FORCE | | WELL | | |
| X | UNCLASSIFIED | | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED |
| Y | EVENT STATE OR PRESENCE | SEQUENCE | | RELAY OR COMPUTE | |
| Z | POSITION | | | DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT | |

IN ACCORDANCE WITH ISA STD. S5.1, 1984 (OR LATER) TABLE I (TABLE II CONTAINS SPECIFIC LETTER COMBINATIONS)

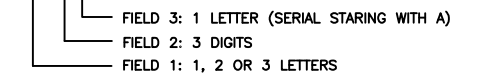
LINE SYMBOLS

| | |
|---|-----------------------------------|
|  | HARD WIRED |
|  | MECHANICAL LINKAGE |
|  | ELECTRICAL SIGNAL |
|  | INPUT TO PLC |
|  | OUTPUT FROM PLC |
|  | PNEUMATIC SIGNAL |
|  | FILLED CAPILLARY |
|  | ELECTROMAGNETIC SIGNAL |
|  | SOFTWARE DATA LINK |
|  | INTERCONNECTION ELECTRICAL SIGNAL |
|  | PNEUMATIC BINARY SIGNAL |
|  | ELECTRIC BINARY SIGNAL |

NOTES

- INSTRUMENT NUMBERING - INSTRUMENT NUMBERS SHALL CONSIST OF AN ALPHA TAG CONFORMING TO ISA STANDARD S5.1-1984 (OR LATER) AND A NUMBER WHICH IS THE LINE NUMBER FOR LINE MOUNTED INSTRUMENTATION. VESSEL MOUNTED INSTRUMENTATION WILL ADOPT THE NUMBER OF THE DISCHARGE LINE. EQUIPMENT MOUNTED INSTRUMENTATION WILL ADOPT THE NUMBER OF THE PROCESS FLUID EXIT LINE. WHERE TWO SIMILAR INSTRUMENTS WITH IDENTICAL TAGS ARE MOUNTED ON A LINE, VESSEL OR PIECE OF EQUIPMENT THE NUMBER WILL BE FOLLOWED BY AN ALPHA SUFFIX STARTING WITH A. ALPHA SUFFIXES ON LINE MOUNTED INSTRUMENTS WILL INCREASE IN THE DIRECTION OF FLOW A,B,C ETC.
- (V) DENOTES EQUIPMENT OR INSTRUMENTATION SUPPLIED BY VENDOR AND INCLUDED IN PACKAGE WITH MAJOR EQUIPMENT. (- P - P -) DENOTES PACKAGE LINE.
- PROCESS AND INSTRUMENTATION DIAGRAMS (P&ID) DESIGNATE INSTRUMENTS AND INSTRUMENTATION SYSTEMS USED FOR MEASUREMENT AND CONTROL. P&ID'S ARE NOT TO BE USED TO ACCOUNT FOR NEW OR USED EQUIPMENT.
- REFER TO ISA STANDARD S5.1-1984 (OR LATER) FOR INSTRUMENT SYMBOLS NOT SHOWN ON THIS SHEET.

TIC-123A



ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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 DATE: 05/16 PER: RCF

L: ON=*, OFF=REF*
 X:
 MO/DA/YR CO DFT
 DIR/DWG

SCALE: NONE

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 Drawn by JBL
 Checked by CDS



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

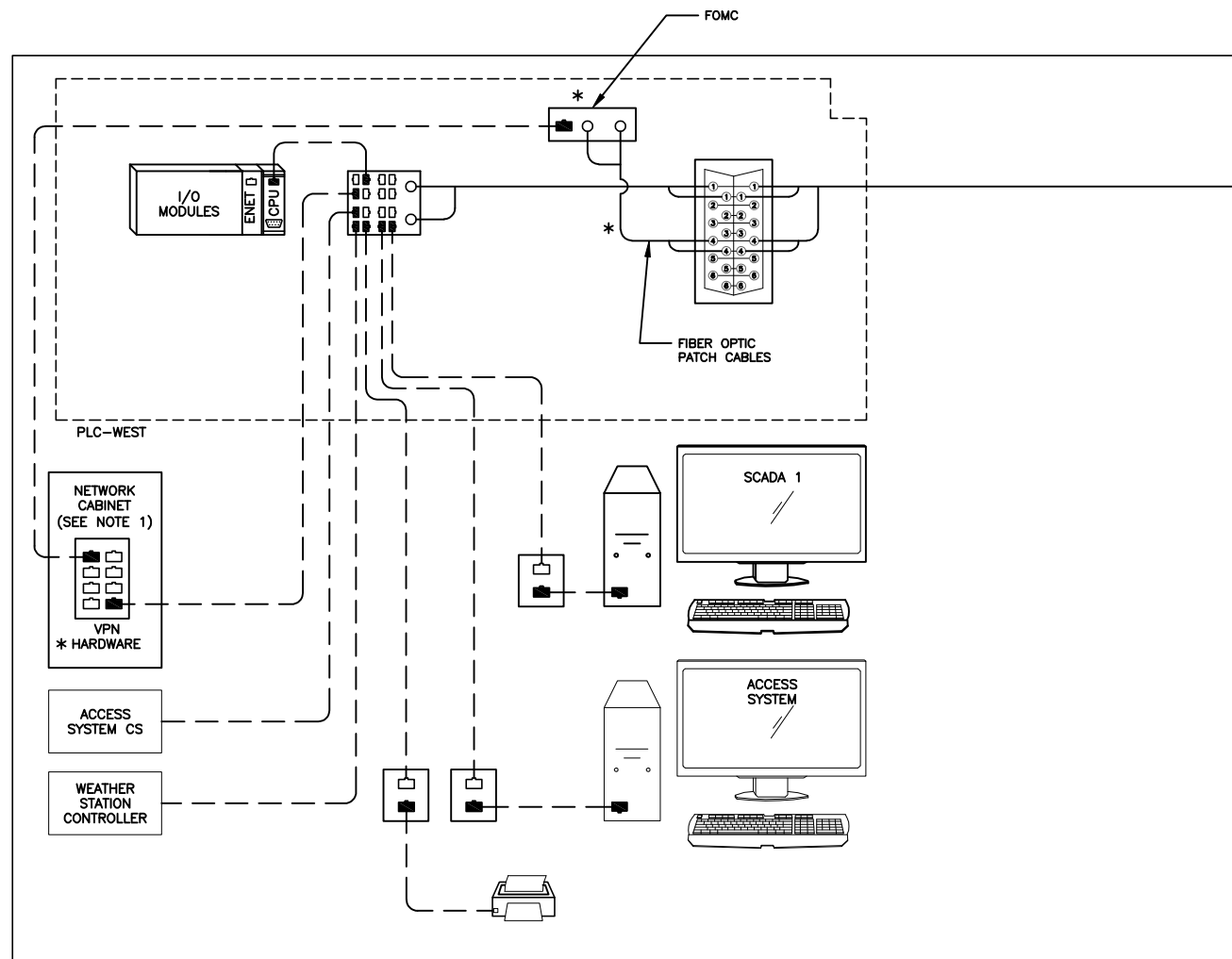
P&ID LEGEND

INSTRUMENTATION



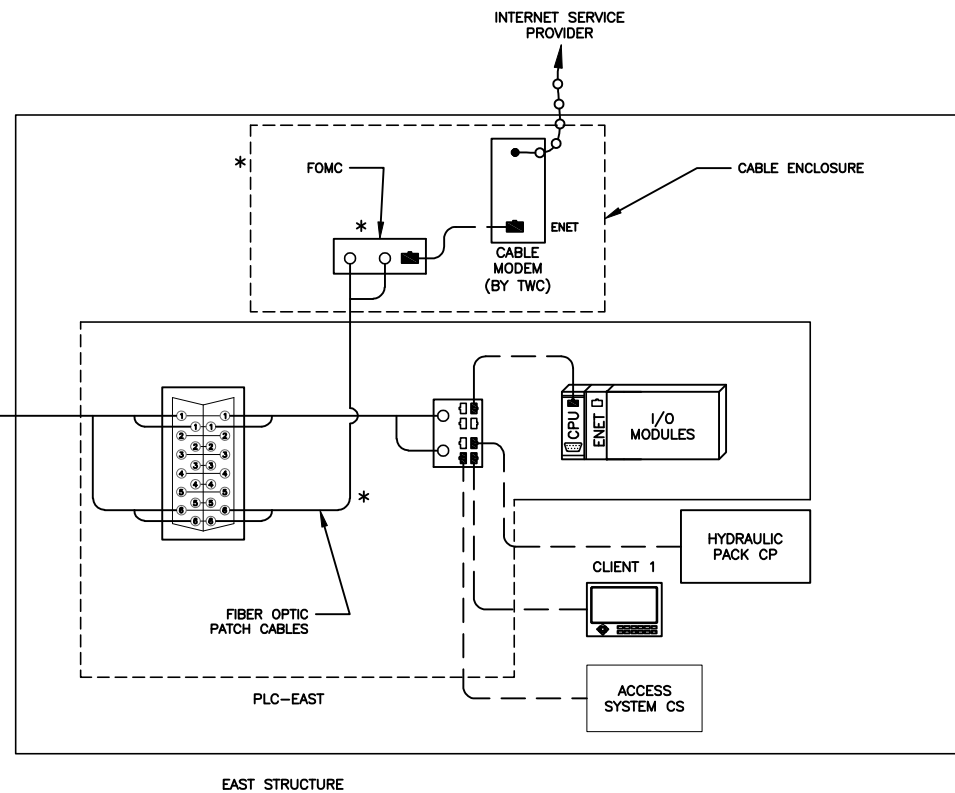
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Date
04/11

I-001



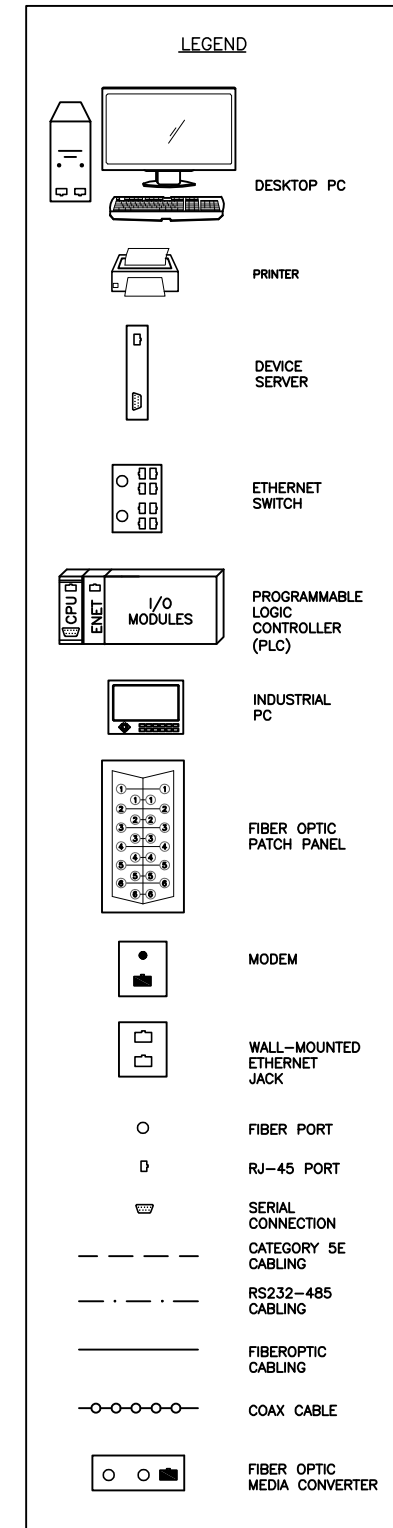
CLINTON STORAGE FACILITY

1. REFER TO SECTION 17560 FOR FURTHER DETAILS.



EAST STRUCTURE

| * NEW EQUIPMENT | |
|-----------------------------|----------|
| ITEM | QUANTITY |
| FIBER OPTIC MEDIA CONVERTER | 2 |
| FIBER OPTIC PATCH CABLES | 2 |
| CABLE ENCLOSURE | 1 |
| VPN HARDWARE | 1 |



SCADA ARCHITECTURE DIAGRAM
NOT TO SCALE

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DATE: 05/16 PER: RCF

L: ON=*, OFF=REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE: NONE

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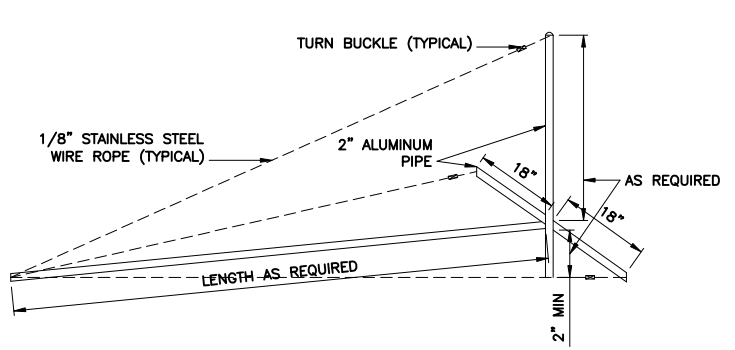
CLINTON STORAGE FACILITY
SCADA ARCHITECTURE
INSTRUMENTATION



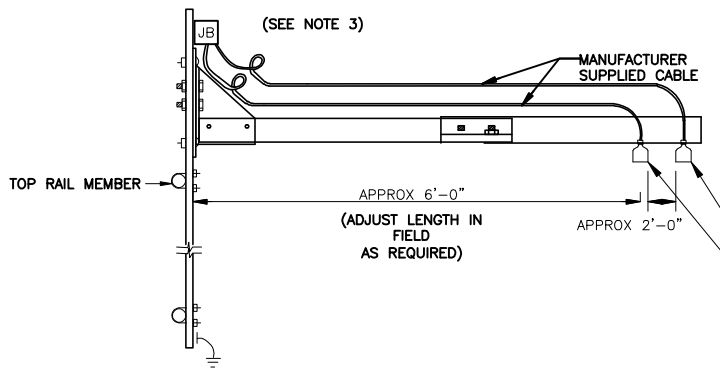
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Date
04/11

Gerald C. Hall

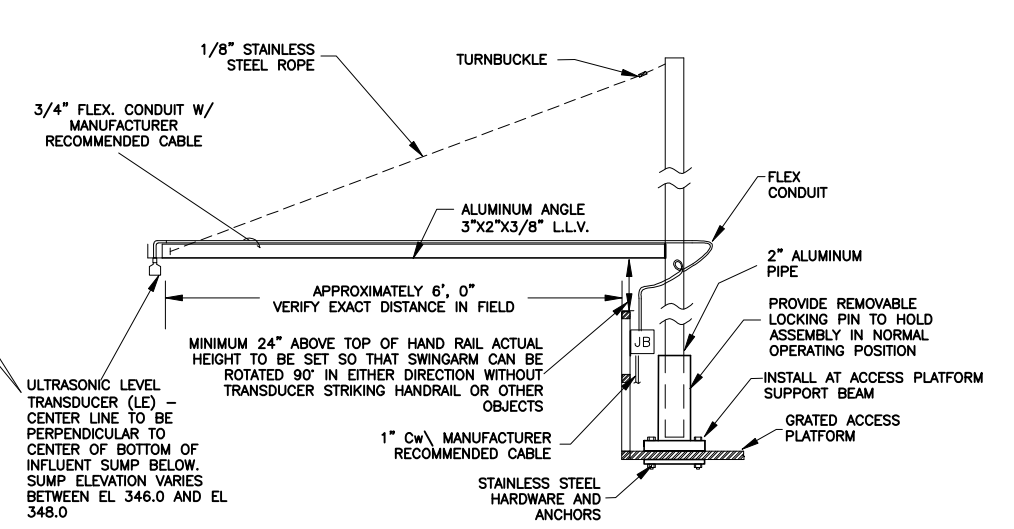


INFLUENT CHAMBER SUMP LEVEL TRANSDUCER SWINGARM ASSEMBLY DETAIL
 NOT TO SCALE

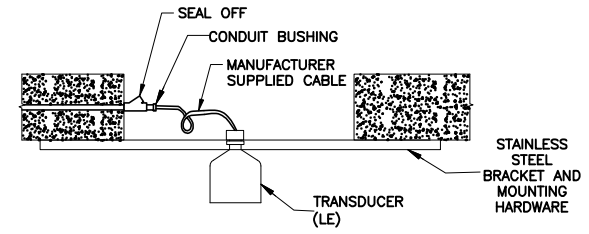


HAND RAIL MOUNTING DETAIL FOR ULTRASONIC LEVEL TRANSDUCERS
 NOT TO SCALE

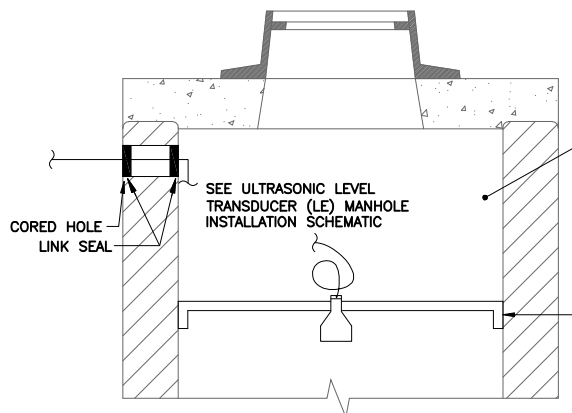
- NOTE:
 1. ALL MATERIAL AND MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
 2. TYPICAL MOUNTING FOR LE-134A AND LE-134B.
 3. PROVIDE A SEPARATE JUNCTION BOX FOR EACH TRANSDUCER.



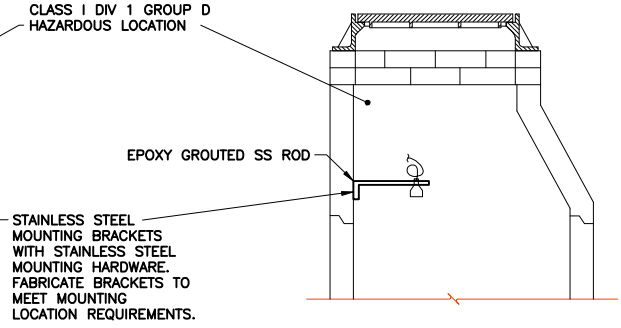
INFLUENT CHAMBER SUMP LEVEL TRANSDUCER
 NOT TO SCALE



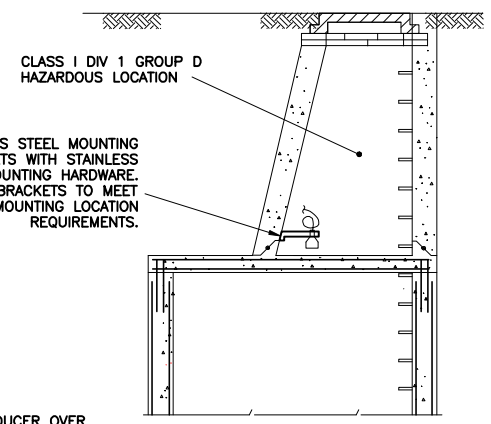
ACCESS HATCH MOUNTING DETAIL FOR ULTRASONIC LEVEL TRANSDUCERS
 NOT TO SCALE



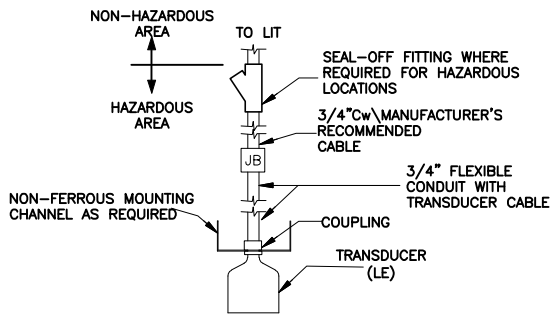
EXISTING MANHOLE MH-J1 LEVEL TRANSDUCER INSTALLATION DETAILS
 NOT TO SCALE



EXISTING MANHOLE MH-A2 LEVEL TRANSDUCER INSTALLATION DETAILS
 NOT TO SCALE



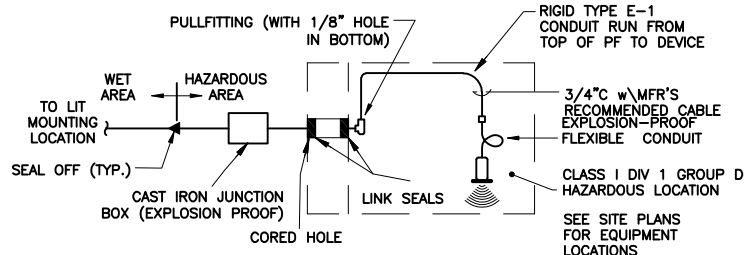
MANHOLE MH-FM LEVEL TRANSDUCER INSTALLATION DETAILS
 NOT TO SCALE



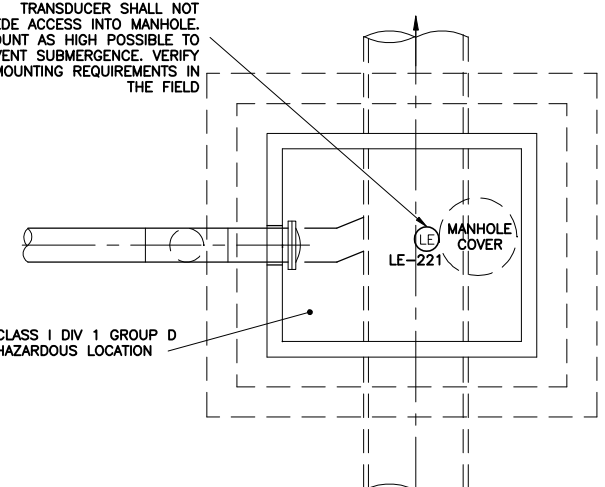
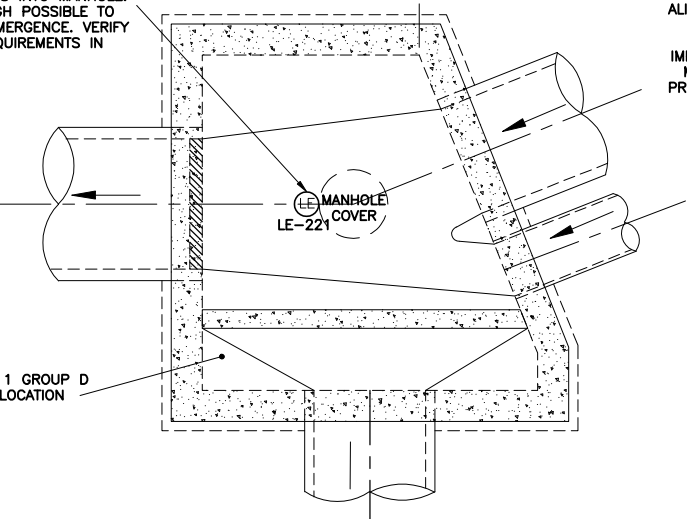
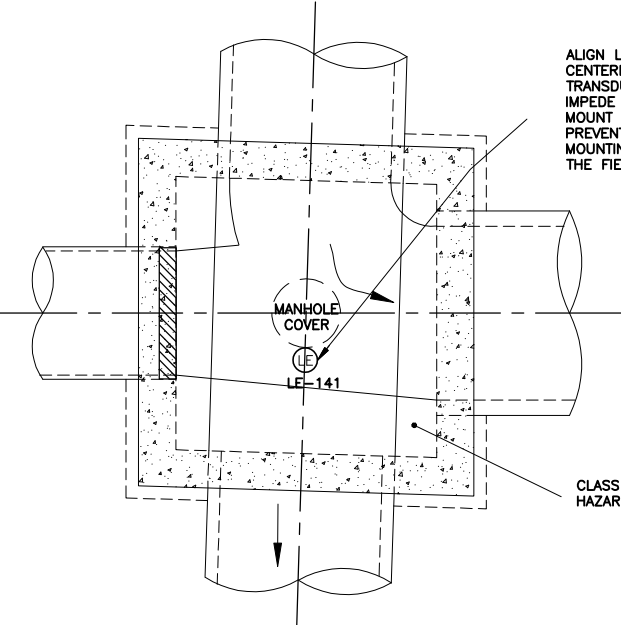
ULTRASONIC LEVEL TRANSDUCER (LE) INSTALLATION DETAIL
 NOT TO SCALE

ALIGN LEVEL TRANSDUCER OVER CENTERLINE OF CHANNEL. TRANSDUCER SHALL NOT IMPEDE ACCESS INTO MANHOLE. MOUNT AS HIGH POSSIBLE TO PREVENT SUBMERGENCE. VERIFY MOUNTING REQUIREMENTS IN THE FIELD

ALIGN LEVEL TRANSDUCER OVER CENTERLINE OF CHANNEL. TRANSDUCER SHALL NOT IMPEDE ACCESS INTO MANHOLE. MOUNT AS HIGH POSSIBLE TO PREVENT SUBMERGENCE. VERIFY MOUNTING REQUIREMENTS IN THE FIELD



ULTRASONIC LEVEL TRANSDUCER (LE) MANHOLE INSTALLATION SCHEMATIC
 NOT TO SCALE



L: ON=*, OFF=REF*
 X:
 MO/DA/YR CO DFT
 DIR/DWG

SCALE: NONE

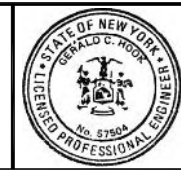
| No. | Date | Revisions | Init |
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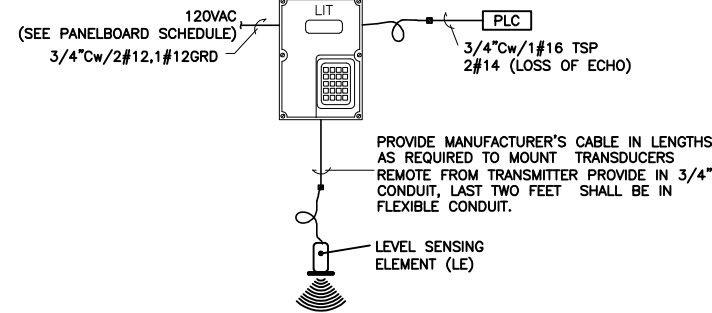
ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

LEVEL MONITORING MANHOLE AND MOUNTING DETAILS
 INSTRUMENTATION



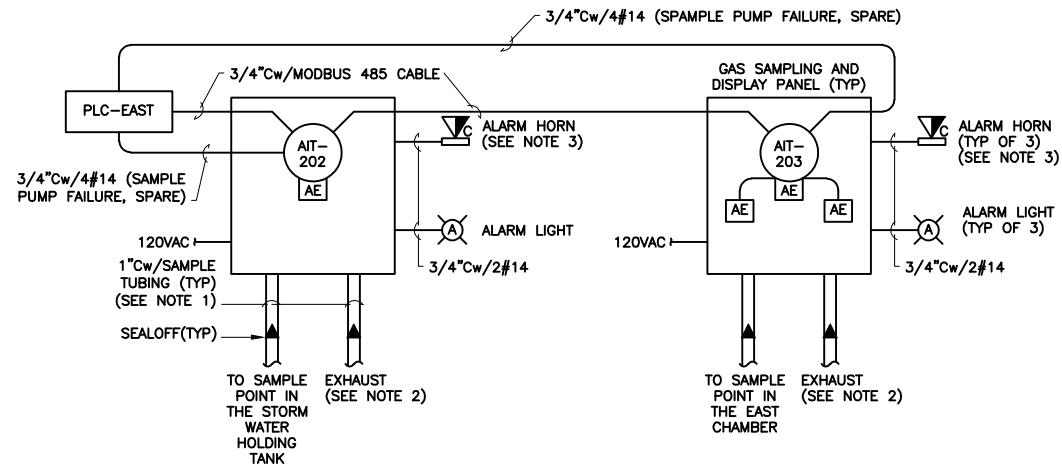
File Number 00663
 Date 04/11
 Signature: Gerald C. Hahn



ULTRASONIC LEVEL MONITORING EQUIPMENT SCHEMATIC DIAGRAM

NOT TO SCALE

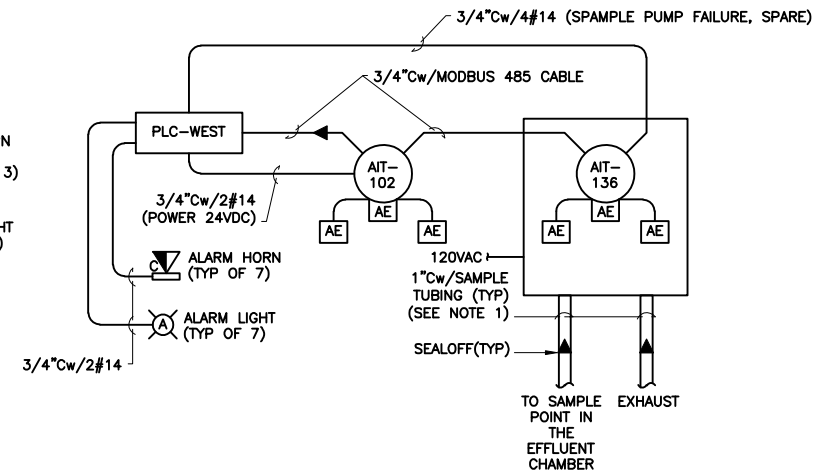
| TYPICAL FOR: | |
|-------------------------------|-------------------------|
| INFLUENT CHAMBER SUMP LEVEL | LIT/LE-101 TO PLC-WEST |
| DEWATERING WET WELL LEVEL | LIT/LE-124 TO PLC-WEST |
| EFFLUENT CHAMBER SUMP LEVEL A | LIT/LE-134A TO PLC-WEST |
| EFFLUENT CHAMBER SUMP LEVEL B | LIT/LE-134B TO PLC-WEST |
| MH-J1 LEVEL | LIT/LE-141 TO PLC-WEST |
| MH-A2 LEVEL | LIT/LE-221 TO PLC-EAST |
| MH-FM LEVEL | LIT/LE-222 TO PLC-EAST |



EAST ENTRANCE STRUCTURE HAZARDOUS GAS DETECTION SYSTEM SCHEMATIC

NOT TO SCALE

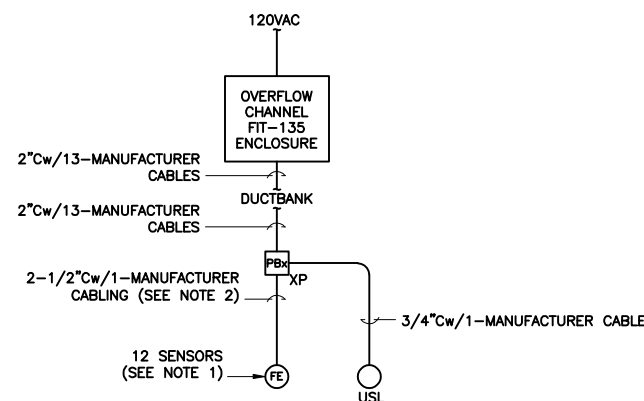
- HAZARDOUS GAS DETECTION NOTES:
- PITCH SHALL BE 1-INCH EVERY 12 FEET, TOWARD THE SAMPLE POINT.
 - EXTEND CONDUIT 6 INCHES BEYOND THE END OF THE EXHAUST TUBING TO PROVIDE A VANDAL RESISTANT EXHAUST POINT AND PROTECT THE END OF THE EXHAUST TUBE FROM BEING PLUGGED. SEAL THE CONDUIT 6 INCHES ABOVE THE END OF THE EXHAUST TUBING AND AT THE END OF THE CONDUIT. PERFORATE THE EXTENSION TO ALLOW THE SAMPLE AIR TO BE DISPERSED INTO THE ATMOSPHERE. SIZE AND QUANTITY OF PERFORATIONS SHALL MAINTAIN THE INTENT TO PROTECT THE EXHAUST TUBING.
 - QUANTITY OF ALARM HORNS INCLUDES THE PANEL MOUNTED HORN.



CLINTON STORAGE FACILITY HAZARDOUS GAS DETECTION SYSTEM SCHEMATIC

NOT TO SCALE

| TYPICAL FOR: | O ₂ | H ₂ S | COMBUSTIBLE | TRANSMITTER | | ENTRANCES |
|--|----------------|------------------|-------------|-------------|----------|-----------|
| GRIT ROOM GAS DETECTION | AE-102C | AE-102B | AE-102A | AIT-102 | PLC-WEST | TBD |
| EFFLUENT CHAMBER GAS DETECTION | AE-136C | AE-136B | AE-136A | AIT-136 | PLC-WEST | TBD |
| STORM WATER STORAGE TANK GAS DETECTION | -- | -- | AE-202 | AIT-202 | PLC-EAST | TBD |
| EAST CHAMBER GAS DETECTION | AE-203C | AE-203B | AE-203A | AIT-203 | PLC-EAST | TBD |

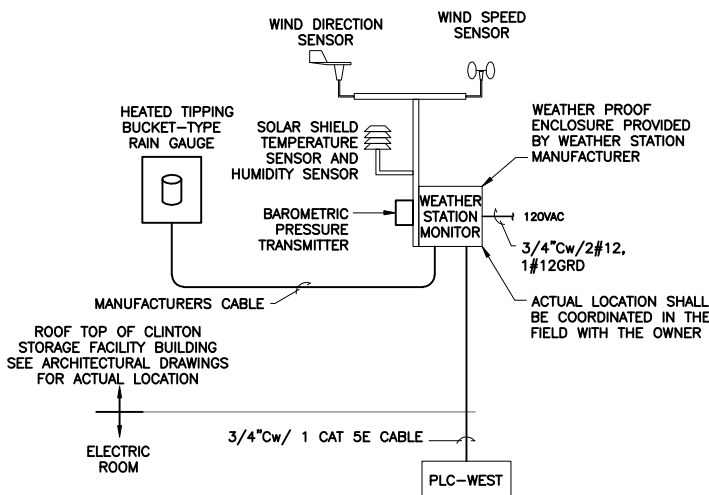


OVERFLOW CHANNEL FLOW MONITORING EQUIPMENT SCHEMATIC

NOT TO SCALE

NOTE:

- PROVIDE ALL CABLING AND MOUNTING ACCESSORIES REQUIRED FOR A COMPLETE SYSTEM.
- 2-1/2\"/>



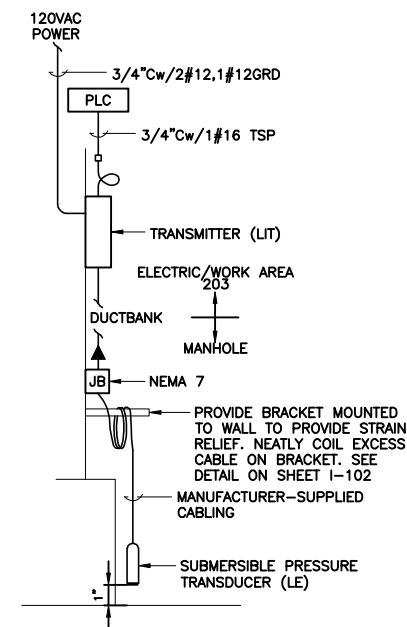
WEATHER STATION DIAGRAM

NOT TO SCALE

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
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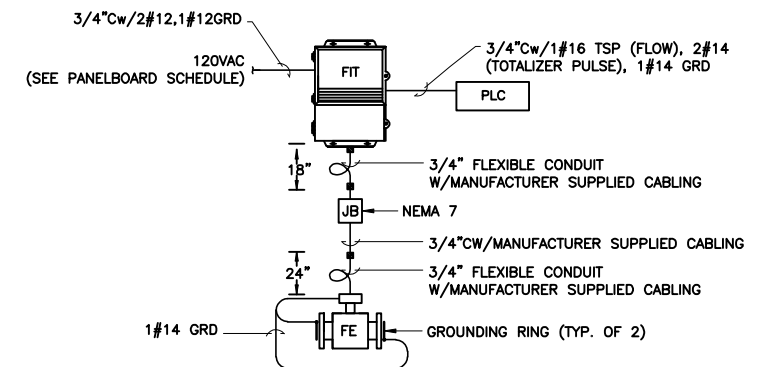
SUBMERSIBLE PRESSURE TRANSMITTER/TRANSDUCER WIRING AND MOUNTING DETAIL

NOT TO SCALE

| TYPICAL FOR: | |
|--------------------------------|------------------------|
| STORM WATER HOLDING TANK LEVEL | LIT/LE-201 TO PLC-EAST |

NOTE:

COIL WIRE AT SIDE OF TANK OR BELOW HATCH AS APPLICABLE FOR EACH INSTALLATION.



FLOW METERING INSTRUMENTATION SCHEMATIC DIAGRAM

NOT TO SCALE

NOTE:

QUANTITIES OF CABLES AND CONDUITS VARY ACCORDING TO SUPPLIED MANUFACTURER. PROVIDE QUANTITY AS REQUIRED BY THE SUPPLIED EQUIPMENT.

| TYPICAL FOR: | |
|------------------------|------------------------|
| DEWATERING PUMP 1 FLOW | FIT/FE-125 TO PLC-WEST |
| DEWATERING PUMP 2 FLOW | FIT/FE-126 TO PLC-WEST |

L: ON=*, OFF=REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE: NONE

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| No. | Date | Revisions | Init |
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SYRACUSE, NEW YORK

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CLINTON CSO STORAGE FACILITY PROJECT

INSTRUMENTATION DETAILS

INSTRUMENTATION

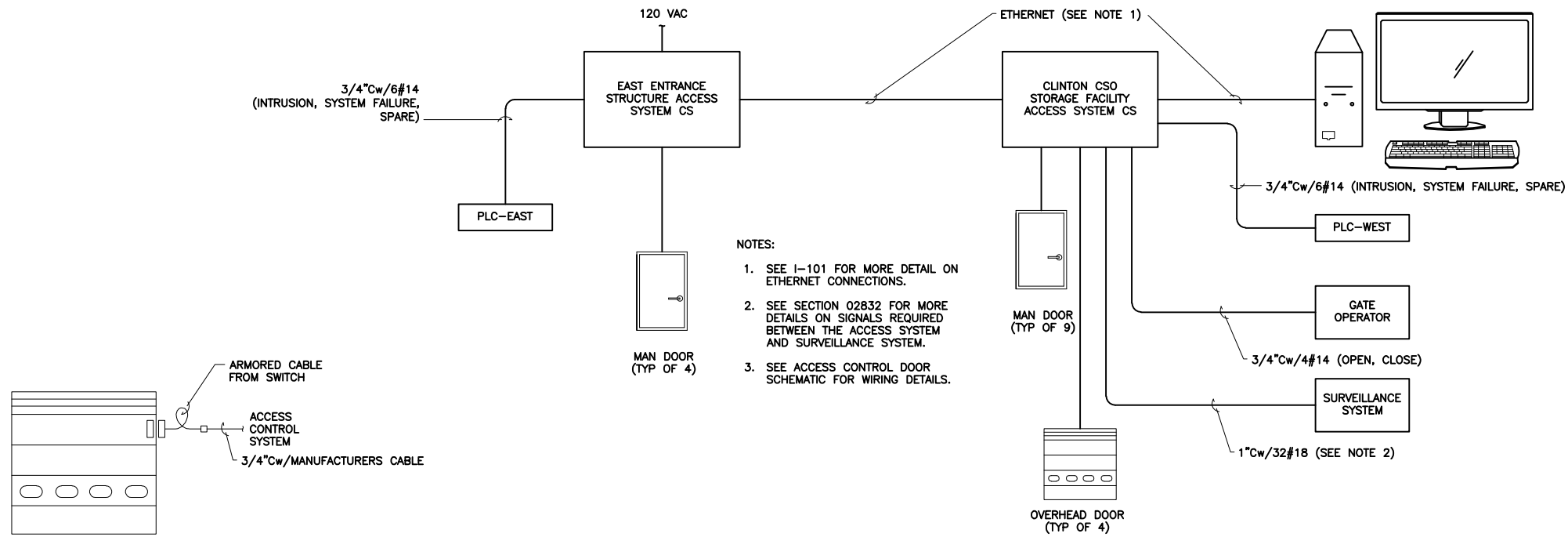


File Number
00663

Date
04/11

Gerald C. Hood

I-103



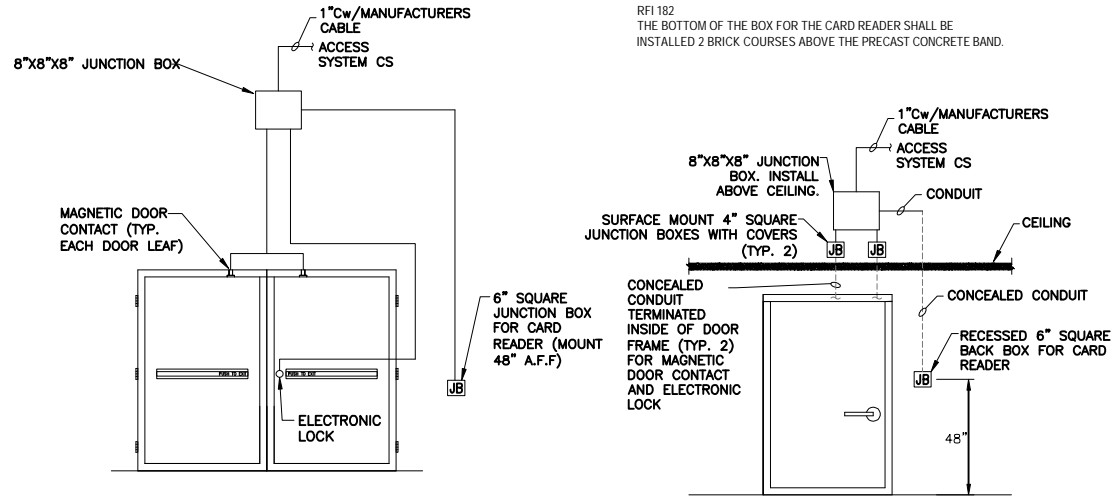
- NOTES:
- SEE I-101 FOR MORE DETAIL ON ETHERNET CONNECTIONS.
 - SEE SECTION 02832 FOR MORE DETAILS ON SIGNALS REQUIRED BETWEEN THE ACCESS SYSTEM AND SURVEILLANCE SYSTEM.
 - SEE ACCESS CONTROL DOOR SCHEMATIC FOR WIRING DETAILS.

ACCESS CONTROL SYSTEM SCHEMATIC DIAGRAM

NOT TO SCALE

MAGNETIC DOOR SWITCH FOR OVERHEAD DOORS SCHEMATIC DIAGRAM

NOT TO SCALE



RF1182
THE BOTTOM OF THE BOX FOR THE CARD READER SHALL BE INSTALLED 2 BRICK COURSES ABOVE THE PRECAST CONCRETE BAND.

NOTE: ALL CONDUIT SHALL BE 3/4" RGS UNLESS OTHERWISE NOTED.

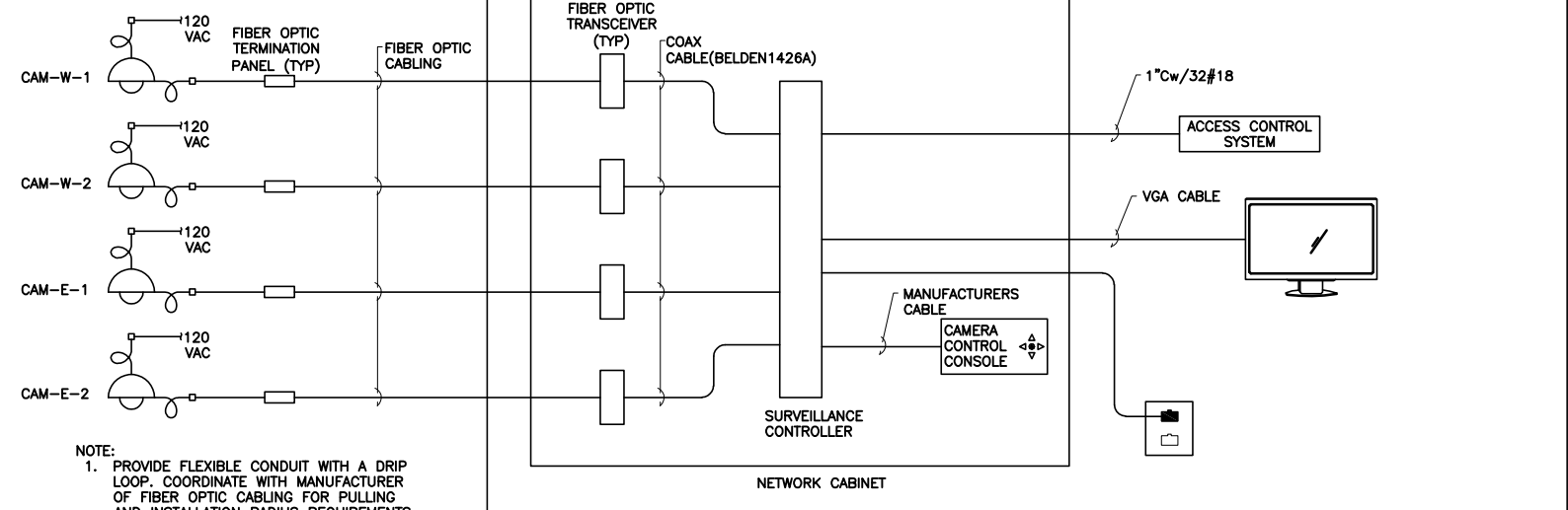
NOTE: ALL CONDUIT SHALL BE 3/4" RGS UNLESS OTHERWISE NOTED.

MAGNETIC DOOR SWITCH FOR MAN DOORS SCHEMATIC DIAGRAM

NOT TO SCALE

NOTE:

- MOUNT MAGNETIC DOOR CONTACTS OPPOSITE OF HINGES.



- NOTE:
- PROVIDE FLEXIBLE CONDUIT WITH A DRIP LOOP. COORDINATE WITH MANUFACTURER OF FIBER OPTIC CABLING FOR PULLING AND INSTALLATION RADIUS REQUIREMENTS. PROVIDE FIBER OPTIC TERMINATION PANELS WITHIN 10' OF THE CAMERAS AS SHOWN. PANELS SHALL BE PROVIDED IN ACCORDANCE WITH 16161 AND SHALL BE MOUNTED INDOORS.

SURVEILLANCE SYSTEM SCHEMATIC DIAGRAM

NOT TO SCALE

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP

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DATE: 05/16 PER: RCF

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE: NONE

| | | | |
|--|-------|-----------------|------|
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SYRACUSE, NEW YORK

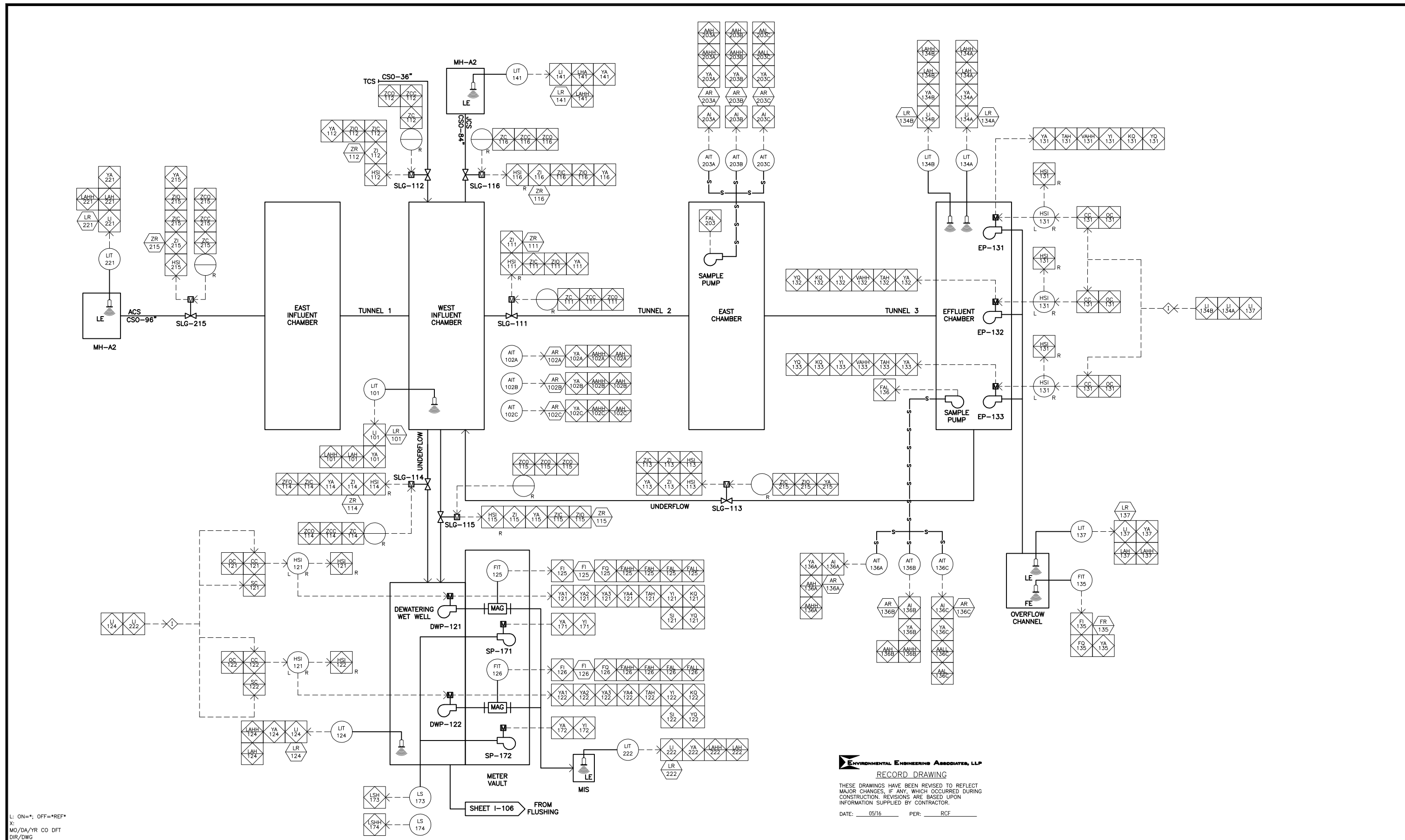
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CLINTON CSO STORAGE FACILITY PROJECT

SURVEILLANCE AND INTRUSION DETAILS

INSTRUMENTATION



File Number
00663
Date
04/11



L: ON=*, OFF=REF*
 X:
 MO/DA/YR CO DFT
 DIR/DWG


SCALE: NONE

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| No. | Date | Revisions | Init |
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| 1 | 05/16 | RECORD DRAWINGS | |


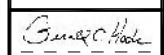
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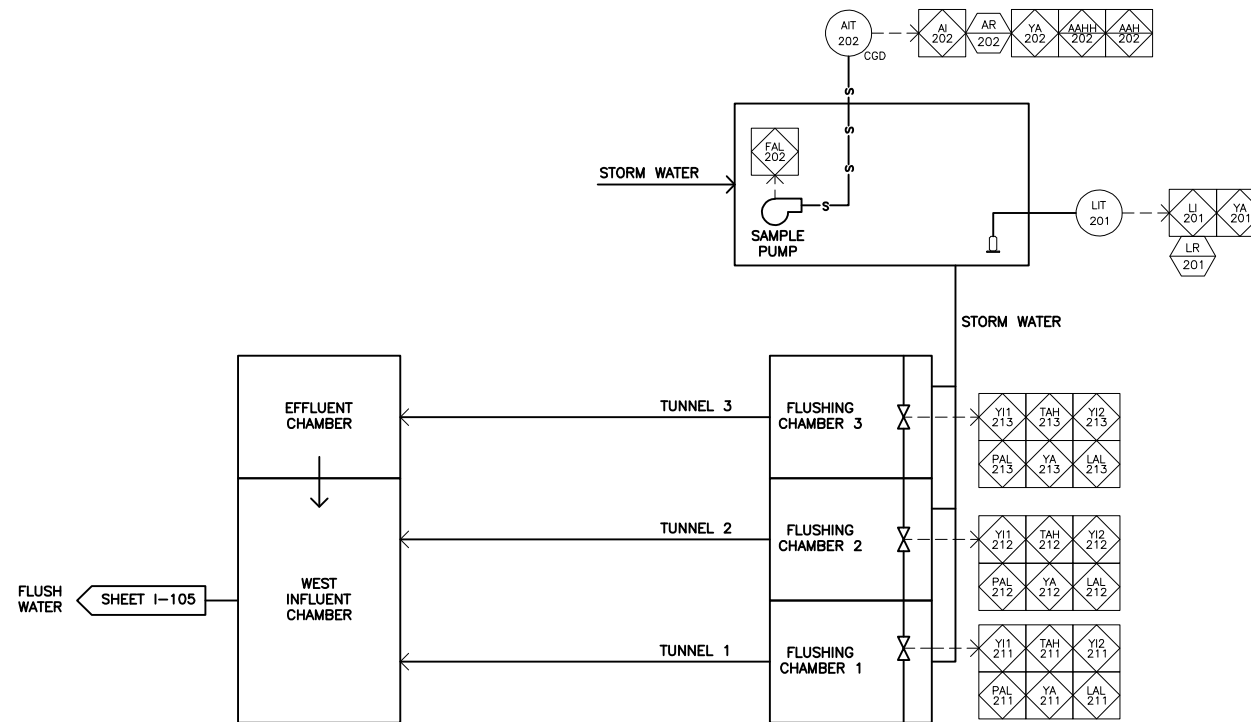
In charge of ___ CDS ___
 Designed by ___ LMN ___
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 DATE: 05/16 PER: RCF

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT
CLINTON STORAGE FACILITY
 P&ID
 INSTRUMENTATION

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|  | File Number 00663 | I-105 |
| | Date 04/11 | |
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DATE: 05/16 PER: RCF

L: ON=*, OFF=*REF*
 X:
 MO/DA/YR CO DFT
 DIR/DWG

SCALE: NONE

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| No. | Date | Revisions | Init |
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| 1 | 05/16 | RECORD DRAWINGS | |

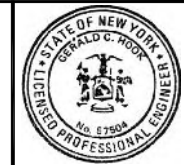
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File Number
 00663
 Date
 04/11
Gerald C. Hood

ABBREVIATIONS

| | | | |
|-------------|-----------------------------------|---------------|---|
| A or AMP | AMPERE, AMPS | NC | NORMALLY CLOSED |
| AC | ALTERNATING CURRENT | NEC | NATIONAL ELECTRICAL CODE |
| AF | AMPERE FRAME SIZE | NEMA | NATIONAL ELECTRICAL MANUFACTURERS ASSOC. |
| AFF | ABOVE FINISHED FLOOR | NG | NATIONAL GRID |
| AFG | ABOVE FINISHED GRADE | NO | NORMALLY OPEN |
| AIC | AMPS INTERRUPTING CURRENT | NP | NAMEPLATE |
| ALT | ALTERNATOR | OH/E | OVERHEAD ELECTRIC |
| AM | AMMETER | OH/L | OVERHEAD TELEPHONE |
| ANN | ANNUNCIATOR | OIU | OPERATOR INTERFACE UNIT |
| AS | AMMETER SWITCH | OL | OVERLOAD RELAY |
| AT | AMPERE TRIP RATING | Ø | PHASE |
| ATS | AUTOMATIC TRANSFER SWITCH | P | POLE |
| AUX | AUXILIARY | PB | PUSHBUTTON |
| AWG | AMERICAN WIRE GAUGE | PBx | PULL BOX |
| BKR | BREAKER | PDSL | PRESSURE DIFFERENTIAL SWITCH LOW |
| BTS | BEARING TEMPERATURE SENSOR | PDSH | PRESSURE DIFFERENTIAL SWITCH HIGH |
| C or COND | CONDUIT | PF | PULLING FITTING |
| CA | CABLE | PFC | POWER FACTOR CORRECTION PROGRAMMABLE LOGIC CONTROLLER |
| CB | CIRCUIT BREAKER | PLC | PANEL |
| CBDH | CIRCUIT BREAKER DISCONNECT HANDLE | PNL | POTENTIOMETER |
| CGD | COMBUSTIBLE GAS DETECTOR | POT | POTENTIAL TRANSFORMER |
| CGM | COMBUSTIBLE GAS MONITOR | PR | PAIR |
| CIRC OR CKT | CIRCUIT | PS | PRESSURE SWITCH |
| CLF | CURRENT LIMITING FUSE | PT | POTENTIAL TRANSFORMER |
| COMP | COMPARTMENT | R&R | REMOVE & REPLACE |
| COR | CORROSION RESISTANT | RECEP | RECEPTACLE |
| CP | CONTROL PANEL | RGS | RIGID GALVANIZED STEEL CONDUIT |
| CS | CONTROL STATION | ROS | REMOTE OPERATING STATION |
| CPT | CONTROL POWER TRANSFORMER | RV-AT | REDUCED VOLTAGE AUTO TRANSFORMER |
| CR | CONTROL RELAY | SA | SURGE ARRESTOR |
| CT | CURRENT TRANSFORMER | SCR | SILICON CONTROLLED RECTIFIER |
| DC | DIRECT CURRENT | SEC | SECOND |
| DM | DAMPEN MOTOR | SEL or SEL SW | SELECTOR SWITCH |
| DS | DISCONNECT SWITCH | SHLD | SHIELDED |
| EA | EACH | S/L | STOP/LOCKOUT SWITCH |
| EJ | EXPANSION JOINTS | SN | SOLID NEUTRAL |
| EMH | ELECTRICAL MANHOLE | SS | STAINLESS STEEL |
| EMT | ELECTRICAL METALLIC TUBING | SSRVS | SOLID STATE REDUCED VOLTAGE STARTER |
| EMTP | EMBEDDED MOTOR THERMAL PROTECTOR | SSW | SAFETY SWITCH |
| EP | EQUIPMENT PANEL | S/S | STOP/START PUSH BUTTON |
| ES | EMERGENCY SWITCH | STR | STRANDED |
| ESTOP | EMERGENCY STOP | SV | SOLENOID VALVE |
| ETM | ELAPSED TIME METER | SW | SWITCH |
| F & I | FURNISHED AND INSTALLED | SWD | SWITCHING DUTY |
| FA | FIRE ALARM | SWSV | SEAL/WATER SOLENOID VALVE |
| FACP | FIRE ALARM CONTROL PANEL | TC | TERMINAL CABINET OR TIMED CLOSED |
| FE | FLOW ELEMENT | TDR | TIME DELAY RELAY |
| FTT | FLOW INDICATING TRANSMITTER | TEL | TELEPHONE |
| FLEX | FLEXIBLE | TRM | TERMINAL |
| FOS | FAST-OFF-SLOW | TR | TIMER |
| FS | FLOW SWITCH | TR.SW. | TRANSFER SWITCH |
| FSW | FUSED SWITCH | TR24 | 24-HOUR TIMER |
| FVNR | FULL VOLTAGE NON REVERSING | TRANS | TRANSFORMER |
| FVR | FULL VOLTAGE REVERSING | TS | TORQUE SWITCH |
| FVTS | FULL VOLTAGE TWO SPEED | TSP | TWISTED SHIELDED PAIR |
| GC | GENERAL CONTRACTOR | TST | TWISTED SHIELDED TRIAD |
| GEN | GENERATOR | TYP | TYPICAL |
| GENSET | EMERGENCY POWER GENERATOR | UG/E | UNDERGROUND ELECTRIC |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER | UG/T | UNDERGROUND TELEPHONE |
| GFI | GROUND FAULT INTERRUPTER | UNK | UNKNOWN |
| GRD | GROUND | UPS | UNINTERRUPTIBLE POWER SUPPLY |
| HMI | HUMAN MACHINE INTERFACE | VA | VOLT-AMPERES |
| HOA | HAND-OFF-AUTO SELECTOR SWITCH | VFD | VARIABLE FREQUENCY DRIVE |
| HOR | HAND-OFF-REMOTE SELECTOR SWITCH | VM | VOLTMETER |
| HP | HORSE POWER | VS | VOLTMETER SWITCH |
| IB/OB | INBOARD/OUTBOARD | VSC | VARIABLE SPEED CONTROL |
| IL | INDICATING LIGHT | W/ | WITH |
| IMH | INSTRUMENTATION MANHOLE | WP | WEATHER PROOF, WATER PROOF |
| I/O | INPUT/OUTPUT | XP | EXPLOSION PROOF |
| ISR | INTRINSICALLY SAFE RELAY | 2S1W | 2 SPEED, 1 WINDING |
| JB | JUNCTION BOX | 2SP2W | 2 SPEED, 2 WINDING |
| JIC | JOINT INDUSTRIAL COUNCIL | XFMR | TRANSFORMER |
| KCML | THOUSAND CIRCULAR MILS | | |
| KSU | KEY SERVICE UNIT | | |
| KVA | KILOVOLT AMPERES | | |
| KW | KILOWATT | | |
| LA | LIGHTNING ARRESTOR | | |
| LC | LIGHTING CIRCUIT | | |
| LE | LEVEL TRANSDUCER | | |
| LIT | LEVEL INDICATING TRANSMITTER | | |
| LP | LIGHTING PANEL | | |
| LS | LOCKOUT | | |
| LUB | LIMIT SWITCH | | |
| LUB | LUBRICATION | | |
| MA | MILLIAMPS | | |
| MAX | MAXIMUM | | |
| MCC | MOTOR CONTROL CENTER | | |
| MCP | MOTOR CIRCUIT PROTECTOR | | |
| MCS/ | MOLDED CASE SWITCH | | |
| | T-THERMAL ONLY | | |
| | M-MAGNETIC ONLY | | |
| | AUTO- AUTOMATIC ONLY | | |
| MDP | MAIN DISTRIBUTION PANEL | | |
| MFR | MANUFACTURER | | |
| MIN | MINIMUM | | |
| MLO | MAIN LUGS ONLY | | |
| MMS | MANUAL MOTOR STARTER | | |
| MOD | MOTOR OPERATED DAMPER | | |
| MSS | MOTOR STARTING SWITCH | | |
| MTR | MOTOR TIMING RELAY | | |
| MWTP | MOTOR WINDING THERMAL PROTECTION | | |
| Mx | MOTOR CONTACTOR AUXILIARY CONTACT | | |

SYMBOLS

| | |
|--|--|
| | DRILLED GROUND ROD |
| | GROUND GRID |
| | DRIVEN GROUND ROD |
| | SINGLE POLE SWITCH (P) PILOT LIGHT |
| | THREE-WAY SWITCH |
| | FOUR-WAY SWITCH |
| | MOTOR STARTING SWITCH WITH OVERLOAD PROTECTION |
| | MANUAL MOTOR STARTER |
| | DUPLEX RECEPTACLE |
| | QUAD RECEPTACLE |
| | SINGLE RECEPTACLE |
| | SPECIAL RECEPTACLE WITH DESIGNATION (CIR. NO.) L6-30R |
| | THERMOSTAT |
| | CONTINUOUS RATING (SA) (MCP) |
| | MOTOR CIRCUIT PROTECTOR-TRIP RANGE SETTING BASED ON ACTUAL MOTOR FULL LOAD AMPS |
| | CONTACTOR TYPE AND NEMA SIZE AS REQUIRED FOR MOTOR FULL LOAD AND CHARACTERISTICS |
| | OVERLOAD HEATERS OR RELAY |
| | MOMENTARY OPEN PUSHBUTTON (NORMALLY OPEN) |
| | MOMENTARY CLOSED PUSHBUTTON (NORMALLY CLOSED) |
| | MAINTAINED CONTACT PUSHBUTTON WITH MECHANICAL INTERLOCK |
| | THREE POSITION MAINTAINED CONTACT SELECTOR SWITCH |
| | FOUR POSITION MAINTAINED CONTACT SELECTOR SWITCH |
| | NORMALLY OPEN CONTACT |
| | NORMALLY CLOSED CONTACT |
| | TEMPERATURE SWITCH |
| | LIMIT SWITCH |
| | FLOAT SWITCH |
| | PRESSURE SWITCH |
| | SOLENOID VALVE COIL |
| | MOTOR OPERATED VALVE |
| | INDICATING LIGHT * = COLOR R - RED W - WHITE G - GREEN A - AMBER |
| | PUSH-TO-TEST INDICATING LIGHT |
| | NAME PLATE |
| | RED MUSHROOM HEAD PUSHBUTTON (MAINTAINED) |
| | MOUNTING STAND |
| | CONTROL RELAY |
| | TIMER |
| | TIME DELAY RELAY |
| | MOTOR STARTER CONTACTOR COIL OTHER COIL DESIGNATIONS: SL - SLOW FS - FAST F - FORWARD R - REVERSE O - OPEN C - CLOSED L - LOW H - HIGH |

| | |
|--|---|
| | LIMIT SWITCH |
| | FLOW SWITCH |
| | PRESSURE SWITCH |
| | VIBRATION SENSOR |
| | MOTOR OPERATED DAMPER |
| | CONTROL STATION |
| | UTILITY POLE |
| | UTILITY POLE W/STREET LIGHT |
| | ELAPSED TIME METER |
| | FLEXIBLE CONDUIT |
| | WIRES CONNECTED |
| | WIRES NOT CONNECTED |
| | CURRENT LIMITING FUSE |
| | SWITCH WITH CURRENT LIMITING FUSE |
| | MOLDED CASE CIRCUIT BREAKER |
| | DISCONNECT SWITCH |
| | SQUIRREL CAGE INDUCTION MOTOR AND HP HP, VARIES |
| | RESISTANCE LOAD |
| | DRAW OUT FEATURE |
| | TRANSFORMER |
| | GROUND |
| | MOTOR OPERATED DAMPER |
| | LOUVER |
| | HAZARDOUS GAS DETECTION ALARM HORN/AMBER BEACON |
| | INTRUSION SYSTEM DOOR CONTACT |
| | STOP/LOCKOUT PB STATION |

LIGHTING SYMBOLS

| | |
|--|--|
| | LIGHTING FIXTURE TYPE, TYP. |
| | FLUORESCENT FIXTURE |
| | FLUORESCENT FIXTURE W/ INTEGRAL BATTERY PACK |
| | STANCHION MOUNTED FIXTURE |
| | WALL OR BOX MOUNTED FIXTURE |
| | CEILING OR PENDANT MOUNTED FIXTURE |
| | POLE MOUNTED AREA/STREET FIXTURE |
| | WALL MOUNTED FIXTURE |
| | EXIT SIGN FIXTURE |
| | EXPLOSION POOF EXIT SIGN FIXTURE |
| | STROBE LIGHT |
| | MOTION SENSOR |

LIGHTNING SYSTEM SYMBOLS

| | |
|--|--------------------|
| | AIR TERMINAL |
| | EARTH TERMINAL |
| | CABLE TURNING DOWN |

TELEPHONE SYSTEM SYMBOLS

| | |
|--|---|
| | PHONE JACK (MOUNT AT 12" AFF. FOR FUTURE DESK PHONE BY OWNER) |
| | PHONE JACK (MOUNT AT 54" AFF. FOR FUTURE WALL-MOUNTED PHONE BY OWNER) |
| | (D INDICATES TWO RJ45 JACKS ON A SINGLE WALLPLATE) |
| | TYPE RJ-31X JACK FOR FIRE ALARM DACT SIGNALS |
| | TELEPHONE AUXILIARY RINGER |

FIRE ALARM SYSTEM SYMBOLS

| | |
|--|---|
| | HEAT DETECTOR |
| | CR= CORROSION RESISTANT XP= EXPLOSION PROOF |
| | SMOKE DETECTOR |
| | D= DUCTSMOKE DETECTOR |
| | FLAME DETECTOR |
| | PULLSTATION |
| | CR= CORROSION RESISTANT XP= EXPLOSION PROOF |
| | HORN ALARM |
| | STROBE |
| | HORN/STROBE COMBINATION ALARM |
| | CR= CORROSION RESISTANT XP= EXPLOSION PROOF |
| | FIRE ALARM CONTROL PANEL |

LEGEND

GENERAL NOTES:

- LIGHTING CIRCUITS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATION OF CONDUIT RUNS SHALL BE DETERMINED BY THE ELECTRICAL INSTALLER IN THE FIELD, UNLESS SPECIFICALLY DIMENSIONED ON THE PLANS. CONDUIT AND WIRE INFORMATION CAN BE FOUND ON THE PLANS, EQUIPMENT SCHEDULES AND SCHEMATICS.
- EXACT EQUIPMENT CONDUIT CONNECTIONS ARE TO BE DETERMINED BY THE ELECTRICAL INSTALLER BASED UPON THE ACTUAL FIELD LOCATION OF EQUIPMENT. INSTALL CONDUIT IN ACCORDANCE WITH SPEC. SEC. 16110.
- ALL PENETRATIONS THROUGH NON-FIRE RATED WALLS, CORE HOLE AND SEAL AROUND CONDUIT WITH NON-SHRINK GROUT. THROUGH EXTERIOR WALL SEAL WATER TIGHT WITH SILICONE MASONRY SEALANT. THRU FIRE RATED WALLS PROVIDE FIRE STOPPING PER SPECIFICATION SECTION 16120 AND DETAILS ON SHEET NO. E-002.
- EVERY EFFORT HAS BEEN MADE TO IDENTIFY REMOTE ITEMS TO BE CONNECTED BY THE ELECTRICAL TRADE, EITHER IN THE ELEMENTARIES OR IN THE SCHEDULES. HOWEVER, NOT ALL OF THE REMOTE DEVICES MAY HAVE BEEN SHOWN ON THE ELECTRICAL PLAN DRAWINGS. SEE THE DRAWINGS OF RESPECTIVE TRADES TO LOCATE OR CONFIRM THEIR LOCATION.
- IN GENERAL, ALL WORK SHOWN ON THESE ELECTRICAL DRAWINGS IS THE WORK OF THIS TRADE UNLESS SPECIFICALLY STATED OTHERWISE. WORK OF ELECTRICAL TRADE IS GENERALLY SHOWN USING HEAVY LINE WEIGHTS, WITH THE WORK OF OTHER TRADES SHOWN WITH LIGHTER LINE WEIGHTS AND/OR CALLED OUT ON THE PLANS.
- ALL ELECTRICAL WORK IN CLASS I, DIV. 1, GROUP D AREAS SHALL BE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 501 AND THE CONTRACT SPECIFICATIONS. ALL MATERIALS PROVIDED IN SUCH AREAS SHALL BE LISTED AS SUITABLE FOR THE ENVIRONMENT IN WHICH THEY ARE INSTALLED. REFER TO THE ROOM SCHEDULE ON SHEETS E-102 AND E-202 FOR AREA CLASSIFICATIONS.
- FASTENERS ON THE UNDERSIDE OF PRECAST/PRESTRESSED CONCRETE MEMBERS (PLANKS OR DOUBLE TEES) WHICH SERVE FOR DIRECT ATTACHMENT OR FOR HANGERS OF ELECTRICAL EQUIPMENT, CONDUIT, CHANNEL, ETC., MAY NOT BE DRILLED OR SHOT IN THE VICINITY OF THE PRESTRESSING TENONS. THIS MEANS THAT FASTENERS AT CONCRETE PLANKS CAN ONLY BE PLACED AT THE JOINTS BETWEEN UNITS. CONTRACTOR SHALL PROVIDE AN INTERMEDIATE SUPPORTS NEEDED TO ACCOMPLISH THIS.

GROUNDING NOTES:

- THE GROUNDING SYSTEM IS SHOWN DIAGRAMMATICALLY. EXACT LOCATION OF CABLE GROUND RODS AND CONNECTIONS SHALL BE DETERMINED IN THE FIELD.
- ALL BURIED GROUNDING CABLE CONNECTIONS SHALL BE CADWELDED OR THERMOWELDED. THE WELDED CONNECTIONS SHALL BE LEFT EXPOSED FOR INSPECTION BY ENGINEER PRIOR TO BACKFILLING. ALL BURIED GROUND CONDUCTOR SHALL BE TIN-PLATED COPPER. SEE SPECIFICATION SECTION 16100.
- WHERE EXPOSED TO MECHANICAL INJURY, THE GROUNDING CONDUCTOR SHALL BE SUITABLY PROTECTED BY PIPE OR OTHER MECHANICAL PROTECTION. EACH END OF PROTECTING CONDUIT (IF METALLIC) SHOULD BE GROUNDED TO THE BARE CABLE AT BOTH ENDS.
- ALL EXPOSED CABLE LUGS AND CONNECTORS SHALL BE OF THE MECHANICAL OR COMPRESSION TYPE UNLESS OTHERWISE NOTED.
- STEEL MUST BE CLEANED THOROUGHLY AND CABLE MUST BE COMPLETELY DRY BEFORE MAKING WELD CONNECTIONS.
- THE GROUNDING SYSTEM SHALL BE CONNECTED TO A METALLIC WATERLINE WITH A MINIMUM OF 10 FEET LENGTH UNDERGROUND AND TO THE GROUNDING ELECTRODES.
- REMOVE PAINT FROM UNDER ALL GROUNDING LUGS, INCLUDING SHOP FABRICATED PANELS.

THE ABBREVIATIONS AND SYMBOLS LISTED HEREIN ARE STANDARDS OF THIS OFFICE AND APPLY TO A VARIETY OF PROJECTS. ONLY A PORTION OF THEM WILL NECESSARILY APPLY TO ANY GIVEN PROJECT. SEE THE LISTINGS IN OTHER SECTIONS OF THIS DOCUMENT FOR ADDITIONAL SYMBOLS AND ABBREVIATIONS.

!!!NOTE!!!
 ALL WORK ON THIS SHEET BY ELECTRICAL TRADE UNLESS SPECIFICALLY NOTED OTHERWISE

X: 08/20/08 GHD RGW DIR/DWG

SCALE: NOT TO SCALE

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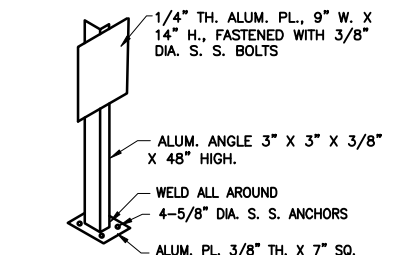
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 SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

ABBREVIATIONS, SYMBOLS AND NOTES
 ELECTRICAL

File Number 00663
 Date 04/11

 E-001



1/4" TH. ALUM. PL., 9" W. X 14" H., FASTENED WITH 3/8" DIA. S. S. BOLTS

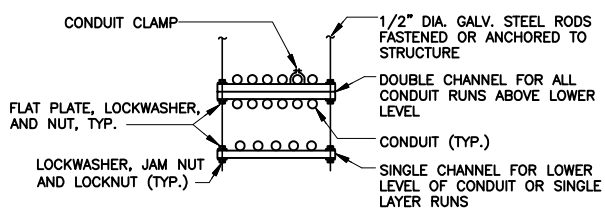
ALUM. ANGLE 3" X 3" X 3/8" X 48" HIGH.

WELD ALL AROUND

4-5/8" DIA. S. S. ANCHORS

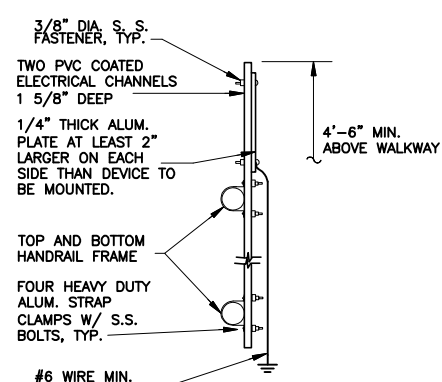
ALUM. PL. 3/8" TH. X 7" SQ.

CONTROL STATION MOUNTING PANEL DETAIL
NOT TO SCALE



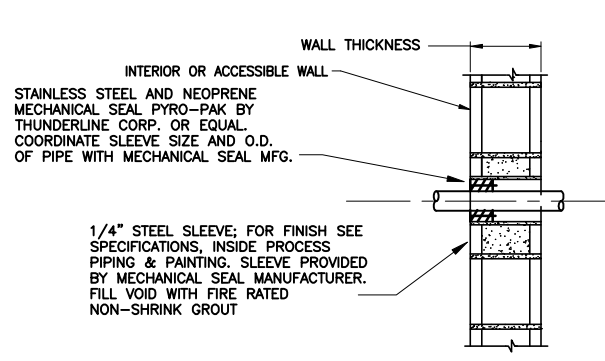
- NOTES:**
1. CHANNEL MEMBERS SHALL BE 1 5/8" X 1 5/8" X 12 GA. MIN.
 2. CHANNEL SUPPORT SYSTEMS SHALL BE GALVANIZED, STAINLESS STEEL, OR PVC COATED AND SHALL CONFORM TO CONDUIT APPLICATIONS AND AREAS OF INSTALLATION. ALSO SEE SPECIFICATION SECTION 16191.
 3. THE LOWEST POINT OF HORIZONTAL RUN SUPPORT SYSTEM SHALL BE 7'-0" ABOVE FLOOR.

TYPICAL CHANNEL SUPPORTS
NOT TO SCALE

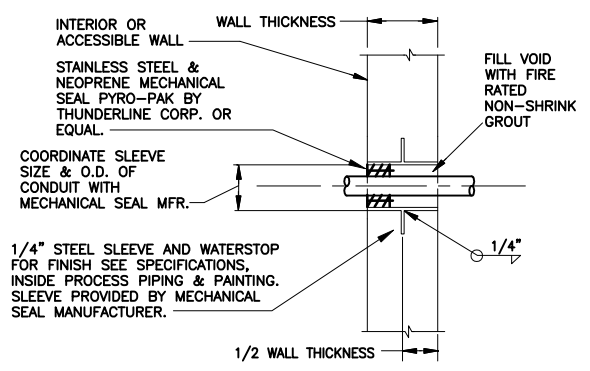


- NOTES:**
- TO BE USED FOR ALL ENCLOSURES OR DEVICES GREATER THAN 8" H. X 8" W. GRIND SMOOTH ALL EDGES AND CORNERS OF FABRICATED PARTS.

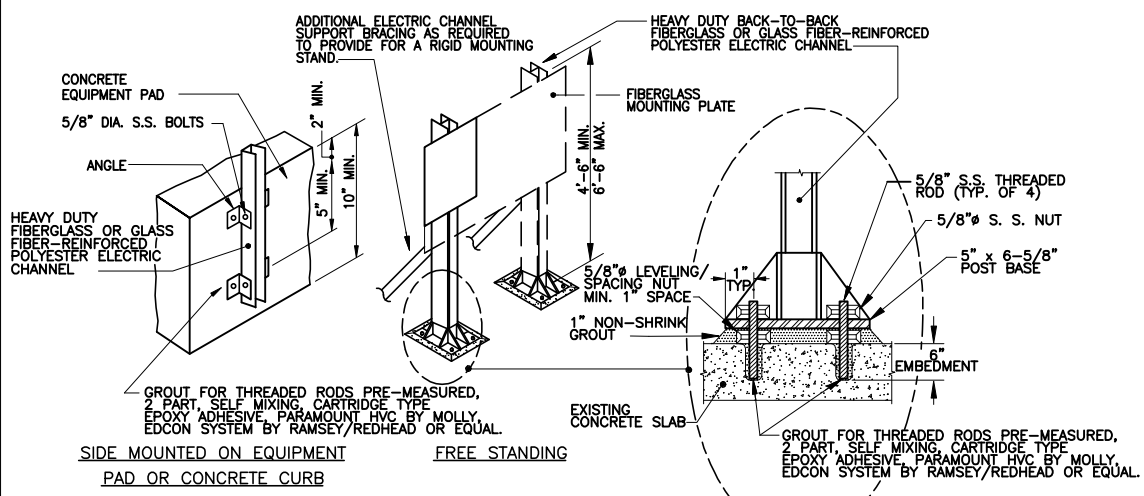
LARGE ENCLOSURE RAILING MOUNT DETAIL
NOT TO SCALE



TYPICAL CONDUIT THROUGH FIRE RATED BLOCK WALL
NOT TO SCALE

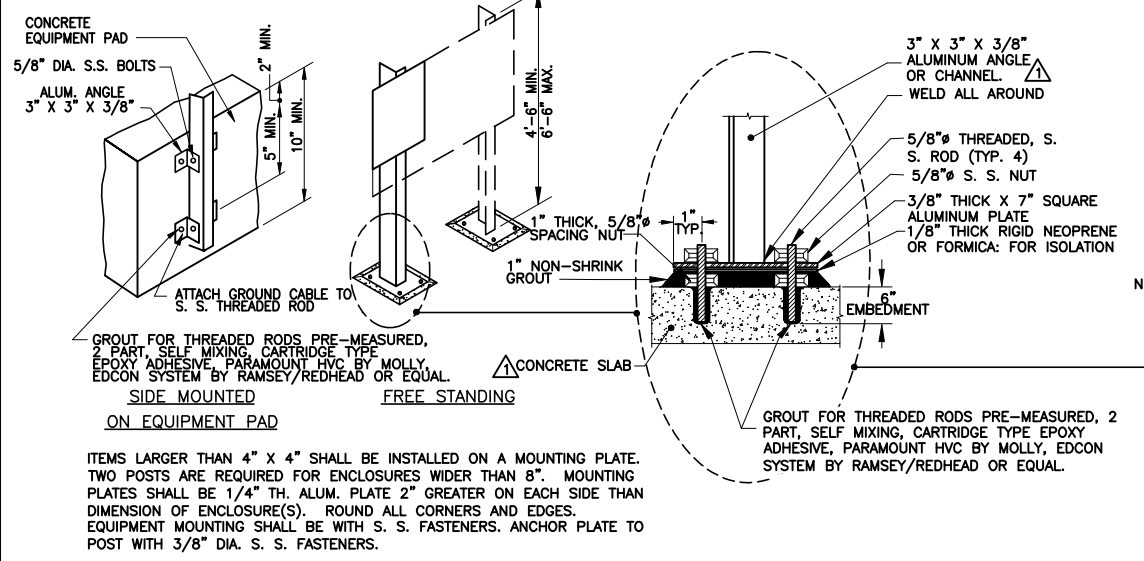


TYPICAL CONDUIT THROUGH FIRE RATED CONCRETE WALL
NOT TO SCALE

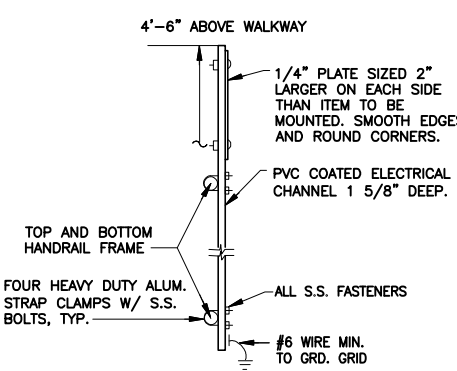


ITEMS LARGER THAN 4" X 4" SHALL BE INSTALLED ON A MOUNTING PLATE. TWO POSTS ARE REQUIRED FOR ENCLOSURES WIDER THAN 8". MOUNTING PLATES SHALL BE 1/4" TH. FIBERGLASS PLATE 2" GREATER ON EACH SIDE THAN DIMENSION OF ENCLOSURE(S). ROUND ALL CORNERS AND EDGES. EDGES SHALL BE COATED AND SMOOTHED TO REMOVE LOOSE FIBERS. EQUIPMENT MOUNTING SHALL BE WITH S. S. FASTENERS. SINGLE POST MOUNTING PLATES AND MULTIPLE POST MOUNTING PLATES SHALL BE SECURED TO POSTS VIA 3/8" DIA. S.S. FASTENERS. ALL S.S. FASTENERS SHALL BE TYPE 316. FOR USE IN CORROSIVE AREAS ONLY.

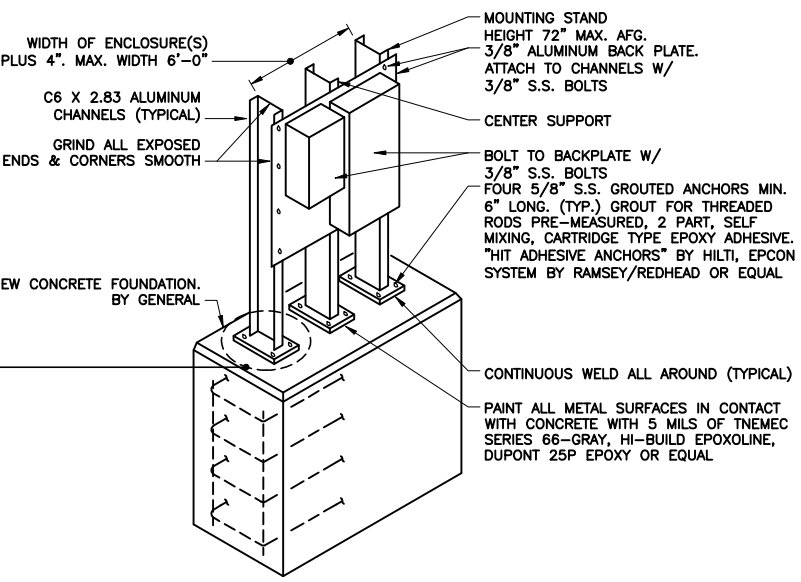
TYPICAL NON-METALLIC MOUNTING PANELS
NOT TO SCALE



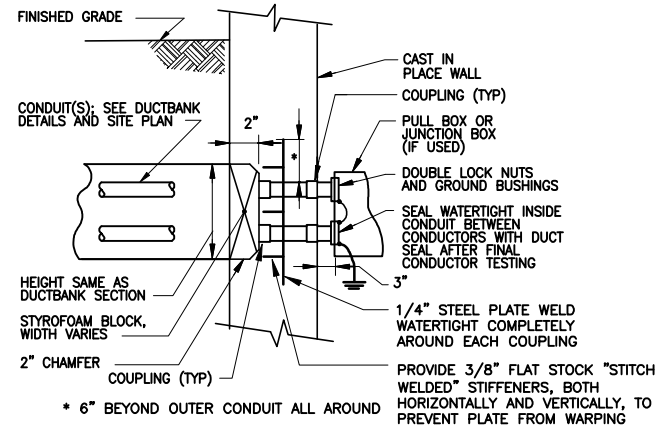
TYPICAL METALLIC MOUNTING PANEL DETAIL
NOT TO SCALE



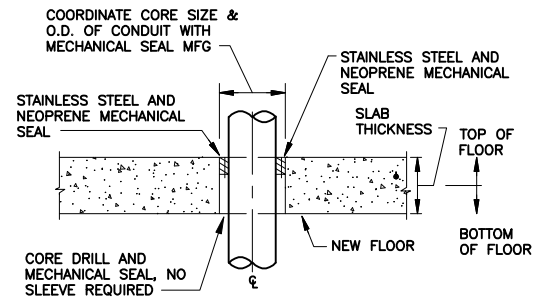
SMALL ENCLOSURE RAILING MOUNT DETAIL
NOT TO SCALE



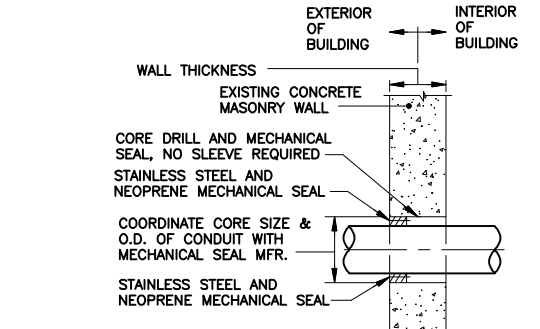
EXTERIOR MOUNTING STAND DETAIL
NOT TO SCALE



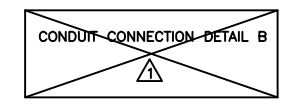
CONDUIT CONNECTION-DETAIL "A"
NOT TO SCALE



CONDUIT PENETRATION THRU CONCRETE FLOOR
NOT TO SCALE



CONDUIT PENETRATION THRU CONCRETE WALL
NOT TO SCALE



ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 05/16 PER: RCF

LEGEND
REFERS TO ADDENDUM NO. INDICATED.

L: ON=*, OFF=REF*
X:
08/20/10 GHG RGW
DIR/DWG

SCALE: NOT TO SCALE

| No. | Date | Revisions | Init |
|-----|-------|-----------------|------|
| 1 | 05/16 | RECORD DRAWINGS | |

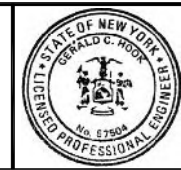
In charge of ___ WFH ___
Designed by ___ RGW ___
Drawn by ___ RGW ___
Checked by ___ WFH ___



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

CONSTRUCTION DETAILS

ELECTRICAL

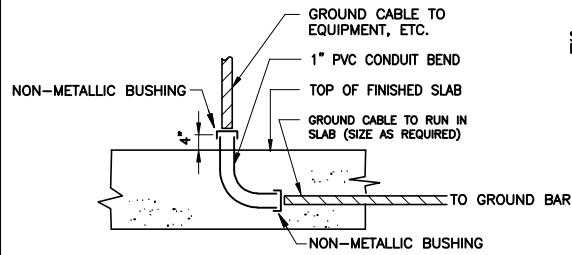


File Number
00663
Date
04/11

E-002

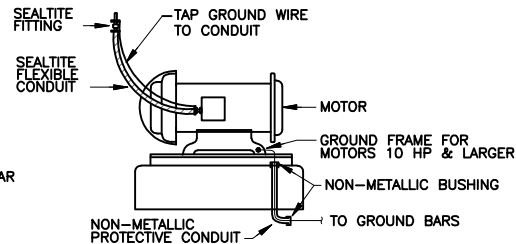
THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW



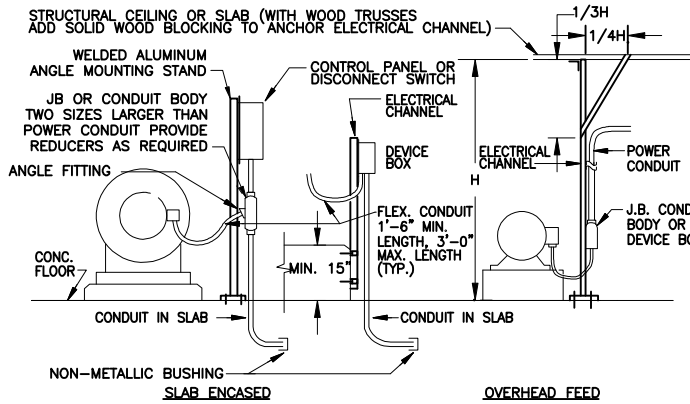
NOTE: GROUNDING CONDUCTOR SIZE SHALL BE AS PER THE SPECIFICATIONS AND THE NEC.

TYPICAL GROUND CABLE SLAB PENETRATION
NOT TO SCALE



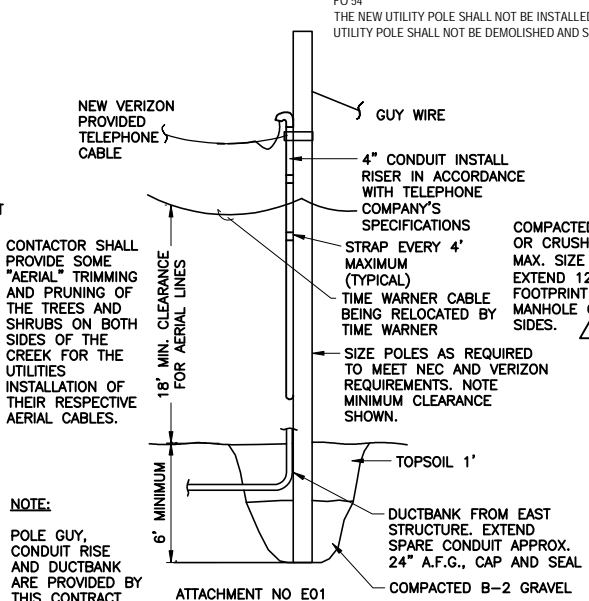
NOTE: GROUNDING CONDUCTOR SIZE SHALL BE AS PER THE SPECIFICATIONS AND THE NEC.

GROUNDING ELECTRIC MOTOR
NOT TO SCALE



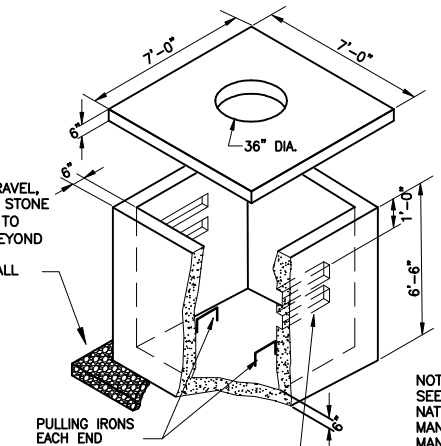
NOTE: NO CONDUIT SHALL BE PLACED IN OR UNDER CONCRETE SLABS THAT ARE BELOW-GRADE. ALL CONDUIT IN BELOW-GRADE AREAS SHALL BE INSTALLED EXPOSED.

TYPICAL ELECTRICAL FEED
NOT TO SCALE



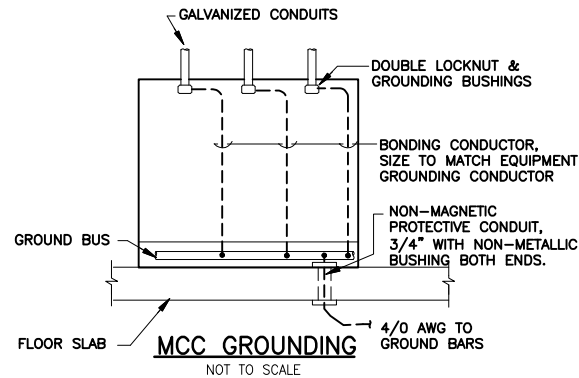
NOTE: POLE GUY, CONDUIT RISE AND DUCTBANK ARE PROVIDED BY THIS CONTRACT.

TYPICAL TELEPHONE SERVICE POLE DETAILS
NOT TO SCALE



NOTE: SEE SHEET E-009 FOR NATIONAL GRID MANHOLE DETAILS - MANHOLE EMH-1.
PROVIDE CONCRETE COVER FOR HS-20 LOADING. SEAL WATERTIGHT WITH MORTAR.
ALLOW FOR MIN. 12" BETWEEN FINISHED GRADE AND TOP OF CONC. COVER. PROVIDE MIN. 2 CONCRETE RING LEVELING COURSES.
PROVIDE FRAME AND COVER, NEENAH R-1640-D OR EQUAL FRAME AND COVER WITH DROP HANDLES, LETTERED "ELECTRIC".

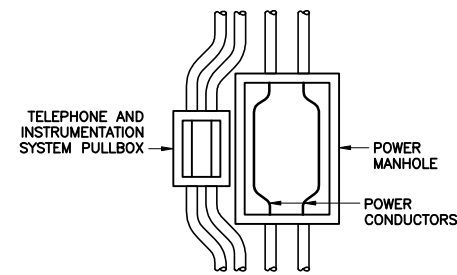
TYPICAL ELECTRICAL MANHOLE (EMH) DETAIL
NOT TO SCALE



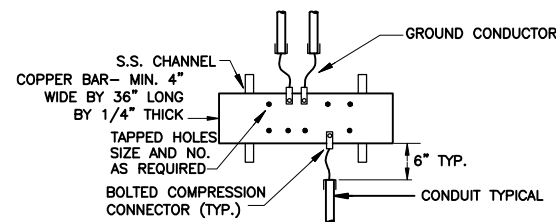
MCC GROUNDING
NOT TO SCALE

GROUNDING NOTES:

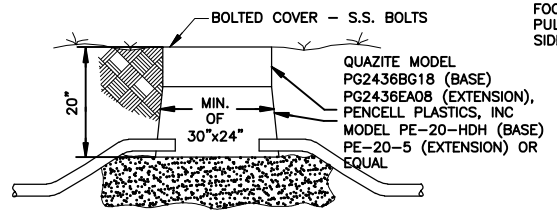
- CONNECT TO EQUIPMENT PER MANUFACTURER'S REQUIREMENTS (TYPICAL).
- MAIN SERVICE COPPER GROUND BAR-1/4"x4"x18" BOLT TO THRU WALL GROUND BUS BAR WITH 12-1/4"x28 AND 6-3/8"x24 TAPPED HOLES. PROVIDE ADDITIONAL TAPPED HOLES AS REQUIRED. SECURE TO WALL VIA 1/2" S.S. ELECTRICAL CHANNEL.
- GENERAL GROUNDING: 1/4"x4"x36" COPPER GROUND BAR WITH 24-1/4"x28 AND 12-3/8"x24 TAPPED HOLES FOR GROUND CONNECTIONS. SECURE TO WALL VIA 1/2" S.S. ELECTRICAL CHANNEL LOCATE WHERE SHOWN.
- GROUND EACH FENCE GATE POST AND FENCING @ 100 FT INTERVALS INCLUDING FENCE TO EAST END OF SITE. CONNECTION TO FENCE TO BE AT POSTS. PROVIDE #6 GROUND FOR FENCE GROUNDING



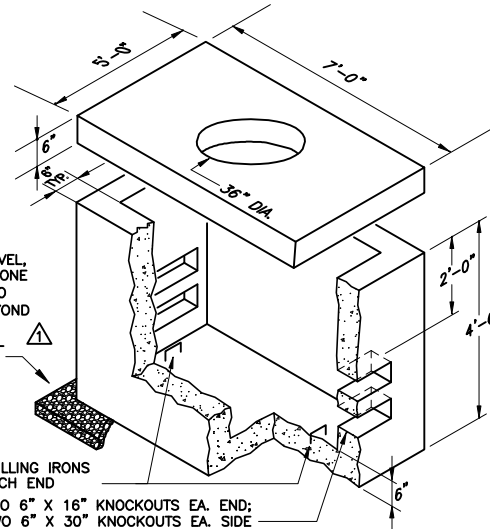
TYPICAL MANHOLE/PULL BOX ARRANGEMENT
NOT TO SCALE



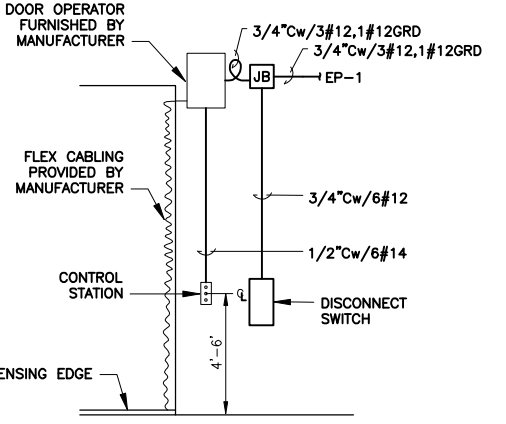
TYPICAL GROUND BAR
NOT TO SCALE



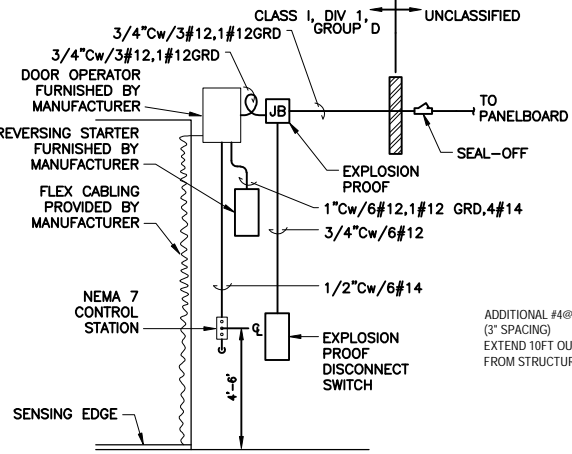
NON-METALLIC ELECTRICAL (EHH) AND INSTRUMENTATION (IHH) HANDHOLE
NOT TO SCALE



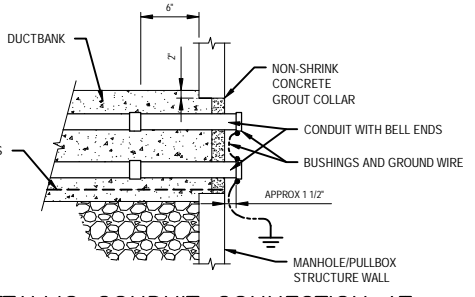
TYPICAL ELECTRICAL (EPB) AND INSTRUMENTATION (IPB) PULLBOX (ACCESSIBLE)
NOT TO SCALE



OVERHEAD DOOR OPERATOR SCHEMATIC
NOT TO SCALE



HAZARDOUS AREA OVERHEAD DOOR OPERATOR SCHEMATIC
NOT TO SCALE



METALLIC CONDUIT CONNECTION AT MANHOLES AND PULLBOXES
NOT TO SCALE

MANHOLE/PULLBOX NOTES:

- PROVIDE NON-CORROSIVE INSERTS IN WALLS OF MANHOLE AND PULLBOX ON 12"x12" GRID.
- PROVIDE NON-METALLIC CONDUIT RACKS TO SUPPORT CONDUCTORS AND CABLES (MAXIMUM SPACING 24").
- CONDUCTORS AND CABLES SHALL GO THE LONG WAY AROUND THE INSIDE OF THE MANHOLE OR PULLBOX. WHERE POWER AND INSTRUMENTATION/SIGNAL WIRING IS RUN IN SAME PULLBOX (NON-ACCESSIBLE) RUN CONDUCTORS/CONDUITS ON OPPOSITE SIDES.
- INSTRUMENTATION/SIGNAL CONDUITS FROM MIN. 12" OUTSIDE AND WITHIN MANHOLE OR PULLBOX SHALL BE TYPE "E" OR "E-1" PER SPECIFICATIONS.
- ELECTRICAL PULLBOX AND MANHOLE DETAILS ARE APPLICABLE FOR ELECTRICAL, COMMUNICATION, AND INSTRUMENTATION WORK.

DUCTBANK DETAIL
NOT TO SCALE

- DUCTBANK NOTES:**
- IF EXISTING OR NEW GROUNDS ARE NOT AVAILABLE AT DUCTBANK ENDS, PROVIDE ONE 3/4"x10" GROUND ROD, OFFSET TO SIDE OF DUCTBANK, FOR TERMINATION OF DUCTBANK GROUNDING CONDUCTORS.
 - SEE SHEET NOS. E-007, E-008, AND E-009 FOR ADDITIONAL DUCTBANK REQUIREMENTS.

LEGEND
REFERS TO ADDENDUM NO. INDICATED.
!!!!NOTE!!!!
ALL WORK ON THIS SHEET BY ELECTRICAL TRADE UNLESS SPECIFICALLY NOTED OTHERWISE

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
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ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

CONSTRUCTION DETAILS

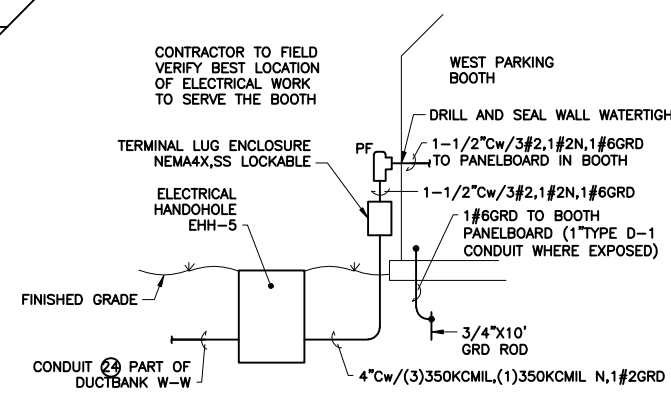
ELECTRICAL



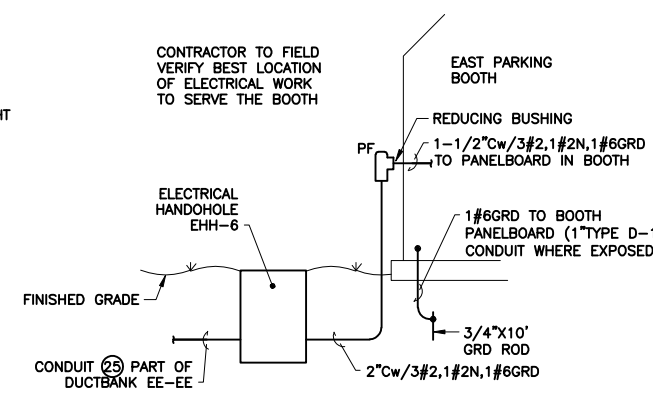
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Date 04/11

E-003

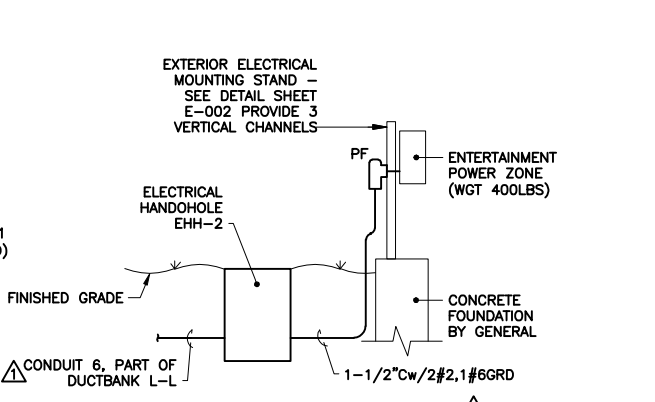
| CONDUIT NUMBER | CONDUIT | CONDUCTORS | FROM | TO | EQUIPMENT/FUNCTION/CIRCUIT |
|----------------|---------|--|--|---|--|
| W | 2" | --- | --- | --- | SPARE-TYPE "A" CONDUIT W/PULLCORD |
| X | 3" | --- | --- | --- | SPARE-TYPE "A" CONDUIT W/PULLCORD |
| Y | 4" | --- | --- | --- | SPARE-TYPE "A" CONDUIT W/PULLCORD |
| Z | 5" | --- | --- | --- | SPARE-TYPE "A" CONDUIT W/PULLCORD |
| 1 | 5" | BY NATIONAL GRID | FAYETTE ST. | 15 KV OUTDOOR SWITCHGEAR | MAIN INCOMING POWER FEED |
| 2 | 2" | 2- MANUFACTURED CABLES (ONE IS SPARE) | LEVEL TRANSMITTER LIT-141 | LEVEL ELEMENT LE-141 IN CSO-030 | SIGNAL WIRING |
| 3 | 5" | 3#2, 1#6GRD | OUTDOOR SWITCHGEAR | TRANSFORMER THV-1 WEST AND TRANSFORMER THV-2 EAST | INCOMING POWER |
| 4 | 2" | 2#10, 1#10GRD | LP-1 | OUTDOOR SWITCHGEAR ACTUATOR | POWER (120V,1φ) |
| 5 | 3" | 3#4/0, 1#4/0N, 1#2GRD | MCC-1 | MCC-2 | POWER FEED FOR EAST STRUCTURE |
| 6 | 4" | 2#2, 1#6GRD | MCC-1 | ENTERTAINMENT POWER ZONE | POWER FEED |
| 7 | 1" | 4#10, 1#10GRD | EP-1 | DRIVEWAY LIGHTS | POWER FOR DRIVEWAY LIGHTS (SEE WIRING DIAGRAM ON SHEET E-006) |
| 8 | 1" | 4#10, 1#10GRD | EP-1 | PARKING LOT LIGHTS | POWER FOR WEST SIDE PARKING LOT LIGHTS (SEE WIRING DIAGRAM ON SHEET E-006) |
| 9 | 1" | 4#10, 1#10GRD | EP-3 | PARKING LOT LIGHTS | POWER FOR EAST SIDE PARKING LOT LIGHTS (SEE WIRING DIAGRAM ON SHEET E-006) |
| 10 | 2" | 2#10, 1#10GRD | LP-2 ON WEST SIDE AND LP-4 ON EAST SIDE | SECURITY CAMERA | POWER FEED |
| 11 | 2" | 1-FIBER OPTIC CABLE | SECURITY CAMERA | PLC-WEST ON WEST SIDE AND PLC-EAST ON EAST SIDE | SIGNAL WIRING |
| 12 | 4" | 1-FIBER OPTIC CABLE | PLC-WEST STRUCTURE | PLC-EAST ENTRANCE STRUCTURE | SIGNAL WIRING |
| 13 | 4" | TIME WARNER CABLE | TELEPHONE UTILITY POLE | TELEPHONE TERM PANEL IN EAST STRUCTURE | INCOMING TELEPHONE SERVICE |
| 14 | 2" | 1-FIBER OPTIC CABLE | FACP WEST STRUCTURE | FACP EAST ENTRANCE STRUCTURE | FIRE ALARM SYSTEM |
| 15 | 1" | 4#10, 2#10GRD | EP-1 | SITE LIGHTING | POWER FEED (TWO TO THE LIGHT AND TWO BACK TO FEED OTHER DRIVEWAY LIGHTS SEE WIRING DIAGRAM ON SHEET E-006) |
| 16 | 1" | 3#10, 1#10GRD | EP-1 OR EP-3 | SITE LIGHTING | POWER FEED (SEE WIRING DIAGRAM ON SHEET E-006) |
| 17 | 1" | 2#10, 1#10GRD | EP-1 OR EP-3 | SITE LIGHTING | POWER FEED (SEE WIRING DIAGRAM ON SHEET E-006) |
| 18 | 2" | 3#10, 1#10GRD | DP-1 | GATE OPERATOR | POWER FEED |
| 19 | 2" | CARD READER CONTROL CABLES AND 6#14 | GATE CARD READER CONTROLLER AND KNOX BOX | GATE ACCESS CONTROL STATION | SIGNAL WIRING |
| 20 | 2" | 3#12, 1#12GRD | EP-1 | SUMP PUMP CONTROL PANEL | POWER FEED |
| 21 | 2" | 12#14 | SUMP PUMP CONTROL PANEL | PLC-WEST | SIGNAL WIRING |
| 22 | 2" | 2- MANUF. SUPPLIED CABLES 2-#10GRD | FIT-125 AND FIT-126 | FE-125 AND FE-126 IN FLOW METER VAULT | SIGNAL WIRING |
| 23 | 2" | 6#10, 1#10GRD | EP-1 | DRIVEWAY LIGHT | POWER FEED (FOUR TO THE LIGHT AND TWO BACK TO FEED OTHER DRIVEWAY LIGHT NEAR GATE SEE WIRING DIAGRAM ON SHEET E-006) |
| 24 | 4" | 3#350, 1#350N, 1#2GRD | CIRCUIT BREAKER ENCLOSURE | PARKING BOOTH NO.1 | POWER FEED |
| 25 | 2" | 3#2, 1#2N, 1#6GRD | CIRCUIT BREAKER ENCLOSURE | PARKING BOOTH NO.2 | POWER FEED |
| 26 | 4" | 4- MANUF. SUPPLIED CABLES (TWO ARE SPARES) | LIT-221 AND LIT-222 | LE-221 AND LE-222 | SIGNAL WIRING |
| 27 | 2" | 1- 6 PR TELEPHONE CABLE | EAST SIDE TELEPHONE TERM BOARD | WEST SIDE TERMINATION BOARD | COMMUNICATION |
| 28 | 2" | 2- MANUF. SUPPLIED CABLES (ONE IS A SPARE) | LIT-222 | LE-222 | SIGNAL WIRING |
| 29 | 2" | 2#10, 1#10GRD | LP-1 | EFFLUENT SAMPLE PUMP | POWER FEED |
| 30 | 2" | 4#14 | EFFLUENT SAMPLE PUMP | PLC-WEST | SIGNAL WIRING |
| 31 | 2" | 2#6, 1#6GRD | LP-2 | WATER METER VAULT SUMP PUMP | POWER FEED |
| 32 | 2" | 13-MANUFACTURERS CABLE | FIT-135 TRANSMITTER ENCLOSURE | FLOW SENSORS | SIGNAL WIRING |



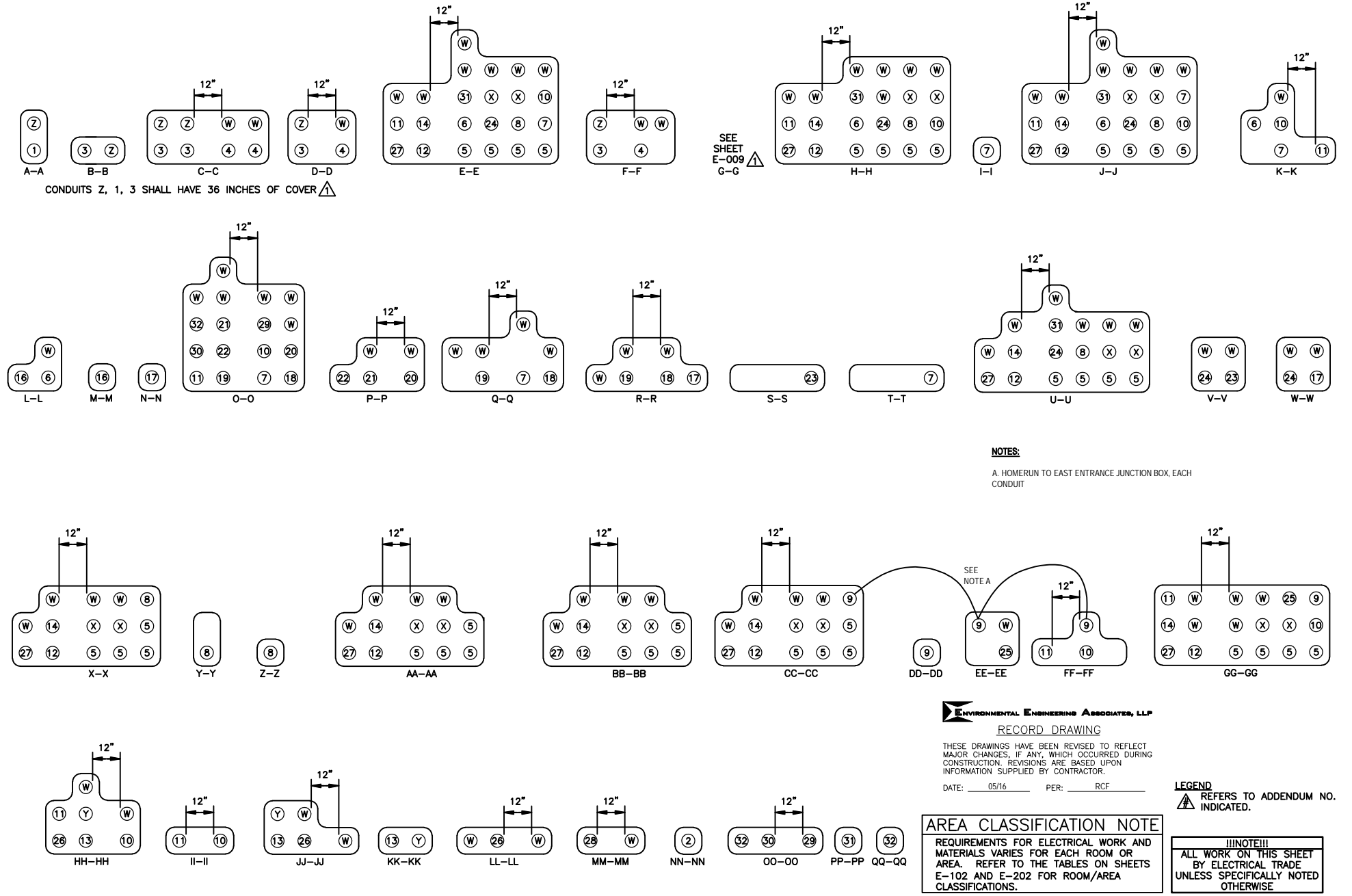
WEST PARKING BOOTH CONNECTION
NOT TO SCALE



EAST PARKING BOOTH CONNECTION
NOT TO SCALE



ENTERTAINMENT POWER ZONE
NOT TO SCALE



NOTES:
A. HOMERUN TO EAST ENTRANCE JUNCTION BOX, EACH CONDUIT

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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AREA CLASSIFICATION NOTE
REQUIREMENTS FOR ELECTRICAL WORK AND MATERIALS VARIES FOR EACH ROOM OR AREA. REFER TO THE TABLES ON SHEETS E-102 AND E-202 FOR ROOM/AREA CLASSIFICATIONS.

LEGEND
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IIINOTE!!!
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L: ON=*, OFF=REF*
X: 08/20/10 GHG RWG
DIR/DWG

SCALE: NOT TO SCALE

| | |
|--------------|---------|
| In charge of | WFH |
| Designed by | RGW |
| Drawn by | RGW/JBL |
| Checked by | WFH |



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

DUCTBANKS AND
MISCELLANEOUS DETAILS
ELECTRICAL

File Number
00663

Date
04/11

Signature

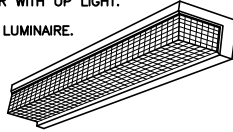
E-004

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1. FLUORESCENT LUMINAIRE, NOMINALLY 4- FEET LONG.
2. WALL MOUNTED.
3. HEAVY GAUGE, DIE FORMED, COLD ROLLED STEEL HOUSING.
4. ACRYLIC PRISMATIC LENS.
5. WHITE BAKED ENAMEL REFLECTOR WITH UP LIGHT.
7. TWO 32 WATT, T-8 LAMPS PER LUMINAIRE.
8. RAPID START BALLAST, 120 VOLTS.
9. BATTERY BALLAST-120 VOLT (AS SPECIFIED ON PLAN VIEWS).



MANUFACTURERS:
LITHONIA: WP SERIES
LIGHTOLIER: LWBU SERIES
OR EQUAL

LUMINAIRE 'A' SPECIFICATION

NOT TO SCALE

1. EXIT SIGN.
2. TOP BACK OR END MOUNT.
3. IMPACT-RESISTANT, THERMOPLASTIC HOUSING.
4. SIX INCH LETTERS
5. SINGLE FACE (DOUBLE FACE AS INDICATED ON CONTRACT DRAWINGS -2)
6. UNIVERSAL CHEVRON ARROWS
7. RED LED FACE
8. DUAL VOLTAGE 120/277VOLT.
9. SELF CONTAINED EMERGENCY SEALED NICKEL-CADMIUM BATTERY BACKUP POWER TO PROVIDE A MINIMUM OF 90 MINUTES OF ILLUMINATION. SOLID STATE BATTERY CHARGING CIRCUIT WITH SELF DIAGNOSTIC AND TEST SWITCH.

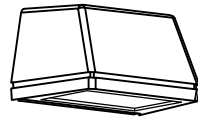


MANUFACTURERS:
LITHONIA: LQM SERIES
McPHILBEN DAY-BRITE: CXX SERIES
OR APPROVED EQUAL

LUMINAIRE 'EX' SPECIFICATION

NOT TO SCALE

1. LOW WATTAGE, COMPACT FLUORESCENT, CUTOFF AREA LIGHT.
2. WALL MOUNTED, CAST ALUMINUM BACK PLATE.
3. ONE PIECE DIE-CAST ALUMINUM HOUSING
4. TEMPERED GLASS LENS.
5. BLACK POLYESTER POWDER FINISH.
6. ALUMINUM REFLECTOR.
7. SUITABLE FOR OUTDOOR APPLICATION GASKETED COVER.
8. TWO 32-WATT TRT, COMPACT FLUORESCENT LAMP PER LUMINAIRE.
9. BALLAST, 120 VOLTS.
10. ACCESSORIES, PHOTOCCELL. BATTERY BALLAST-120 VOLT (AS SPECIFIED ON PLAN VIEWS WITH "B").

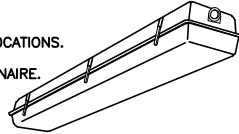


MANUFACTURERS:
DAY-BRIGHT: WTM SERIES
LITHONIA: TW1 SERIES
OR APPROVED EQUAL

LUMINAIRE 'SE' SPECIFICATION

NOT TO SCALE

1. NONMETALLIC FLUORESCENT LUMINAIRE, NOMINALLY 4- FEET LONG.
2. PENDANT MOUNTED 3/8" THREADED STAINLESS STEEL ROD.
3. FIBERGLASS HOUSING WITH NEOPRENE GASKET.
4. ACRYLIC PRISMATIC LENS WITH SIX STAINLESS STEEL OR POLYCARBONATE LATCHES.
5. WHITE BAKED ENAMEL REFLECTOR.
6. SUITABLE FOR WET OR CORROSIVE LOCATIONS.
7. TWO 32 WATT, T-8 LAMPS PER LUMINAIRE.
8. TWO-LAMP RAPID START ELECTRONIC BALLAST, 120 VOLTS.
9. BATTERY BALLAST-120 VOLT (AS SPECIFIED ON PLAN VIEWS).



MANUFACTURERS:
LITHONIA: DMW SERIES
DAY-BRIGHT: DW SERIES
COLUMBIA: LUN SERIES
LIGHTOLIER: STW SERIES
OR APPROVED EQUAL

LUMINAIRE 'B' SPECIFICATION

NOT TO SCALE

1. HAZARDOUS LOCATION SELF-LUMINOUS EXIT SIGN
2. SURFACE MOUNTED OR CEILING MOUNTED.
3. COMPLETELY SEALED HOUSING.
4. SIX INCH LETTERS WITH UNIVERSAL CHEVRON.
5. SINGLE FACE (DOUBLE FACE AS INDICATED ON CONTRACT DRAWINGS -2)
6. ALUMINUM ANODIZED FRAME.
7. STENCIL FACEPLATE
8. LISTED FOR CLASS 1, DIVISION 1, GROUP D.
9. TRITIUM FILLED GLASS TUBES 20 YEAR LUMINOUS LIFE.
10. SELF CONTAINED NO POWER CONNECTION, COMPLETELY SEALED LAMP COMPARTMENT

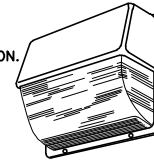


MANUFACTURERS:
MULE LIGHTING: EGX SERIES
EMERGI-LITE: SLX SERIES
OR APPROVED EQUAL

LUMINAIRE 'EX-XP' SPECIFICATION

NOT TO SCALE

1. LOW WATTAGE, HIGH INTENSITY DISCHARGE, NON-CUTOFF AREA LIGHT.
2. WALL MOUNTED, CAST ALUMINUM BACK PLATE.
3. DARK BRONZE BAKED POLYESTER POWDER FINISH.
4. ONE PIECE, POLYCARBONATE FRONT HOUSING WITH CLEAR, U.V. STABILIZED, PRISMATIC REFRACTOR.
5. POLISHED ALUMINUM REFLECTOR.
7. ONE 175-WATT, METAL HALIDE LAMP PER LUMINAIRE.
8. BALLAST, 277 VOLTS.
9. ACCESSORIES, IN-LINE FUSE INTEGRAL PHOTOCCELL.

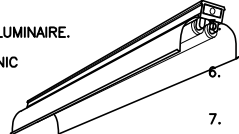


MANUFACTURERS:
LITHONIA: TWP SERIES
HUBBLE: PVL SERIES
GE: WALLLIGHTER 175 SERIES
OR APPROVED EQUAL

LUMINAIRE 'S7' SPECIFICATION

NOT TO SCALE

1. INDUSTRIAL FLUORESCENT LUMINAIRE, NOMINALLY 4- FEET LONG.
2. MOUNTING CEILING, SUSPENDED, OR WALL MOUNTED WITH 45° STAINLESS STEEL ANGLE BRACKETS.
3. HEAVY GAUGE, DIE FORMED, COLD ROLLED STEEL HOUSING. WHITE BAKED ENAMEL FINISH, PAINT AFTER FABRICATION.
4. REFLECTOR DIE EMBOSSED, SMOOTH EXTRUDED APERTURES FOR MIN. 10% UPLIGHT.
5. TWO 32 WATT, T-8, LAMPS PER LUMINAIRE.
6. TWO-LAMP RAPID START ELECTRONIC BALLAST, 120 VOLTS.
7. BATTERY BALLAST-120 VOLT (AS SPECIFIED ON PLAN VIEWS).
8. ACCESSORIES, PROVIDE 4-FOOT WIRE GUARD.

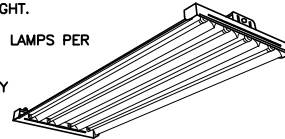


MANUFACTURERS:
LITHONIA: AF SERIES
DAY-BRITE: 1F SERIES
COLUMBIA: KL SERIES
LIGHTOLIER: TU SERIES
OR APPROVED EQUAL

LUMINAIRE 'C' SPECIFICATION

NOT TO SCALE

1. INDUSTRIAL FLUORESCENT LUMINAIRE, NOMINALLY 4- FEET LONG, 2- FEET WIDE.
2. HIGH BAY MOUNTING STAINLESS STEEL HARDWARE.
3. HEAVY-DUTY CODE GAUGE STEEL STEEL HOUSING.
4. WHITE BAKED ENAMEL FINISH REFLECTOR WIDE DISTRIBUTION OPTICAL SYSTEM FOR OPEN AREAS WITH UPLIGHT.
5. PROVIDE FOUR 32 WATT, T8, LAMPS PER LUMINAIRE.
6. ENERGY EFFICIENT THERMALLY PROTECTED ELECTRONIC 120 VOLT BALLAST.
7. BATTERY BALLAST-120 VOLT (AS SPECIFIED ON PLAN VIEWS).

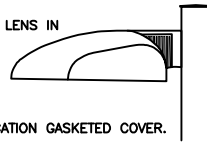


MANUFACTURERS:
LITHONIA: I-BEAM SERIES.
COLUMBIA: LHR SERIES.
SPEGLIGHT: FGB SERIES.
OR APPROVED EQUAL

LUMINAIRE 'HB' SPECIFICATION

NOT TO SCALE

1. AREA LIGHT, METAL HALIDE, CUTOFF.
2. POLE MOUNTED, CAST ALUMINUM BACK PLATE.
3. DIE-CAST SINGLE PIECE ALUMINUM HOUSING WITH BLACK BAKED POLYESTER POWDER FINISH.
4. CLEAR FLAT TEMPERED GLASS LENS IN HINGED FRAME.
5. ALUMINUM REFLECTOR FULL CUT-OFF TYPE IV WIDE FORWARD THROW DISTRIBUTION.
6. SUITABLE FOR OUTDOOR APPLICATION GASKETED COVER.
7. ONE 400-WATT METAL HALIDE LAMP PER LUMINAIRE.
8. BALLAST, 277 VOLTS.
9. ACCESSORIES IN-LINE FUSE PHOTOCCELL, EXTENSION ARM MIN 24".



MANUFACTURERS:
LITHONIA: AS2 SERIES
EMCO: AVA SERIES
OR APPROVED EQUAL

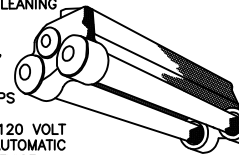
MOUNTING POLE
SQUARE, STRAIGHT 18-FOOT ALUMINUM
POLE WITH BLACK BAKED POWDERCOAT
FINISH, HAND HOLE, AND CAST
ALUMINUM ANCHOR BASE.

POLE MANUFACTURERS:
LITHONIA: SSA SERIES
EMCO: SSA4 SERIES
OR APPROVED EQUAL

LUMINAIRE 'W' SPECIFICATION

NOT TO SCALE

1. FLUORESCENT LUMINAIRE TESTED AND CERTIFIED FOR HAZARDOUS LOCATIONS.
2. MOUNTING: CEILING, SUSPENDED, OR WALL MOUNTED WITH WALL BRACKET.
3. COPPER FREE ALUMINUM ALLOY HOUSING WITH EPOXY FINISH.
4. HEAT AND IMPACT RESISTANT GLASS TUBES.
5. REFLECTORS EASILY REMOVED FOR CLEANING USING SCREW DRIVER.
6. CLASSIFICATION, LISTED FOR CLASS I, DIVISION 1, GROUP D.
7. TWO 32 WATT T8 FLUORESCENT LAMPS
8. ENERGY SAVING CLASS P BALLASTS 120 VOLT SINGLE PHASE, EQUIPPED WITH AN AUTOMATIC THERMALLY-ACTIVATED PROTECTIVE DEVICE.
9. BATTERY BALLAST - 120 VOLT (AS SPECIFIED ON PLANS)

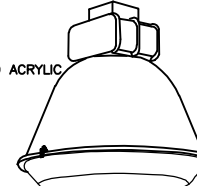


MANUFACTURERS:
APPLETON - EFU SERIES
COOPER CROUSE-HINDS - SERIES EVFDR
OR APPROVED EQUAL

LUMINAIRE 'D' SPECIFICATION

NOT TO SCALE

1. LOW BAY METAL HALIDE LUMINAIRE
2. MOUNTING: PENDANT MOUNT, 3/4" RIGID CONDUIT WITH SAFETY CHAIN.
3. DIE-CAST ALUMINUM HOUSING POLYESTER POWDER FINISH.
4. ONE PIECE INJECTION MOLDED ACRYLIC LENS, ALUMINUM REFRACTOR, CONTINUOUSLY GASKETED.
5. POSITIVE LATCHING CLIPS
6. LOW BAY, SUITABLE FOR DAMP LOCATIONS.
7. ONE 175 WATT METAL HALIDE LAMP.
8. INTEGRAL BALLAST, 120 VOLT, SINGLE PHASE.
9. ACCESSORIES, FUSE KIT, SAFETY CHAIN,

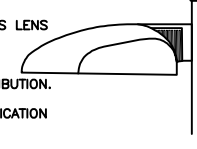


MANUFACTURERS:
LITHONIA - TX A23 SERIES
DAY-BRITE - LBH LR23 SERIES
OR APPROVED EQUAL

LUMINAIRE 'M' SPECIFICATION

NOT TO SCALE

1. AREA LIGHT, METAL HALIDE, CUTOFF.
2. POLE MOUNTED, CAST ALUMINUM BACK PLATE.
3. DIE-CAST SINGLE PIECE ALUMINUM HOUSING WITH BLACK BAKED POLYESTER POWDER FINISH.
4. CLEAR FLAT TEMPERED GLASS LENS IN HINGED FRAME.
5. ALUMINUM REFLECTOR FULL CUT-OFF TYPE III DISTRIBUTION.
6. SUITABLE FOR OUTDOOR APPLICATION GASKETED COVER.
7. ONE 100-WATT METAL HALIDE LAMP PER LUMINAIRE.
8. BALLAST, 277 VOLTS.
9. ACCESSORIES IN-LINE FUSE PHOTOCCELL, VANDAL GUARD.



MANUFACTURERS:
LITHONIA: AS1 SERIES
EMCO: AVA SERIES
OR APPROVED EQUAL

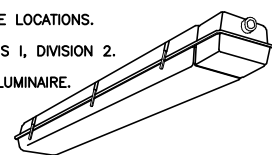
MOUNTING POLE
SQUARE, STRAIGHT 10-FOOT ALUMINUM
POLE WITH BLACK BAKED POWDERCOAT
FINISH, HAND HOLE, AND CAST
ALUMINUM ANCHOR BASE.

POLE MANUFACTURERS:
LITHONIA: SSA SERIES
EMCO: SSA4 SERIES
OR APPROVED EQUAL

LUMINAIRE 'W1' SPECIFICATION

NOT TO SCALE

1. NONMETALLIC FLUORESCENT LUMINAIRE, TESTED AND CERTIFICATED FOR HAZARDOUS LOCATIONS, NOMINALLY 4- FEET LONG.
2. CEILING OR CHAIN MOUNT.
3. CORROSION RESISTANT NONMETALLIC BODY WITH NEOPRENE GASKET.
4. ACRYLIC PRISMATIC LENS WITH SIX STAINLESS STEEL OR POLYCARBONATE LATCHES.
5. SUITABLE FOR WET OR CORROSIVE LOCATIONS.
6. CLASSIFICATION, LISTED FOR CLASS I, DIVISION 2.
7. TWO 32 WATT, T-8 LAMPS PER LUMINAIRE.
8. TWO-LAMP RAPID START ELECTRONIC BALLAST, 120 VOLTS.
9. BATTERY BALLAST-120 VOLT (AS SPECIFIED ON PLAN VIEWS).

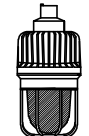


MANUFACTURERS:
CROUSE-HINDS: eLLK SERIES
RIG-A-LITE: MHD2 SERIES
APPLETON: FD SERIES
OR APPROVED EQUAL

LUMINAIRE 'D2' SPECIFICATION

NOT TO SCALE

1. HID LUMINAIRE TESTED AND CERTIFIED FOR HAZARDOUS LOCATIONS.
2. MOUNTING: PENDANT, CEILING, WALL AND STANCHION. WALL BRACKET: 90° ANGLE BRACKETS, STANCHION MOUNTED: 25° BRACKET.
3. DIE CAST COPPER FREE ALUMINUM ALLOY HOUSING.
4. PRE STRESSED GLASS, PRISMATIC BOTTOM GLOBE.
5. FIBERGLASS REINFORCED POLYESTER REFLECTOR.
6. CLASSIFICATION, LISTED FOR CLASS I, DIVISION 1, GROUP D.
7. LAMP, 175 WATT METAL HALIDE
8. BALLAST, TYPE AND SIZE TO MATCH SPECIFIED LAMP, LOCATE IN HOUSING. 120 VOLT, SINGLE PHASE.
9. ACCESSORIES, GLOBE WIRE GUARD, QUARTZ AUX. (ONLY ON LUMINAIRES W/ 'QTZ' ON PLAN), ANGLED REFLECTOR (ONLY ON LUMINAIRES W/ 'AR' ON PLAN) DOME REFLECTOR (ONLY ON LUMINAIRES W/ 'R' ON PLAN).



MANUFACTURERS:
COOPER CROUSE-HINDS - SERIES EVM
RIG-A-LITE - SERIES SXP
APPLETON ELECTRIC - CODE MASTER 2 SERIES
OR APPROVED EQUAL

LUMINAIRE 'Q' SPECIFICATION

NOT TO SCALE

1. LOW WATTAGE, LED, CUTOFF AREA LIGHT.
2. POLE MOUNTED, CAST ALUMINUM WITH GASKET SEALS.
3. DIE-CAST SINGLE PIECE ALUMINUM HOUSING WITH BLACK BAKED POLYESTER POWDER FINISH.
4. CLEAR FLAT TEMPERED GLASS LENS IN HINGED FRAME WITH LATCH.
5. LED ARRAY TO ACHIEVE TYPE III DISTRIBUTION.
6. SUITABLE FOR OUTDOOR APPLICATION GASKETED COVER.
7. MINIMUM 120 LED CONFIGURATION, REPLACEABLE.
8. DRIVER, 277 VOLTS.
9. ACCESSORIES: INLINE FUSE, PHOTO CELL



MANUFACTURERS:
KIM LIGHTING: WP9LE SERIES
GARDCO: GULWING SERIES
OR APPROVED EQUAL

MOUNTING POLE
SQUARE, STRAIGHT 18-FOOT ALUMINUM
POLE WITH DARK BRONZE BAKED
POWDERCOAT FINISH, HAND HOLE, AND
CAST ALUMINUM ANCHOR BASE.

LUMINAIRE 'WL' SPECIFICATION

NOT TO SCALE

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 05/16 PER: RCF

!!!NOTE!!!
ALL WORK ON THIS SHEET
BY ELECTRICAL TRADE
UNLESS SPECIFICALLY NOTED
OTHERWISE

L: ON=*, OFF=REF*
X:
08/20/10 GHG RGW
DIR/DWG

SCALE: NOT TO SCALE

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

| No. | Date | Revisions | Init |
|-----|-------|-----------------|------|
| 1 | 05/16 | RECORD DRAWINGS | |

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

In charge of ___ WFH ___
Designed by ___ RGW/SLC ___
Drawn by ___ RGW/SLC ___
Checked by ___ WFH ___

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

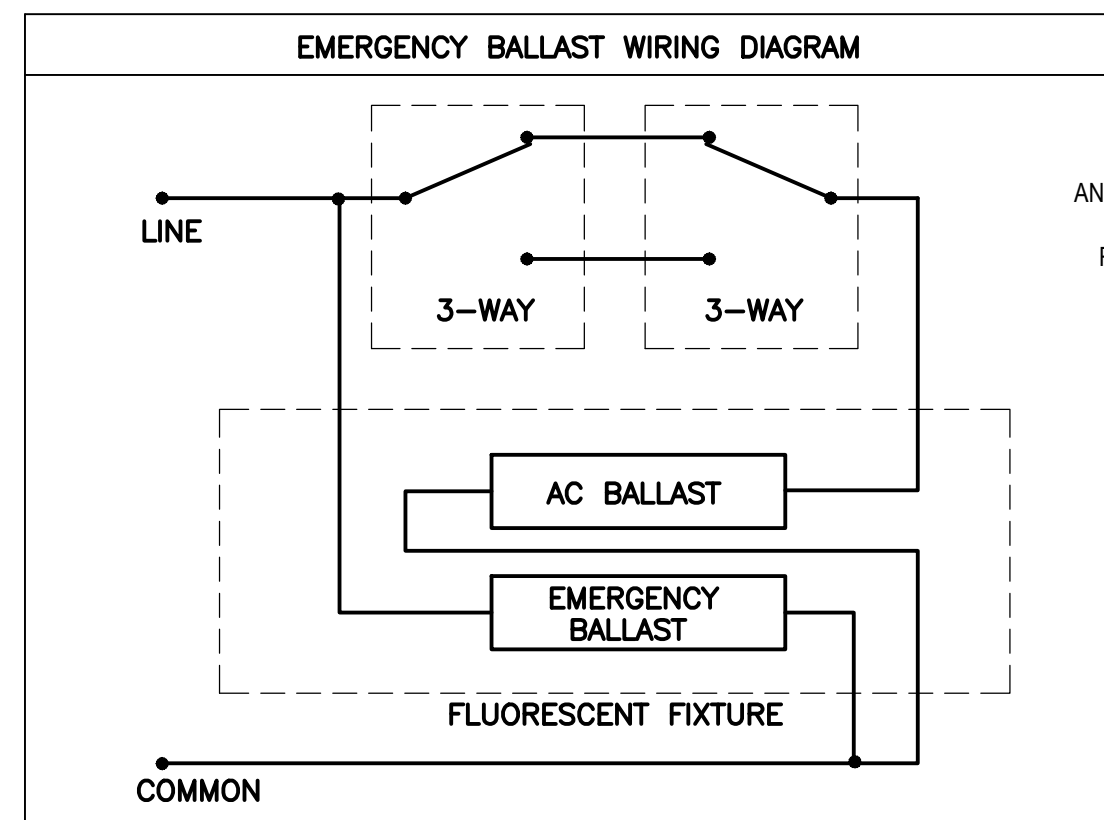
LIGHTING SPECIFICATIONS

ELECTRICAL



File Number
00663
Date
04/11
Gerald C. Hildebrand

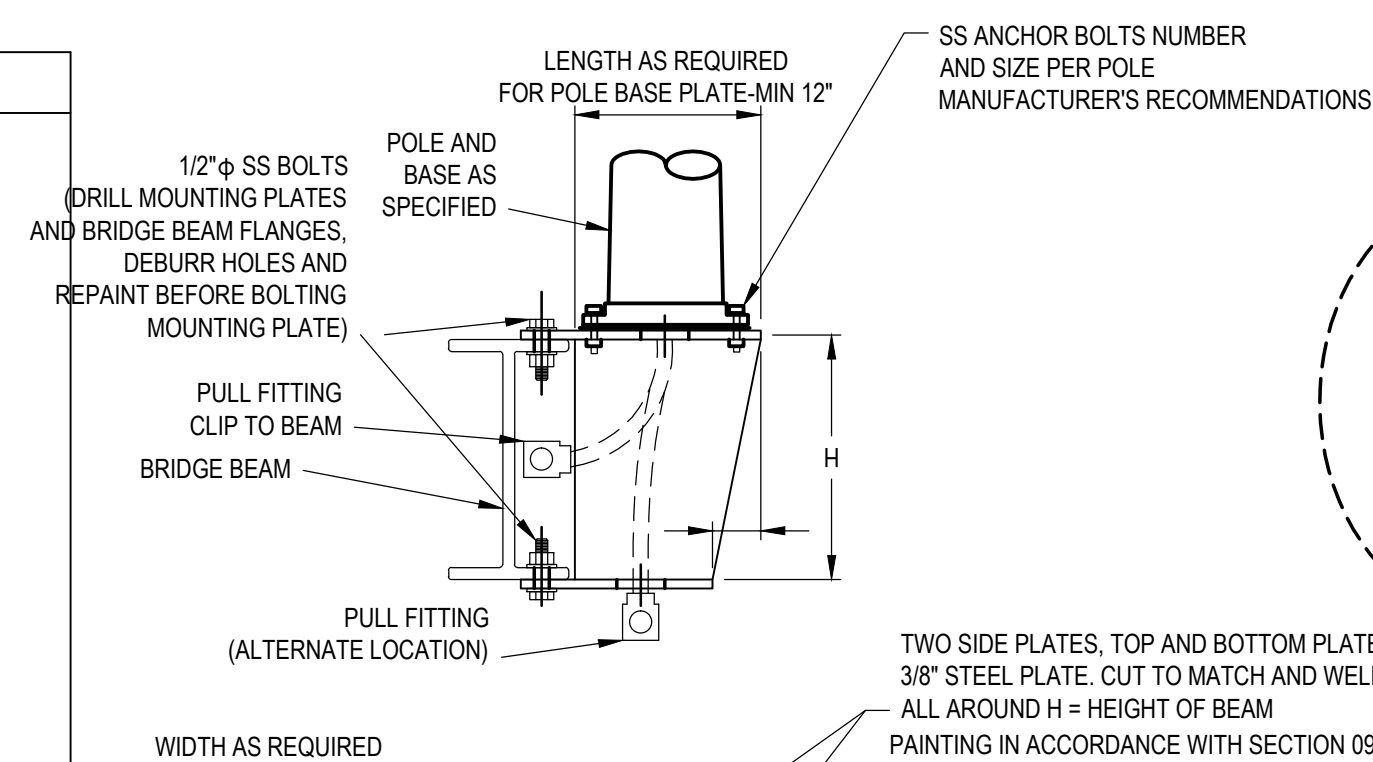
E-005



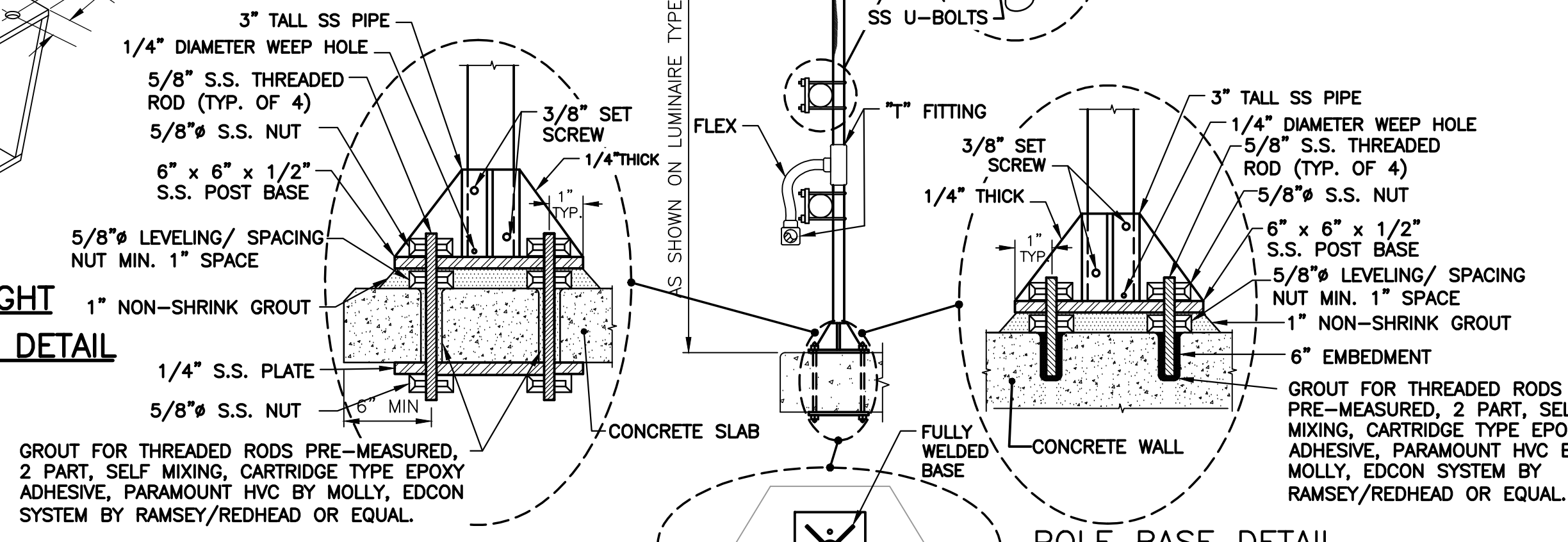
EMERGENCY BALLAST WIRING DIAGRAM
NOT TO SCALE

| SPARE LAMP REQUIREMENTS | | | |
|---------------------------------|-----------|--------------------------------|-------------------------|
| TYPE OF LAMP | WATTAGE | NUMBER OF SPARE LAMPS REQUIRED | USE WITH LUMINAIRE TYPE |
| FLUORESCENT T8 | 32 WATTS | 48 | A, B, C, D, D2, & HB |
| COMPACT FLUORESCENT TRIPLE TUBE | 32 WATTS | 6 | SE |
| METAL HALIDE | 100 WATTS | 1 | W1 |
| METAL HALIDE | 175 WATTS | 5 | M, & Q |
| METAL HALIDE | 400 WATTS | 3 | W |

| SPARE BALLAST REQUIREMENTS | | | |
|--------------------------------|-----------|----------------------------------|-------------------------|
| TYPE OF BALLAST | VOLTAGE | NUMBER OF SPARE BALLAST REQUIRED | USE WITH LUMINAIRE TYPE |
| 2 LAMP ELECTRONIC | 120 VOLTS | 12 | A, B, C, D2, & HB |
| COMPACT FLUORESCENT ELECTRONIC | 120 VOLTS | 2 | SE |
| BATTERY BALLAST | 120 VOLT | 4 | B, C, D, D2, HB, SE |
| ENERGY SAVING CLASS P | 120 VOLTS | 4 | D |
| METAL HALIDE | 277 VOLTS | 4 | W, & W1 |

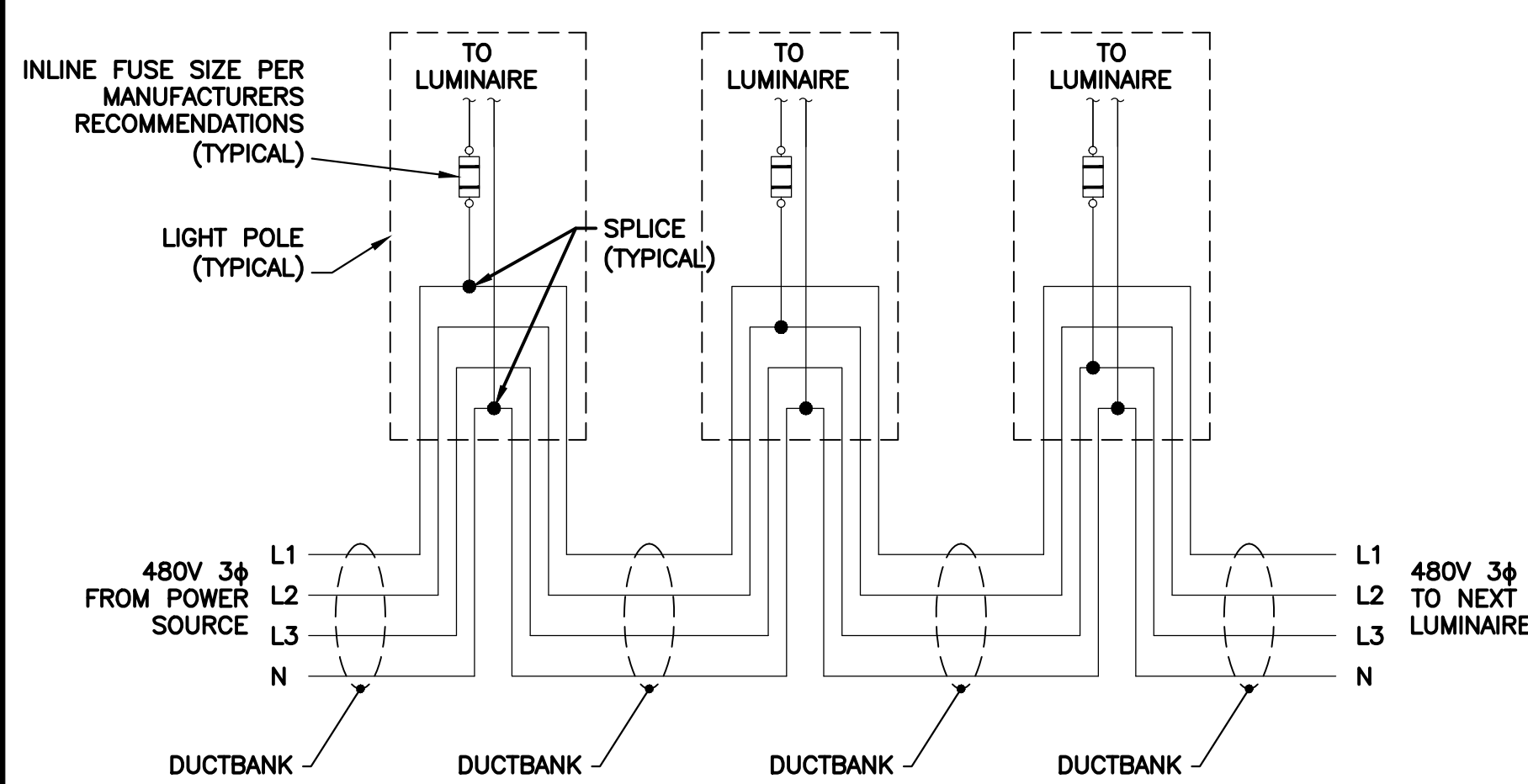


NEW TANK LIGHT POLE MOUNTING DETAIL
NOT TO SCALE



LUMINAIRE STANCHION MOUNTING DETAIL
NOT TO SCALE

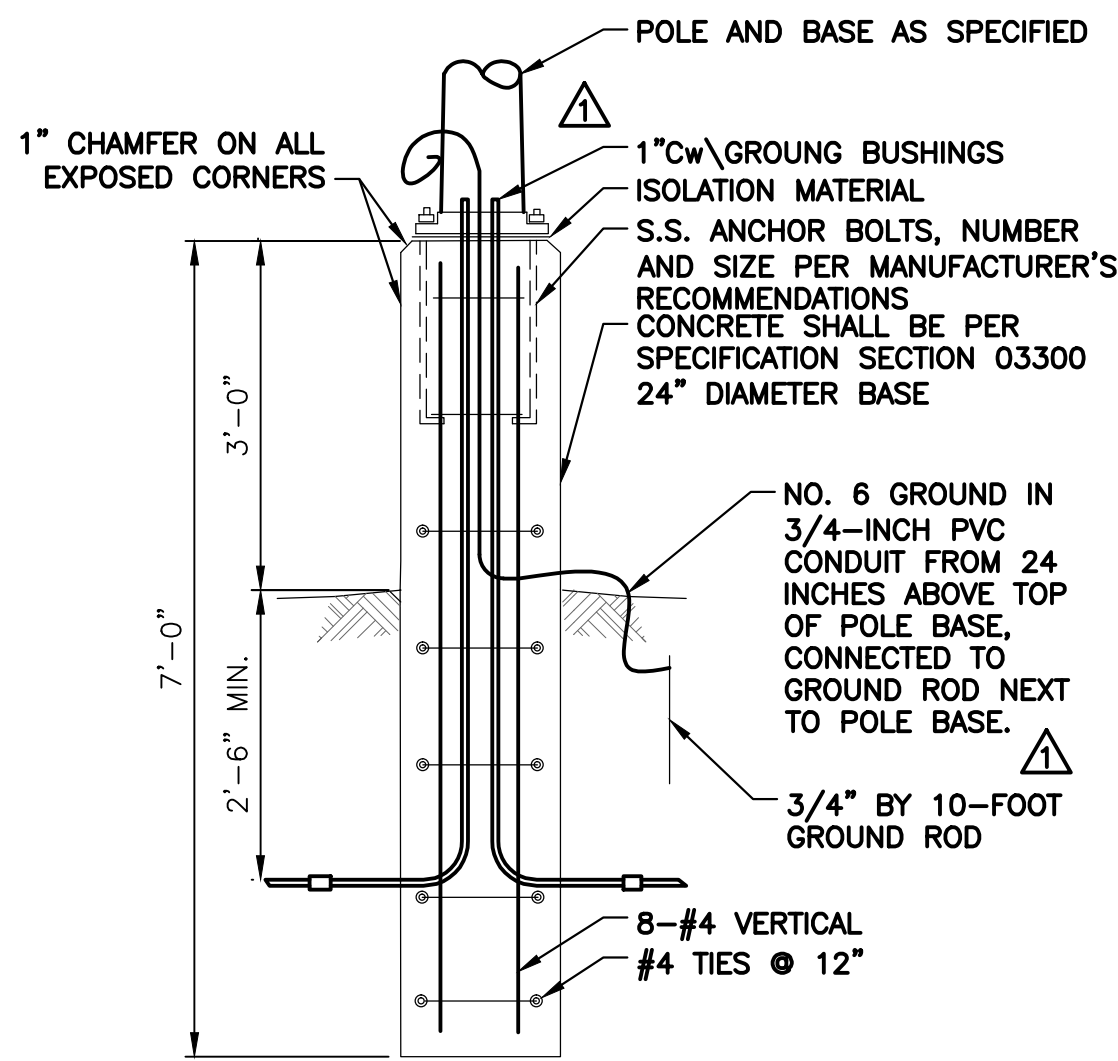
RFI 223
A PLATE SHOULD NOT BE USED TO PUSH THE POLE OUT AWAY FROM THE WALKWAY, THE INTENT OF THE LOCATION OF THE LUMINARIES IS TO MINIMIZE THE PHYSICAL INTRUSION OVER THE GRIT AREA BELOW. A CONCRETE BUMP PUT IS NOT REQUIRED. THE STANCHION SHOULD BE MOUNTED TO THE CONCRETE AS SHOWN ON DRAWING E-006 "POLE BASE DETAIL ON CONCRETE WALL". THE USE OF THE 2" PIPE WITH WELDED NIPPLE FOR THE POWER CONNECTION IS ACCEPTABLE, HOWEVER A CLASS 1 DIX-1 LISTED UNION IN THE 2" PIPE WILL BE REQUIRED SO THE UNION CAN BE LOOSENED UP AND THE LUMINAIRE CAN BE ROTATED AROUND TO BE SERVICED SAFELY FROM THE WALKWAY



TYPICAL 277 VOLT PARKING LOT WIRING DIAGRAM
NOT TO SCALE

L: ON=*, OFF=*REF*
X: 08/20/10 GHD RGW
DIR/DWG

NOTE:
6 SPARE IN LINE FUSES SHALL BE PROVIDED AND STORED IN CABINET LOCATED IN ELECTRICAL ROOM 117



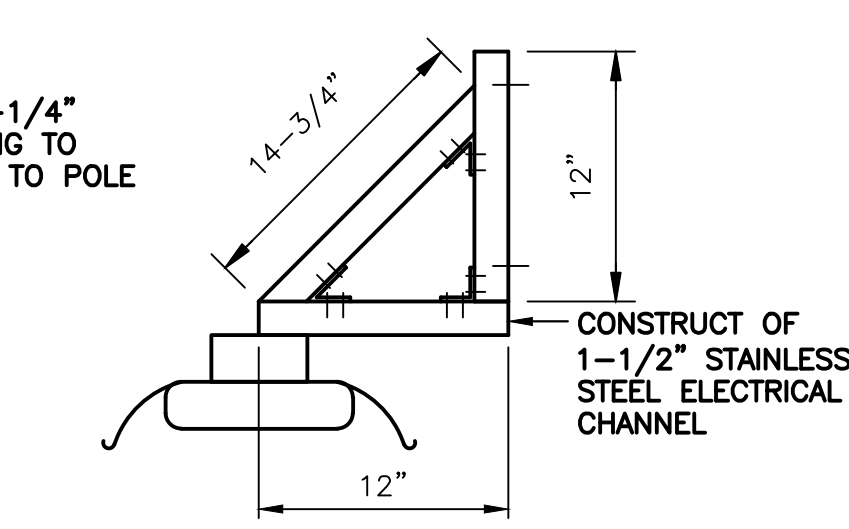
EXTERIOR LIGHT POLE BASE DETAIL
NOT TO SCALE

- RFI 242
WEST STRUCTURE:
• SOUTH WALL AT THE CANOPIES TO BE 7'-4" AFF, THE REST TO BE MOUNTED 9'-4" AFF
• WEST WALL ALL UNITS MOUNTED 9'-4" AFF
• NORTH WALL NEAR DOOR "01" TO BE MOUNTED 7'-4", ALL OTHERS TO BE 9'-4"
• EAST WALL NEAR DOOR "07" TO BE MOUNTED 7'-4", ALL OTHERS TO BE 9'-4"
- EAST STRUCTURE
• NORTH AND SOUTH WALLS TO BE MOUNTED 14'-4"
• EAST AND WEST WALL TO BE MOUNTED 8'-4"
- RFI 288
THE LUMINARIES IN ROOM 108 SHALL BE AT A HEIGHT OF 16 FEET AFF PER THE TABLE ON SHEET E-006.
- RFI 300
THE LUMINARIES ON BOTH THE NORTH AND SOUTH WALLS SHALL BE MOUNTED 10'-4" AFF.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 05/16 PER: RCF



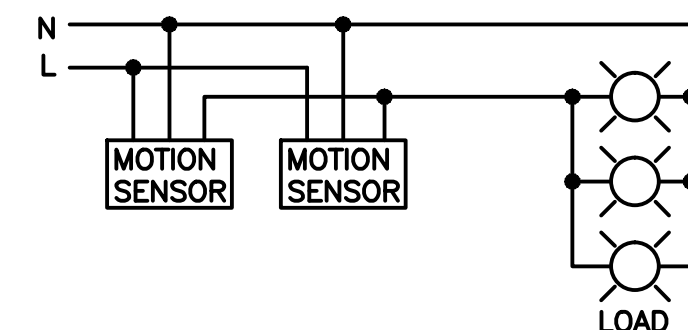
WALL MOUNTED FLUORESCENT FIXTURE DETAIL
NOT TO SCALE

RFI 242
KEEP THE NUMBER AND LOCATIONS OF LUMINARIES AS SHOWN ON E-SHEETS E-103 AND E-202

1. OUTDOOR MOTION SENSOR
2. WALL, POLE OR UNDER EAVE MOUNT TO OUTDOOR JUNCTION BOX.
3. 120V OPERATION.
4. 270 DEGREES OF COVERAGE EXTENDS OUT TO 40 FEET AT MOUNTING HEIGHT OF 8 FEET.
5. ADJUSTABLE TIME DELAY FROM 15 SECONDS TO 15 MINUTES.
6. PROVIDE 1 SPARE.
7. SENSOR SHALL BE CAPABLE OF COVERING ENTIRE AREA WHERE INSTALLED PER CONTRACT DRAWINGS.
8. SENSOR SHALL BE CAPABLE OF OPERATING -40 TO 130 DEGREES F, AND BE RATED FOR OUTDOOR USE.
9. LOAD POWER 120V AC BALLAST.

MANUFACTURERS:
WATT STOPPER: EW SERIES
LEVITON OS-127
OR APPROVED EQUAL

'MS' MOTION SENSOR SPECIFICATION
NOT TO SCALE



MOTION SENSOR SCHEMATIC
NOT TO SCALE

| LUMINARIES TYPES AND MOUNTING HEIGHTS | | | | | |
|---------------------------------------|-------------|--------------------------------|-------------|-----------------|--|
| BUILDING NAME | ROOM NUMBER | ROOM DESIGNATION | VOLTS/PHASE | TYPE OF FIXTURE | MOUNTING HEIGHT TO BOTTOM OF LUMINAIRE |
| STORAGE FACILITY | 101 | MECHANICAL ROOM #1 | 120/1 | D | 10' AFF |
| STORAGE FACILITY | 102 | VESTIBULE | 120/1 | D2 | 10' AFF |
| STORAGE FACILITY | 103 | MECHANICAL ROOM #2 | 120/1 | C | 10' AFF |
| STORAGE FACILITY | 104 | STORAGE | 120/1 | B | 12' AFF |
| STORAGE FACILITY | 105 | ODOR CONTROL ROOM | 120/1 | HB | 30' AFF |
| STORAGE FACILITY | 105 | ODOR CONTROL ROOM | 120/1 | C | 8' AFF WALL MOUNTING |
| STORAGE FACILITY | 106 | ACCESS ROOM | 120/1 | D | 12' AFF |
| STORAGE FACILITY | 107 | VESTIBULE | 120/1 | D2 | 10' AFF |
| STORAGE FACILITY | 108 | TRUCK LOADING | 120/1 | M | 16' AFF |
| STORAGE FACILITY | 109 | GRIT ROOM WALKWAYS | 120/1 | D | 10' AFF WALL MOUNTING |
| STORAGE FACILITY | 109 | GRIT AREA PIT AREA | 120/1 | Q | 8' STANCHION |
| STORAGE FACILITY | 110 | CONTROL ROOM | 120/1 | C | 10' AFF |
| STORAGE FACILITY | 111 | VESTIBULE | 120/1 | C | 10' AFF |
| STORAGE FACILITY | 112 | JANITOR | 120/1 | C | 10' AFF |
| STORAGE FACILITY | 113 | HALL | 120/1 | C | 10' AFF |
| STORAGE FACILITY | 114 | BATHROOM | 120/1 | C | 10' AFF |
| STORAGE FACILITY | 115 | VESTIBULE | 120/1 | D2 | 10' AFF |
| STORAGE FACILITY | 116 | STAIRS | 120/1 | A | 10' ABOVE LANDING |
| STORAGE FACILITY | 117 | ELECTRICAL ROOM | 120/1 | C | 10' AFF |
| STORAGE FACILITY | -- | INFLUENT CHANNEL AREA WALKWAYS | 120/1 | D | 10' AFF |
| STORAGE FACILITY | -- | EFFLUENT CHAMBER | 120/1 | Q | 8' STANCHION |
| STORAGE FACILITY | -- | EXTERIOR | 120/1 | SE | 10' AFG |
| EAST ENTRANCE STRUCTURE | 201 | STAIRS | 120/1 | D | 10' AFF |
| EAST ENTRANCE STRUCTURE | 202 | VESTIBULE | 120/1 | D2 | 10' AFF |
| EAST ENTRANCE STRUCTURE | 203 | ELECTRICAL WORK AREA | 120/1 | C | 10' AFF |
| EAST ENTRANCE STRUCTURE | 204 | MECHANICAL ROOM | 120/1 | D | 10' AFF |
| EAST ENTRANCE STRUCTURE | -- | INTERMEDIATE LEVEL WALKWAY | 120/1 | D | 9' AFF |
| EAST ENTRANCE STRUCTURE | -- | INTERMEDIATE LEVEL CHANNEL | 120/1 | Q | 6' STANCHION |
| EAST ENTRANCE STRUCTURE | -- | EXTERIOR | 120/1 | SE | 14' AFG |
| PARKING LOT | -- | -- | 277/1 | W | 18' POLE |
| PARKING LOT WALKWAY | -- | -- | 277/1 | W1 | 10' POLE |
| PARKING LOT CSX WALL | -- | CSX WALL | 277/1 | S7 | SAME AS EXISTING |

LIGHTING NOTES:

1. INSTALL LIGHTING LUMINARIES IN LOCATIONS AS SHOWN, AS NOTED, OR AS CLOSE AS POSSIBLE TO THESE LOCATIONS WHEN ADJUSTMENTS TO AVOID INTERFERENCE ARE REQUIRED. LUMINARIES SHALL BE INSTALLED LEVEL AND PLUMB.
2. INSTALL LUMINAIRE AT HEIGHT SHOWN IN TABLE UNLESS A SPECIFIC MOUNTING HEIGHT IS CALLED OUT ON PLAN DRAWINGS.
3. CONNECT LUMINARIES ON CIRCUITS AS SHOWN ON DRAWINGS AND ON PANELBOARD SCHEDULES. LIGHTING CIRCUIT CONDUIT AND CONDUCTORS SHALL BE PER NEC OR AS NOTED ON THE DRAWINGS.
4. CLEAN EACH LUMINAIRE AT TIME OF SUBSTANTIAL COMPLETION.
5. REPLACE AT TIME OF SUBSTANTIAL COMPLETION ANY LAMPS THAT ARE OUT. REPLACEMENT LAMPS SHALL NOT COME FROM SPARES BEING PROVIDED.
6. OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR AND REPAIR ALL IMPROPER CONNECTIONS AND OPERATION.
7. LIGHT SWITCHES SHALL BE AS SPECIFIED IN SECTION 16142.
8. PROVIDE THE FOLLOWING SPARE COMPONENTS:
LAMPS: AS NOTED IN SPARE LAMPS REQUIREMENTS TABLE
BALLASTS: AS NOTED IN SPARE BALLASTS REQUIREMENTS TABLE
9. SUBMIT SHOP DRAWINGS FOR ALL LUMINARIES UNDER THIS CONTRACT IN ACCORDANCE WITH GENERAL SPECIFICATION S-013 IN THE CONTRACT DOCUMENTS. PROVIDE COMPLETE INFORMATION INCLUDING LUMINAIRE ACCESSORIES, INSTALLATION INSTRUCTIONS, OPERATION AND MAINTENANCE INFORMATION, AND LIST OF LUMINAIRE TYPES AND MANUFACTURER TO BE USED FOR EACH.
10. PROVIDE PROJECT RECORD DOCUMENTS IN ACCORDANCE WITH SECTIONS 01700 AND 16050 OF THE CONTRACT DOCUMENTS. RECORD DOCUMENTS SHALL ACCURATELY SHOW FIXTURE LOCATIONS OF EACH LUMINAIRE INCLUDING THE CONNECTIONS, AND FOR EACH TYPE OF LUMINAIRE, PROVIDE MANUFACTURER'S NAME, CATALOG NUMBER, VOLTAGE, LAMP TYPE, AND POWER REQUIREMENTS.

LEGEND
REFERS TO ADDENDUM NO. INDICATED.

!!NOTE!!
ALL WORK ON THIS SHEET BY ELECTRICAL TRADE UNLESS SPECIFICALLY NOTED OTHERWISE

SCALE: NOT TO SCALE

| No. | Date | Revisions | Init |
|-----|-------|-----------------|------|
| 1 | 05/16 | RECORD DRAWINGS | |

In charge of WFH
Designed by RGW/SLC
Drawn by RGW/SLC
Checked by WFH

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

LIGHTING SPECIFICATIONS

ELECTRICAL



File Number
00663
Date
04/11
E-006
Gerald C. Hood

FO 45
SEE DRAWING E-009A FOR REVISED PLAN INCLUDING DUCTBANK CHANGES.

RFI 22
THE PROPOSED SEQUENCE OF WORK APPEARS REASONABLE AND AS DISCUSSED ON SITE WITH NATIONAL GRID.

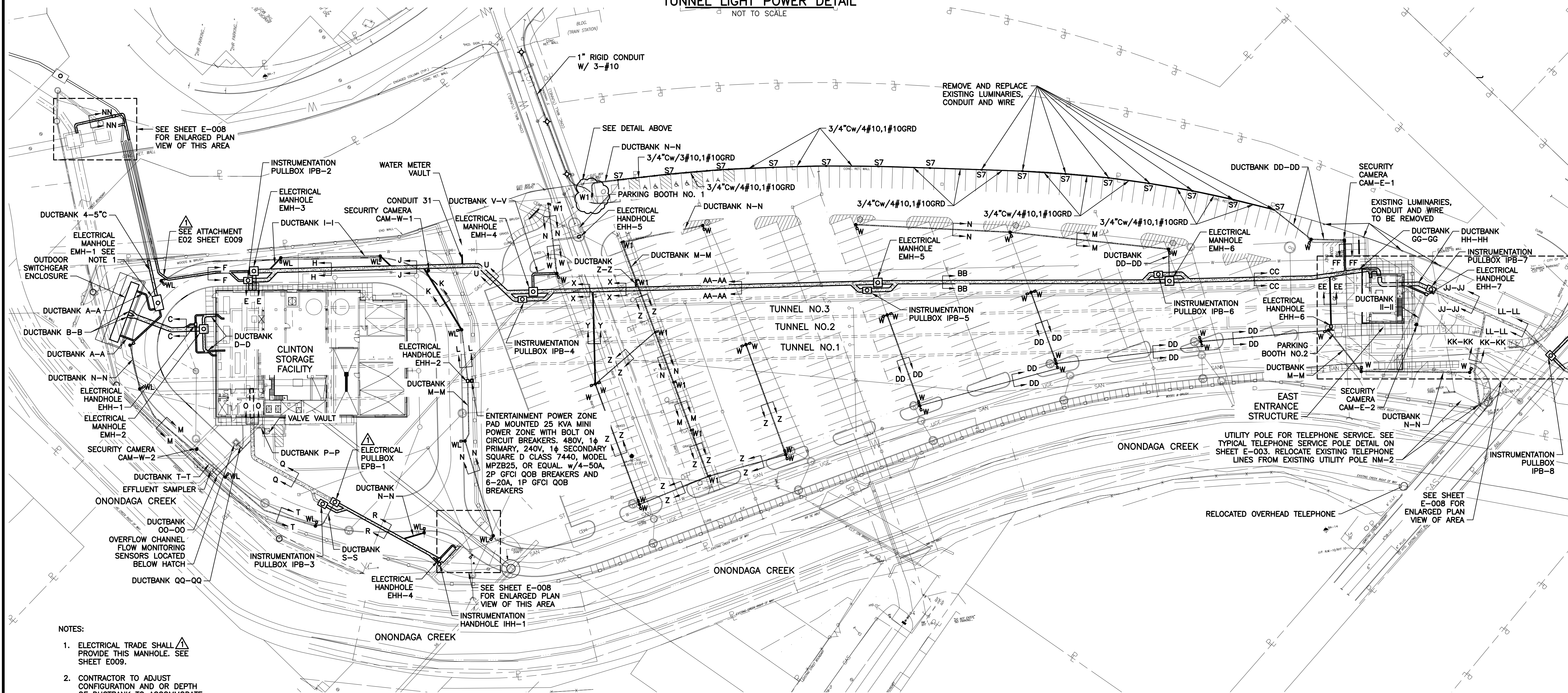
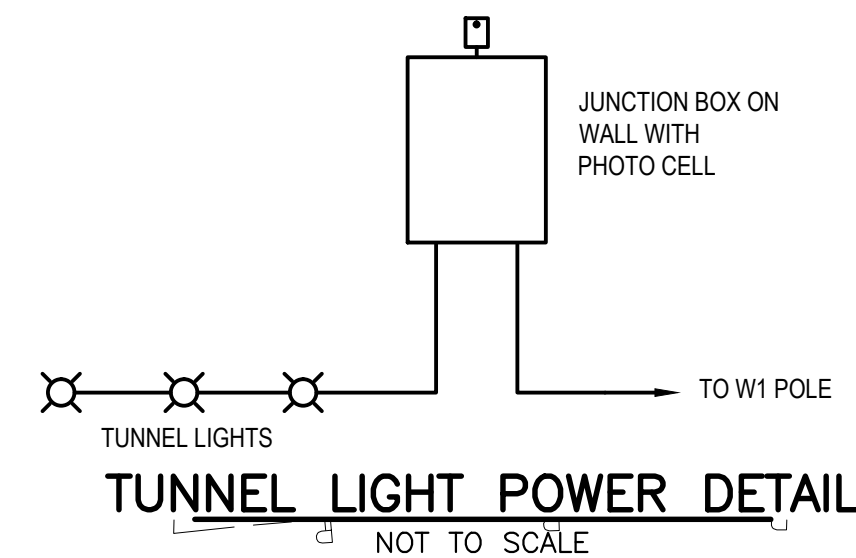
- ALL TEMPORARY ELECTRIC WORK SHALL BE DONE IN ACCORDANCE WITH NATIONAL GRID REQUIREMENTS AND NEC.
- ALL PERMANENT ELECTRIC WORK SHALL BE DONE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS AND NEC.

RFI 278
NEW DUCTBANK RUNS ARE ACCEPTABLE AS WAS ALSO DISCUSSED IN THE FIELD ON JULY 19, 2013. ADDITIONALLY THE DELETED SECTION OF DUCTBANK IS ACCEPTABLE.

THE HOME RUNNING OF CONDUIT #9 IN SECTIONS EE-EE, FF-FF AND GG-GG IS ACCEPTABLE.

THE FEEDS FOR THESE TWO POLE MOUNTED LUMINARIES FROM EMH-3 IS ACCEPTABLE.

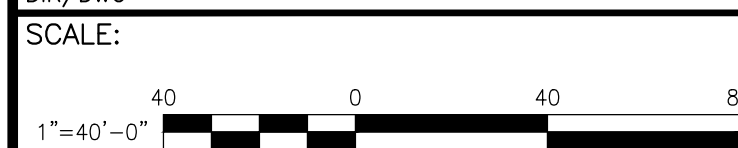
POWER AND SIGNAL FOR SECURITY CAMERA W-2, VIA DUCTBANK OO-OO IS ACCEPTABLE.



- NOTES:
1. ELECTRICAL TRADE SHALL PROVIDE THIS MANHOLE. SEE SHEET E009.
 2. CONTRACTOR TO ADJUST CONFIGURATION AND OR DEPTH OF DUCTBANK TO ACCOMMODATE DRAINAGE FACILITIES.

LEGEND (THIS SHEET)
REFERS TO ADDENDUM NO. INDICATED.

L: ON=*; OFF=*REF*
X:
08/24/10 GHD RGW
DIR/DWG



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| 1 | 05/16 | RECORD DRAWINGS | |

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Designed by RGW/WFH
Drawn by RGW/JBL
Checked by W FH



ELECTRICAL SITE PLAN
SCALE: 1"=40'-0"

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

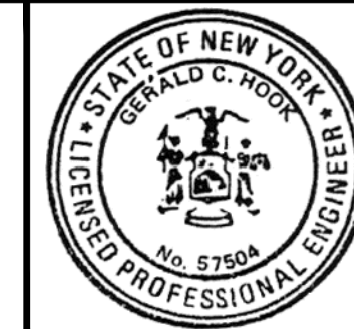
THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 05/16 PER: RCF

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

ELECTRICAL SITE PLAN

ELECTRICAL



File Number
00663

Date
04/11

Gerald C. Hoke

!!!NOTE!!!
ALL WORK ON THIS SHEET BY ELECTRICAL TRADE UNLESS SPECIFICALLY NOTED OTHERWISE

E-007

FO 54
EXISTING UTILITY POLE TO REMAIN AND NEW UTILITY POLE WILL NOT BE
INSTALLED. DUCTBANK KK-KK SHALL BE DIRECTED TO THE EXISTING UTILITY POLE

RFI 247
DUCTBANK HH-HH SHALL REMAIN AS SHOWN ON CONTRACT DRAWINGS.

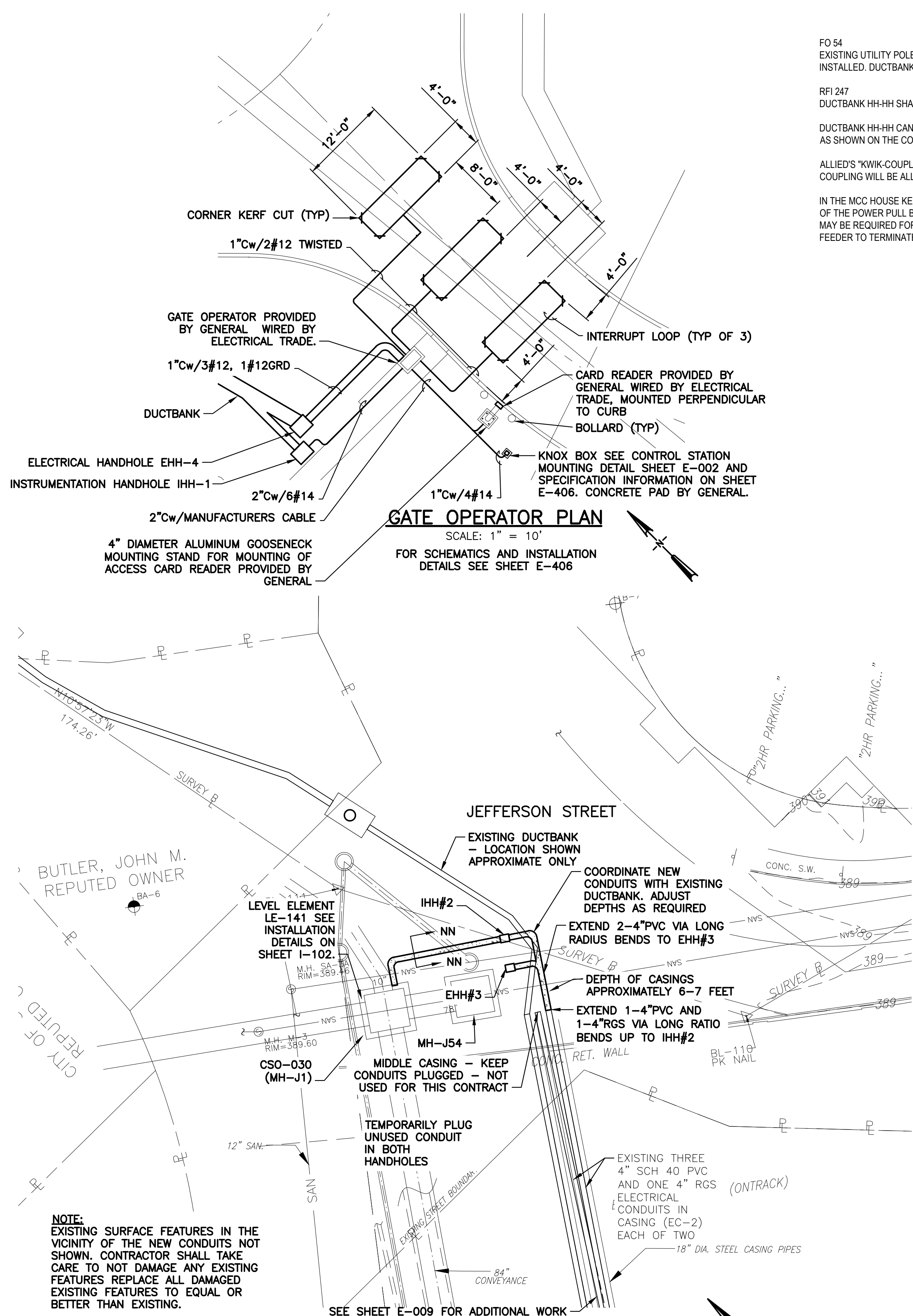
DUCTBANK HH-HH CAN BE BROUGHT UP VERTICALLY NEXT TO DUCTBANK GG-GG,
AS SHOWN ON THE CONTRACTOR'S SKETCH SUBMITTED WITH THIS RFI.

ALLIED'S "KWIK-COUPLE" COUPLINGS AND ELBOWS OR BOLTED SLEEVE TYPE
COUPLING WILL BE ALLOWED. THE LATTER SHALL HAVE JOINTS FULLY TAPED.

IN THE MCC HOUSE KEEPING PAD, THESE CONDUITS SHALL BE RUN OUT THE TOP
OF THE POWER PULL BOX AND UP AND OVER INTO THE TOP OF MCC-2. A "TOP HAT"
MAY BE REQUIRED FOR THE FINAL CONNECTION TO THE MCC STRUCTURE. SPARE
FEEDER TO TERMINATE AT THIS POWER BOX.

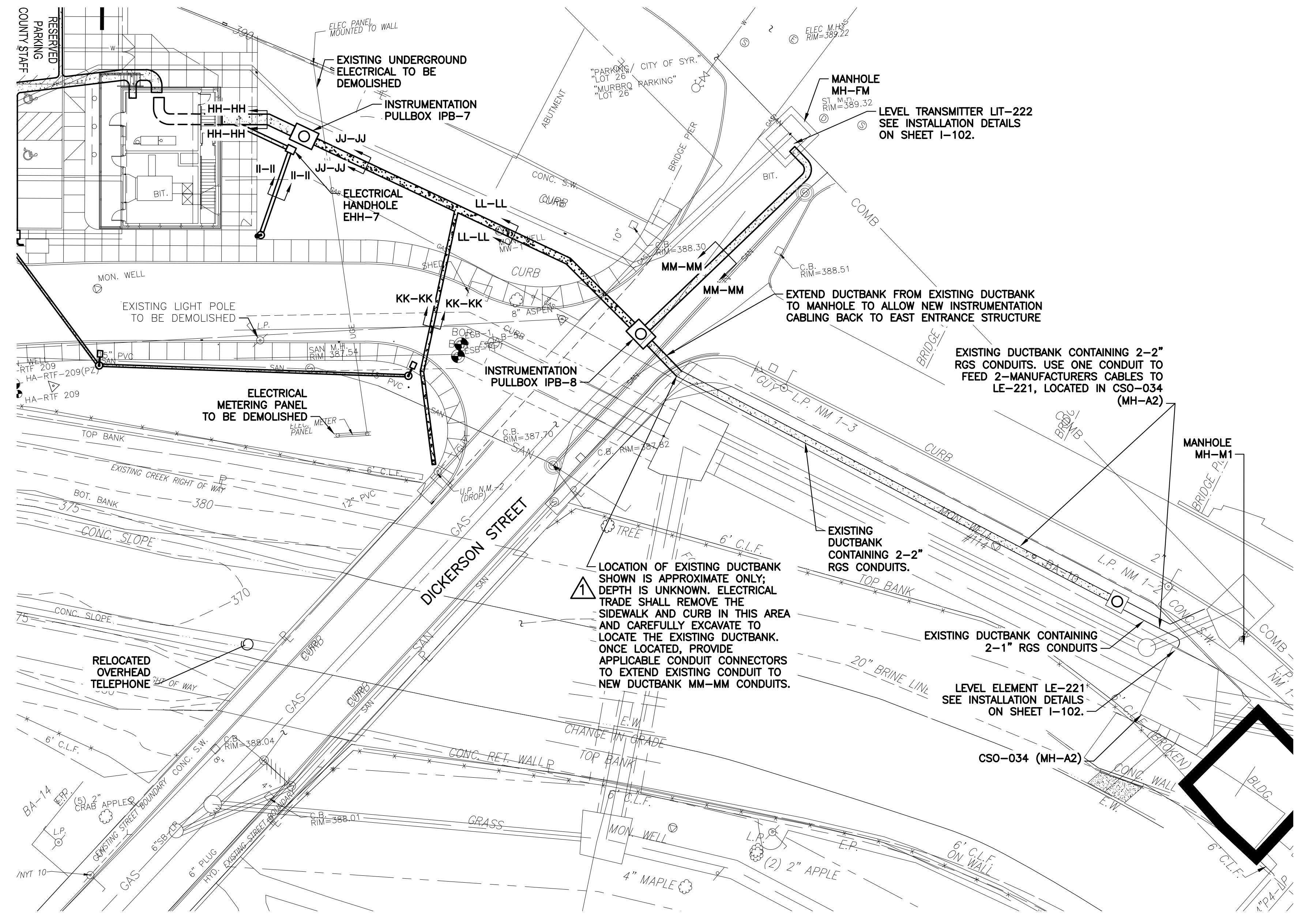
NOTES:
1. ALL EXISTING SURFACES OR VEGETATION REMOVED OR
DAMAGED AS A RESULT OF THIS CONTRACT SHALL BE
REPLACED OR REPAIRED TO EQUAL OR BETTER
CONDITION THAN EXISTED PRIOR TO CONSTRUCTION,
INCLUDING MEETING THE REQUIREMENTS OF THE
OWNER OR THE CITY OF SYRACUSE.

LEGEND (THIS SHEET)
REFERS TO ADDENDUM NO.
INDICATED.



GATE OPERATOR PLAN

SCALE: 1" = 10'
FOR SCHEMATICS AND INSTALLATION
DETAILS SEE SHEET E-406



ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT
MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING
CONSTRUCTION. REVISIONS ARE BASED UPON
INFORMATION SUPPLIED BY CONTRACTOR.

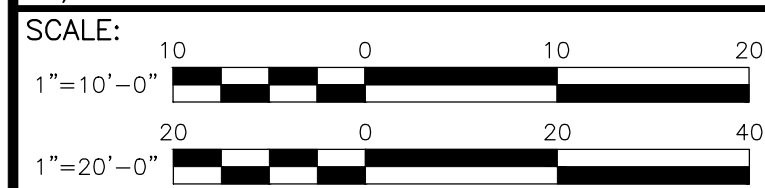
DATE: 05/16 PER: RCF

DICKERSON STREET CONVEYANCE MONITORING

SCALE: 1" = 20'

!!NOTE!!
ALL WORK ON THIS SHEET
BY ELECTRICAL TRADE UNLESS
SPECIFICALLY NOTED
OTHERWISE

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In charge of WFH
Designed by RGW
Drawn by JBL/ RGW
Checked by WFH

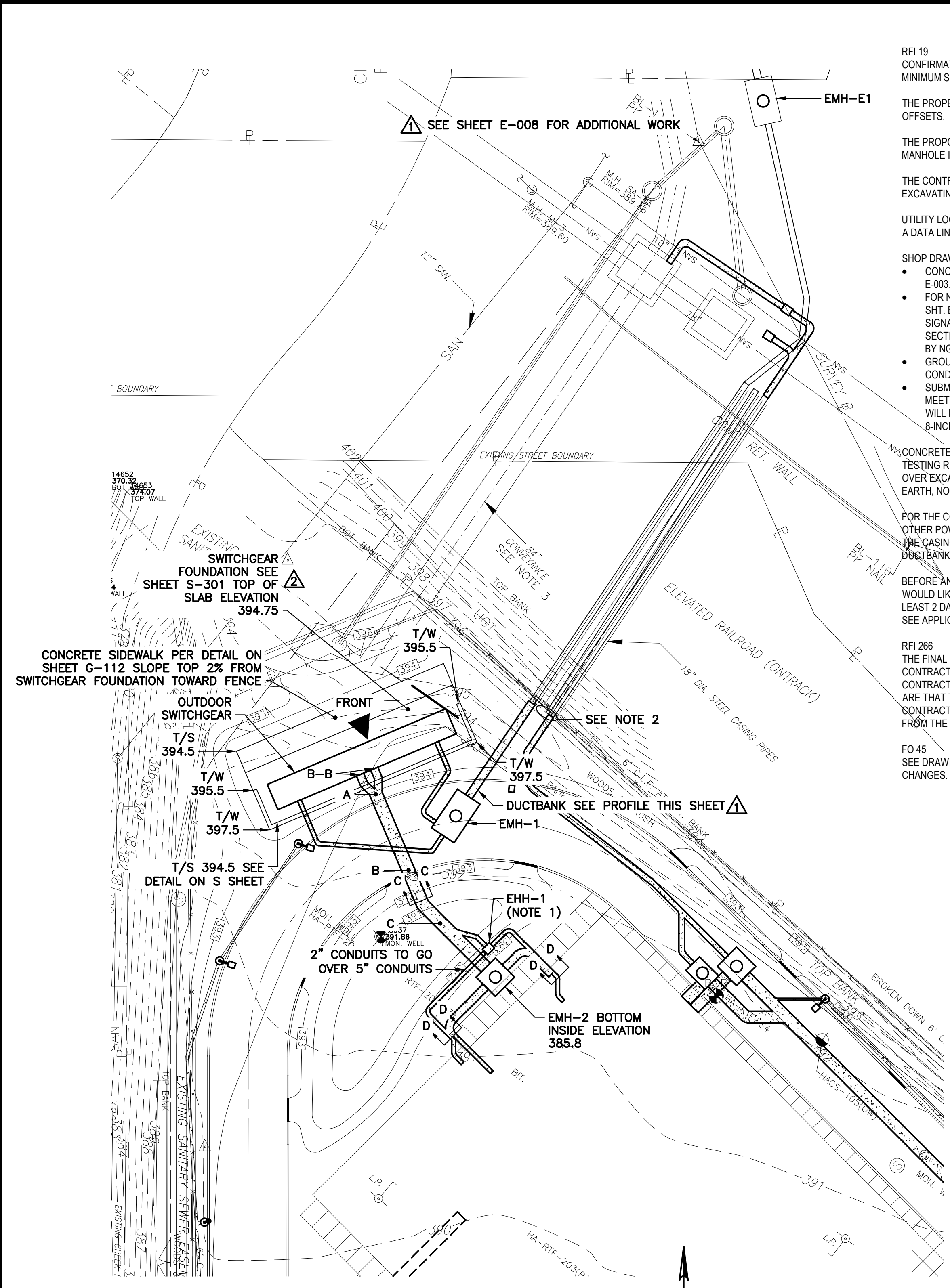
ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT
**CONVEYANCE AND OFF-SITE ELECTRICAL
SITE PLANS**
ELECTRICAL



File Number
00663
Date
04/11
Gerald C. Hoke
E-008

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209
SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW



INCOMING ELECTRICAL PLAN

- NOTES:
- HANDHOLE TO BE INSTALLED ON FULLY COMPACTED TYPE "A" CRUSHER STONE, FROM BASE OF EMH TO UNDERSIDE OF HANDHOLE.
 - CONTRACTOR TO EXCAVATE AND LOCATE EXISTING CONDUIT, ADJUST DESIGN TO MATCH EXISTING CONDITIONS. LOCATION AND DEPTH SHALL BE CONSIDERED APPROXIMATE ONLY. SEE ADDENDUM NO. 1, ATTACHMENT E02, FOR ADDITIONAL INFORMATION. THIS SHEET.
 - SEE SHEET NOS. G-126 AND G-127 FOR LOCATION OF THE 84-INCH CONVEYANCE BELOW SWITCHGEAR.

TOP OF DUCTBANK C-C ELEVATIONS

| LOCATION | ELEVATION |
|----------|-----------|
| A | 390.7 |
| B | 390.3 |
| C | 387.8 |
| D | 389.0 |

RFI 19
CONFIRMATION IS NEEDED FROM NATIONAL GRID ON THE ACCEPTABLE MINIMUM SETBACK FROM THE PROPERTY LINE.

THE PROPERTY LINE SHOULD BE STAKED BY A SURVEYOR TO VERIFY OFFSETS.

THE PROPOSED LOCATION SHOULD BE MOVED EAST SO THAT THE MANHOLE IS 1-FT OFF OF THE PROPOSED CURB.

THE CONTRACTOR SHALL PROTECT THE RAILROAD EMBANKMENT WHEN EXCAVATING FOR THE MANHOLE AND CONDUIT.

UTILITY LOCATIONS SHOULD BE VERIFIED. WE SUSPECT THAT THERE IS A DATA LINE AT THE BASE OF THE SLOPE.

SHOP DRAWINGS ARE NEEDED FOR THE FOLLOWING:

- CONCRETE MANHOLE PER SHT E-009 AND DETAIL NOTES ON SHT. E-003.
- FOR NATIONAL GRID'S (NG) CONDUIT, PVC SHC 80 CONDUIT PER SHT. E-009 AND SPEC SECTION 16110. FOR THE OTHER SIGNAL/POWER PROVIDE RIGID GALVANIZED STEEL PER SPEC. SECTION 16110. TEMPORARY CONDUIT CAN BE PVC AS REQUIRED BY NG.
- GROUNDING PER SHT E-009 AND SPEC SECTION 16100. NOTE CONDUCTOR SHALL BE "TIN PLATED COPPER".
- SUBMITTAL NOT REQUIRED FOR BEDDING UNDER MANHOLE. JUST MEET THE DETAILS. COMPACTED BEDDING (CRUSHED MATERIAL WILL BE ACCEPTABLE FOR MANHOLES) SHALL BE A MINIMUM OF 8-INCHES THICK.

CONCRETE FOR DUCTBANK ENCASUREMENT PER SPEC SECTION 03300 (NO TESTING REQUIRED, NEEDS TO BE AT LEAST 4000 PSI, AIR ENTRAINED). OVER EXCAVATION SHALL BE FILLED W/ CONCRETE TO UNDISTURBED EARTH, NOT W/ GRANULAR MATERIAL.

FOR THE CONNECTIONS TO THE EXISTING CASINGS (BOTH NG AND OTHER POWER/CONTROL), CONCRETE SHOULD EXTEND 18-INCHES INTO THE CASING AND PROVIDE #4 REBAR IN THE BOTTOM OF THE DUCTBANK, EXTENDING INTO THE CASING 12-INCHES.

BEFORE ANY CONCRETE IS PLACED, EEA ELECTRICAL ENGINEER WOULD LIKE TO BE ON-SITE TO REVIEW THE INSTALLATION. PROVIDE AT LEAST 2 DAYS NOTICE, PLEASE. SEE APPLICABLE ADDENDUMS FOR ADDITIONAL REQUIREMENTS.

RFI 266
THE FINAL LOCATION OF THE SWITCHGEAR PAD SHOULD BE CONTRACTOR FIELD LOCATED WITH INPUT FROM THE ELECTRICAL CONTRACTOR AND NATIONAL GRID. THE ENGINEERS REQUIREMENTS ARE THAT THE PAD BE LOCATED IN THE GENERAL LOCATION SHOWN ON CONTRACT DRAWINGS G-106 AND E-009 AND THAT THE 4 FT SETBACK FROM THE CURB IS MAINTAINED AS INDICATED IN FIELD ORDER 47.

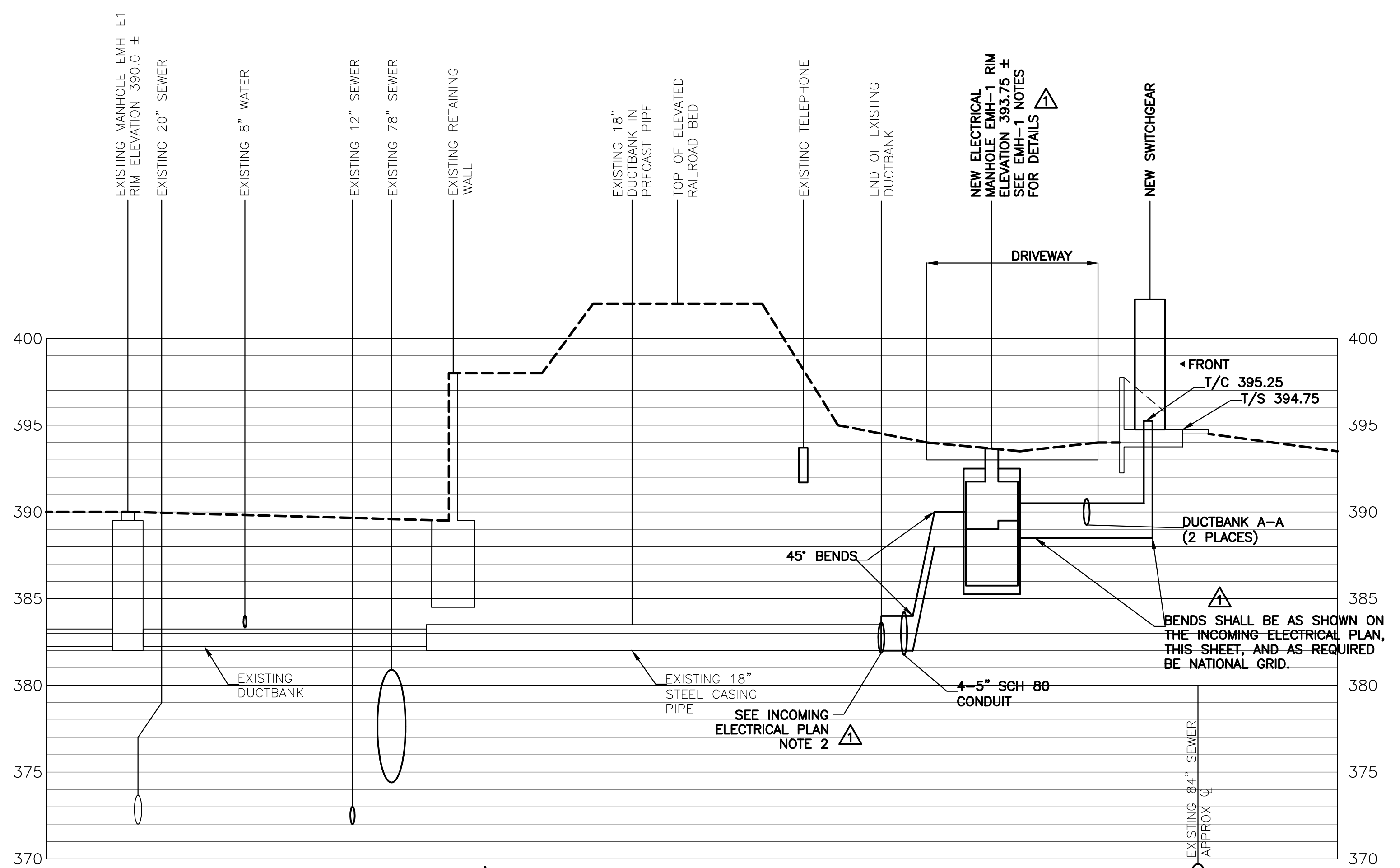
FO 45
SEE DRAWING E-009A FOR REVISED PLAN INCLUDING DUCTBANK CHANGES.

MH EMH-1 NOTES:

- MANHOLES SHALL BE PRECAST - 6'W x 12'L x 7'H (LAKELANDS PRECAST MODEL NO. MH6127 OR EQUAL BY FORT MILLER OR OLD CASTLE.)
- 36-INCH CAST IRON FRAME AND COVER FURNISHED BY NATIONAL GRID INSTALLED BY ELECTRICAL TRADE.
- ALL CONDUITS SHALL ENTER MANHOLE PERPENDICULAR TO MANHOLE WALL, PROVIDE BELL ENDS ON CONDUIT FLUSH WITH INTERIOR WALL AND FULLY GROUTED FLUSH.
- PROVIDE PULLING EYE (POCKET PULLING EYES) 24" ABOVE FLOOR OF MANHOLE, CENTERED UNDER AND OPPOSITE EACH DUCTBANK ENTRY.
- TOP OF DUCTBANK SHALL BE 42" BELOW FINISHED GRADE.
- PROVIDE STAINLESS STEEL INSETS OR DROP IN ANCHORS APPROXIMATELY 12" ON CENTER BOTH VERTICALLY AND HORIZONTALLY ON EACH INTERIOR MANHOLE FACE. PROVIDE NON-METALLIC HEAVY DUTY CABLE RACKS AND SUPPORT ARMS AS REQUIRED BY THE UTILITY CO.
- PROVIDE A #4/O GROUND CONDUCTOR AROUND THE INSIDE BOTTOM OF MANHOLE THERMOWELDED TO A 5/8" BY 8" COPPERWELD GROUND ROD INSTALLED AT OPPOSITE CORNERS OF MANHOLE. BOND INTERIOR GROUND TO EXTERIOR GROUND.

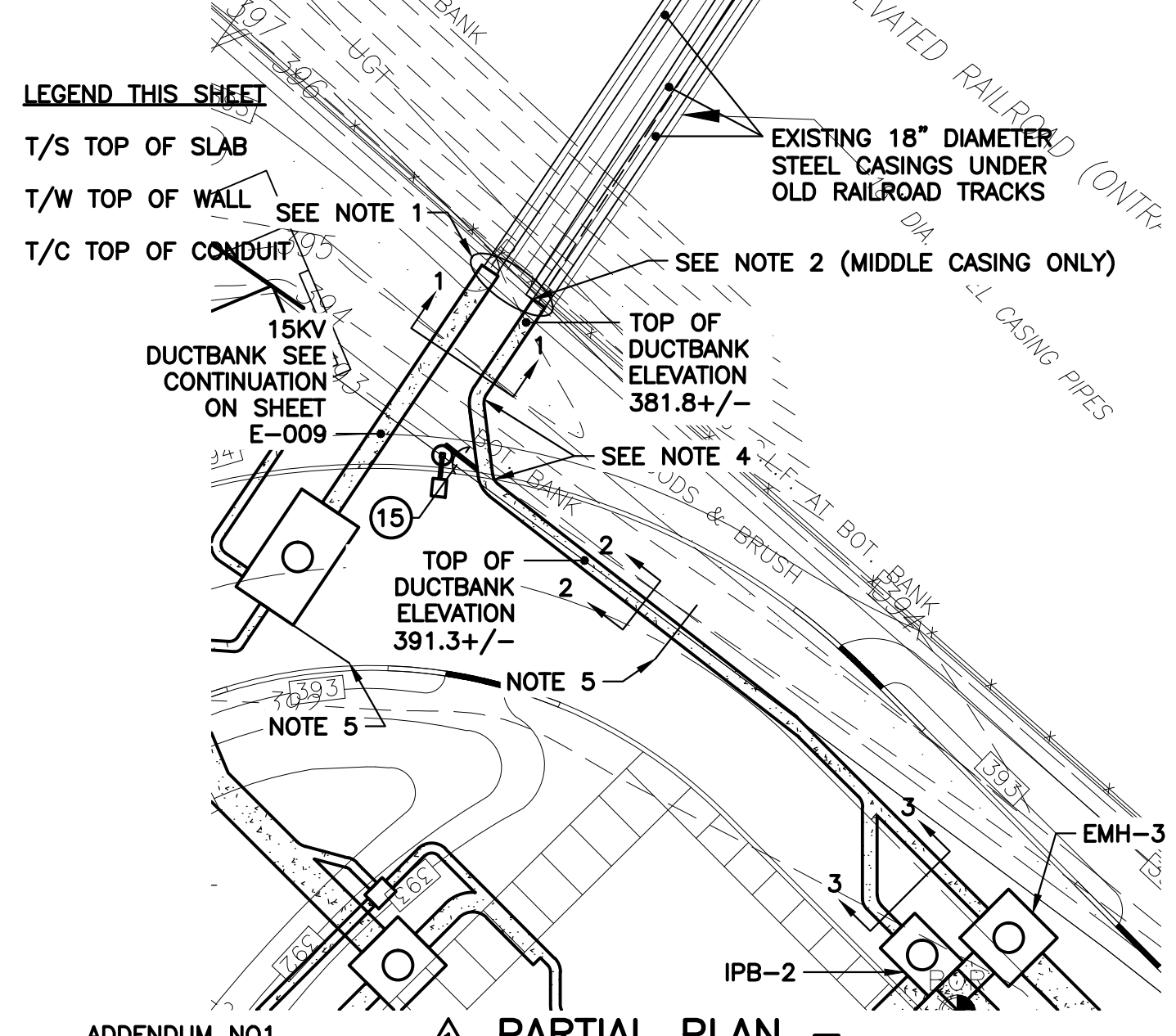
CONSTRUCTION NOTES - PLEASE READ BEFORE CONSTRUCTION:

- CONDUIT ENTRIES UP INTO SWITCHGEAR SHALL BE VIA 5-INCH DIAMETER, RIGID GALVANIZED STEEL WITH A MINIMUM RADIUS OF 48-INCHES. ONCE SWITCHGEAR SUBMITTAL HAS BEEN REVIEWED AND APPROVED BY THE ENGINEER, THE SWITCHGEAR SUBMITTAL SHALL BE SUBMITTED TO NATIONAL GRID FOR THEIR REVIEW AND APPROVAL. NOT UNTIL NATIONAL GRID PROVIDES A LETTER OF APPROVAL CAN THE SWITCHGEAR BE RELEASED FOR MANUFACTURING. CONTRACTOR/MANUFACTURER SHALL ABIDE BY ALL UTILITY COMPANY REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR/ELECTRICAL TRADE SHALL ARRANGE A MEETING AT THE JOB SITE WITH A NATIONAL GRID INSPECTOR AT LEAST 48 HOURS IN ADVANCE OF PAD CONSTRUCTION TO REVIEW ALL CONSTRUCTION REQUIREMENTS. CALL NATIONAL GRID AT 452-7636.
- ANY DEVIATION FROM THE PLAN MUST BE APPROVED BY NATIONAL GRID PRIOR TO INSTALLATION.
- NATIONAL GRID TO SUPPLY PRIMARY CONNECTIONS INCLUDING CABLE AND CUSTOMER TO SUPPLY SECONDARY CABLE INCLUDING CONNECTORS AND CONNECTION TO SECONDARY TERMINALS OR SWITCHGEAR.
- CONTRACTOR TO PROVIDE, CONCRETE SWITCHGEAR FOUNDATION, CONCRETE MANHOLE, GROUNDING, CRUSHED STONE, AND CONDUITS.
- CONCRETE SWITCHGEAR FOUNDATION IS NOT TO BE POURED OR CONDUIT COVERED UNTIL INSPECTED BY NATIONAL GRID. CALL 452-7636.
- UPON COMPLETION OF CONSTRUCTION, THE DUCT SHALL BE FREE AND CLEAR OF ALL OBSTRUCTION TO PERMIT THE INSTALLATION OF NATIONAL GRID CABLE.
- CONTRACTOR/ELECTRICAL TRADE IS NOT TO OBSTRUCT ACCESS TO FOUNDATION IN ORDER TO PERMIT EASE OF SWITCHGEAR AND/OR CABLE INSTALLATION.
- CONTRACTOR TO HAVE UNDER GROUND FACILITIES LOCATED PRIOR TO DIGGING.
- FOR GROUNDING DETAILS, SEE SHEET E-402.



EMH-1 TO SWITCHGEAR

SCALE: 1" = 20' HOR
1" = 5' VERT



ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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DATE: 05/16 PER: RCF

LEGEND
REFERS TO ADDENDUM NO. INDICATED.

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09/01/10 GHJ JBL
DIR/DWG

SCALE: NOT TO SCALE

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In charge of WFH
Designed by RGW
Drawn by JBL
Checked by WFH

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

INCOMING ELECTRICAL SERVICE PROFILE

ELECTRICAL

File Number
00663

Date
04/11

E-009

STATE OF NEW YORK
SEAL OF C. HOOK
LICENSED PROFESSIONAL ENGINEER
No. 5750A

Guerra, H. H.

RFI 114
 PROVIDE CONCRETE ENCASED ELECTRICAL DUCT BANKS PER THE ATTACHED FIGURE FOR THE LOCATIONS INDICATED ON CONTRACT DRAWINGS S-105. SIZE, LENGTHS AND ELEVATIONS OF DUCTBANKS SHALL BE COORDINATED.

THE ARRANGEMENT OF CONDUITS, INCLUDING THE SIZE AND QUANTITY OF CONDUITS SHALL BE VERIFIED BY THE ELECTRICAL CONTRACTOR.

THE PROPOSED CONFIGURATION OF DUCTBANK E-E IS ACCEPTABLE.

FOR DUCTBANK D-D, THE TWO (2) 5-INCH CONDUITS SHOULD SWEEP UP IMMEDIATELY ON THE INSIDE FACE OF THE WALL AND RAISE THE UNDERSIDE OF THE 9-FOOT SECTION BY A MINIMUM OF 1 FOOT.

FOR DUCTBANK O-O, ALL THE CONDUITS SHOULD SWEEP UP IMMEDIATELY ON THE INSIDE FACE OF THE WALL AND RAISE THE ENTIRE UNDERSIDE OF THE DUCTBANK BY A MINIMUM OF 1.5 FEET.

DETAILS OF THE REINFORCING BARS FOR THESE DUCTBANKS SHALL BE INCLUDED IN THE UPCOMING REBAR SHOP DRAWINGS FOR THE BUILDING FLOOR SLAB SYSTEM.

RFI 149
 BASED UPON ANOTHER REVIEW OF DUCTBANKS D-D AND O-O, WE HAVE DETERMINED THAT THESE TWO DUCTBANK TYPES CAN BE INSTALLED WITHOUT THE NEED TO SWEEP THE CONDUITS IMMEDIATELY AFTER THE WALL PENETRATIONS. HOWEVER, DUCTBANK O-O SHALL BE ENCASED WITH A GEOFOAM BLOCK CORE AS INDICATED IN FIELD ORDER 21.

RFI 221
 AFTER REVIEWING THE HEAT DETECTOR LOCATIONS AND DISCUSSIONS WITH THE ELECTRICAL SUB-CONTRACTOR, RIDLEY ELECTRIC, TO IMPROVE THE MAINTENANCE AND SAFETY OF ACCESSING THE DEVICES, THE MOUNTING HEIGHT SHALL BE APPROXIMATELY 8 FEET ABOVE THE PLATFORMS. LATERAL LOCATIONS SHALL REMAIN APPROXIMATELY AS SHOWN ON DRAWING NO. E-101. SUPPORT SHALL BE VIA ONE OF THE FOLLOWING OR AN APPROVED VARIATION THEREOF:

- BRACKET OFF AN ADJACENT WALL
- PENDANT SUPPORTED FROM THE CEILING ABOVE
- ELECTRIC CHANNEL MOUNTED TO THE UNDERSIDE OF CONDUITS RACKS ABOVE THE PLATFORMS

SINCE THIS IS A CHANGE IN THE APPROVED DESIGN, EEA WILL BE SENDING THIS TO THE ONONDAGA COUNTY EMERGENCY MANAGEMENT TO OBTAIN THEIR CONCURRENCE AND/OR COMMENTS. CONTRACTOR WILL BE ADVISED OF THE OUTCOME OF THIS REVIEW.

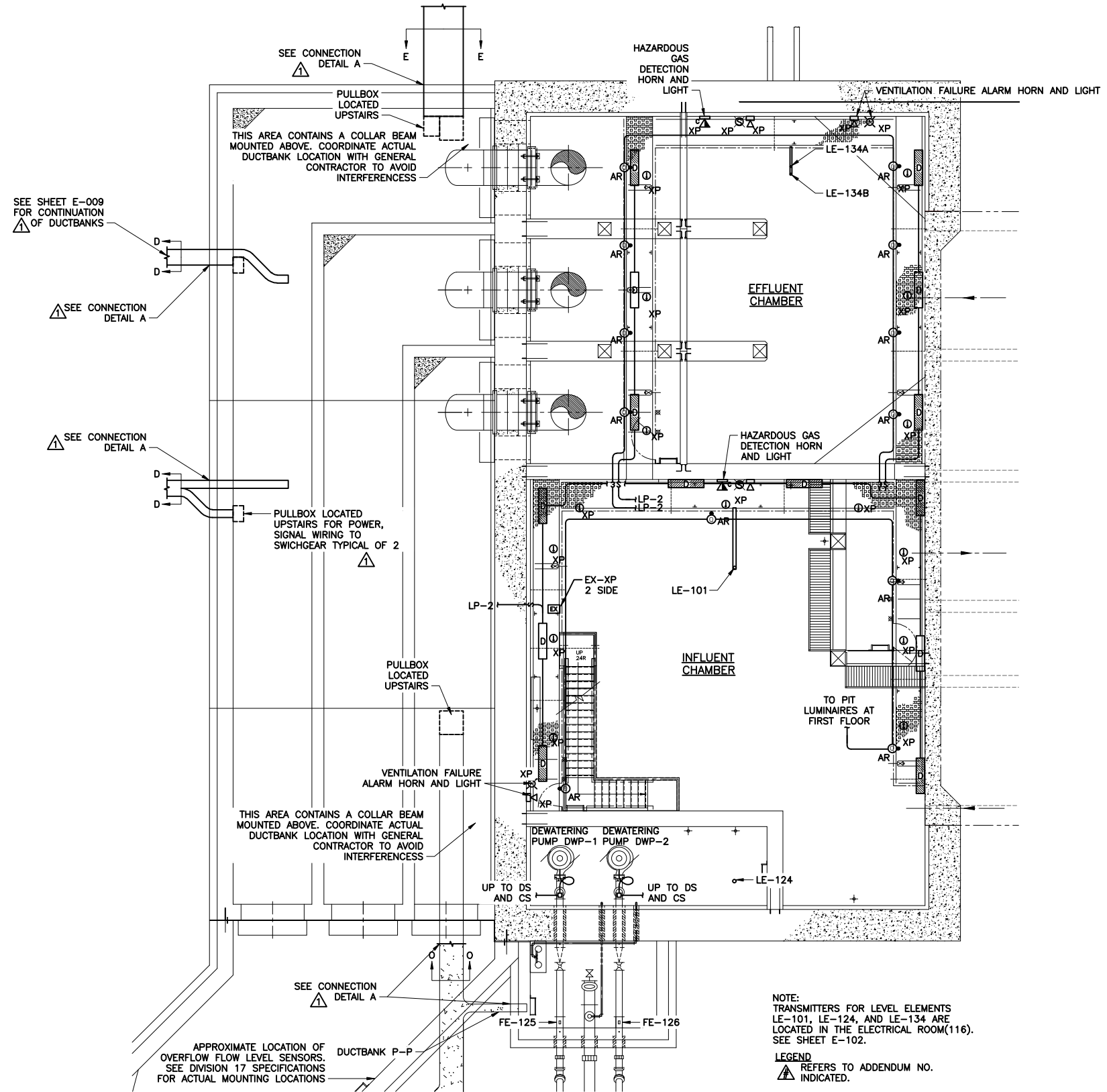
RFI 229
 THE CONTRACTOR SHALL REFER TO EEA'S RESPONSES TO RFI NO. 114, 114A, & 149, AND FIELD ORDER NO. 21 FOR ADDITIONAL INFORMATION ON THE PROPOSED CONSTRUCTION OF THESE DUCTBANKS.

THIS PROPOSAL TO TRANSITION THE DUCTBANK WIDTHS HAS BEEN ALREADY BEEN PROPOSED AND APPROVED IN THE REFERENCED RFI RESPONSES. THE DUCTBANKS ARE DESIGNED TO BE HUNG FROM THE FLOOR SLAB SO THERE IS NO NEED FOR THEM TO SPAN TO THE NEARBY WALL. THESE DUCTBANKS SHOULD BE TERMINATED A MINIMUM OF 6 INCHES BEYOND THE FURTHEST CONDUIT UPTURN.

RFI 236
 IN GENERAL, IT WOULD BE ACCEPTABLE TO UTILIZE GEOFOAM AS STAY-IN-PLACE FORMWORK AS PROPOSED. HOWEVER, THE IDENTIFIED PORT OPENING (VENT) IN THE KNEE WALL CANNOT BE BLOCKED. IF GEOFORM IS TO BE USED AT THIS PORT OPENING LOCATION, PROVIDE A PERMANENT CHASE THAT WOULD ALLOW AIR TO ENTER FROM THE NORTH END AND OUT THROUGH THIS PORT OPENING. THIS CHASE MATERIAL SHALL BE COMPOSED OF NON-CORROSIVE MATERIAL, SUCH AS STAINLESS STEEL DUCTWORK. IN LIEU OF CREATING THIS CHASE, IT WOULD ALSO BE ACCEPTABLE TO SAW CUT A NEW PORT OPENING AND CAST-IN THIS EXISTING PORT OPENING.

THE CONTRACTOR SHALL SUBMIT A FOLLOW UP RFI TO SUGGEST HOW THEY WILL ADDRESS THIS PORT OPENING ISSUE.

RFI 315
 IT WOULD BE ACCEPTABLE TO SHORTEN THE LIGHT POLE AND MOUNT THE LIGHTS BELOW THE LEVEL OF THE PLANT WATER LINE. NOTE THAT ALL FOUR LIGHTS ON THIS SECTION OF CATWALK SHOULD BE PLACED AT THE SAME ELEVATION. IF THE POLE DOES NOT ALLOW FOR THE LUMINAIRE TO BE ROTATED INWARD FOR MAINTENANCE THEN THE CONTRACTOR SHALL INSTALL A UNION IN THE POLE TO ALLOW FOR ROTATION OF THE LUMINAIRE.



ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 RECORD DRAWING
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 DATE: 05/16 PER: RCF

NOTE:
 TRANSMITTERS FOR LEVEL ELEMENTS LE-101, LE-124, AND LE-134 ARE LOCATED IN THE ELECTRICAL ROOM(116). SEE SHEET E-102.
 LEGEND
 REFERS TO ADDENDUM NO. INDICATED.

WEST CHAMBER INTERMEDIATE LEVEL POWER AND LIGHTING PLAN
 SCALE: 1/8"=1'-0"

AREA CLASSIFICATION NOTE
 REQUIREMENTS FOR ELECTRICAL WORK AND MATERIALS VARIES FOR EACH ROOM OR AREA. REFER TO THE TABLE ON SHEET E-102 FOR ROOM/AREA CLASSIFICATIONS.
 !!!NOTE!!!
 ALL WORK ON THIS SHEET BY ELECTRICAL TRADE UNLESS SPECIFICALLY NOTED OTHERWISE

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 DIR/DWG

SCALE:
 1/8"=1'-0"

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In charge of WFH
 Designed by RGW/WFH
 Drawn by RGW/JBL
 Checked by WFH

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

**WEST CHAMBER INTERMEDIATE LEVEL
 POWER AND LIGHTING PLAN**
 ELECTRICAL

File Number 00663
 Date 04/11

 E-101

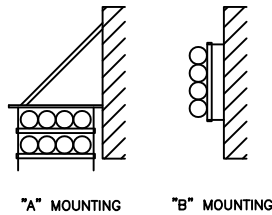
| ROOM NUMBER | ROOM NAME | CLASSIFICATION |
|-------------|----------------------|--|
| 101 | MECHANICAL ROOM NO.1 | CLASS I, DIVISION 1, GROUP D |
| 102 | VESTIBULE | CLASS I, DIVISION 2, GROUP D |
| 103 | MECHANICAL ROOM NO.2 | UNCLASSIFIED |
| 104 | STORAGE | CORROSIVE |
| 105 | ODOR CONTROL ROOM | CLASS I, DIV 2, GROUP D WITHIN 3'-0" OF ODOR CONTROL SYSTEM DUCTWORK BLOWERS, SCRUBBERS OR ANY OTHER POTENTIAL LEAK SOURCE. OUTSIDE THIS 3'-0" ENVELOPE, IS UNCLASSIFIED |
| 106 | ACCESS HATCH | CLASS I, DIVISION 1, GROUP D |
| 107 | VESTIBULE | CLASS I, DIVISION 2, GROUP D |
| 108 | TRUCK LOADING AREA | UNCLASSIFIED |
| 109 | GRIT ROOM | CLASS I, DIVISION 1, GROUP D |
| 110 | CONTROL ROOM | UNCLASSIFIED |
| 111 | VESTIBULE | UNCLASSIFIED |
| 112 | JANITOR | UNCLASSIFIED |
| 113 | HALL | UNCLASSIFIED |
| 114 | BATHROOM | UNCLASSIFIED |
| 115 | VESTIBULE | CLASS I, DIVISION 2, GROUP D |
| 116 | STAIR | UNCLASSIFIED |
| 117 | ELECTRICAL ROOM | UNCLASSIFIED |
| -- | INFLUENT CHAMBER | CLASS I, DIVISION 1, GROUP D |
| -- | EFFLUENT CHAMBER | CLASS I, DIVISION 1, GROUP D |

NOTES:

- CONTRACTOR TO VERIFY ALL PULLBOX SIZES AND PROVIDE LARGER BOX IF REQUIRED.
- MAXIMUM LENGTH OF 3200 AMP BUS SHALL BE 25 FEET.

CONDUIT ROUTING NOTES:

- CONDUIT ELEVATIONS IN ELECTRIC ROOM (117) APPROXIMATELY 406.
- NO CONDUITS SHALL BE INSTALLED IN OR BELOW SLABS UNLESS SPECIFICALLY APPROVED BY THE ENGINEER, AN THEN ONLY IN SPECIAL CASES.



RFI 298
WE HAVE RECEIVED CONFIRMATION FROM THE COUNTY CODES ENFORCEMENT OFFICER FOR THE LOCATION OF THE REMOTE ANNUCIATOR PANEL. PANEL IS TO BE LOCATED ON AN INTERIOR WALL JUST INSIDE THE EXTERIOR DOOR TO MECHANICAL ROOM NO. 2. ACTUAL FINAL PANEL LOCATION TO BE FIELD LOCATED BY THE CONTRACTOR AS SPACE PERMITS.

RFI 335
LOCATION OF KEYPADS SHALL BE COORDINATED WITH JAIME ISGAR AT OCDWEP. LOCATION OF THE CARD READER THAT WILL CONTROL THE MAIN GATE SHALL NOT BE LOCATED UNTIL AFTER THE GATE IS INSTALLED.

CONFIGURE THE ENTRANCE/EXIT DELAYS FOR 30 SECONDS INITIALLY, BUT OWNER SHALL BE TRAINED ON HOW TO ADJUST THESE SETTINGS.

PROXIMITY CARD READERS ARE CLEARLY SHOWN AT THE MAN DOORS PER DRAWINGS I-104. CARD READERS ARE NOT REQUIRED FOR OVERHEAD DOORS.

KEY SWITCH TO CONTROL DOOR 30 IS ACCEPTABLE, BUT SHALL UTILIZE AN ALL-WEATHER KEY SWITCH ASSEMBLY TO PREVENT FREEZING/ICING OF THE KEY SWITCH.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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Drawn by: RGW/JBL
Checked by: WFH

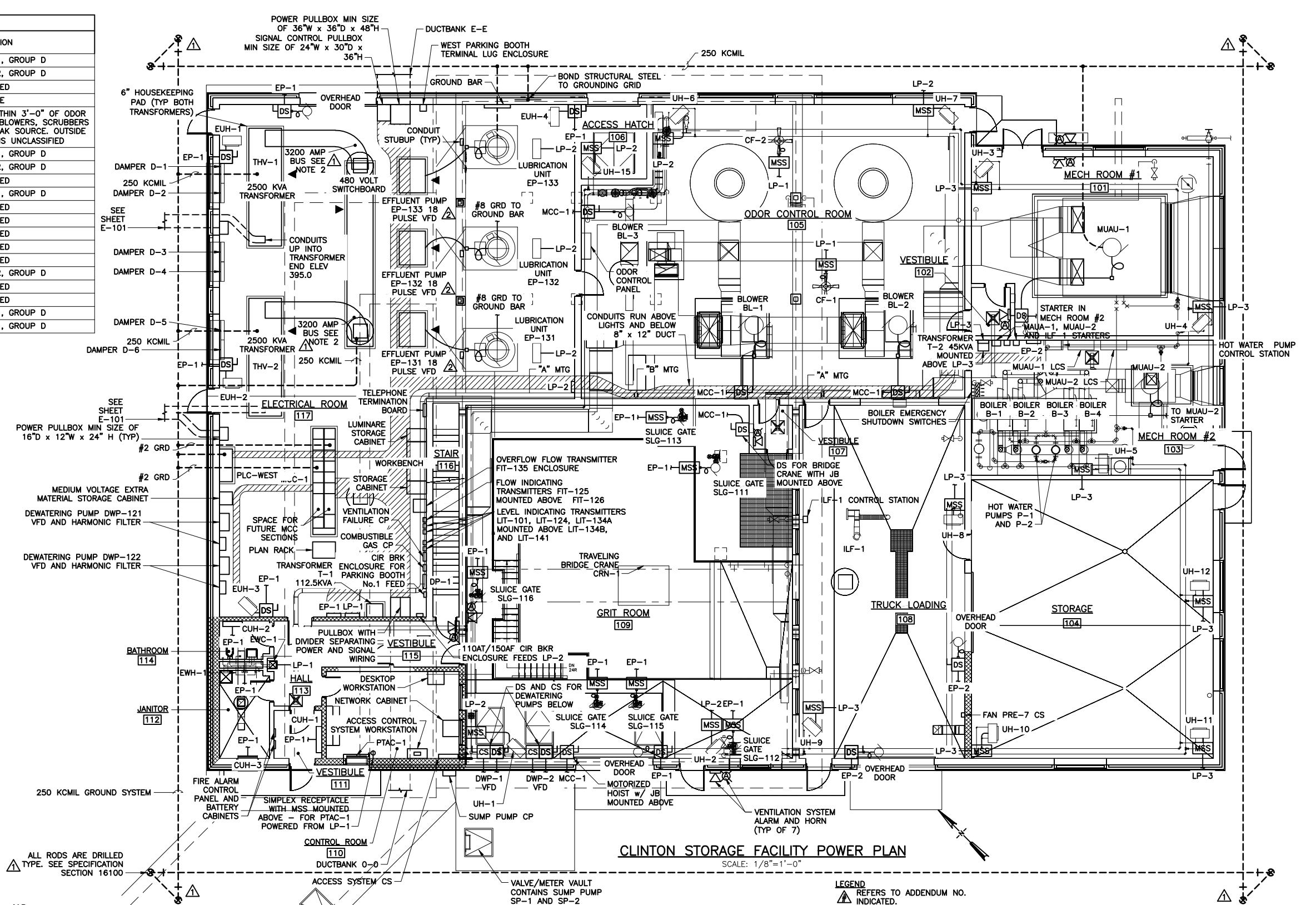
ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

CLINTON STORAGE FACILITY
POWER PLAN
ELECTRICAL

FILE NUMBER: 00663
DATE: 04/11
E-102

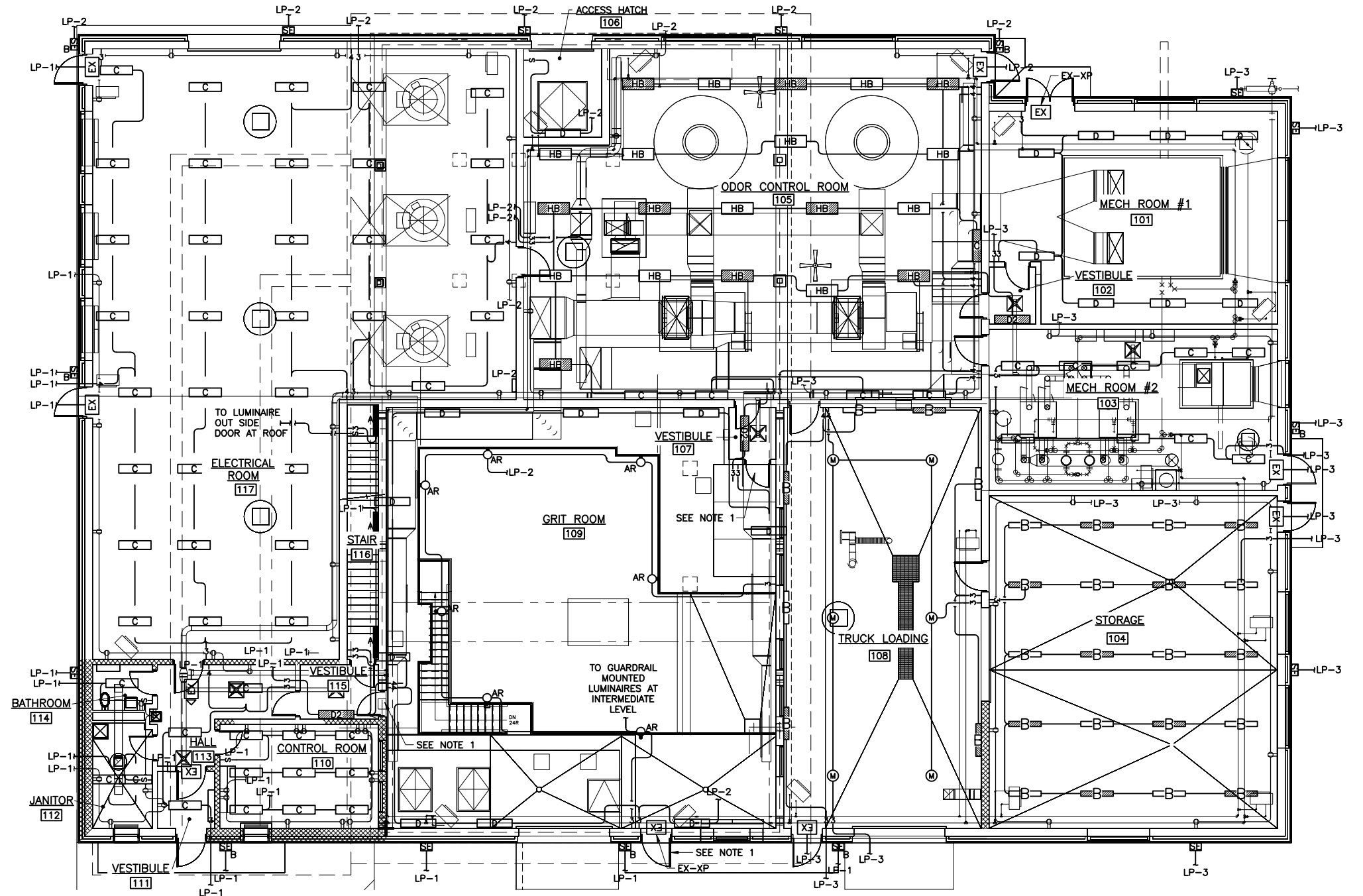
ALL WORK ON THIS SHEET BY ELECTRICAL TRADE UNLESS SPECIFICALLY NOTED OTHERWISE



CLINTON STORAGE FACILITY POWER PLAN
SCALE: 1/8" = 1'-0"

RFI 282
THE PART NUMBER SHOULD BE CADDY M CDN132X 120E TB 41K EBR.

FO53
REPLACE THE EXTERIOR LUMINAIRE LOCATED NEXT TO DOOR 01 AT THE NORTH EAST CORNER OF THE ODOR CONTROL ROOM WITH THE ATTACHED LUMINAIRE WITH A REMOTELY MOUNTED BATTERY BALLAST BACKUP. THE REMOTE BATTERY BALLAST SHALL BE MOUNTED INSIDE THE ODOR CONTROL ROOM JUST INSIDE THE DOOR IN A NEMA 12 ENCLOSURE, AND WIRED PER MANUFACTURER RECOMMENDATIONS.



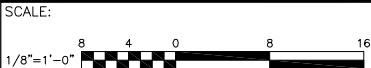
NOTE:
1. PROVIDE SIGNAGE ON THE DOOR IN ACCORDANCE WITH SEC. 16196, LABEL AS "BEFORE ENTERING THE AREA BELOW, PERSONNEL ARE REQUIRED TO PLACE THE VENTILATION SYSTEM IN MAINTENANCE MODE THROUGH THE PLANT PLC."

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 05/16 PER: RCF

L: ON=*; OFF=*REF*
X:
08/20/10 GHD RGW
DIR/DWG



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| No. | Date | Revisions | Init |
|-----|-------|-----------------|------|
| 1 | 05/16 | RECORD DRAWINGS | |

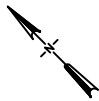
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In charge of WFH
Designed by SLC
Drawn by SLC/JBL
Checked by WFH



CLINTON STORAGE FACILITY LIGHTING PLAN

SCALE: 1/8"=1'-0"



AREA CLASSIFICATION NOTE

REQUIREMENTS FOR ELECTRICAL WORK AND MATERIALS VARIES FOR EACH ROOM OR AREA. REFER TO THE TABLE ON SHEET E-102 FOR ROOM/AREA CLASSIFICATIONS.

!!!NOTE!!!
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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

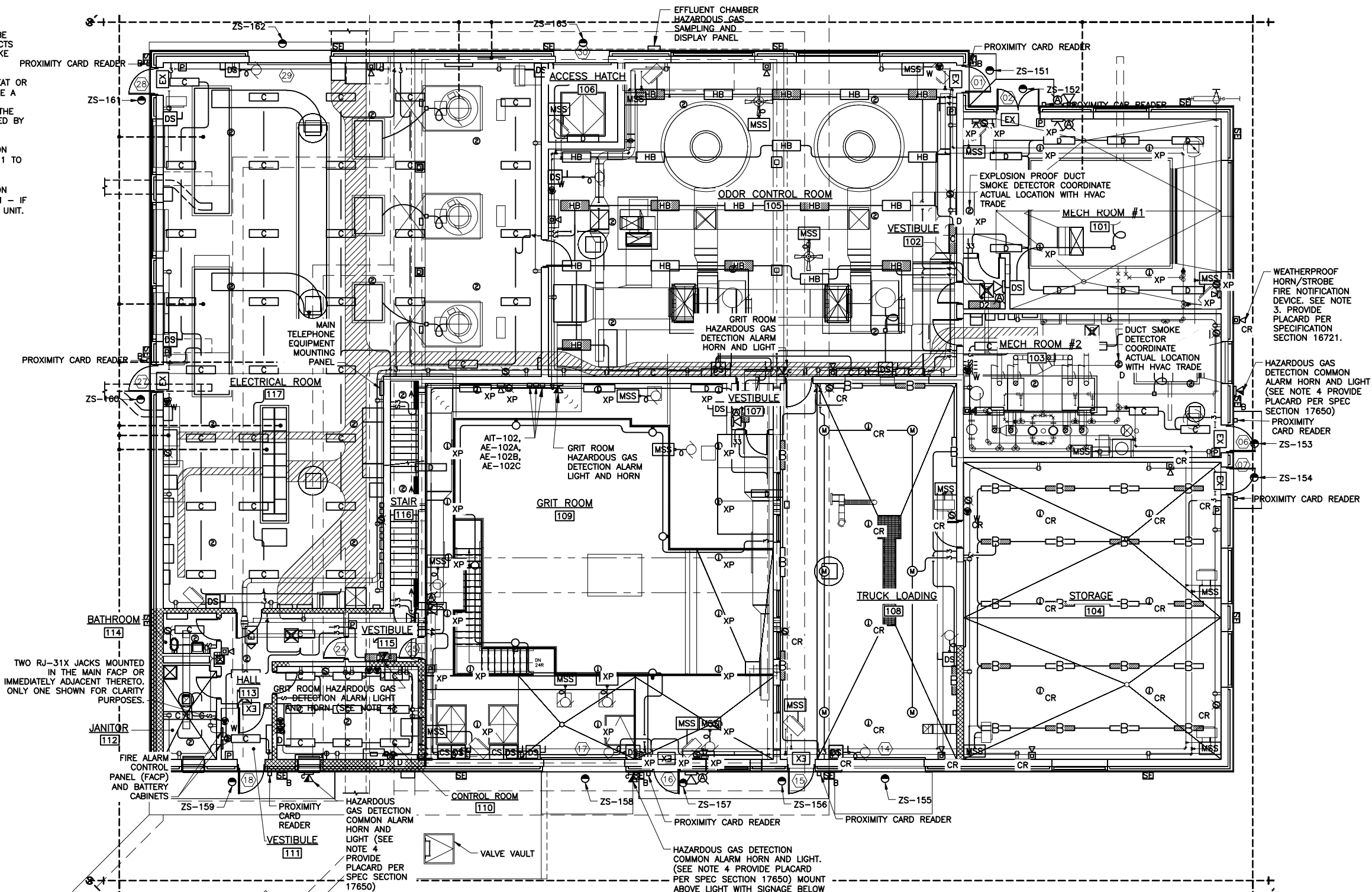
CLINTON STORAGE FACILITY LIGHTING PLAN
ELECTRICAL



File Number
00663
Date
04/11
Gerald C. Hook

NOTES:

1. ACTUAL LOCATION OF ALL FIRE ALARM SYSTEM DEVICES SHALL BE DETERMINED IN THE FIELD. ADJUST LOCATIONS TO AVOID CONFLICTS WITH UNIT HEATERS, HOT WATER PIPING, FANS VENTILATION INTAKE AND DISCHARGE LOUVERS AND OTHER EQUIPMENT.
2. FOR EACH DUCT SMOKE DETECTOR AND FOR ANY DETECTOR (HEAT OR SMOKE) THAT IS NOT VISIBLE OR READILY "ACCESSIBLE", PROVIDE A REMOTE TEST STATION. TEST STATION TO BE LOCATED IN A CONVENIENT AND ACCESSIBLE LOCATION AND BE SUITABLE FOR THE AREA OF INSTALLATION. PROVIDE CONDUIT AND WIRE AS REQUIRED BY MANUFACTURER.
3. PROVIDE LAMINATED PLASTIC PLACARD WITH 2" WHITE LETTERS ON RED BACKGROUND, TO READ "FIRE ALARM. IF FLASHING CALL 911 TO REPORT FIRE." MOUNT DIRECTLY BENEATH HORN/STROBE UNIT.
4. PROVIDE LAMINATED PLASTIC PLACARD WITH 2" WHITE LETTERS ON RED BACKGROUND, TO READ "HAZARDOUS GAS DETECTION ALARM - IF LIGHT IS ON DIAL 911". MOUNT DIRECTLY BENEATH HORN/LIGHT UNIT.



CLINTON STORAGE FACILITY FIRE ALARM SYSTEM AND TELEPHONE PLAN

SCALE: 1/8"=1'-0"

AREA CLASSIFICATION NOTE

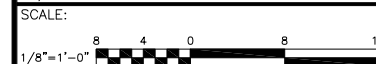
REQUIREMENTS FOR ELECTRICAL WORK AND MATERIALS Varies FOR EACH ROOM OR AREA. REFER TO THE TABLE ON SHEET E-102 FOR ROOM/AREA CLASSIFICATIONS.

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ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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| 1 | 05/16 | RECORD DRAWINGS | |

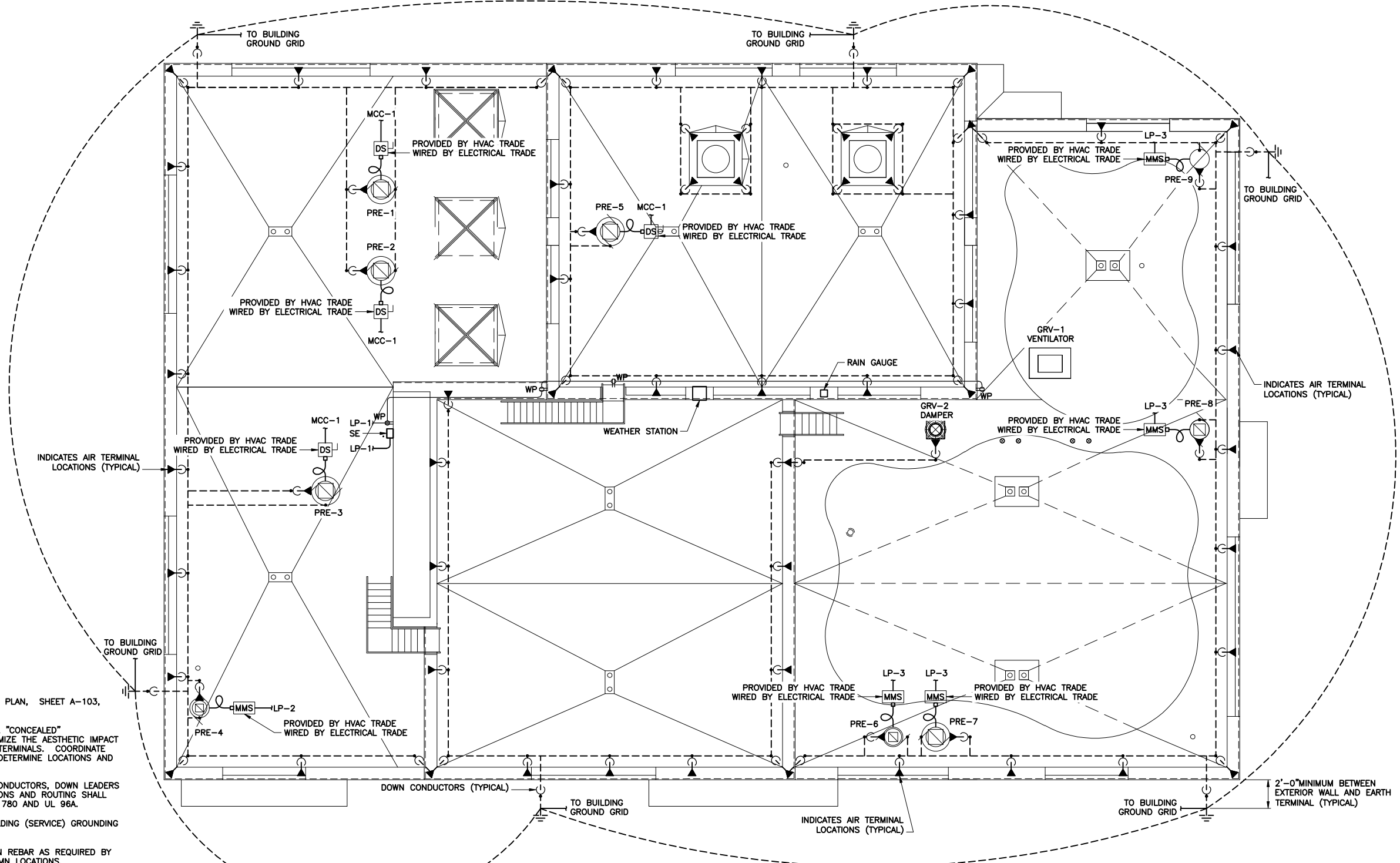
In charge of WFH
Designed by RGW
Drawn by RGW
Checked by WFH



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT
CLINTON STORAGE FACILITY FIRE ALARM, INTRUSION, AND TELEPHONE SYSTEM PLAN
ELECTRICAL



File Number 00663
Date 04/11
Gerald C. Hahn
E-104



LIGHTNING PROTECTION NOTES:

1. FOR MORE DETAILED ARCHITECTURAL INFORMATION SEE ROOF PLAN, SHEET A-103, AND BUILDING ELEVATIONS, SHEETS A-105 - A-110.
2. LIGHTNING PROTECTION SYSTEM SHALL BE CONSIDERED AS A "CONCEALED" INSTALLATION. ALL WORK SHALL BE INSTALLED SO AS TO MINIMIZE THE AESTHETIC IMPACT OF ALL DOWN CONDUCTORS AND EQUIPMENT OTHER THAN AIR TERMINALS. COORDINATE WITH THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION TO DETERMINE LOCATIONS AND SEQUENCE FOR INSTALLATION OF DOWN CONDUCTORS.
3. PRIMARY AND SECONDARY LIGHTNING PROTECTION SYSTEM CONDUCTORS, DOWN LEADERS AND INTERCONNECTIONS SHOWN SCHEMATICALLY. FINAL LOCATIONS AND ROUTING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 16670, NFPA 780 AND UL 96A.
4. EARTH TERMINALS SHALL BE BONDED TO THE ELECTRIC BUILDING (SERVICE) GROUNDING ELECTRODE SYSTEM (GROUND GRID).
5. BOND LIGHTNING PROTECTION SYSTEM TO CONCRETE COLUMN REBAR AS REQUIRED BY NFPA 780 & UL-96A. SEE STRUCTURAL DRAWINGS FOR COLUMN LOCATIONS. COORDINATE WITH THE GENERAL CONTRACTOR PRIOR TO POURING OF BUILDING SLAB AND COLUMNS.
6. AIR TERMINALS SHALL BE OF ALUMINUM CONSTRUCTION AND 10" IN LENGTH UNLESS NOTED OTHERWISE.
7. ALL ROOFTOP RECEPTACLES SHALL BE GFCI TYPE. ⚠
8. BOND ALL HANDRAILING TO THE LIGHTNING PROTECTION SYSTEM. ⚠

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|-----|-------|-----------------|------|
| 1 | 05/16 | RECORD DRAWINGS | |

In charge of WFH
 Designed by RGW
 Drawn by RGW/JBL
 Checked by WFH

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

CLINTON STORAGE FACILITY ROOF PLAN

ELECTRICAL

FILED
 STATE OF NEW YORK
 SEAL OF THE STATE OF NEW YORK
 NO. 57504
 LICENSED PROFESSIONAL ENGINEER

File Number
 00663
 Date
 04/11

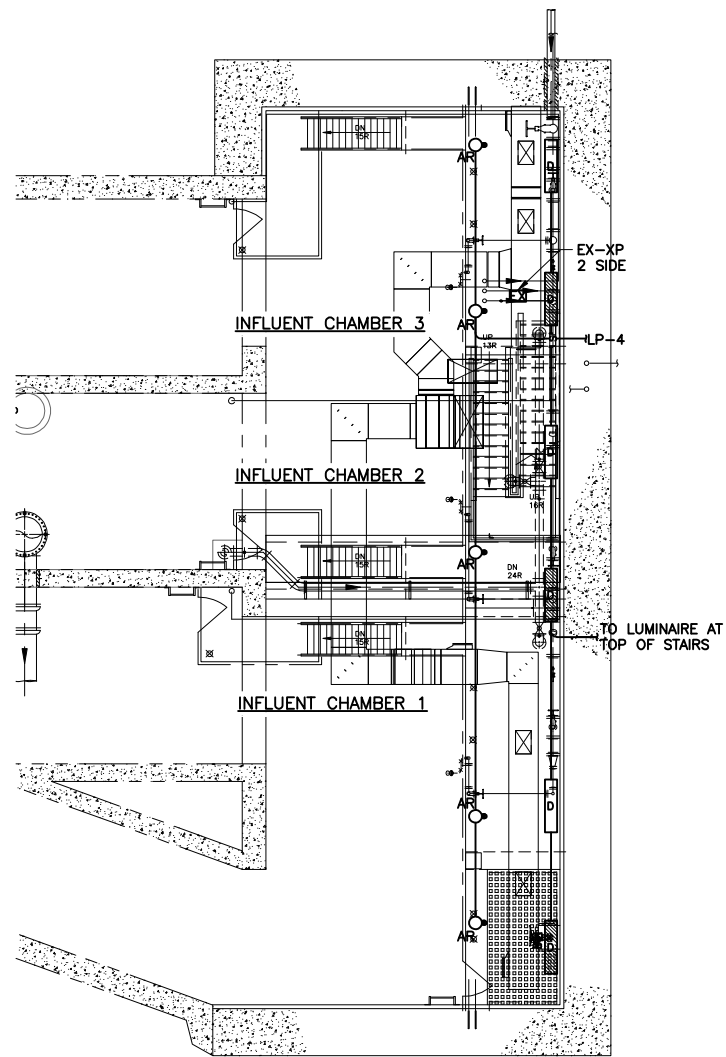
Guaracino

E-105

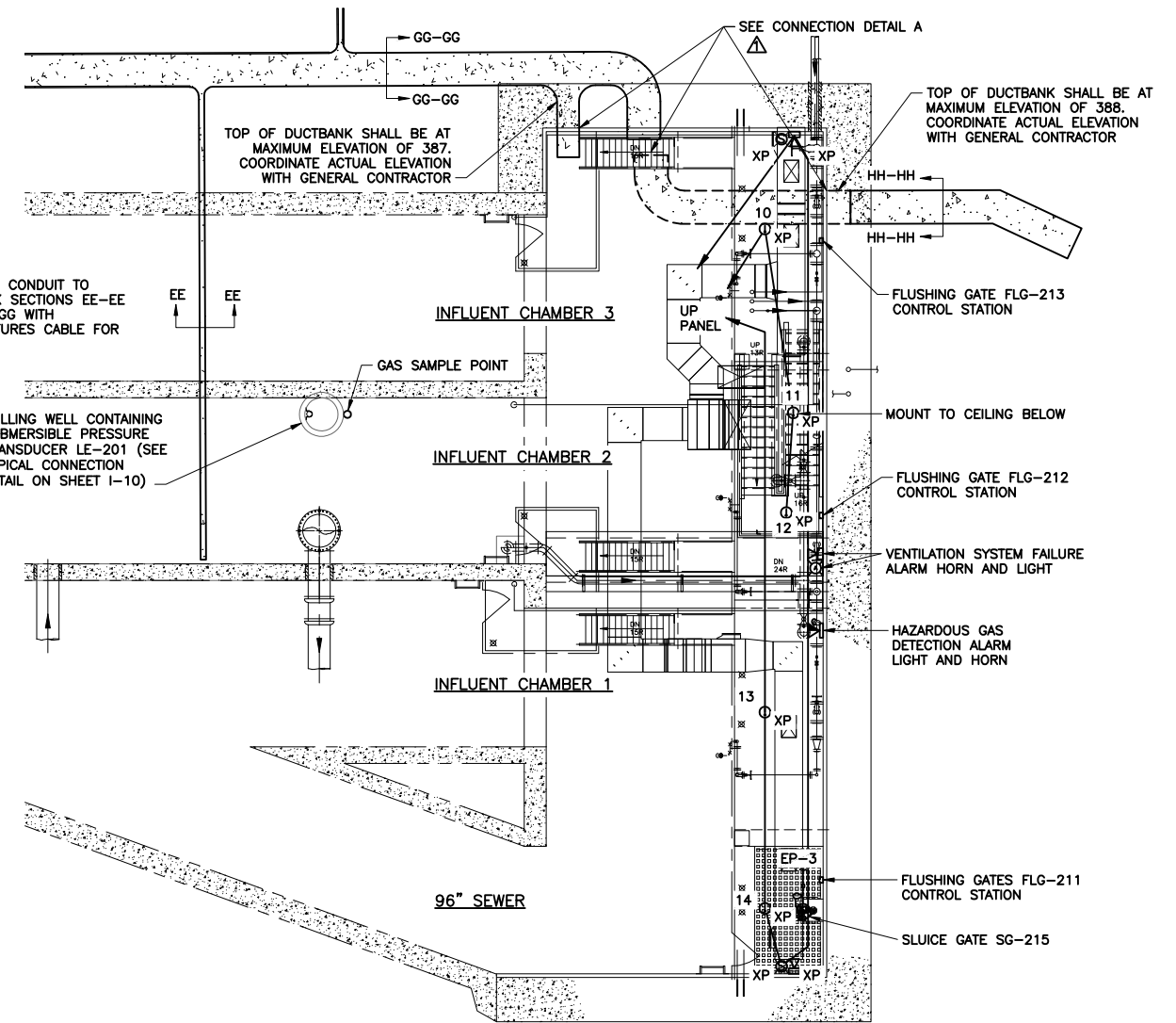
ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 RECORD DRAWING
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 DATE: 05/16 PER: RCF

LEGEND
 ⚠ REFERS TO ADDENDUM NO. INDICATED.

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INTERMEDIATE LEVEL LIGHTING PLAN
1/8" = 1'-0"



INTERMEDIATE LEVEL POWER AND FIRE ALARM SYSTEM PLAN
1/8" = 1'-0"

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP

RECORD DRAWING

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In charge of WFH
Designed by RGW/WFH
Drawn by RGW/JBL
Checked by WFH



LEGEND (THIS SHEET)
REFERS TO ADDENDUM NO. INDICATED.

AREA CLASSIFICATION NOTE

REQUIREMENTS FOR ELECTRICAL WORK AND MATERIALS VARIES FOR EACH ROOM OR AREA. REFER TO THE TABLE ON SHEET E-202 FOR ROOM/AREA CLASSIFICATIONS.

!!!NOTE!!!
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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

**EAST CHAMBER INTERMEDIATE LEVEL
POWER AND LIGHTING PLAN**
ELECTRICAL

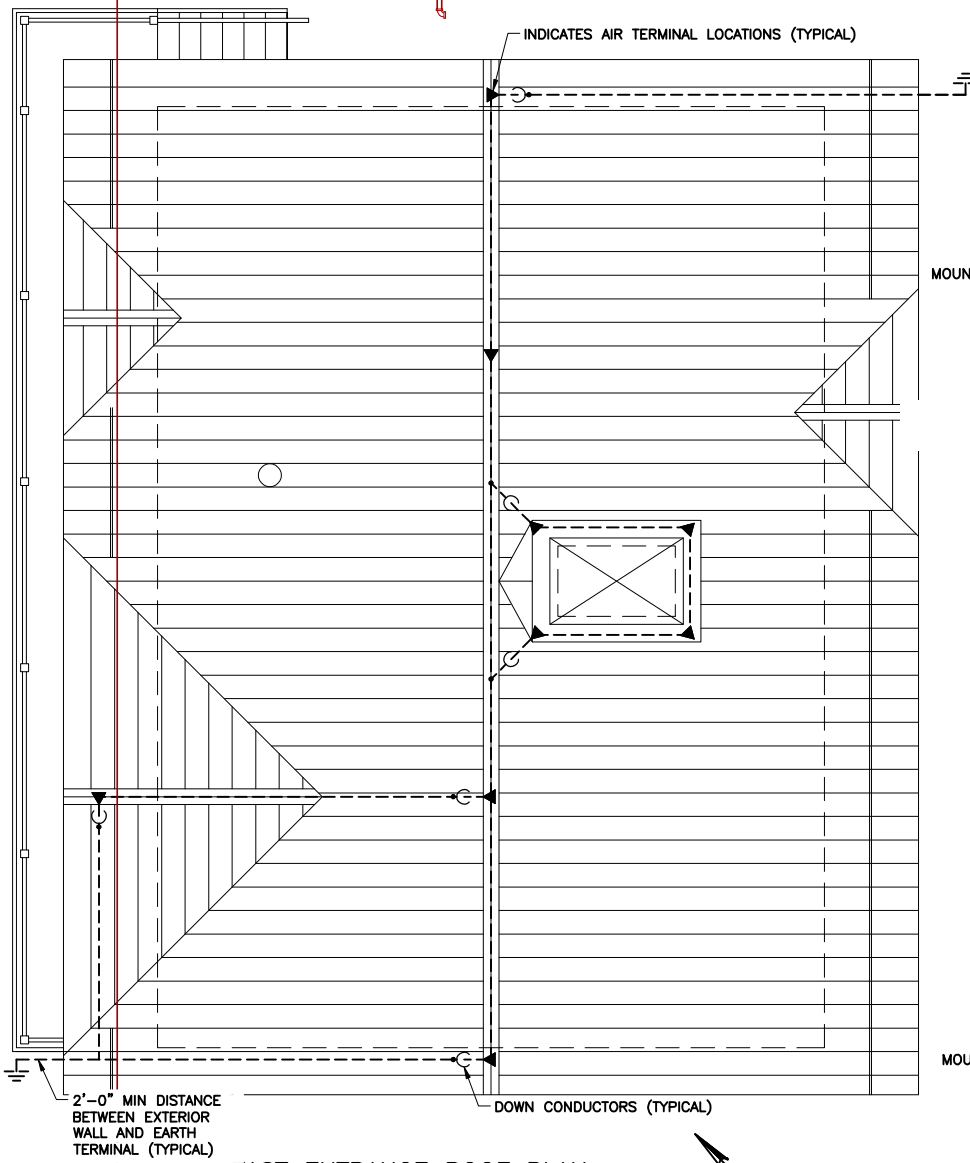


File Number
00663
Date
04/11
Gerald C. Rood

E-201

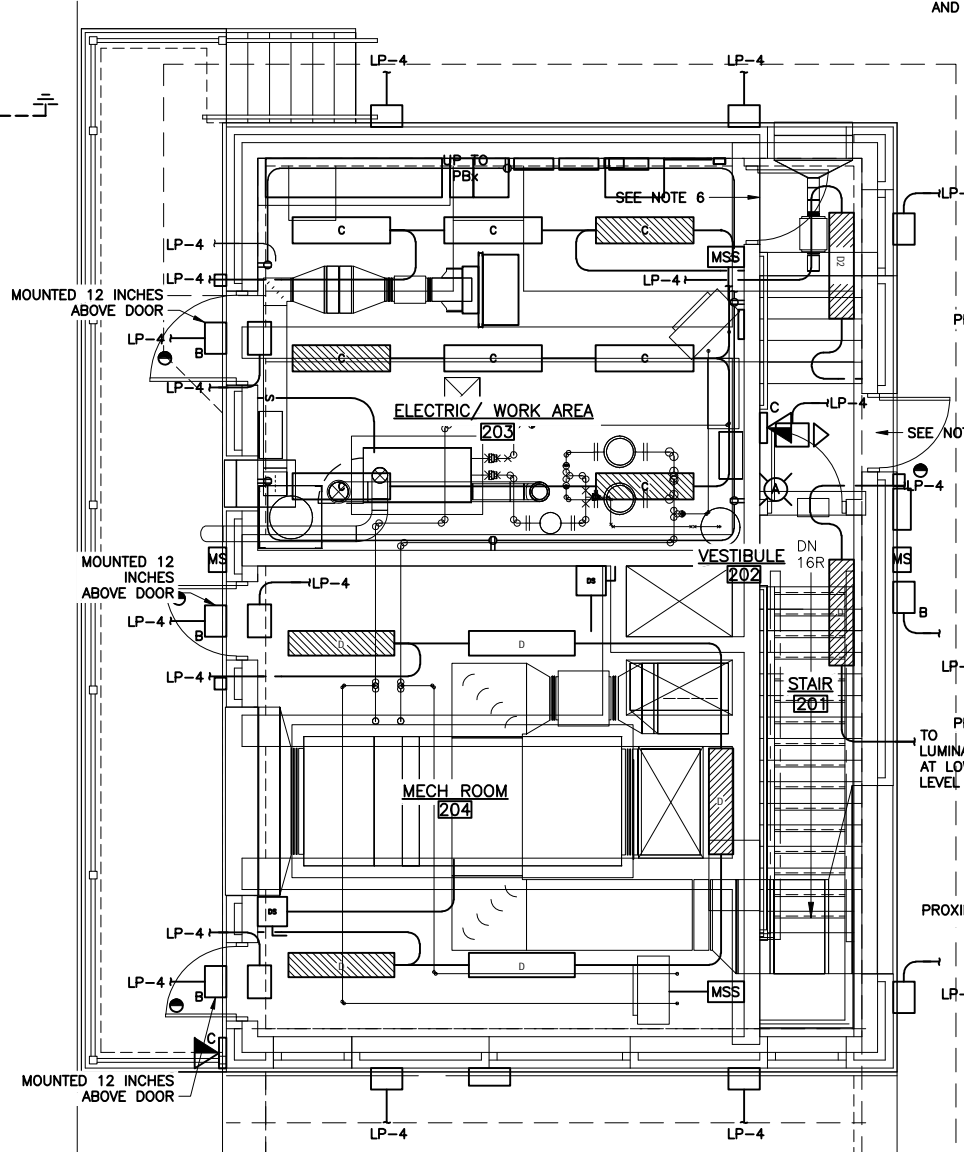
LIGHTNING PROTECTION NOTES:

- FOR MORE DETAILED ARCHITECTURAL INFORMATION SEE ROOF PLAN, SHEET A-201, AND BUILDING ELEVATIONS, SHEET A-202.
- LIGHTNING PROTECTION SYSTEM SHALL BE CONSIDERED AS A "CONCEALED" INSTALLATION. ALL WORK SHALL BE INSTALLED SO AS TO MINIMIZE THE AESTHETIC IMPACT OF ALL DOWN CONDUCTORS AND EQUIPMENT OTHER THAN AIR TERMINALS. COORDINATE WITH THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION TO DETERMINE LOCATIONS AND SEQUENCE FOR INSTALLATION OF DOWN CONDUCTORS.
- PRIMARY AND SECONDARY LIGHTNING PROTECTION SYSTEM CONDUCTORS, DOWN LEADERS AND INTERCONNECTIONS SHOWN SCHEMATICALLY. FINAL LOCATIONS AND ROUTING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 16670, NFPA 780 AND UL 96A.
- EARTH TERMINALS SHALL BE BONDED TO THE ELECTRIC BUILDING (SERVICE) GROUNDING ELECTRODE SYSTEM (GROUND GRID).
- BOND LIGHTNING PROTECTION SYSTEM TO CONCRETE COLUMN REBAR AS REQUIRED BY NFPA 780 & UL-96A. SEE STRUCTURAL DRAWINGS FOR COLUMN LOCATIONS. COORDINATE WITH THE GENERAL CONTRACTOR PRIOR TO POURING OF BUILDING SLAB AND COLUMNS.
- AIR TERMINALS SHALL BE OF ALUMINUM CONSTRUCTION AND 10" IN LENGTH UNLESS NOTED OTHERWISE.



EAST ENTRANCE ROOF PLAN
SCALE: 1/4"=1'-0"

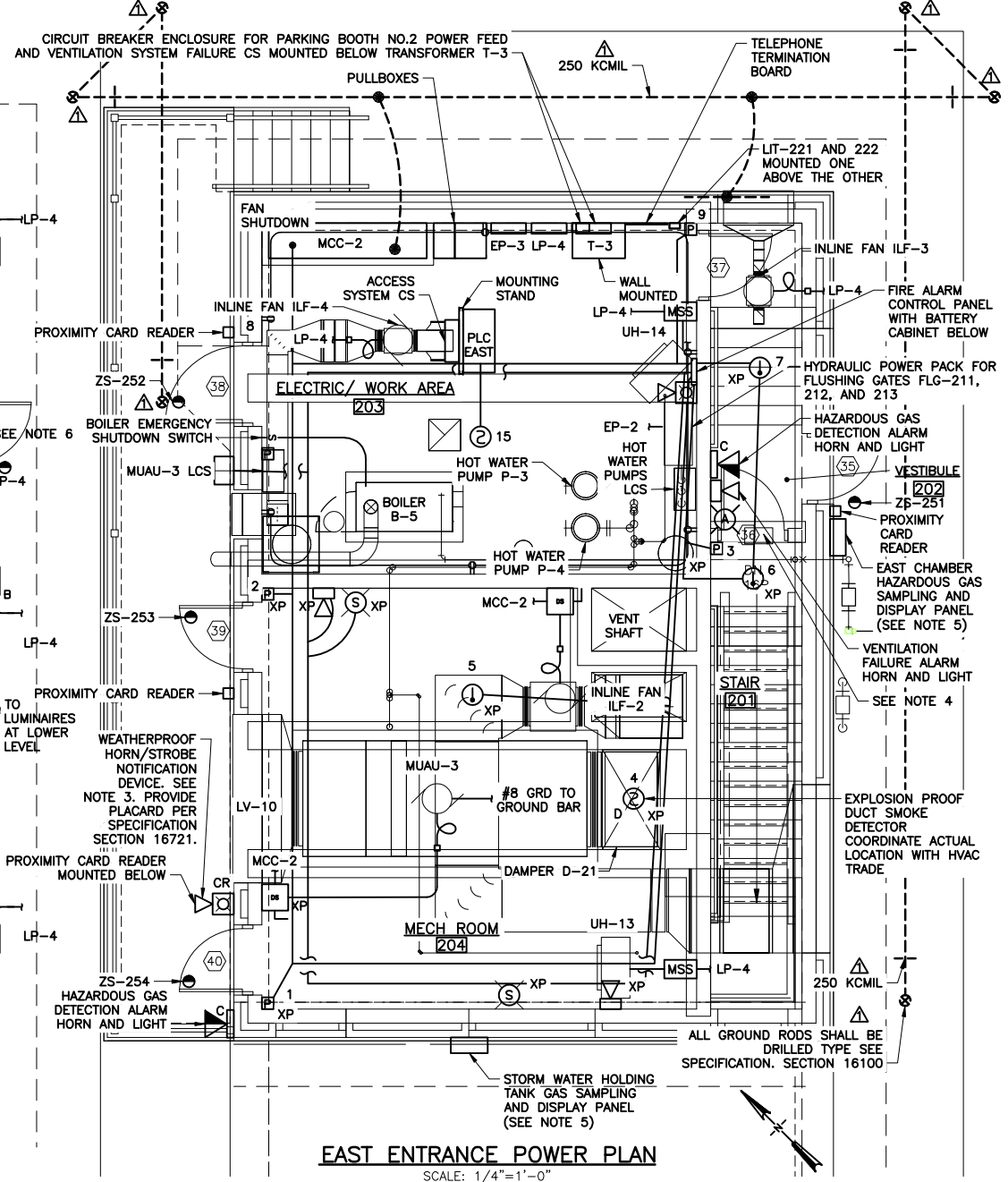
| ROOM/AREA CLASSIFICATION | | |
|--------------------------|--------------------|------------------------------|
| ROOM NUMBER | ROOM NAME | CLASSIFICATION |
| 201 | STAIR | CLASS I, DIVISION 1, GROUP D |
| 202 | VESTIBULE | CLASS I, DIVISION 2, GROUP D |
| 203 | ELECTRIC/WORK AREA | UNCLASSIFIED |
| 204 | MECH ROOM | CLASS I, DIVISION 1, GROUP D |
| -- | INTERMEDIATE LEVEL | CLASS I, DIVISION 1, GROUP D |



EAST ENTRANCE LIGHTING PLAN
SCALE: 1/4"=1'-0"

NOTES:

- ACTUAL LOCATION OF ALL FIRE ALARM SYSTEM DEVICES SHALL BE DETERMINED IN THE FIELD. ADJUST LOCATIONS TO AVOID CONFLICTS WITH UNIT HEATERS, HOT WATER PIPING, FANS VENTILATION INTAKE AND DISCHARGE LOUVERS AND OTHER EQUIPMENT.
- FOR EACH DUCT SMOKE DETECTOR AND FOR ANY DETECTOR (HEAT OR SMOKE) THAT IS NOT VISIBLE OR READILY "ACCESSIBLE", PROVIDE A REMOTE TEST STATION. TEST STATION TO BE LOCATED IN A CONVENIENT AND ACCESSIBLE LOCATION AND BE SUITABLE FOR THE AREA OF INSTALLATION. PROVIDE CONDUIT AND WIRE AS REQUIRED BY MANUFACTURER.
- PROVIDE LAMINATED PLASTIC PLACARD WITH 2" WHITE LETTERS ON RED BACKGROUND, TO READ "FIRE ALARM. IF FLASHING CALL 911 TO REPORT FIRE." MOUNT DIRECTLY BENEATH HORN/STROBE UNIT.
- PROVIDE SIGNAGE ON THE DOOR IN ACCORDANCE WITH SPEC. SEC. 16196, LABELED AS "BEFORE ENTERING THE AREA BELOW PERSONNEL ARE REQUIRED TO PLACE THE VENTILATION SYSTEM IN MAINTENANCE MODE THROUGH THE PLANT PLC."
- MOUNT ALARM LIGHT DIRECTLY ABOVE THE HORIZONTAL CENTERLINE OF GAS SAMPLING AND DISPLAY PANEL AT HEIGHT CONSISTENT WITH OTHER ALARM LIGHTS AND HORNS AND IN ACCORDANCE WITH NFPA 72.
- PROVIDE SIGNAGE ON THE DOOR IN ACCORDANCE WITH SEC. 16196, LABEL AS "BEFORE ENTERING THE AREA BELOW, PERSONNEL ARE REQUIRED TO PLACE THE VENTILATION SYSTEM IN MAINTENANCE MODE THROUGH THE PLANT PLC."



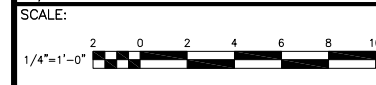
EAST ENTRANCE POWER PLAN
SCALE: 1/4"=1'-0"

LEGEND
REFERS TO ADDENDUM NO. INDICATED.
FIRE RATED WALLS

| AREA CLASSIFICATION NOTE | |
|--|--|
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ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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In charge of: WFH
Designed by: RGW/WFH
Drawn by: RGW/JBL
Checked by: WFH



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

**EAST ENTRANCE STRUCTURE
POWER AND LIGHTING PLANS**
ELECTRICAL

File Number: 00663
Date: 04/11
E-202

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

CONDUIT AND WIRE SCHEDULE *

| # | CONDUIT | | CONDUCTOR | | FUNCTION OR EQUIPMENT SERVED | COMMENTS (SEE NOTES) |
|----|---------|--------|-----------|-------------|--|-------------------------|
| | NO. | SIZE | NO. | SIZE | | |
| 1 | 1 | 5" | 3 | #2 | OUTDOOR SWITCHGEAR TO INDOOR TRANSFORMER LOAD BREAK SWITCH | 15KV CABLE |
| | 1 | 5" | - | - | | SPARE WITH PULLCORD |
| 2 | - | - | 1 | 3200AMP | INDOOR TRANSFORMER TO SWITCHBOARD | POWER BUS |
| 3 | 4 | 4" | 1 | 350KCMIL(N) | SWITCHBOARD TO MCC-1 | - |
| | 1 | 4" | 1 | #2GRD | | SPARE WITH PULLCORD |
| 4 | 2 | 3" | 1 | #4/O | FEEDER MCC-1 TO MCC-2 | TYPE RHW-USE (5) |
| | 1 | 3" | 1 | #2GRD | | SPARE WITH PULLCORD (5) |
| 5 | 2 | 3" | 3 | 350KCMIL | FEEDER MCC-1 (VIA AT-1) TO DISTRIBUTION PANEL DP-1 | - |
| 6 | 1 | 1-1/2" | 2 | #2 | FEEDER DP-1 TO ENTERTAINMENT POWER ZONE (SINGLE PHASE) | TYPE RHW-USE (5) |
| | 1 | 1-1/2" | 1 | #6GRD | | - |
| 7 | 1 | 3" | 1 | #4/O(N) | FEEDER DP-1 TO EP-1 | - |
| 8 | 1 | 1-1/2" | 3 | #2/O | FEEDER DP-1 TO TRANSFORMER T-1 | - |
| | 1 | 1-1/2" | 1 | #6GRD | | - |
| 9 | 1 | 2" | 3 | #2/O | FEEDER DP-1 TO EP-2 | - |
| | 1 | 2" | 1 | #4GRD | | - |
| 10 | 1 | 2" | 1 | #2/O(N) | FEEDER TRANSFORMER T-1 TP LP-1 | - |
| | 1 | 2" | 1 | #4GRD | | - |
| 11 | 1 | 2" | 3 | #1/O | FEEDER TRANSFORMER T-1 TO LP-2 DISCONNECT | - |
| | 1 | 2" | 1 | #4GRD | | - |
| 12 | 1 | 2" | 1 | #1/O(N) | LP-2 DISCONNECT TO LP-2 | - |
| | 1 | 2" | 1 | #4GRD | | - |
| 13 | 1 | 1" | 3 | #4 | EP-2 TO TRANSFORMER T-2 | - |
| | 1 | 1" | 1 | #6GRD | | - |
| 14 | 1 | 2" | 3 | #2/O | TRANSFORMER T-2 TO LP-3 | - |
| | 1 | 2" | 1 | #6GRD | | - |
| 15 | 1 | 1-1/2" | 3 | #2 | TRANSFORMER T-1 TO WEST PARKING BOTH DISCONNECT/TERMINAL LUG ENCLOSURE | - |
| | 1 | 1-1/2" | 1 | #6GRD | | - |
| 16 | 1 | 4" | 3 | 350KCMIL | WEST PARKING BOOTH TERMINAL LUG ENCLOSURE TO PARKING BOOTH WEST | TYPE RHW-USE (5) |
| | 1 | 4" | 1 | #2GRD | | - |
| 17 | 1 | 1" | 3 | #4 | MCC-2 TO TRANSFORMER T-3 | - |
| | 1 | 1" | 1 | #6GRD | | - |
| 18 | 1 | 1-1/2" | 3 | #2 | TRANSFORMER T-3 TO EAST PARKING BOOTH DISCONNECT | TYPE RHW-USE (5) |
| | 1 | 1-1/2" | 1 | #6GRD | | - |
| 19 | 1 | 1-1/2" | 3 | #2 | EAST PARKING BOOTH DISCONNECT TO EAST PARKING BOOTH | TYPE RHW-USE (5) |
| | 1 | 1-1/2" | 1 | #6GRD | | - |
| 20 | 1 | 1-1/2" | 3 | #2 | TRANSFORMER T-3 TO LP-4 | - |
| | 1 | 1-1/2" | 1 | #6GRD | | - |
| 21 | 1 | 1-1/2" | 3 | #2 | MCC-2 TO EP-3 | - |
| | 1 | 1-1/2" | 1 | #6GRD | | - |
| 22 | 1 | 1" | 3 | #6 | DP-1 TO TRANSFORMER T-4 | TYPE RHW-USE (5) |
| | 1 | 1" | 1 | #8GRD | | - |
| 23 | 1 | 1-1/2" | 3 | #2 | TRANSFORMER T-4 TO LP-5 | TYPE RHW-USE |
| | 1 | 1-1/2" | 1 | #6GRD | | - |

*NOTE: ALL ONE-LINE CONDUCTORS SHALL BE TYPE XHHW INSULATION UNLESS SPECIFICALLY NOTED OTHERWISE.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DATE: 05/16 PER: RCF

L: ON="; OFF="REF"
X:
08/19/10 GHG RGW
DIR/DWG

SCALE: NOT TO SCALE

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In charge of: WFH
Designed by: WFH
Drawn by: RGW/JBL
Checked by: WFH



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

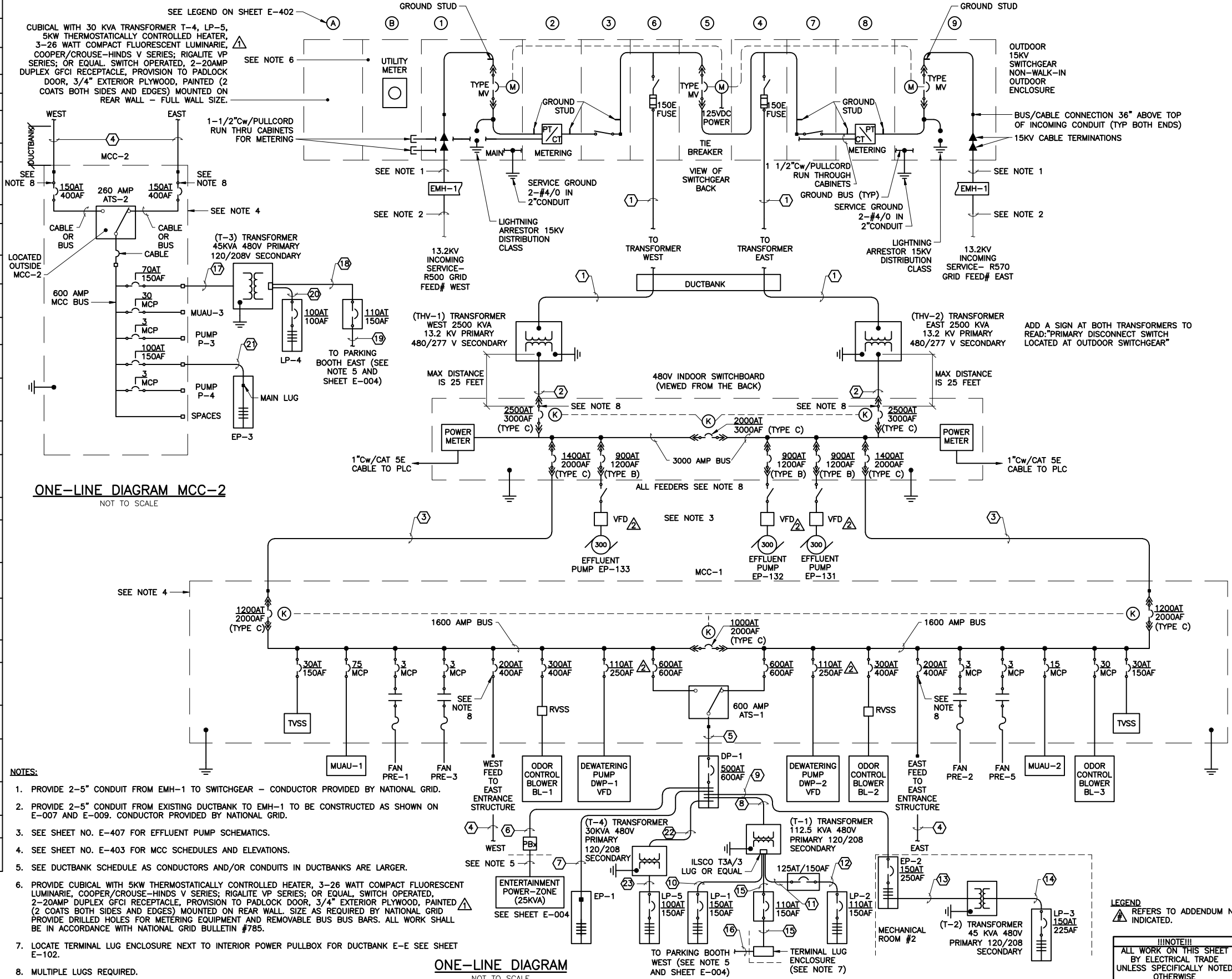
ONE-LINE DIAGRAM

ELECTRICAL



File Number: 00663
Date: 04/11

E-401



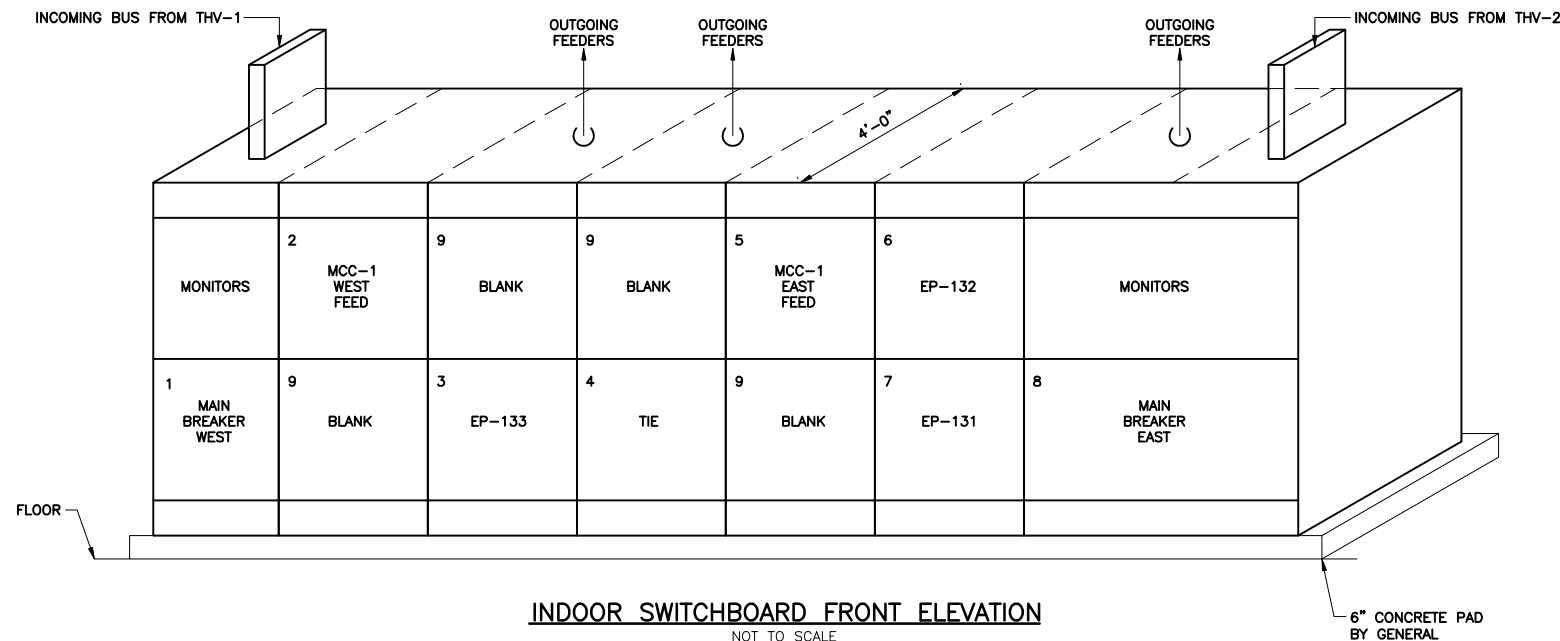
ONE-LINE DIAGRAM MCC-2
NOT TO SCALE

ONE-LINE DIAGRAM
NOT TO SCALE

- NOTES:
1. PROVIDE 2-5" CONDUIT FROM EMH-1 TO SWITCHGEAR - CONDUCTOR PROVIDED BY NATIONAL GRID.
 2. PROVIDE 2-5" CONDUIT FROM EXISTING DUCTBANK TO EMH-1 TO BE CONSTRUCTED AS SHOWN ON E-007 AND E-009. CONDUCTOR PROVIDED BY NATIONAL GRID.
 3. SEE SHEET NO. E-407 FOR EFFLUENT PUMP SCHEMATICS.
 4. SEE SHEET NO. E-403 FOR MCC SCHEDULES AND ELEVATIONS.
 5. SEE DUCTBANK SCHEDULE AS CONDUCTORS AND/OR CONDUITS IN DUCTBANKS ARE LARGER.
 6. PROVIDE CUBICAL WITH 5KW THERMOSTATICALLY CONTROLLED HEATER, 3-26 WATT COMPACT FLUORESCENT LUMINARIE, COOPER/CROUSE-HINDS V SERIES; RIGALITE VP SERIES; OR EQUAL. SWITCH OPERATED, 2-20AMP DUPLEX GFCI RECEPTACLE, PROVISION TO PADLOCK DOOR, 3/4" EXTERIOR PLYWOOD, PAINTED (2 COATS BOTH SIDES AND EDGES) MOUNTED ON REAR WALL. SIZE AS REQUIRED BY NATIONAL GRID BE IN ACCORDANCE WITH NATIONAL GRID BULLETIN #785.
 7. LOCATE TERMINAL LUG ENCLOSURE NEXT TO INTERIOR POWER PULLBOX FOR DUCTBANK E-E SEE SHEET E-102.
 8. MULTIPLE LUGS REQUIRED.

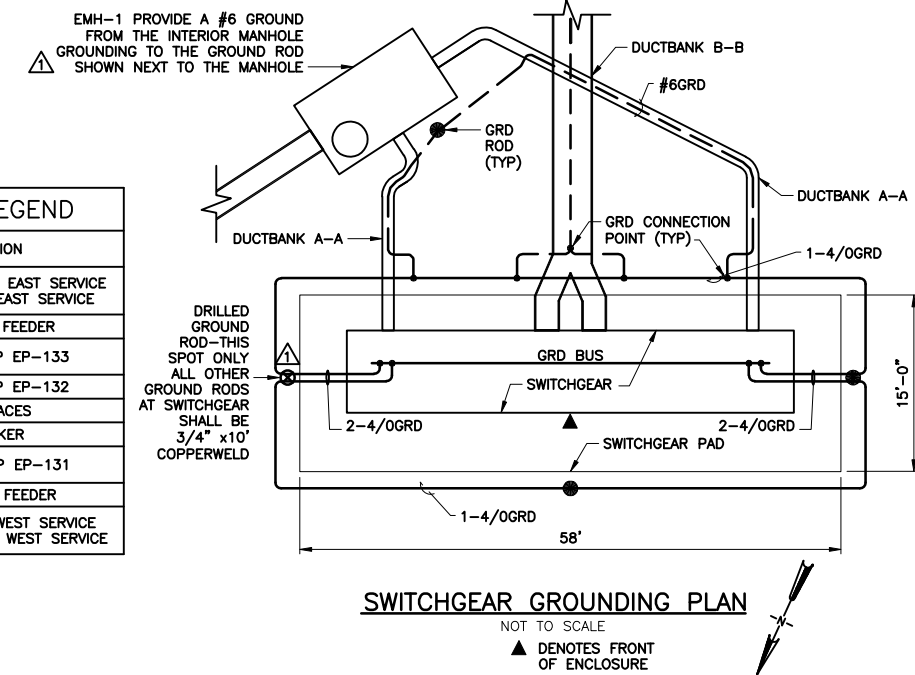
LEGEND
REFERS TO ADDENDUM NO. INDICATED.

!!NOTE!!!
ALL WORK ON THIS SHEET BY ELECTRICAL TRADE UNLESS SPECIFICALLY NOTED OTHERWISE

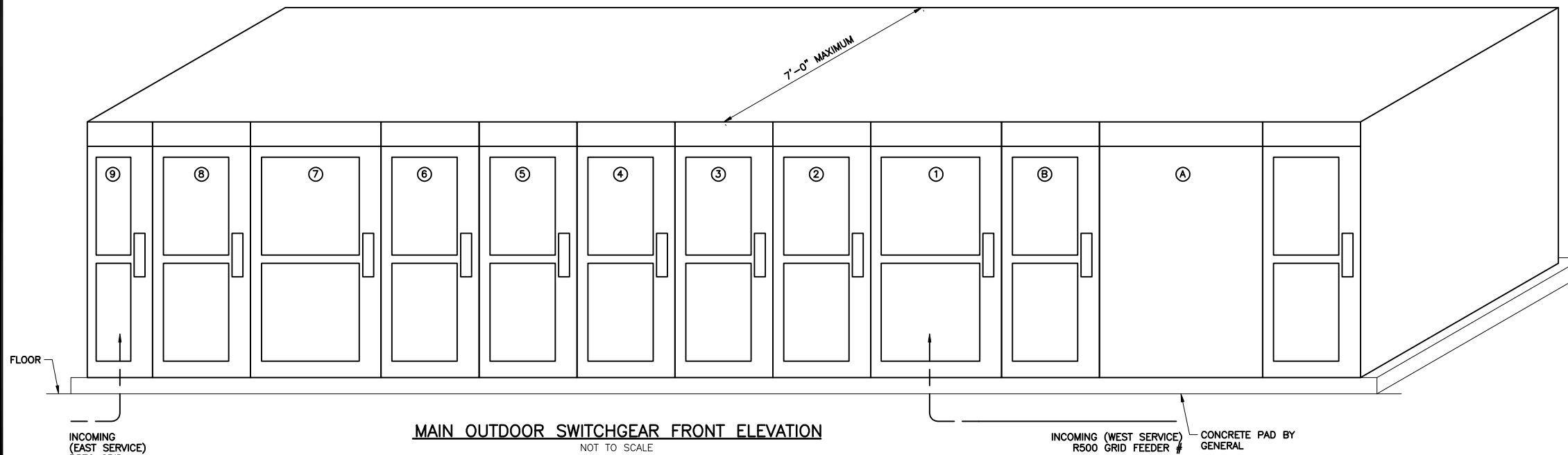


INDOOR SWITCHBOARD FRONT ELEVATION
NOT TO SCALE

| SWITCHBOARD LEGEND | |
|--------------------|---|
| UNIT NUMBER | DESCRIPTION |
| 8 | INCOMING FEEDER - EAST SERVICE MAIN BREAKER - EAST SERVICE |
| 5 | MCC-1 EAST FEEDER |
| 3 | EFFLUENT PUMP EP-133 |
| 6 | EFFLUENT PUMP EP-132 |
| 9 | BLANK SPACES |
| 4 | TIE BREAKER |
| 7 | EFFLUENT PUMP EP-131 |
| 2 | MCC-1 WEST FEEDER |
| 1 | MAIN BREAKER - WEST SERVICE INCOMING FEEDER - WEST SERVICE |



SWITCHGEAR GROUNDING PLAN
NOT TO SCALE
▲ DENOTES FRONT OF ENCLOSURE



MAIN OUTDOOR SWITCHGEAR FRONT ELEVATION
NOT TO SCALE

| MAIN SWITCHGEAR LEGEND | | |
|------------------------|---|-----------|
| SECTION | NAMEPLATE | |
| A | MAINTENANCE CUBICAL | |
| B | UTILITY BILLING METER CUBICAL | |
| 1 | INCOMING SECTION-WEST FEEDER WEST SERVICE-MAIN CIRCUIT BREAKER | FEED R500 |
| 2 | WEST SERVICE-UTILITY METERING | |
| 3 | NON-LOAD BREAK ISOLATION SWITCH | |
| 4 | FEEDER TO TRANSFORMER THV-2 | |
| 5 | TIE CIRCUIT BREAKER | |
| 6 | FEEDER TO TRANSFORMER THV-1 | ▲ |
| 7 | NON LOAD BREAK ISOLATION SWITCH | |
| 8 | EAST SERVICE-UTILITY METERING | |
| 9 | EAST SERVICE-MAIN CIRCUIT BREAKER INCOMING SECTION-EAST FEEDER | FEED R570 |

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.
DATE: 05/16 PER: RCF

LEGEND
▲ REFERS TO ADDENDUM NO. INDICATED.

!!!NOTE!!!
ALL WORK ON THIS SHEET BY ELECTRICAL TRADE UNLESS SPECIFICALLY NOTED OTHERWISE

X: 08/20/08 GHD RGW
DIR/DWG

SCALE: NOT TO SCALE

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| No. | Date | Revisions | Init |
|-----|-------|-----------------|------|
| 1 | 05/16 | RECORD DRAWINGS | |

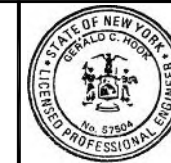
NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

In charge of -- WFH
Designed by -- WFH
Drawn by -- JBL
Checked by -- WFH



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

**SWITCHGEAR AND SWITCHBOARD
ELEVATIONS AND SCHEDULES**
ELECTRICAL

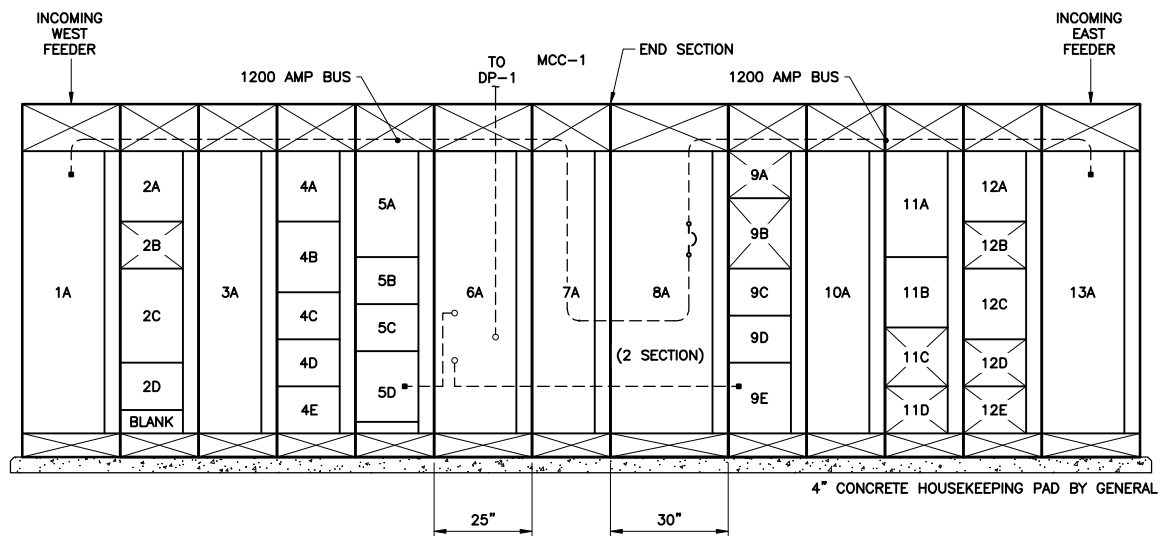


File Number
00663

Date
04/11

Gerald C. Brock

E-402



MOTOR CONTROL CENTER MCC-1

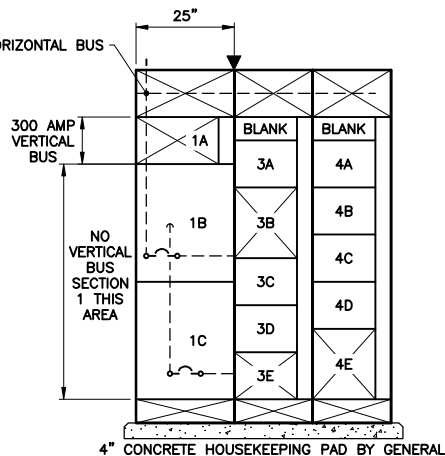
NOT TO SCALE

| COMPARTMENT NUMBER | EQUIPMENT NUMBER | EQUIPMENT IN MOTOR CONTROL CENTER MCC-2 | | | | | | | FIELD MOUNTED DEVICES | | SEE ELEMENTARY OR SCHEMATIC DIAGRAM ON SHEET: |
|--------------------|------------------|--|-------|-----------------|-------|---------|--------------------------|---------------|-----------------------|-----|---|
| | | EQUIPMENT DESCRIPTION | LOAD | CIRCUIT BREAKER | | STARTER | DOOR MOUNTED ACCESSORIES | BY ELECTRICAL | BY OTHERS | | |
| 1A | --- | SPARE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1B | MCB | CIRCUIT BREAKER WEST FEEDER (SEE NOTE 2) | --- | 150AT | 400AF | --- | --- | CBDH, NP | --- | --- | --- |
| 1C | MCB | CIRCUIT BREAKER EAST FEEDER (SEE NOTE 2) | --- | 150AT | 400AF | --- | --- | CBDH, NP | --- | --- | --- |
| 2B | TVSS | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2A | MUAU-3 | MAKE UP AIR UNIT NO. 3 VFD FEED | 10 HP | 35AT | 150AF | --- | --- | CBDH, NP | DS | --- | E-409 |
| --- | --- | --- | --- | --- | --- | --- | --- | NP | --- | --- | --- |
| 2C | P-3 | HOT WATER PUMP P-3 | 3 HP | 3A | MCP | 1 | FVNR | CBDH, NP | --- | --- | E-410 |
| 2D | P-4 | HOT WATER PUMP P-4 | 3 HP | 3A | MCP | 1 | FVNR | CBDH, NP | --- | --- | E-410 |
| 2E | --- | SPACE | --- | --- | --- | --- | --- | NP* | --- | --- | --- |
| 3A | T-3 | TRANSFORMER FEED | 45KVA | 70AT | 150AF | --- | --- | CBDH, NP | --- | --- | --- |
| 3B | EP-3 | PANELBOARD | 35KW | 100AT | 150AF | --- | --- | NP | --- | --- | --- |
| 3C | ILF-2 | INLINE FAN NO. 2 | 7.5HP | 15 | MCP | 1 | FVNR | CBDH, NP | --- | --- | E-411 |
| 3D | ILF-4 | INLINE FAN NO. 4 | 1/2HP | 3A | MCP | 1 | FVNR | NP | --- | --- | E-411 |
| 3E | --- | SPACE | --- | --- | --- | --- | --- | NP* | --- | --- | --- |

* LEAVE NAMEPLATE BLANK - NO LETTERING

NOTES:

1. PROVIDE 120KA SURGE RATING.
2. MULTIPLE INCOMING LUGS ARE REQUIRED.



MOTOR CONTROL CENTER MCC-2

NOT TO SCALE

| COMPARTMENT NUMBER | EQUIPMENT NUMBER | EQUIPMENT IN MOTOR CONTROL CENTER MCC-1 | | | | | | | FIELD MOUNTED DEVICES | | SEE ELEMENTARY OR SCHEMATIC DIAGRAM ON SHEET: |
|--------------------|------------------|--|----------------|-----------------|--------|---------|--------------------------|-----------------------------|-----------------------|---------------------|---|
| | | EQUIPMENT DESCRIPTION | LOAD | CIRCUIT BREAKER | | STARTER | DOOR MOUNTED ACCESSORIES | BY ELECTRICAL | BY OTHERS | | |
| 1A | MCB | MAIN CIRCUIT BREAKER WEST | --- | 1200AT | 1600AF | --- | --- | CBDH, NP | --- | --- | 100% RATED CB |
| 2A | --- | SURGE SUPPRESSION DEVICE FOR WEST SERVICE(160KA SURGE) | --- | --- | 250AF | --- | --- | CBDH, NP | --- | --- | --- |
| 2B | --- | WEST PMX2270 POWER MODULE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2C | --- | SPACE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2D | PRE-1 | POWER ROOF EXHAUSTER NO.1 | 1.5HP | 7A | MCP | --- | --- | CBDH, NP, RUN IND, FAIL IND | --- | DS, TSTAT, LOUVERS | E-410 |
| 3A | BL-1 | ODOR CONTROL BLOWER NO.1 | 125 HP | 400AT | 600AF | 6 | RVSS | CBDH, NP, RUN IND, FAIL IND | DS | CONTROL PANEL | E-409 |
| 4A | --- | WEST FEED TO EAST ENTRANCE STRUCTURE | --- | 200AT | 400 AF | --- | --- | CBDH, NP | --- | --- | --- |
| 4B | --- | CAPACITOR BANK BLOWER 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| --- | --- | SPACE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| --- | --- | SPACE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| --- | --- | SPACE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5A | DWP-121 | DEWATERING PUMP NO. 1 VFD FEED | 40 HP | 90AT | 150AF | --- | --- | CBDH, NP | DS, VFD, FILTER | --- | E-407 |
| 5B | CLS-1 | CLAMSHELL POWER FEED | 2@7.5HP, 3@1HP | 60AT | 150AF | --- | --- | CBDH, NP | DS | --- | --- |
| 5C | MUAU-1 | MAKE UP AIR HANDLING UNIT FEED 1 | 40 HP | 100A | MCP | 4 | FVNR | CBDH, NP | DS | CS | E-409 |
| 5D | --- | WEST ATS FEED | --- | 200AT | 250AF | --- | --- | CBDH, NP | --- | --- | --- |
| 6A | --- | 600A ATS | --- | --- | --- | --- | --- | NP | --- | --- | --- |
| 7A | --- | BLANK, REAR TIE BREAKER WEST SIDE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| --- | --- | END SECTION | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8A | --- | TIE BREAKER | --- | 1000AT | 1600AF | --- | --- | CBDH, NP | --- | --- | 80% RATED CB |
| 9A | DWP-122 | DEWATERING PUMP NO.2 VFD FEED - EAST SIDE | 40 HP | 90AT | 150AF | --- | --- | CBDH, NP | DS, VFD, FILTER | --- | E407 |
| 9B | --- | SPACE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9C | BL-3 | ODOR CONTROL BLOWER NO. 3 | 20 HP | 50A | MCP | 2 | FVNR | CBDH, NP, RUN IND, FAIL IND | DS | CONTROL PANEL | E-409 |
| 9D | MUAU-2 | MAKE UP AIR HANDLING UNIT FEED 2 | 7.5 HP | 20AT | MCP | --- | --- | CBDH, NP | DS, COMBO STARTER | CS | E-409 |
| 9E | --- | EAST ATS FEED | --- | 200AT | 250AF | --- | --- | CBDH, NP | --- | --- | --- |
| 10A | BL-2 | ODOR CONTROL BLOWER NO.2 | 125 HP | 400AT | 600AF | 6 | RVSS | CBDH, NP, RUN IND, FAIL IND | DS | CONTROL PANEL | E-409 |
| 11A | PRE-5 | POWER ROOF EXHAUSTER NO.5 | 1.5 HP | 7A | MCP | --- | --- | CBDH, NP, RUN IND, FAIL IND | --- | DS | E-410 |
| 11B | PRE-2 | POWERED ROOF EXHAUSTER NO. 2 | 1.5 HP | 7A | MCP | --- | --- | CBDH, NP, RUN IND, FAIL IND | --- | DS, T-STAT, LOUVERS | E-410 |
| 11C | --- | CAPACITOR BANK BLOWER 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11D | --- | SPACE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12A | --- | SURGE SUPPRESSION DEVICE FOR EAST SERVICE(160KA SURGE) | --- | --- | 250AF | --- | --- | CBDH, NP | --- | --- | --- |
| 12B | --- | EAST PMX2270 POWER MODULE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12C | PRE-3 | POWERED ROOF EXHAUSTER NO. 3 | 1.5 HP | 7A | MCP | --- | --- | CBDH, NP, RUN IND, FAIL IND | --- | DS | E-410 |
| 12D | --- | EAST FEED TO EAST ENTRANCE STRUCTURE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| --- | --- | SPACE | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13A | --- | MAIN CIRCUIT BREAKER- EAST | --- | 1200AT | 1600AF | --- | --- | CBDH, NP | --- | --- | 100% RATED CB |

F07

IN MCC SCHEDULE FOR MCC-1, IN THE COLUMN HEADED STARTER SHOW A "SIZE 1/FVNR" FOR EACH OF THE FANS PRE 1, 2, 3 AND 5. THESE ARE IN COMPARTMENT NOS 4A, 4B, 11B, AND 12C RESPECTIVELY. NOTE, THE MCC ELEVATIONS SHOW SUFFICIENT SPACE FOR THESE STARTERS AND THE FAN ELEMENTARY DIAGRAMS, SHOWN ON SHEET E-410, SHOWS THESE STARTERS IN THE MCC.

IN MCC SCHEDULE FOR MCC-2, NOTE THE HP FOR FAN ILF-2, COMPARTMENT 4C, HAS INCREASED FROM 5 TO 7.5. THERE ARE NO OTHER CHANGES IDENTIFIED FOR THIS UNIT.

THE CONTRACTOR'S MCC SUPPLIER SHALL COORDINATE THE PROPER OVERCURRENT DEVICE SIZING FOR EACH MOTOR SERVED.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DATE: 05/16 PER: RCF

L: ON=*, OFF=*REF*
X:
08/19/10 GHD RGW
DIR/DWG

SCALE: NOT TO SCALE

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| 1 | 05/16 | RECORD DRAWINGS | |

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In charge of ___ WFH
Designed by ___ WFH
Drawn by ___ RGW
Checked by ___ WFH

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

MCC ELEVATIONS AND SCHEDULES



File Number
00663

Date
04/11

Signature

E-403

ELECTRICAL

| LOCATION: EAST ENTRANCE ELECTRICAL/WORK AREA MAIN BUS RATINGS: 125 AMP, 277/480 VOLTS, 3 PHASE, 4 WIRE MINIMUM SHORTCIRCUIT INTERRUPTION RATING: 35,000 MAIN: LUG ONLY CONNECTED LOAD: WITH FUTURE: 35KW | | | | PANELBOARD EP-3 SCHEDULE SEE PANELBOARD NOTES 1 THROUGH 3 | | | | FED FROM: MCC-2 INCOMING FEED: 1-1/2" CW/3#2, 1#2N, 1#6GRD ENCLOSURE: NEMA 1 * INDICATES GFCI CIRCUIT BREAKER | | | |
|--|--------------|--------|--------------|--|-------|----------------------------------|--------------|--|--------------|------------------------------|--|
| DESCRIPTION | DIAGRAM/NOTE | LOAD | CB TRIP/POLE | CIR. | A B C | CIR. | CB TRIP/POLE | LOAD | DIAGRAM/NOTE | DESCRIPTION | |
| HYDRAULIC PACK | E-406 | 3/4 HP | 20A/3P | 1 3 5 7 | | 2 4 6 8 | 70A/3P | 8.3 HP | E-406 | SLUICE GATE SG-215 | |
| PARKING LOT WALL LIGHTS | E-007 | 1.2KW | 20A/3P | 9 11 13 15 17 | | 10 12 14 16 18 | 20A/3P | 8KW | E-008 | PARKING LOT EAST SIDE LIGHTS | |
| SPACE | - | - | 20A/3P | 19 21 23 25 27 29 | | 20 22 24 26 28 30 | - | - | - | SPACE | |

| LOCATION: CLINTON STORAGE FACILITY ELECTRICAL ROOM MAIN BUS RATINGS: 600 AMP, 277/480 VOLTS, 3 PHASE, 4 WIRE MINIMUM SHORTCIRCUIT INTERRUPTION RATING: 65,000 MAIN BREAKER: 500AT/600AF CONNECTED LOAD: 300KW | | | | PANELBOARD DP-1 SCHEDULE SEE PANELBOARD NOTES 1 THROUGH 3 | | | | FED FROM: ATS-1(MCC-1) INCOMING FEED: 2-3" CW/4#350KCMIL, 1#2/0GRD ENCLOSURE: NEMA 1 63 INCH MOUNTING HEIGHT | | | |
|---|--------------|----------|--------------|--|-------|--------|--------------|---|--------------|---|--|
| DESCRIPTION | DIAGRAM/NOTE | LOAD | CB TRIP/POLE | INCHES | A B C | INCHES | CB TRIP/POLE | LOAD | DIAGRAM/NOTE | DESCRIPTION | |
| ENTERTAINMENT POWER ZONE | E-401 | 25 KVA | 2P/100 | - | | - | 60/3P | 3.3HP | E-406 | SLUICE GATE 113 | |
| SPARE | - | - | - | - | | - | - | - | - | - | |
| SLUICE GATE 116 | E-406 | 4.9 HP | 3P/50 | - | | - | 45/3P | 12KW | E-405 | 15KV OUTSIDE GEAR, MAINTENANCE CUBICLE TRANSFORMER T4 | |
| SLUICE GATE SLG-111 | E-406 | 3.3 HP | 30A/3P | - | | - | 30A/3P | 3.3 HP | E-406 | SLUICE GATE SLG-112 | |
| SLUICE GATE SLG-114 & 115 | E-406 | 2@ 1.3HP | 20A/3P | - | | - | 20A/3P | 1 HP | E-406 | OUTSIDE GATE OPERATOR | |
| SPACE | - | - | - | - | | - | - | - | - | SPACE | |
| EP-1 | E-405 | 12KW | 45A/3P | - | | - | - | - | - | SPACE | |
| EP-2 | E-401 | 70 KW | 175/3P | - | | - | 175A/3P | 112.5 KVA | E-401 | TRANSFORMER T-1 | |

PANELBOARD GENERAL NOTES:

- FOR THREE PHASE CIRCUITS - PROVIDE 3/4" C w/ 3#12, 1#12 GRD FOR 20 AMP CIRCUITS SERVING EQUIPMENT WITHIN 60' OF PANELBOARD. UNLESS OTHERWISE NOTED, INCREASE CONDUIT AND WIRE SIZES IN ACCORDANCE WITH SPEC. SECTIONS 16110, 16120, AND THE N.E.C. FOR LONGER CIRCUITS OR CIRCUITS MORE THAN 20 AMPS.
- FOR SINGLE PHASE CIRCUITS - PROVIDE 3/4" C w/ 2#12, 1#12 GRD FOR 20 AMP CIRCUITS SERVING EQUIPMENT WITHIN 60' OF PANELBOARD. UNLESS OTHERWISE NOTED, INCREASE CONDUIT AND WIRE SIZE IN ACCORDANCE WITH SPEC. SECTIONS 16120, 16110, AND THE N.E.C. FOR LONGER CIRCUITS OR CIRCUITS MORE THAN 20 AMPS.
- CONDUIT SIZES SHOWN ARE NOT FOR USE IN DUCTBANKS, SEE DUCTBANK SCHEDULE FOR CONDUIT SIZE.

| LOCATION: CLINTON STORAGE FACILITY ELECTRICAL ROOM MAIN BUS RATINGS: 250 AMP, 277/480 VOLTS, 3 PHASE, 4 WIRE MINIMUM SHORTCIRCUIT INTERRUPTION RATING: 35,000 MAIN: LUGS ONLY CONNECTED LOAD: 97KW | | | | PANELBOARD EP-1 SCHEDULE SEE PANELBOARD NOTES 1 THROUGH 3 | | | | FED FROM: DP-1 INCOMING FEED: 3" CW/3#4/0, 1#4/0N, 1#2GRD ENCLOSURE: NEMA 1 * INDICATES GFCI CIRCUIT BREAKER | | | |
|--|--------------|----------|--------------|--|-------|----------------------------------|--------------|---|--------------|--|--|
| DESCRIPTION | DIAGRAM/NOTE | LOAD | CB TRIP/POLE | CIR. | A B C | CIR. | CB TRIP/POLE | LOAD | DIAGRAM/NOTE | DESCRIPTION | |
| WEST SIDE PARKING LOT LUMINARIES | E-008 | 10KW | 20A/3P | 1 3 5 7 | | 2 4 6 8 | 15A/3P | 1 HP | E-003 | GRIT ROOM (109) OVERHEAD DOOR OPERATOR | |
| ELECTRIC ROOM (117) OVERHEAD DOOR OPERATOR | E-102 | 1HP | 15A/3P | 9 11 13 15 17 | | 10 12 14 16 18 | 20A/3P | 10KW | E-008 | WEST SIDE PARKING LOT LIGHTS | |
| ELECTRIC UNIT HEATERS (EUH-1, EUH-2, EUH-3, AND EUH-4) | E-411 | 25KW | 40A/3P | 19 21 23 25 27 29 | | 20 22 24 26 28 30 | - | - | - | SPACE | |
| CABINET UNIT HEATER CUH-1 | E-411 | 1.5KW | 15A/1P | 31 | | 32 | 45A/1P | 10KW | E-401 | INSTANTANEOUS WATER HEATER EWH-1 | |
| CABINET UNIT HEATER CUH-2 | E-411 | 3KW | 15A/1P | 33 | | 34 | 45A/1P | 10KW | E-401 | INSTANTANEOUS WATER HEATER EWH-1 | |
| CABINET UNIT HEATER CUH-3 | E-411 | 3KW | 15A/1P | 35 | | 36 | 20A/1P | - | - | SPACE | |
| SUMP PUMPS SP-171 AND SP-172 CP POWER FEED | E-406 | 2@ 1/2HP | 20A/3P | 37 39 | | 38 40 | 30A/3P | 2 HP | E-406 | DEWATER PUMPS HOIST PWR. FEED | |
| SPACE | - | - | - | 41 | | 42 | - | - | - | SPACE | |

| LOCATION: CLINTON STORAGE FACILITY MECH ROOM #2 MAIN BUS RATINGS: 250 AMP, 277/480 VOLTS, 3 PHASE, 4 WIRE MINIMUM SHORTCIRCUIT INTERRUPTION RATING: 35,000 MAIN BREAKER: 150AT/250AF CONNECTED LOAD: 70KW | | | | PANELBOARD EP-2 SCHEDULE SEE PANELBOARD NOTES 1 THROUGH 3 | | | | FED FROM: DP-1 INCOMING FEED: 2" CW/3#2/0, 1#2/0N, 1#4GRD ENCLOSURE: NEMA 1 * INDICATES GFCI CIRCUIT BREAKER | | | |
|---|--------------|--------|--------------|--|-------|----------------------------------|--------------|---|--------------|---|--|
| DESCRIPTION | DIAGRAM/NOTE | LOAD | CB TRIP/POLE | CIR. | A B C | CIR. | CB TRIP/POLE | LOAD | DIAGRAM/NOTE | DESCRIPTION | |
| TRANSFORMER T-2 | E-401 | 45 KVA | 70A/3P | 1 3 5 7 | | 2 4 6 8 | 15A/3P | 2@ 1HP | E-003 | TRUCK LOADING (108) AND STORAGE (104) OVERHEAD DOOR OPERATORS | |
| INLINE FAN ILF-1 COMBINATION STARTER | E-410 | 1HP | 20A/3P | 9 11 13 15 17 | | 10 12 14 16 18 | - | - | - | FUTURE STORAGE ROOM LOADS | |
| HOT WATER PUMPS P-1 AND P-2 CONTROL PANEL POWER FEED | E-410 | 15HP | 40A/3P | 19 21 23 25 27 29 | | 20 22 24 26 28 30 | - | - | - | FUTURE STORAGE ROOM LOADS | |
| TRUCK LOADING, ACCESS HATCH OVERHEAD DOOR OPERATOR | E-003 | 2@ 1HP | 15A/3P | 31 33 35 | | 32 34 36 | - | - | - | FUTURE STORAGE ROOM LOADS | |
| SPACE | - | - | - | 37 39 | | 38 40 | - | - | - | SPACE | |
| SPACE | - | - | - | 41 | | 42 | - | - | - | SPACE | |

FO 5
ON DRAWING E-404, REVISE THE PANELBOARD EP-1 SCHEDULE AS FOLLOWS:
CHANGE THE 3 POLE FEEDER BREAKER FOR THE ELECTRIC UNIT HEATERS,
CIR. NO. 13, 15, 17 FROM A 35 AMP TRIP TO A 40 AMP TRIP.

FO 22
IN PANELBOARD EP-1 CHANGE THE 20 AMP, 3 POLE CIRCUIT BREAKERS TO 15
AMP, 3 POLE AT CIR NOS 2, 4, 6 AND 7, 9, 11. CONDUIT AND WIRE TO STAY AS
DESIGNED.

IN PANELBOARD EP-2 CHANGE THE 20 AMP, 3 POLE CIRCUIT BREAKERS TO 15
AMP, 3 POLE AT CIR NOS. 2, 4, 6. CONDUIT AND WIRE TO STAY AS DESIGNED.

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP

RECORD DRAWING

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DATE: 05/16 PER: RCF

L: ON*; OFF=REF*
X:
08/20/08 GHG RGW
DIR/DWG

SCALE: NOT TO SCALE

In charge of ___ WFH ___
Designed by ___ RGW ___
Drawn by ___ JBL ___
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ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

PANELBOARD SCHEDULES

ELECTRICAL



File Number
00663

Date
04/11

E-404

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NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209
SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

| LOCATION:CLINTON STORAGE FACILITY ELECTRICAL ROOM (117) MAIN BUS RATINGS:225 AMP, 208Y/120 VOLTS, 3 PHASE, 4 WIRE MINIMUM SHORTCIRCUIT INTERRUPTION RATING:22,000 MAIN BREAKER TRIP:150 AT CONNECTED LOAD: 26KW | | | | PANELBOARD LP-1 SCHEDULE | | | | FED FROM:T-1 INCOMING FEED:2"Cw/3#2/0, 1#2/ON, 1#4GRD ENCLOSURE:NEMA 1 * INDICATES GFCI CIRCUIT BREAKER | | | |
|---|--------------|-------|--------------|--------------------------|-------|------|--------------|--|--------------|---|--|
| SEE PANELBOARD NOTES 1 THROUGH 4 | | | | | | | | | | | |
| DESCRIPTION | DIAGRAM/NOTE | LOAD | CB TRIP/POLE | CIR. | A B C | CIR. | CB TRIP/POLE | LOAD | DIAGRAM/NOTE | DESCRIPTION | |
| AIR CONDITIONER PTAC-1 (208V) | - | - | 20A/2P | 1 | | 2 | 15A/1P | 1400W | E-103 | ELECTRICAL ROOM MAIN LIGHTING | |
| PLC-WEST | E-102 | 2400 | 30A/1P | 5 | | 4 | 15A/1P | 225W | E-103 | ROOF STAIRS AND ROOF EXTERIOR LIGHT | |
| FIRE ALARM CONTROL PANEL | E-412 | 2400 | 30A/1P | 7 | | 6 | 15A/1P | 550W | E-103 | CONTROL ROOM LIGHTING | |
| ELECTRIC WATER COOLER EWC-1 | E-411 | 1500W | 20A/1P | 9 | | 8 | 15A/1P | 175W | E-103 | JANITOR CLOSET & BATHROOM LIGHTING | |
| ACCESS CONTROL SYSTEM | E-406 | 1800W | 20A/1P | 11 | | 10 | 15A/1P | 255W | E-103 | VESTIBULE 110, 114 AND HALL LIGHTING | |
| VENTILATION SYSTEM FAILURE CS | E-408 | 200W | 20A/1P | 13 | | 12 | 15A/1P | 100W | E-103 | ELEC RM, & HALL EXIT SIGNS | |
| EFFLUENT SAMPLER | E-406 | 1500W | 20A/1P | 15 | | 14 | 15A/1P | 320W | E-103 | WEST & SOUTH EXTERIOR LIGHTING | |
| SPARE | - | - | 20A/1P | 17 | | 16 | 20A/1P | 1800W | E-103 | ELECTRICAL ROOM S & W WALL RECEPTACLES | |
| SPARE | - | - | 20A/1P | 19 | | 18 | 20A/1P | 1500W | E-103 | ELEC. S & E WALL & PUMP AREA RECEPT | |
| SPARE | - | - | 20A/1P | 21 | | 20 | 20A/1P | 1800W | E-103 | CONTROL ROOM RECEPTACLES | |
| SPARE | - | - | 20A/1P | 23 | | 22 | 20A/1P | 1800W | E-103 | CONTROL ROOM RECEPTACLES | |
| FIRE ALARM NAC PANELS | - | - | 20A/1P | 25 | | 24 | 20A/1P* | 1800W | E-103 | BATHROOM, HALL, JANITOR CLOSET, RECEPT. | |
| SPARE | - | - | 20A/1P | 27 | | 26 | 20A/1P* | 900W | E-105 | ROOF RECEPTACLES | |
| SPARE | - | - | 20A/1P | 29 | | 28 | 20A/1P | 200W | I-103 | WEATHER STATION | |
| SPACE | - | - | - | 31 | | 30 | 20A/1P | - | - | SPARE | |
| SPACE | - | - | - | 33 | | 32 | 20A/1P | - | - | SPARE | |
| SPACE | - | - | - | 35 | | 34 | 20A/1P | - | - | SPARE | |
| SPACE | - | - | - | 37 | | 36 | 20A/1P | - | - | SPARE | |
| SPACE | - | - | - | 39 | | 38 | - | - | - | SPACE | |
| SPACE | - | - | - | 41 | | 40 | - | - | - | SPACE | |
| SPACE | - | - | - | - | | 42 | - | - | - | SPACE | |

| LOCATION:CLINTON STORAGE FACILITY ELECTRICAL ROOM (117) MAIN BUS RATINGS:225 AMP, 208Y/120 VOLTS, 3 PHASE, 4 WIRE MINIMUM SHORTCIRCUIT INTERRUPTION RATING: 22,000 MAIN BREAKER TRIP:110 AT CONNECTED LOAD: 23KW | | | | PANELBOARD LP-2 SCHEDULE | | | | FED FROM:T-1 INCOMING FEED:1-1/2"Cw/3#2/0, 1#2/ON, 1#6GRD ENCLOSURE:NEMA 1 * INDICATES GFCI CIRCUIT BREAKER | | | |
|--|--------------|---------|--------------|--------------------------|-------|------|--------------|--|--------------|--------------------------------------|--|
| SEE PANELBOARD NOTES 1 THROUGH 4 | | | | | | | | | | | |
| DESCRIPTION | DIAGRAM/NOTE | LOAD | CB TRIP/POLE | CIR. | A B C | CIR. | CB TRIP/POLE | LOAD | DIAGRAM/NOTE | DESCRIPTION | |
| FAN PRE-4 | E-410 | 1/6HP | 15A/1P | 1 | | 2 | 20A/1P | 1000W | E-103 | ODOR CONTROL ROOM NORTH LIGHTING | |
| GRIT ROOM (109) UH-1 AND UH-2 | E-411 | 2#1/4HP | 20A/1P | 3 | | 4 | 15A/1P | 525W | E-103 | ELECTRICAL ROOM PUMP AREA LIGHTS | |
| ODOR CONTROL ROOM (105) UH-6 AND UH-7 | E-411 | 2#1/4HP | 20A/1P | 5 | | 6 | 15A/1P | 600W | E-103 | GRIT ROOM WALKWAY LIGHTING | |
| SPARE | E-411 | 300W | 15A/1P | 7 | | 8 | 25A/1P | 2350W | E-103 | GRIT ROOM PIT AREA LIGHTING | |
| SPARE | E-407 | 300W | 15A/1P | 9 | | 10 | 15A/1P | 925W | E-101 | INTERMEDIATE LEVEL WALKWAY LIGHTING | |
| SPARE | E-407 | 300W | 15A/1P | 11 | | 12 | 20A/1P | 1700W | E-101 | EFFLUENT CHAMBER PIT LIGHTS | |
| EFFLUENT PUMP EP-131 LUBRICATION UNIT | E-407 | 1/3HP | 20A/1P | 13 | | 14 | 15A/1P | 320W | E-103 | NORTH SIDE AND ACCESS HATCH LIGHTS | |
| EFFLUENT PUMP EP-132 LUBRICATION UNIT | E-407 | 1/3HP | 20A/1P | 15 | | 16 | 20A/1P | 1500W | E-103 | ODOR CONTROL ROOM WEST SIDE RECEPT. | |
| EFFLUENT PUMP EP-133 LUBRICATION UNIT | E-407 | 1/3HP | 20A/1P | 17 | | 18 | 20A/1P | 1800W | E-103 | ELEC. ROOM PUMP AREA & N WALL RECEPT | |
| ODOR CONTROL BLOWER LOCAL CS | E-409 | 750W | 30A/1P | 19 | | 20 | 20A/1P | 1500W | E-103 | ODOR CONTROL ROOM SOUTH LIGHTING | |
| EFFLUENT HAZARDOUS GAS CS AIT-136 | I-103 | 750W | 20A/1P | 21 | | 22 | 15A/1P | 1/4HP | E-411 | ACCESS ROOM (106) UH-15 | |
| SURVEILLANCE CAMERAS CAM-W-1, CAM-W-2 | E-104 | 750W | 20A/1P | 23 | | 24 | 20A/1P* | 1/4HP | E-406 | METER VAULT SUMP PUMP | |
| CEILING FAN CF-1 | E-411 | 64W | 15A/1P | 25 | | 26 | 20A/1P | - | - | SPARE | |
| CEILING FAN CF-2 | E-411 | 64W | 15A/1P | 27 | | 28 | 20A/1P | - | - | SPARE | |
| SPARE | - | - | 20A/1P | 29 | | 30 | 20A/1P | - | - | SPARE | |
| SPARE | - | - | 20A/1P | 31 | | 32 | 20A/1P | - | - | SPARE | |
| SPACE | - | - | - | 33 | | 34 | - | - | - | SPACE | |
| SPACE | - | - | - | 35 | | 36 | - | - | - | SPACE | |
| SPACE | - | - | - | 37 | | 38 | - | - | - | SPACE | |
| SPACE | - | - | - | 39 | | 40 | - | - | - | SPACE | |
| SPACE | - | - | - | 41 | | 42 | - | - | - | SPACE | |

PANELBOARD GENERAL NOTES:

- FOR THREE PHASE CIRCUITS - PROVIDE 3/4" C w/ 3#12, 1#12 GRD FOR 20 AMP CIRCUITS SERVING EQUIPMENT WITHIN 60' OF PANELBOARD, UNLESS OTHER WISE NOTED. INCREASE CONDUIT AND WIRE SIZES IN ACCORDANCE WITH SPEC. SECT. 16120 AND THE N.E.C. FOR LONGER CIRCUITS OR CIRCUITS MORE THAN 20 AMPS.
- FOR SINGLE PHASE CIRCUITS - PROVIDE 3/4" C w/ 2#12, 1#12 GRD FOR 20 AMP CIRCUITS SERVING EQUIPMENT WITHIN 60' OF PANELBOARD, UNLESS OTHER WISE NOTED. INCREASE CONDUIT AND WIRE SIZE IN ACCORDANCE WITH SPEC. SECTION 16120 AND THE N.E.C. FOR LONGER CIRCUITS OR CIRCUITS MORE THAN 20 AMPS.
- CONDUIT SIZES SHOWN ARE NOT FOR USE IN DUCTBANKS, SEE DUCTBANK SCHEDULE FOR CONDUIT SIZE.
- ALL RECEPTACLE CIRCUITS SHALL BE POWERED THROUGH A GFCI CIRCUIT BREAKER, EXCEPT AS FOLLOWS:
 - WHEN THE DISTANCE TO THE FIRST RECEPTACLE IS OVER 50' IN LENGTH, USE A STANDARD CIRCUIT BREAKER AND PROVIDE A FEED THROUGH GFCI TYPE RECEPTACLE.
 - ALL RECEPTACLES MOUNTED IN LIGHT POLES OR ON HANDRAIL SHALL BE GFCI TYPE.
 - PROVIDE GFCI RECEPTACLES AT ALL LOCATION WHERE RECEPTACLES ARE MORE THAN 50' APART.
 - PROVIDE GFCI RECEPTACLES FOR ALL SINGLE PHASE CORD CONNECTED, SUBMERSIBLE PUMP, MIXERS, ETC.

L: ON=*, OFF=REF*
X:
08/20/08 GHG RGW
DIR/DWG

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 05/16 PER: RCF

SCALE: NOT TO SCALE

| No. | Date | Revisions | Init |
|-----|-------|-----------------|------|
| 1 | 05/16 | RECORD DRAWINGS | |

In charge of ___ WFH ___
Designed by ___ RGW ___
Drawn by ___ JBL ___
Checked by ___ WFH ___



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

| LOCATION:CLINTON STORAGE FACILITY MECHANICAL ROOM NO. 2 (103) MAIN BUS RATINGS:225 AMP, 208Y/120 VOLTS, 3 PHASE, 4 WIRE MINIMUM SHORTCIRCUIT INTERRUPTION RATING: 22,000 MAIN BREAKER TRIP:150 AT CONNECTED LOAD: 27KW | | | | PANELBOARD LP-3 SCHEDULE | | | | FED FROM:T-2 INCOMING FEED:3"Cw/3#2/0, 1#2/ON, 1#6GRD ENCLOSURE:NEMA 1 * INDICATES GFCI CIRCUIT BREAKER | | | |
|--|--------------|---------|--------------|--------------------------|-------|------|--------------|--|--------------|---------------------------------------|--|
| SEE PANELBOARD NOTES 1 THROUGH 4 | | | | | | | | | | | |
| DESCRIPTION | DIAGRAM/NOTE | LOAD | CB TRIP/POLE | CIR. | A B C | CIR. | CB TRIP/POLE | LOAD | DIAGRAM/NOTE | DESCRIPTION | |
| MECH ROOM (101) UH-3 AND UH-4 | E-411 | 2#1/4HP | 20A/1P | 1 | | 2 | 15A/1P | 520W | E-103 | MECHANICAL ROOM #1 LIGHTS | |
| MECH ROOM (103) UH-5 | E-411 | 1/4HP | 20A/1P | 3 | | 4 | 15A/1P | 520W | E-103 | MECHANICAL ROOM #2 LIGHTS & EXIT SIGN | |
| TRUCK LOADING (108) UH-8 AND UH-9 | E-411 | 2#1/4HP | 15A/1P | 5 | | 6 | 20A/1P | 1270W | E-103 | TRUCK LOADING AREA LIGHTS | |
| STORAGE (104) UH-10, UH-11, AND UH-12 | E-411 | 3#1/4HP | 25A/1P | 7 | | 8 | 15A/1P | - | - | SPARE | |
| FAN PRE-6 | E-410 | 1/20HP | 15A/1P | 9 | | 10 | 15A/1P | 255W | E-103 | WEST SIDE EXTERIOR LIGHTS | |
| FAN PRE-7 CONTROL STATION | E-410 | 1/4HP | 15A/1P | 11 | | 12 | 20A/1P | 1800W | E-103 | MECHANICAL ROOM #2 RECEPTACLES | |
| FAN PRE-9 | E-410 | 1/20HP | 15A/1P | 13 | | 14 | 20A/1P | 1500W | E-103 | ODOR CONTROL ROOM EAST SIDE RECEPT. | |
| BOILER B-1 CS | E-410 | 1200W | 20A/1P | 15 | | 16 | 15A/1P | 1160W | E-103 | STORAGE ROOM LIGHTS | |
| BOILER B-2 CS | E-410 | 1200W | 20A/1P | 17 | | 18 | 20A/1P | 1200W | E-103 | STORAGE ROOM WEST SIDE RECEPT. | |
| BOILER B-3 CS | E-410 | 1200W | 20A/1P | 19 | | 20 | 20A/1P | 1200W | E-103 | STORAGE ROOM EAST SIDE RECEPT. | |
| BOILER B-4 CS | E-410 | 1200W | 20A/1P | 21 | | 22 | 15A/1P | 1/6HP | E-410 | FAN PRE-8 | |
| EMCS | E-410 | 500W | 20A/1P | 23 | | 24 | 20A/1P | 1/3HP | E-411A | GLYCOL SYSTEM | |
| MUAU-1 CONTROL STATION | E-409 | 500W | 20A/1P | 25 | | 26 | 20A/1P | - | - | SPARE | |
| MUAU-2 CONTROL STATION | E-409 | 500W | 20A/1P | 27 | | 28 | 20A/1P | - | - | SPARE | |
| FIRE ALARM ANNUNCIATOR RM103 | - | - | 20A/1P | 29 | | 30 | 20A/1P | - | - | SPARE | |
| SPACE | - | - | - | 31 | | 32 | - | - | - | SPACE | |
| SPACE | - | - | - | 33 | | 34 | - | - | - | SPACE | |
| SPACE | - | - | - | 35 | | 36 | - | - | - | SPACE | |
| SPACE | - | - | - | 37 | | 38 | - | - | - | SPACE | |
| SPACE | - | - | - | 39 | | 40 | - | - | - | SPACE | |
| SPACE | - | - | - | 41 | | 42 | - | - | - | SPACE | |

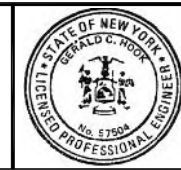
| LOCATION:EAST ENTRANCE ELECTRIC/WORK AREA (203) MAIN BUS RATINGS:100 AMP, 208Y/120 VOLTS, 3 PHASE, 4 WIRE MINIMUM SHORTCIRCUIT INTERRUPTION RATING: 22,000 MAIN BREAKER TRIP:100 AT CONNECTED LOAD: 15KW | | | | PANELBOARD LP-4 SCHEDULE | | | | FED FROM:T-3 INCOMING FEED:1-1/2"Cw/3#2, 1#2N, 1#6GRD ENCLOSURE:NEMA 1 * INDICATES GFCI CIRCUIT BREAKER | | | |
|--|--------------|-------|--------------|--------------------------|-------|------|--------------|--|--------------|---|--|
| SEE PANELBOARD NOTES 1 THROUGH 4 | | | | | | | | | | | |
| DESCRIPTION | DIAGRAM/NOTE | LOAD | CB TRIP/POLE | CIR. | A B C | CIR. | CB TRIP/POLE | LOAD | DIAGRAM/NOTE | DESCRIPTION | |
| PLC-EAST | - | 2400W | 30A/1P | 1 | | 2 | 15A/1P | 500W | E-202 | ELECTRICAL WORK AREA LIGHTING & EXIT SIGN | |
| FIRE ALARM CONTROL PANEL (FACP) | E-412 | 500W | 20A/1P | 3 | | 4 | 15A/1P | 450W | E-202 | MECHANICAL ROOM LIGHTING & EXIT SIGNS | |
| SPARE | E-202 | 500W | 20A/1P | 5 | | 6 | 15A/1P | 750W | E-201 | INTERMEDIATE, STAIRS & VESTIBULE LIGHTS | |
| MECH ROOM (204) UH-13 | E-411 | 1/4HP | 15A/1P | 7 | | 8 | 15A/1P | 730W | E-201 | INTERMEDIATE LEVEL CHAMBER LIGHTS | |
| ELECTRICAL/WORK AREA (203) UH-14 | E-411 | 1/4HP | 15A/1P | 9 | | 10 | 15A/1P | 375W | E-202 | EXTERIOR LIGHTING | |
| SPARE | E-411 | 200W | 15A/1P | 11 | | 12 | 120A/1P | 1800W | E-202 | ELECTRICAL WORK AREA RECEPTACLES | |
| BOILER B-5 CS | E-411 | 1200W | 20A/1P | 13 | | 14 | 20A/1P | 300W | E-408 | VENTILATION SYSTEM FAILURE CS | |
| MUAU-3 CONTROL STATION | E-409 | 300W | 30A/1P | 15 | | 16 | 20A/1P | 1/4HP | E-410 | FAN ILF-3 | |
| TIME WARNER RECEPTACLE | I-103 | 75W | 20A/1P | 17 | | 18 | 20A/1P | - | E-410 | HOT WATER PUMP CS | |
| SURVEILLANCE CAMERAS CAM-E-1, CAM-E-2 | I-104 | 200W | 20A/1P | 19 | | 20 | 20A/1P | 1/3HP | E-411A | GLYCOL SYSTEM | |
| SPARE | I-103 | 250W | 20A/1P | 21 | | 22 | 20A/1P | - | - | SPARE | |
| SPARE | - | - | 20A/1P | 23 | | 24 | 20A/1P | - | - | SPARE | |
| SPACE | - | - | - | 25 | | 26 | - | - | - | SPACE | |
| SPACE | - | - | - | 27 | | 28 | - | - | - | SPACE | |
| SPACE | - | - | - | 29 | | 30 | - | - | - | SPACE | |

| LOCATION:OUTDOOR SWITCHGEAR - MAINTENANCE CUBICAL MAIN BUS RATINGS:100 AMP, 208Y/120 VOLTS, 3 PHASE, 4 WIRE MINIMUM SHORTCIRCUIT INTERRUPTION RATING: 22,000 MAIN BREAKER TRIP:100 AT CONNECTED LOAD: 12KW | | | | PANELBOARD LP-5 SCHEDULE | | | | FED FROM:T-4 INCOMING FEED:1-1/2"Cw/3#2, 1#2N, 1#6GRD ENCLOSURE:NEMA 12 * INDICATES GFCI CIRCUIT BREAKER | | | |
|--|--------------|-------|--------------|--------------------------|-------|------|--------------|---|--------------|---------------------|--|
| SEE PANELBOARD NOTES 1 THROUGH 4 | | | | | | | | | | | |
| DESCRIPTION | DIAGRAM/NOTE | LOAD | CB TRIP/POLE | CIR. | A B C | CIR. | CB TRIP/POLE | LOAD | DIAGRAM/NOTE | DESCRIPTION | |
| HEATER CKTS. 1-3 | - | - | - | 1 | | 2 | - | - | - | HEATER CKTS. 4-6 | |
| HEATER CKTS. 7-9 | - | 5KW | 20A/3P | 3 | | 4 | - | - | - | GFI RECEPTACLES | |
| EXHAUST FAN VENT | - | - | - | 5 | | 6 | - | - | - | FLOURESCENT LIGHTS | |
| EXTERIOR LIGHTS | - | 900W | 20A/1P | 7 | | 8 | - | - | - | BATTERY CHARGER | |
| SPARE | - | 1600W | 20A/1P | 9 | | 10 | - | - | - | UNITS 1-10 LIGHTS | |
| | | | | 11 | | 12 | | | | | |
| HEATER CKT. UNIT 10 | - | - | - | 13 | | 14 | - | - | - | HEATER CKT. UNIT 11 | |
| | | | | 15 | | 16 | | | | | |
| SPARE | - | - | - | 17 | | 18 | - | - | - | SPACE | |

LEGEND
REFERS TO ADDENDUM NO. INDICATED.

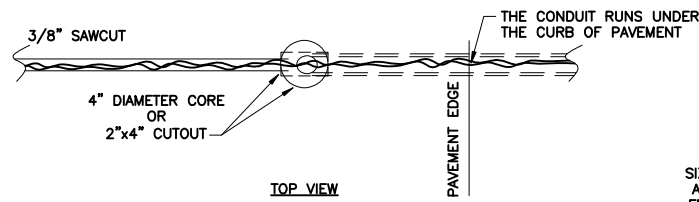
ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

PANELBOARD SCHEDULES



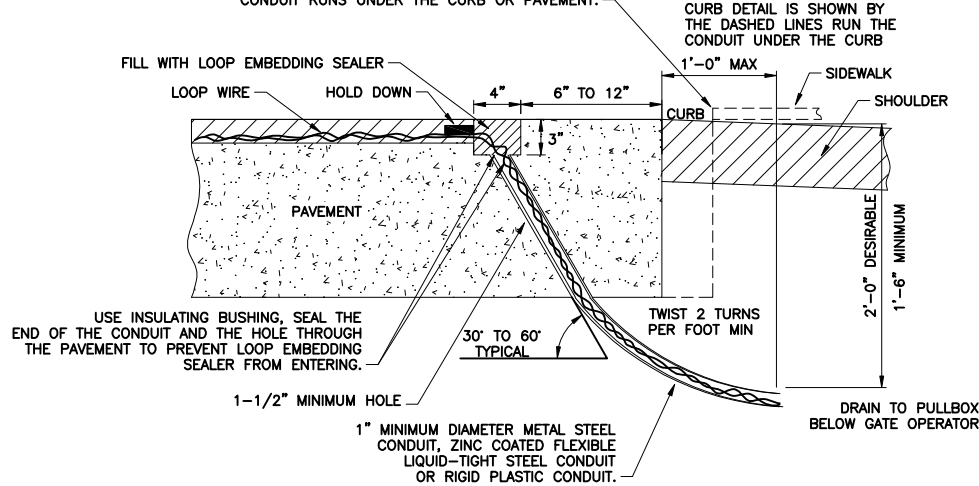
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Date
04/11
E-405

ELECTRICAL



TOP VIEW

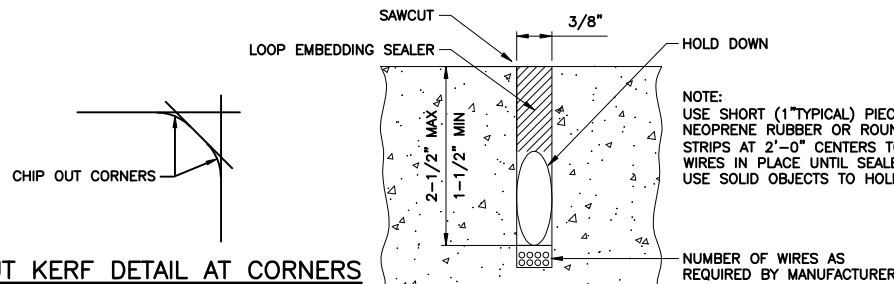
SAWCUT CURB TOP OR PAVEMENT EDGE AT 3/8" WIDE BY 1/4" DEEP TO SHOW WHERE THE CONDUIT RUNS UNDER THE CURB OR PAVEMENT.



SIDE VIEW

LOOP LEAD IN AT PAVEMENT EDGE

NOT TO SCALE

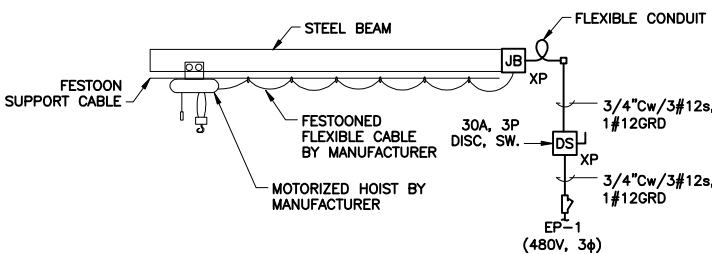


SAWCUT KERF DETAIL AT CORNERS

NOT TO SCALE

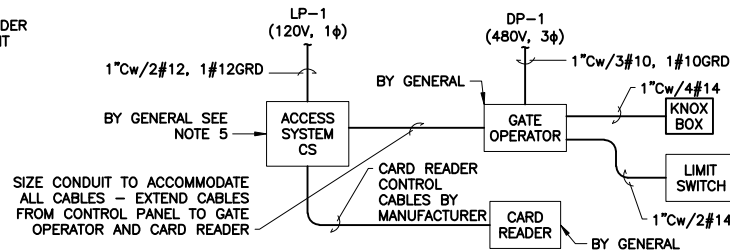
SAWCUT CROSS SECTION IN CONCRETE OR ASPHALT

NOT TO SCALE



DEWATERING PUMPS MOTORIZED HOIST SCHEMATIC

NOT TO SCALE

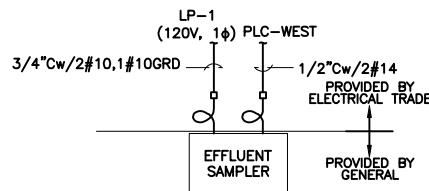


GATE OPERATOR SCHEMATIC

NOT TO SCALE

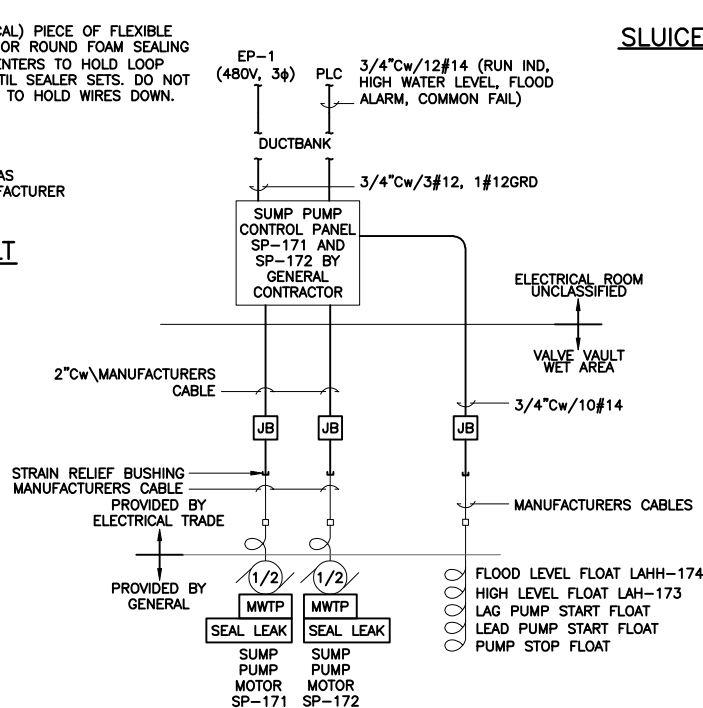
KNOX BOX SPECIFICATIONS:

1. UL LISTED 4"H x 5"W x 3-1/4"D, 1/4" PLATE STEEL, SURFACE MOUNTED HOUSING.
 2. 1/2" THICK STAINLESS STEEL HINGED DOOR, WITH INTERIOR GASKETED SEAL.
 3. LOCK: UL LISTED, DOUBLE-ACTION ROTATING TUMBLERS AND HARDENED STEEL PINS ACCESSED BY A BIASED CUT KEY. WITH A 1/8" THICK STAINLESS STEEL DUST COVER AND TAMPER SEAL MOUNTING CAPABILITY. LOCK SHALL ALSO MEET THE REQUIREMENTS OF THE ONONDAGA COUNTY DEPARTMENT OF EMERGENCY MANAGEMENT.
 4. UL LISTED TAMPER SWITCHES.
 5. SEE DRAWING I-104 FOR ACCESS CONTROL SYSTEM SCHEMATIC DIAGRAM.
- MANUFACTURER:
KNOX COMPANY- SERIES 3200



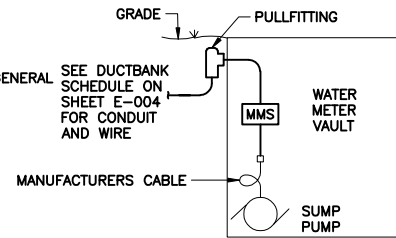
EFFLUENT SAMPLER SCHEMATIC

NOT TO SCALE



VALVE VAULT SUMP PUMP SCHEMATIC

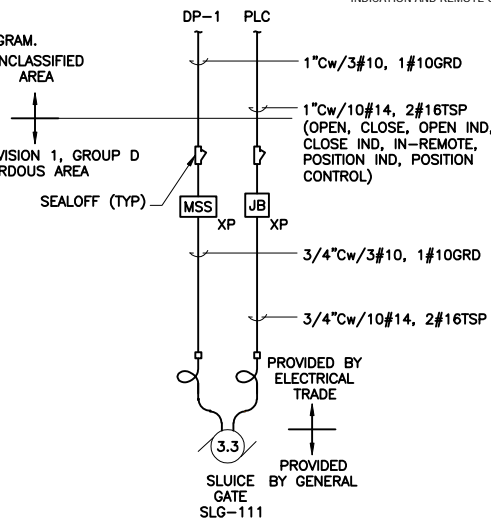
NOT TO SCALE



WATER METER VAULT SUMP PUMP

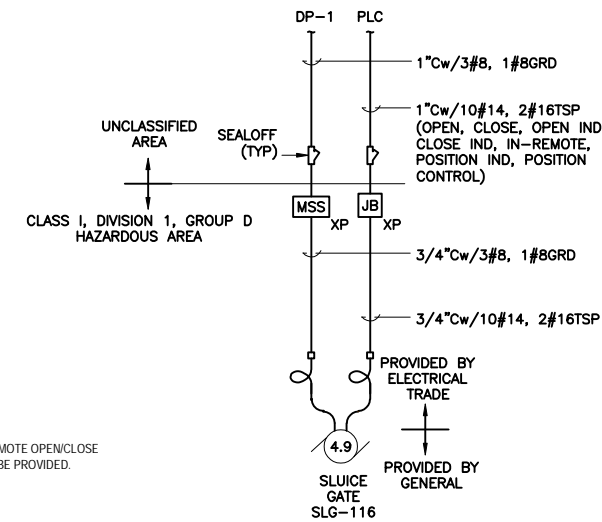
NOT TO SCALE

RFI 325 POSITION INDICATION WAS SPECIFIED, BUT NOT REQUIRED. REMOTE OPEN/CLOSE INDICATION AND REMOTE OPEN/CLOSE CONTROL SHALL STILL BE PROVIDED.



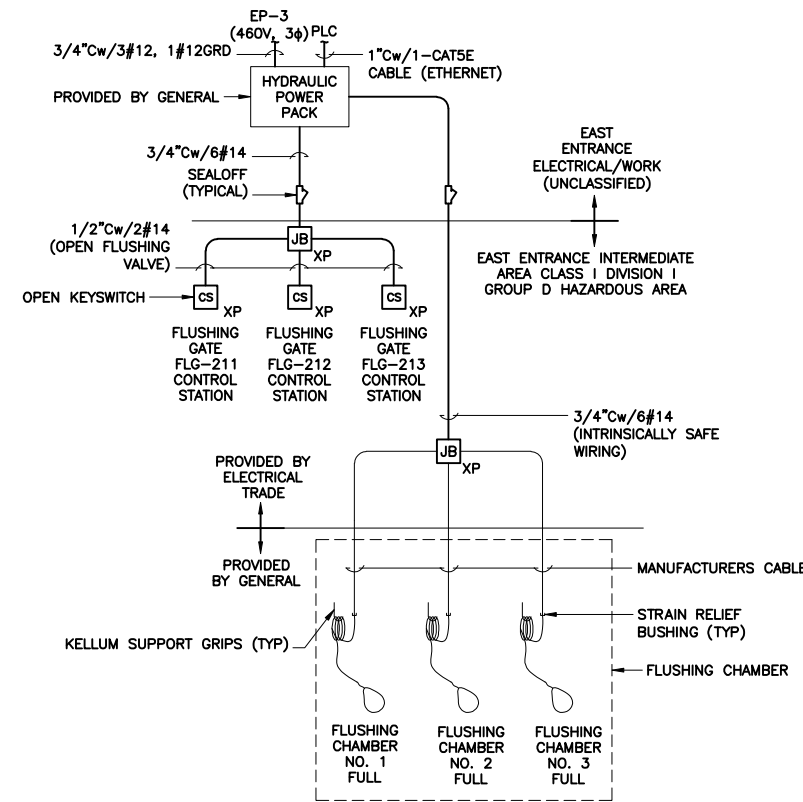
SLUDGE GATE SCHEMATIC SLG-111

NOT TO SCALE
TYPICAL FOR SLG-112, SLG-113, SLG-114, AND SLG-115



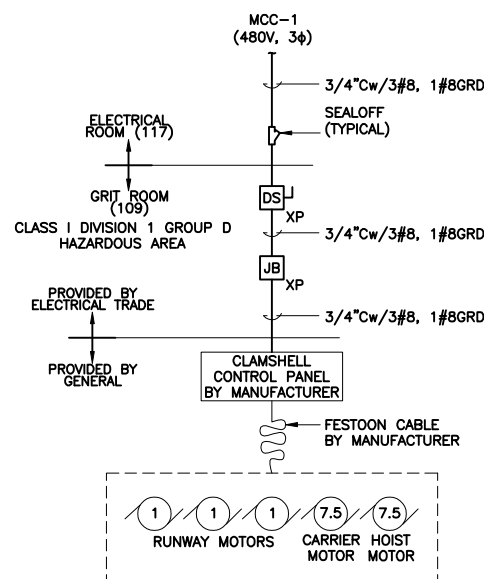
SLUDGE GATE SCHEMATIC SLG-116

NOT TO SCALE
TYPICAL FOR SLG-215 FED FROM EP-3



HYDRAULIC POWER PACK FOR FLUSHING GATES SCHEMATIC

NOT TO SCALE



CLAMSHELL BRIDGE CRANE CLS-1 SCHEMATIC

NOT TO SCALE

09/01/10 GHD JBL
DIR/DWG

SCALE: NOT TO SCALE

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

| No. | Date | Revisions | Init |
|-----|-------|-----------------|------|
| 1 | 05/16 | RECORD DRAWINGS | |

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

In charge of WFH
Designed by JBL/RGW
Drawn by JBL
Checked by WFH



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

PROCESS ELEMENTARY AND SCHEMATIC DIAGRAMS
ELECTRICAL



File Number
00663

Date
04/11

Gerald C. Rook

E-406

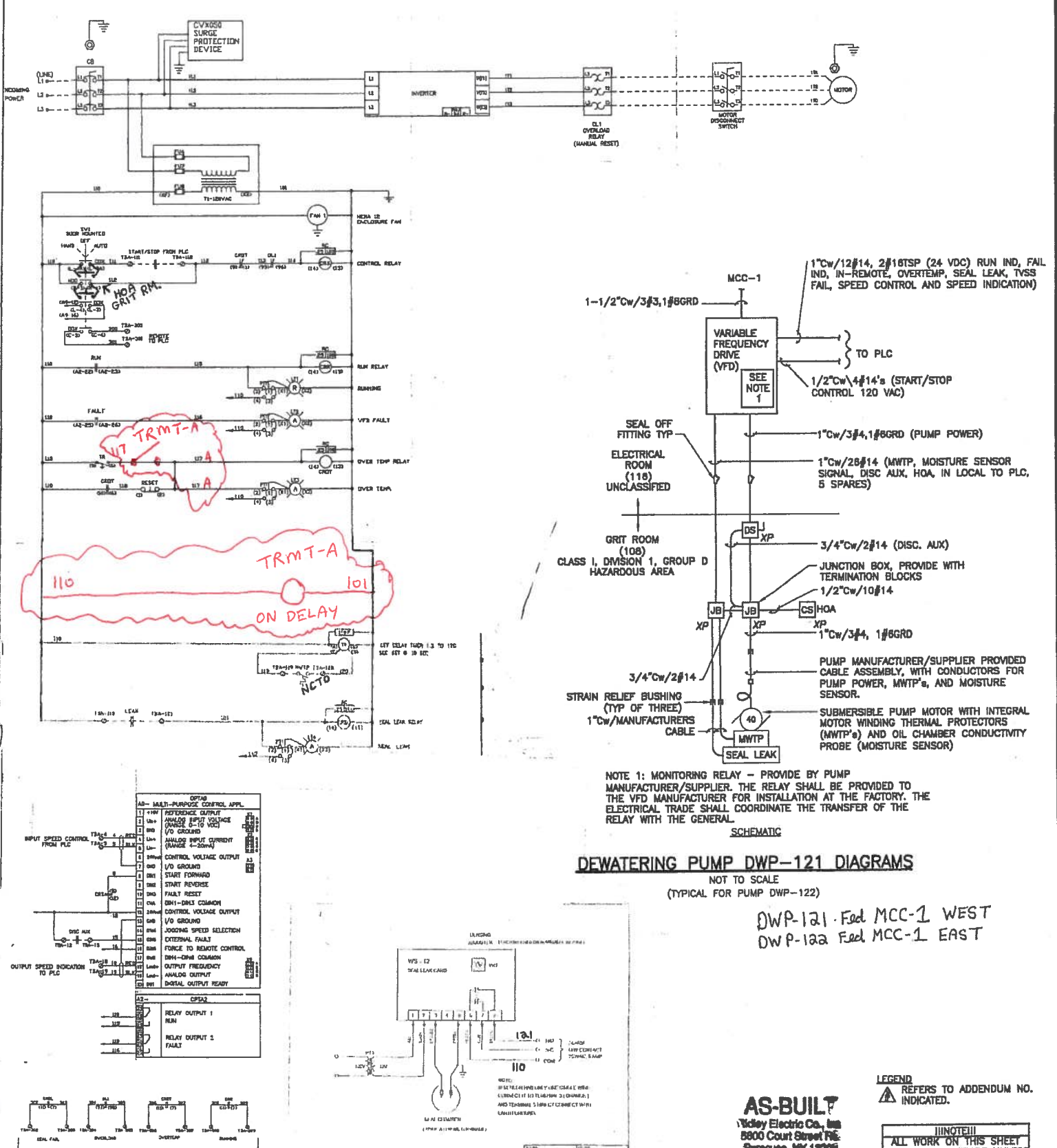
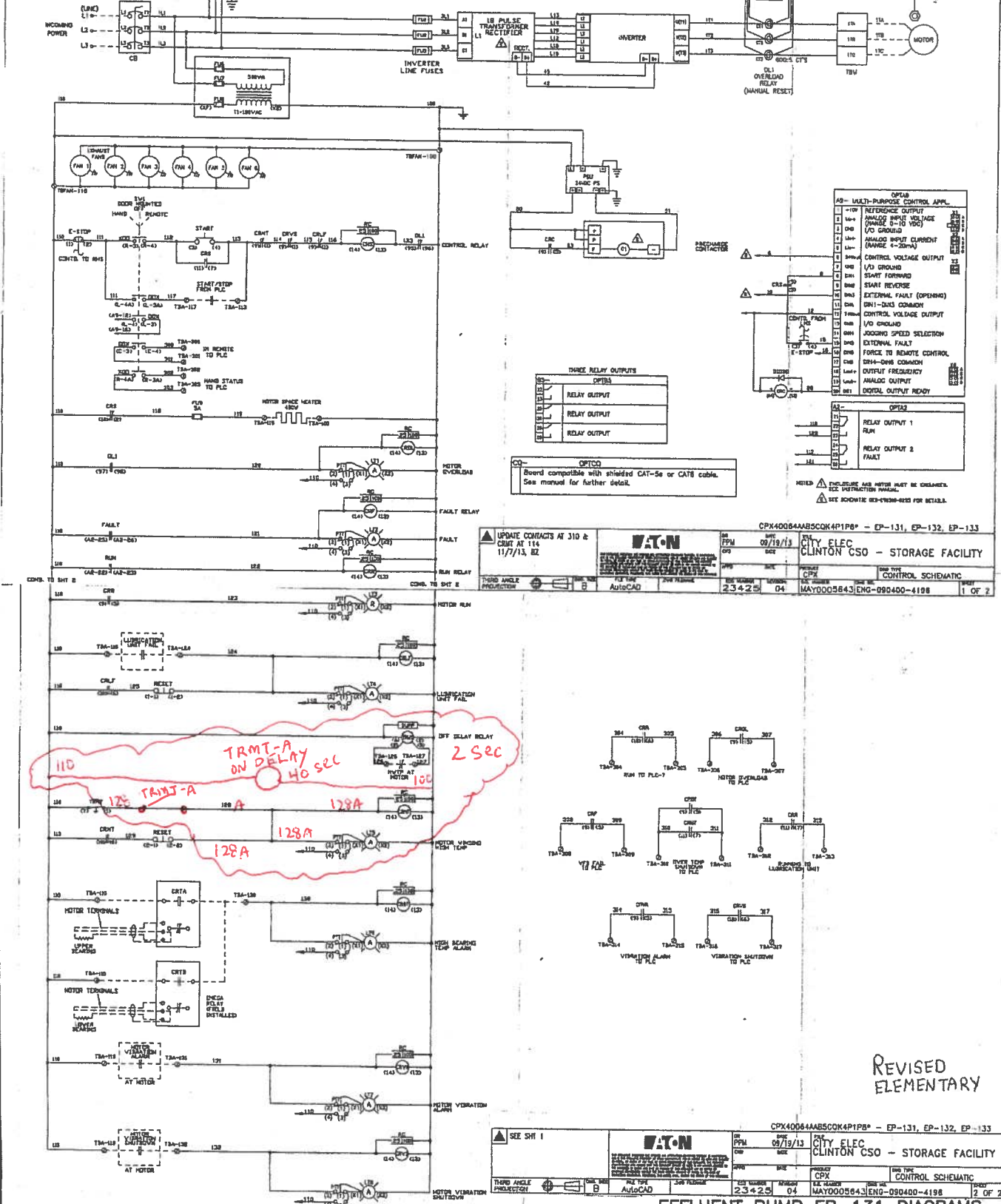
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ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DATE: 05/16 PER: RCF

ALL Fed. 480v SWITCHBOARDS



09/01/10 GHD JBL
DIR/DWG
SCALE: NOT TO SCALE

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| Designed by | JBL/RGW |
| Drawn by | JBL |
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ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

AS-BUILT
Vickley Electric Co., Inc.
8600 Court Street
Syracuse, NY 13208

File Number: 00663
Date: 04/11
E-407

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REVISIONS

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ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

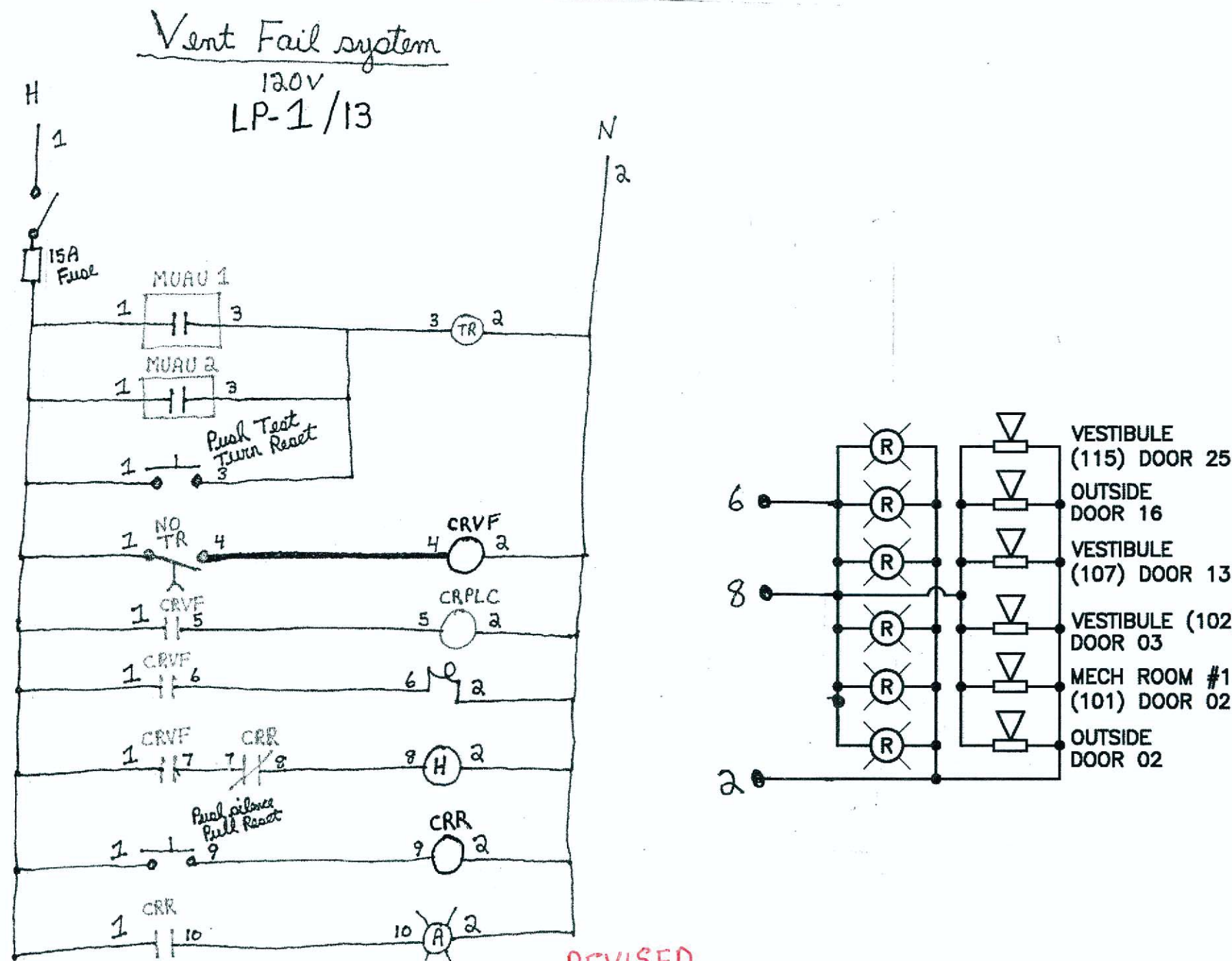
PROCESS ELEMENTARY AND SCHEMATIC DIAGRAMS
ELECTRICAL

AS-BUILT
Vickley Electric Co., Inc.
8600 Court Street
Syracuse, NY 13208

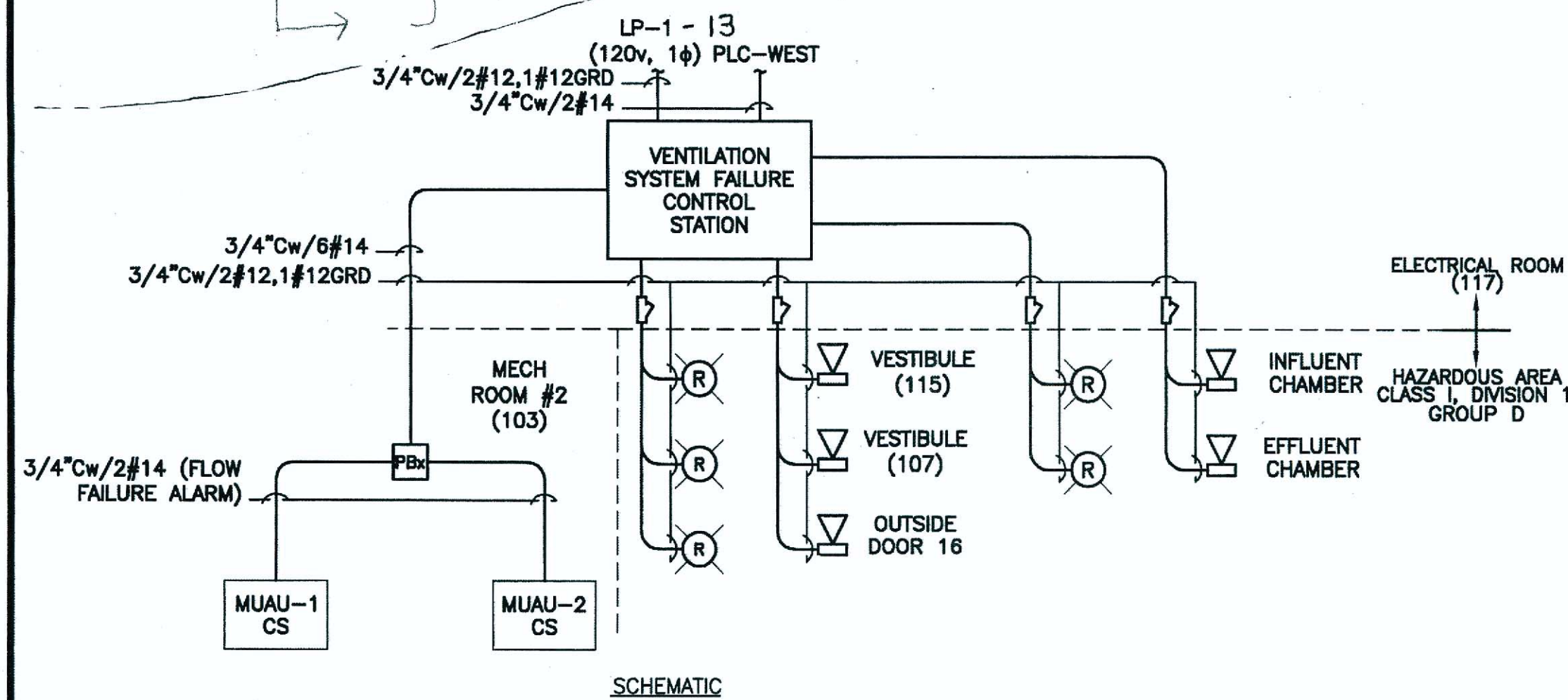
File Number: 00663
Date: 04/11
E-407

VENTILATION SYSTEM FAILURE NOTES:

1. VENTILATION ALARM LIGHTS AND HORNS SHALL BE MOUNTED 8'-0" ABOVE FINISHED GRADE.
2. VENTILATION SYSTEM FAILURE ALARM LIGHTS FOR INTERIOR AND EXTERIOR LOCATIONS SHALL BE FEDERAL SIGNAL MODEL USIX (NEMA 4X) OR EQUAL AND FOR HAZARDOUS AREAS SHALL BE FEDERAL SIGNAL MODEL 27XL.
3. VENTILATION SYSTEM FAILURE ALARM HORN FOR INTERIOR AND EXTERIOR LOCATIONS SHALL BE FEDERAL SIGNAL MODEL 350WBX OR EQUAL AND FOR HAZARDOUS AREAS SHALL BE FEDERAL SIGNAL MODEL 31X OR EQUAL.
4. PROVIDE SIGN LABELED AS "VENTILATION SYSTEM FAILURE ALARM WHEN FLASHING" MOUNTED BELOW EACH SET OF ALARM HORN AND LIGHTS.
5. TR RELAY SHALL BE AN ALARM ON RELAY, 5-10 MINUTES, SET AT 5 MINUTES.



REVISED ELEMENTARY



GRIT ROOM VENTILATION SYSTEM FAILURE

NOT TO SCALE

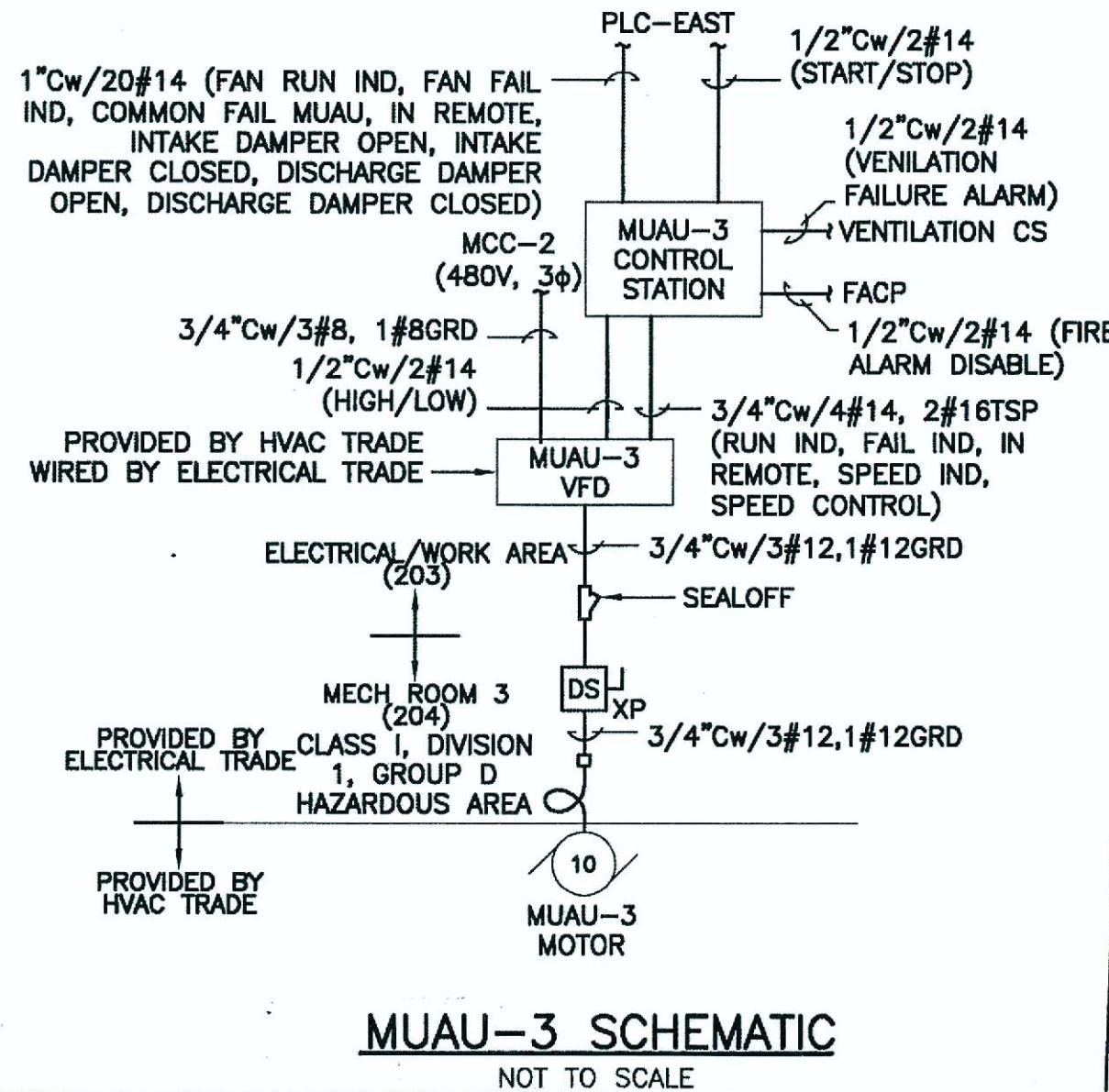
09/01/10 GHD JBL
DIR/DWG

SCALE: NOT TO SCALE

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| Designed by | JBL/RGW | | |
| Drawn by | JBL | | |
| Checked by | WFH | | |
| No. | Date | Revisions | Init |
| 2 | 04/11 | AS BID | GCH |
| 1 | 01/11 | ISSUED FOR APPROVAL | GCH |

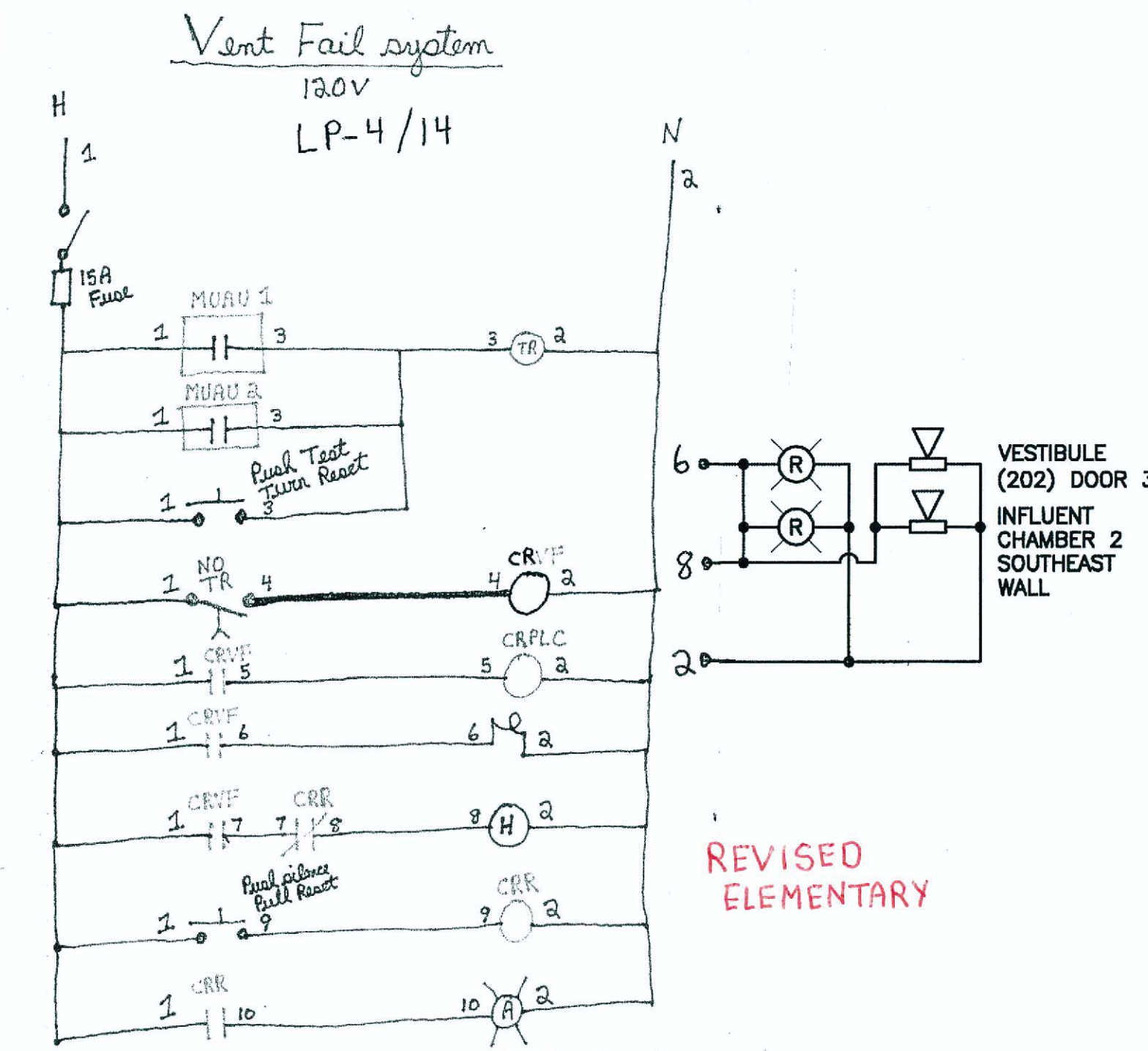
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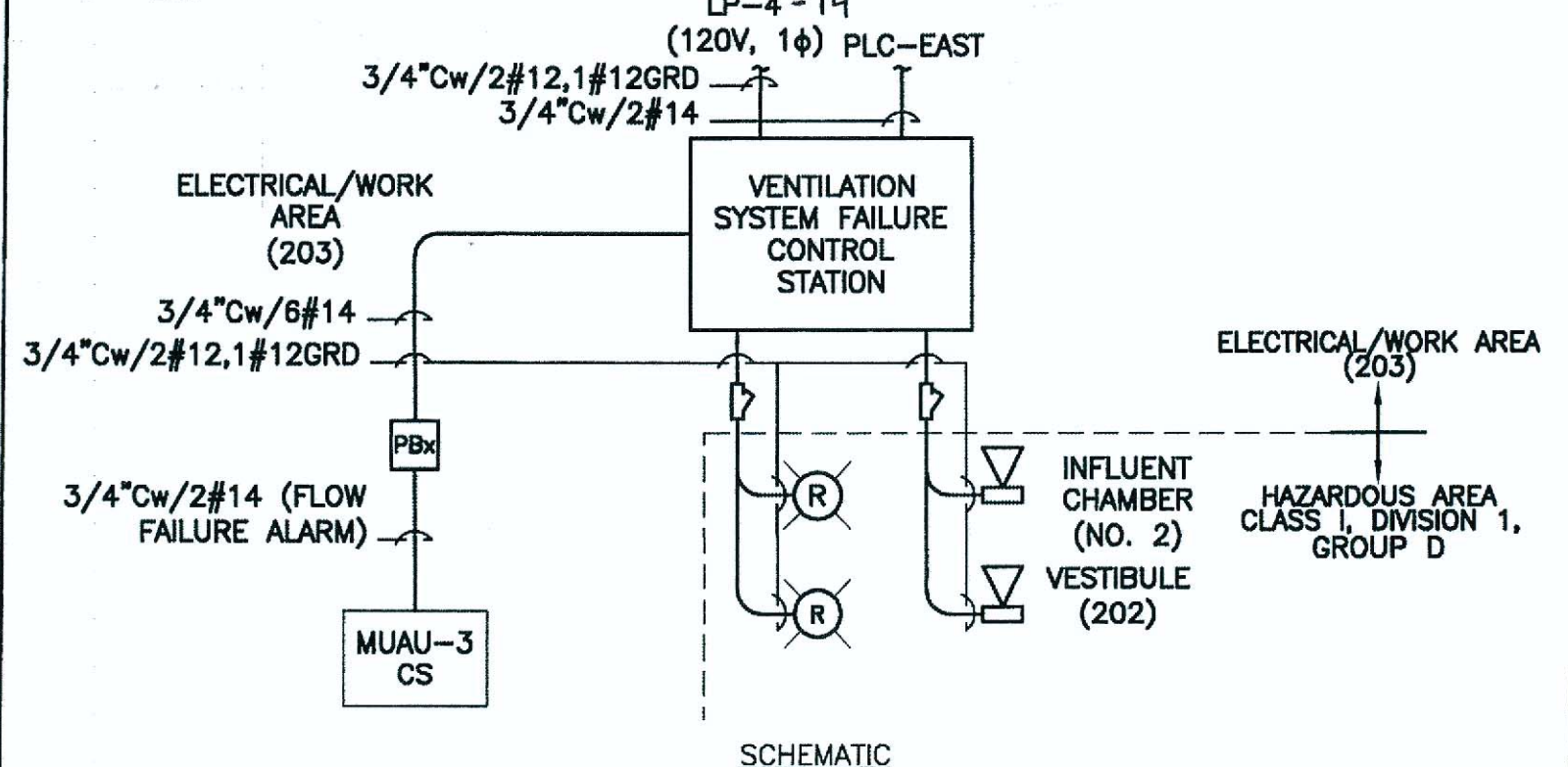


MUAU-3 SCHEMATIC

NOT TO SCALE

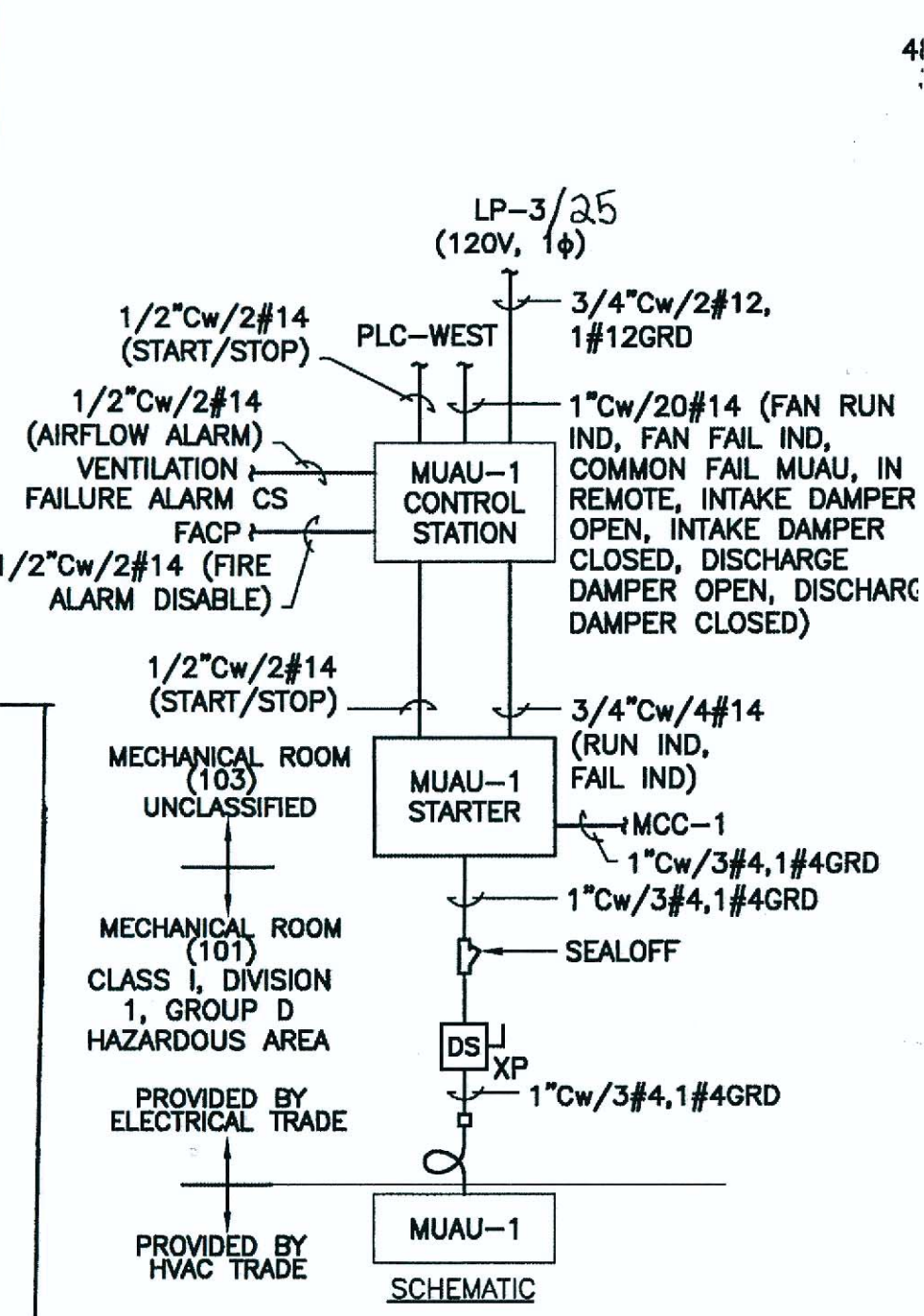


REVISED ELEMENTARY



EAST ENTRANCE VENTILATION SYSTEM FAILURE

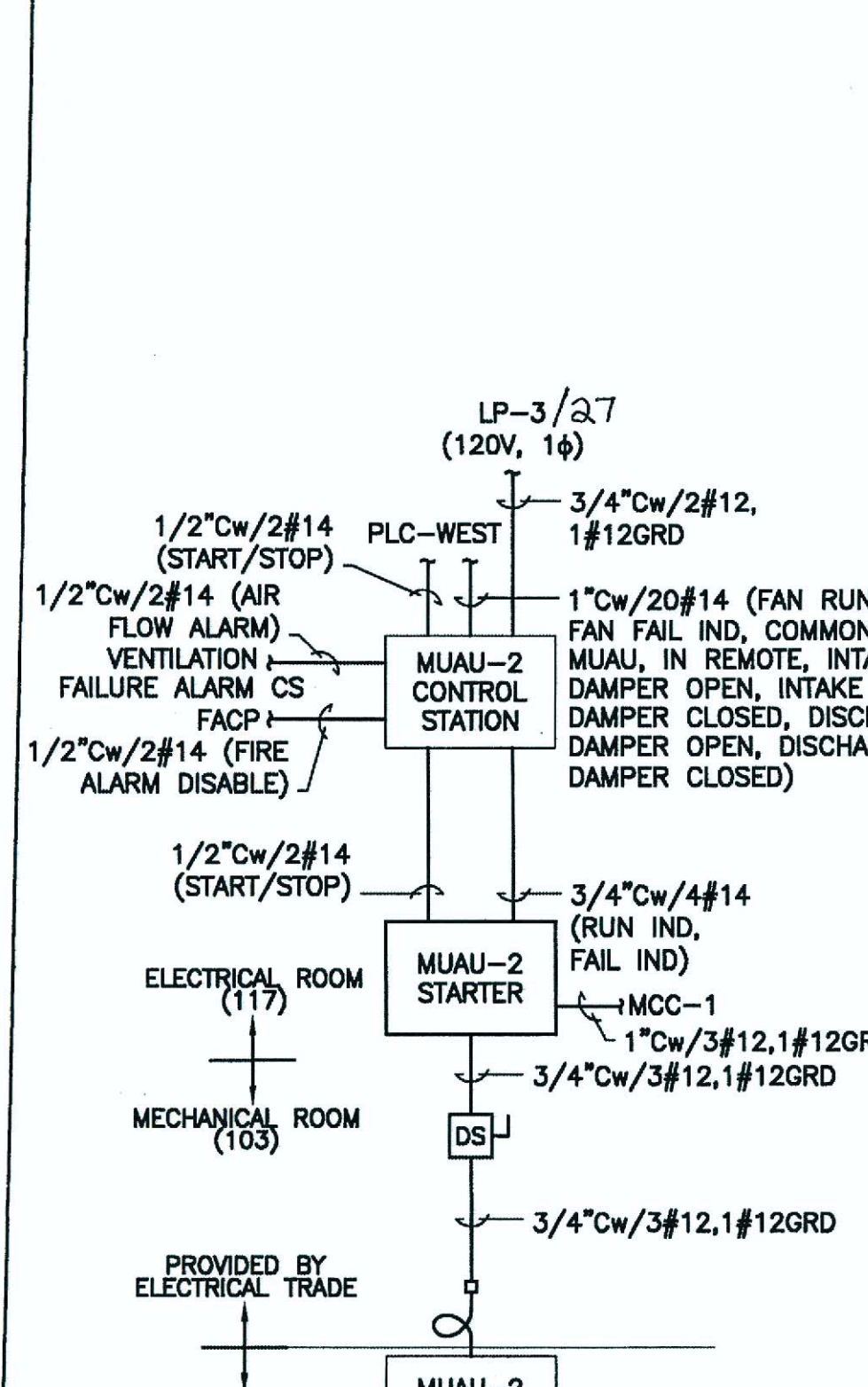
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MUAU-1 SCHEMATIC

MUAU-1 DIAGRAMS

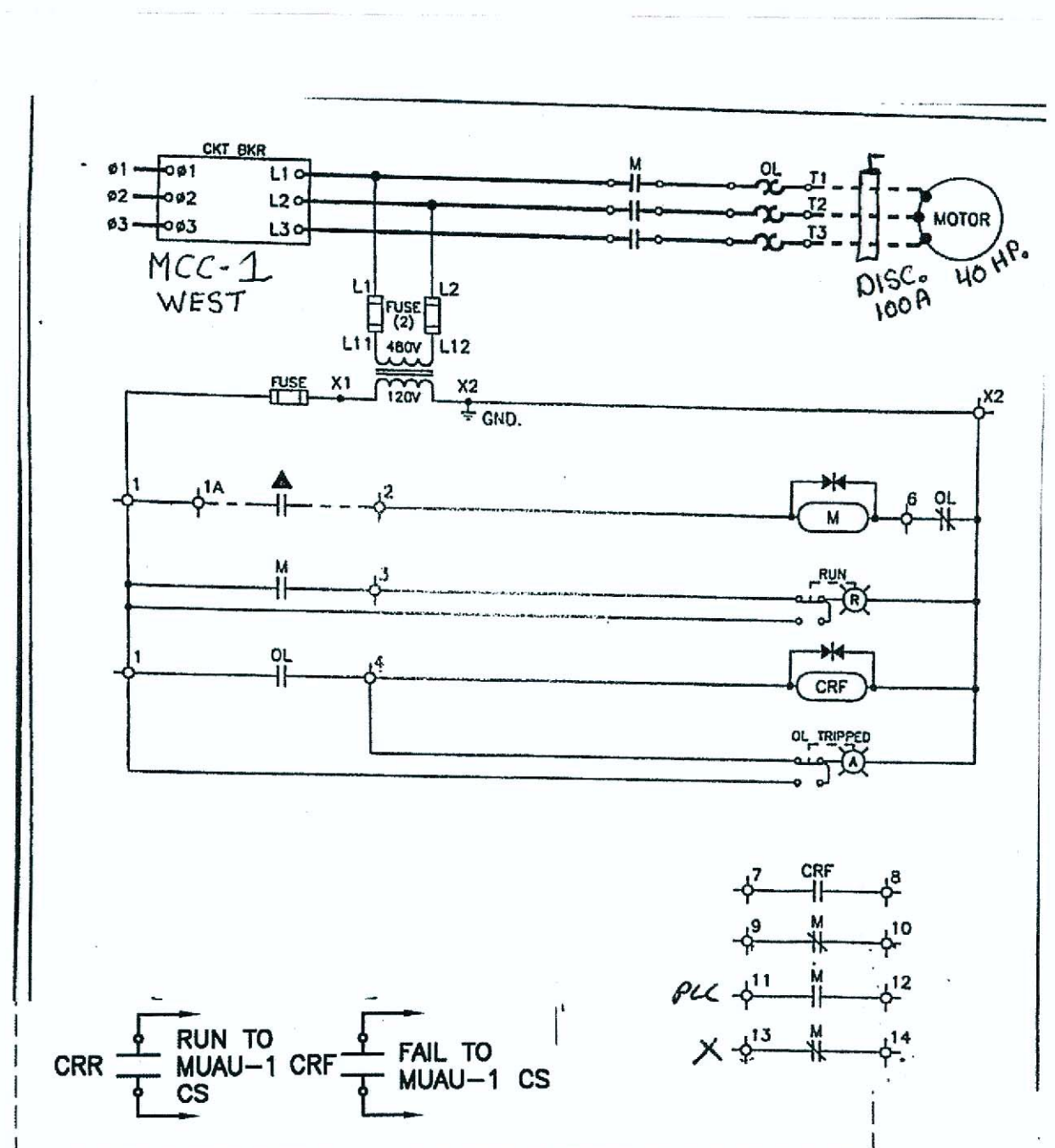
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MUAU-2 SCHEMATIC

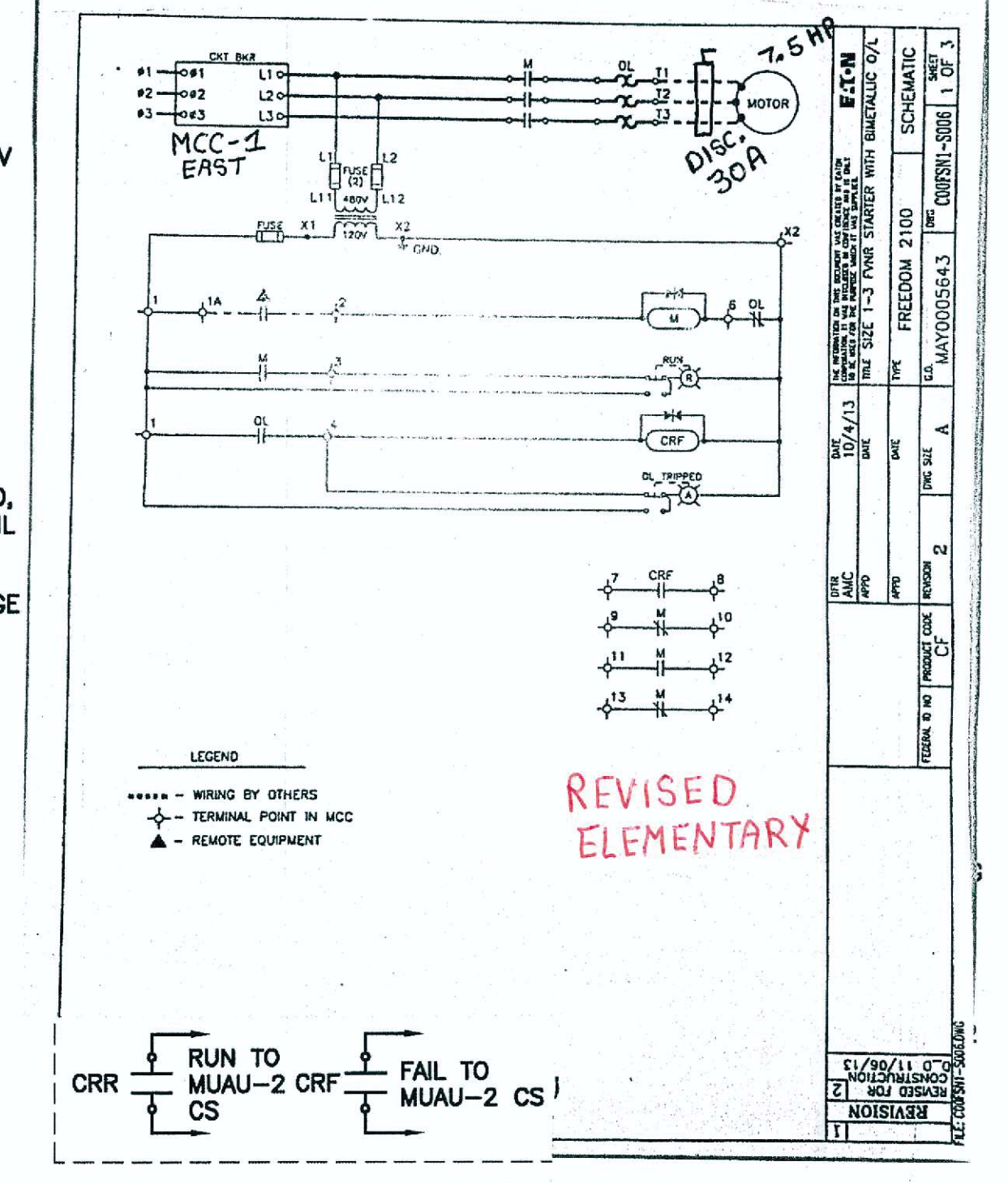
MUAU-2 DIAGRAMS

NOT TO SCALE



ELEMENTARY

REVISED ELEMENTARY



ELEMENTARY

REVISED ELEMENTARY

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CLINTON CSO STORAGE FACILITY PROJECT



H & V ELEMENTARY AND SCHEMATIC DIAGRAMS

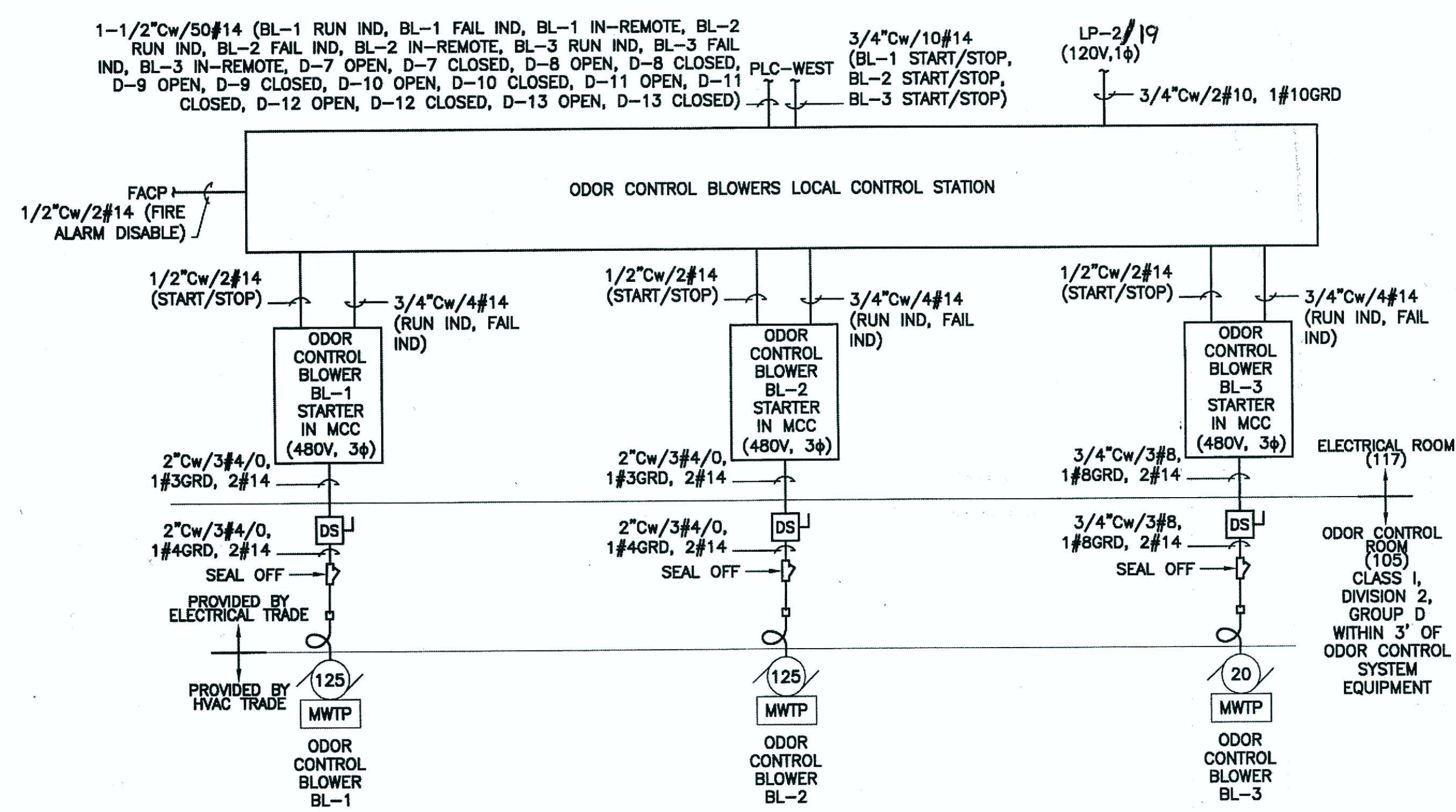
AS-BUILT
Wiley Electric Co.
5800 Court Street
Syracuse, NY 13215

STATE OF NEW YORK
LICENSED PROFESSIONAL ENGINEER
No. 57504

| | |
|-------------|----------------------|
| File Number | 00663 |
| Date | 04/11 |
| Signature | <i>James C. Hode</i> |

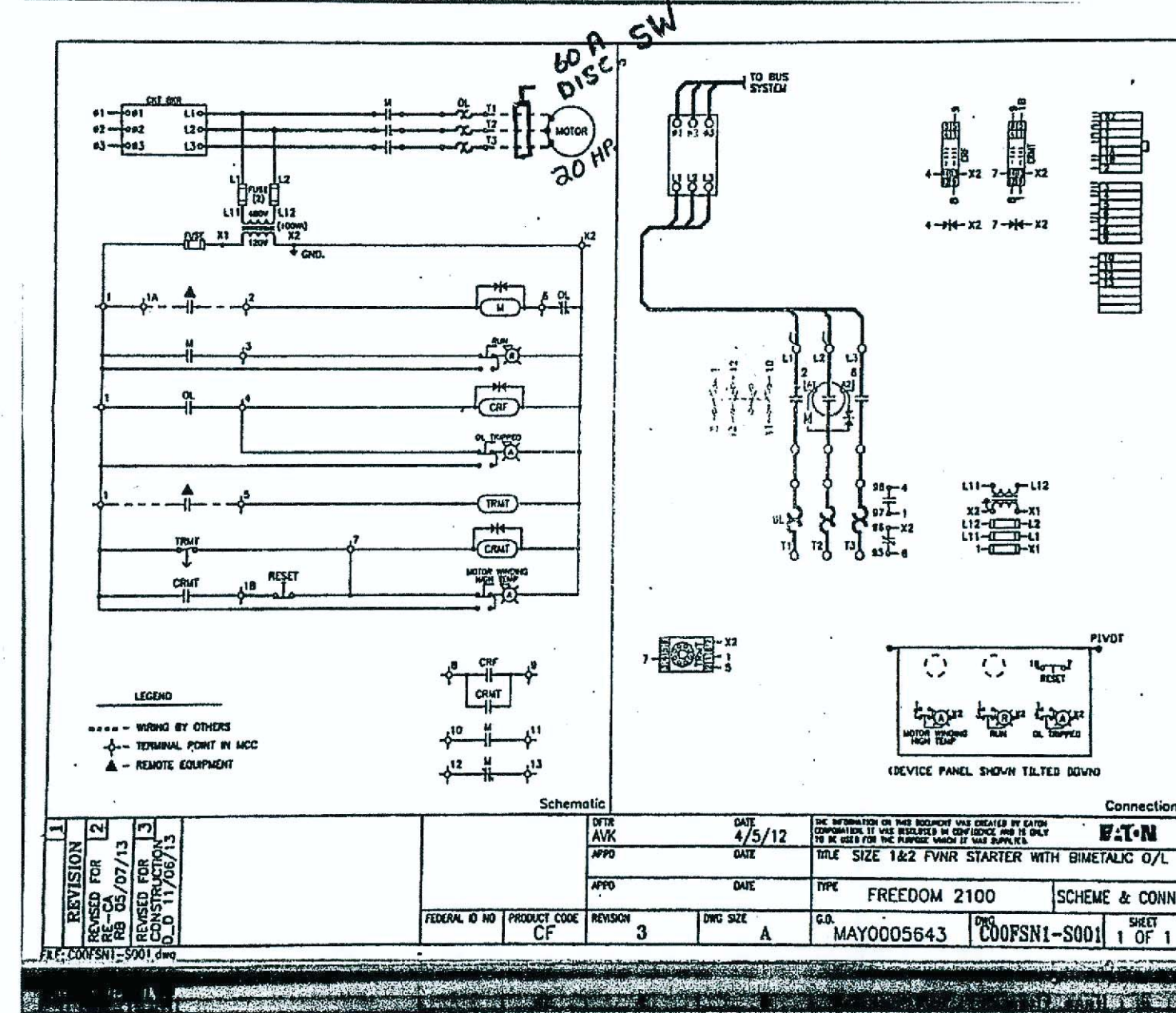
E-408

Fed: BL-1 MCC-1 West
BL-2 MCC-1 EAST

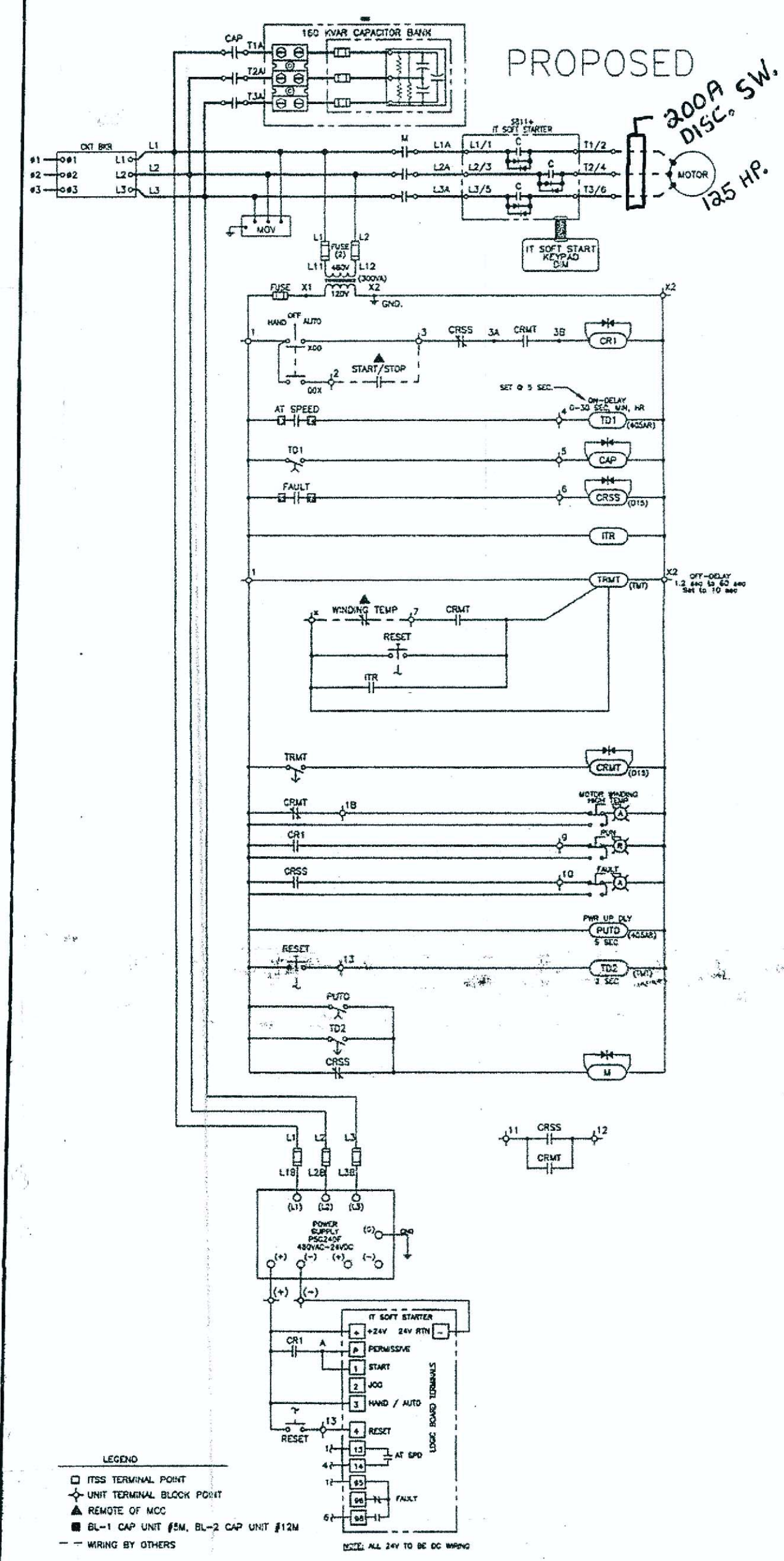


ODOR CONTROL BLOWERS BL-1, BL-2, AND BL-3 SCHEMATIC
NOT TO SCALE

Fed: MCC-1 EAST



ODOR CONTROL BLOWER BL-3 ELEMENTARY
NOT TO SCALE



ODOR CONTROL BLOWER BL-1 ELEMENTARY
NOT TO SCALE

NOTE: * FUSE PER MANUFACTURE RECOMMENDATION

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X:
08/19/10 GHD RGW
DIR/DWG

SCALE: NOT TO SCALE

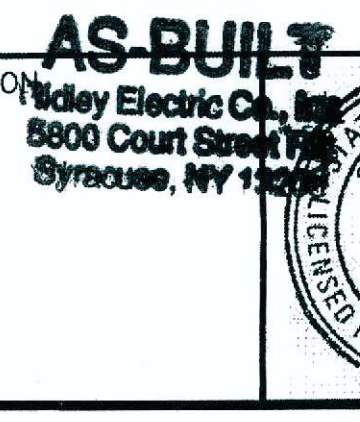
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| Designed by | RGW | | |
| Drawn by | RGW/JBL | | |
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CLINTON CSO STORAGE FACILITY PROJECT

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ELECTRICAL

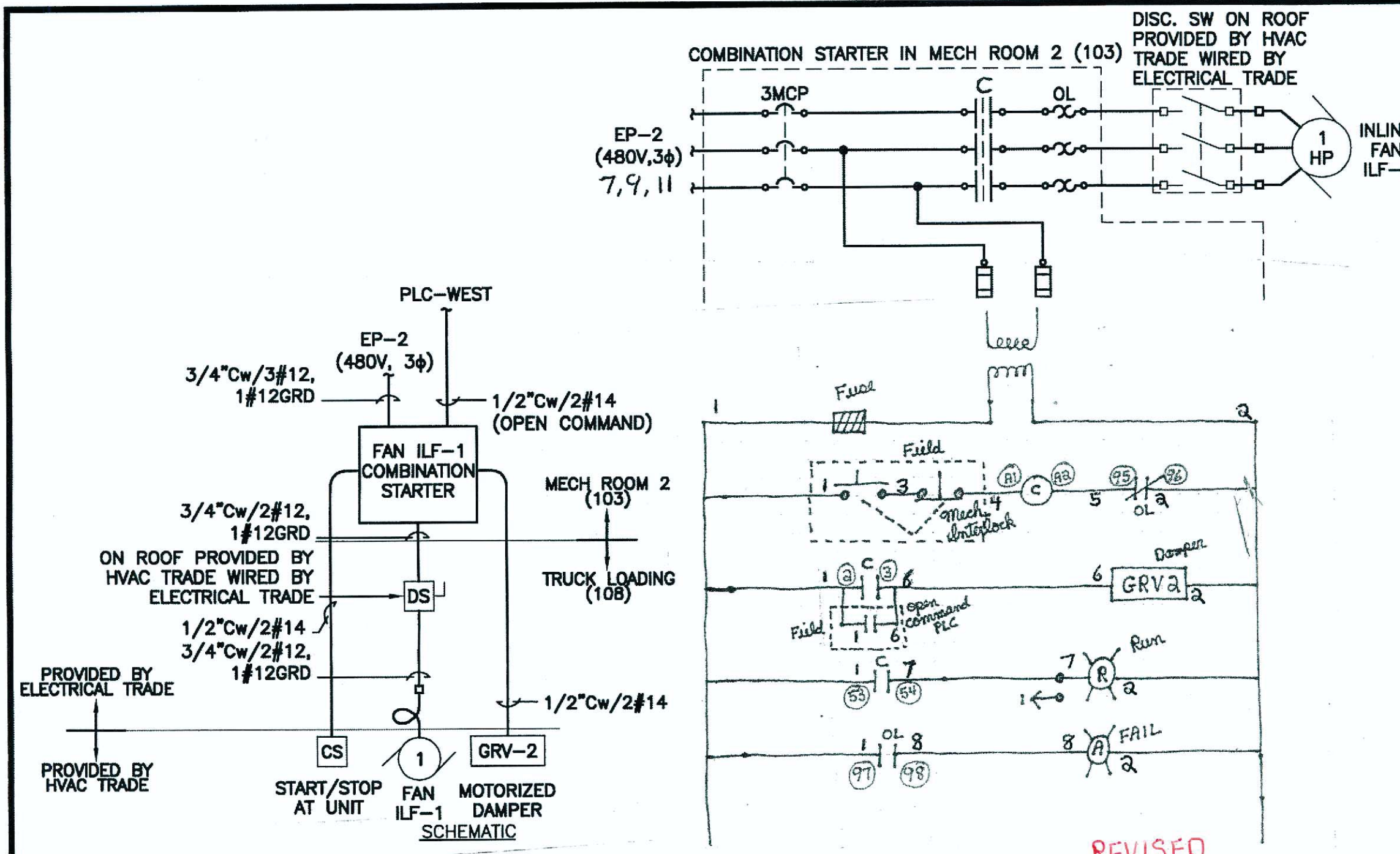


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E-409

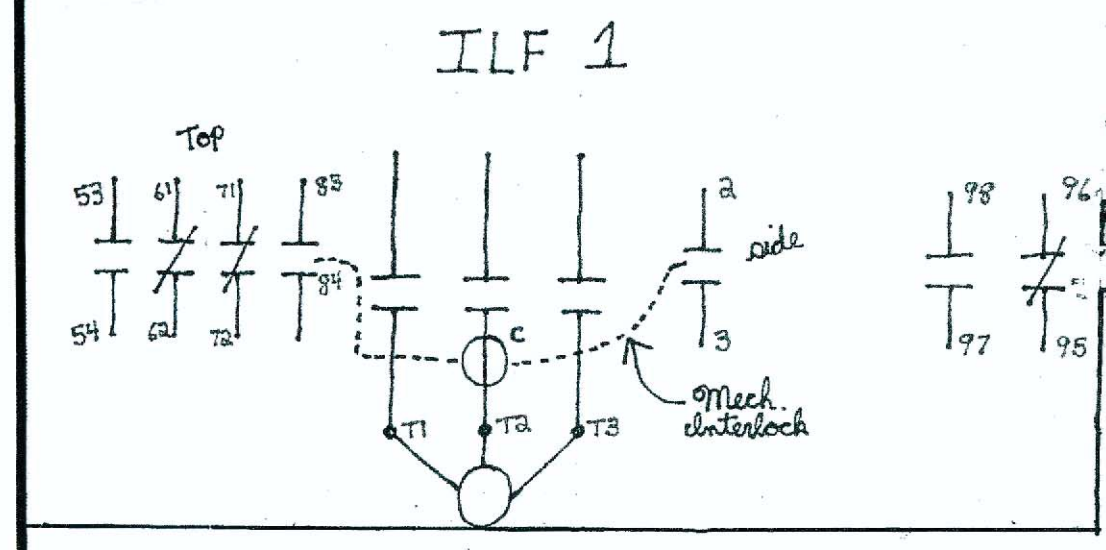
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| REVISION | 1 | REVISION | 2 | REVISION | 3 |
| DESCRIPTION | | DESCRIPTION | | DESCRIPTION | |

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REVISION 1
REVISION 2
REVISION 3

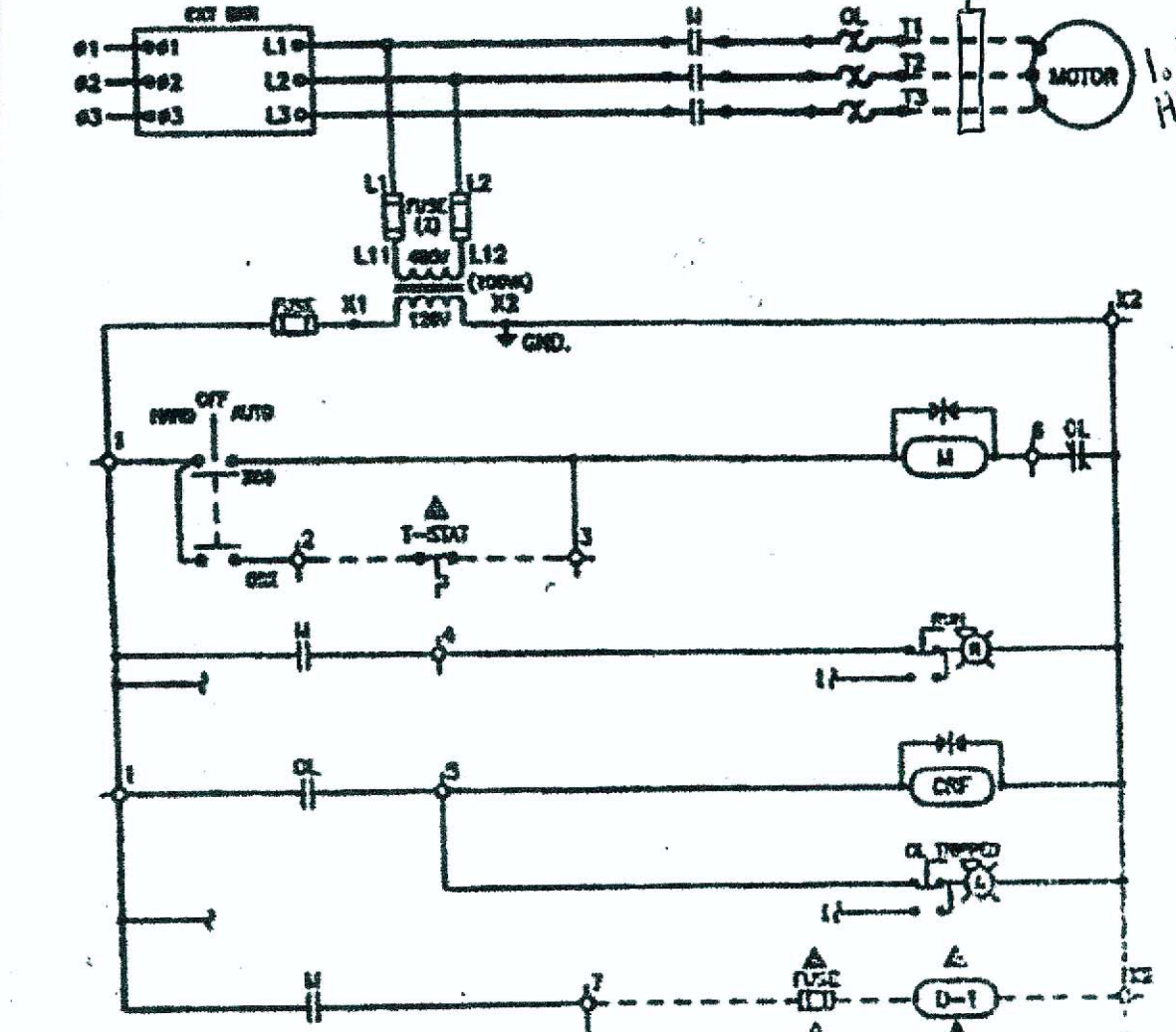


REVISED ELEMENTARY

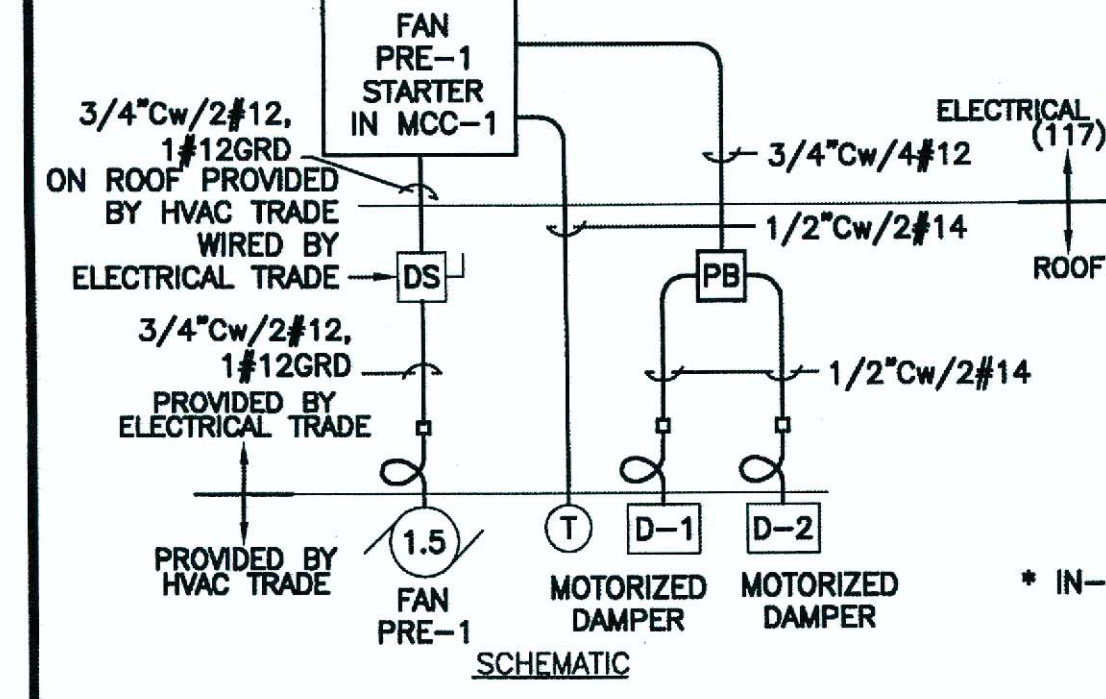


* IN-LINE FUSE TO BE SIZED PER DAMPER MANUFACTURERS RECOMMENDATION

FAN ILF-1 DIAGRAMS NOT TO SCALE



REVISED ELEMENTARY



FAN PRE-1 DIAGRAMS NOT TO SCALE

(TYPICAL FOR FAN PRE-2, DAMPER D-3 AND D-4 AND FAN PRE-3, DAMPER D-5 AND D-6)

L: ON=; OFF=*REF* X: 08/19/10 GHD RGW DIR/DWG

SCALE: NOT TO SCALE

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| 2 | 04/11 | AS BID | GCH |
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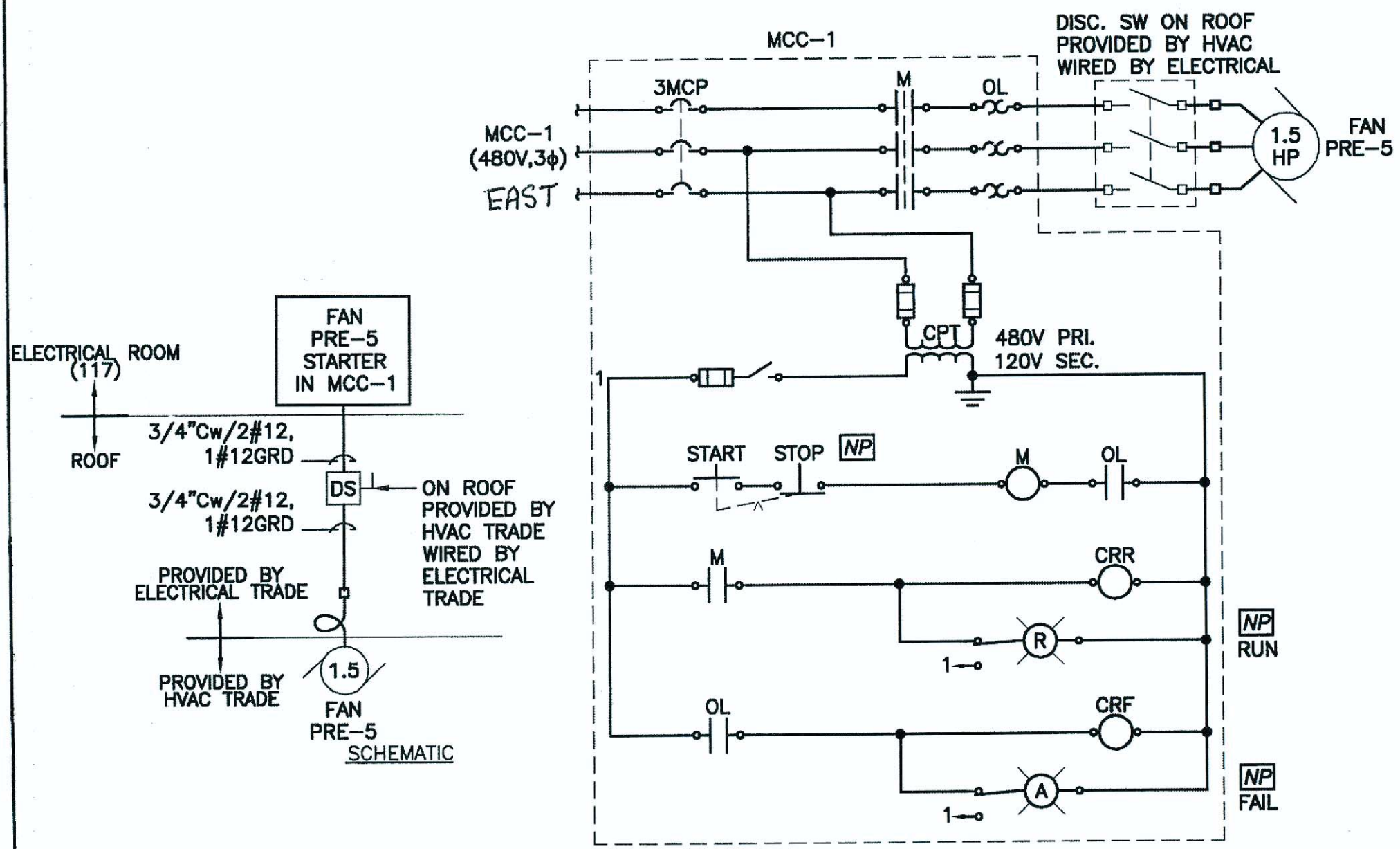
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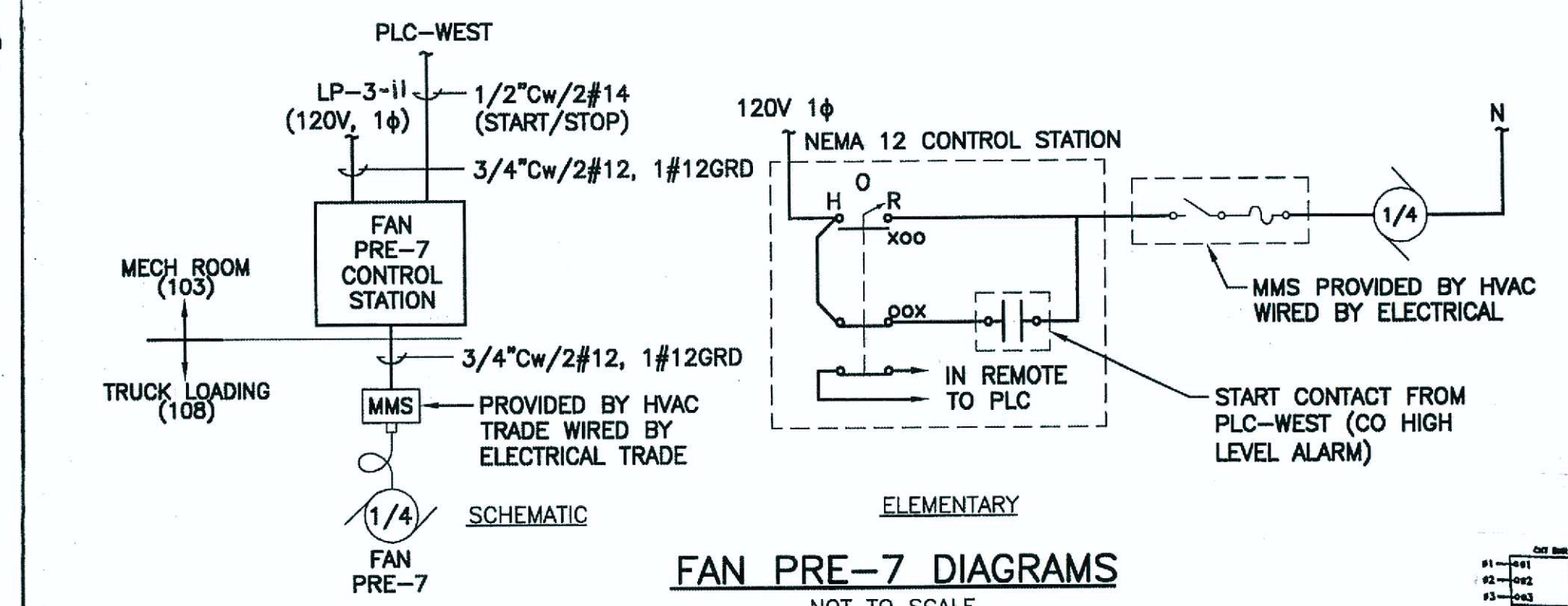
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 Drawn by - RGW/JBL
 Check by - WFH



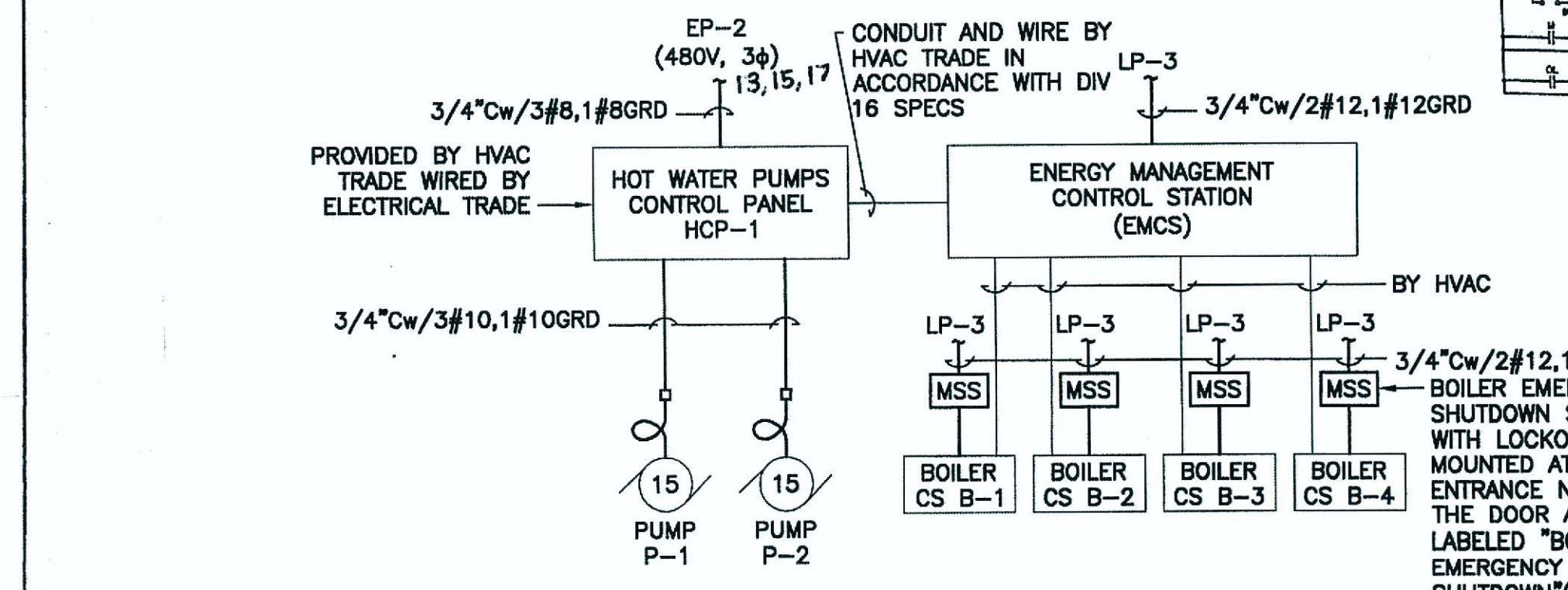
ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 SYRACUSE, NEW YORK



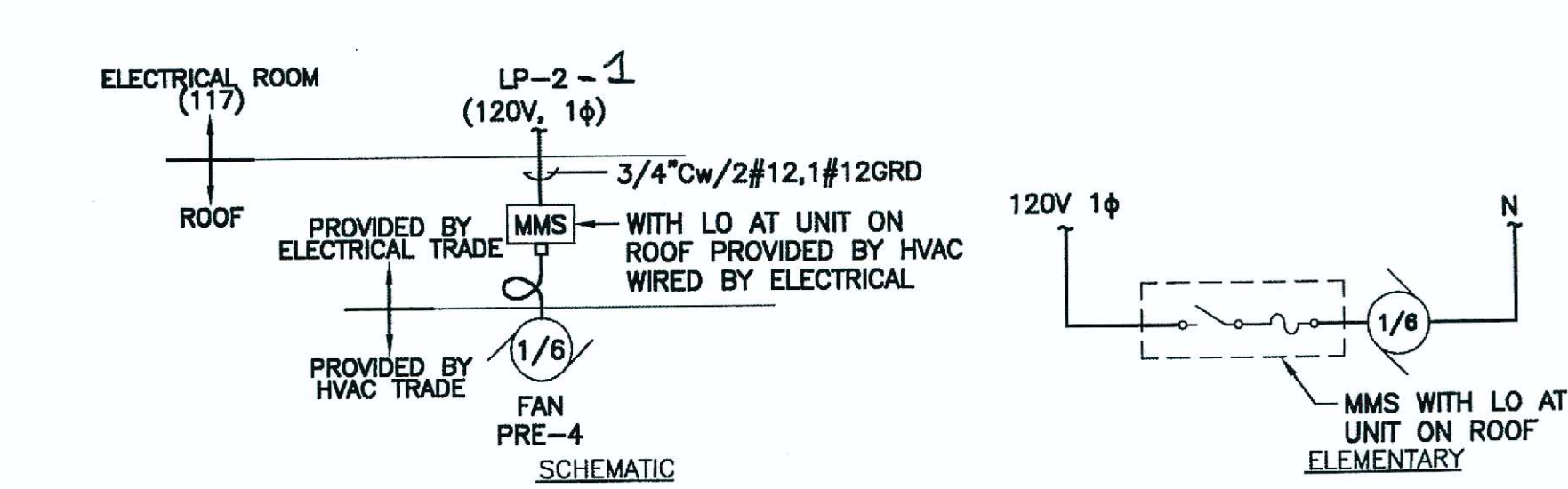
FAN PRE-5 DIAGRAMS NOT TO SCALE



FAN PRE-7 DIAGRAMS NOT TO SCALE

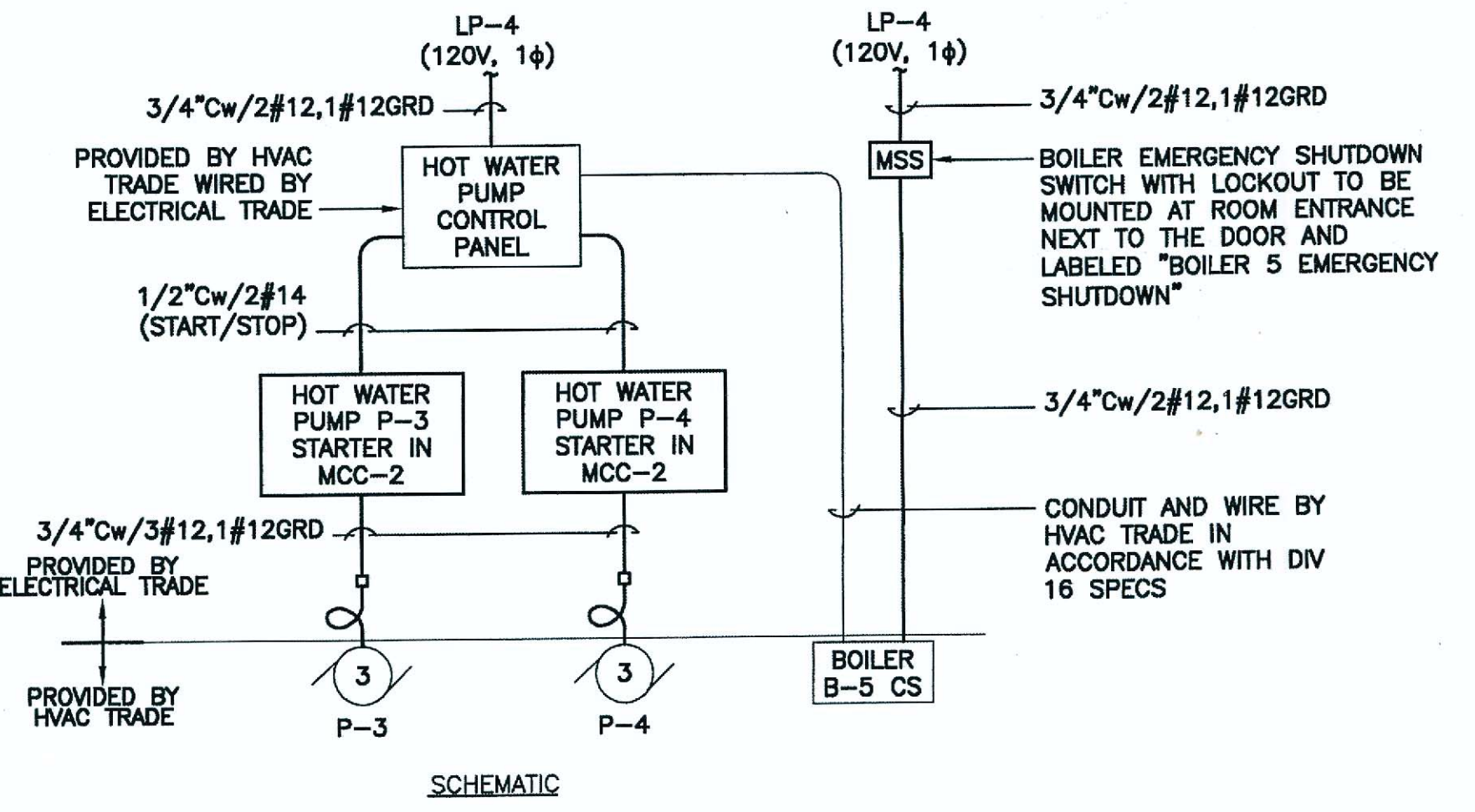


BOILERS AND HOT WATER PUMPS P-1 AND P-2 DIAGRAM NOT TO SCALE



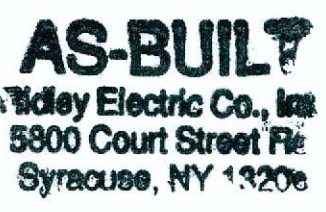
FAN PRE-4 DIAGRAMS NOT TO SCALE

TYP. PRE-6 AT 1/20HP, LP-3, PRE-8 AT 1/20HP, LP-3, PRE-9 AT 1/6HP, LP-3, AND ILF-3 AT 1/40HP, LP-4



EAST ENTRANCE HOT WATER PUMP P-3 DIAGRAMS NOT TO SCALE

TYPICAL FOR HOT WATER PUMP P-4

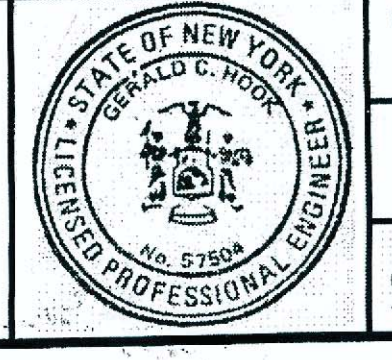


Valley Electric Co., Inc.
 5800 Court Street
 Syracuse, NY 13206

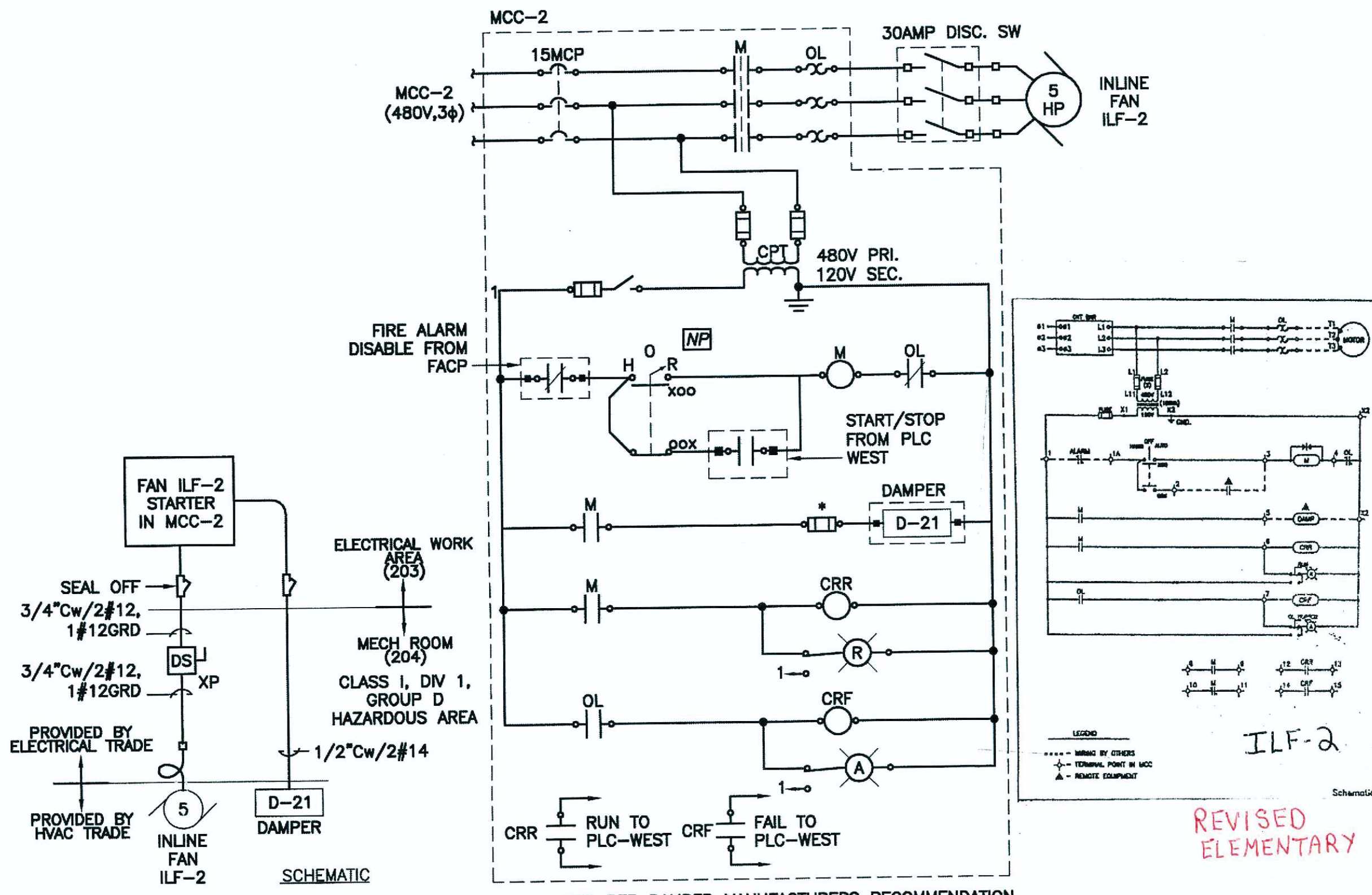
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 CLINTON CSO STORAGE FACILITY PROJECT

H & V ELEMENTARY AND SCHEMATIC DIAGRAMS
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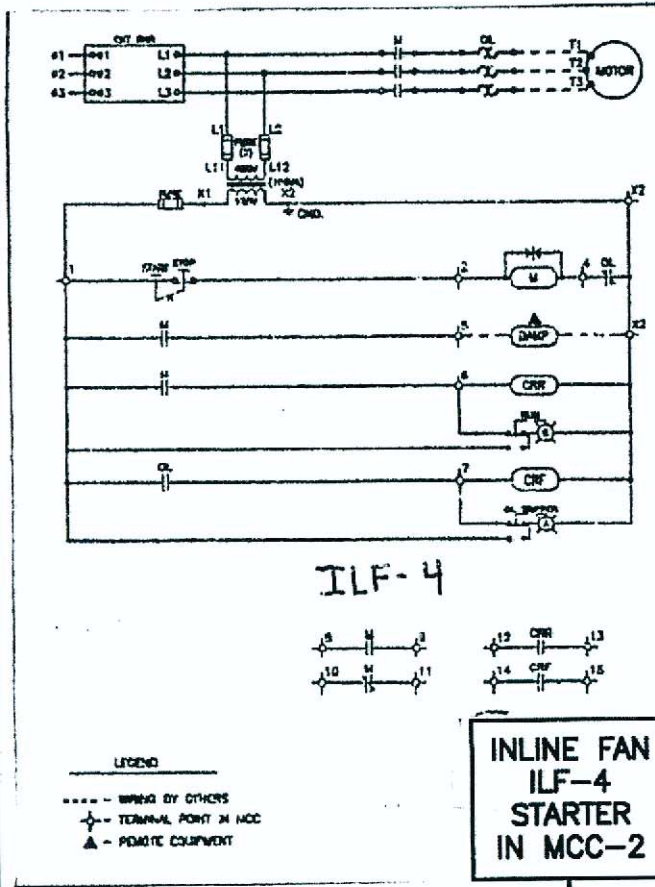


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 E-410



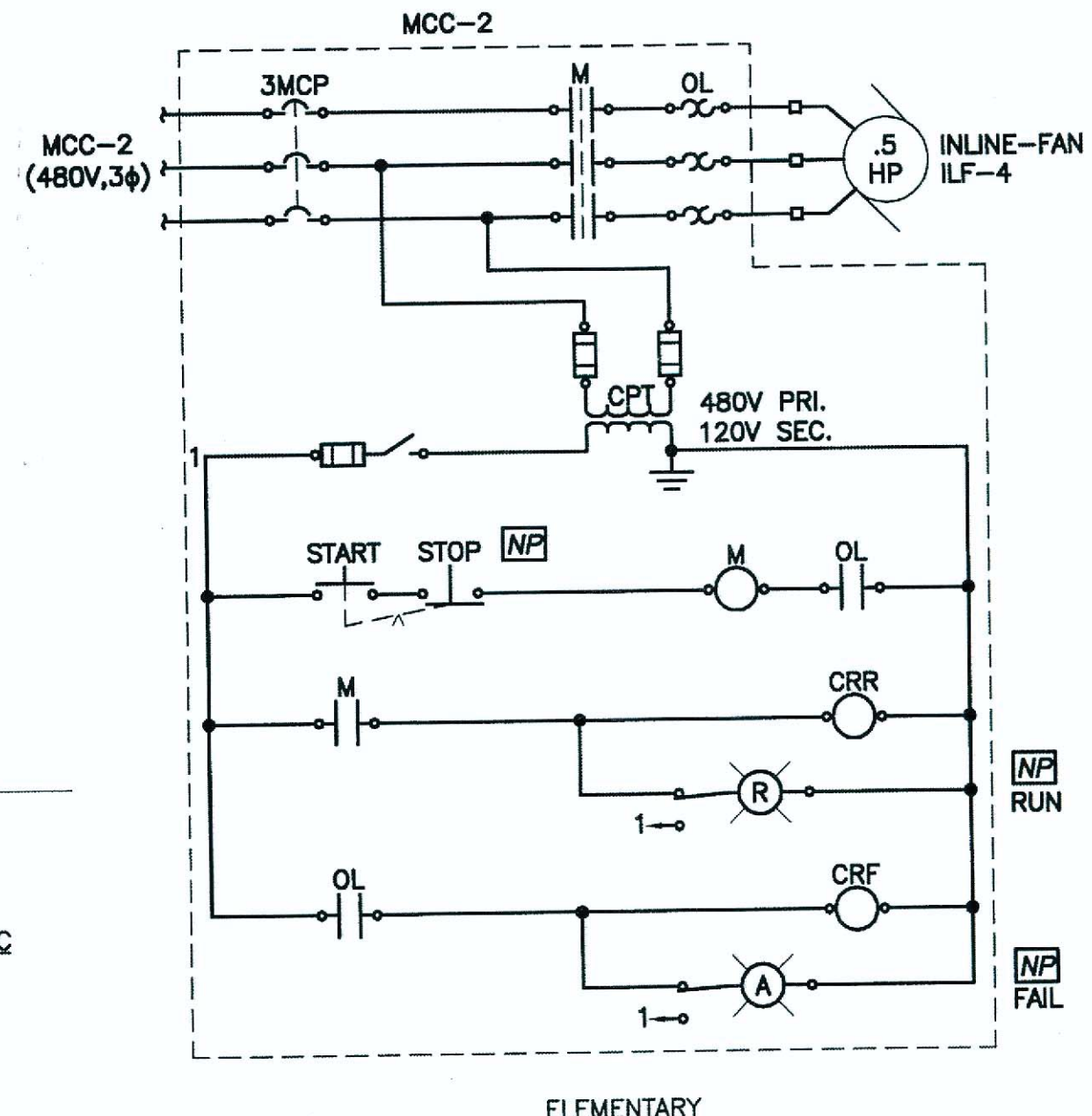
INLINE FAN ILF-2 DIAGRAMS

NOT TO SCALE



INLINE FAN ILF-4 DIAGRAMS

NOT TO SCALE



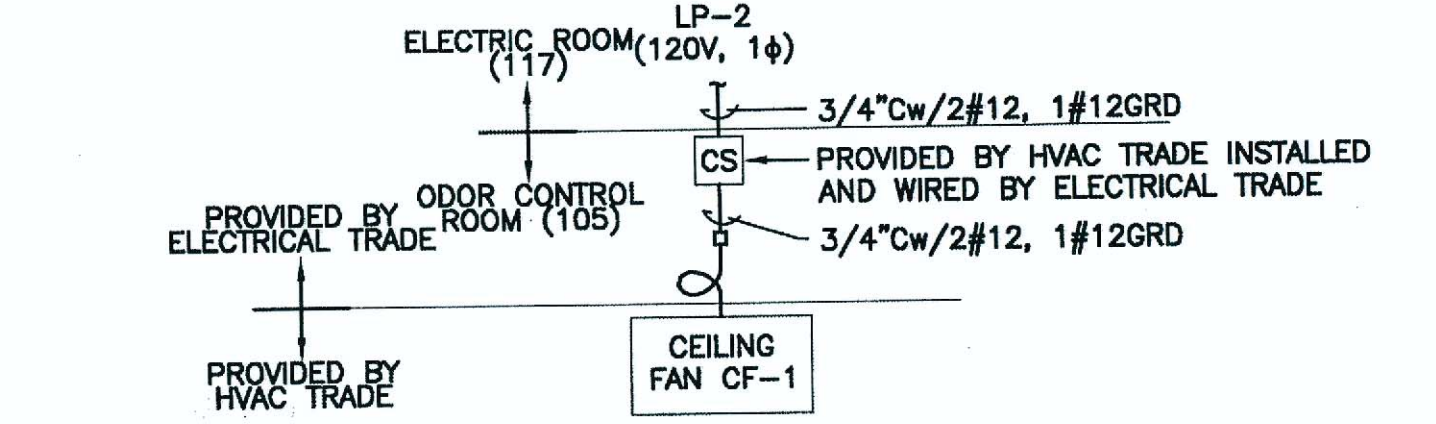
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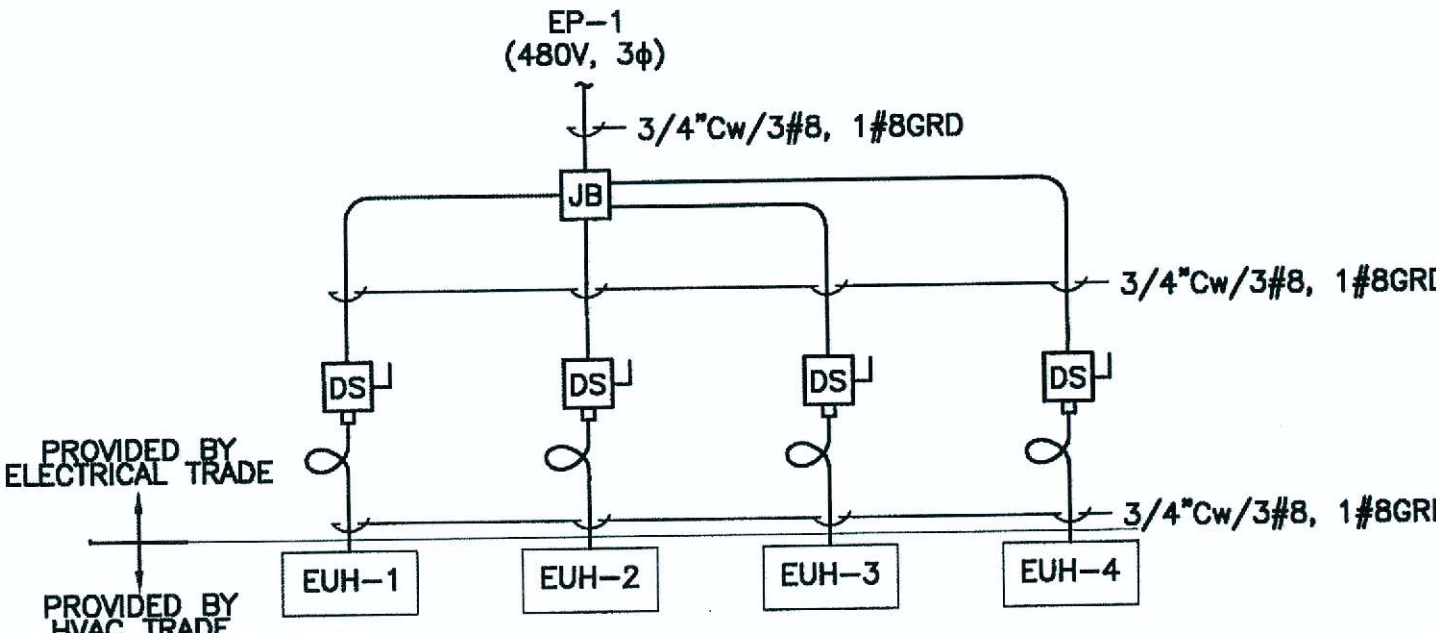
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Designed by RGW/JBL
Drawn by RGW/JBL
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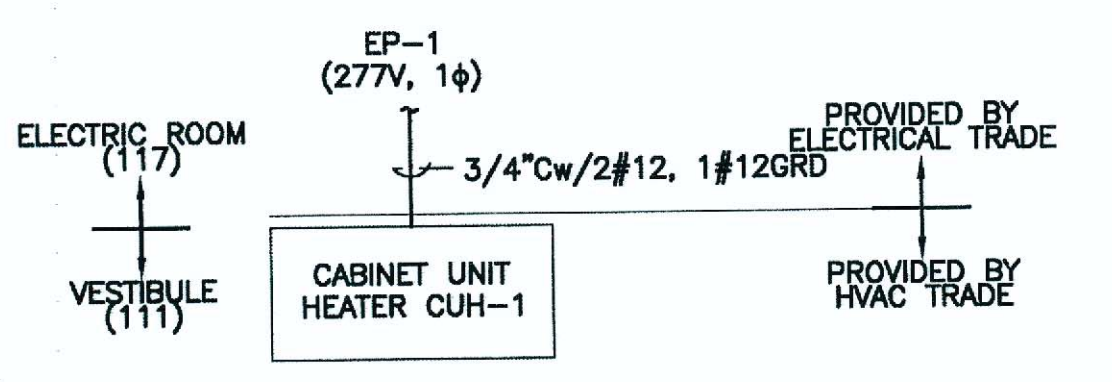
ODOR CONTROL ROOM CEILING FAN CF-1 SCHEMATIC

NOT TO SCALE
TYPICAL FOR CF-2



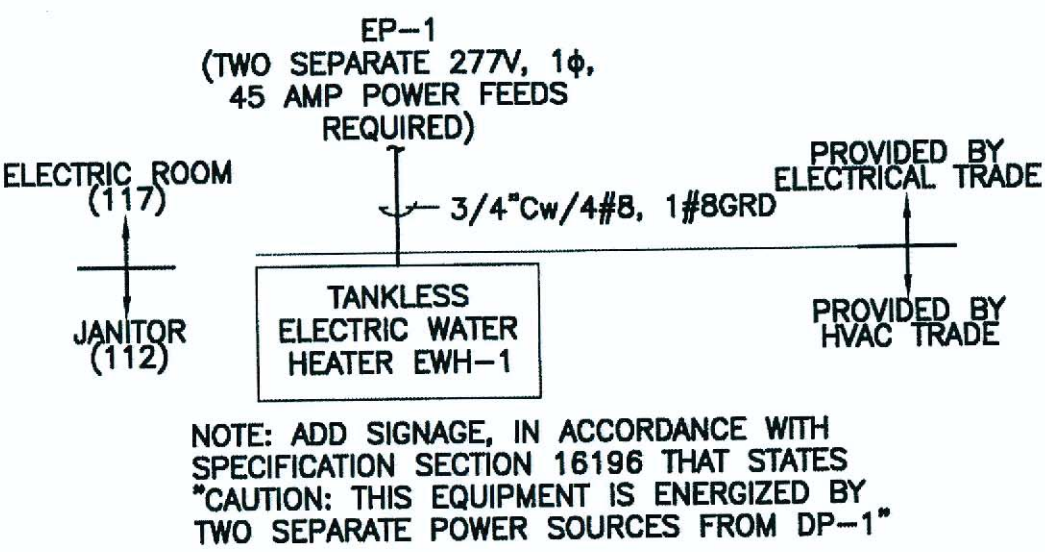
ELECTRIC ROOM (117) ELECTRIC UNIT HEATERS EUH-1, EUH-2, EUH-3, EUH-4 SCHEMATIC

NOT TO SCALE



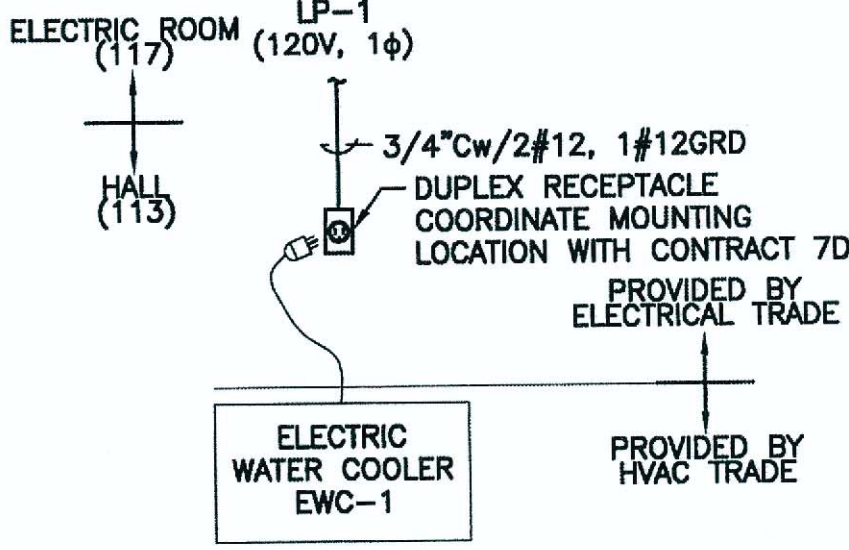
CABINET UNIT HEATER CUH-1 SCHEMATIC

NOT TO SCALE
TYPICAL FOR CUH-2 IN BATH (114) AND CUH-3 IN JANITOR (112)



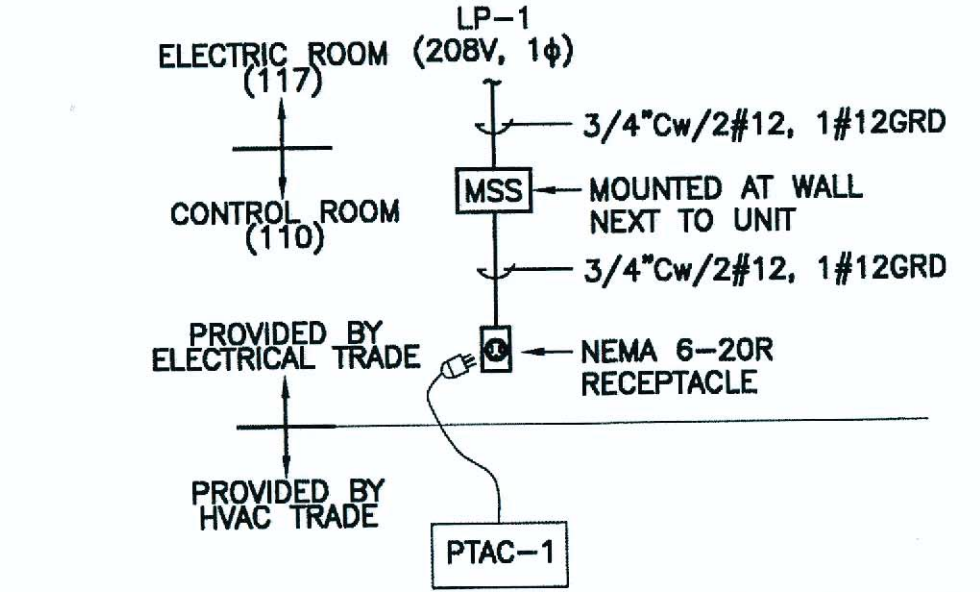
INSTANTANEOUS WATER HEATER EWH-1 SCHEMATIC

NOT TO SCALE



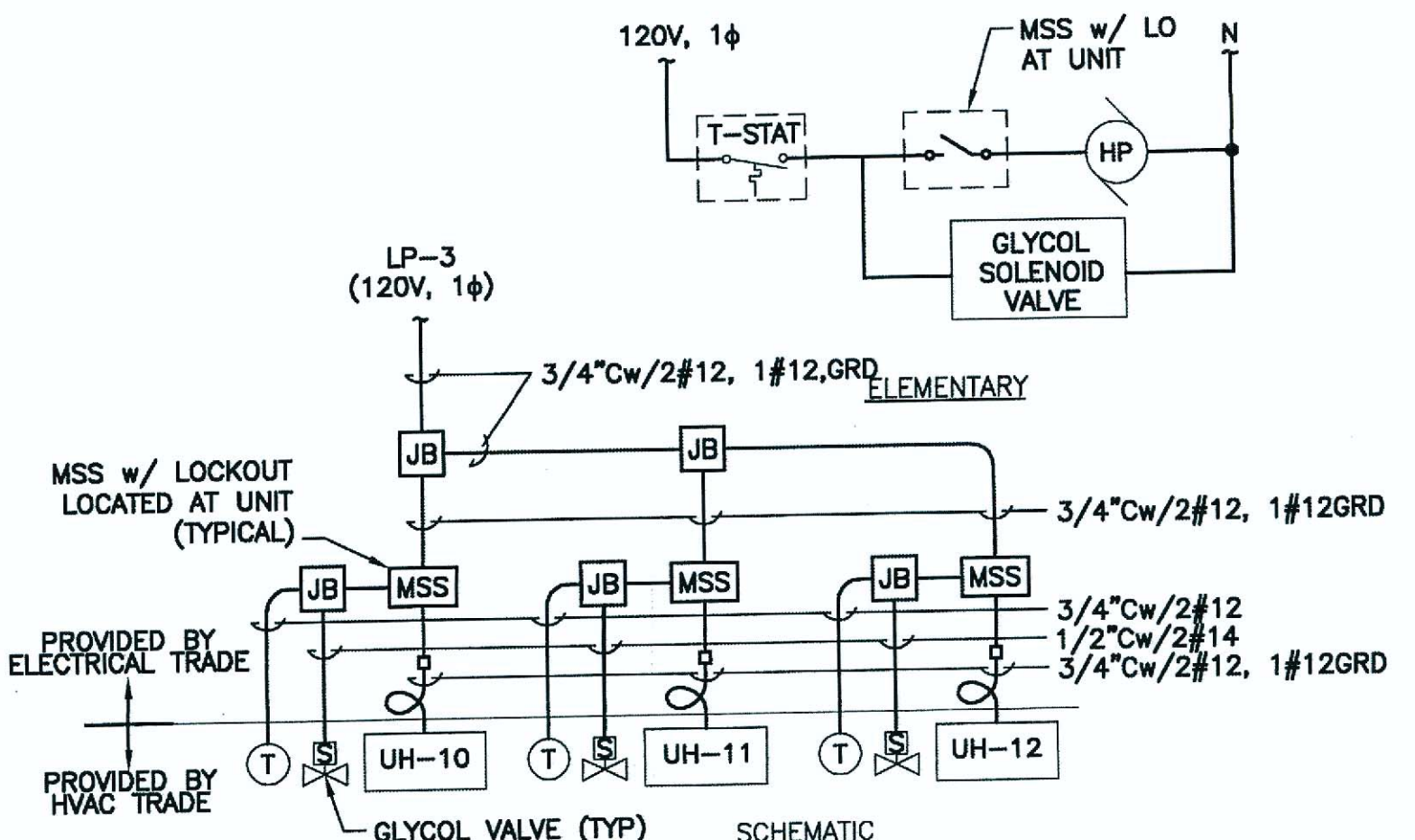
ELECTRIC WATER COOLER EWC-1 SCHEMATIC

NOT TO SCALE



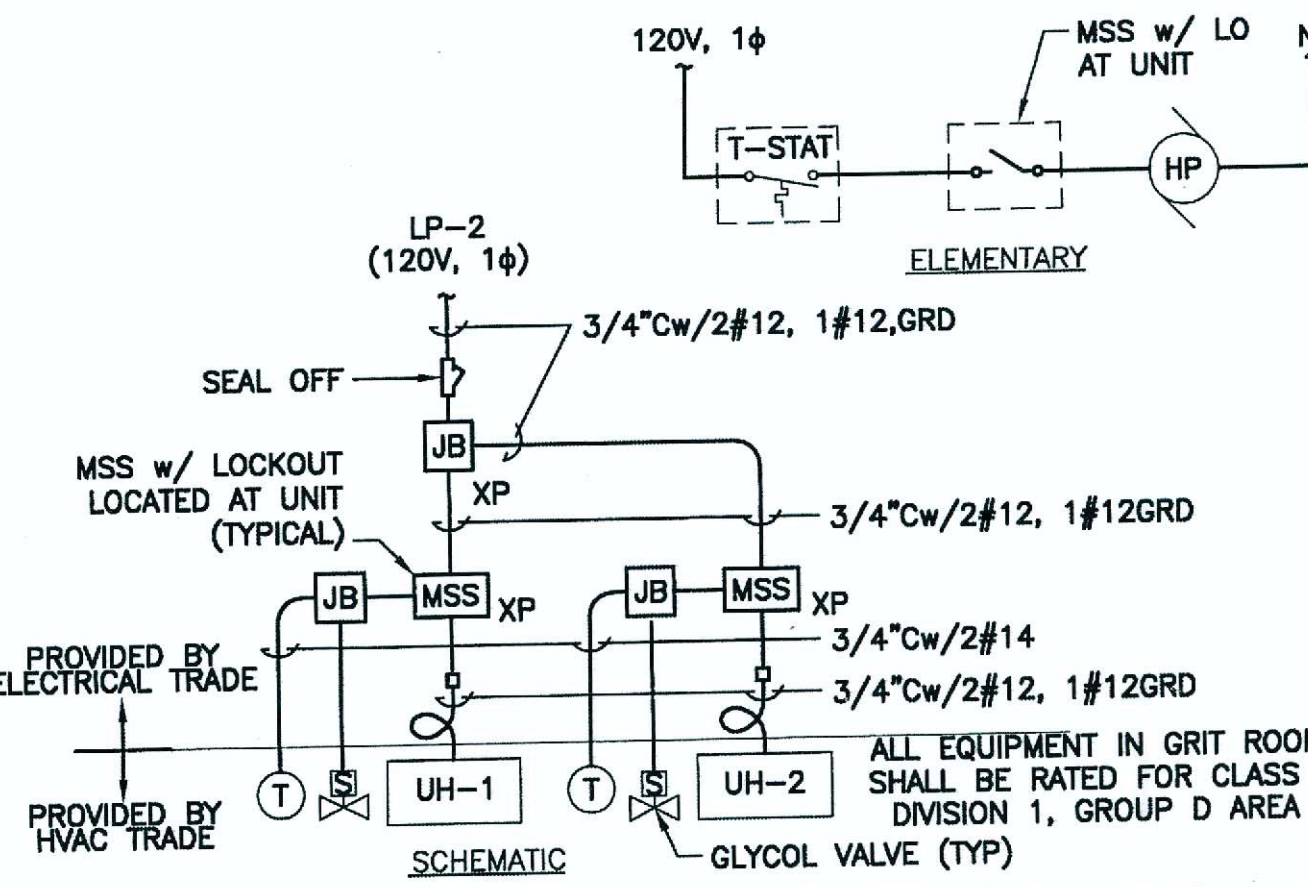
AIR CONDITIONER PTAC-1 SCHEMATIC

NOT TO SCALE



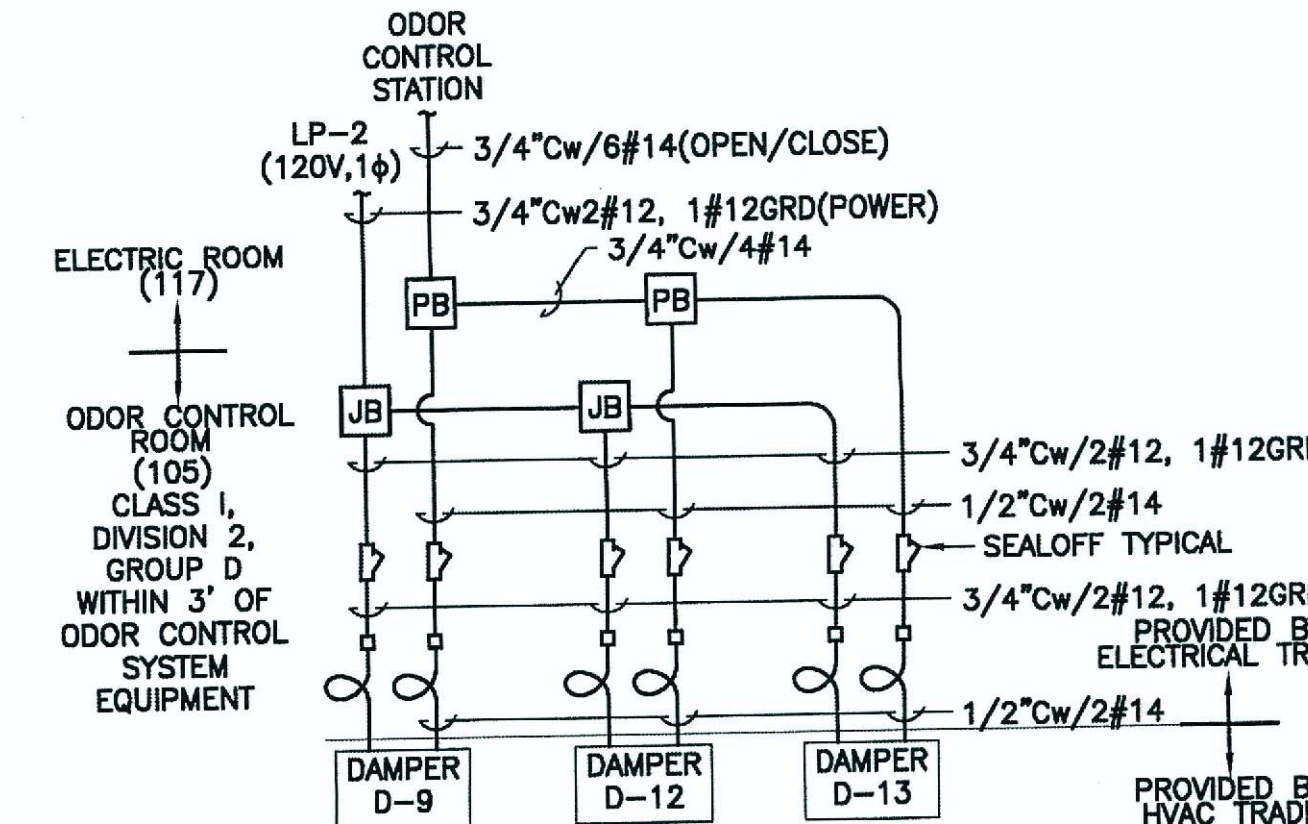
STORAGE ROOM(104) HOT WATER UNIT HEATER DIAGRAMS

NOT TO SCALE
TYPICAL FOR UH-5 MECHANICAL ROOM (103), LP-3
UH-6 AND UH-7, ODOR CONTROL ROOM (105), LP-2
UH-8 AND UH-9, TRUCK LOADING (108), LP-3
UH-14, EAST ENTRANCE STRUCTURE, ELECTRIC/WORK AREA (203), LP-4



GRIT ROOM(109) HOT WATER UNIT HEATER DIAGRAMS

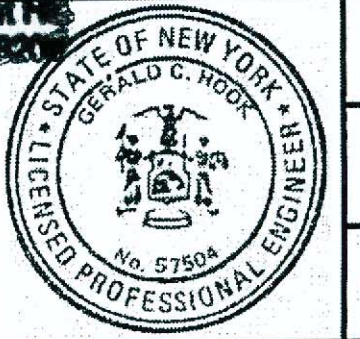
NOT TO SCALE
TYPICAL FOR UH-3 AND UH-4 MECHANICAL ROOM (101), LP-3
UH-15, ACCESS ROOM (106), LP-2
UH-13, EAST ENTRANCE STRUCTURE, MECHANICAL ROOM (204), LP-4



DAMPERS D-9, D-12, AND D-13 SCHEMATIC

NOT TO SCALE
TYPICAL FOR D-14 AND D-15, EAST ENTRANCE STRUCTURE, LP-4

AS-BUILT
Sibley Electric Co., Inc.
8800 COURT STREET
SYRACUSE, NY 13208

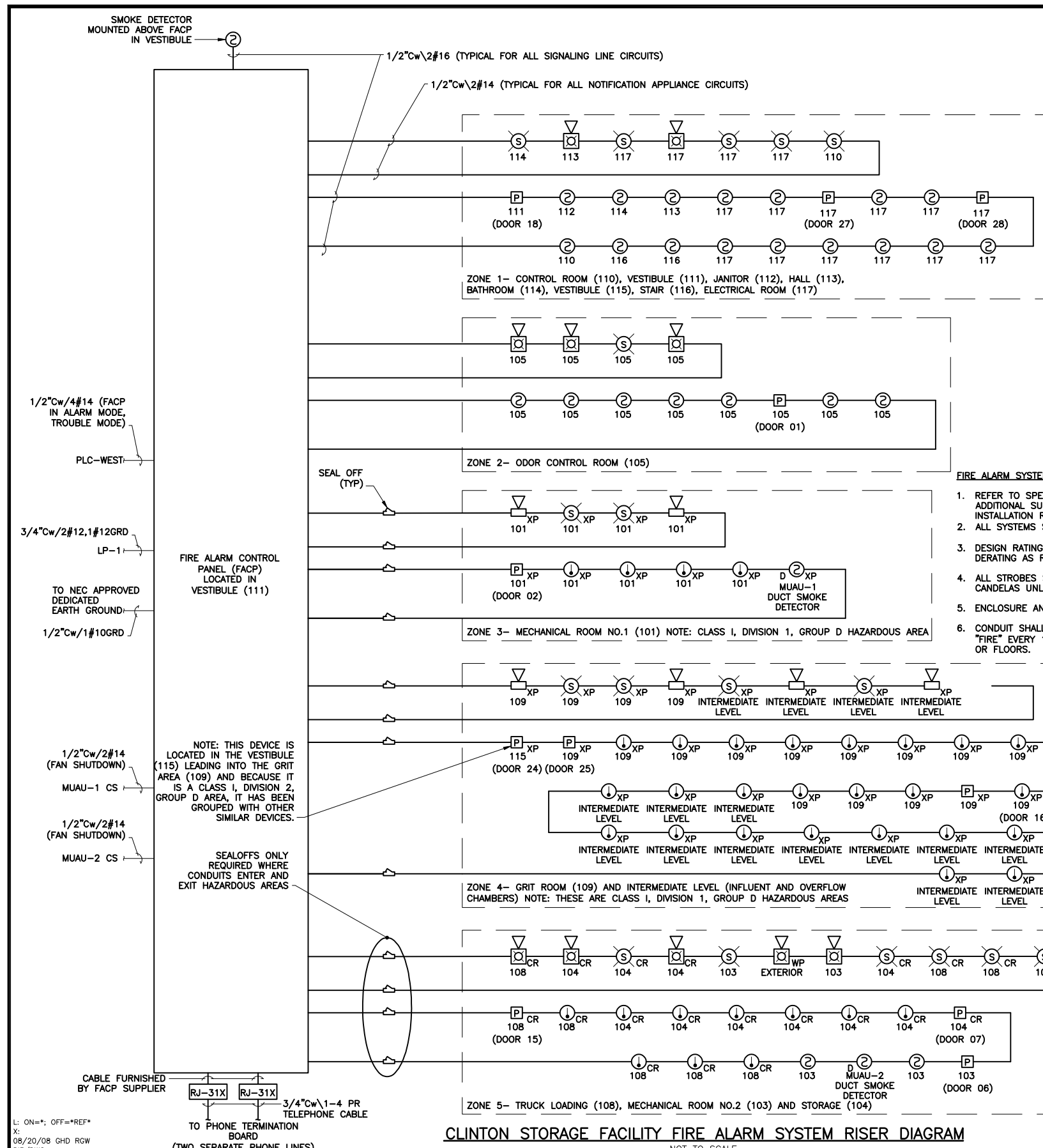


File Number 00663
Date 04/11
E-411

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CLINTON CSO STORAGE FACILITY PROJECT

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CLINTON STORAGE FACILITY FIRE ALARM SYSTEM RISER DIAGRAM
NOT TO SCALE

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08/20/08 GHD RGW
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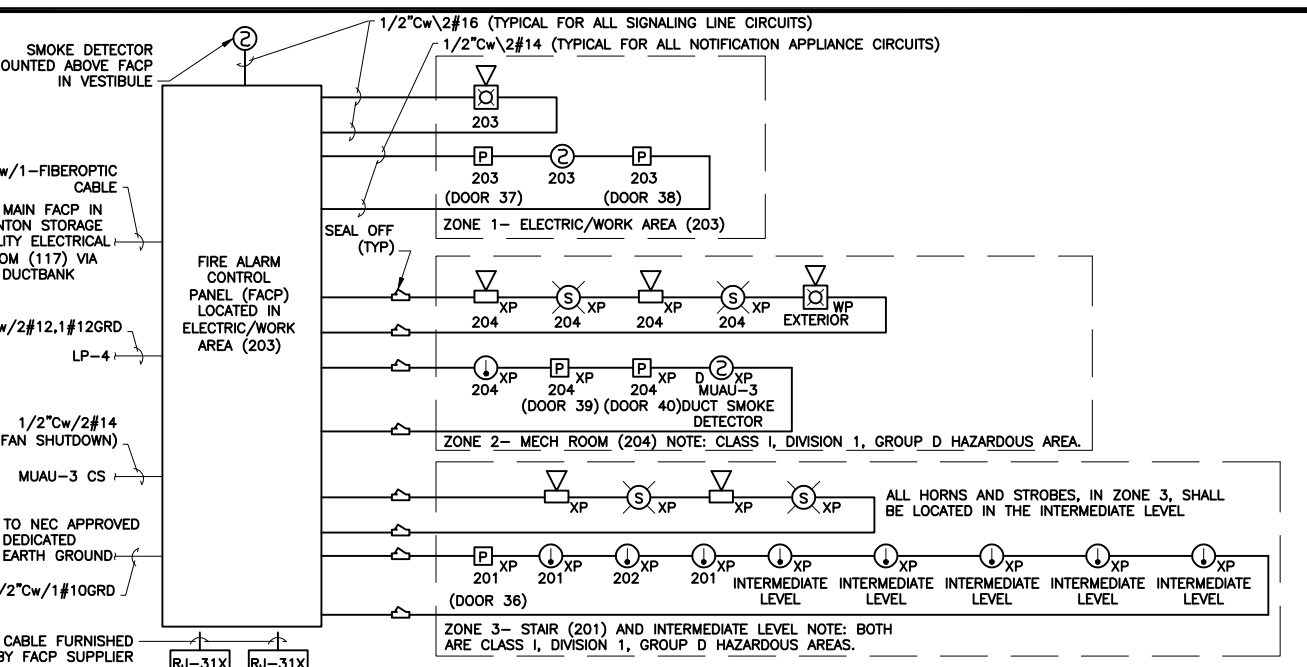
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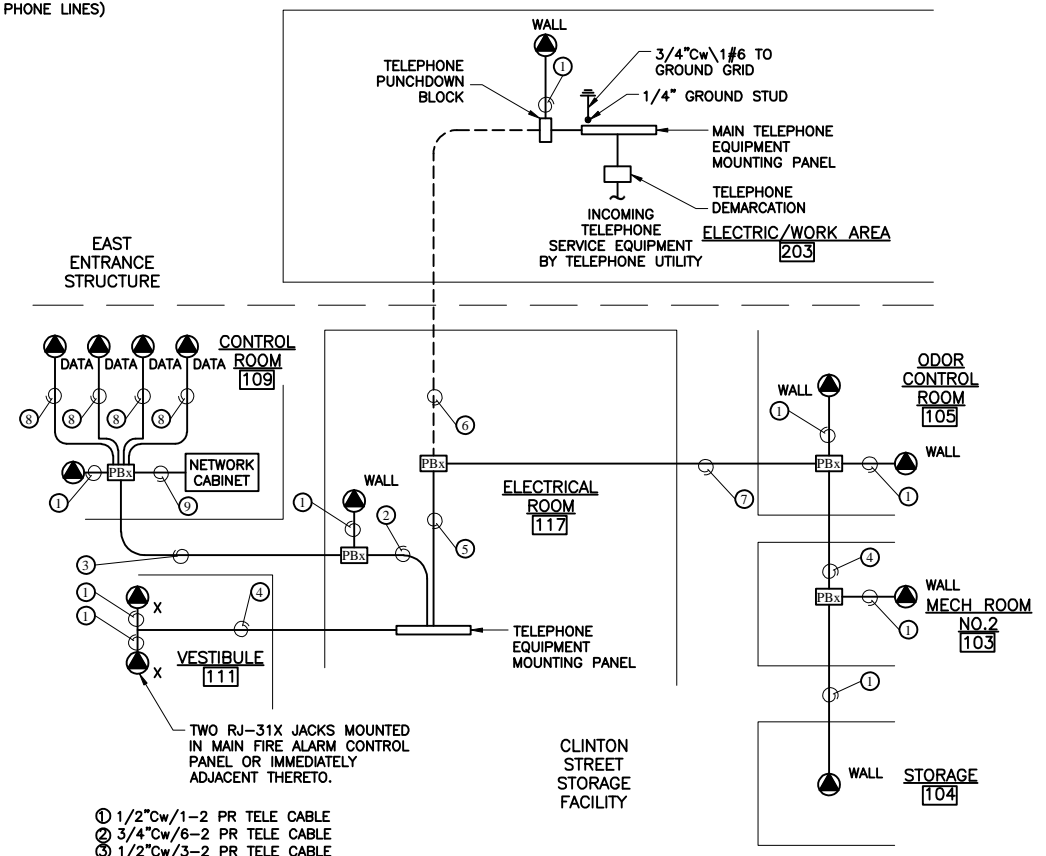
In charge of WFH
Designed by RGW
Drawn by RGW
Checked by WFH



- FIRE ALARM SYSTEM NOTES:**
- REFER TO SPECIFICATION SECTION 16721 FOR ADDITIONAL SUBMITTAL DEVICE, CONDUIT, WIRING AND INSTALLATION REQUIREMENTS.
 - ALL SYSTEMS SHALL BE A "CLASS A" TYPE SYSTEM.
 - DESIGN RATING OF HEAT DETECTORS IS 40'-0" BEFORE DERATING AS REQUIRED.
 - ALL STROBES SHALL BE RATED A MINIMUM OF 15 CANDELAS UNLESS OTHERWISE NOTED.
 - ENCLOSURE AND BOXES SHALL BE COLORED RED.
 - CONDUIT SHALL BE IDENTIFIED BY A LABEL READING "FIRE" EVERY 10 FEET AND ON EACH SIDE OF WALLS OR FLOORS.



EAST ENTRANCE STRUCTURE FIRE ALARM SYSTEM RISER DIAGRAM
NOT TO SCALE



TELEPHONE RISER DIAGRAM
NOT TO SCALE

- ① 1/2"Cw/1-2 PR TELE CABLE
- ② 3/4"Cw/6-2 PR TELE CABLE
- ③ 1/2"Cw/3-2 PR TELE CABLE
- ④ 1/2"Cw/2-2 PR TELE CABLE
- ⑤ 1"Cw/1-12 PR TELE CABLE AND 4-2 PR TELE CABLE
- ⑥ 2"Cw/1-12 PR TELE CABLE (IN DUCTBANK TO CLINTON STORAGE FACILITY)
- ⑦ 1/2"Cw/4-2 PR TELE CABLE
- ⑧ 1/2"Cw/1-CAT 5E
- ⑨ 2"Cw/1-4 PR TELE CABLE, 1-2 PR TELE CABLE, 4-CAT 5E

NOTE: INCOMING TELEPHONE SERVICE FROM THE UTILITY POLE TO TELEPHONE MOUNTING PANEL FURNISHED AND INSTALLED BY THE TELEPHONE UTILITY IN DUCTBANK CONDUITS AND SERVICE RISER PROVIDED BY THIS ELECTRICAL TRADE

!!!NOTE!!!
ALL WORK ON THIS SHEET BY ELECTRICAL TRADE UNLESS SPECIFICALLY NOTED OTHERWISE

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

FIRE ALARM AND TELEPHONE SYSTEM
RISER DIAGRAMS
ELECTRICAL

File Number 00663
Date 04/11
E-412

DWG. INDEX

| DWG. # | DESCRIPTION | LOCATION |
|--------|-------------------------|--|
| E-500 | COVER PAGE - DWG. INDEX | NA |
| E-501 | EFFLUENT PUMP 131 | WEST STORAGE BLDG. |
| E-502 | EFFLUENT PUMP 132 | WEST STORAGE BLDG. |
| E-503 | EFFLUENT PUMP 133 | WEST STORAGE BLDG. |
| E-504 | DEWATERING PUMP 121 | WEST STORAGE BLDG. |
| E-505 | DEWATERING PUMP 122 | WEST STORAGE BLDG. |
| E-506 | BLOWER #1 | WEST STORAGE BLDG. |
| E-507 | BLOWER #2 | WEST STORAGE BLDG. |
| E-508 | BLOWER #3 | WEST STORAGE BLDG. |
| E-509 | MUAU-1 | WEST STORAGE BLDG. |
| E-510 | MUAU-2 | WEST STORAGE BLDG. |
| E-511 | MUAU-3 & ILF-2 | EAST ENTRANCE STRUCTURE |
| E-512 | VENT FAIL CONTROL PANEL | WEST STORAGE BLDG. |
| E-513 | VENT FAIL CONTROL PANEL | EAST ENTRANCE STRUCTURE |
| E-514 | SLUICE GATES | WEST STORAGE BLDG. & EAST ENTRANCE STRUCTURE |

OPTIONAL_LAYER
XREF
DATE_COM_OP
DIRECTORY/FILE

SCALE: NONE

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| No. | Date | Revisions | Init |
|-----|------|-----------|------|
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In charge of __ WFH __
Designed by __ WFH __
Drawn by __ KEB __
Checked by __ GWS __

RIDLEY ELECTRIC CO. INC.
5800 COURT ST. ROAD
SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON 3.7 MG STORAGE FACILITY PROJECT

COVER SHEET—"AS BUILT" DWGS.

ELECTRIC

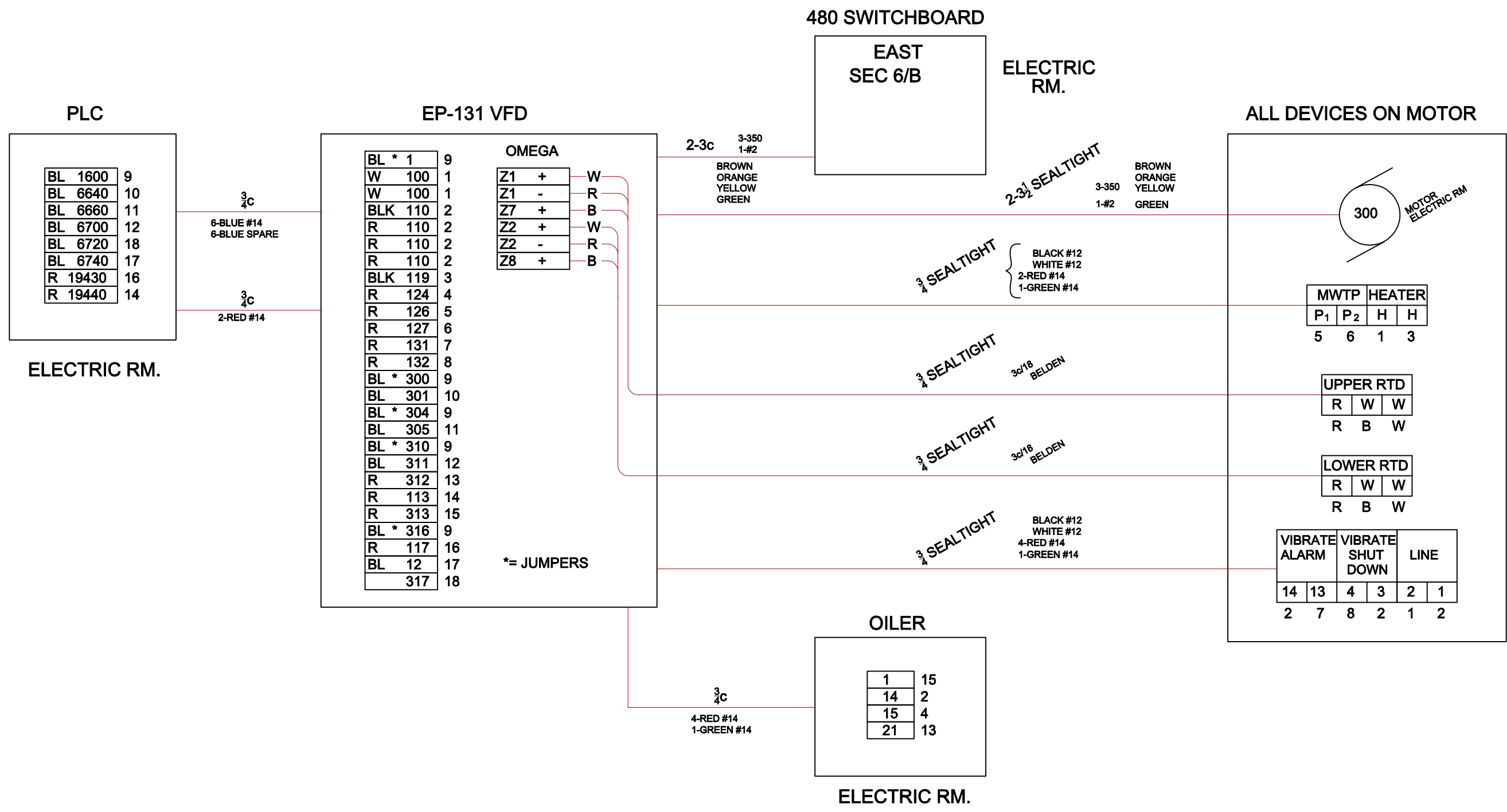
AS-BUILT

DATE:
12/1/15

File Number
00663

Date
DATE

E-500



OPTIONAL_LAYER
XREF
DATE_COM_OP
DIRECTORY/FILE

SCALE: NONE

| No. | Date | Revisions | Init |
|-----|------|-----------|------|
| | | | |
| | | | |
| | | | |

In charge of ___ WFH ___
Designed by ___ WFH ___
Drawn by ___ KEB ___
Checked by ___ GWS ___

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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON 3.7 MG STORAGE FACILITY PROJECT

WEST STORAGE BLDG.
EFFLUENT PUMP 131

ELECTRIC

AS-BUILT

File Number
00663

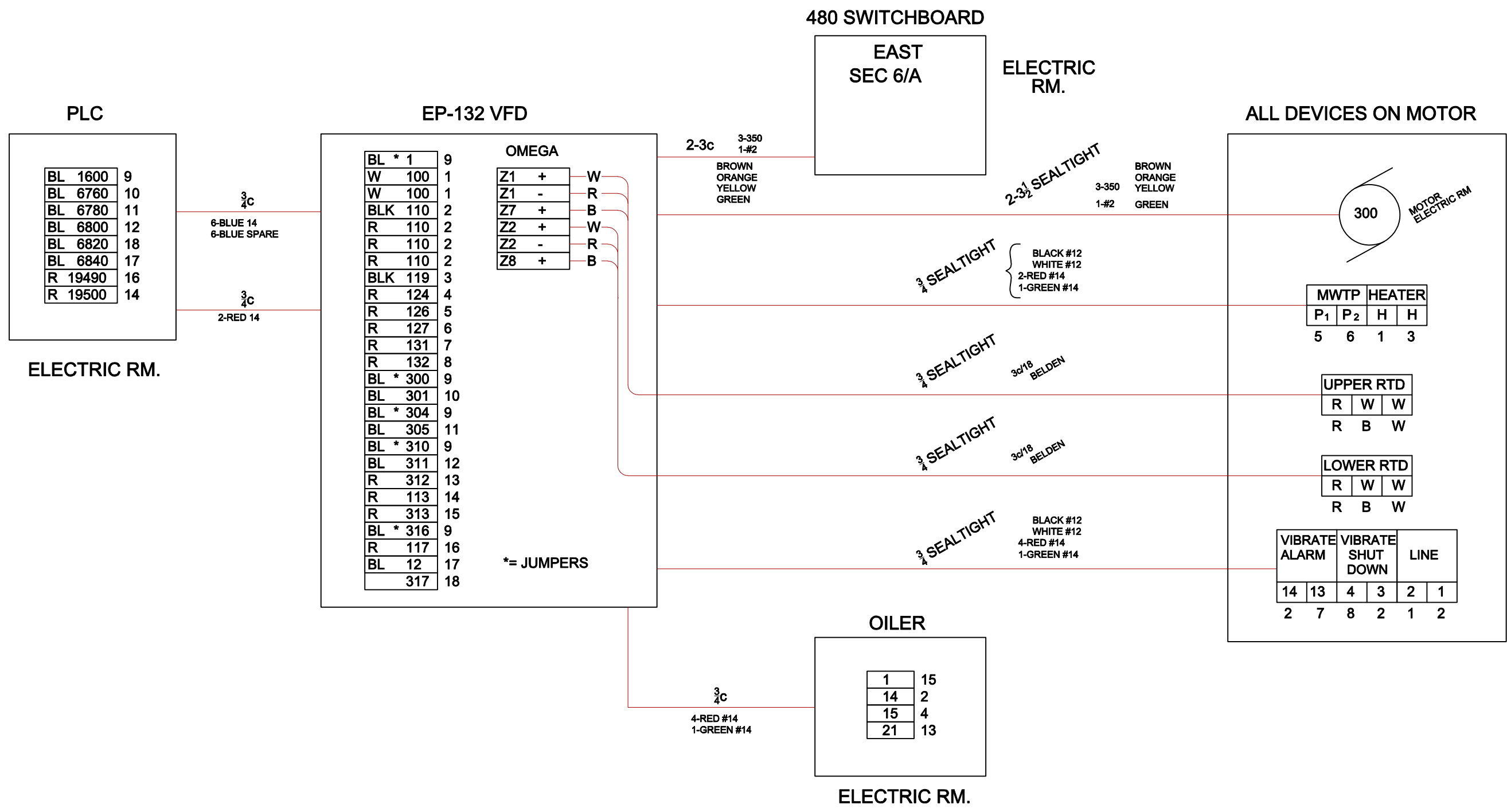
Date
DATE

DATE:
12/1/15

E-501

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XREF
DATE_COM_OP
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Designed by WFH
Drawn by KEB
Checked by GWS

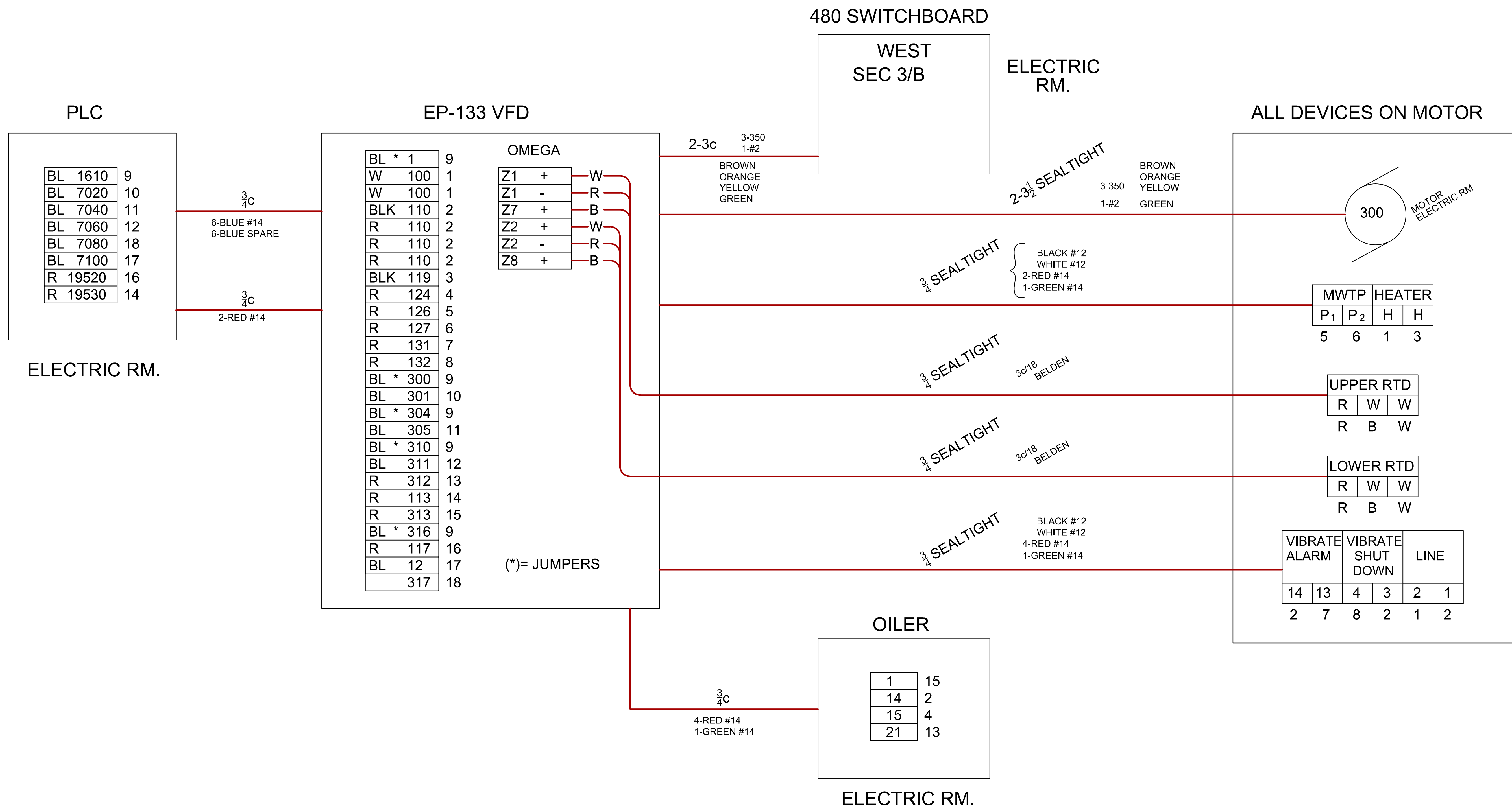
RIDLEY ELECTRIC CO., INC.
5800 COURT ST. ROAD
SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON 3.7 MG STORAGE FACILITY PROJECT

WEST STORAGE BLDG.
EFFLUENT PUMP 132
ELECTRIC

AS-BUILT
File Number 00663
Date DATE
DATE: 12/1/15

E-502



OPTIONAL_LAYER
XREF
DATE_COM_OP
DIRECTORY/FILE

SCALE: NONE

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| No. | Date | Revisions | Init |
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In charge of WFH
Designed by WFH
Drawn by KEB
Checked by GWS

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SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON 3.7 MG STORAGE FACILITY PROJECT

WEST STORAGE BLDG.
EFFLUENT PUMP 133

ELECTRIC

AS-BUILT

DATE:
12/1/15

File Number
00663

Date
DATE

E-503

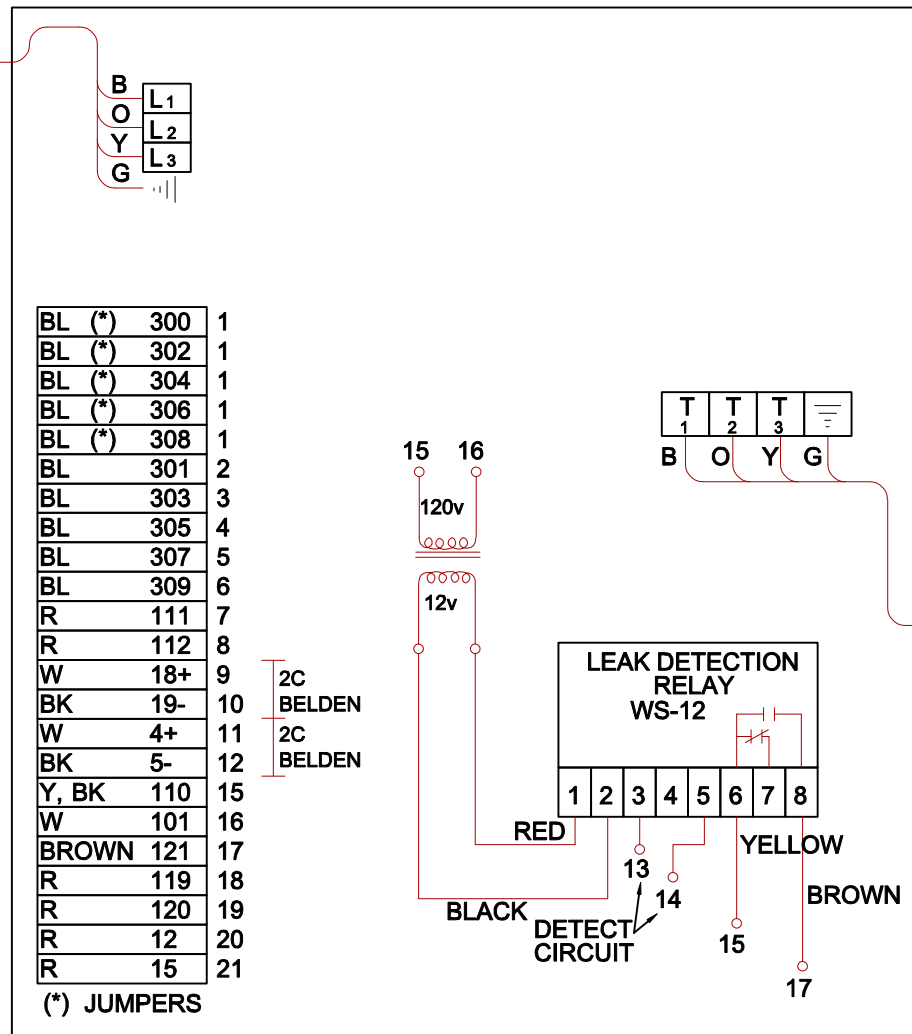
MCC-1/WEST
SEC. D/A
ELECTRIC RM.

BROWN }
ORANGE } #3
YELLOW }
GREEN-#8

| | | |
|--------|-----|----|
| BL (*) | 300 | 1 |
| BL (*) | 302 | 1 |
| BL (*) | 304 | 1 |
| BL (*) | 306 | 1 |
| BL (*) | 308 | 1 |
| BL | 301 | 2 |
| BL | 303 | 3 |
| BL | 305 | 4 |
| BL | 307 | 5 |
| BL | 309 | 6 |
| R | 111 | 7 |
| R | 112 | 8 |
| W | 18+ | 9 |
| BK | 19- | 10 |
| W | 4+ | 11 |
| BK | 5- | 12 |
| Y, BK | 110 | 15 |
| W | 101 | 16 |
| BROWN | 121 | 17 |
| R | 119 | 18 |
| R | 120 | 19 |
| R | 12 | 20 |
| R | 15 | 21 |

(*) JUMPERS

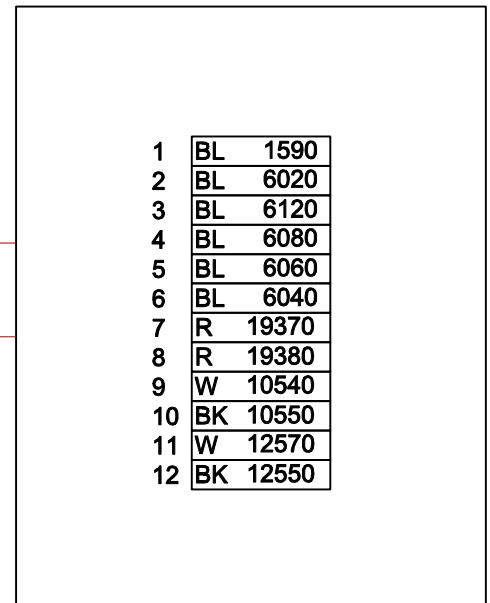
DWP-121



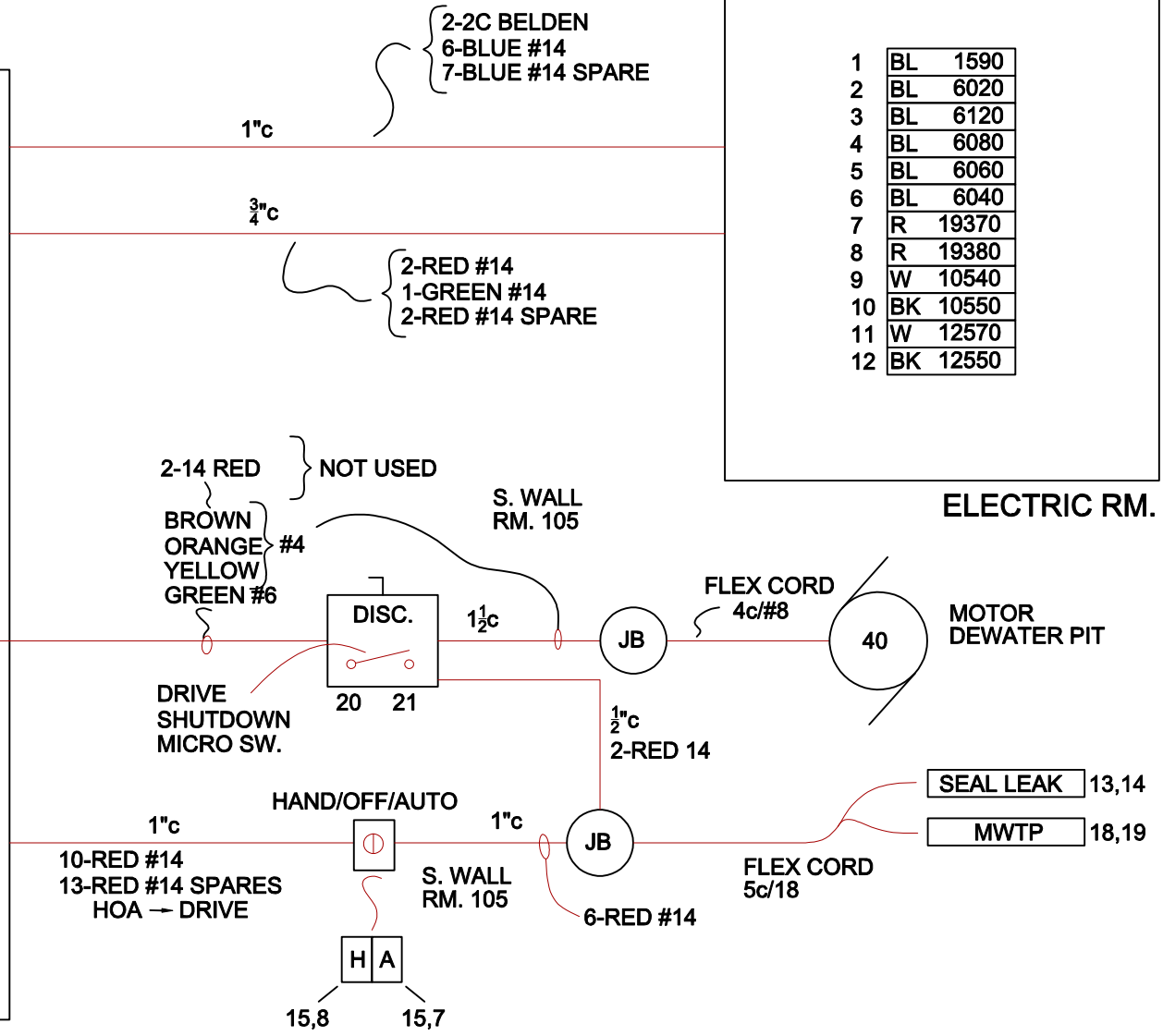
WEST WALL ELECTRIC RM.

Y - YELLOW
BL - BLUE
BK - BLACK
R - RED
W - WHITE

PLC



ELECTRIC RM.



OPTIONAL_LAYER
XREF
DATE_COM_OP
DIRECTORY/FILE

SCALE: NONE

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| No. | Date | Revisions | Init |
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In charge of ___ WFH ___
Designed by ___ WFH ___
Drawn by ___ KEB ___
Checked by ___ GWS ___

RIDLEY ELECTRIC CO., INC.
5800 COURT ST. ROAD
SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON 3.7 MG STORAGE FACILITY PROJECT

WEST STORAGE BLDG.
DEWATERING PUMP 121

ELECTRIC

AS-BUILT

DATE:
12/1/15

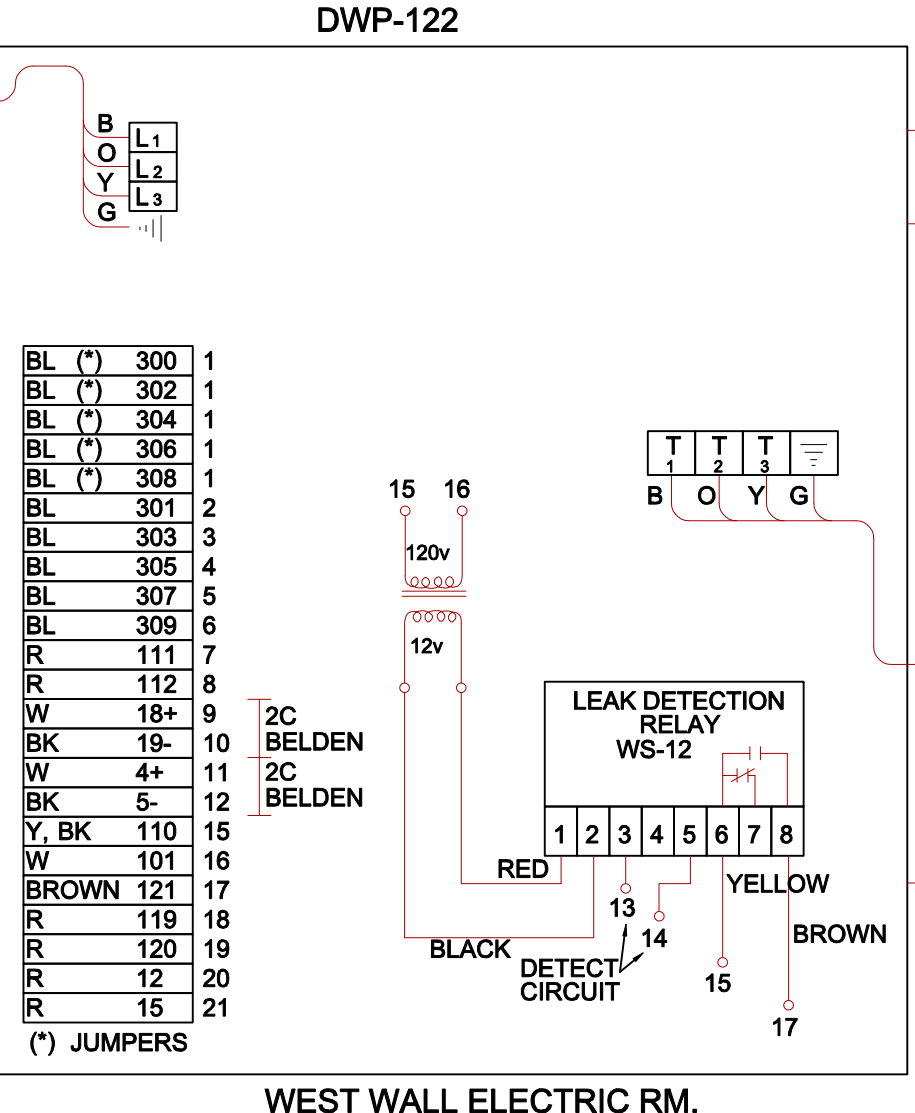
File Number
00663

Date
DATE

E-504

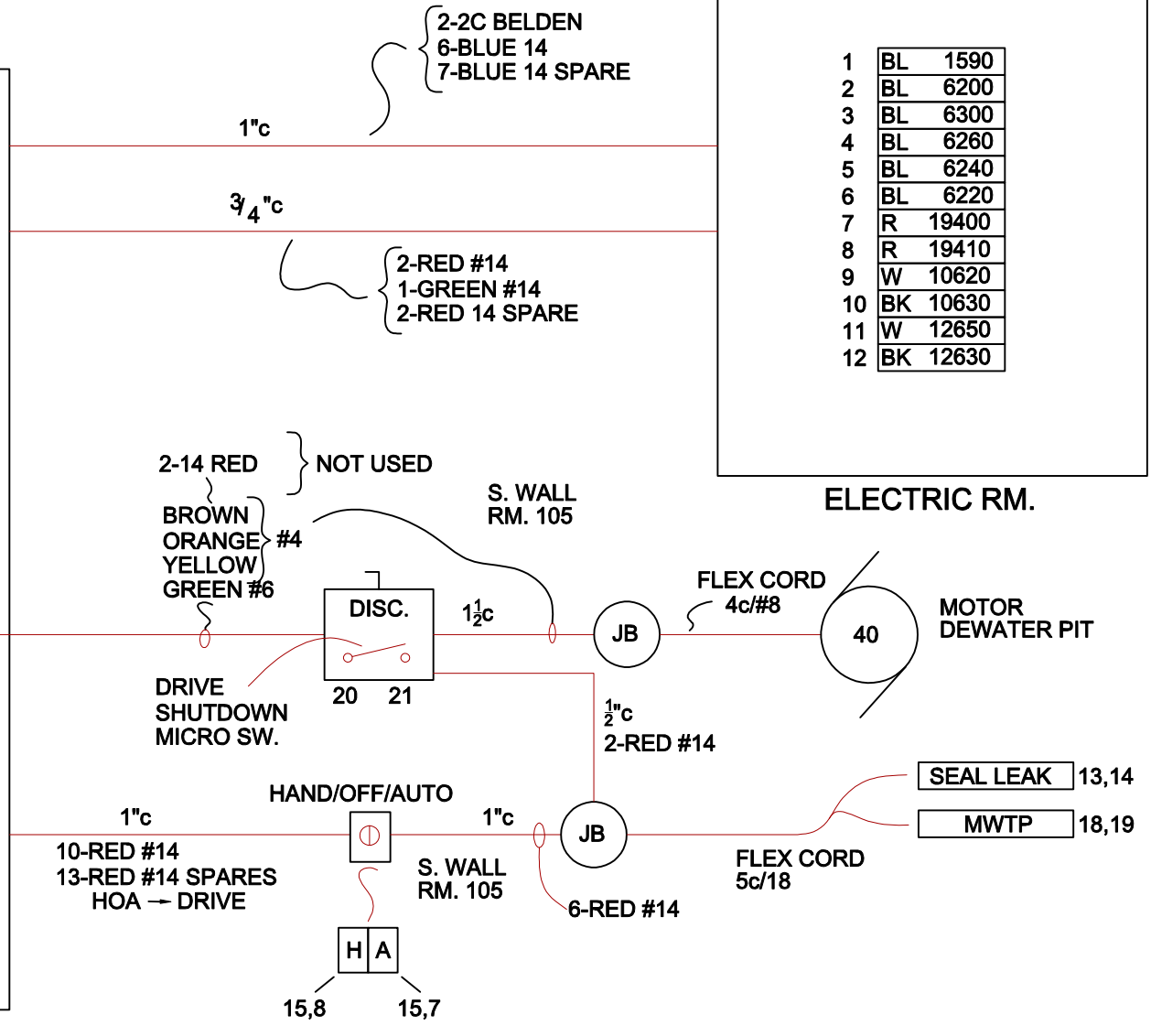
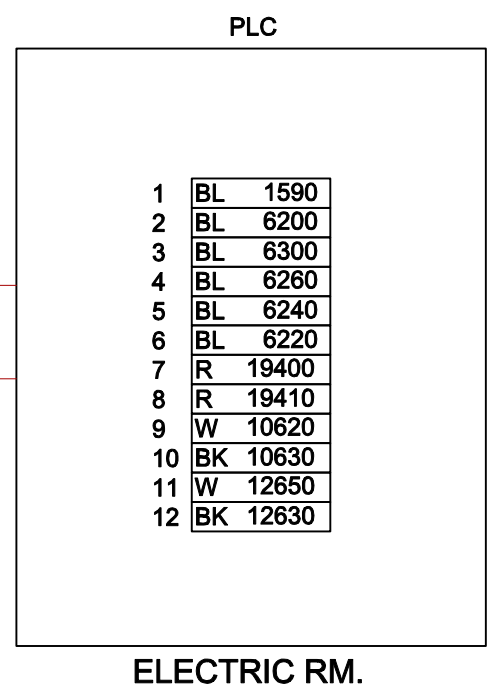
MCC-1/EAST
SEC. C/A
ELECTRIC RM.

BROWN }
ORANGE } #3
YELLOW }
GREEN-#8



WEST WALL ELECTRIC RM.

Y - YELLOW
BL - BLUE
BK - BLACK
R - RED
W - WHITE



OPTIONAL_LAYER
XREF
DATE_COM_OP
DIRECTORY/FILE
SCALE: NONE

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Designed by -- WFH --
Drawn by -- KEB --
Checked by -- GWS --

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SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON 3.7 MG STORAGE FACILITY PROJECT

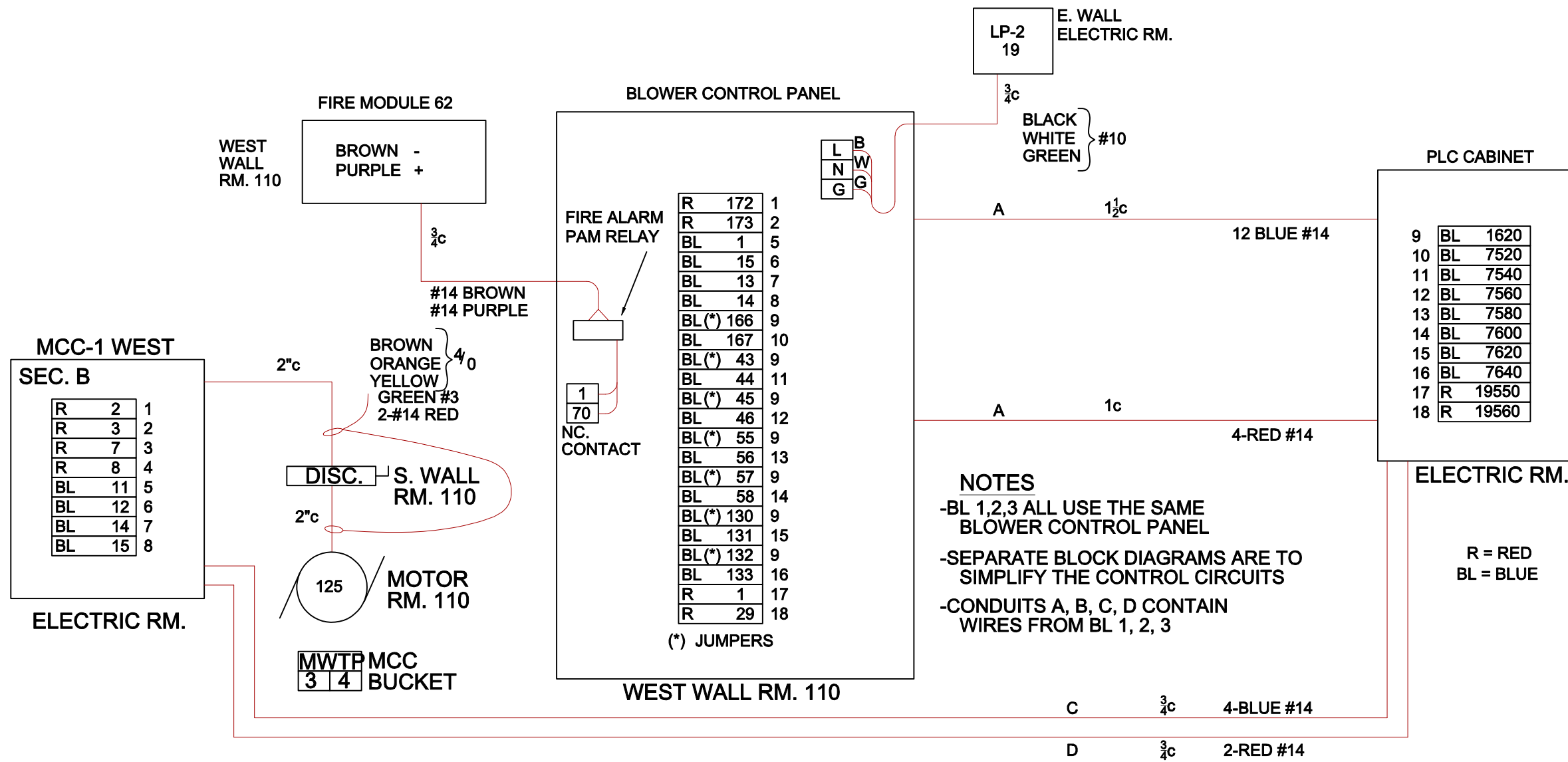
**WEST STORAGE BLDG.
DEWATERING PUMP 122**

ELECTRIC

AS-BUILT

File Number 00663
Date DATE
DATE: 12/1/15

E-505



OPTIONAL_LAYER
XREF
DATE_COM_OP
DIRECTORY/FILE

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| Revisions | Init |
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Designed by -- WFH --
Drawn by -- KEB --
Checked by -- GWS --

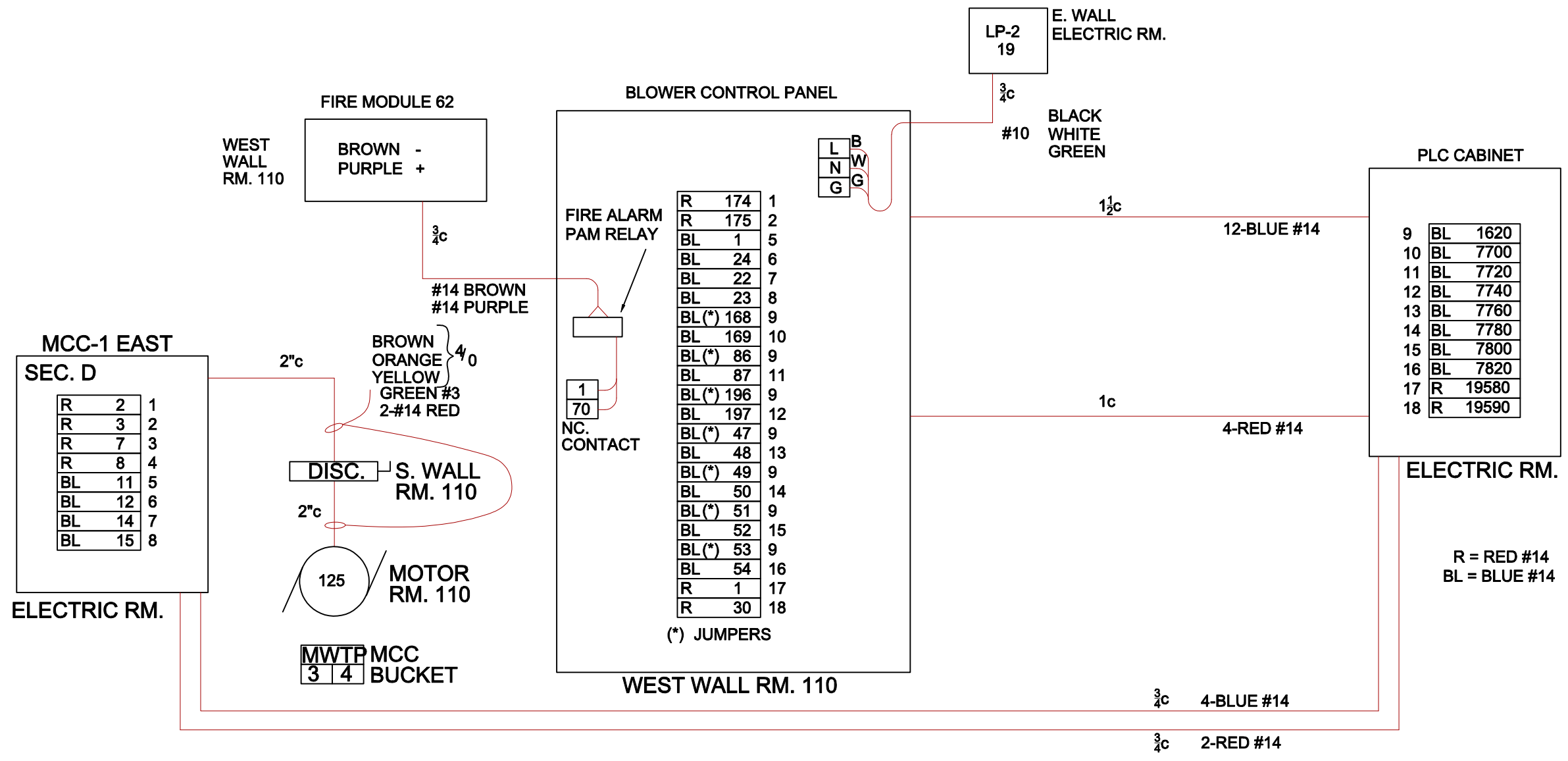
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SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON 3.7 MG STORAGE FACILITY PROJECT

WEST STORAGE BLDG.
BLOWER #1
ELECTRIC

AS-BUILT
File Number 00663
Date DATE
DATE: 12/1/15

E-506



OPTIONAL_LAYER
XREF
DATE_COM_OP
DIRECTORY/FILE

SCALE: NONE

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 SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON 3.7 MG STORAGE FACILITY PROJECT

WEST STORAGE BLDG.
BLOWER #2

ELECTRIC

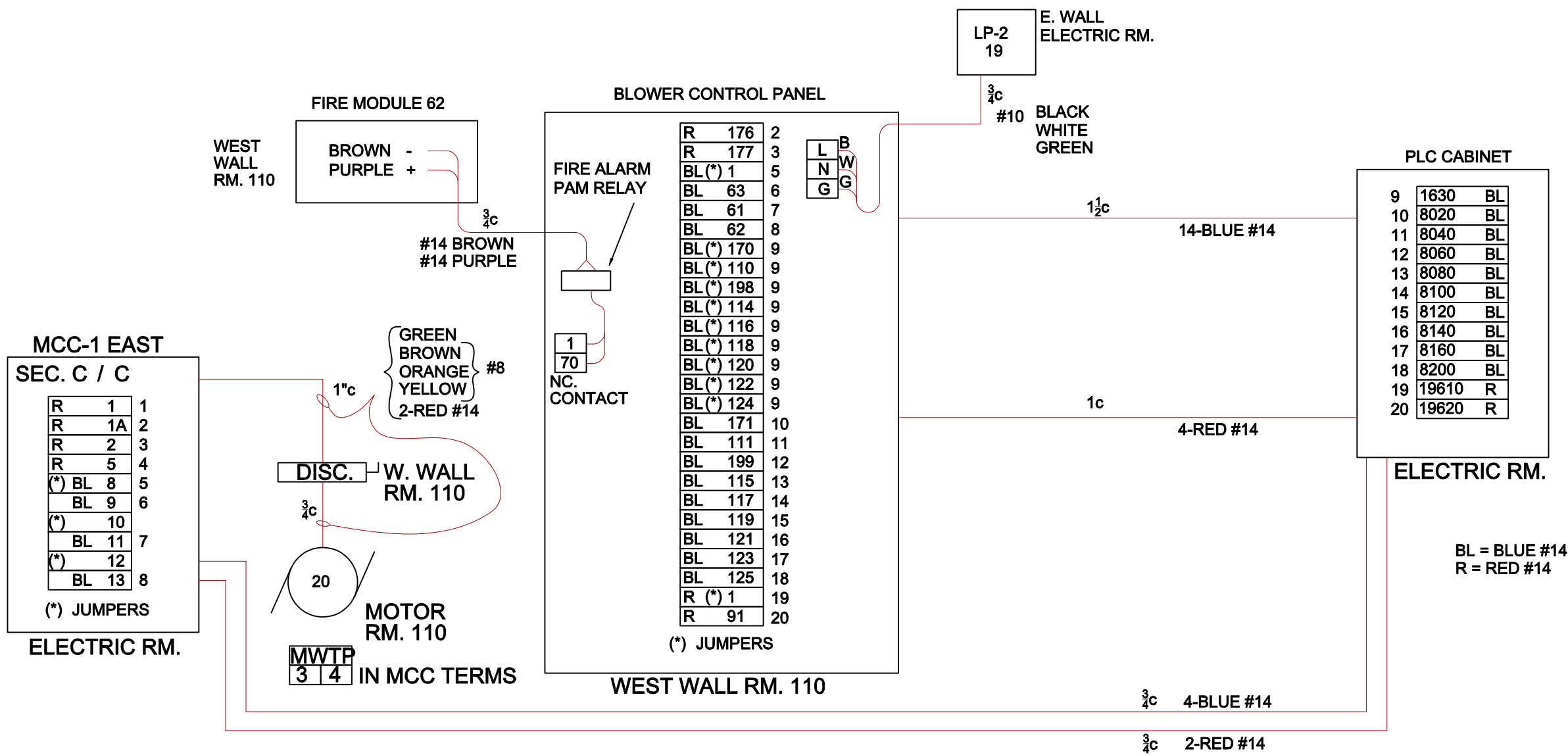
AS-BUILT

DATE:
 12/1/15

File Number
 00663

Date
 DATE

E-507



OPTIONAL_LAYER
 XREF
 DATE_COM_OP
 DIRECTORY/FILE

SCALE: NONE

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RIDLEY ELECTRIC CO., INC.
 5800 COURT ST. ROAD
 SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON 3.7 MG STORAGE FACILITY PROJECT

WEST STORAGE BLDG.
BLOWER #3

ELECTRIC

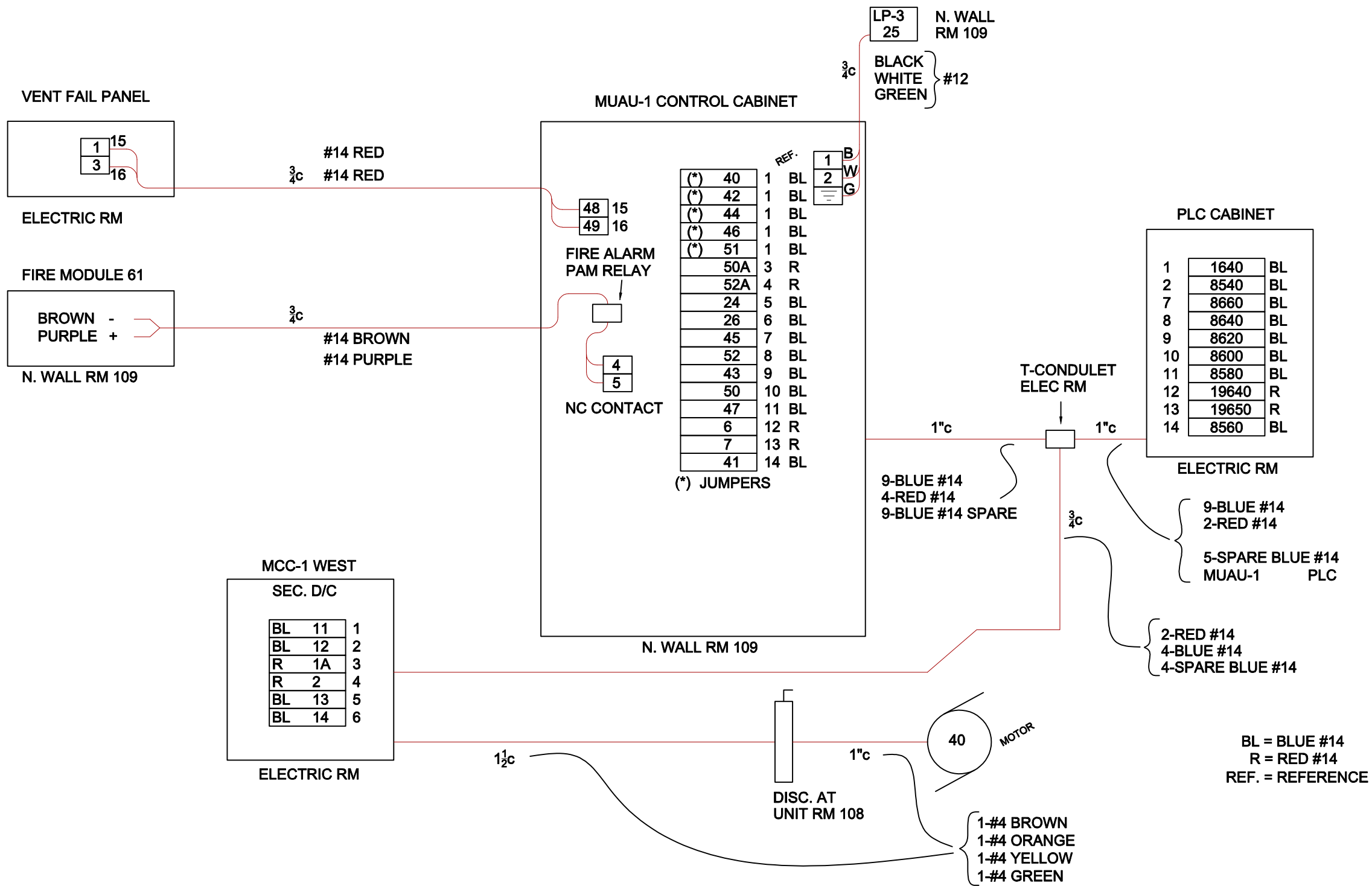
AS-BUILT

File Number
 00663

Date
 DATE

DATE:
 12/1/15

E-508



OPTIONAL_LAYER
XREF
DATE_COM_OP
DIRECTORY/FILE

SCALE: NONE

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

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Checked by -- GWS --

RIDLEY ELECTRIC CO., INC.
5800 COURT ST. ROAD
SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON 3.7 MG STORAGE FACILITY PROJECT

WEST STORAGE BLDG.
MUAU-1

ELECTRIC

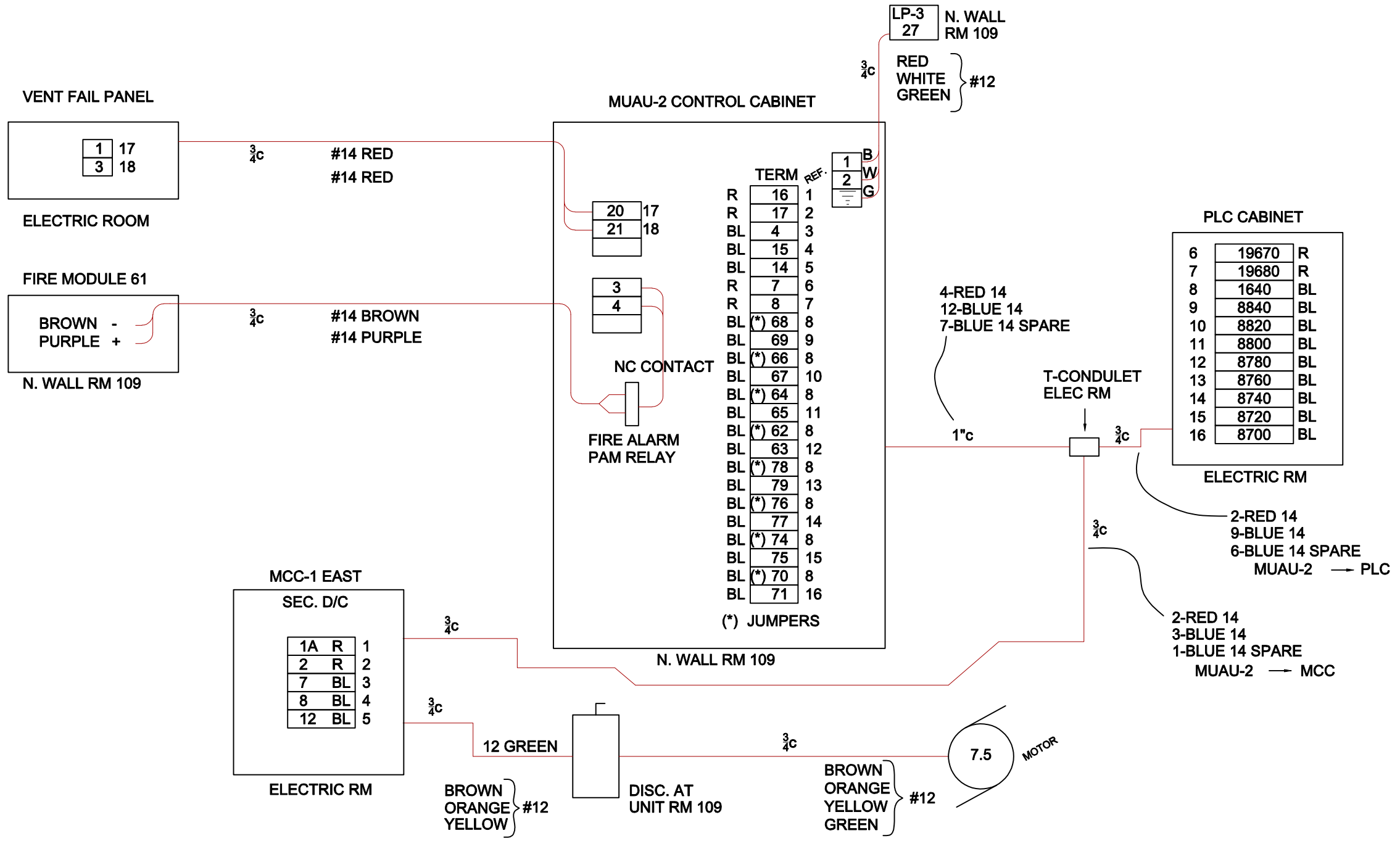
AS-BUILT

DATE:
12/1/15

File Number
00663

Date
DATE

E-509



BL = BLUE 14
 R = RED 14
 REF = REFERENCE

OPTIONAL_LAYER
 XREF
 DATE_COM_OP
 DIRECTORY/FILE

SCALE: NONE

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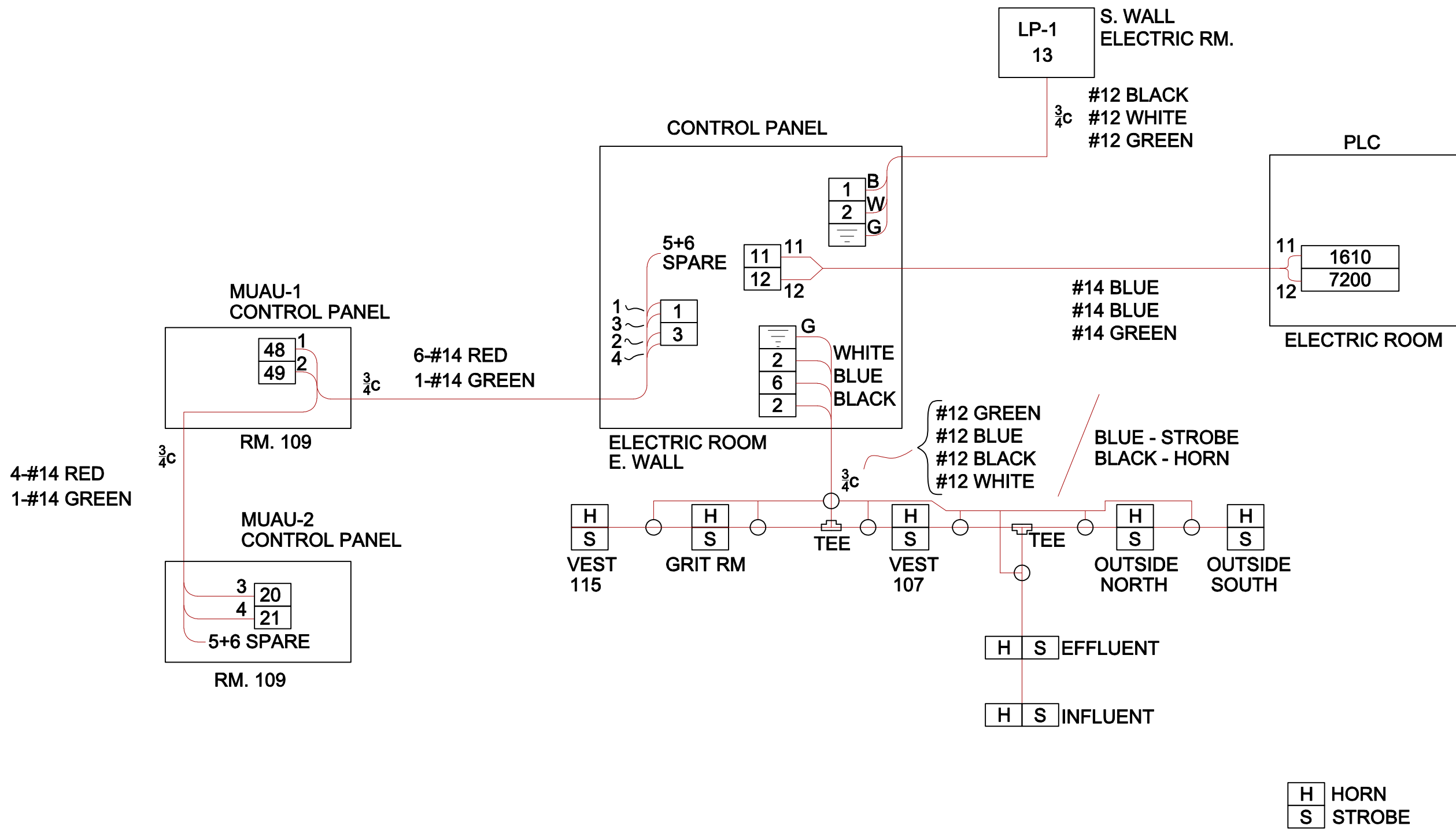
RIDLEY ELECTRIC CO., INC.
 5800 COURT ST. ROAD
 SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON 3.7 MG STORAGE FACILITY PROJECT

WEST STORAGE BLDG.
MUAU-2
 ELECTRIC

AS-BUILT
 File Number 00663
 Date DATE
 DATE: 12/1/15

E-510



OPTIONAL_LAYER
 XREF
 DATE_COM_OP
 DIRECTORY/FILE

SCALE: NONE

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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON 3.7 MG STORAGE FACILITY PROJECT

WEST STORAGE BLDG.
VENT FAIL CONTROL PANEL

ELECTRIC

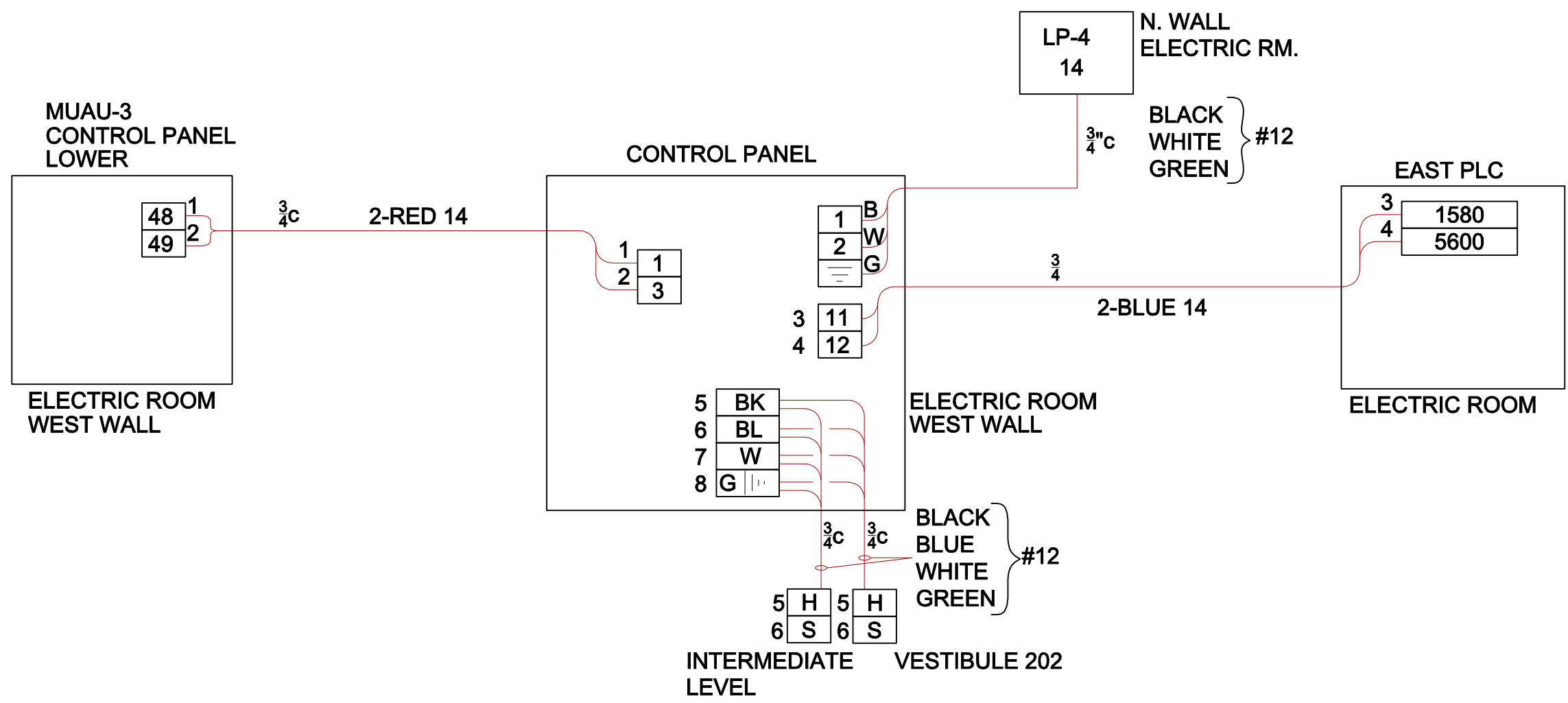
AS-BUILT

File Number
 00663

Date
 DATE

DATE:
 12/1/15

E-512



| | |
|---|-------------|
| H | VENT FAIL |
| S | HORN/STROBE |

OPTIONAL_LAYER
XREF
DATE_COM_OP
DIRECTORY/FILE

SCALE: NONE

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 5800 COURT ST. ROAD
 SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON 3.7 MG STORAGE FACILITY PROJECT

EAST ENTRANCE STRUCTURE
 VENT FAIL CONTROL PANEL

ELECTRIC

AS-BUILT

DATE:
12/1/15

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| File Number 00663 |
| Date DATE |
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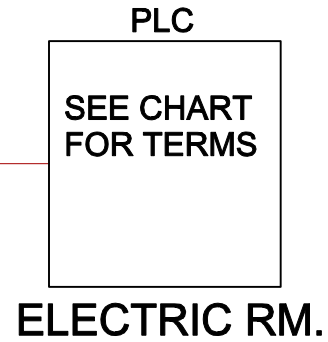
E-513

TYPICAL SLUICE GATES

| | REF. |
|-------|--------|
| R 5 | 1 |
| R 5 | 2 |
| BL 6 | 3 |
| BL 7 | 4 |
| BL 8 | 5 |
| BL 9 | 6 |
| BL 10 | 7 |
| BL 11 | 8 |
| R 33 | 9 |
| R 35 | 10 |
| BL 42 | 11 |
| BL 44 | 12 |
| 1 | BROWN |
| 2 | ORANGE |
| 3 | YELLOW |
| E | GREEN |

LINE CONDUIT
SEE CHART

3/4C



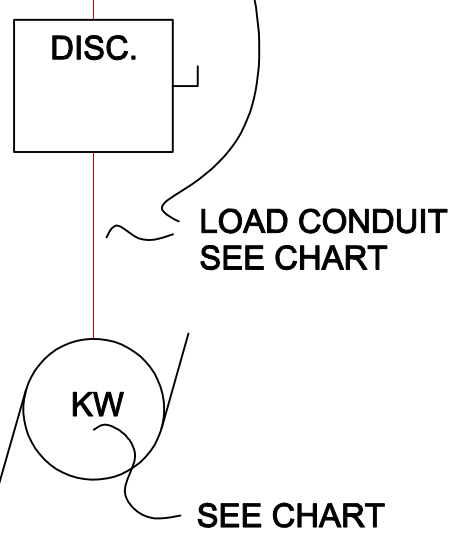
CONDUIT SIZE LINE
CONDUIT SIZE LOAD
KW
CONDUCTOR SIZE
SOURCE
BREAKER
LOCATION

SLUICE GATES

| | 111 | 112 | 113 | 114 | 115 | 116 | 215 |
|----------------|----------|----------|---------|----------|----------|----------|-----------|
| 1 | 19010 | 19070 | 19130 | 19190 | 19250 | 19310 | 15010 |
| 2 | 19040 | 19100 | 19160 | 19220 | 19280 | 19340 | 15040 |
| 3 | 1570 | 1570 | 1580 | 1580 | 1580 | 1580 | 1580 |
| 4 | 5260 | 5340 | 5580 | 5660 | 5760 | 5840 | 5160 |
| 5 | 1570 | 1570 | 1580 | 1580 | 1580 | 1580 | 1580 |
| 6 | 5240 | 5320 | 5560 | 5640 | 5740 | 5820 | 5140 |
| 7 | 1570 | 1570 | 1580 | 1580 | 1580 | 1580 | 1580 |
| 8 | 5220 | 5300 | 5540 | 5620 | 5720 | 5800 | 5120 |
| 9 | 19050 | 19110 | 19170 | 19230 | 19290 | 19350 | 15050 |
| 10 | 19020 | 19080 | 19140 | 19200 | 19260 | 19320 | 15020 |
| 11 | 1570 | 1570 | 1580 | 1580 | 1580 | 1580 | 1580 |
| 12 | 5200 | 5280 | 5520 | 5600 | 5700 | 5780 | 5100 |
| | 3/4" | 3/4" | 1" | 3/4" | 3/4" | 3/4" | 3/4" |
| | 3/4" | 3/4" | 1" | 3/4" | 3/4" | 3/4" | 3/4" |
| KW | 2.45 | 2.45 | 5 | 1.70 | 1.70 | 3.89 | 6.17 |
| CONDUCTOR SIZE | #10 | #10 | #6 | #10 | #10 | #8 | #6 |
| SOURCE | DP-1 | DP-1 | DP-1 | DP-1 | DP-1 | DP-1 | EP-3 |
| BREAKER | 13,15,17 | 14,16,18 | 2, 4, 6 | 19,21,23 | 19,21,23 | 7, 9, 11 | 2, 4, 6 |
| LOCATION | RM. 105 | RM. 105 | RM. 105 | RM. 105 | RM. 105 | RM. 105 | ELEC. RM. |

WEST STORAGE BUILDING

EAST
ENTRANCE
STRUCTURE



OPTIONAL_LAYER
XREF
DATE_COM_OP
DIRECTORY/FILE

SCALE: NONE

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

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Drawn by -- KEB --
Checked by -- GWS --

RIDLEY ELECTRIC CO., INC.
5800 COURT ST. ROAD
SYRACUSE, NY 13206

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON 3.7 MG STORAGE FACILITY PROJECT

WEST STORAGE BLDG. & EAST ENTRANCE STRUCTURE
SLUICE GATES
ELECTRIC

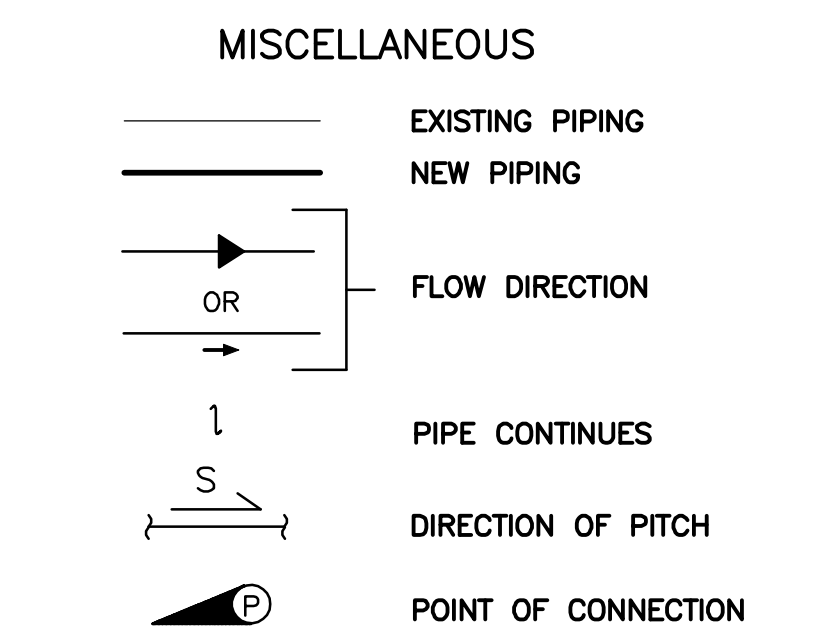
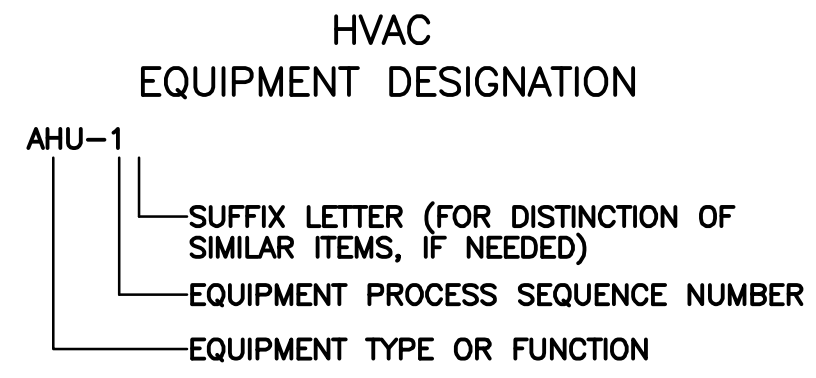
AS-BUILT
File Number 00663
Date DATE
DATE: 12/1/15

ABBREVIATIONS

Table of abbreviations for HVAC and electrical symbols, organized by letter (A, B, C, D, E, F, G, H, I, L, M, N, P, Q, R, S, T, U, V, W, X, Y, Z).

SYMBOLS

Diagrammatic symbols for HVAC equipment, actuators, controls, and miscellaneous items, including flow direction, gate valves, dampers, diffusers, and pumps.



GENERAL NOTE: ALL FLOOR MOUNTED HVAC EQUIPMENT SHALL BE PLACED ON HOUSEKEEPING PADS... DRAWING NOTE: THIS DRAWING CONTAINS SYMBOLS AND ABBREVIATIONS WHICH MAY NOT BE USED FOR THIS PROJECT.

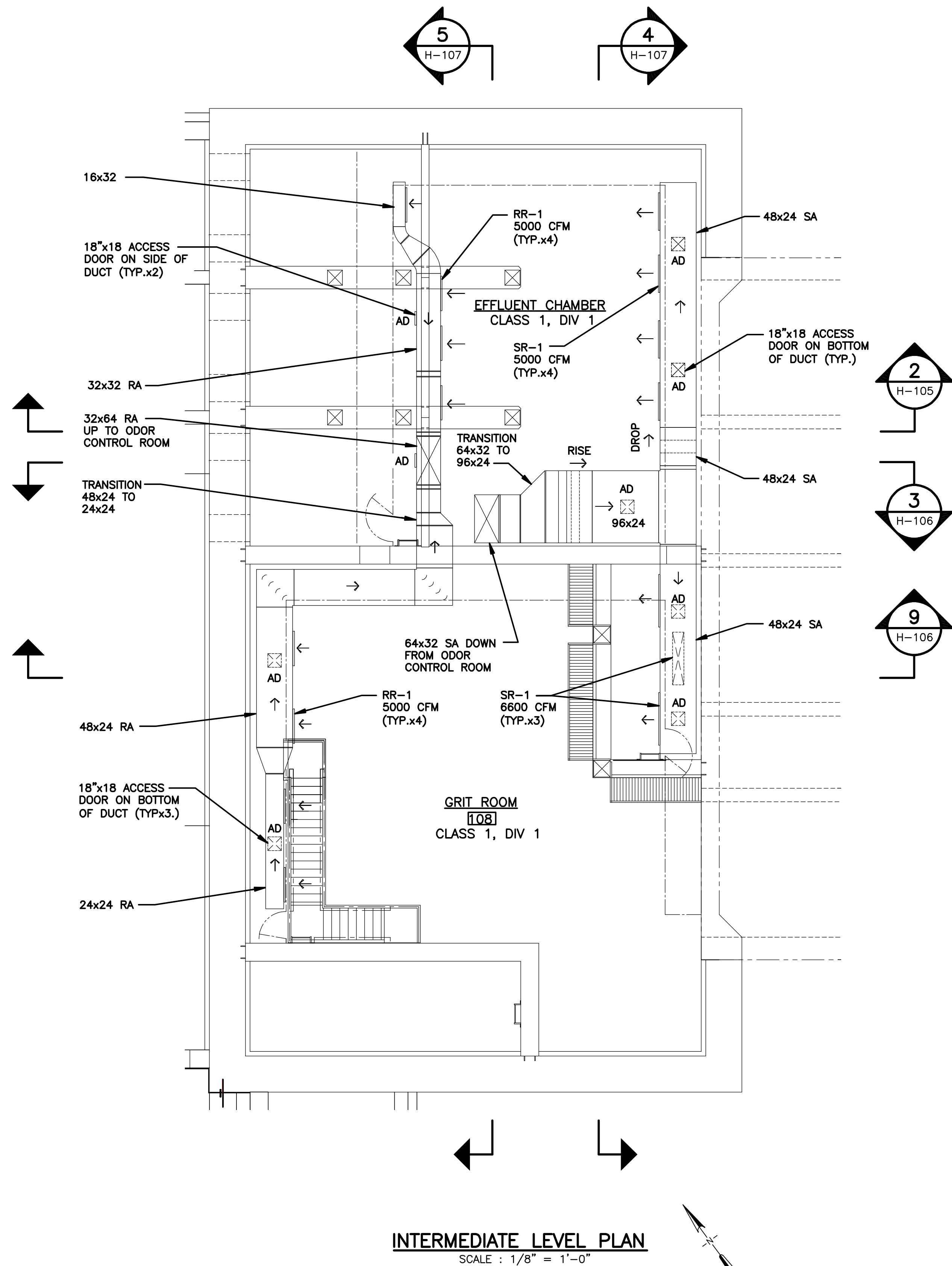
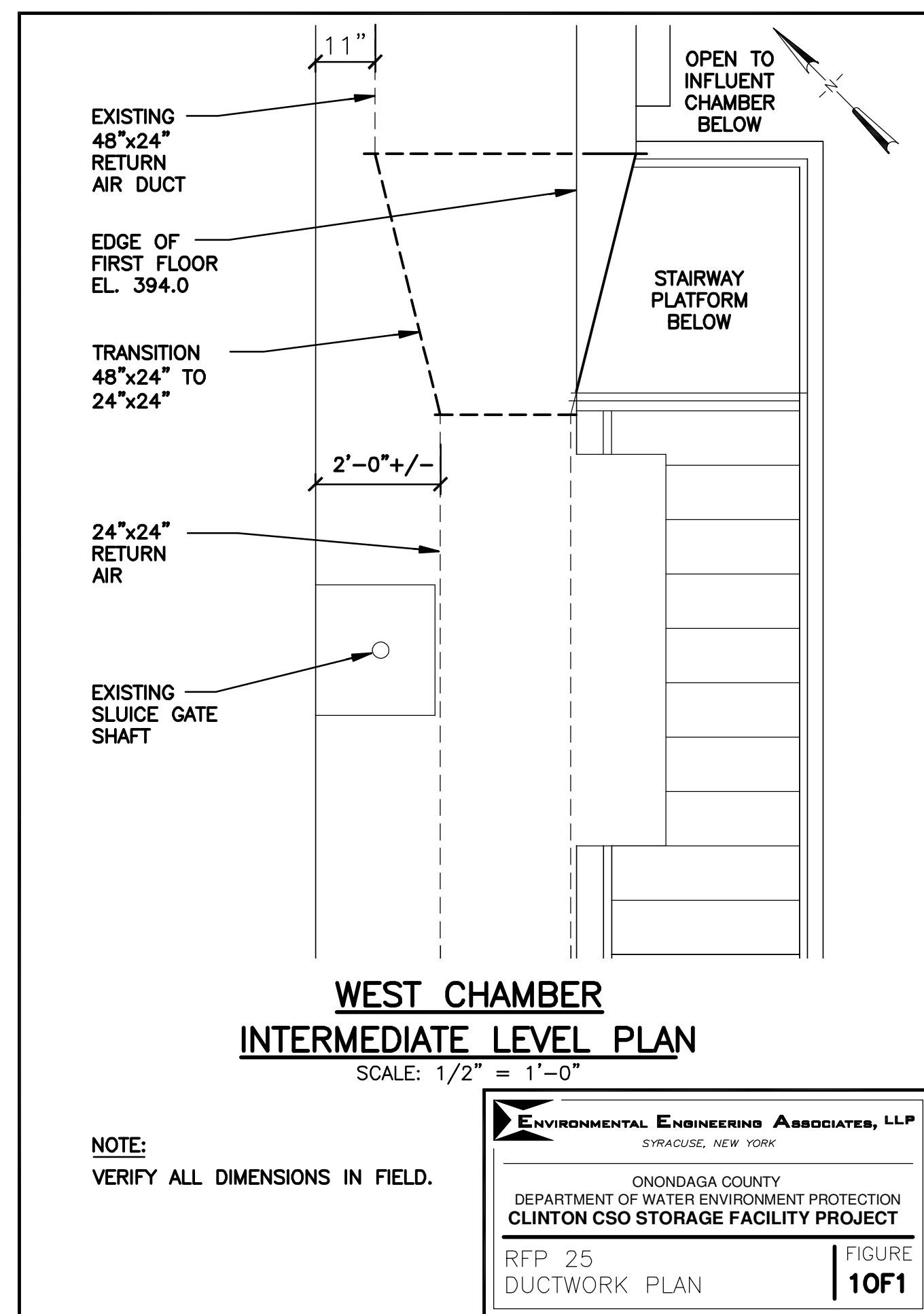
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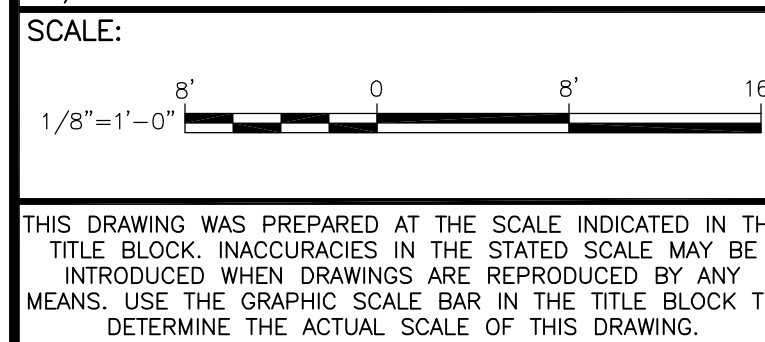
Environmental Engineering Associates, LLP logo and contact information: SYRACUSE, NEW YORK.

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION. CLINTON CSO STORAGE FACILITY PROJECT. STORAGE FACILITY & EAST STRUCTURE ABBREVIATIONS & SYMBOLS.

Professional Engineer seal for Environmental Engineering Associates, LLP. Includes File Number 00663, Date 04/11, and Project ID H-001.



L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG



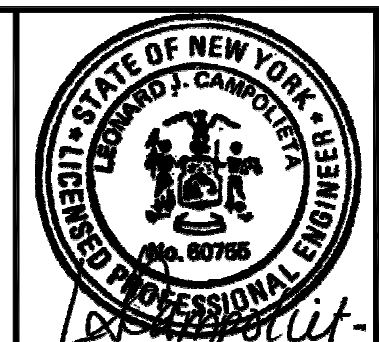
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| 2 | 04/11 | AS BID | LJC |
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Drawn by ___ KJL ___
Checked by ___ SWM ___



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CLINTON CSO STORAGE FACILITY PROJECT

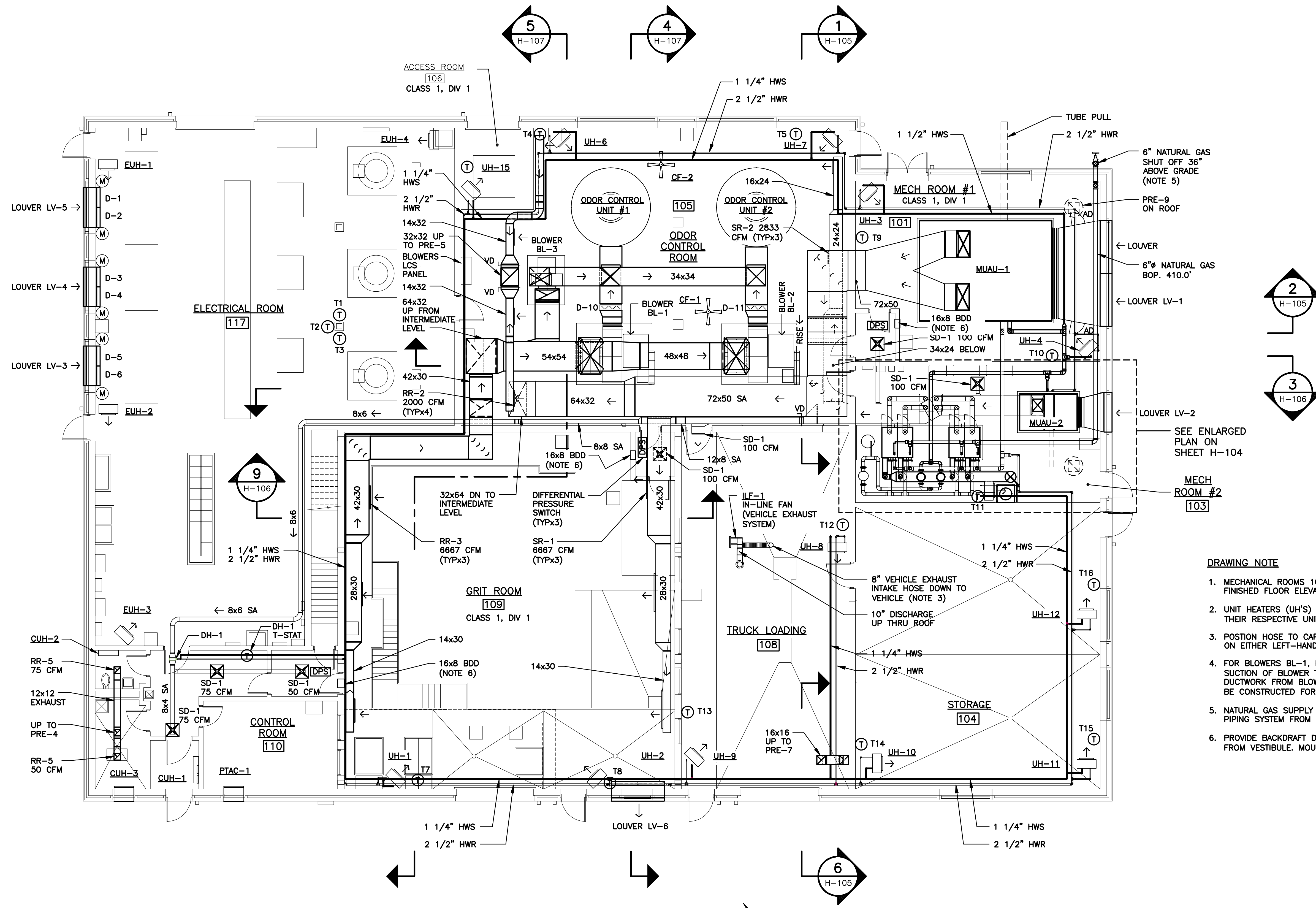
**WEST CHAMBER
INTERMEDIATE LEVEL PLAN**
HVAC



File Number
00663
Date
04/11

H-101

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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DATE: 04/01/2015 PER: [Signature]



- DRAWING NOTE**
- MECHANICAL ROOMS 101 & 102, ODOR CONTROL ROOM 104, FINISHED FLOOR ELEVATIONS 394.0.
 - UNIT HEATERS (UH'S) THERMOSTATS SHALL BE LOCATED DIRECTLY BELOW THEIR RESPECTIVE UNITS AT 5'-0" AFF.
 - POSITION HOSE TO CAPTURE DISCHARGE FROM VERTICAL EXHAUST STACK ON EITHER LEFT-HAND OR RIGHT HAND SIDE OF TRUCK.
 - FOR BLOWERS BL-1, BL-2 AND BL-3 DUCTWORK FROM DAMPER ON SUCTION OF BLOWER TO BLOWER SHALL BE CONSTRUCTED FOR -20" WC. DUCTWORK FROM BLOWER DISCHARGE TO ODOR CONTROL VESSEL SHANLL BE CONSTRUCTED FOR +20" WC.
 - NATURAL GAS SUPPLY AND METER / REGULATOR BY NATURAL GRID. GAS PIPING SYSTEM FROM NATURAL GRID LIMIT BY HVAC.
 - PROVIDE BACKDRAFT DAMPER WITH 0.1" WC SETPOINT TO RELIEF AIR FROM VESTIBULE. MOUNT AT APPROXIMATELY 8'-8" AFF.

GRADE LEVEL PLAN
SCALE: 1/8"=1'-0"

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE:
1/8"=1'-0"

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| 3 | 03/15 | RECORD DRAWINGS | LJC |
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CLINTON CSO STORAGE FACILITY PROJECT

CLINTON STORAGE FACILITY
GRADE LEVEL PLAN
HVAC

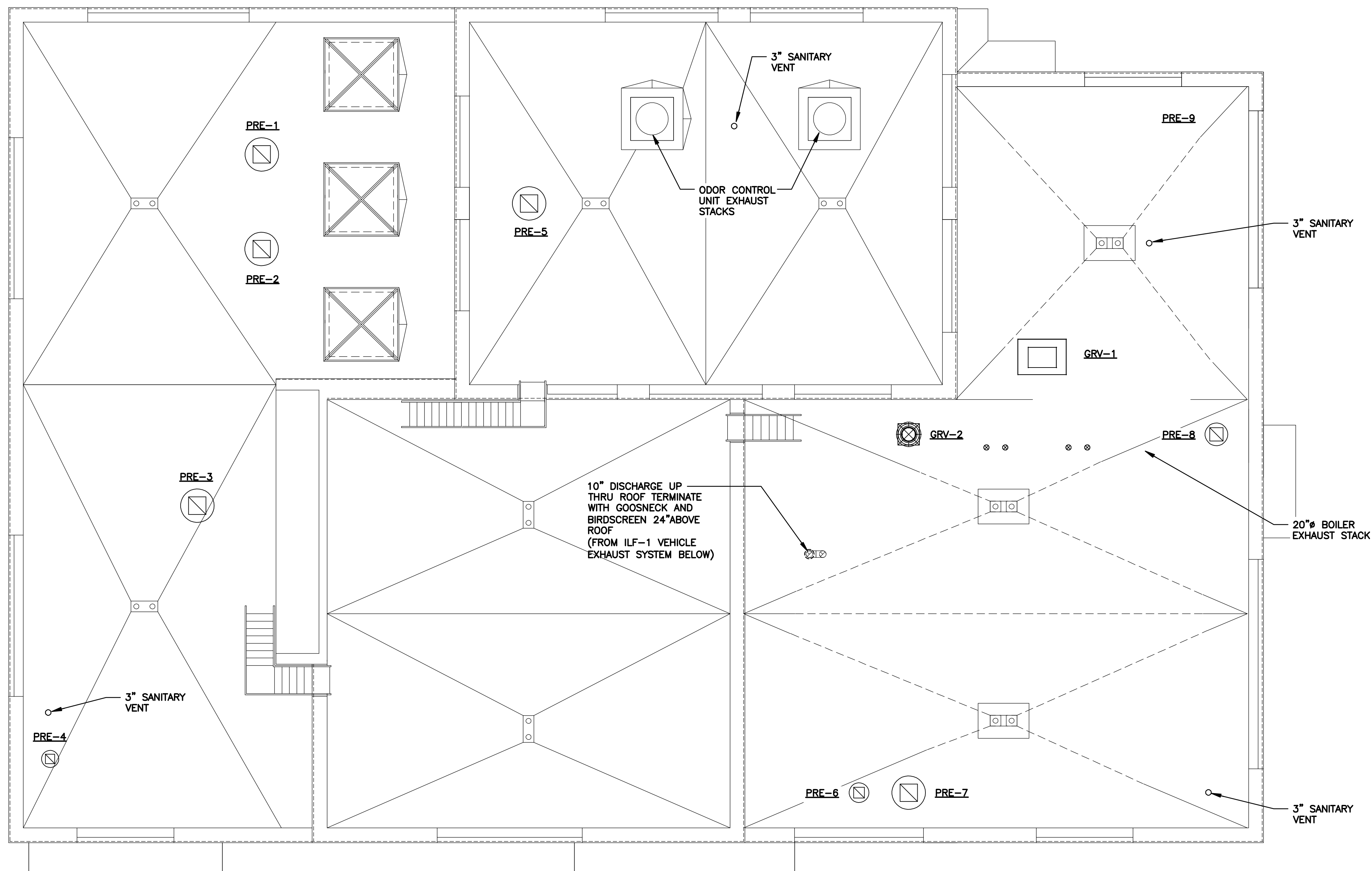


ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

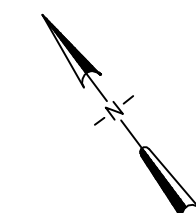
THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 04/01/2015 PER: [Signature]

File Number: 00663
Date: 04/11
H-102



ROOF LEVEL PLAN
SCALE: 1/8"=1'-0"



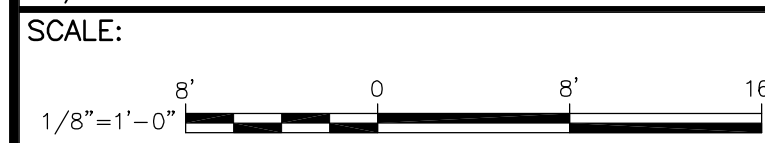
ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP

RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

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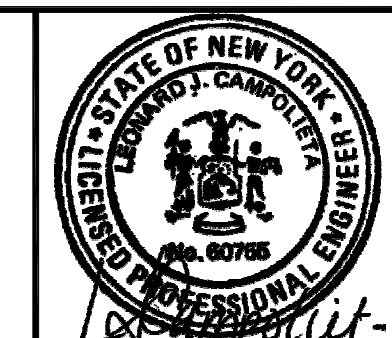
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| 2 | 04/11 | AS BID | LJC |
| 1 | 01/11 | ISSUED FOR APPROVAL | |

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CLINTON STORAGE FACILITY PROJECT

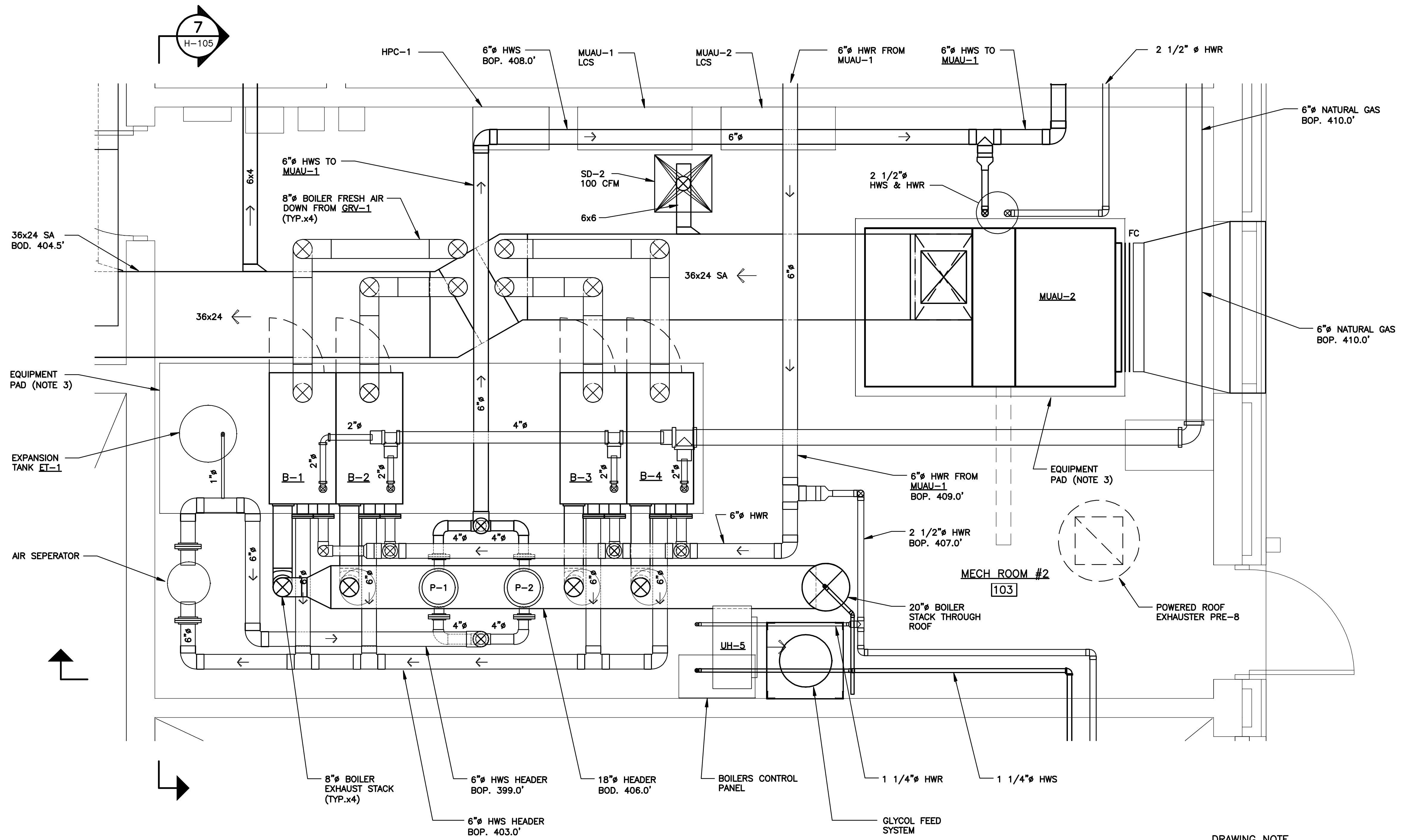
CLINTON STORAGE FACILITY
ROOF PLAN
HVAC



File Number
00663

Date
04/11

H-103



GRADE LEVEL PLAN
SCALE : 1/2" = 1'-0"

DRAWING NOTE

1. MECHANICAL ROOMS FINISHED FLOOR ELEVATION 394.0.
2. THE GLYCOL FEED SYSTEM AND AIR CONTROL SYSTEM IS FACTORY ASSEMBLED UNIT NOT SHOWN ON THE DRAWING.
3. SEE SHEET S-002 FOR EQUIPMENT PAD DETAILS.

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE:
1/2"=1'-0"

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| No. | Date | Revisions | Init |
|-----|-------|---------------------|------|
| 3 | 03/15 | RECORD DRAWINGS | LJC |
| 2 | 04/11 | AS BID | LJC |
| 1 | 01/11 | ISSUED FOR APPROVAL | |

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Designed by GBC
Drawn by KJL
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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON STREET CSO STORAGE FACILITY PROJECT

CLINTON STORAGE FACILITY
GRADE LEVEL ENLARGED PLAN
HVAC

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

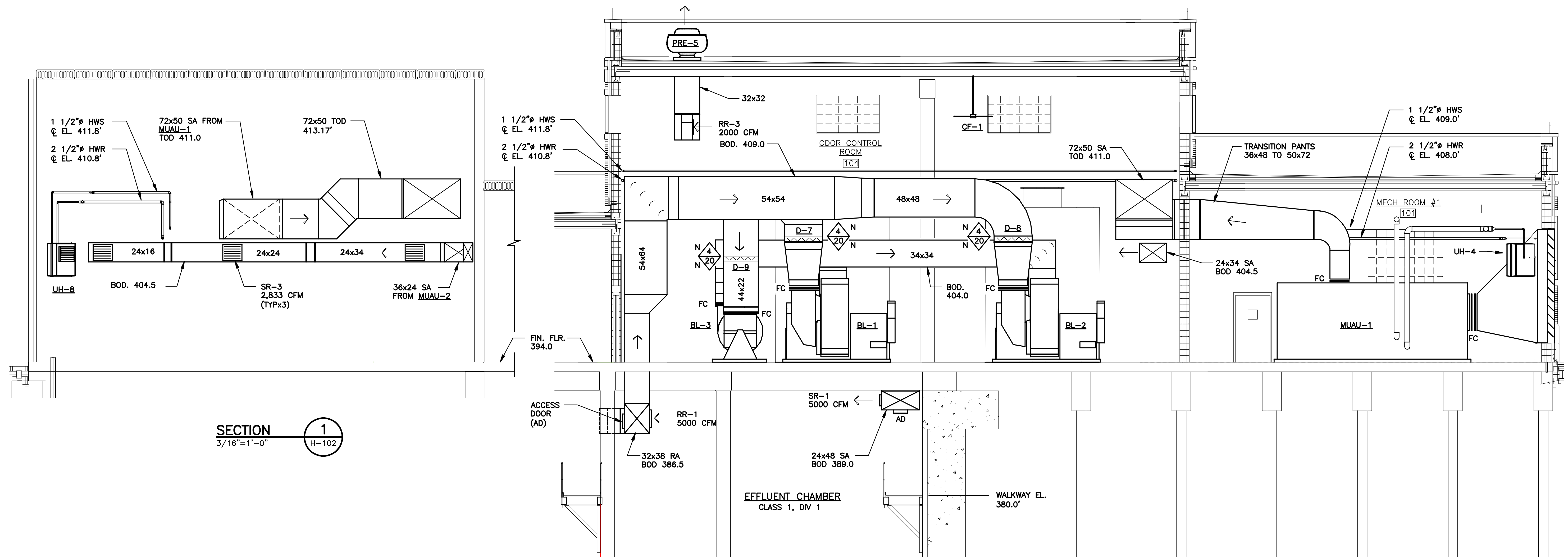
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File Number
00663

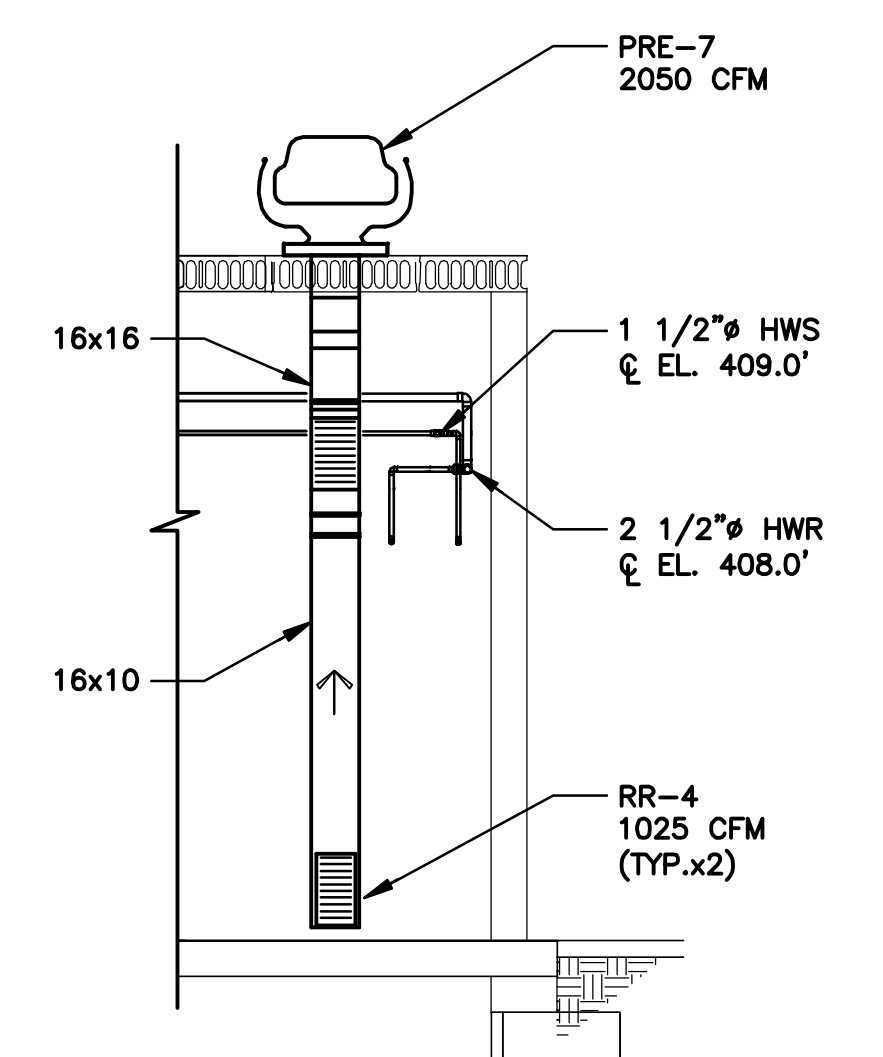
Date
04/11

H-104

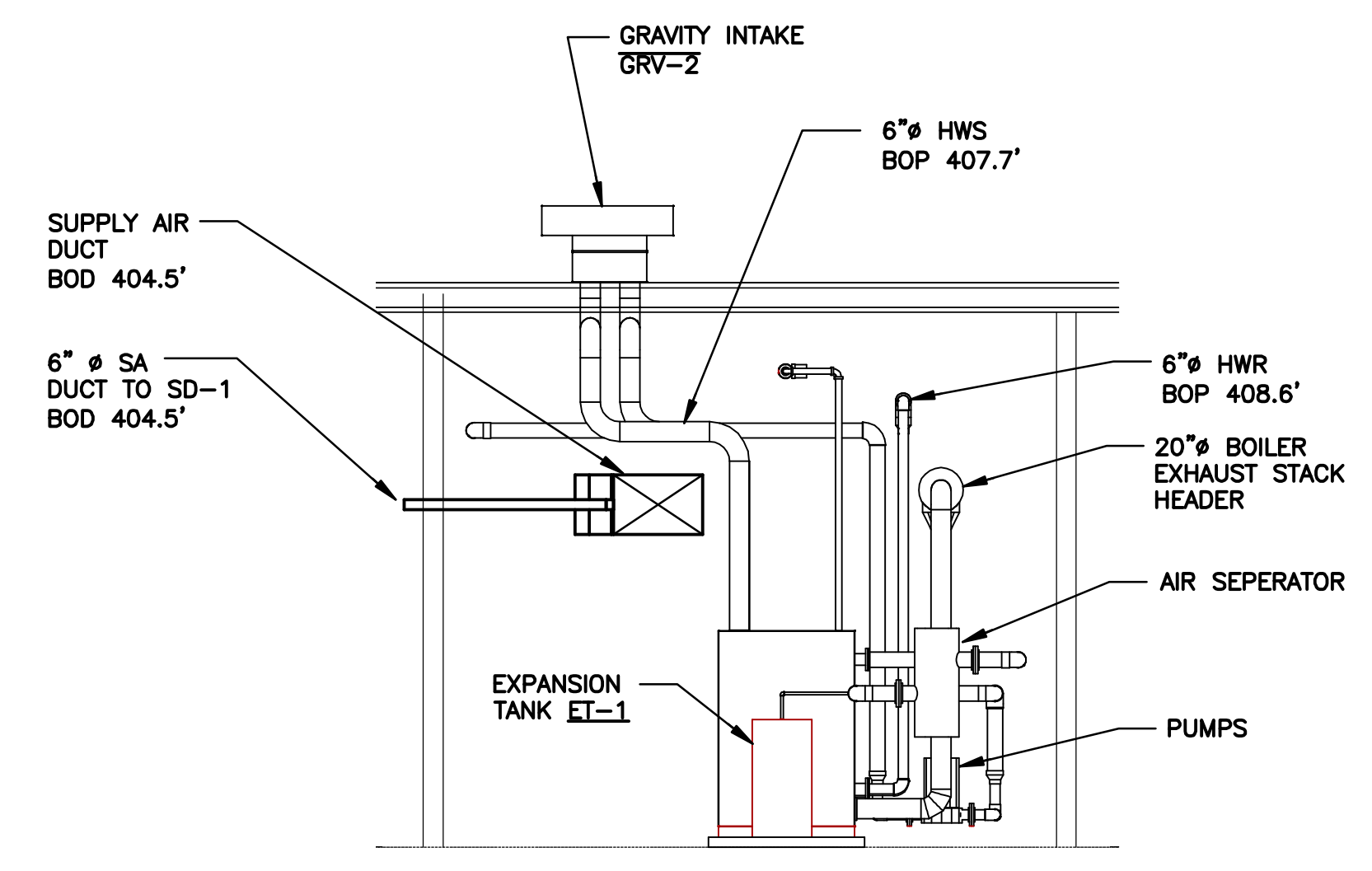


SECTION 1
3/16"=1'-0" H-102

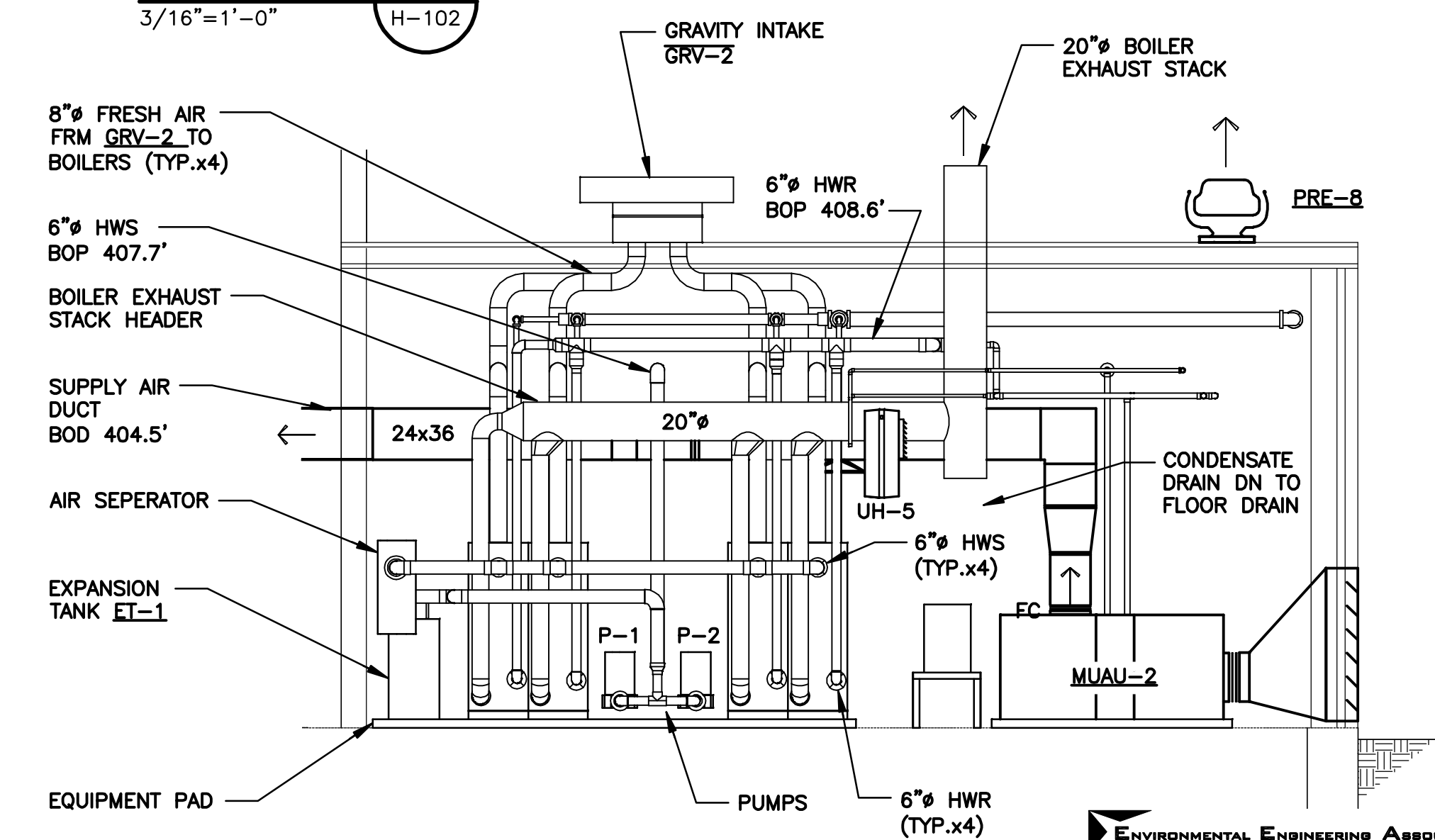
SECTION 2
3/16"=1'-0" H-102



SECTION 6
3/16"=1'-0" H-102



SECTION 7
3/16"=1'-0" H-104



SECTION 8
3/16"=1'-0" H-104

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE:
3/16"=1'-0"

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| 3 | 03/15 | RECORD DRAWINGS | LJC |
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| 1 | 01/11 | ISSUED FOR APPROVAL | |

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CLINTON CSO STORAGE FACILITY PROJECT

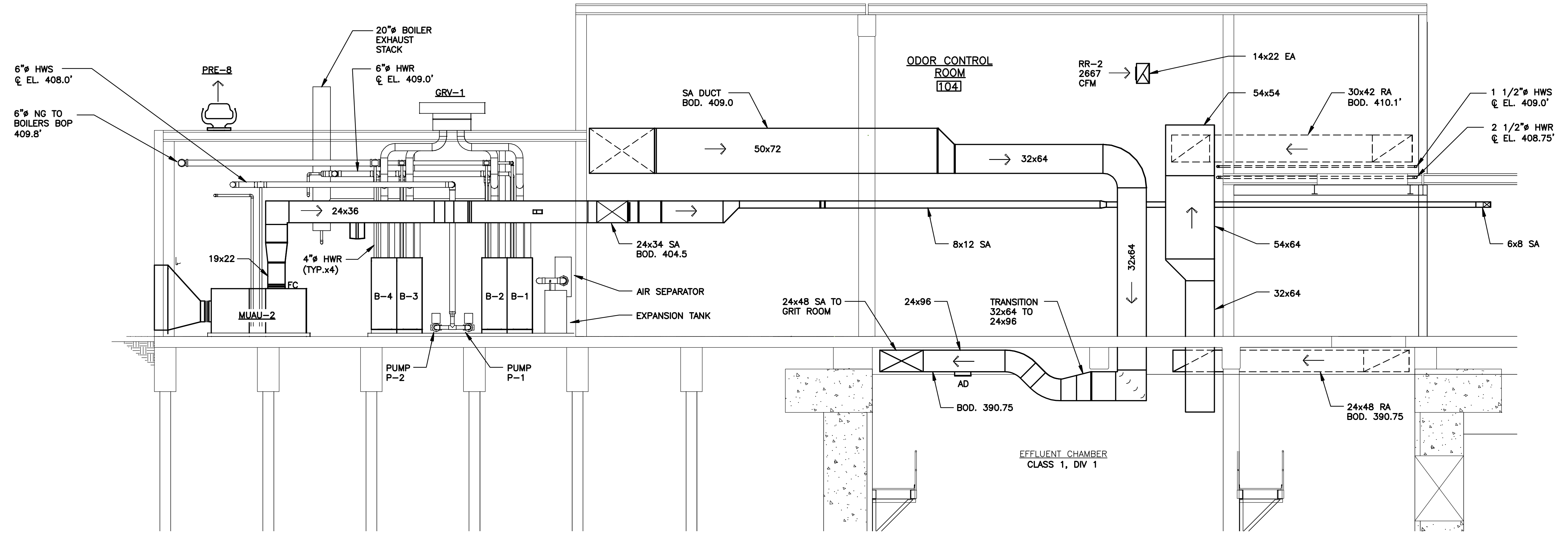
CLINTON STORAGE FACILITY SECTIONS
HVAC

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

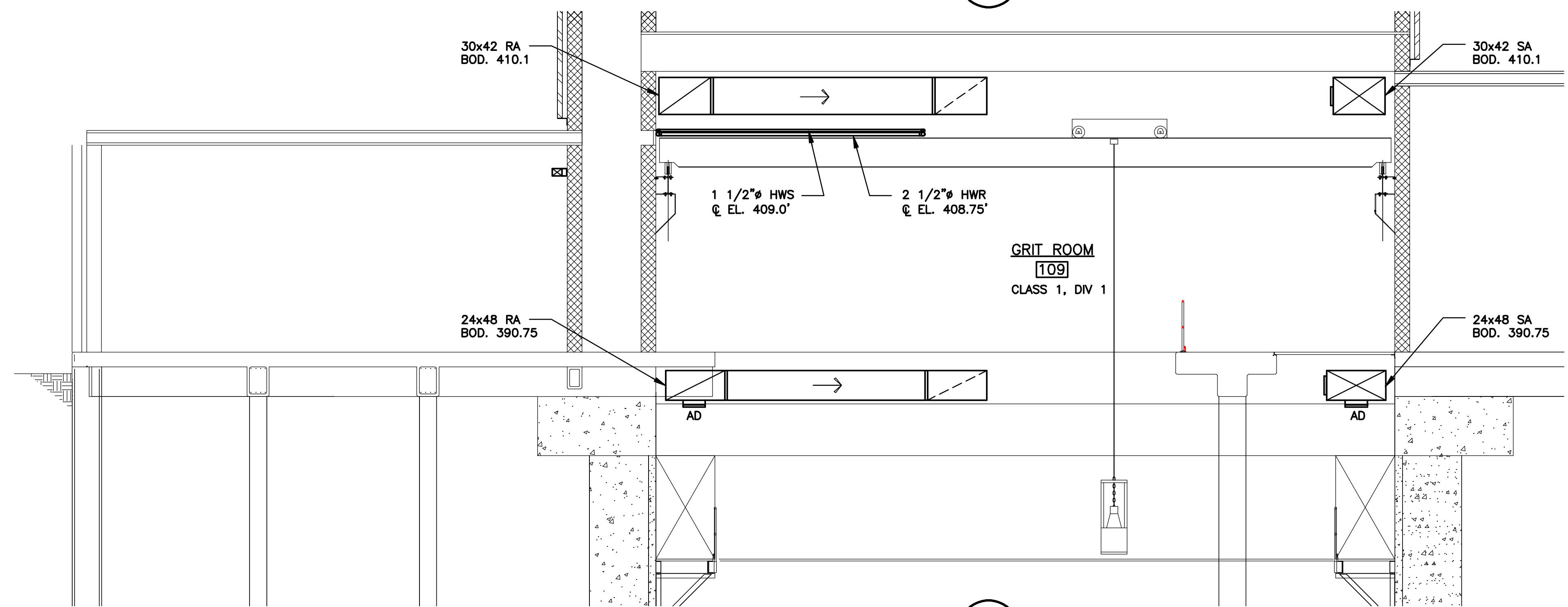
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File Number: 00663
Date: 04/11
H-105



SECTION 3
3/16"=1'-0" H-102



SECTION 9
3/16"=1'-0" H-102

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X:
MO/DA/YR CO DFT
DIR/DWG

SCALE:
3/16"=1'-0"

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CLINTON CSO STORAGE FACILITY PROJECT

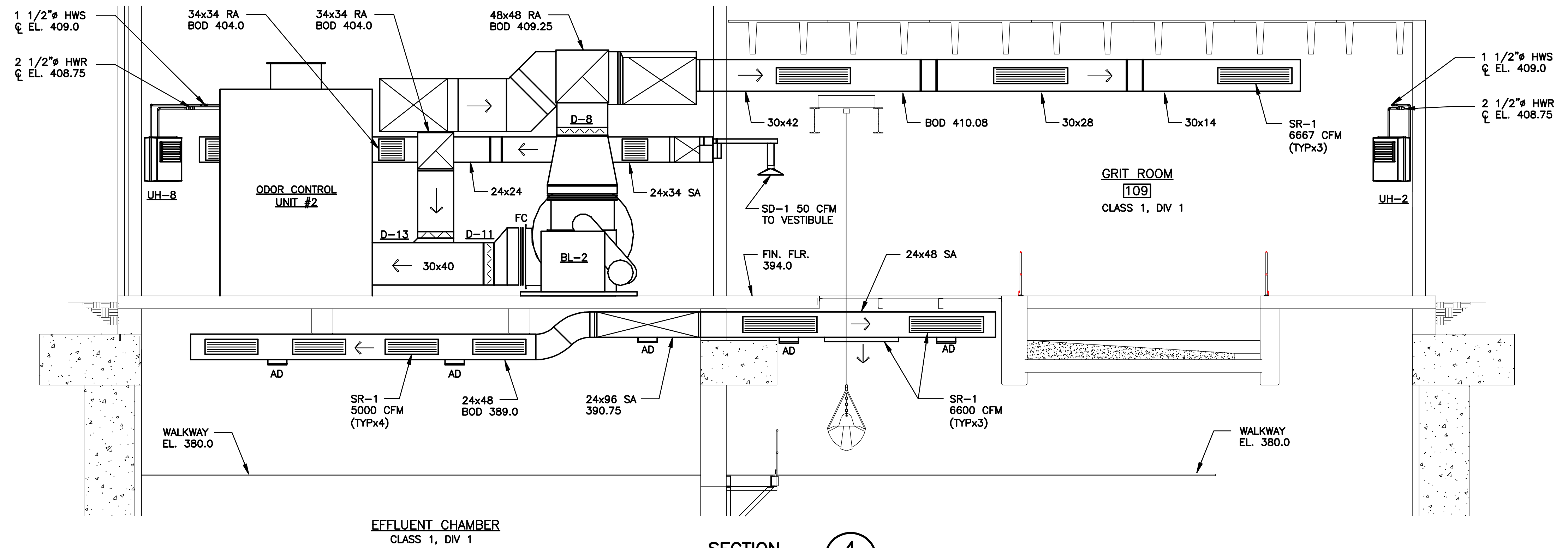
CLINTON STORAGE FACILITY SECTIONS
HVAC

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

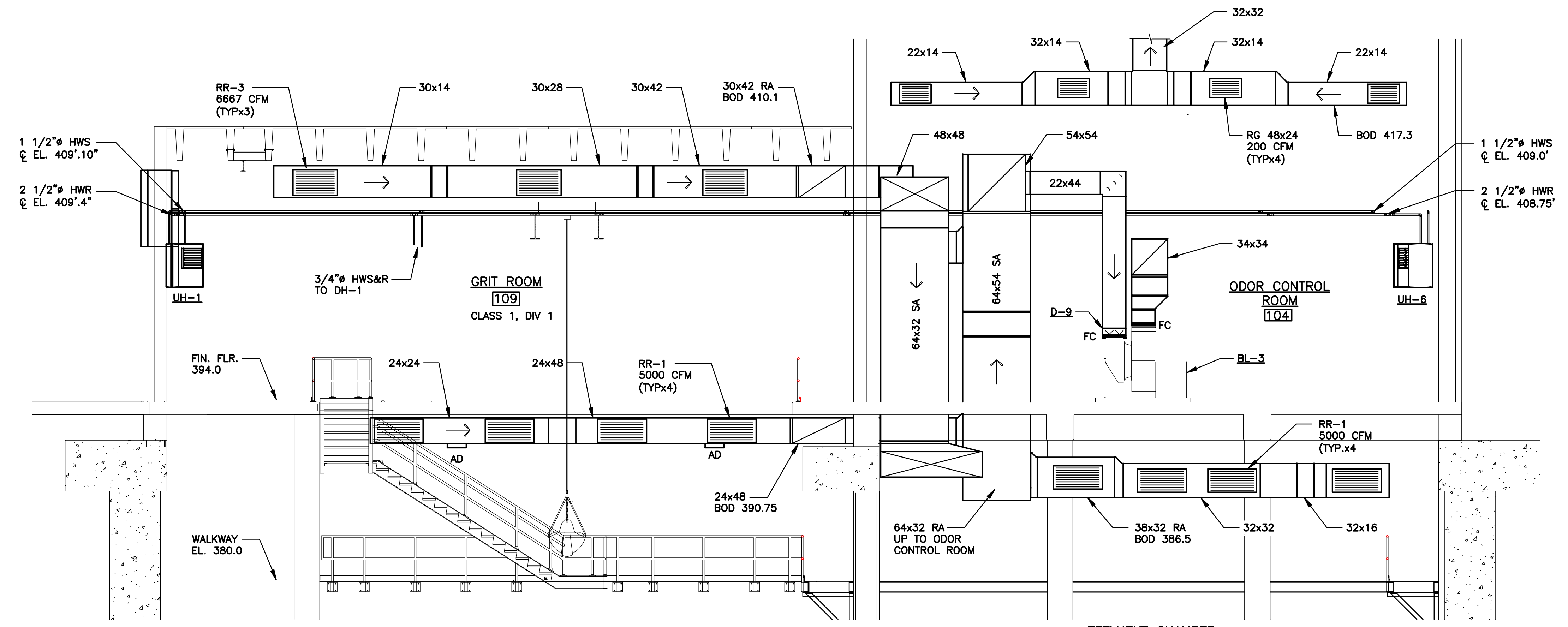
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File Number: 00663
Date: 04/11
H-106



SECTION 4
3/16"=1'-0" H-102



SECTION 5
3/16"=1'-0" H-102

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG
SCALE:
3/16"=1'-0"
4' 0 6' 12'
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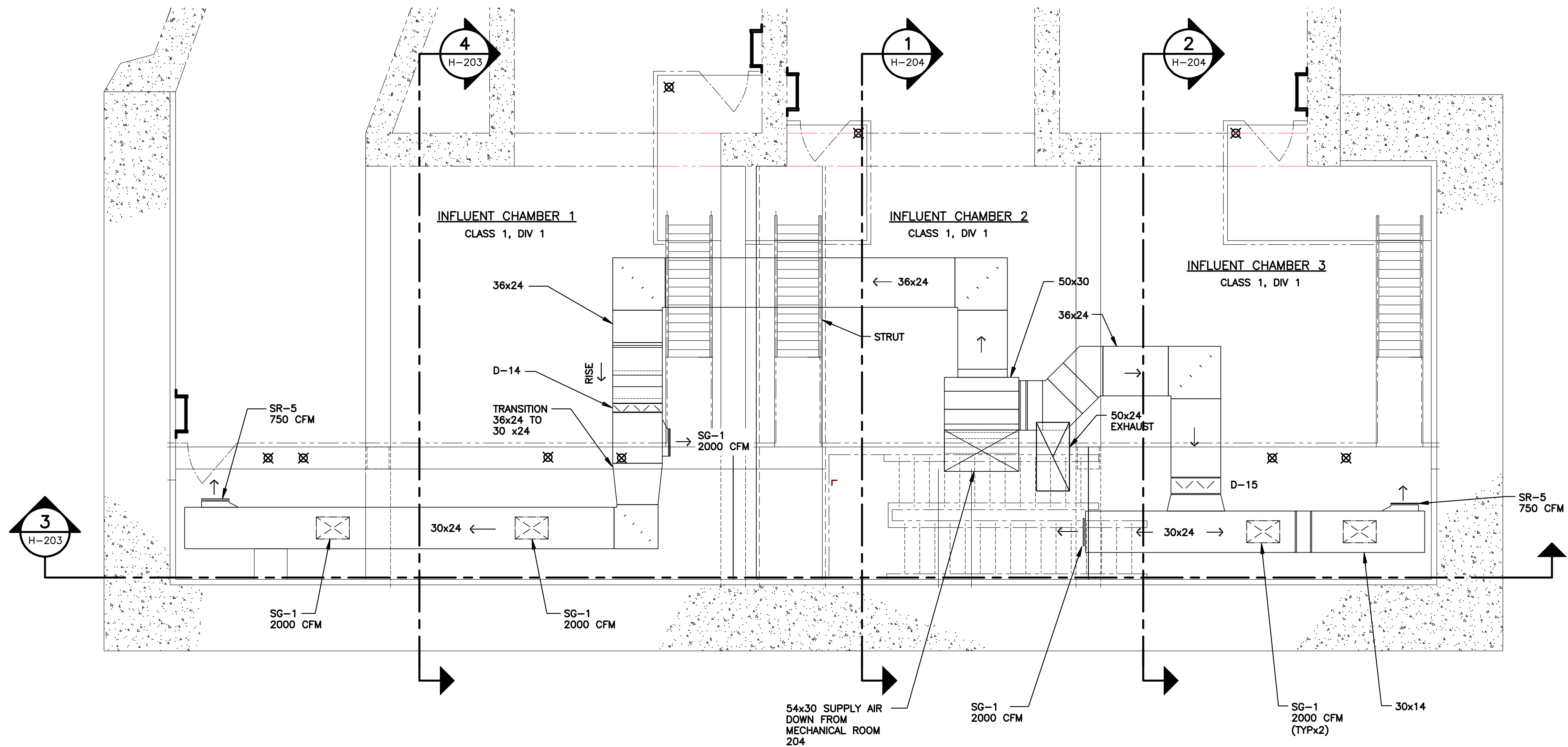
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| 2 | 04/11 | AS BID | LJC |
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CLINTON CSO STORAGE FACILITY PROJECT
CLINTON STORAGE FACILITY
SECTIONS
HVAC

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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DATE: 04/01/2015 PER: [Signature]
File Number: 00663
Date: 04/11
H-107

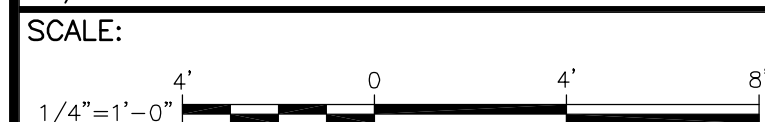


INTERMEDIATE LEVEL PLAN
SCALE: 1/4"=1'-0"

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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| 1 | 01/11 | ISSUED FOR APPROVAL | LJC |

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Drawn by KJL
Checked by SWM



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CLINTON CSO STORAGE FACILITY PROJECT

EAST CHAMBER
INTERMEDIATE LEVEL PLAN
HVAC

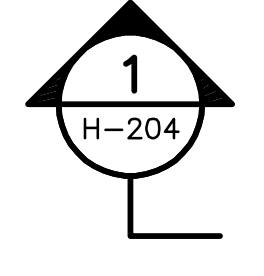
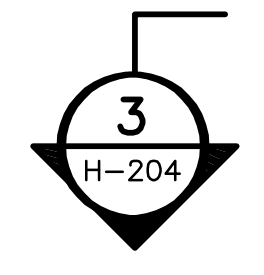
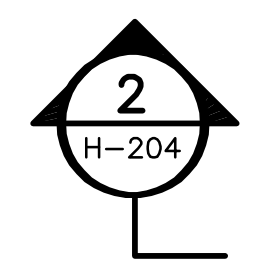
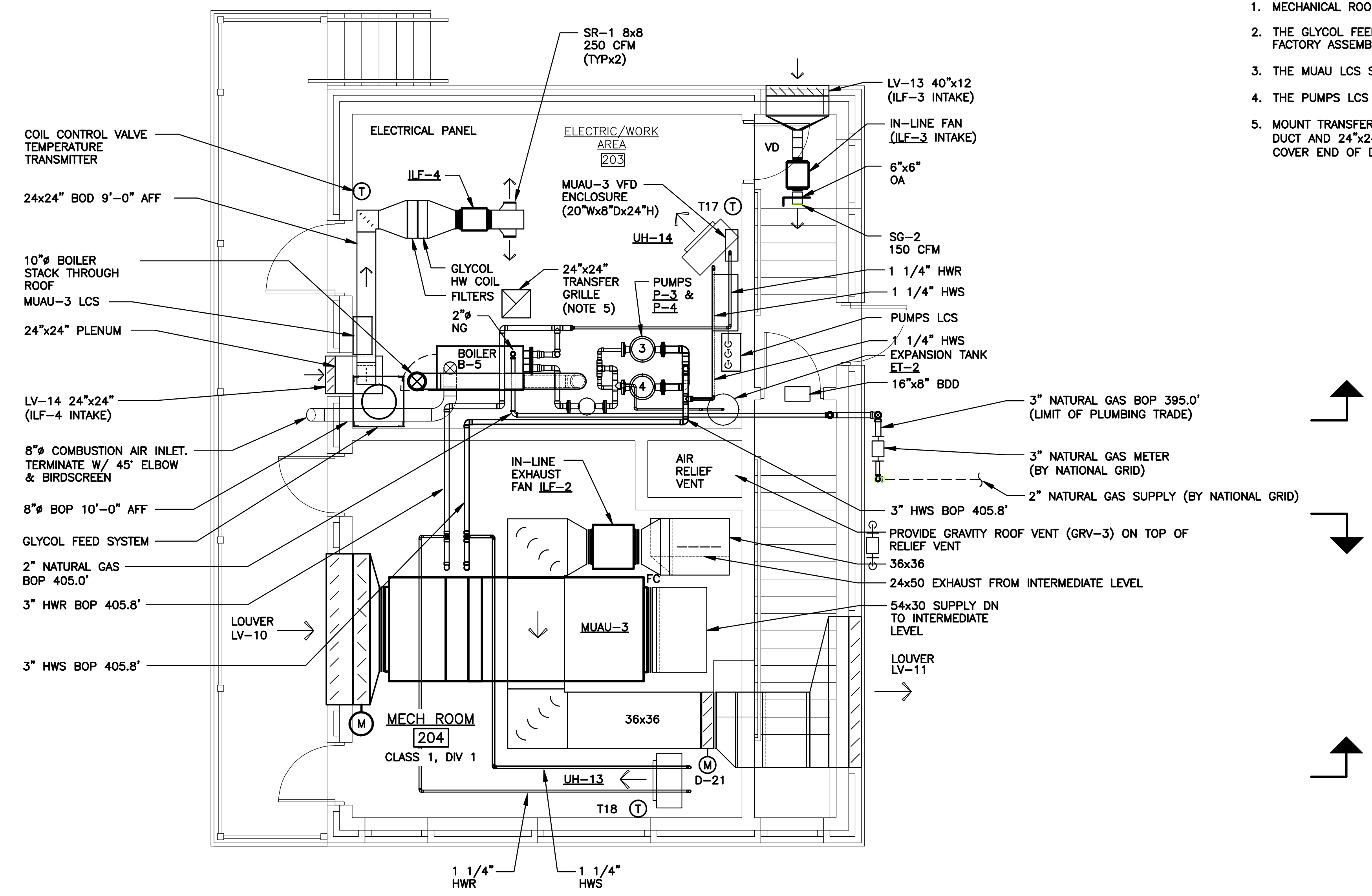


File Number
00663
Date
04/11

H-201

DRAWING NOTE

1. MECHANICAL ROOMS FINISHED FLOOR ELEVATION 395.0.
2. THE GLYCOL FEED SYSTEM AND AIR CONTROL SYSTEM IS FACTORY ASSEMBLED UNIT NOT SHOWN ON THE DRAWING.
3. THE MUAU LCS SHALL NOT EXCEED 2'-0" WIDE.
4. THE PUMPS LCS SHALL NOT EXCEED 2'-0" WIDE.
5. MOUNT TRANSFER GRILLE IN CEILING. PROVIDE 1'-0" LONG STRAIGHT DUCT AND 24"x24" MITER ELBOW IN THE ATTIC ABOVE TRANSFER GRILLE. COVER END OF DUCT W/ INSECT SCREEN.



GRADE LEVEL PLAN
SCALE: 1/4"=1'-0"

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE:
1/4"=1'-0"

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| No. | Date | Revisions | Init |
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| 1 | 01/11 | ISSUED FOR APPROVAL | LJC |

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Designed by GBC
Drawn by KJL
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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

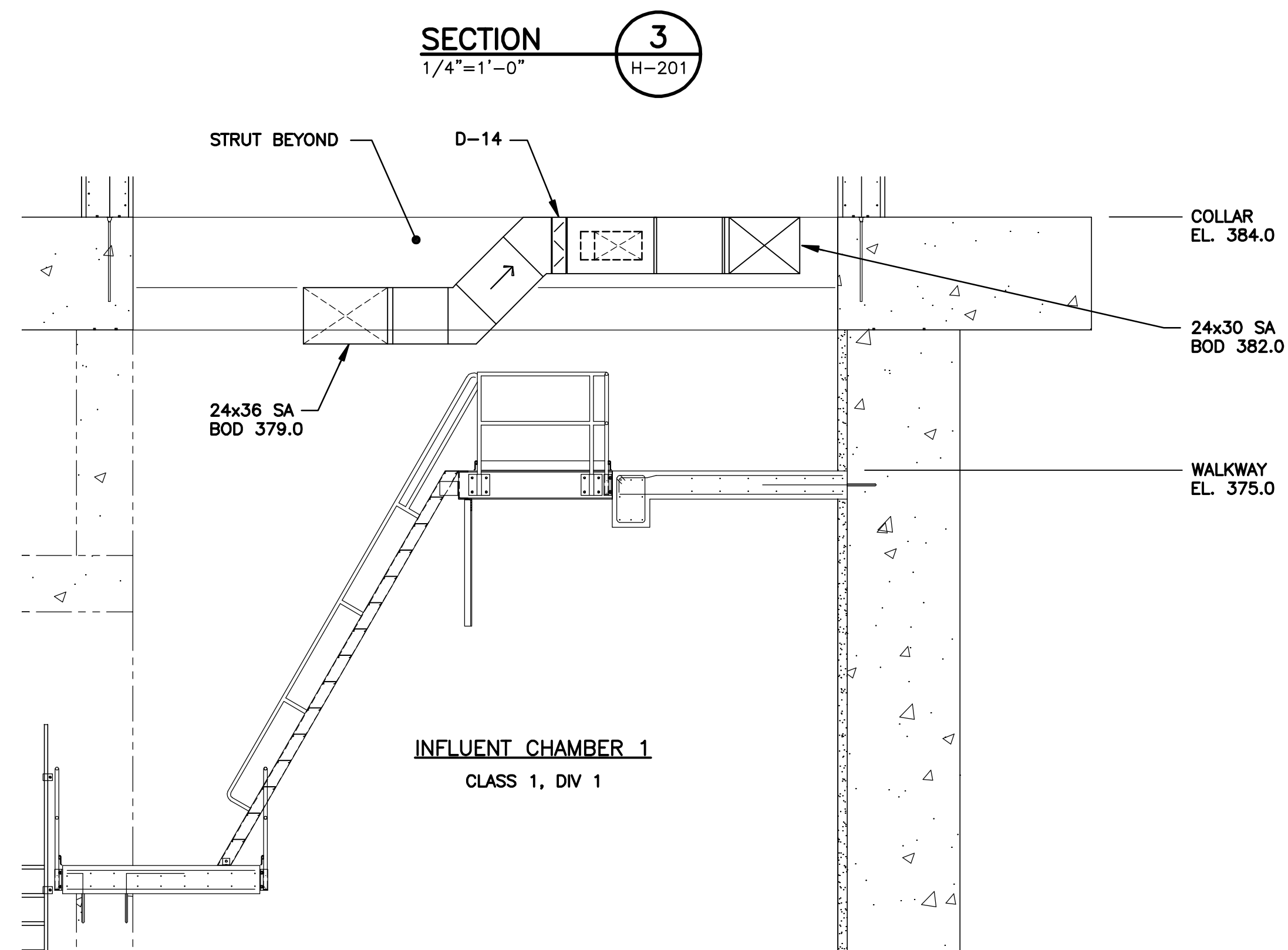
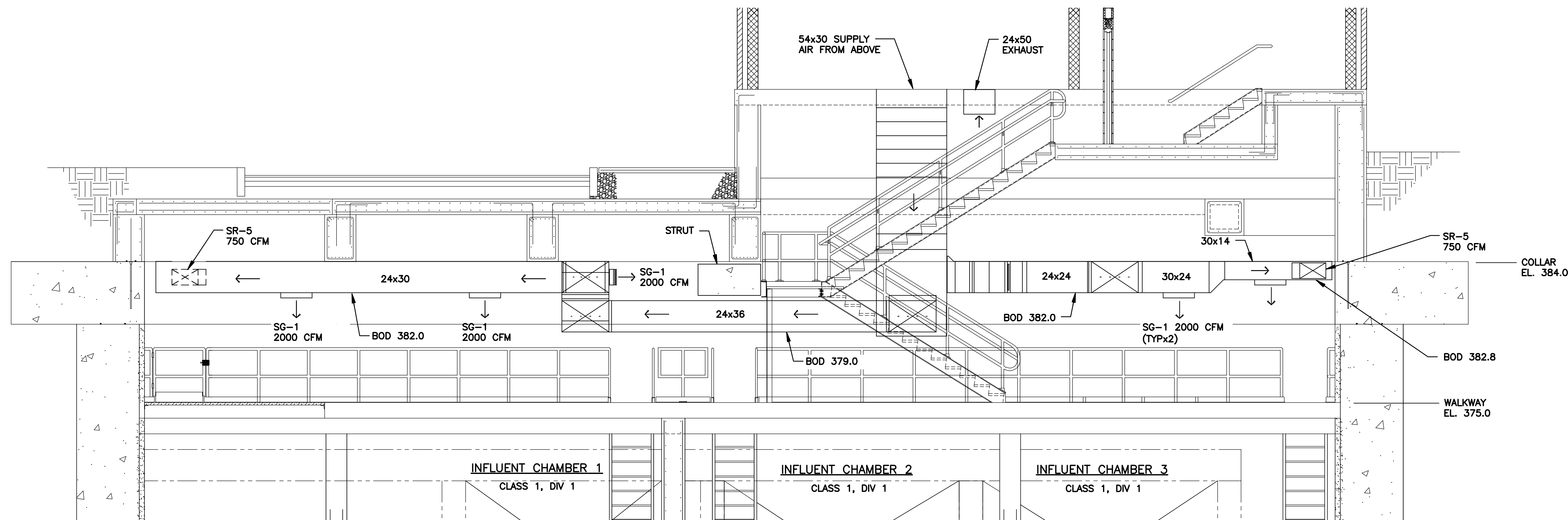
EAST ENTRANCE STRUCTURE
GRADE LEVEL PLAN
HVAC

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

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File Number: 00663
Date: 04/11
H-202



L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE:
1/4"=1'-0"
0 4' 8'

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| No. | Date | Revisions | Init |
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| 4 | 03/15 | RECORD DRAWINGS | LJC |
| 3 | 2/12 | REVISED FOR CHANGE ORDER NO 1 | LJC |
| 2 | 04/11 | AS BID | LJC |
| 1 | 01/11 | ISSUED FOR APPROVAL | LJC |

In charge of LJC
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Checked by SWM

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CLINTON CSO STORAGE FACILITY PROJECT

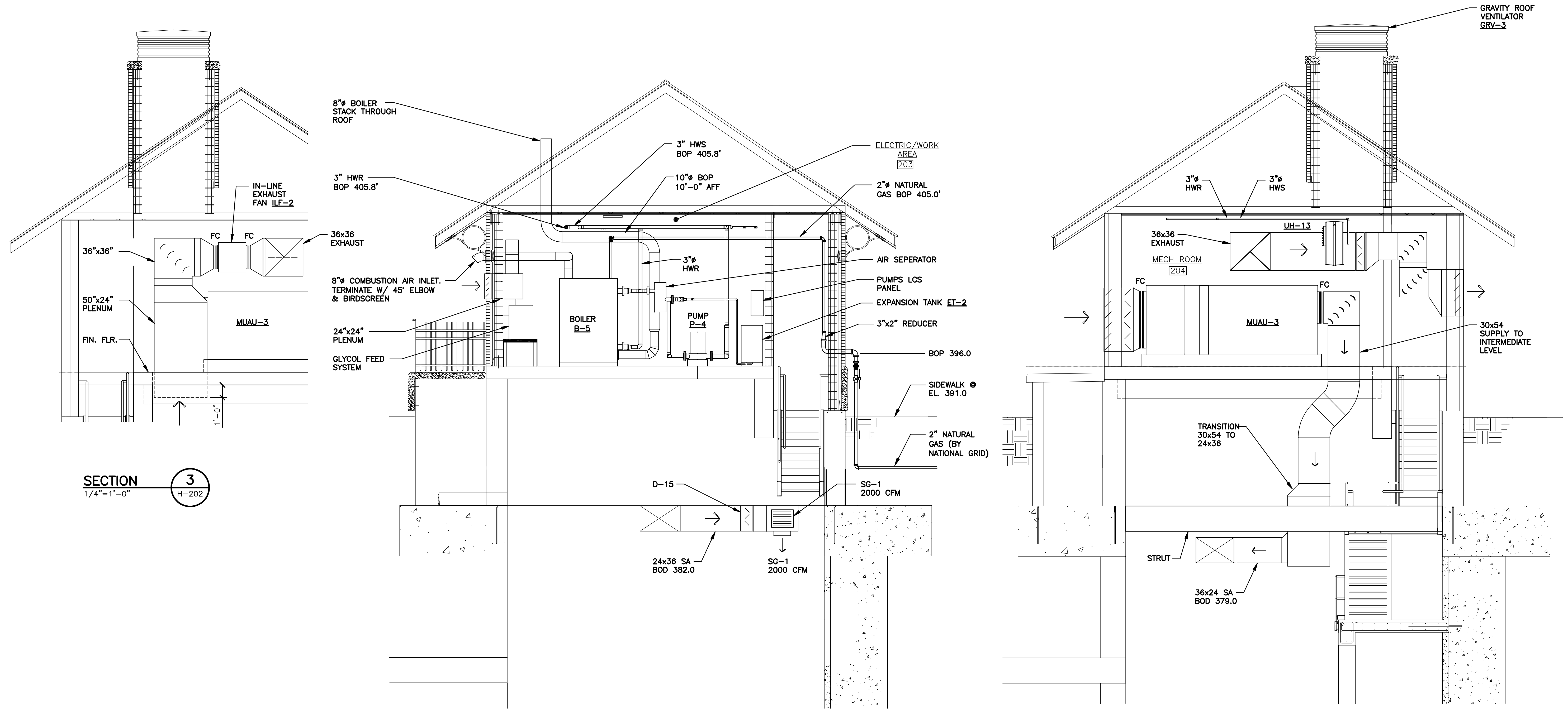
EAST ENTRANCE STRUCTURE SECTION
HVAC

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DATE: 04/01/2015 PER: [Signature]

File Number 00663
Date 04/11
H-203



SECTION 3
1/4"=1'-0" H-202

SECTION 2 2
1/4"=1'-0" H-202 H-201

SECTION 1 1
1/4"=1'-0" H-202 H-201

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE:
1/4"=1'-0"

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|-----|-------|-------------------------------|------|
| 4 | 03/15 | RECORD DRAWINGS | LJC |
| 3 | 2/12 | REVISED FOR CHANGE ORDER NO 1 | LJC |
| 2 | 04/11 | AS BID | LJC |
| 1 | 01/11 | ISSUED FOR APPROVAL | LJC |

In charge of LJC
Designed by GBC
Drawn by KJL
Checked by SWM



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

EAST ENTRANCE STRUCTURE SECTIONS
HVAC

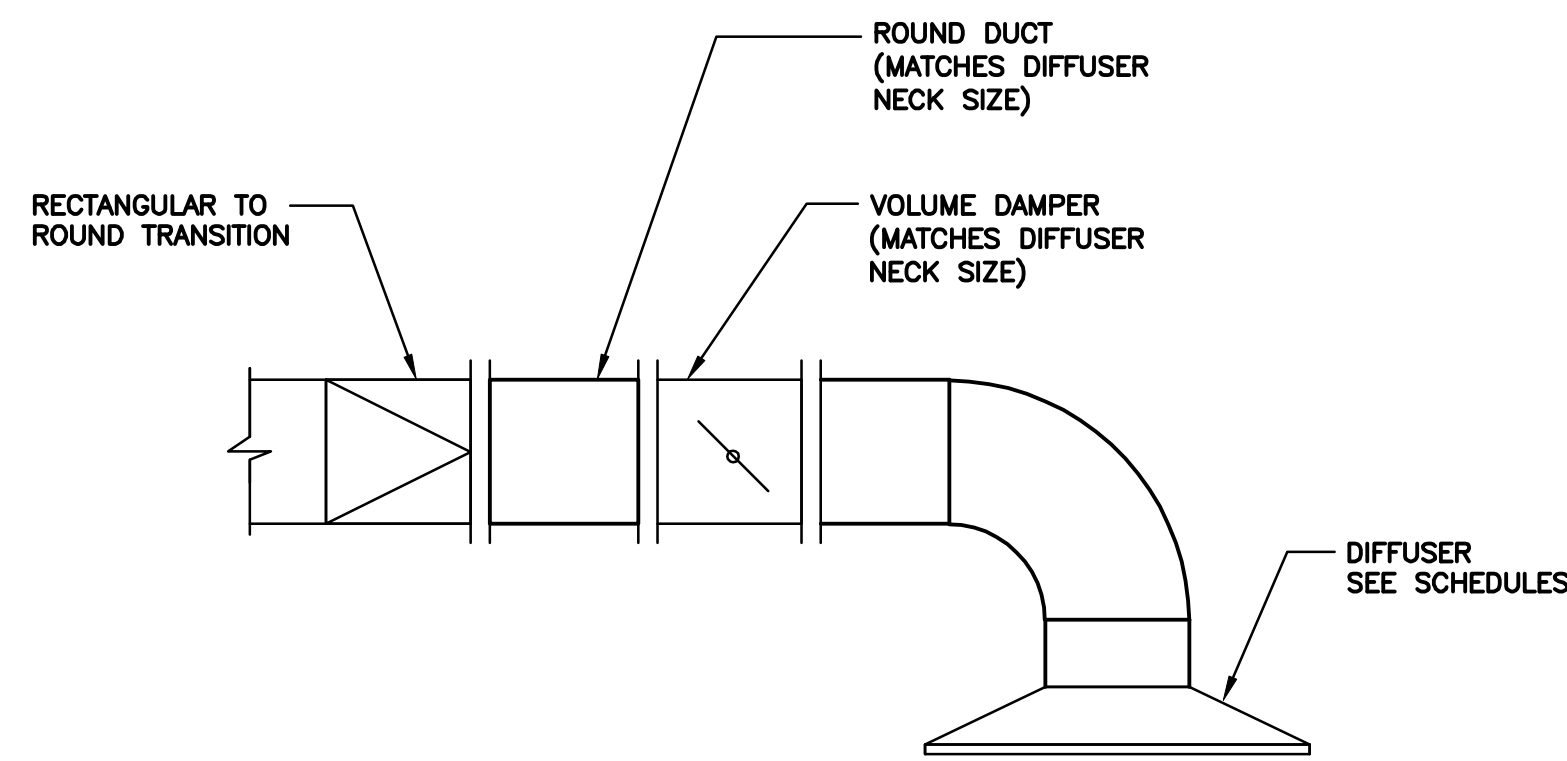


File Number 00663
Date 04/11
H-204

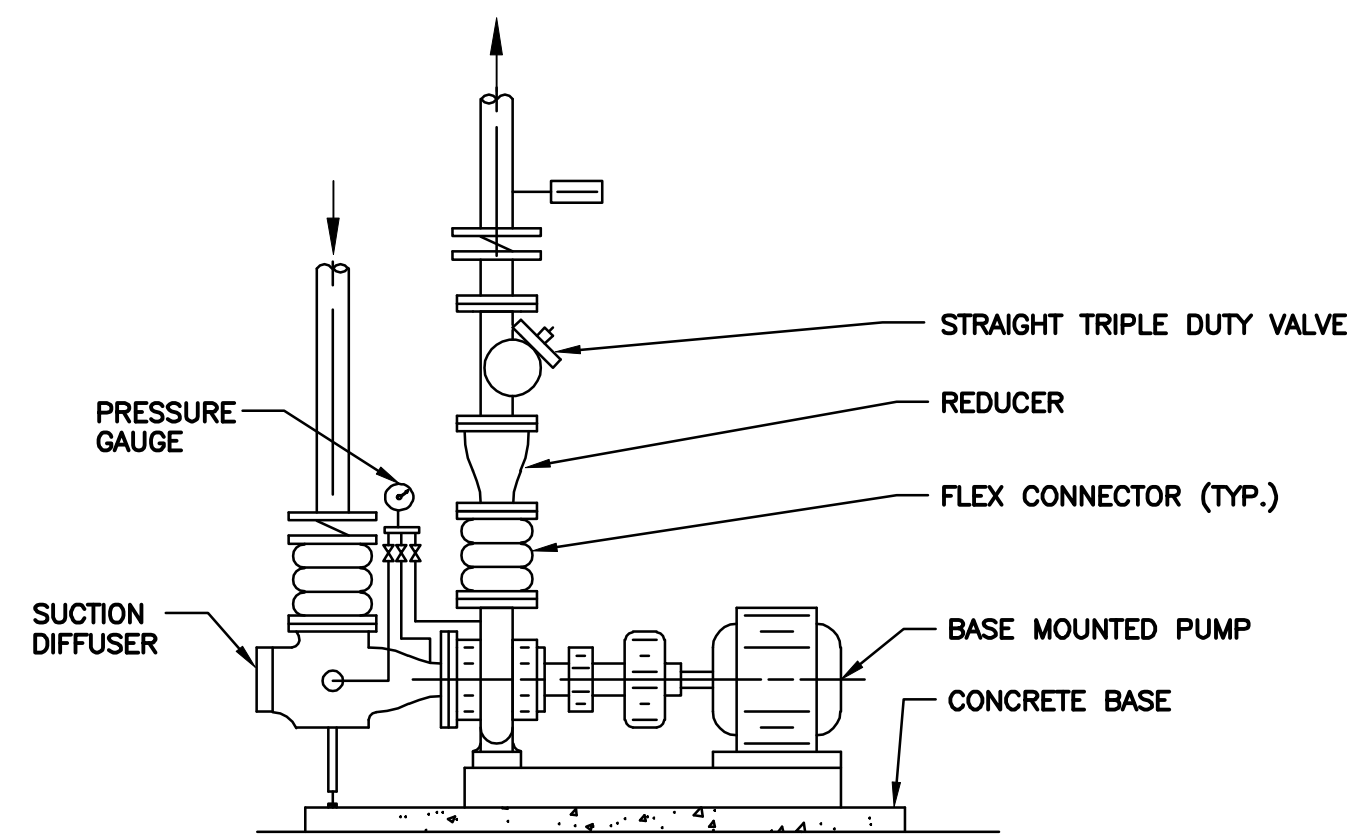
ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

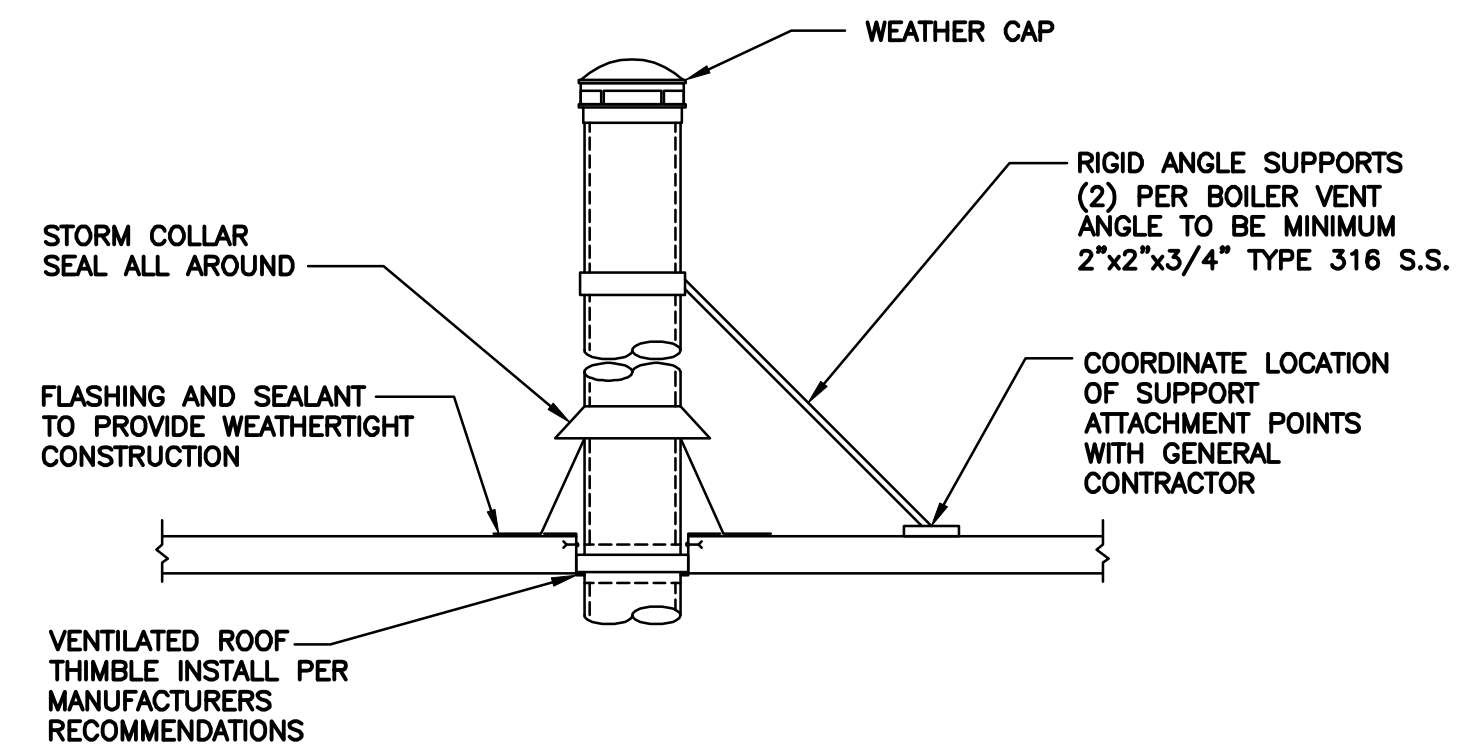
DATE: 04/01/2015 PER: [Signature]



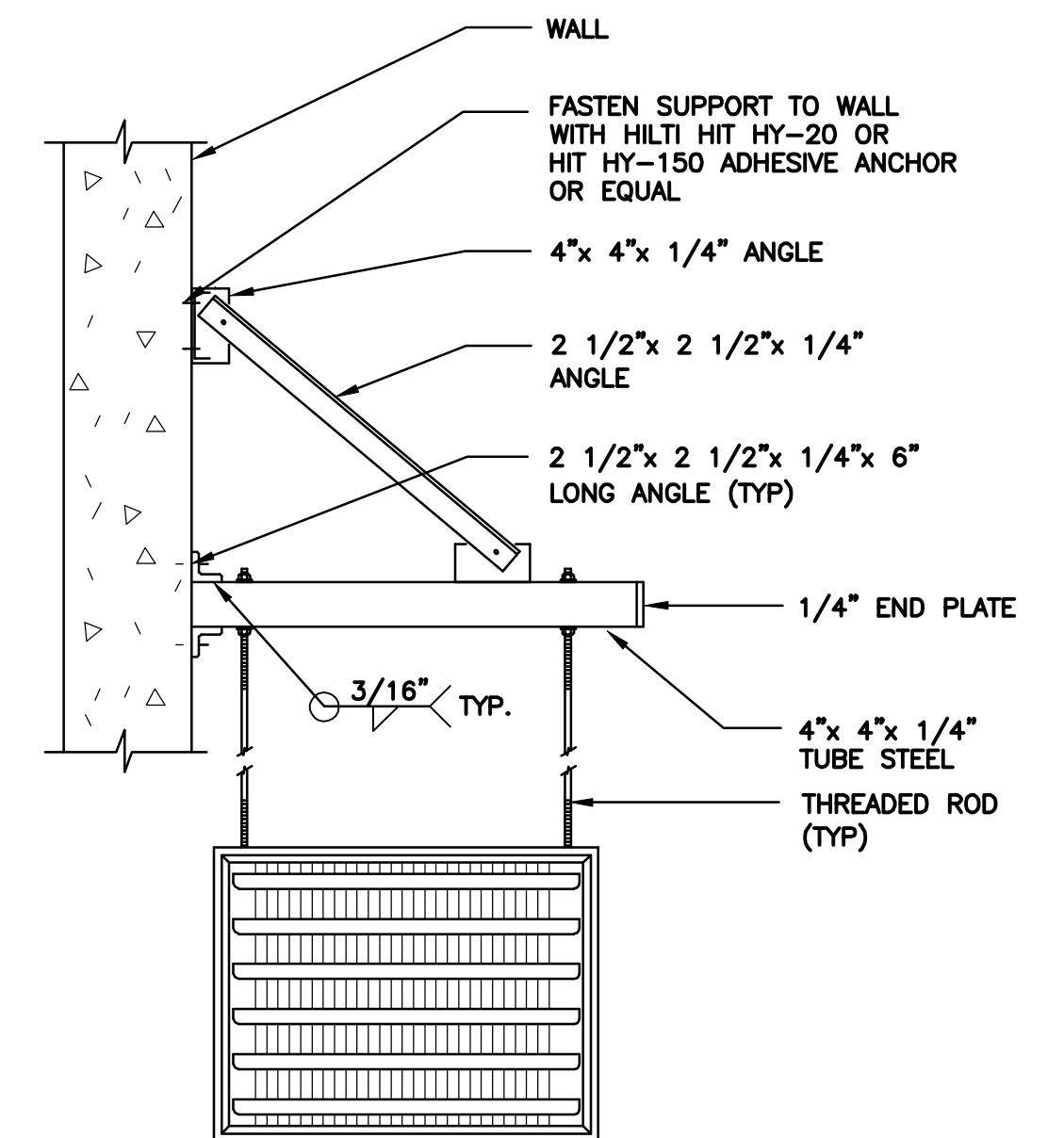
SUPPLY AIR DIFFUSER DETAIL
NOT TO SCALE



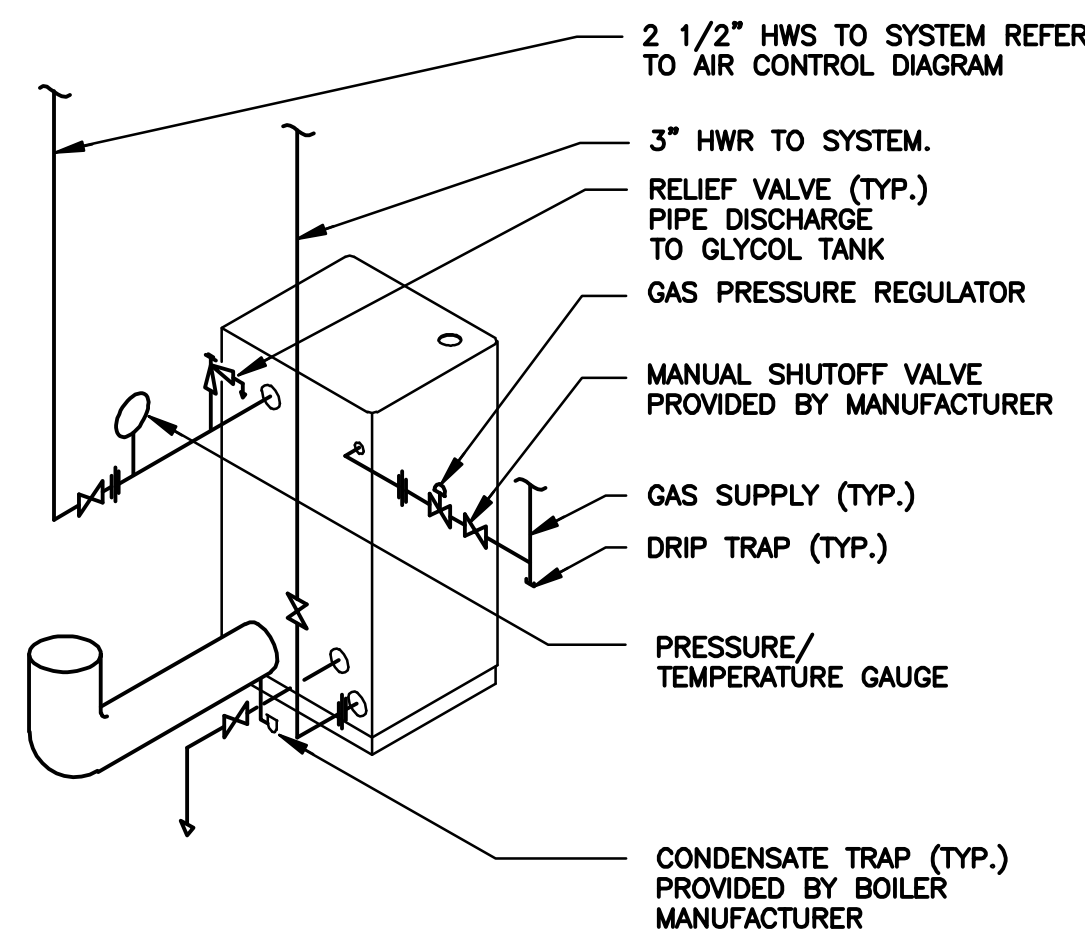
**TYPICAL END SUCTION
BASE MOUNTED PUMP DETAIL**
NOT TO SCALE



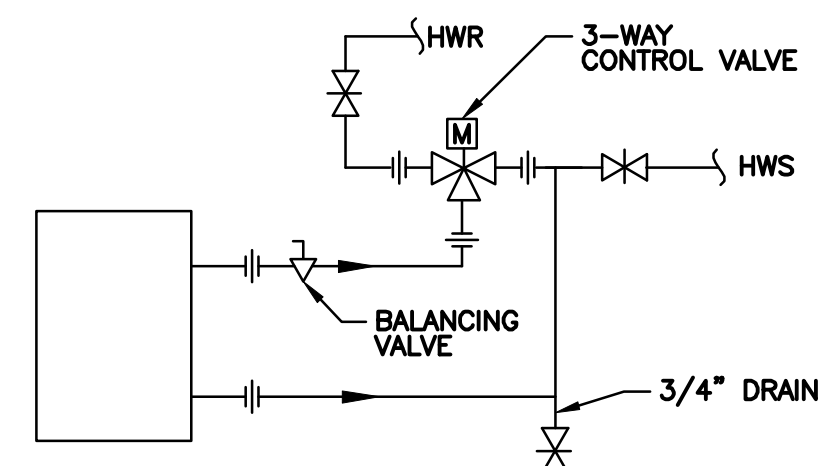
FROM BOILERS B-1 THRU B-4
BOILER VENT THRU ROOF DETAIL
NOT TO SCALE



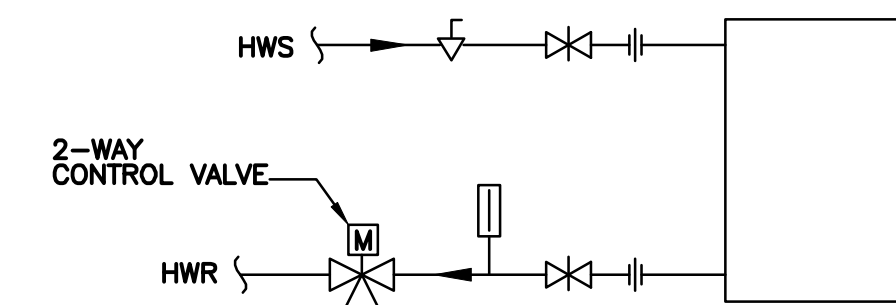
UNIT HEATER SUPPORT DETAIL
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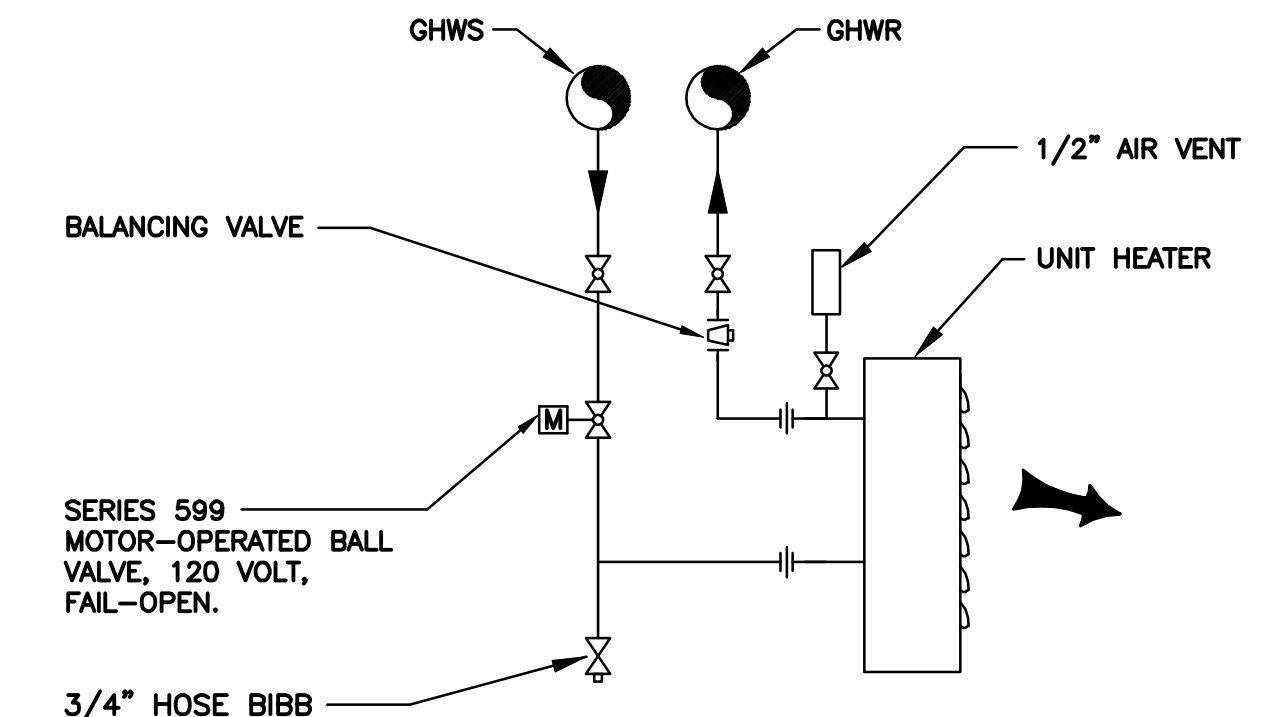
BOILER B-5 DETAIL
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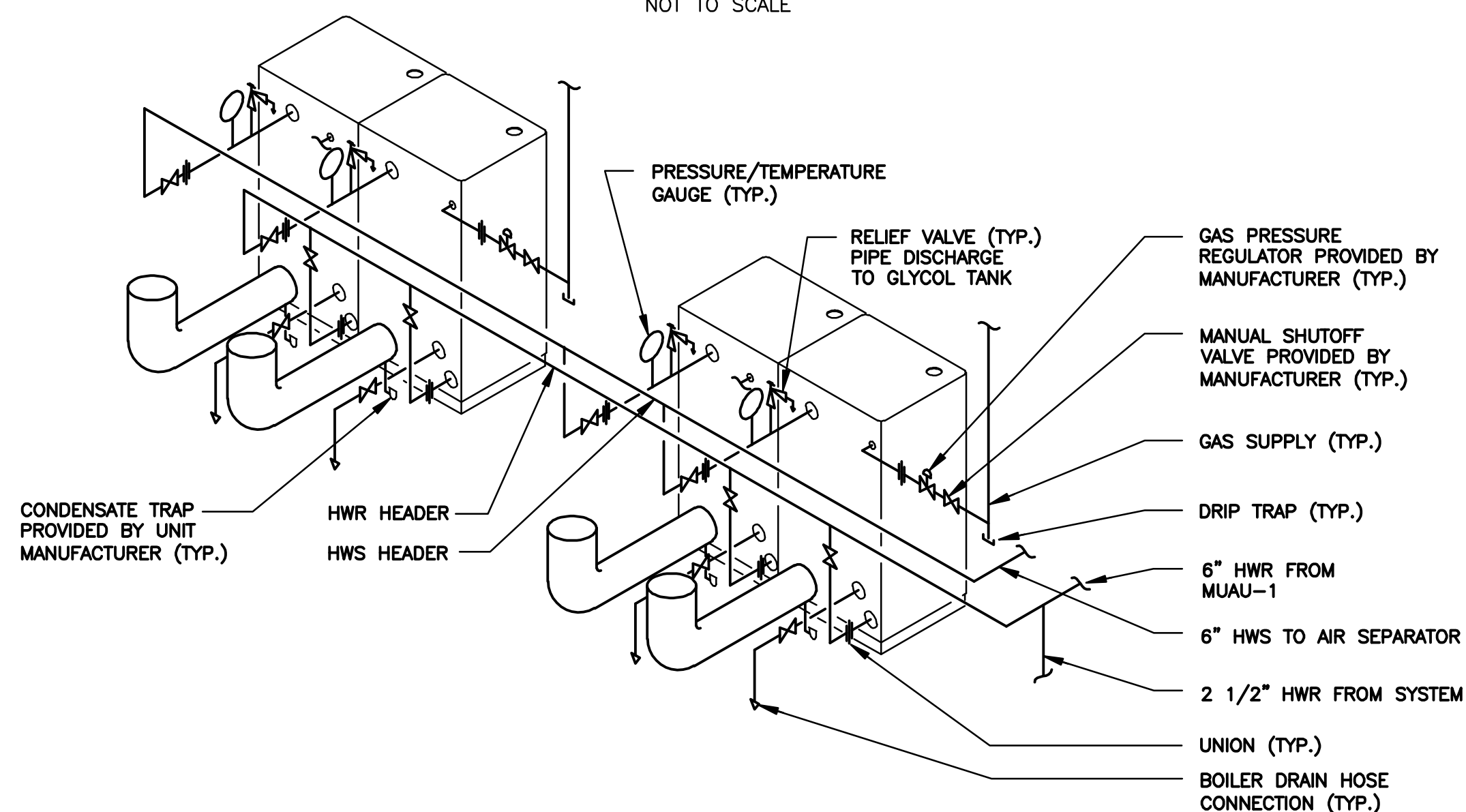
HOT WATER COIL PIPING DETAIL
NOT TO SCALE
TYPICAL FOR MUAU-3 & 2, DUH-2



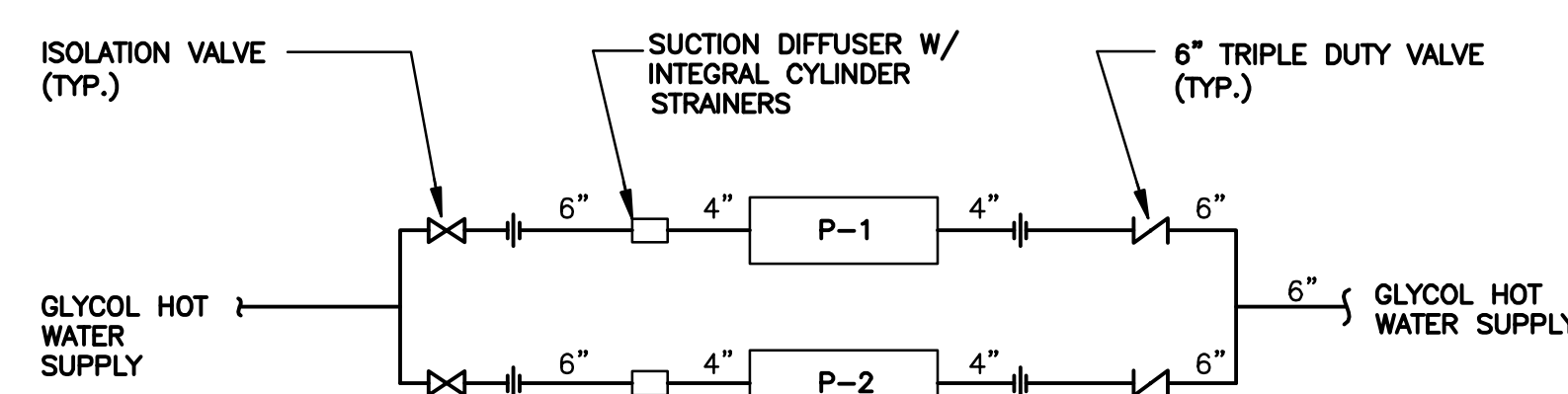
HOT WATER COIL PIPING DETAIL
NOT TO SCALE
TYPICAL FOR MUAU-1 & 2, DUH-1



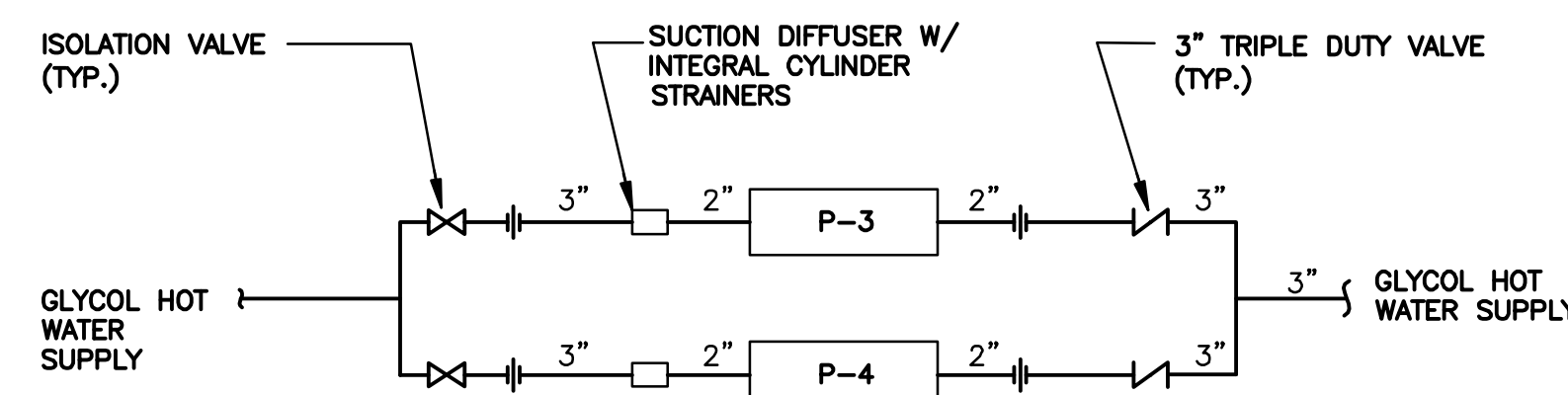
UNIT HEATER PIPING DETAIL
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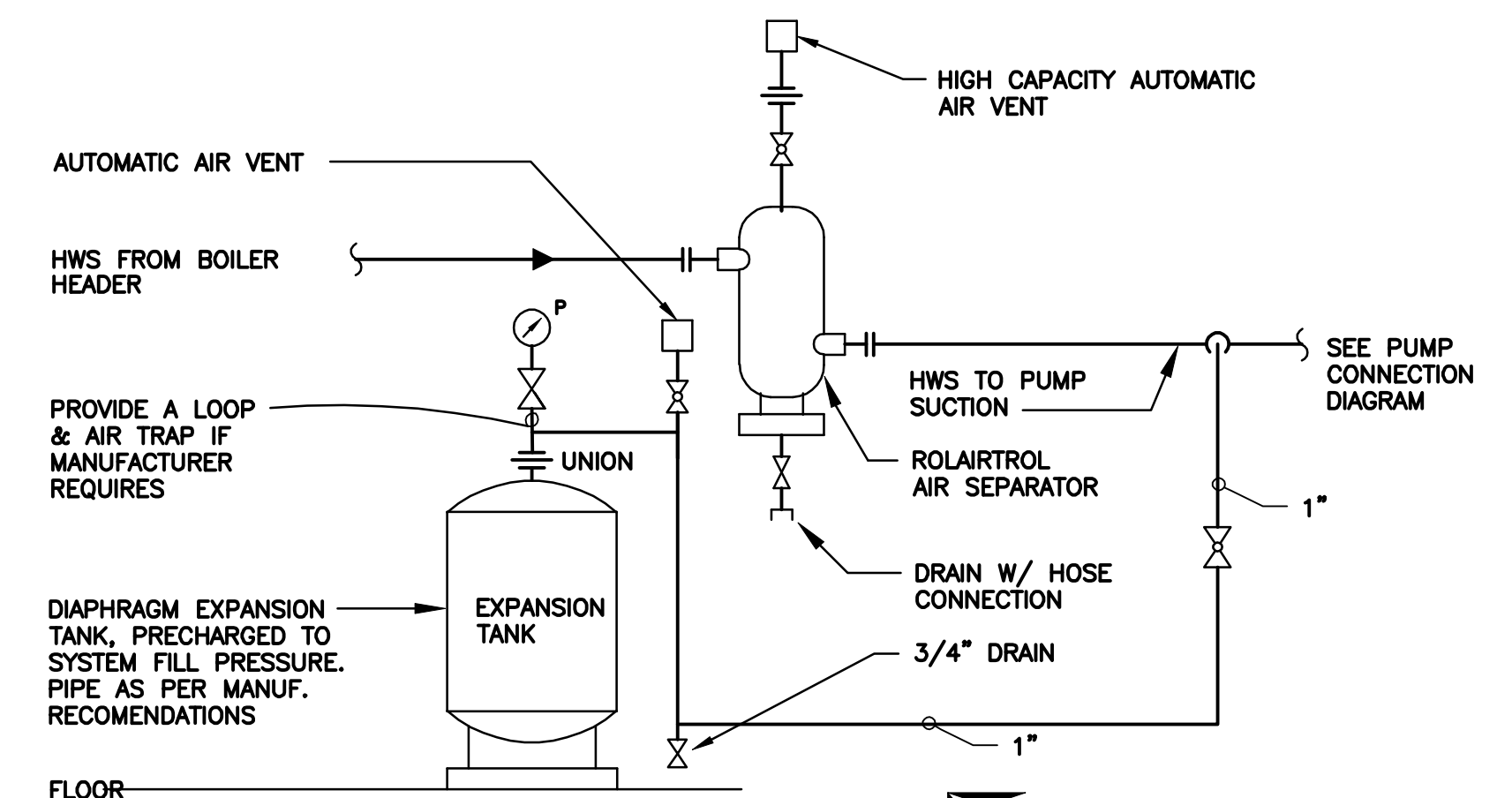
BOILERS B-1 THRU B-4 DETAIL
NOT TO SCALE



PUMPS P-1 & P-2 DETAIL
NOT TO SCALE



PUMPS P-3 & P-4 DETAIL
NOT TO SCALE



AIR CONTROL FOR BOILERS
NOT TO SCALE

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP

RECORD DRAWING

THESE DRAWINGS HAVE BEEN REVISED TO REFLECT MAJOR CHANGES, IF ANY, WHICH OCCURRED DURING CONSTRUCTION. REVISIONS ARE BASED UPON INFORMATION SUPPLIED BY CONTRACTOR.

DATE: 04/01/2015 PER: [Signature]

L: ON=*; OFF=*REF*
X:
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SCALE:

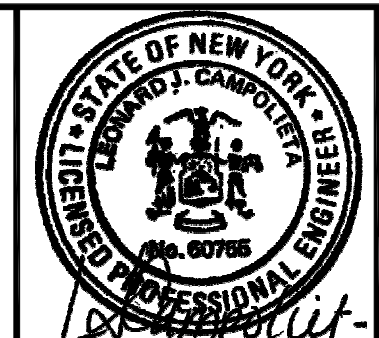
| No. | Date | Revisions | Init |
|-----|-------|---------------------|------|
| 3 | 03/15 | RECORD DRAWINGS | LJC |
| 2 | 04/11 | AS BID | LJC |
| 1 | 01/11 | ISSUED FOR APPROVAL | |

In charge of LJC
Designed by SWM
Drawn by KJL
Checked by GBC

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

**STORAGE FACILITY & EAST STRUCTURE
DETAILS**
HVAC



File Number
00663
Date
04/11

H-301

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

| ELECTRIC UNIT HEATER (EUH) SCHEDULE | | | | | |
|-------------------------------------|---------------|-----|-------------|-----------------|---------|
| NO. | LOCATION | KW | VOLTS/PHASE | MOUNTING HEIGHT | REMARKS |
| EUH-1 | ELECTRIC ROOM | 7.5 | 480/3 | 9'-0" | 1 |
| EUH-2 | ELECTRIC ROOM | 7.5 | 480/3 | 9'-0" | 1 |
| EUH-3 | ELECTRIC ROOM | 5.0 | 480/3 | 9'-0" | 1 |
| EUH-4 | ELECTRIC ROOM | 5.0 | 480/3 | 9'-0" | 1 |

REMARKS:
1. INSTALL WITH HORIZONTAL DISCHARGE

| MAKE UP AIR HANDLING UNIT (MAU) SCHEDULE | | | | | | | | | | | | | | | | | | | | |
|--|------------------|---------------------|----------------|-----------|---------|-----------|--------------|------------|-----------|------|-----------|--|-------------------------------|---------|-----------|-------------|-----|--------|-------------------------------|----------|
| NO. | BUILDING | LOCATION | SUPPLY FAN | | | | HEATING COIL | | | | | FILTER DUST SPOT EFFICIENCY % ASHRAE 52.1-92 | MANUFACTURER/MODEL (OR EQUAL) | REMARKS | | | | | | |
| | | | CAPACITY (CFM) | | FAN RPM | MOTOR RPM | ELECTRICAL | | TOTAL MBH | ROWS | AIR | | | | GLYCOL | | | | | |
| | | | MAX. | ESP ("WC) | | | HP | VOLT/PHASE | | | EAT "F DB | | | | LAT "F DB | APD (IN WC) | GPM | IN | OUT | FPD (FT) |
| MUAU-1 | STORAGE FACILITY | MECHANICAL ROOM 101 | 59,800 | 1.5 | 452 | 1800 | 40 | 460/3 | 3775 | 2 | -3 | 55 | 0.25 | 282 | 180°F | 150°F | 16 | MERV 8 | ABSOLUTE AIRE | 1,2,3 |
| MUAU-2 | STORAGE FACILITY | MECHANICAL ROOM 102 | 9,100 | 1.0 | 871 | 1800 | 7.5 | 460/3 | 683 | 2 | -20 | 50 | 0.25 | 50 | 180°F | 150°F | 15 | MERV 8 | TRANE/CLIMATE CHANGER SIZE 17 | 1,3 |
| MUAU-3 | EAST STRUCTURE | MECHANICAL ROOM 202 | 13,500/9,800 | 1.5 | 1184 | 1200 | 10 | 460/3 | 1139 | 2 | -20 | 55 | 0.25 | 85 | 180°F | 150°F | 15 | MERV 8 | ABSOLUTE AIRE | 1,2,3 |

REMARKS:
1. HEATING GLYCOL SOLUTION IS 50% PROPYLENE GLYCOL IN WATER.
2. EXPLOSION PROOF CONSTRUCTION.
3. FAN SHALL HAVE AMCA 99 TYPE A SPARK RESISTANT CONSTRUCTION.

| POWERED ROOF EXHAUSTER (PRE) SCHEDULE | | | | | | | | | |
|---------------------------------------|----------------------|----------------|-----------|-----------|-------------|--------------------|---------------------|---------|--|
| NO. | LOCATION | AIR FLOW (CFM) | S.P. (WC) | FAN MOTOR | | ROOF OPENING SIZES | MANUFACTURER/ MODEL | REMARKS | |
| | | | | HP | VOLTS/PHASE | | | | |
| PRE-1 THRU 3 | ELECTRIC ROOM 117 | 9000 | 0.25 | 1 1/2 | 480/3 | 31.5 X 31.5 | COOK/ACEB - 300C8B | | |
| PRE-4 | JANITOR 112 BATH 114 | 150 | 0.375 | 1/6 | 120/1 | 13.5 X 13.5 | COOK/ACEB - 60C2B | | |
| PRE-5 | ODOR CONTROL ROOM 10 | 8000 | 0.50 | 1 1/2 | 480/3 | 31.5 X 31.5 | COOK/ACEB - 300C8B | | |
| PRE-6 | TRUCK LOADING 108 | 200 | 0.25 | 1/20 | 120/1 | 13.5 X 13.5 | COOK/ACED 70C15DH | | |
| PRE-7 | TRUCK LOADING 108 | 2050 | 0.375 | 1/4 | 120/1 | 19.5 X 19.5 | COOK/ACRUB 165SC3B | | |
| PRE-8 | MECHANICAL ROOM 103 | 100 | 0.25 | 1/20 | 120/1 | 13.5 X 13.5 | COOK/ACED 70C15DL | | |
| PRE-9 | MECHANICAL ROOM 101 | 100 | 0.25 | 1/20 | 120/1 | 13.5 X 13.5 | COOK/ACED 70C15DL | | |

| CEILING FAN (CF) SCHEDULE | | | | | | | | | | |
|---------------------------|-------------------|-------------------------|--------|------|------------|-----|-------------|--------------|-------|-------|
| NO. | SERVES | EQUIPMENT TYPE | FAN | | MOTOR DATA | | | DESIGN BASIS | | NOTES |
| | | | DRIVE | CFM | WATTS | RPM | VOLTS/PHASE | MANUFACTURER | MODEL | |
| CF-1 | ODOR CONTROL ROOM | CEILING CIRCULATION FAN | DIRECT | 8275 | 64 | 301 | 120/1 | CRAFTMADE | VE48 | 1 |
| CF-2 | ODOR CONTROL ROOM | CEILING CIRCULATION FAN | DIRECT | 8275 | 64 | 301 | 120/1 | CRAFTMADE | VE48 | 1 |

REMARKS:
1. PROVIDE 4-SPEED WALL MOUNTED CONTROLLER.

| PUMP (P) SCHEDULE | | | | | | | | | | | | | |
|-------------------|--------------------|--------|--------|--------------------|----------|----------------|----------------------|-------|-------|------------|------------|--------------------------|---------|
| NO. | LOCATION | SERVES | TYPE | IMPELLER DIA. (IN) | PUMP | | | MOTOR | | | | MANUFACTURER/ MODEL | REMARKS |
| | | | | | FLOW GPM | HEAD LOSS (FT) | MIN. PUMP EFFICIENCY | HP | RPM | VOLT/PHASE | MOTOR TYPE | | |
| P-1 | MECHANICAL ROOM #2 | GHW | INLINE | 9.125 | 355 | 75 | 70% | 15 | 1,800 | 480/3 | TEFC | BELL & GOSSETT SERIES 80 | 1,2 |
| P-2 | MECHANICAL ROOM #2 | GHW | INLINE | 9.125 | 355 | 75 | 70% | 15 | 1,800 | 480/3 | TEFC | BELL & GOSSETT SERIES 80 | 1,2 |
| P-3 | EAST STRUCTURE | GHW | INLINE | 7.5 | 88 | 50 | 57% | 3 | 1,800 | 480/3 | TEFC | BELL & GOSSETT SERIES 80 | 1 |
| P-4 | EAST STRUCTURE | GHW | INLINE | 7.5 | 88 | 50 | 57% | 3 | 1,800 | 480/3 | TEFC | BELL & GOSSETT SERIES 80 | 1 |

REMARKS:
1. GHW = 50% GLYCOL / HOT WATER SOLUTION
2. INVERTER DUTY MOTOR FOR USED WITH VARIABLE SPEED DRIVE.

| BLOWER (BL) SCHEDULE | | | | | | | | | | | | |
|----------------------|--------------|--------|-----------|----------------|------|------------|-----|------|--------------|-----------------|------------|-----------|
| NO. | SERVES | FAN | | | | ELECTRICAL | | | DESIGN BASIS | | REMARKS | |
| | | CFM | S.P. (WC) | WHEEL DIAMETER | RPM | BHP | HP | RPM | VOLTS/PHASE | MANUFACTURER | | MODEL NO. |
| BL-1 | ODOR CONTROL | 30,000 | 13" | 48" | 1250 | 80 | 125 | 1800 | 480/3 | NEW YORK BLOWER | FE 482 HP | 1 |
| BL-2 | ODOR CONTROL | 30,000 | 13" | 48" | 1250 | 80 | 125 | 1800 | 480/3 | NEW YORK BLOWER | FE 482 HP | 1 |
| BL-3 | ODOR CONTROL | 10,000 | 4" | 30" | 1175 | 8.6 | 20 | 1800 | 480/3 | NEW YORK BLOWER | GFE 301 MP | 1 |

REMARKS:
1. EXPLOSION PROOF CONSTRUCTION.

| UNIT HEATER (UH) SCHEDULE | | | | | | | | | | | | | | | |
|---------------------------|------------------|----------------------|----------------|----------------------------|------|---------|------------|---------|---------|-----------------------------------|-----------------|-------------|------|---------------------|---------|
| NO. | BUILDING | LOCATION | EQUIPMENT TYPE | COIL DATA | | | FLUID DATA | | | | ELECTRICAL DATA | | | MANUFACTURER/ MODEL | REMARKS |
| | | | | MIN. OUTPUT CAPACITY (MBH) | CFM | EAT (F) | GPM | EWT (F) | LWT (F) | FLUID PRESSURE DROP (FT OF WATER) | HP | VOLTS/PHASE | RPM | | |
| UH-1 | STORAGE FACILITY | GRIT ROOM 109 | HORIZONTAL | 34 | 1120 | 50 | 2.50 | 180 | 150 | 0.25 | 1/4 | 120/1 | 1550 | MODINE/HSB-63 | 1,2 |
| UH-2 | STORAGE FACILITY | GRIT ROOM 109 | HORIZONTAL | 34 | 1120 | 50 | 2.50 | 180 | 150 | 0.25 | 1/4 | 120/1 | 1550 | MODINE/HSB-63 | 1,2 |
| UH-3 | STORAGE FACILITY | MECHANICAL RM. 101 | HORIZONTAL | 23 | 730 | 50 | 1.68 | 180 | 150 | 0.25 | 1/4 | 120/1 | 1550 | MODINE/HSB-47 | 1,2 |
| UH-4 | STORAGE FACILITY | MECHANICAL RM. 101 | HORIZONTAL | 23 | 730 | 50 | 1.69 | 180 | 150 | 0.25 | 1/4 | 120/1 | 1550 | MODINE/HSB-47 | 1,2 |
| UH-5 | STORAGE FACILITY | MECHANICAL RM. 103 | HORIZONTAL | 23 | 730 | 50 | 1.69 | 180 | 150 | 0.25 | 1/4 | 120/1 | 1550 | MODINE/HSB-47 | 2 |
| UH-6 | STORAGE FACILITY | ODOR CONTROL RM. 105 | HORIZONTAL | 34 | 1120 | 50 | 2.50 | 180 | 150 | 0.25 | 1/4 | 120/1 | 1550 | MODINE/HSB-63 | 2 |
| UH-7 | STORAGE FACILITY | ODOR CONTROL RM. 105 | HORIZONTAL | 34 | 1120 | 50 | 2.50 | 180 | 150 | 0.25 | 1/4 | 120/1 | 1550 | MODINE/HSB-63 | 2 |
| UH-8 | STORAGE FACILITY | TRUCK UNLOADING 108 | HORIZONTAL | 23 | 730 | 50 | 1.69 | 180 | 150 | 0.25 | 1/4 | 120/1 | 1550 | MODINE/HSB-47 | 2 |
| UH-9 | STORAGE FACILITY | TRUCK UNLOADING 108 | HORIZONTAL | 23 | 730 | 50 | 1.69 | 180 | 150 | 0.25 | 1/4 | 120/1 | 1550 | MODINE/HSB-47 | 2 |
| UH-10 | STORAGE FACILITY | STORAGE 104 | HORIZONTAL | 16 | 630 | 50 | 1.19 | 180 | 150 | 0.20 | 1/4 | 120/1 | 1550 | MODINE/HSB-33 | 2 |
| UH-11 | STORAGE FACILITY | STORAGE 104 | HORIZONTAL | 16 | 630 | 50 | 1.19 | 180 | 150 | 0.20 | 1/4 | 120/1 | 1550 | MODINE/HSB-33 | 2 |
| UH-12 | STORAGE FACILITY | STORAGE 104 | HORIZONTAL | 16 | 630 | 50 | 1.19 | 180 | 150 | 0.20 | 1/4 | 120/1 | 1550 | MODINE/HSB-33 | 2 |
| UH-13 | EAST STRUCTURE | MECHANICAL ROOM | HORIZONTAL | 23 | 730 | 50 | 1.69 | 180 | 150 | 0.25 | 1/4 | 120/1 | 1550 | MODINE/HSB-47 | 1,2 |
| UH-14 | EAST STRUCTURE | ELECTRICAL ROOM | HORIZONTAL | 16 | 630 | 50 | 1.19 | 180 | 150 | 0.20 | 1/4 | 120/1 | 1550 | MODINE/HSB-33 | 2 |
| UH-15 | STORAGE FACILITY | ACCESS ROOM 106 | HORIZONTAL | 16 | 630 | 50 | 1.19 | 180 | 150 | 0.20 | 1/4 | 120/1 | 1550 | MODINE/HSB-33 | 1,2 |

REMARKS:
1. EXPLOSION PROOF MOTOR RATED FOR CLASS 1, DIV. 1 CLASSIFICATION.
2. MINIMUM OUTPUT BASED ON 50% GLYCOL SOLUTION.

| BOILER (BLR) SCHEDULE | | | | | | | | | | | | | | |
|-----------------------|------------------|------------------------|-------------|--------------|-------|----------------|----------------|---------|---------|---------------------------|-------------------------|--------------|---------|----------|
| NO. | BUILDING | LOCATION | BOILER | | | | | | | | BURNER | | REMARKS | |
| | | | INPUT (MBH) | OUTPUT (MBH) | FLUID | FLOW (GPM) MAX | FLOW (GPM) MIN | EWT (F) | LWT (F) | OPERATING PRESSURE (PSIG) | WORKING PRESSURE (PSIG) | PRIMARY FUEL | | VOLT/PH. |
| B-1 | STORAGE FACILITY | MECHANICAL RM. 103 | 2,000 | 1.74 | GHW | 350 | 25 | 150 | 180 | 12 | 160 | NATURAL GAS | 120/1 | 1 |
| B-2 | STORAGE FACILITY | MECHANICAL RM. 103 | 2,000 | 1.74 | GHW | 350 | 25 | 150 | 180 | 12 | 160 | NATURAL GAS | 120/1 | 1 |
| B-3 | STORAGE FACILITY | MECHANICAL RM. 103 | 2,000 | 1.74 | GHW | 350 | 25 | 150 | 180 | 12 | 160 | NATURAL GAS | 120/1 | 1 |
| B-4 | STORAGE FACILITY | MECHANICAL RM. 103 | 2,000 | 1.74 | GHW | 350 | 64 | 150 | 180 | 12 | 160 | NATURAL GAS | 120/1 | 1 |
| B-5 | EAST STRUCTURE | ELECTRIC/WORK AREA 203 | 2,000 | 1.74 | GHW | 350 | 64 | 150 | 180 | 12 | 160 | NATURAL GAS | 120/1 | 1 |

REMARKS:
1. GHW = 50% GLYCOL / HOT WATER SOLUTION

| PACKAGED TERMINAL AIR CONDITIONER (PTAC) SCHEDULE | | | | | | | | | |
|---|------------------|----------------------|------|--------------|--------------------------------|-------------|----------------------|------|---------|
| NO. | LOCATION | NOMINAL COOLING BTUH | EER | SUPPLY (CFM) | MINIMUM HEATING CAPACITY (BTU) | VOLTS/PHASE | MAXIMUM COOLING AMPS | MOCF | REMARKS |
| PTAC-1 | CONTROL ROOM 110 | 9,000 | 11.2 | 220 | 11,600 | 208/1 | 3.9 | 20 | 1 |

REMARKS:
1. DESIGN DATA BASED ON FRIEDRICH MODEL PDE9K.

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG
SCALE:
THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

| | |
|--------------|-----|
| In charge of | LJC |
| Designed by | GBC |
| Drawn by | KJL |
| Checked by | SWM |



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT
STORAGE FACILITY & EAST STRUCTURE SCHEDULES
HVAC

File Number: 00663
Date: 04/11
Professional Engineer Seal: H-302
DATE: 04/01/2015 PER: [Signature]

| DAMPER (D) SCHEDULE | | | | | | | | | | | |
|---------------------|--------------------------|-----------------------|----------|-----------|--------|-----------|---------|-----------------|--------|--------|---------|
| NO. | BUILDING | LOCATION | QUANTITY | DIMENSION | | TYPE | DUTY | DAMPER ACTUATOR | | | REMARKS |
| | | | | WIDTH | HEIGHT | | | POWER | OPEN | CLOSE | |
| D-1 & D-2 | CLINTON STORAGE FACILITY | ELECTRIC ROOM 117 | 2 | 4'-0" | 4'-0" | INSULATED | INTAKE | 120V/1Ø | POWER | SPRING | 1 |
| D-3 & D-4 | CLINTON STORAGE FACILITY | ELECTRIC ROOM 117 | 2 | 4'-0" | 4'-0" | INSULATED | INTAKE | 120V/1Ø | POWER | SPRING | 2 |
| D-5 & D-6 | CLINTON STORAGE FACILITY | ELECTRIC ROOM 117 | 2 | 4'-0" | 4'-0" | INSULATED | INTAKE | 120V/1Ø | POWER | SPRING | 3 |
| D-7 | CLINTON STORAGE FACILITY | ODOR CONTROL ROOM 105 | 1 | 4'-0" | 4'-0" | STD. | EXHAUST | 120V/1Ø | SPRING | POWER | 4,5 |
| D-8 | CLINTON STORAGE FACILITY | ODOR CONTROL ROOM 105 | 1 | 4'-0" | 4'-0" | STD. | EXHAUST | 120V/1Ø | SPRING | POWER | 4,5 |
| D-9 | CLINTON STORAGE FACILITY | ODOR CONTROL ROOM 105 | 1 | 1'-10" | 3'-4" | STD. | EXHAUST | 120V/1Ø | SPRING | POWER | 4,5 |
| D-10 | CLINTON STORAGE FACILITY | ODOR CONTROL ROOM 105 | 1 | 3'-4" | 3'-4" | STD. | EXHAUST | 120V/1Ø | SPRING | POWER | 4,5 |
| D-11 | CLINTON STORAGE FACILITY | ODOR CONTROL ROOM 105 | 1 | 3'-4" | 3'-4" | STD. | EXHAUST | 120V/1Ø | SPRING | POWER | 4,5 |
| D-12 | CLINTON STORAGE FACILITY | ODOR CONTROL ROOM 105 | 1 | 2'-10" | 2'-10" | STD. | EXHAUST | 120V/1Ø | SPRING | POWER | 4,5 |
| D-13 | CLINTON STORAGE FACILITY | ODOR CONTROL ROOM 105 | 1 | 2'-10" | 2'-0" | STD. | EXHAUST | 120V/1Ø | SPRING | POWER | 4,5 |
| D-14 | EAST CHAMBER | INFLUENT CHAMBER 1 | 1 | 2'-6" | 2'-0" | MANUAL | SUPPLY | - | MANUAL | MANUAL | 7 |
| D-15 | EAST CHAMBER | INFLUENT CHAMBER 1 | 1 | 3'-0" | 2'-0" | MANUAL | SUPPLY | - | MANUAL | MANUAL | 7 |
| D-16 | CLINTON STORAGE FACILITY | BOILERS INTAKE | 1 | 2'-6" | 3'-6" | PARALLEL | INTAKE | 120V/1Ø | SPRING | POWER | |
| D-17 THRU 20 | CLINTON STORAGE FACILITY | CLINTON LV-6 | 4 | 4'-0 | 3'-0" | PARALLEL | EXHAUST | - | - | - | 6 |
| D-21 | EAST ENTRANCE STRUCTURE | MECH. ROOM 204 | 1 | 3'-0" | 3'-0" | PARALLEL | EXHAUST | 120V/1Ø | SPRING | POWER | |
| D-22 | EAST ENTRANCE STRUCTURE | ELEC/WORK AREA 203 | 1 | 1'-6" | 1'-6" | PARALLEL | EXHAUST | 120V/1Ø | POWER | SPRING | |

REMARKS :

- MOUNTED ON LOUVER LV-3.
- MOUNTED ON LOUVER LV-4.
- MOUNTED ON LOUVER LV-5.
- ACTUATOR SUITABLE FOR CLASS 1, DIVISION 1, GROUP D CLASSIFICATION.
- DAMPER SHALL BE RATED FOR 20" WC DIFFERENTIAL PRESSURE.
- BACKDRAFT DAMPER.
- ALUMINUM CONSTRUCTION WITH MANUAL QUADRANT.

| CABINET UNIT HEATER (CUH) SCHEDULE | | | | | |
|------------------------------------|--------------------------|-----------|-------------|--------------|---------|
| NO. | BUILDING | LOCATION | VOLTS/PHASE | LENGTH (IN.) | REMARKS |
| CUH-1 | CLINTON STORAGE FACILITY | VESTIBULE | 277V/1Ø | 24 | |
| CUH-2 | CLINTON STORAGE FACILITY | BATH | 277V/1Ø | 48 | |
| CUH-3 | CLINTON STORAGE FACILITY | JANITOR | 277V/1Ø | 48 | |

| DIFFUSERS, REGISTERS & GRILLES (SD, SR, SG, RR) SCHEDULE | | | | | | | |
|--|-----------------|--------------------|---------------|--------------------------|---------------------|--------------------|---------|
| NO. | EQUIPMENT TYPE | NECK SIZE (INCHES) | AIRFLOW (CFM) | PRESSURE DROP (IN. W.C.) | NOISE CRITERIA (NC) | MANUFACTURER/MODEL | REMARKS |
| SD-1 | SQUARE DIFFUSER | 6"Ø | 50-150 | 0.08 | 13 | TITUS/DL | 1 |
| SR-1 | DRUM DIFFUSER | 70x15 | 5,000 | 0.27 | 47 | TITUS/DL | 1 |
| SR-2 | DRUM DIFFUSER | 50x15 | 5,000 | 0.27 | 49 | TITUS/DL | 1 |
| SR-3 | DRUM DIFFUSER | 40x12 | 2,833 | 0.32 | 47 | TITUS/DL | 1 |
| SR-4 | DRUM DIFFUSER | 9x6 | 100 | 0.05 | 10 | TITUS/DL | 1 |
| SR-5 | DRUM DIFFUSER | 20x12 | 750 | 0.11 | 27 | TITUS/DL | 1 |
| SG-1 | SUPPLY REGISTER | 20x20 | 2,000 | 0.15 | 35 | TITUS/300 | 1 |
| SG-2 | SUPPLY REGISTER | 8x8 | 150 | 0.15 | 35 | TITUS/300 | 1 |
| SG-3 | SUPPLY REGISTER | 8x8 | 250 | 0.15 | 35 | TITUS/300 | 1 |
| RR-1 | RETURN REGISTER | 46x22 | 5,000 | 0.15 | 39 | TITUS/300 | 1 |
| RR-2 | RETURN REGISTER | 30x18 | 2,667 | 0.15 | 36 | TITUS/300 | 1 |
| RR-3 | RETURN REGISTER | 42x30 | 6,667 | 0.15 | 40 | TITUS/300 | 1 |
| RR-4 | RETURN REGISTER | 14x18 | 1,025 | 0.1 | 29 | TITUS/350 | 1 |
| RR-5 | RETURN REGISTER | 8x8 | 50-75 | 0.1 | 30 | TITUS/350 | 1 |

REMARKS :

- SHALL INCLUDE OPOSED BLADE VOLUME DAMPER.

| CONTROL VALVE (CV) SCHEDULE | | | | | |
|-----------------------------|-------|---------------------|--------------------------|---------------|---------|
| NO. | FLUID | PRESSURE DROP (PSI) | TYPE | FAIL POSITION | REMARKS |
| CV-1 | GHW | 5 | MODULATING SPRING-RETURN | OPEN | 1 |
| CV-2 | GHW | 5 | MODULATING SPRING-RETURN | OPEN | |
| CV-3 | GHW | 5 | MODULATING SPRING-RETURN | OPEN | 1 |

REMARKS :

- SUITABLE FOR CLASS 1, DIVISION 1, GROUP D LOCATION.

| EXPANSION TANK (ET) SCHEDULE | | | | | |
|------------------------------|--------------------------|-----------------|------------|-------------------------|---------|
| NO. | LOCATION | VOLUME (GALLON) | | MANUFACTURER/MODEL | REMARKS |
| | | TANK | ACCEPTANCE | | |
| ET-1 | CLINTON STORAGE FACILITY | - | 80 | BELL & GOSSETT/B300 | |
| ET-2 | EAST ENTRANCE STRUCTURE | 34 | 27 | BELL & GOSSETT/B-130 LA | |

| LOUVER (LV) SCHEDULE | | | | | | | | | | | |
|----------------------|----------------------------------|------------------|--------|------------------------|---------|----------------------|---------|--|--|--|--|
| NO. | LOCATION | DIMENSIONS (IN.) | | MINIMUM FREE AREA (SF) | TYPE | MANUFACTURER / MODEL | REMARKS | | | | |
| | | WIDTH | HEIGHT | | | | | | | | |
| LV-1 | CLINTON - MECH. RM. 101 | 16'-0" | 12'-0" | 103.0 | INTAKE | RUSKIN / ELF375DX | | | | | |
| LV-2 | CLINTON - MECH. RM. 103 | 6'-0" | 12'-0" | 38.0 | INTAKE | RUSKIN / ELF375DX | 1 | | | | |
| LV-3 | CLINTON - ELEC. RM. 118 | 8'-0" | 4'-0" | 16.3 | INTAKE | RUSKIN / ELF375DX | | | | | |
| LV-4 | CLINTON - ELEC. RM. 118 | 8'-0" | 4'-0" | 16.3 | INTAKE | RUSKIN / ELF375DX | | | | | |
| LV-5 | CLINTON - ELEC. RM. 118 | 8'-0" | 4'-0" | 16.3 | INTAKE | RUSKIN / ELF375DX | | | | | |
| LV-6 | CLINTON - GRIT ROOM - 109 | 8'-0" | 6'-0" | 24.4 | EXHAUST | RUSKIN / ELF375DX | | | | | |
| LV-7 | NOT USED | | | | | | | | | | |
| LV-8 | NOT USED | | | | | | | | | | |
| LV-9 | NOT USED | | | | | | | | | | |
| LV-10 | EAST STRUCTURE - MECH ROOM 204 | 8'-0" | 5'-4" | 23.7 | INTAKE | RUSKIN / ELF375DX | | | | | |
| LV-11 | EAST STRUCTURE - STAIR 201 | 8'-0" | 3'-8" | 15.0 | EXHAUST | RUSKIN / ELF375DX | | | | | |
| LV-12 | EAST STRUCTURE - ATTIC | 3'-4" | 4'-0" | 6.5 | EXHAUST | RUSKIN / ELF375DX | | | | | |
| LV-13 | EAST STRUCTURE - STAIR 201 | 3'-4" | 1'-0" | 1.6 | INTAKE | RUSKIN / ELF375DX | | | | | |
| LV-14 | EAST STRUCTURE - WORK AREA - 203 | 2'-8" | 1'-4" | 2.0 | INTAKE | RUSKIN / ELF375DX | | | | | |

REMARKS :

- PROVIDE BLANKOFF.

| GRAVITY ROOF VENTILATOR (GRV) SCHEDULE | | | | | | | | |
|--|--------------------------|----------------------|--------|------------------------------|----------------------------|----------------------------|--------------------|---------|
| NO. | BUILDING | LOCATION | CFM | THROAT SIZE (WIDTH X HEIGHT) | MIN. ROOF AREA AIRWAY AREA | MIN. HOOD AREA AIRWAY AREA | MANUFACTURER/MODEL | REMARKS |
| GRV-1 | CLINTON STORAGE FACILITY | MECHANICAL ROOM #103 | 2,000 | 30" X 42" | 13.9 | 17.75 | GREENHECK/FGI | 1 |
| GRV-2 | CLINTON STORAGE FACILITY | TRUCK LOADING ROOF | 2,050 | 18" X 24" | 3.0 | - | GREENHECK/WH | 1,2 |
| GRV-3 | EAST ENTRANCE STRUCTURE | AIR RELIEF VENT | 22,000 | 60" X 30" | 15.0 | - | GREENHECK/WRH | 3 |

REMARKS :

- PROVIDE 120V/1 PHASE OPPOSED BLADE DAMPER.
- PROVIDE THREE TIERS.
- PROVIDE 10 TIERS.

| INLINE FAN (ILF) SCHEDULE | | | | | | | | | |
|---------------------------|--------------------------|--------------------------|----------------|-----------|------|-------------|--------|---------|--|
| NO. | BUILDING | LOCATION | AIR FLOW (CFM) | S.P. (WC) | HP | VOLTS/PHASE | DRIVE | REMARKS | |
| ILF-1 | CLINTON STORAGE FACILITY | TRUCK LOADING - 108 | 1020 | 3" | 1.0 | 480V/3Ø | BELT | 1 | |
| ILF-2 | EAST ENTRANCE STRUCTURE | MECHANICAL ROOM - 202 | 14,000 | 1.5" | - | 480V/3Ø | BELT | 2 | |
| ILF-3 | EAST ENTRANCE STRUCTURE | ELECTRIC/VESTIBULE - 202 | 150 | 0.25 | 1/40 | 120V/1Ø | DIRECT | 2,3,5,6 | |
| ILF-4 | EAST ENTRANCE STRUCTURE | ELECTRIC/WORK AREA - 203 | 500 | 1.5" | 1/2 | 480V/3Ø | DIRECT | 5,6 | |

REMARKS :

- VEHICLE EXHAUST CAPTURE SYSTEM IN TRUCK LOADING AREA 108.
- SUITABLE FOR CLASS 1, DIV. 1 AREA.
- FAN SHALL HAVE AMCA 99 TYPE A SPARK RESISTANT CONSTRUCTION.
- MOTOR SHALL BE OUT OF AIR STREAM.
- INCLUDE DISCONNECT SWITCH.
- PROVIDE PERFORMANCE BAFFLE.

| DUCT HEATER (DH) SCHEDULE | | | | | | | | |
|---------------------------|--------------------------|--------------------------|-----|------------------------|------------|--------------------------|------------------------|-----------|
| NO. | LOCATION | SERVES | CFM | MINIMUM CAPACITY (MBH) | COIL DATA | | MANUFACTURER MODEL | REMARKS |
| | | | | | FLOW (GPM) | PRESSURE DROP (FT. W.G.) | | |
| DH-1 | HALL 113 | HALL 113 & VESTIBULE 115 | 200 | 5.4 | 0.5 | 0.09 | CARNES/AWVOS 8X12 COIL | 1,2,4,5,6 |
| DH-2 | ELECTRIC/WORK AREA - 203 | ILF-4 | 500 | 34 | 5 | 2.81 | CARNES/AWVOS 12-1/2X14 | 1,2,3,5,6 |

REMARKS:

- SLIP AND DRIVE CONNECTION.
- GALVANIZED STEEL CASING, 20 GAGE.
- CAPACITY RATED FOR 50% PROPYLENE GLYCOL AT 180° EWT/-3°F EAT.
- CAPACITY RATED FOR 50% PROPYLENE GLYCOL AT 180° EWT/180°F EAT.
- COILS SHALL BE CONSTRUCTED USING COPPER TUBES AND ALUMINIUM FINS.
- PROVIDE CONTROL VALVE WITH THERMOSTAT.

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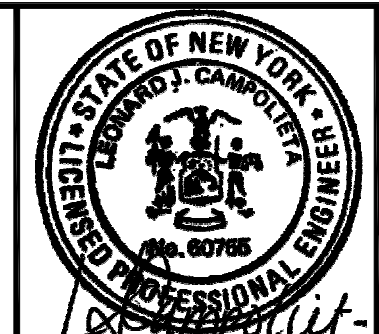
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CLINTON CSO STORAGE FACILITY PROJECT

STORAGE FACILITY & EAST STRUCTURE
SCHEDULES
HVAC



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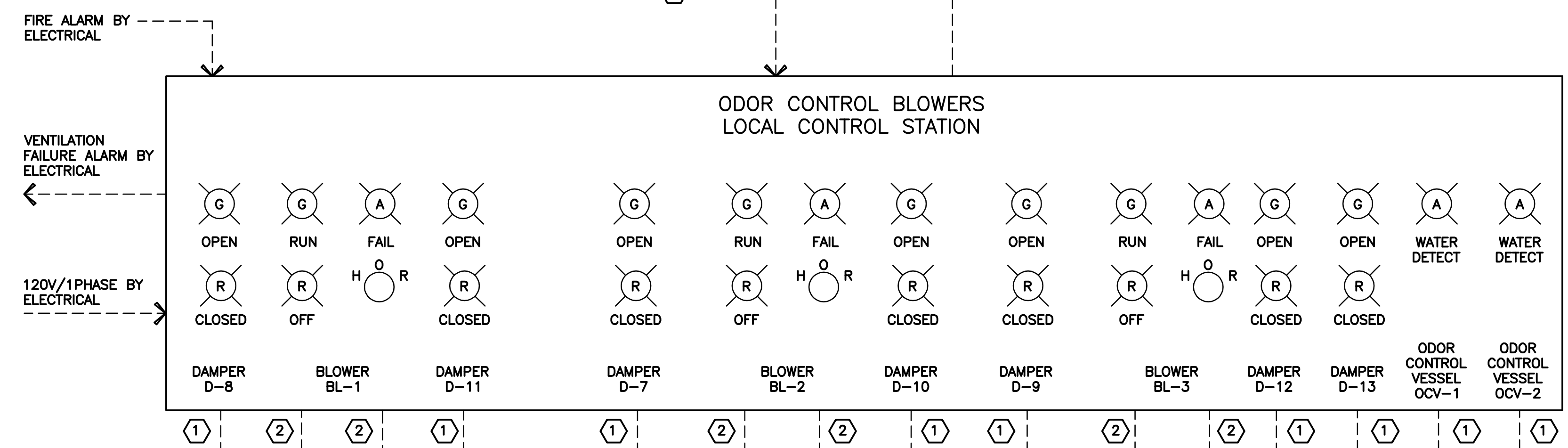
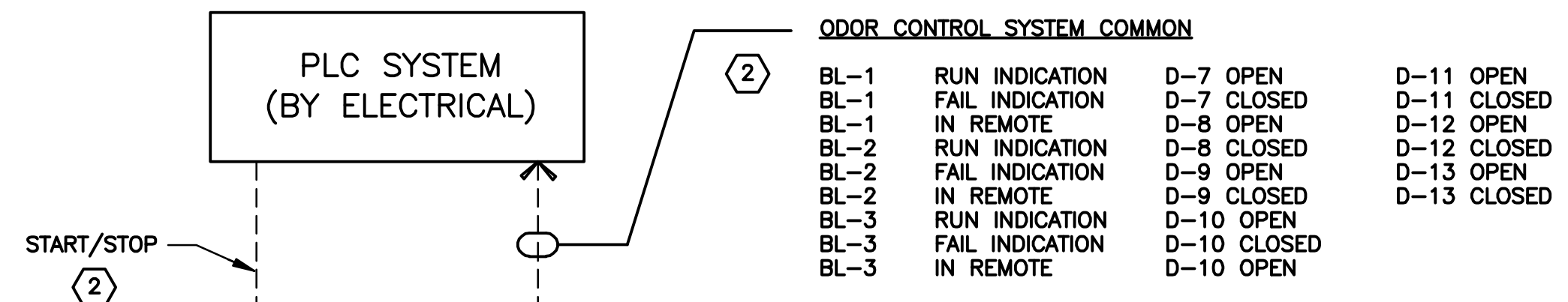
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H-303

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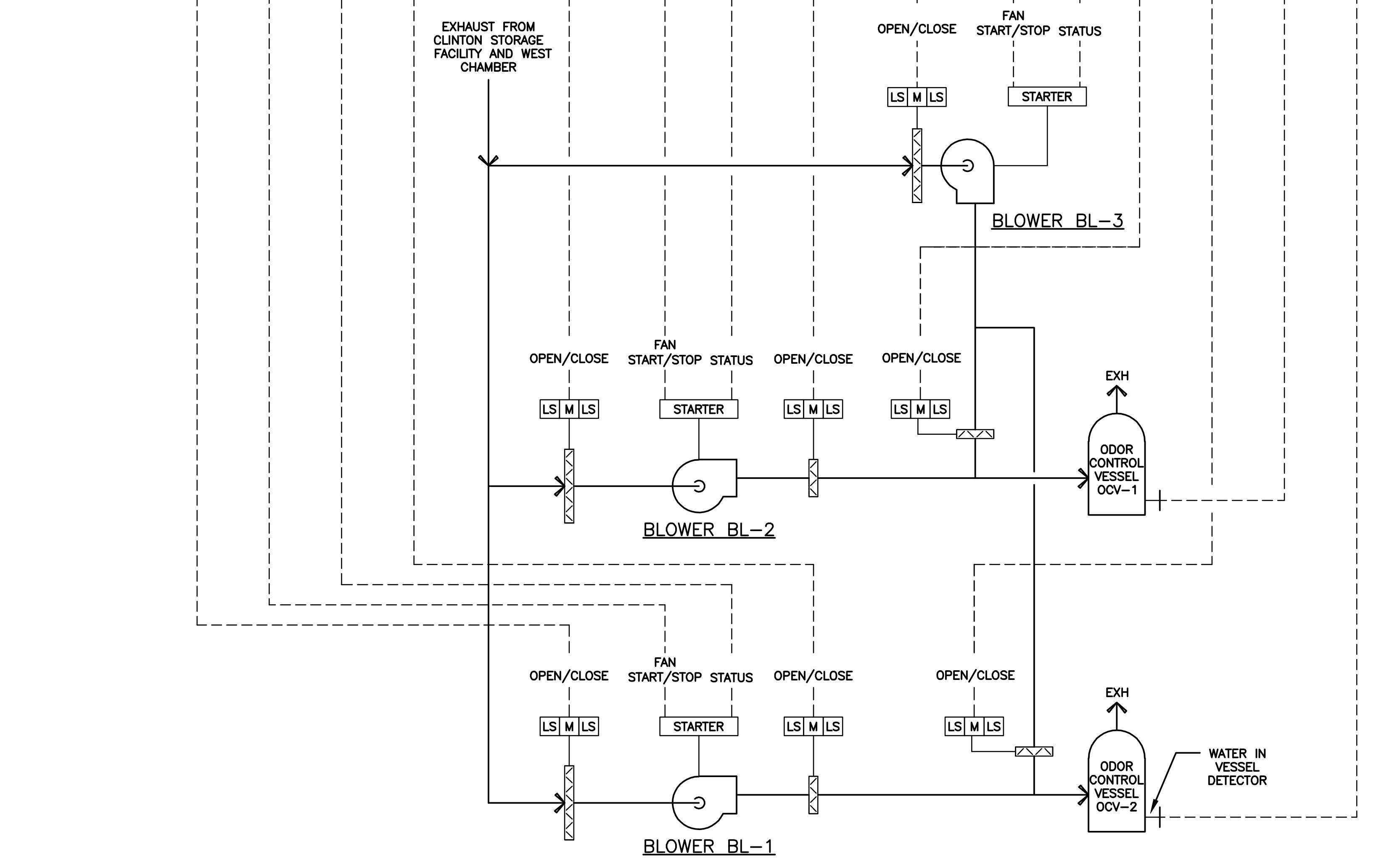
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KEYED NOTES:

① CONDUIT AND WIRE BY ELECTRICAL.

② CONDUIT AND WIRE BY ELECTRICAL.



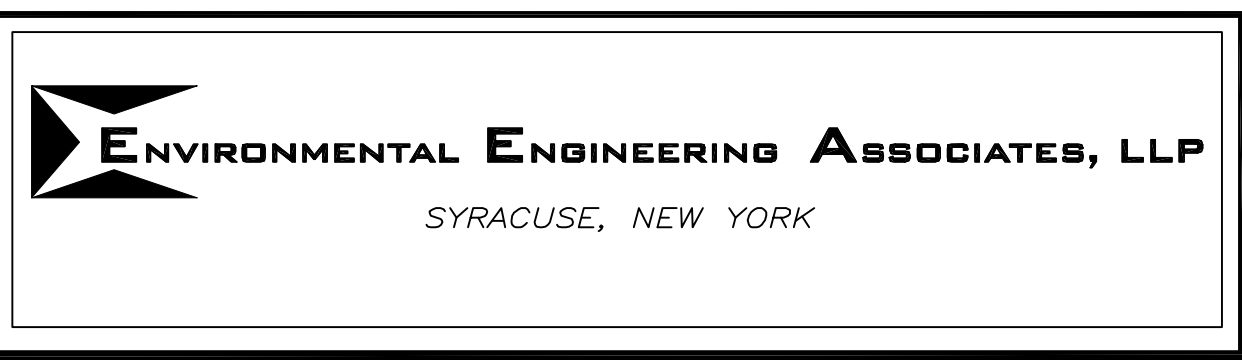
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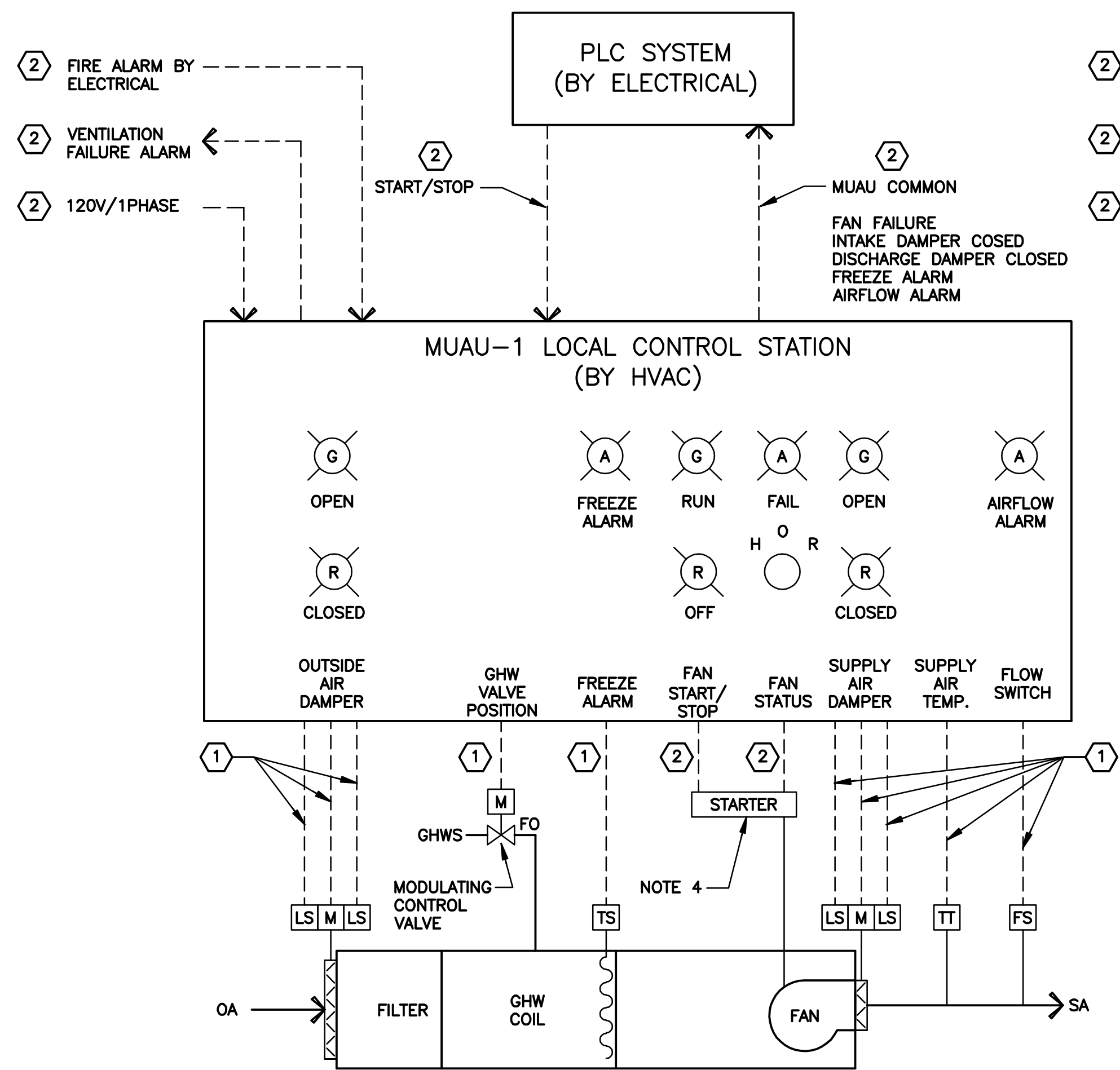
BLOWER CONTROL DIAGRAM
 HVAC

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 Date: 04/11
 H-304



MUAU-1 CONTROL DIAGRAM
NOT TO SCALE

NOTES:

- MUAU-1 LOCATED IN A CLASS I, DIVISION 1, GROUP D HAZARDOUS AREA, CONTROL STATION LOCATED IN UNCLASSIFIED AREA.
- PROVIDE TERMINAL STRIP FOR FIRE ALARM WIRING. CONDUIT AND WIRING BY ELECTRICAL.
- PROVIDE TERMINAL STRIP FOR PLC WIRING. CONDUIT AND WIRING BY ELECTRICAL.
- MOTOR STARTER AND POWER WIRING BY ELECTRICAL.

LEGEND

- | | | | |
|-------|-----------------|----|--------------|
| H O R | HAND-OFF-REMOTE | A | AMBER |
| (A) | LIGHT | FS | FLOW SWITCH |
| | | FO | FAIL OPEN |
| | | G | GREEN |
| | | LS | LIMIT SWITCH |
| | | R | RED |

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Drawn by ___ KJL ___
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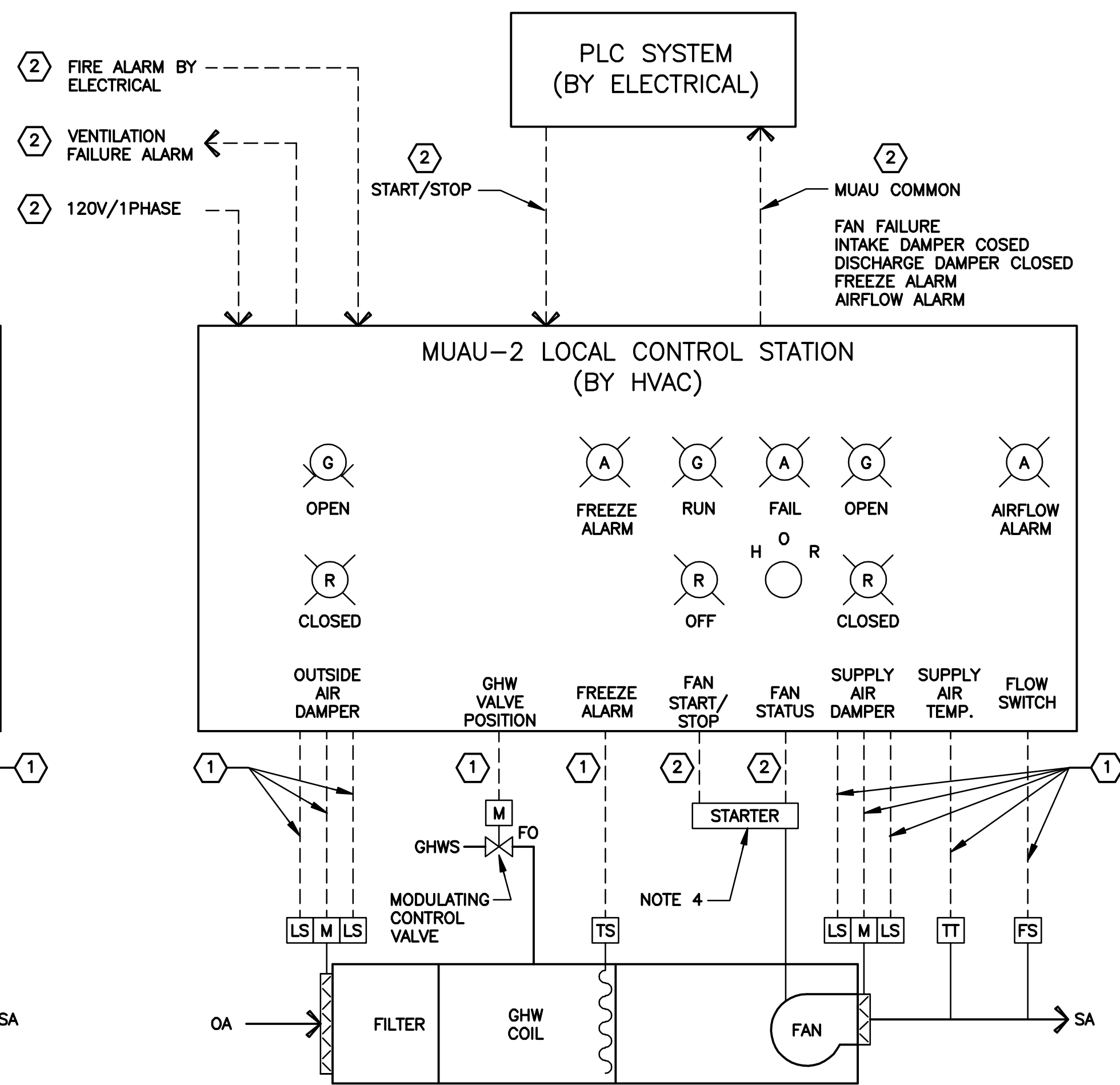
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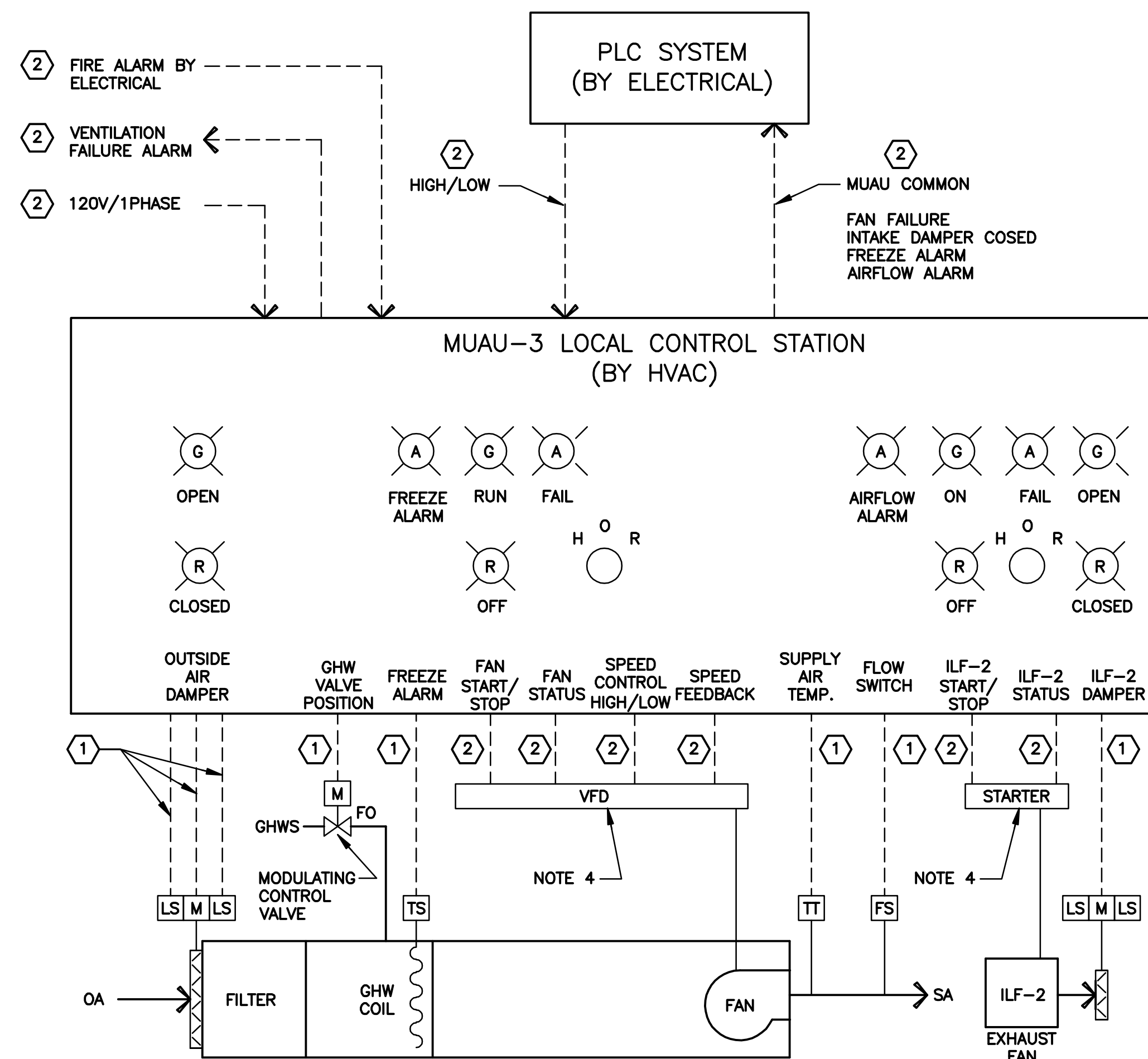
- CONDUIT AND WIRE BY HVAC.
- CONDUIT AND WIRE BY ELECTRICAL.



MUAU-2 CONTROL DIAGRAM
NOT TO SCALE

NOTES:

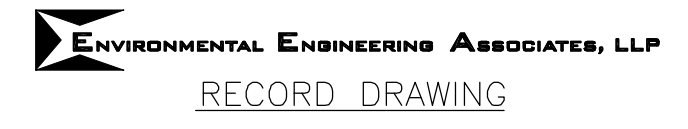
- NOTE NOT USED.
- PROVIDE TERMINAL STRIP FOR FIRE ALARM WIRING. CONDUIT AND WIRING BY ELECTRICAL.
- PROVIDE TERMINAL STRIP FOR PLC WIRING. CONDUIT AND WIRING BY ELECTRICAL.
- MOTOR STARTER AND POWER WIRING BY ELECTRICAL.



MUAU-3 CONTROL DIAGRAM
NOT TO SCALE

NOTES:

- MUAU-3 AND ILF-2 LOCATED IN A CLASS I, DIVISION 1, GROUP D HAZARDOUS AREA, CONTROL STATION LOCATED IN UNCLASSIFIED AREA.
- PROVIDE TERMINAL STRIP FOR FIRE ALARM WIRING. CONDUIT AND WIRING BY ELECTRICAL.
- PROVIDE TERMINAL STRIP FOR PLC WIRING. CONDUIT AND WIRING BY ELECTRICAL.
- VFD BY HAVC 7C. POWER WIRING BY ELECTRICAL.



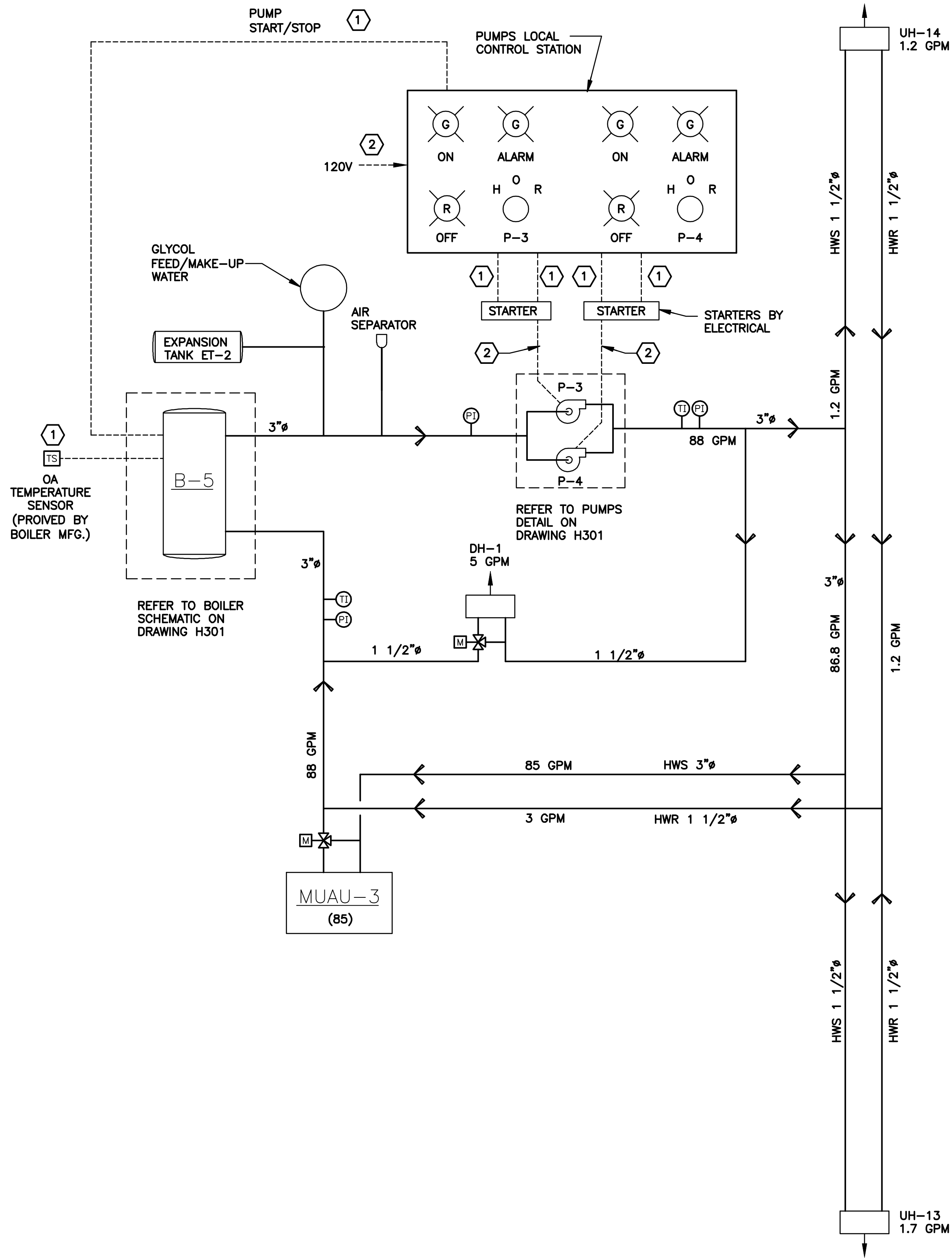
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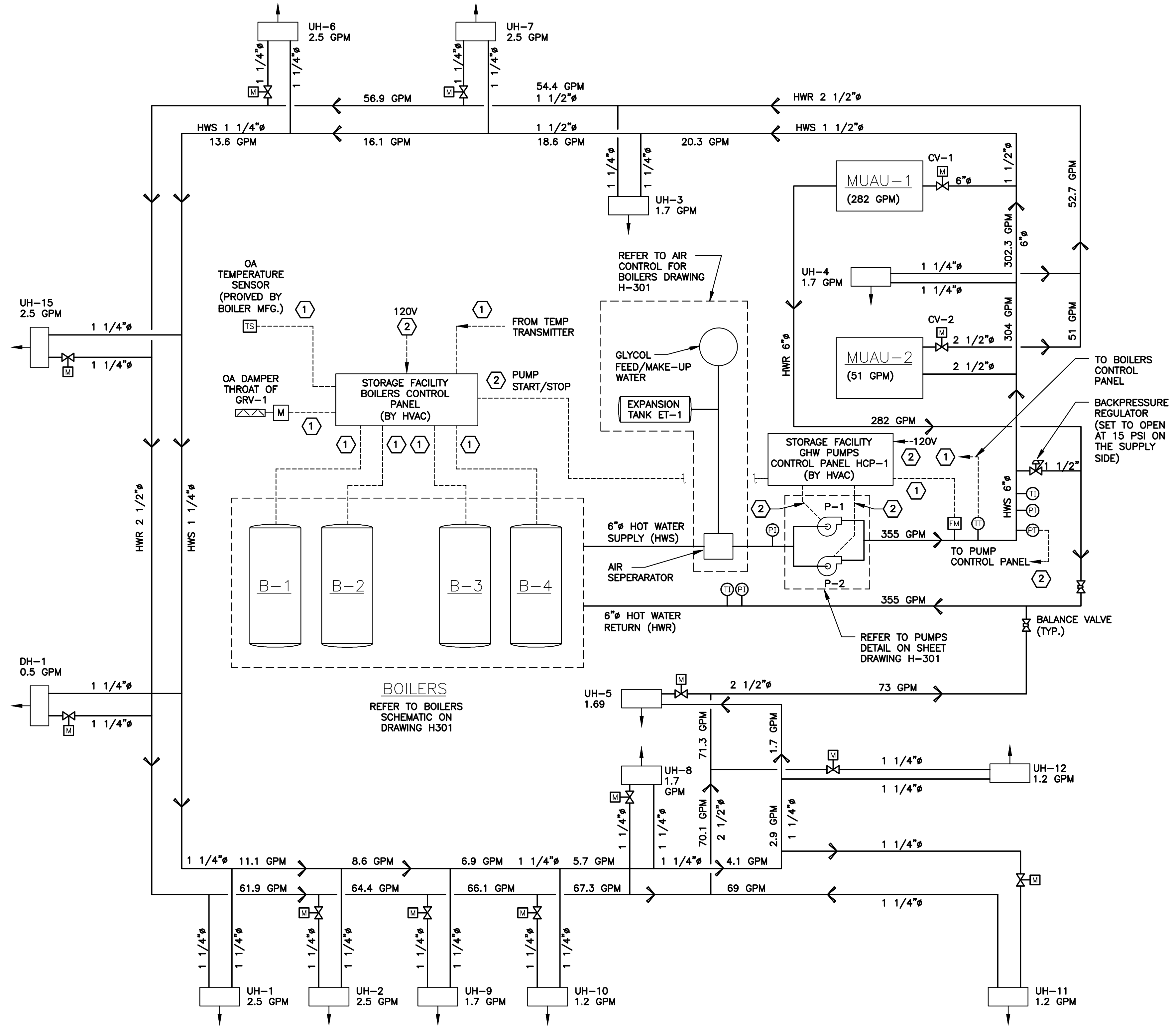
**MAKE UP AIR UNIT (MUAU)
CONTROL DIAGRAMS**
HVAC



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| | H-305 |



BOILER B-5
NOT TO SCALE



BOILERS B-1 THRU B-4
NOT TO SCALE

- KEYED NOTES:**
- ① CONDUIT AND WIRE BY HVAC.
 - ② CONDUIT AND WIRE BY ELECTRICAL.

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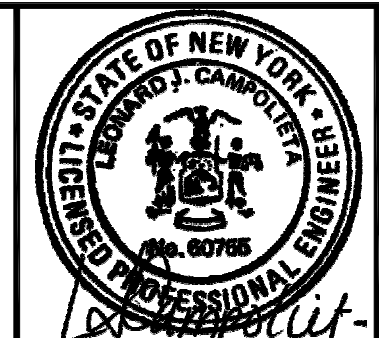


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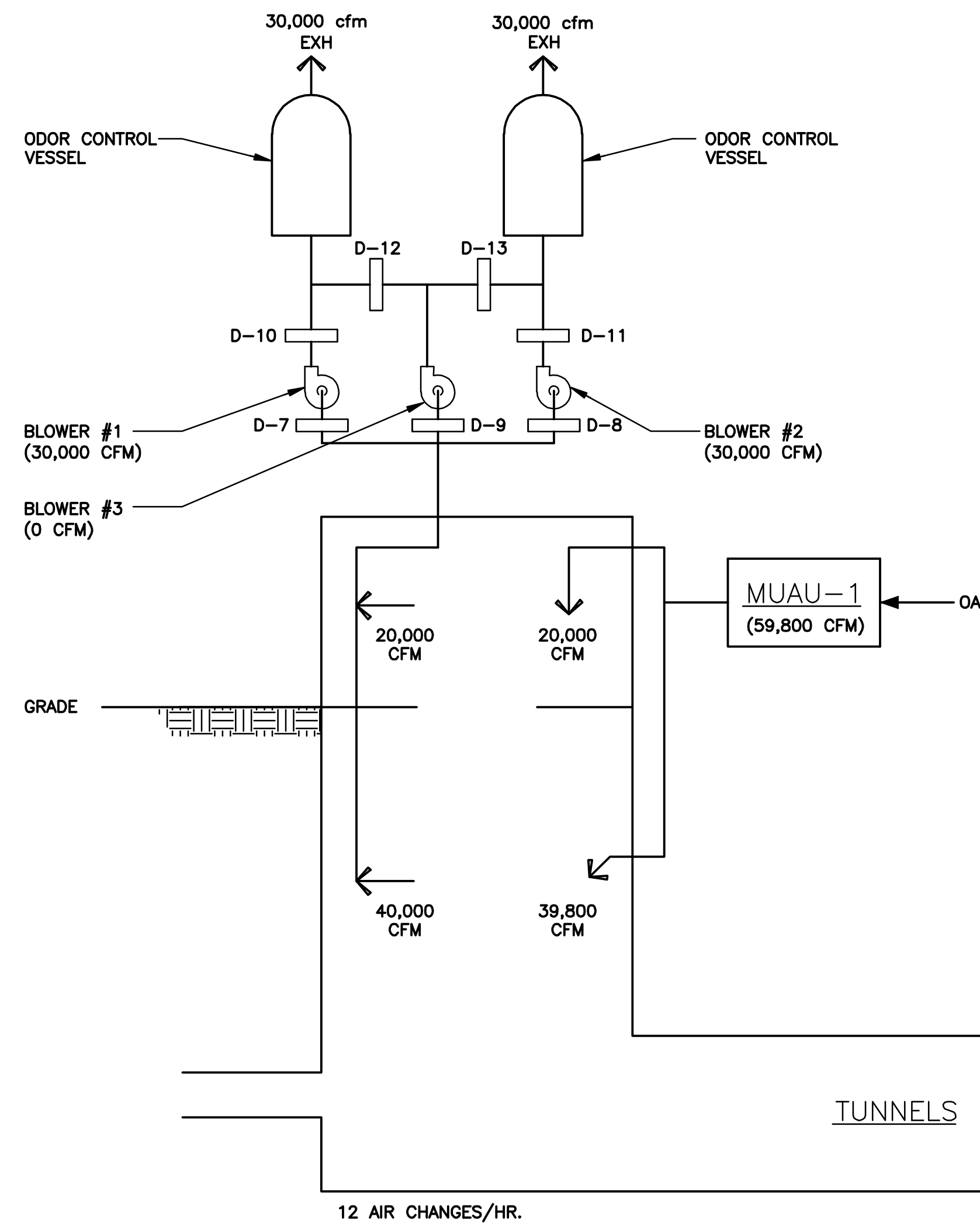
BOILER B-1 THRU B-5
PIPING SCHEMATICS
HVAC

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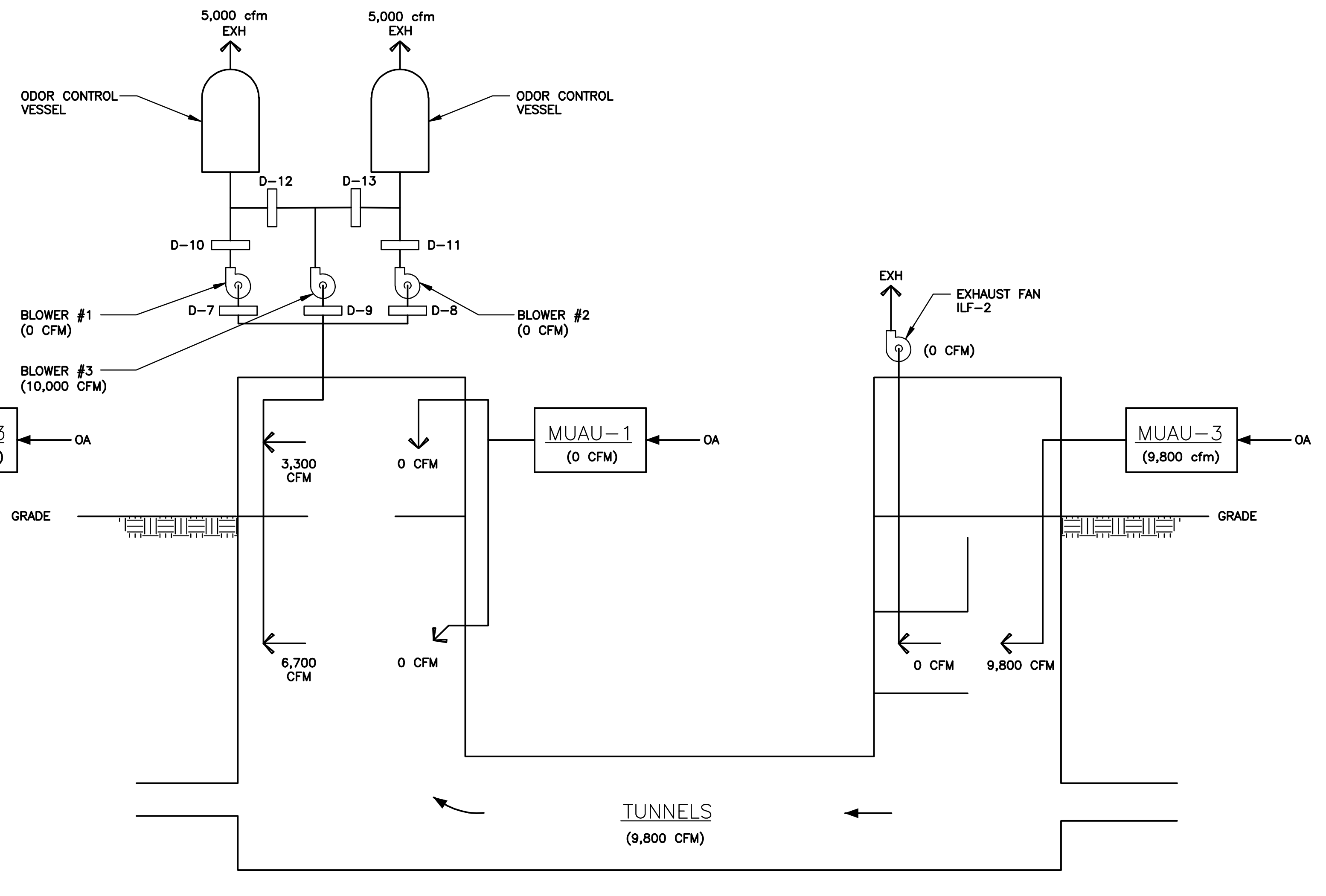
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H-306



WEST STRUCTURE & CHAMBER

EAST STRUCTURE & CHAMBER

FACILITY IN USE
AIR BALANCE DIAGRAM
NOT TO SCALE



WEST STRUCTURE & CHAMBER

EAST STRUCTURE & CHAMBER

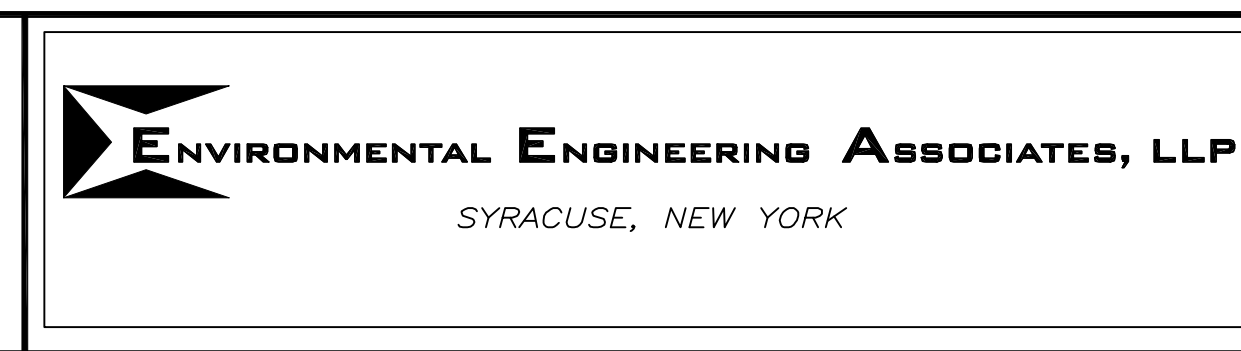
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**STORAGE FACILITY & EAST STRUCTURE
AIR BALANCE DIAGRAMS**
HVAC

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| File Number 00663 | H-307 |
| Date 04/11 | |

ABBREVIATIONS

| | | | | | |
|-------------|--|-----|----------------------------|-----|--------------|
| ● | AT | FD | FLOOR DRAIN | F | FLOOR DRAIN |
| AAV | AUTOMATIC AIR VENT | FDC | FIRE DEPARTMENT CONNECTION | FL | FLOOR |
| ABS | ACRYLONITRILE BUTADIENE STYRENE | FLV | FLAP VALVE | FM | FLOW METER |
| ADD'L | ADDITIONAL | FS | FLOW SWITCH | FT. | FOOT OR FEET |
| AFF | ABOVE FINISHED FLOOR | | | | |
| ALUM | ALUMINUM | | | | |
| ANSI | AMERICAN NATIONAL STANDARDS INSTITUTE | | | | |
| APPD. | APPROVED | | | | |
| APPROX | APPROXIMATE | | | | |
| ARCH | ARCHITECTURAL | | | | |
| ASPH | ASPHALT | | | | |
| ASTM | AMERICAN SOCIETY FOR TESTING AND MATERIALS | | | | |
| AUTO | AUTOMATIC | | | | |
| AUX | AUXILIARY | | | | |
| AV | ACID VENT | | | | |
| AVG | AVERAGE | | | | |
| AVV | AIR/VACUUM VALVE | | | | |
| AW | ACID WASTE | | | | |
| AWS | AMERICAN WELDING SOCIETY | | | | |
| AWWA | AMERICAN WATER WORKS ASSOCIATION | | | | |
| | B | | | | |
| B & S | BELL & SPIGOT | | | | |
| B. OR BOT. | BOTTOM | | | | |
| B&B | BELL & BELL | | | | |
| B&F | BELL & FLANGE | | | | |
| BAV | BALL VALVE | | | | |
| BF | BLIND FLANGE | | | | |
| BFF | BELOW FINISHED FLOOR | | | | |
| BFP | BACKFLOW PREVENTER | | | | |
| BFV | BUTTERFLY VALVE | | | | |
| B | BASE LINE | | | | |
| BLDG | BUILDING | | | | |
| Bm | BEAM | | | | |
| BOP | BOTTOM OF PIPE | | | | |
| BPS | BOOSTER PUMPING STATION | | | | |
| BSMT | BASEMENT | | | | |
| BW | BUTT WELD | | | | |
| | C | | | | |
| C/C | CENTER TO CENTER | | | | |
| CA | COMPRESSED AIR | | | | |
| CaO | CALCIUM OXIDE (LIME) | | | | |
| CHEM | CHEMICAL | | | | |
| CI | CAST IRON | | | | |
| CISP | CAST IRON SOIL PIPE | | | | |
| CL | CENTERLINE | | | | |
| CLG | CEILING | | | | |
| CLR | CLEAR | | | | |
| CMP | CORRUGATED METAL PIPE | | | | |
| CMU | CONCRETE MASONRY UNIT | | | | |
| CO | CLEAN OUT | | | | |
| COL | COLUMN | | | | |
| CONC | CONCRETE | | | | |
| CONST | CONSTRUCTION | | | | |
| CONT | CONTINUE OF CONTINUOUS | | | | |
| CONT'D | CONTINUED | | | | |
| CONTR | CONTRACT OR CONTRACTOR | | | | |
| COORD | COORDINATE | | | | |
| CORR | CORRIDOR | | | | |
| CPVC | CHLORINATED POLYVINYL CHLORIDE | | | | |
| CS | CARBON STEEL | | | | |
| CTR | CENTER | | | | |
| CV | CHECK VALVE | | | | |
| CW | COLD WATER OR CLOCKWISE | | | | |
| | D | | | | |
| DEG | DEGREE | | | | |
| D | DRAIN (ALL TYPES) (SPECIFY) | | | | |
| DCW | DOMESTIC COLD WATER | | | | |
| DF | DRINKING FOUNTAIN | | | | |
| DHW | DOMESTIC HOT WATER | | | | |
| DI | DUCTILE IRON | | | | |
| DIA. | DIAMETER | | | | |
| DIM | DIMENSION | | | | |
| DN | DOWN | | | | |
| DPCO | DECK PLATE CLEANOUT | | | | |
| DWG | DRAWING | | | | |
| | E | | | | |
| Ea | EACH | | | | |
| EBH | ELECTRIC BASEBOARD HEATER | | | | |
| ECV | ELECTRIC CHECK VALVE | | | | |
| EFF | EFFLUENT OR EFFICIENCY | | | | |
| EL | ELEVATION | | | | |
| ELEC | ELECTRIC OR ELECTRICAL | | | | |
| ELL | ELBOW | | | | |
| EQ | EQUAL | | | | |
| EQUIP | EQUIPMENT | | | | |
| EWC | ELECTRIC WATER COOLER | | | | |
| EWH | ELECTRIC WATER HEATER | | | | |
| EXIST OR EX | EXISTING | | | | |

L: ON=*; OFF=*REF*
 X: MO/DA/YR CO DFT DIR/DWG
 SCALE: _____

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| 3 | 03/15 | RECORD DRAWINGS | LJC |
| 2 | 04/11 | AS BID | LJC |
| 1 | 01/11 | ISSUED FOR APPROVAL | |

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

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 Designed by ___ GBC
 Drawn by ___ KJL
 Checked by ___ SWM



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

STORAGE FACILITY & EAST STRUCTURE
ABBREVIATIONS & SYMBOLS

PLUMBING

Environmental Engineering Associates, LLP
 RECORD DRAWING

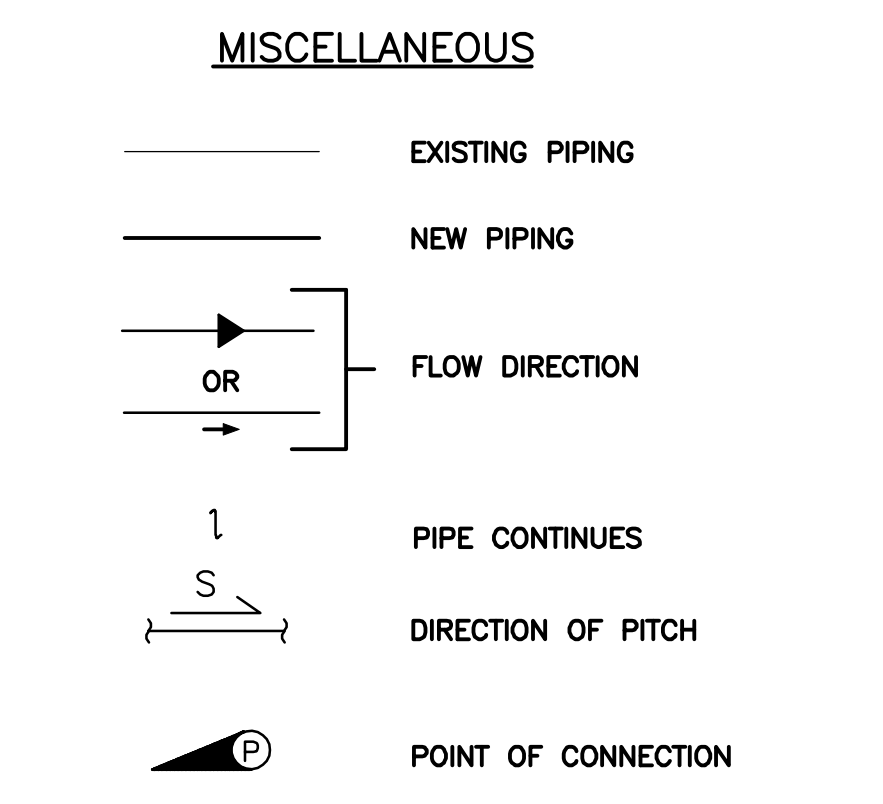
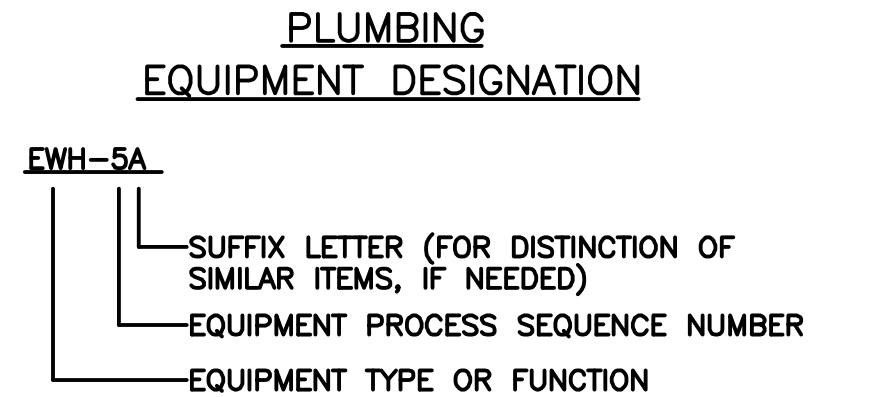
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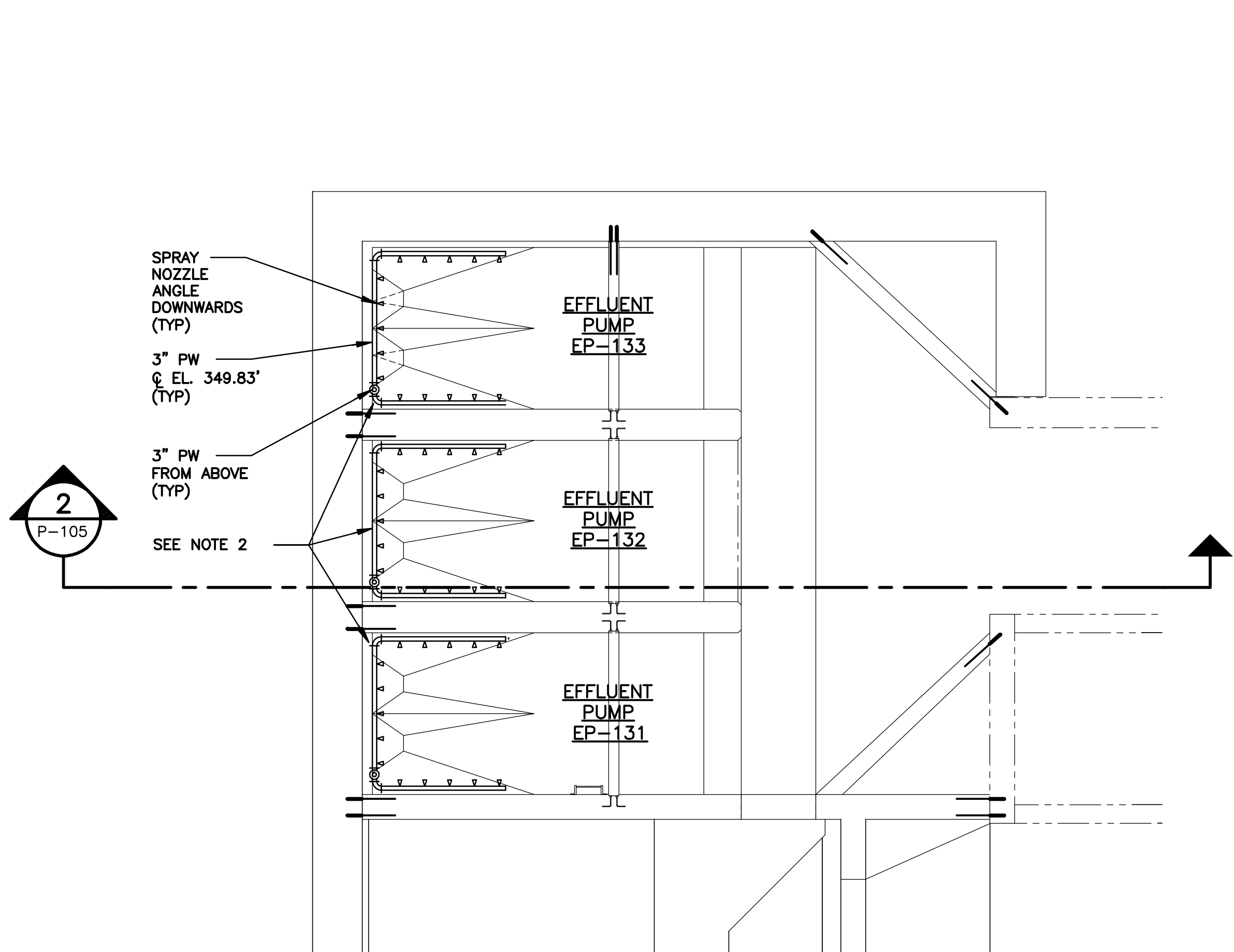
File Number: 00663
 Date: 04/11
 P-001

SYMBOLS

| | | | | | |
|--|---------------------------------|--|-------------------------|--|-------------------|
| | PIPING | | BUTTERFLY VALVE | | MOP SINK |
| | FLANGED JOINT | | CHECK VALVE | | WATER CLOSET |
| | WELDED JOINT | | BALL VALVE | | WALL MOUNT SINK |
| | MECHANICAL JOINT | | GLOBE VALVE | | DRINKING FOUNTAIN |
| | SLEEVE-TYPE MECHANICAL COUPLING | | GATE VALVE | | |
| | ELBOW UP | | COCK VALVE | | |
| | ELBOW DOWN | | NEEDLE VALVE | | |
| | 90° ELBOW IN PLANE | | KNIFE GATE VALVE | | |
| | 45° ELBOW IN PLANE | | BALANCING VALVE | | |
| | TEE UP | | DIAPHRAGM VALVE | | |
| | TEE DOWN | | PINCH VALVE | | |
| | TEE IN PLANE | | PLUG VALVE | | |
| | CROSS | | PRESSURE REDUCING VALVE | | |
| | LATERAL WYE IN PLANE | | BACK PRESSURE VALVE | | |
| | CONCENTRIC REDUCER | | ANGLE VALVE | | |
| | ECCENTRIC REDUCER | | ANGLE GLOBE VALVE | | |
| | SEDIMENT TRAP | | 3 WAY VALVE | | |
| | CAP | | 3 WAY BALL VALVE | | |
| | UNION | | 3 WAY GLOBE VALVE | | |
| | STRAINER | | PRESSURE RELIEF VALVE | | |
| | HOSE CONNECTION | | MUD VALVE | | |
| | QUICK CONNECTION | | FLUSHING CONNECTION | | |
| | SAMPLE TAP | | SAMPLE TAP | | |
| | FLOOR DRAIN | | HOSE BIBB | | |
| | DECKPLATE CLEANOUT | | BACKFLOW VALVE | | |
| | TRAP (PLAN) | | RPZ BACKFLOW VALVE | | |
| | TRAP (SIDE) | | FLEX CONNECTION | | |
| | CLEANOUT, DPCO | | HARNESSED COUPLING | | |
| | CLEANOUT, PLUG | | FLOAT VALVE | | |
| | CLEANOUT, WALL | | CORPORATION STOP | | |
| | NON-FREEZE WALL HYDRANT | | DRAIN VALVE | | |
| | | | DRAIN | | |

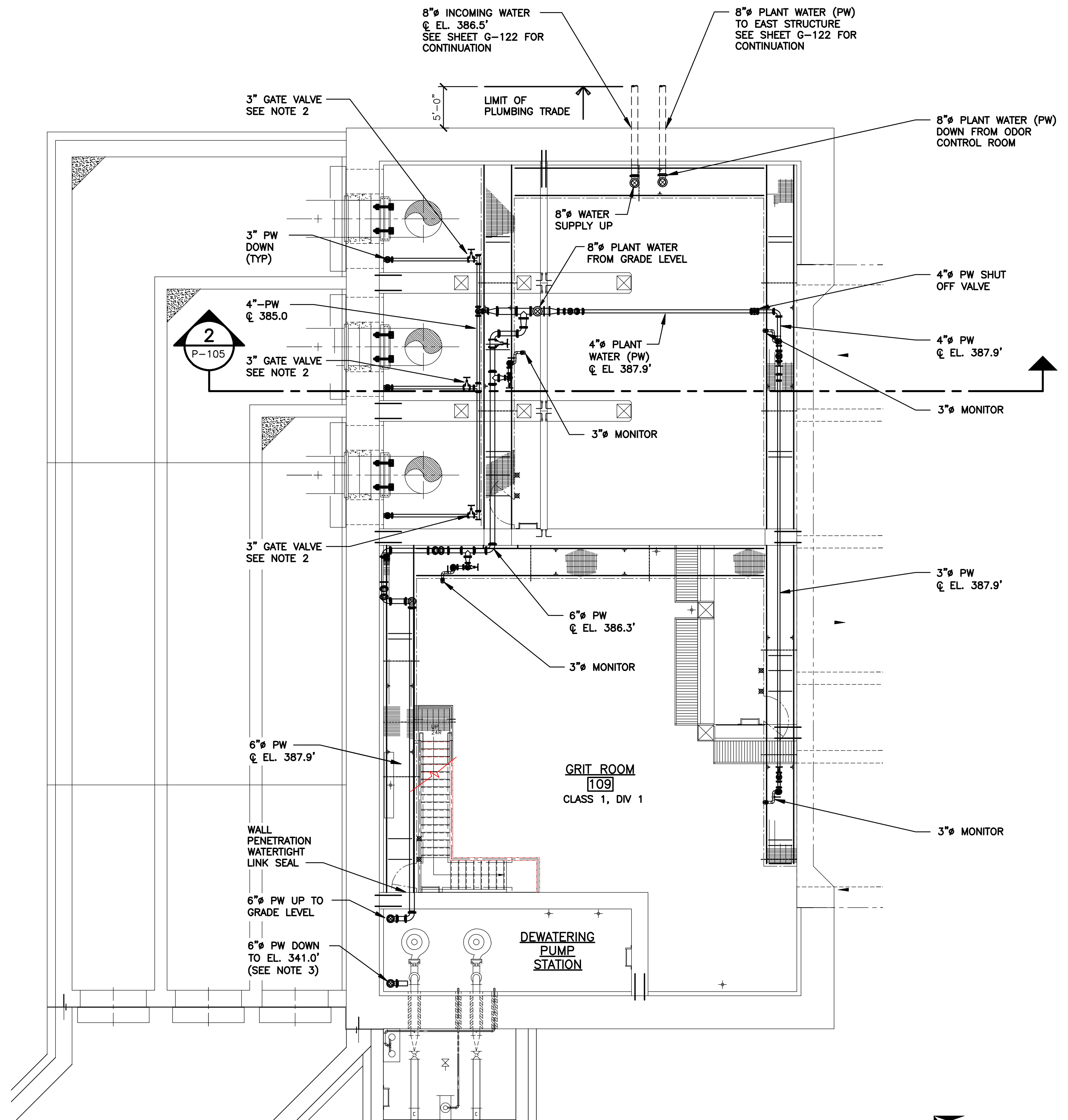


DRAWING NOTE:
 THIS DRAWING CONTAINS SYMBOLS AND ABBREVIATIONS WHICH MAY NOT BE USED FOR THIS PROJECT.



WEST CHAMBER - LOWER LEVEL PLAN
SCALE: 1/8" = 1'-0"

- DRAWING NOTE**
- CATWALK ELEVATION 380.0'
 - ALL PLANT WATER PIPING FROM SHUTOFF VALVE AT CATWALK DOWN TO EFFLUENT PUMP SPRAY NOZZLES SHALL BE STAINLESS STEEL.
 - ALL PLANT WATER PIPING DOWNSTREAM OF SHUTOFF VALVE INTO DEWATERING PUMP STATION SHALL BE STAINLESS STEEL.



WEST CHAMBER - INTERMEDIATE LEVEL PLAN
SCALE: 1/8" = 1'-0"

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE:
1/8"=1'-0"

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| 3 | 03/15 | RECORD DRAWINGS | LJC |
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In charge of LJC
Designed by GBC
Drawn by KJL
Checked by SWM



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CLINTON CSO STORAGE FACILITY PROJECT

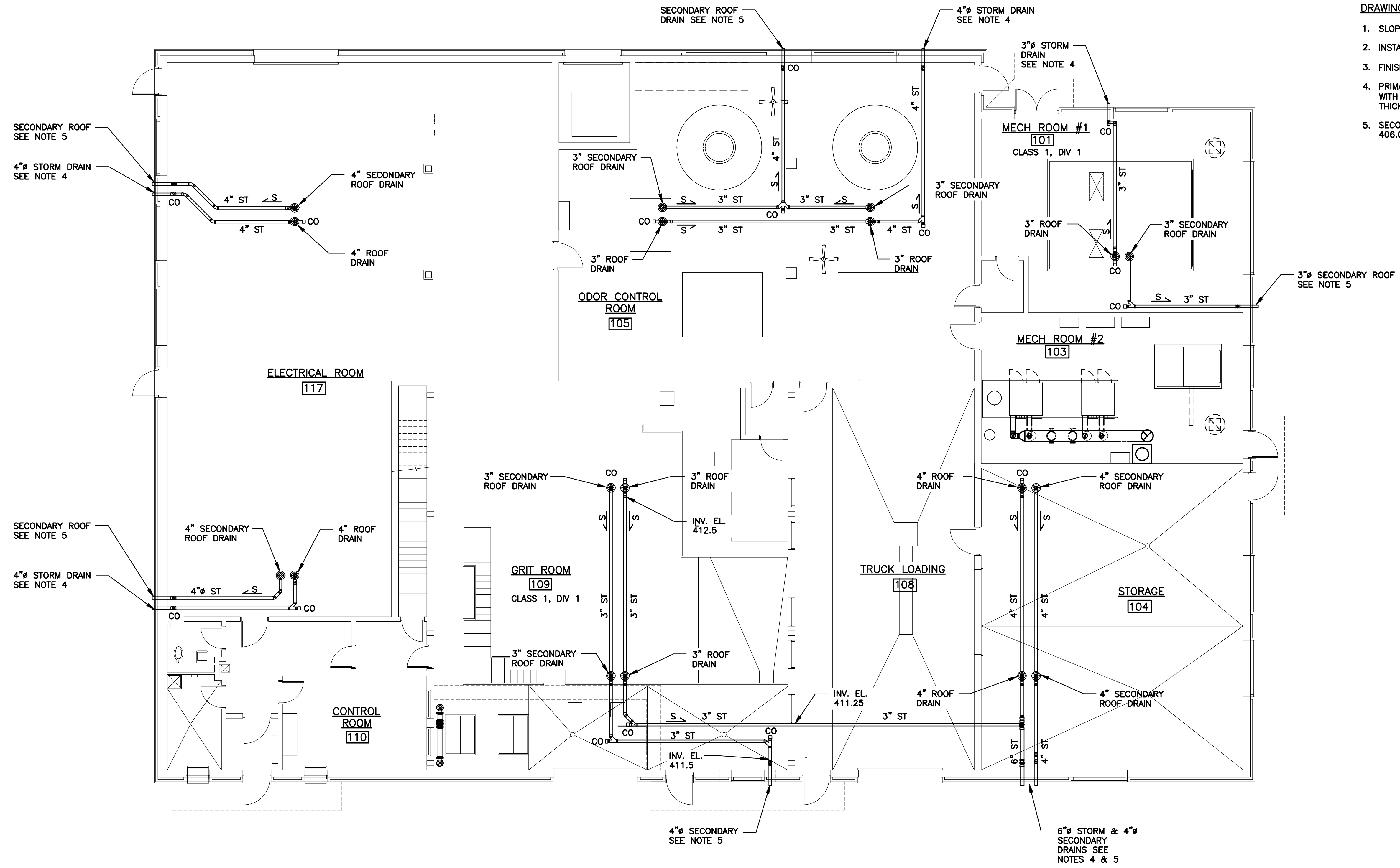
WEST CHAMBER
LOWER AND INTERMEDIATE LEVEL PLANS
PLUMBING

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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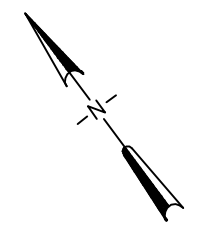
DATE: 04/01/2015 PER: [Signature]

File Number: 00663
Date: 04/11
P-101



- DRAWING NOTE**
1. SLOPE ALL DRAINS 1/4" PER FOOT.
 2. INSTALL ALL DRAINAGE PIPING AS HIGH AS POSSIBLE.
 3. FINISHED FLOOR ELEVATION 394.0'.
 4. PRIMARY STORMWATER DRAINS SHALL TERMINATE AT EL 396.0 WITH DOWNSPOUT NOZZLE. PROVIDE PRECAST 2'-0"X2'-0"X2" THICK SPLASHBLOCK AT GRADE.
 5. SECONDARY STORMWATER DRAINS SHALL TERMINATE AT EL. 406.00 WITH DOWNSPOUT NOZZLE.

GRADE LEVEL PLAN
SCALE: 1/8"=1'-0"



ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING
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DATE: 04/01/2015 PER: [Signature]

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG
SCALE:
1/8"=1'-0"
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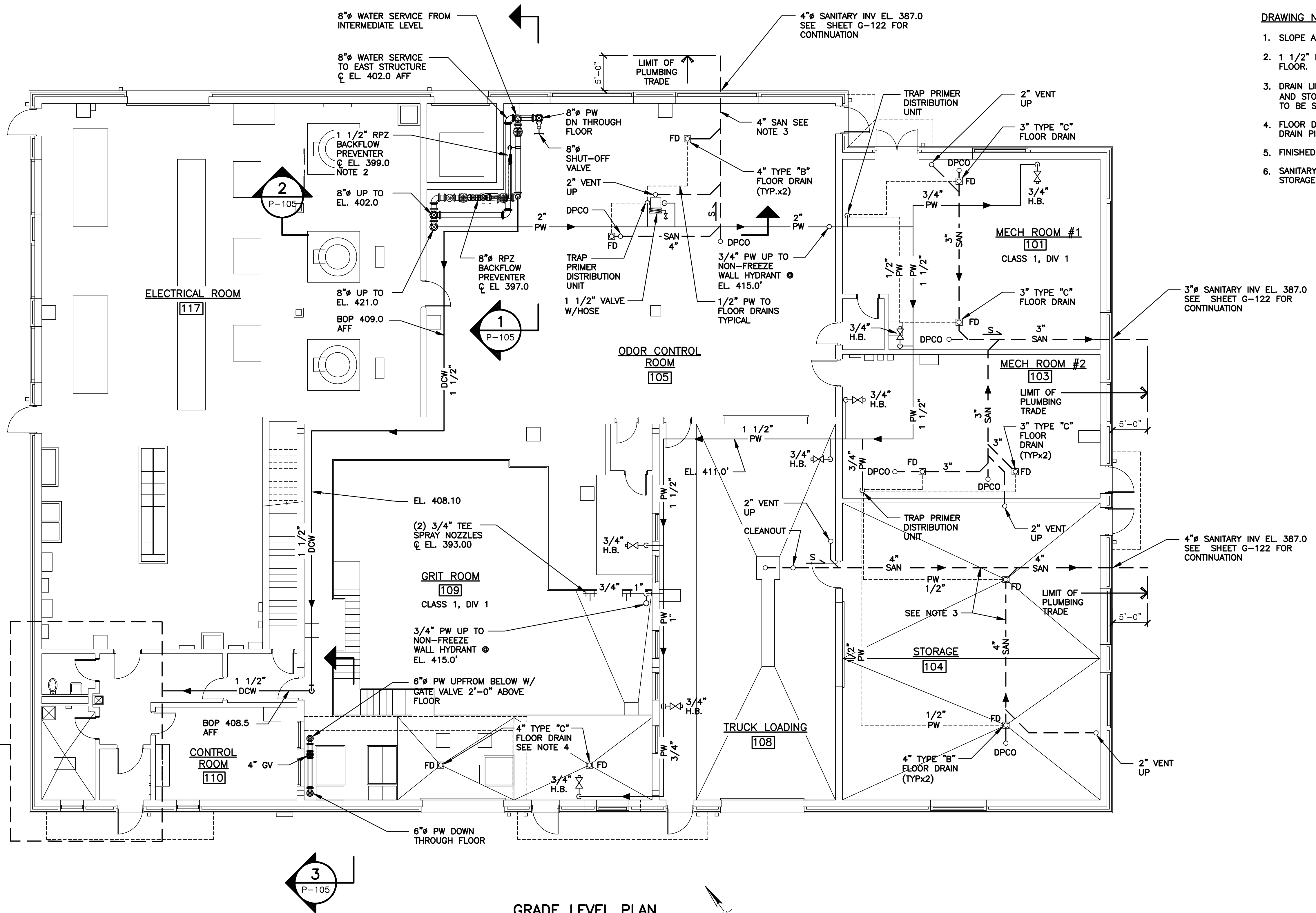
| No. | Date | Revisions | Init |
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| 3 | 03/15 | RECORD DRAWINGS | LJC |
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Designed by ___ GBC ___
Drawn by ___ KJL ___
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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT
CLINTON STORAGE FACILITY
GRADE LEVEL STORMWATER DRAINAGE PLAN
PLUMBING

| | | |
|--|----------------------|-------|
| | File Number 00663 | P-102 |
| | Date 04/11 | |



- DRAWING NOTE**
1. SLOPE ALL DRAINS 1/4" PER FOOT.
 2. 1 1/2" RPZ BACKFLOW PREVENTER 5'-0" ABOVE FINISHED FLOOR.
 3. DRAIN LINE FROM TRUCK LOADING ROOM #108 TRENCH DRAIN AND STORAGE ROOM #104 AND ODOR CONTROL ROOM #105 TO BE SCHEDULE 40 PVC-DWV.
 4. FLOOR DRAIN TO BE PROVIDED WITHOUT TRAP - EXTEND DRAIN PIPE DOWN TO EL. 392.00.
 5. FINISHED FLOOR ELEVATION IS 394.0.
 6. SANITARY PIPING BELOW MECHANICAL ROOMS 101,103 & STORAGE 104 SHALL BE SUPPORTED FROM SLAB ABOVE.

GRADE LEVEL PLAN
SCALE: 1/8"=1'-0"

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
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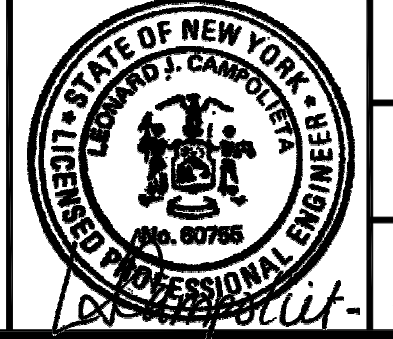
L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG
SCALE:
1/8"=1'-0"
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|-----|-------|---|------|
| 5 | 03/15 | RECORD DRAWINGS | LJC |
| 4 | 02/13 | RFP#15 BACKFLOW PREVENTER MODIFICATIONS | LJC |
| 3 | 10/12 | BACKFLOW APPLICATION SUBMITTAL | LJC |
| 2 | 04/11 | AS BID | LJC |
| 1 | 01/11 | ISSUED FOR APPROVAL | LJC |

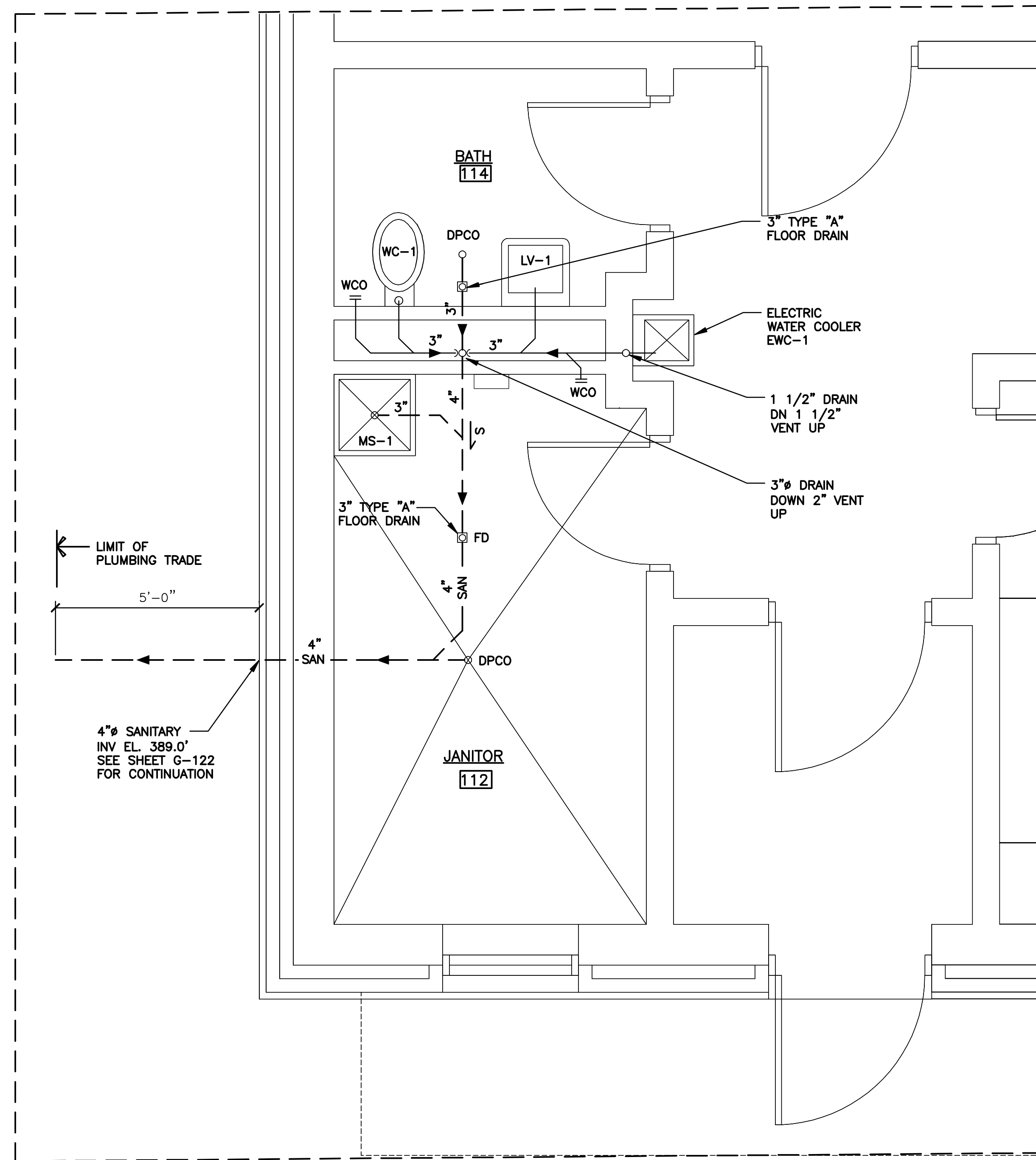
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Designed by GBC
Drawn by KJL
Checked by SWM



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CLINTON CSO STORAGE FACILITY PROJECT
CLINTON STORAGE FACILITY
GRADE LEVEL WATER & DRAINAGE PLAN
PLUMBING



File Number 00663
Date 04/11
P-103

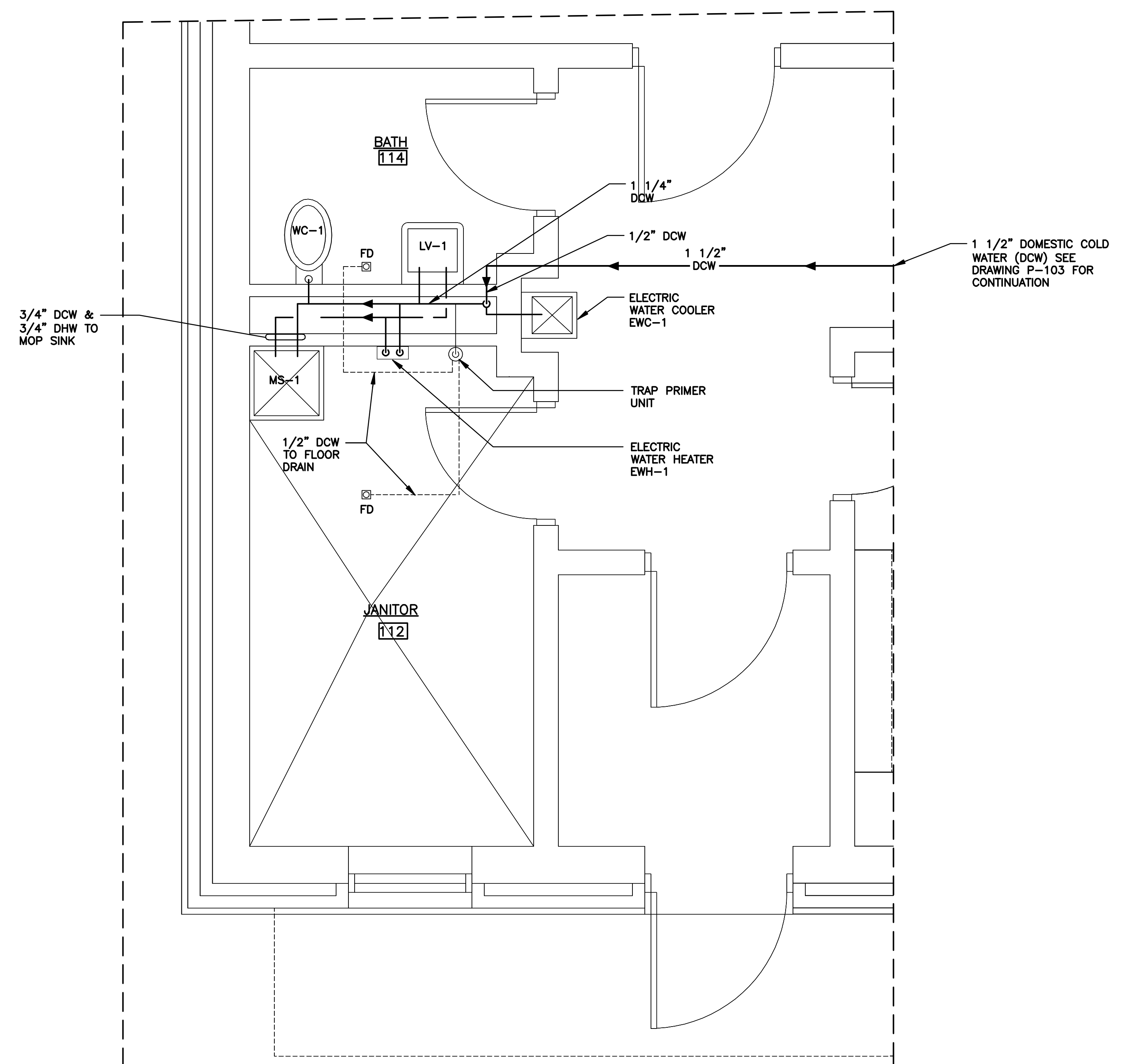


GRADE LEVEL DRAINAGE PIPING PLAN

SCALE: 1/2" = 1'-0"

DRAINAGE NOTE

1. SLOPE ALL DRAINS 1/4" PER FOOT.
2. FILL FLOOR DRAIN TRAPS WITH 40% GLYCOL SOLUTION.



GRADE LEVEL WATER PIPING PLAN

SCALE: 1/2" = 1'-0"

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE:
1/2"=1'-0"

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| 3 | 03/15 | RECORD DRAWINGS | LJC |
| 2 | 04/11 | AS BID | LJC |
| 1 | 01/11 | ISSUED FOR APPROVAL | |

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Designed by ___ GBC
Drawn by ___ KJL
Checked by ___ SWM

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
SYRACUSE, NEW YORK

ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

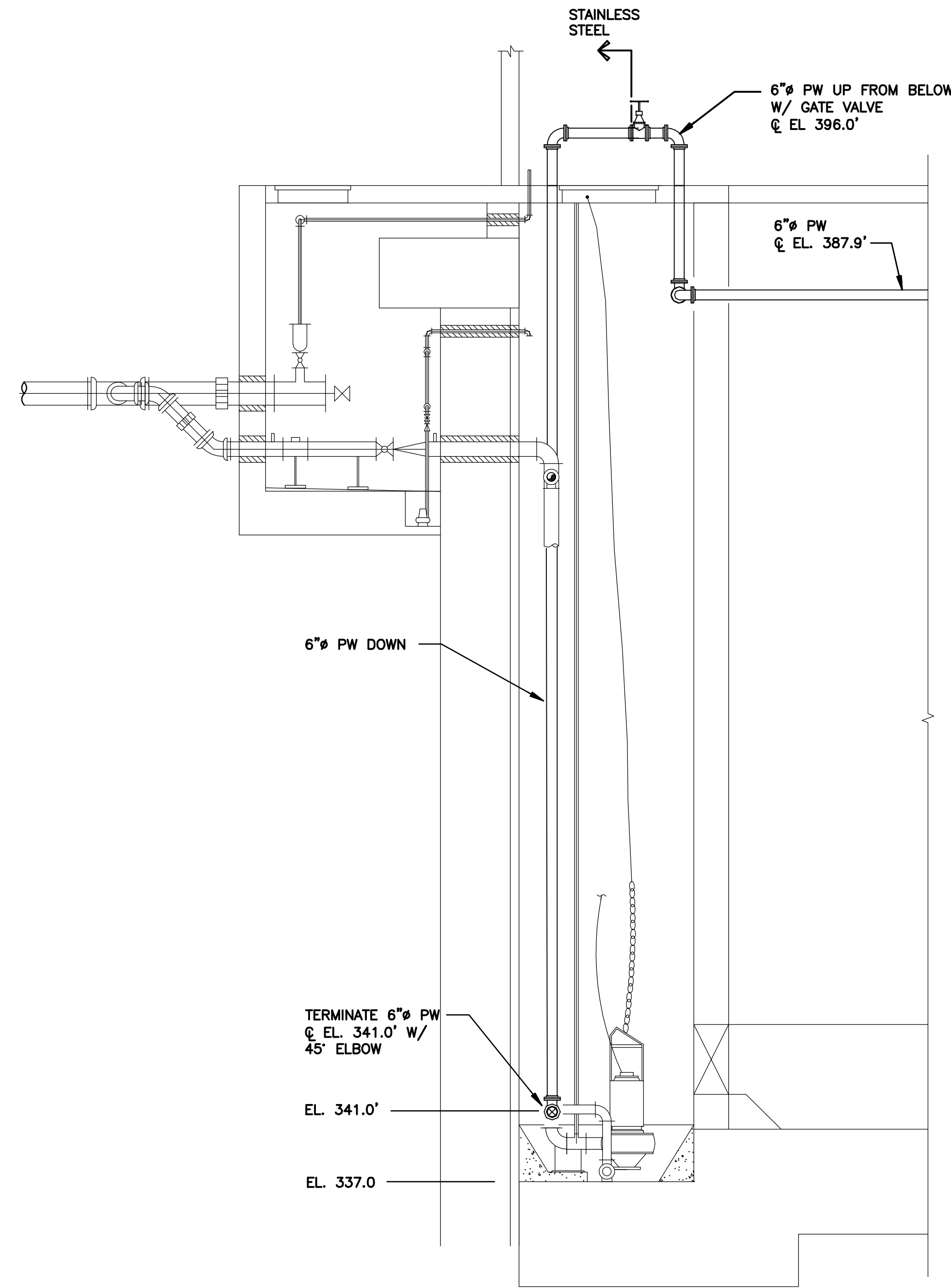
CLINTON STORAGE FACILITY
ENLARGED WATER & DRAINAGE PLANS
PLUMBING

File Number
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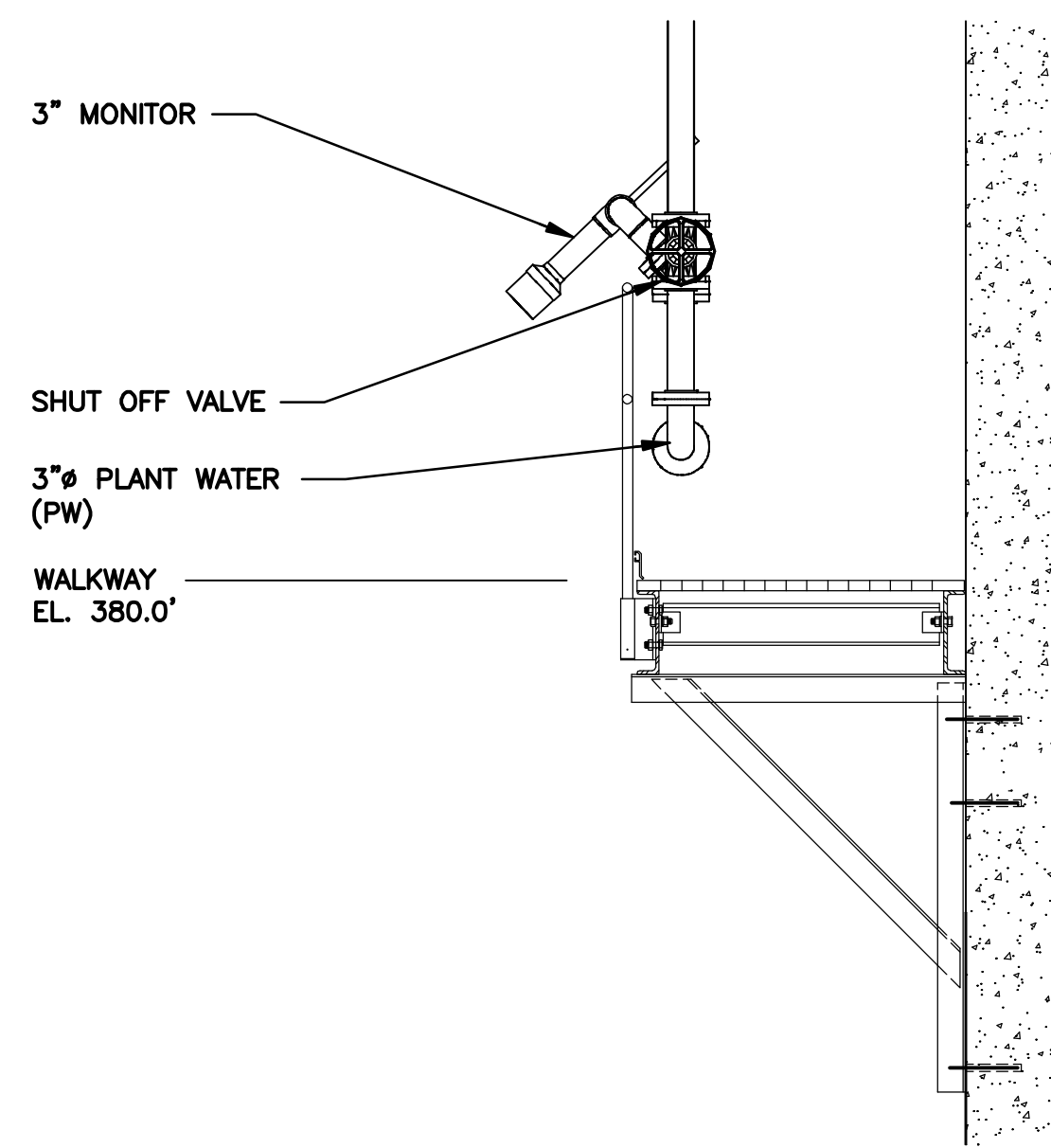
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P-104

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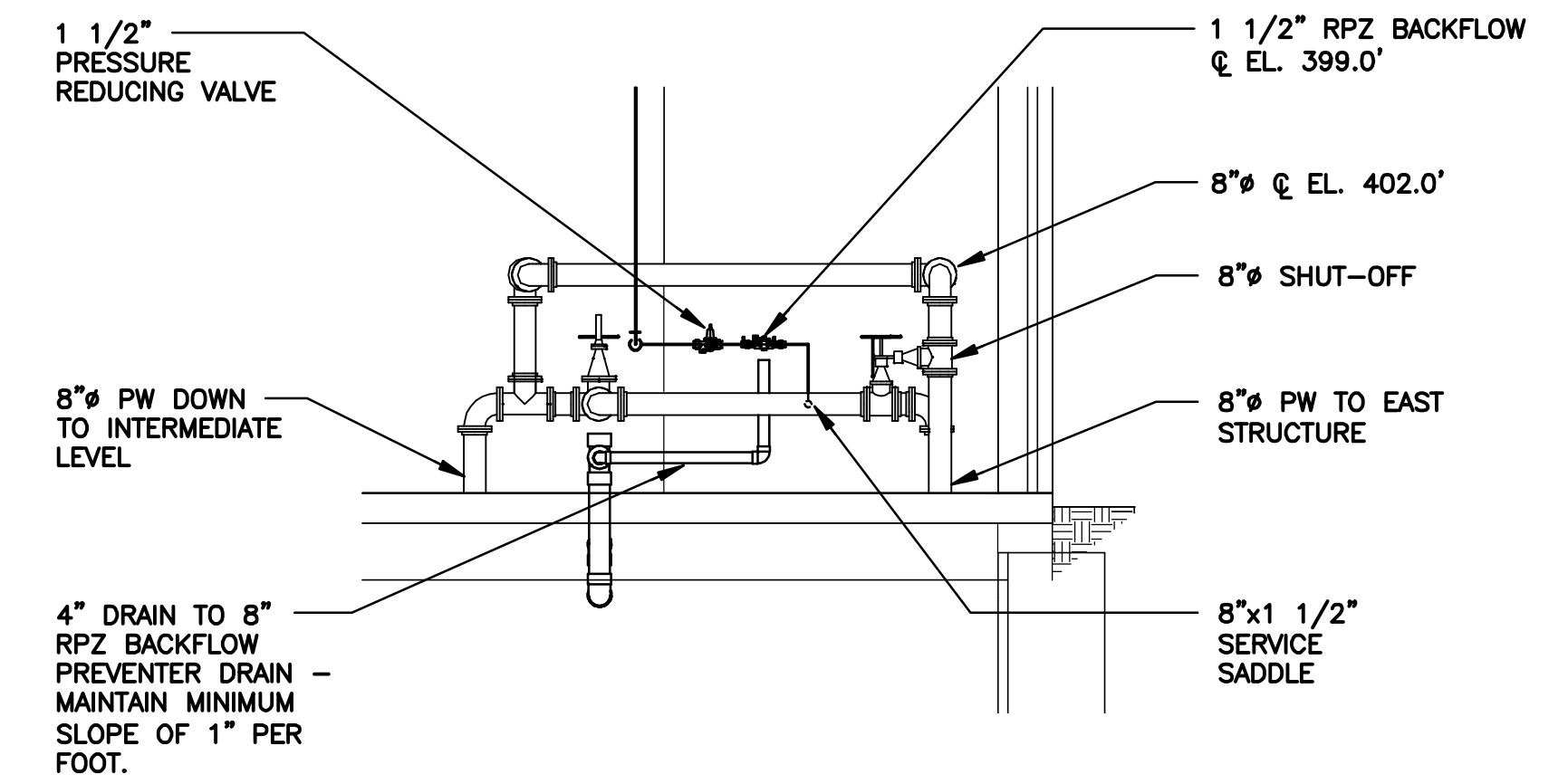
SECTION 3
3/16"=1'-0"
P-103



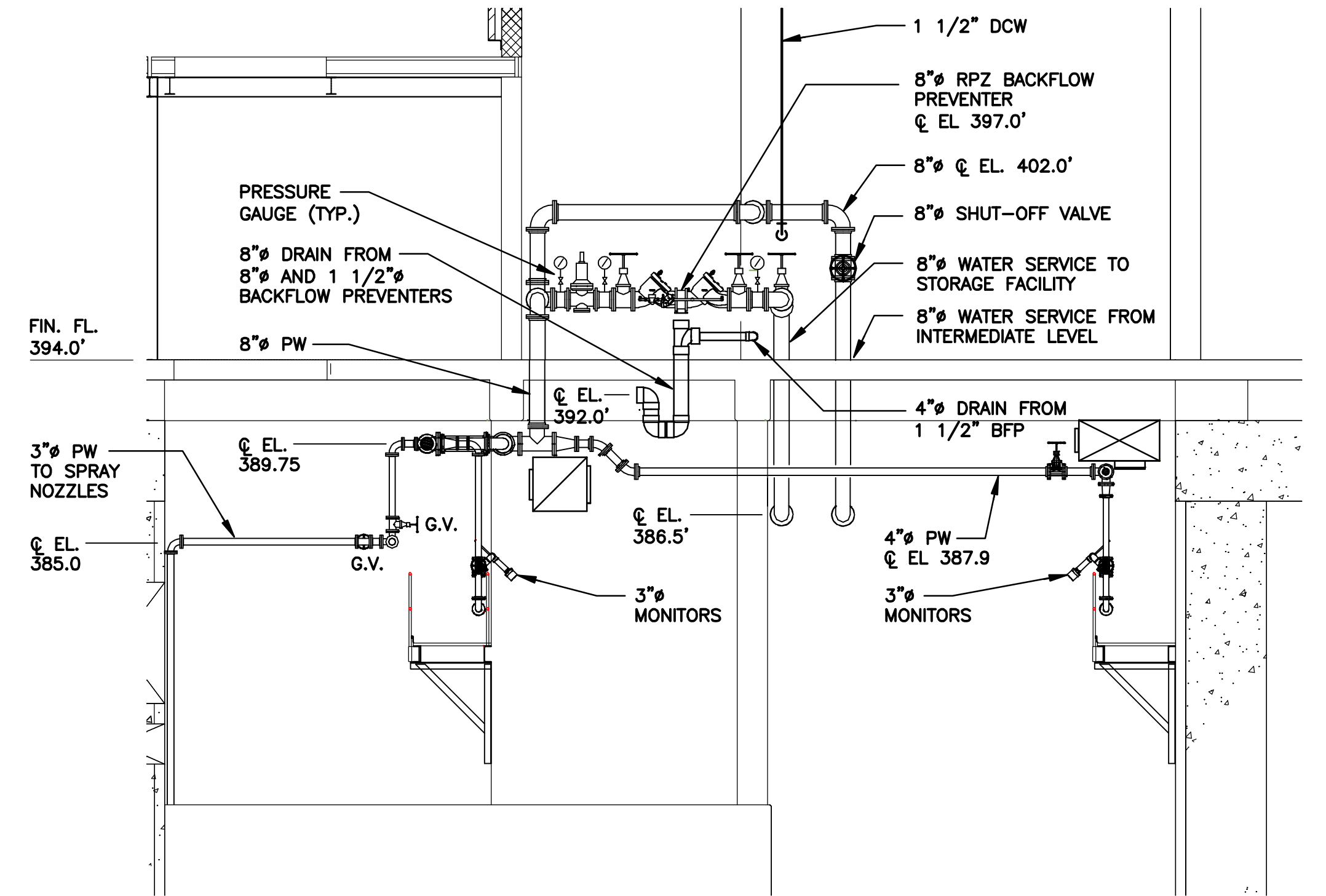
MONITOR PIPING DETAIL
NOT TO SCALE

REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTER INSTALLATION NOTES

1. INSTALL RPZ DEVICES WITH A MINIMUM OF 18" CLEARANCE BETWEEN BOTTOM OF RELIEF VALVE AND FLOOR.
2. INSTALL RPZ DEVICES WITH A MINIMUM OF 12" CLEAR SPACE ABOVE THE ASSEMBLIES.
3. INSTALL RPZ DEVICES WITH A MINIMUM OF 30" CLEAR SPACE BETWEEN FRONT SIDE OF THE DEVICES AND THE NEAREST WALL OR OBSTRUCTION.
4. INSTALL RPZ DEVICES WITH A MINIMUM OF 8" CLEAR FROM THE BACK OF THE DEVICES TO THE NEAREST WALL OR OBSTRUCTION.
5. PROVIDE SUPPORTS WITHIN 6" OF EACH END OF THE RPZ DEVICES TO BE INSTALLED IN ACCORDANCE WITH TECHNICAL SPECIFICATION 15140-SUPPORTS AND ANCHORS.
6. INSTALL 8" DIAMETER RPZ @ CENTERLINE ELEVATION 397.00 (36" ABOVE FINISHED FLOOR) AND THE 1 1/2" DIAMETER RPZ @ CENTERLINE ELEVATION 399.00 (60" ABOVE FINISHED FLOOR).
7. PROVIDE 6" AIR GAP FOR THE 8" BACKFLOW PREVENTER AND A 4" AIR GAP FOR THE 1 1/2" BACKFLOW PREVENTER BETWEEN RPZ RELIEF PORTS AND THE DRAIN PIPE.



SECTION 1
3/16"=1'-0"
P-103



SECTION 2
3/16"=1'-0"
P-101

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE:
3/16"=1'-0"

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| 5 | 03/15 | RECORD DRAWINGS | LJC |
| 4 | 02/13 | RFP#15 BACKFLOW PREVENTER MODIFICATIONS | LJC |
| 3 | 10/12 | BACKFLOW APPLICATION SUBMITTAL | LJC |
| 2 | 04/11 | AS BID | LJC |
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Designed by ___ GBC ___
Drawn by ___ KJL ___
Checked by ___ SWM ___



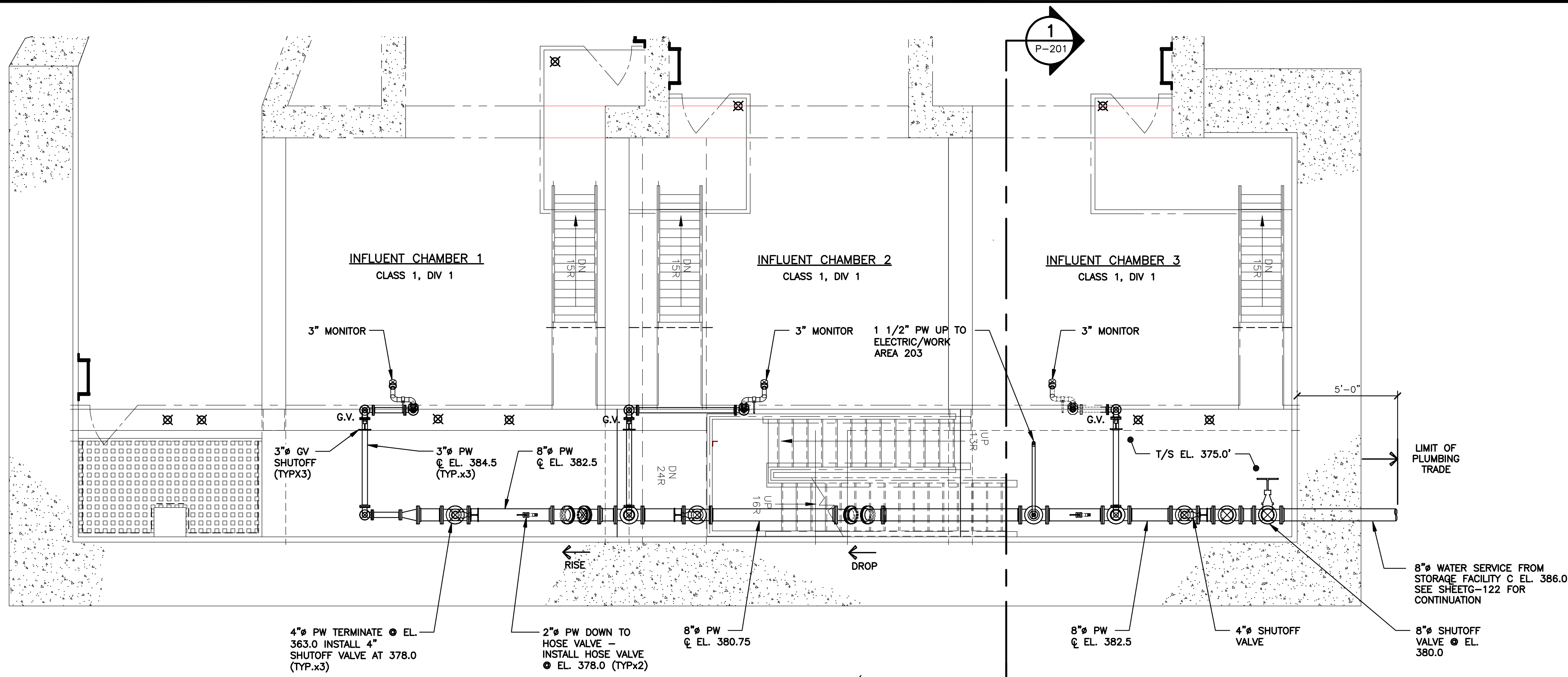
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CLINTON CSO STORAGE FACILITY PROJECT

CLINTON STORAGE FACILITY
SECTIONS
PLUMBING

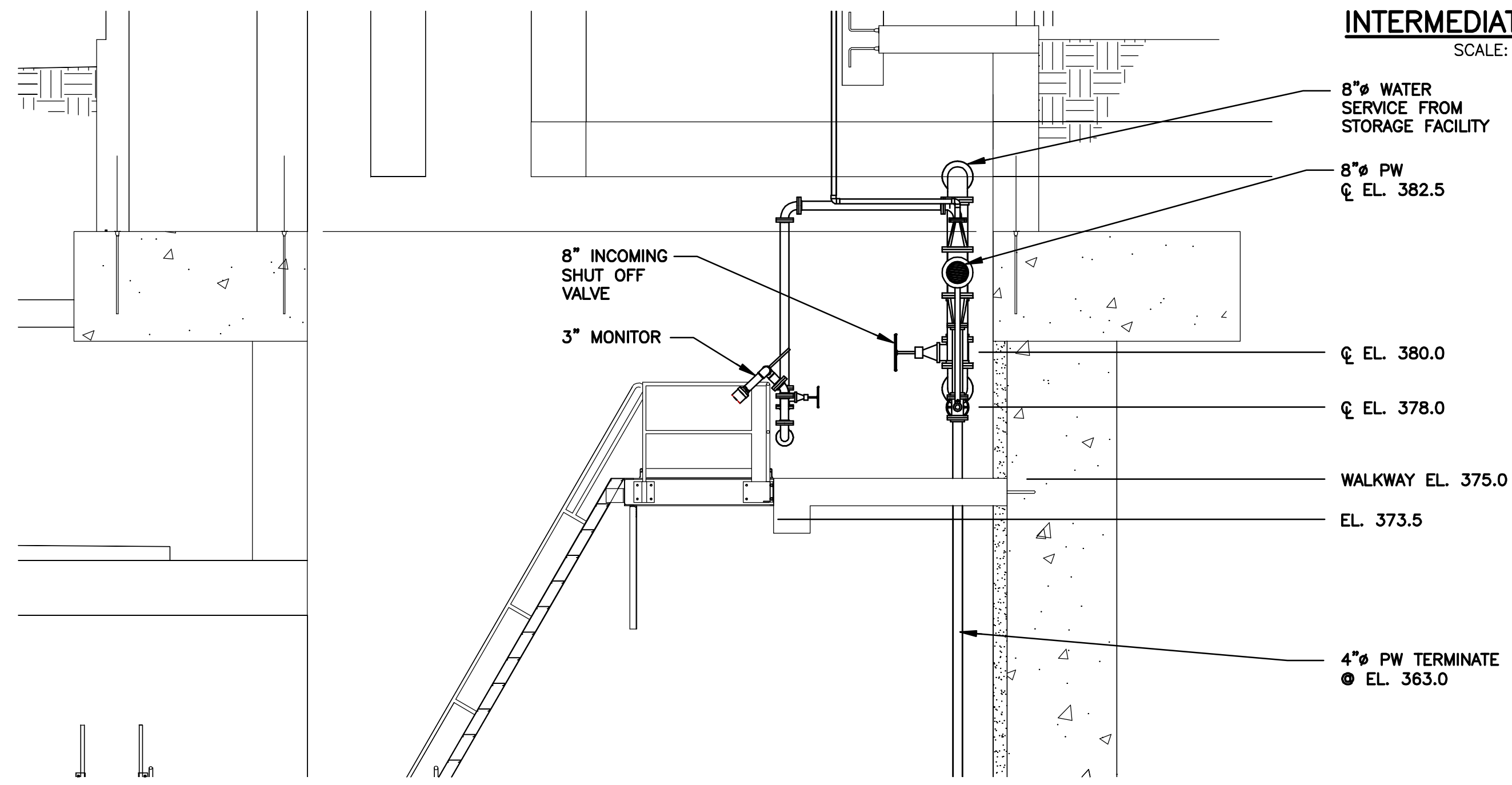


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00663
Date
04/11
P-105



INTERMEDIATE LEVEL PLAN
SCALE: 1/4"=1'-0"



SECTION 1
1/4"=1'-0" P-201

L: ON=*; OFF=*REF*
X:
MO/DA/YR CO DFT
DIR/DWG

SCALE:
1/4"=1'-0"

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| 4 | 03/15 | RECORD DRAWINGS | LJC |
| 3 | 2/12 | REVISED FOR CHANGE ORDER NO 1 | LJC |
| 2 | 04/11 | AS BID | LJC |
| 1 | 01/11 | ISSUED FOR APPROVAL | LJC |

In charge of LJC
Designed by GBC
Drawn by KJL
Checked by SWM



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CLINTON CSO STORAGE FACILITY PROJECT

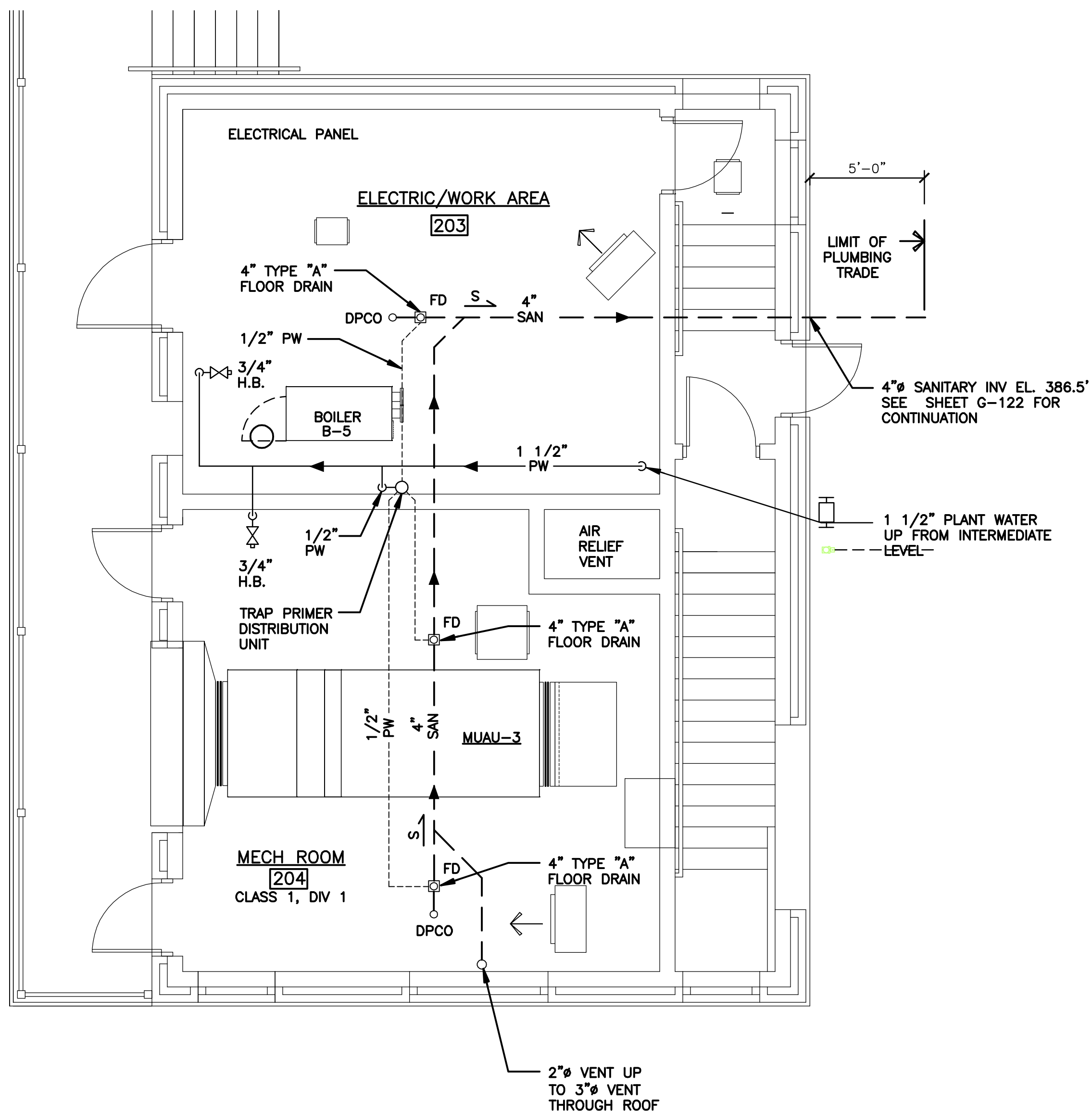
**EAST CHAMBER
INTERMEDIATE LEVEL PLAN**
PLUMBING



File Number
00663
Date
04/11

P-201

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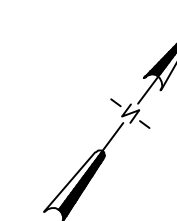


DRAWING NOTE

1. SLOPE ALL DRAINS 1/4" PER FOOT.
2. FINISHED FLOOR ELEVATION IS 395.0'.

GRADE LEVEL PLAN

SCALE: 1/4"=1'-0"

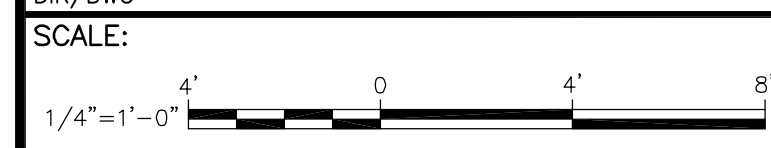


ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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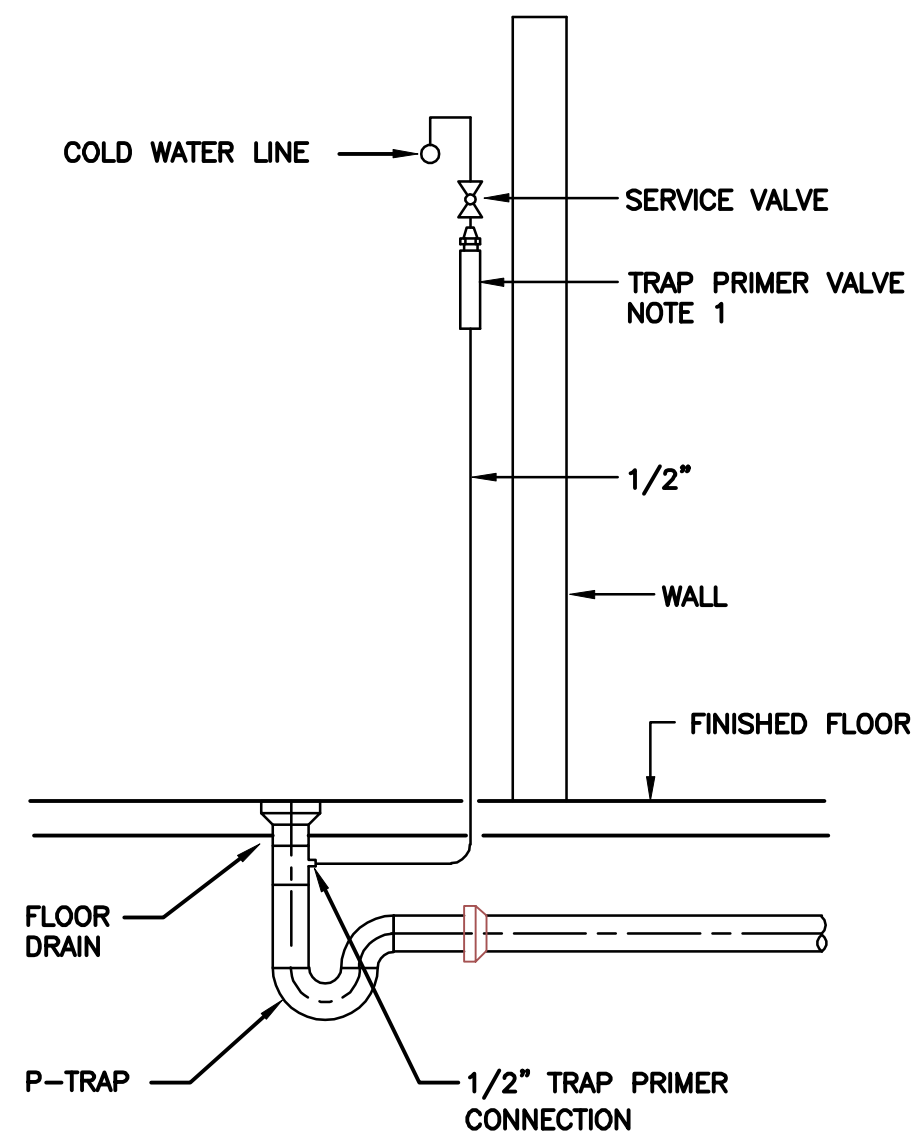
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CLINTON CSO STORAGE FACILITY PROJECT

**EAST ENTRANCE STRUCTURE
GRADE LEVEL PLAN**
PLUMBING



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Date
04/11

P-202

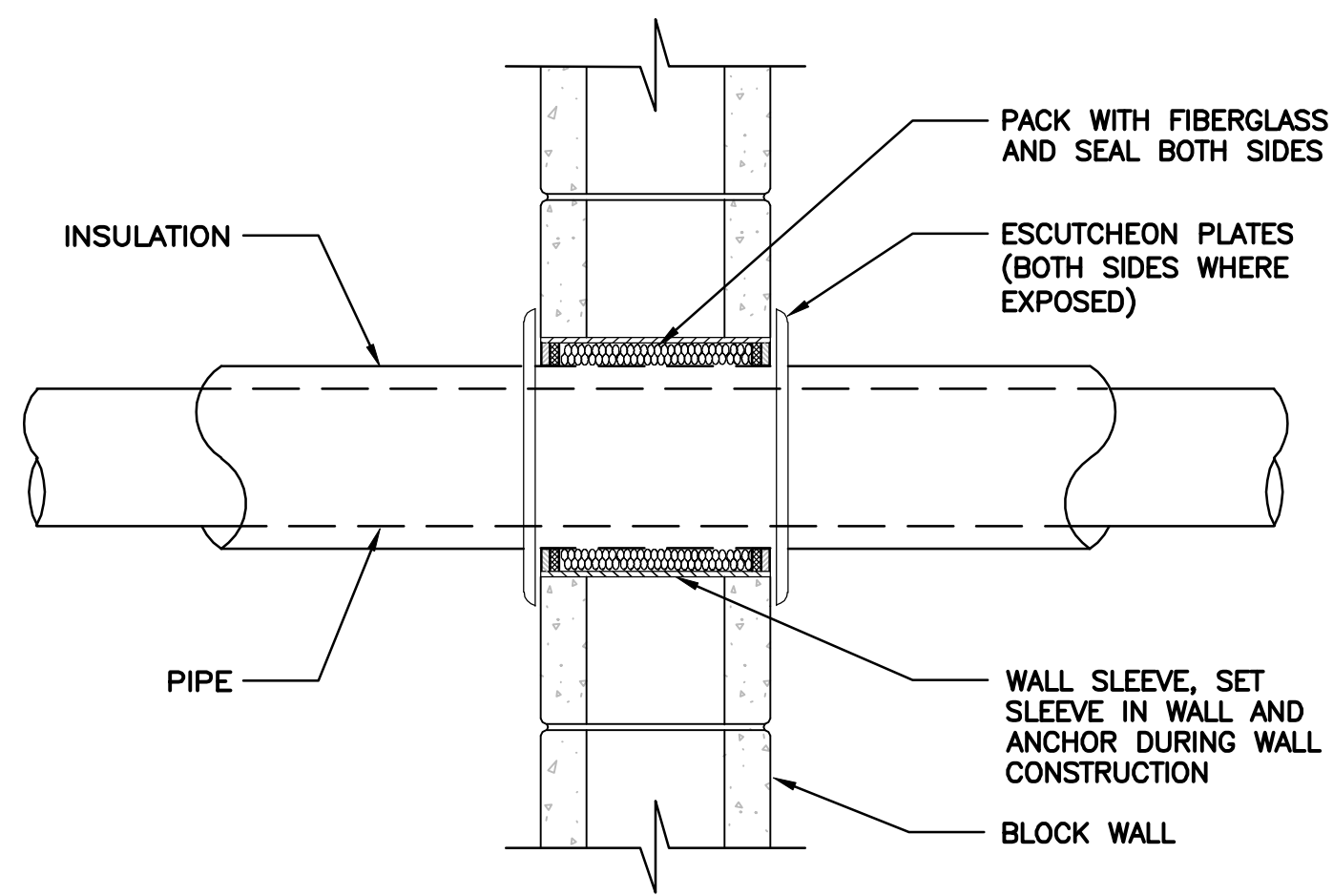


SINGLE FLOOR DRAIN TRAP PRIMER DETAIL

NOT TO SCALE

NOTE:

1. THE TRAP PRIMER VALVE MUST HAVE A MINIMUM ELEVATION OF 12 INCHES ABOVE THE FINISHED FLOOR.

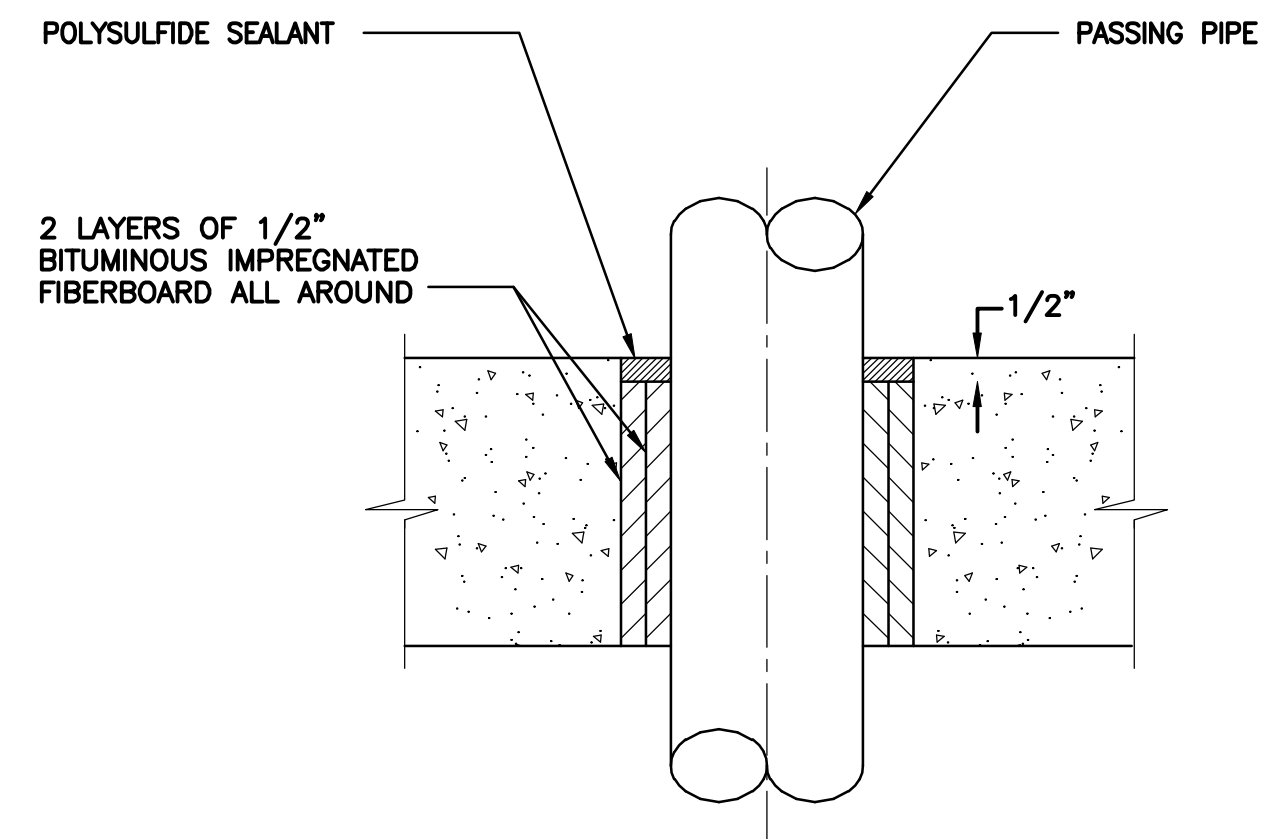


PIPE SLEEVE THRU INTERIOR WALL DETAIL

NOT TO SCALE

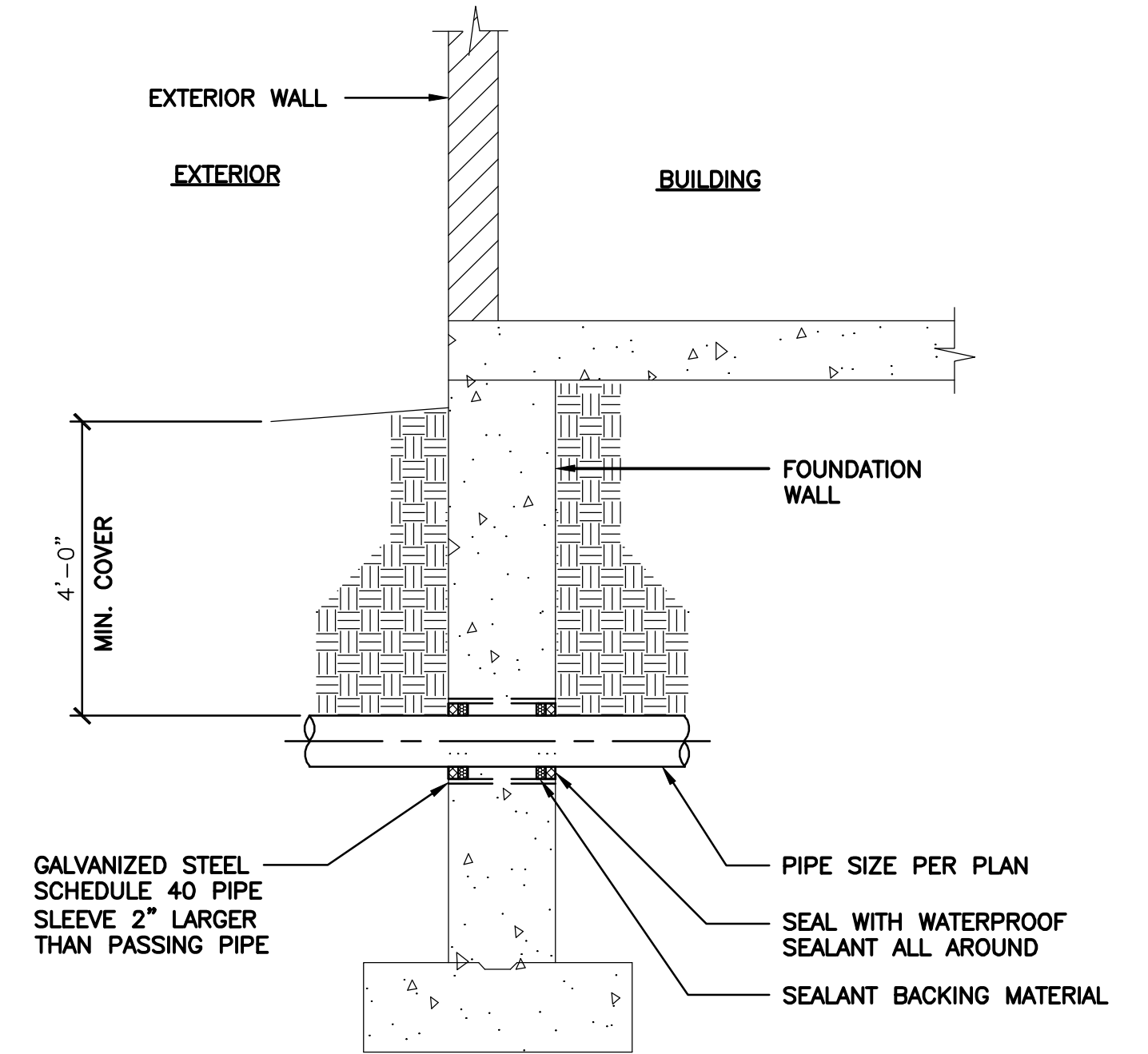
DETAIL NOTES:

1. THIS DETAIL IS FOR ABOVE GRADE PENETRATION INTO BUILDING THROUGH BLOCK WALLS INTO DRY AREA.
2. REFER TO STRUCTURAL DRAWING FOR LOCATION AND DIMENSIONS.



PIPE FLOOR PENETRATION DETAIL

NOT TO SCALE

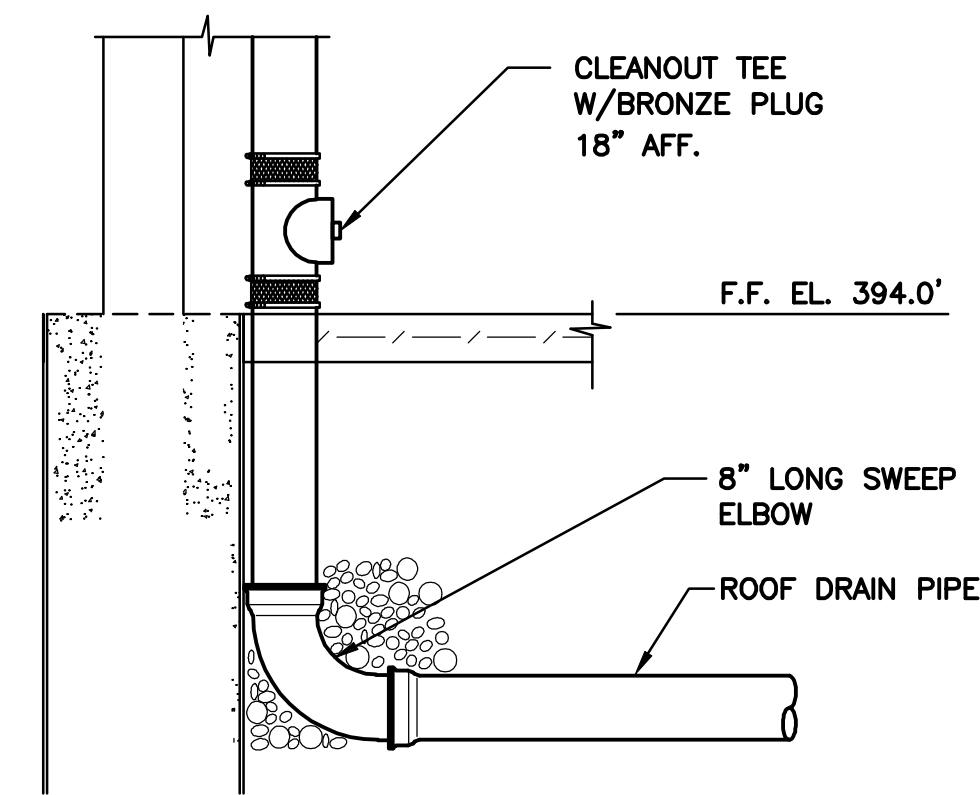


PIPE PENETRATION AT FOUNDATION DETAIL

NOT TO SCALE

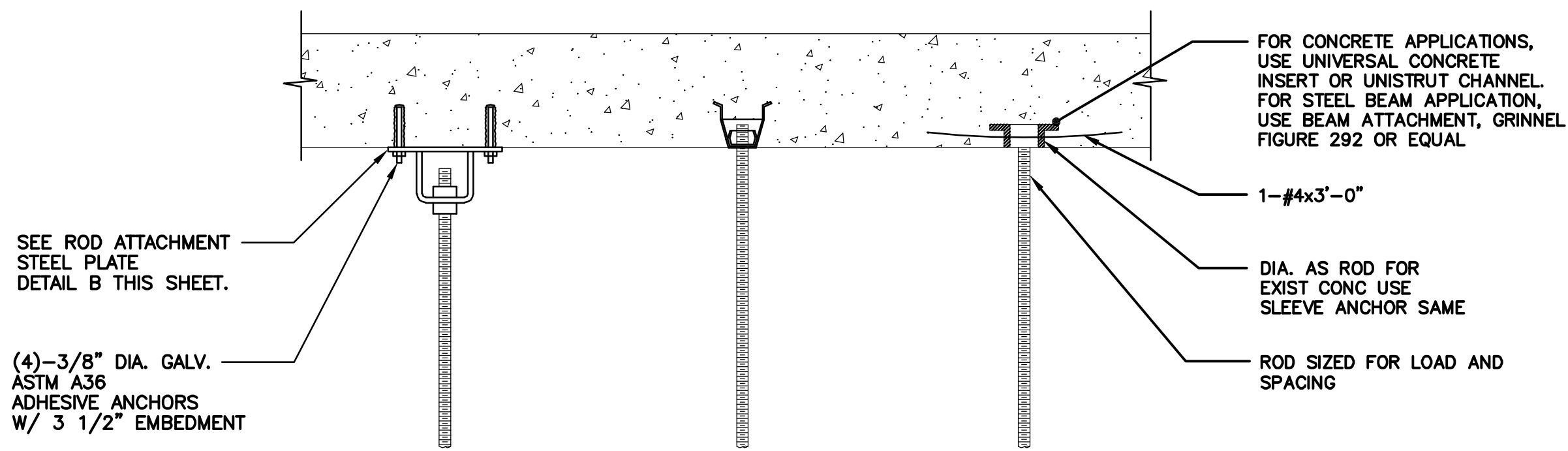
DETAIL NOTES:

1. THIS DETAIL IS FOR PENETRATION INTO BUILDING ABOVE FOUNDATION INTO DRY AREA. A CAST IN PLACE WALL SLEEVE SHALL BE INSTALLED AND VOID SHALL BE SEALED WITH WATER PROOF MATERIAL.
2. REFER TO STRUCTURAL DRAWING FOR LOCATION AND DIMENSIONS.



ROOF LEADER CLEANOUT DETAIL

NOT TO SCALE

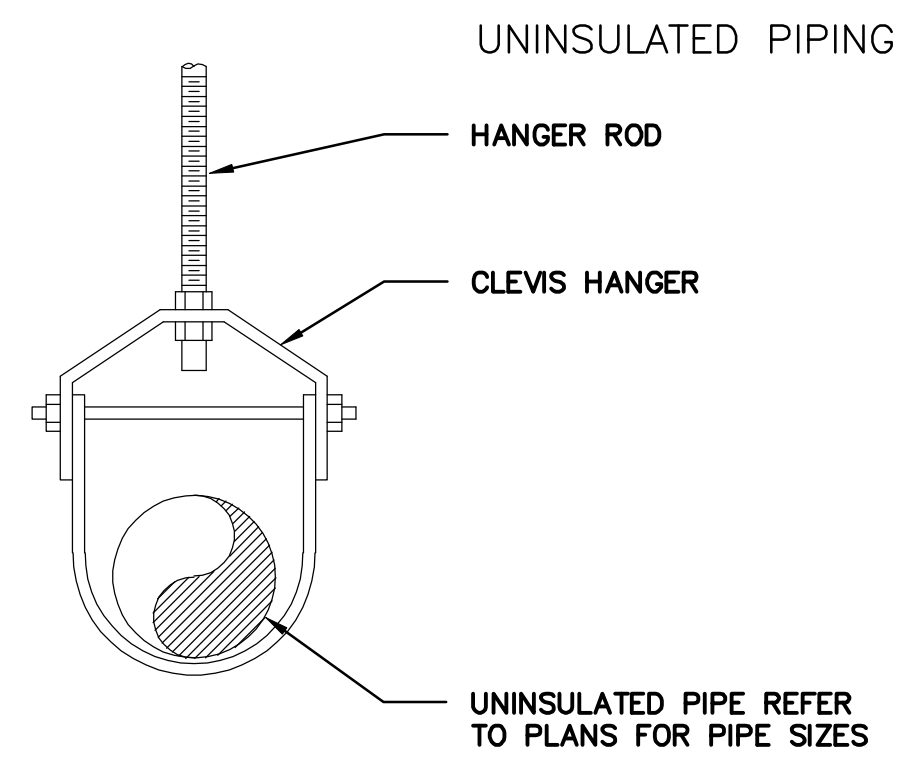
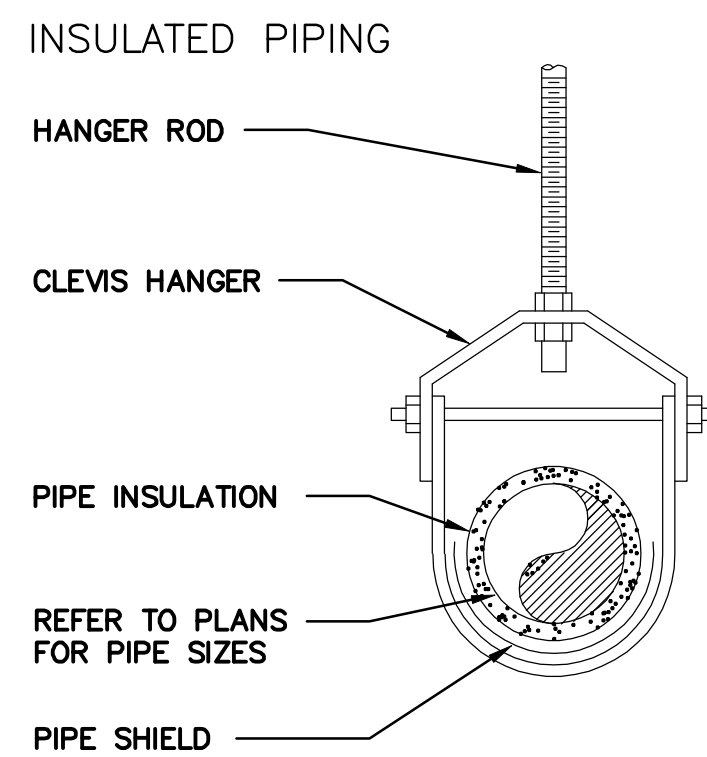


PIPE HANGING CONCRETE ATTACHMENT DETAILS

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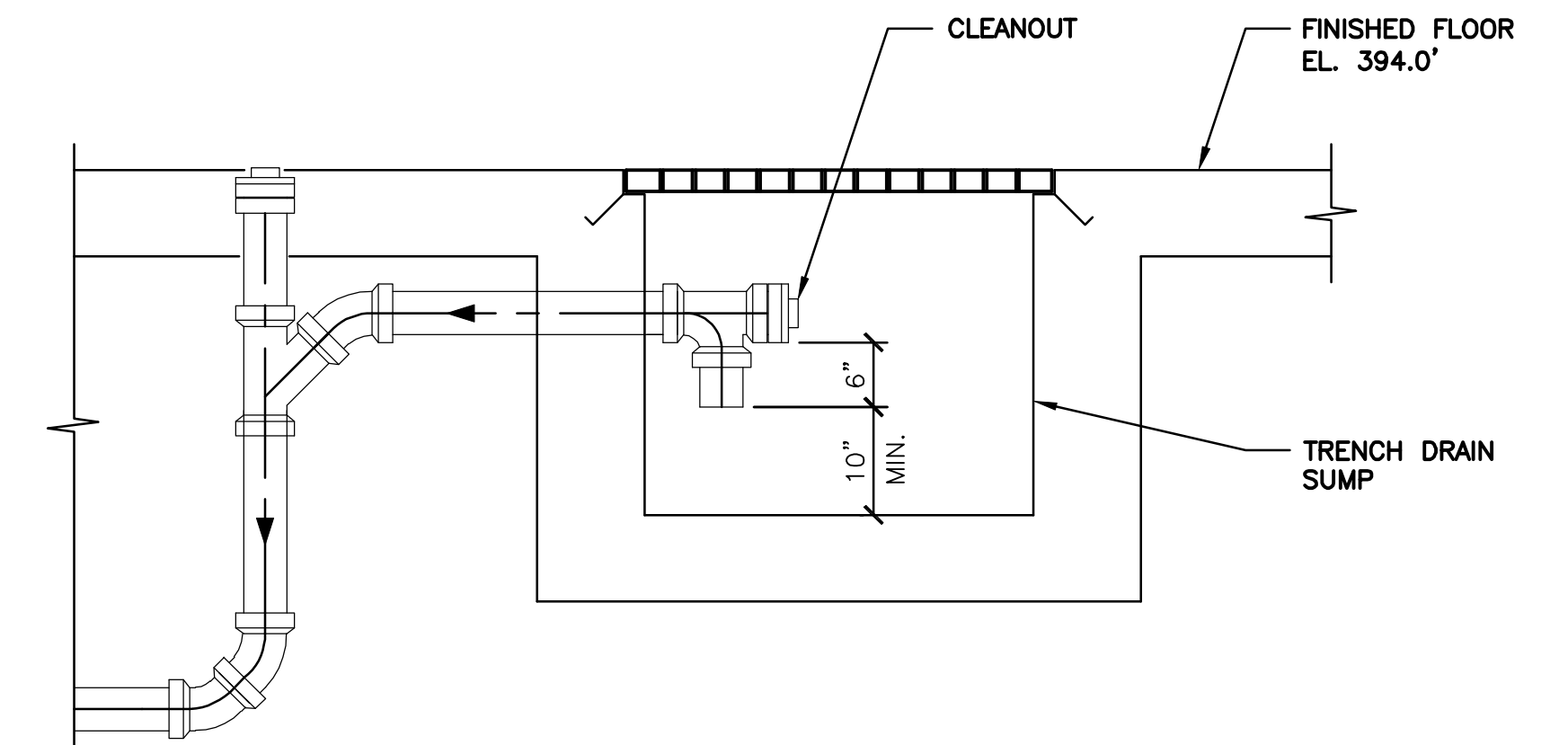
NOTES:

1. TOTAL LOADING SHALL NOT EXCEED MANUFACTURER'S RECOMMENDED LOADING.



PIPE HANGERS DETAILS

NOT TO SCALE



TRUCK LOADING TRENCH DRAIN DETAIL

NOT TO SCALE

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
RECORD DRAWING

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DATE: 04/01/2015 PER: [Signature]

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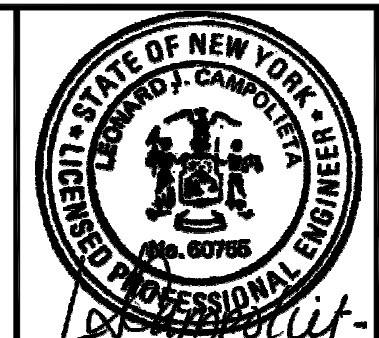
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| 3 | 03/15 | RECORD DRAWINGS | LJC |
| 2 | 04/11 | AS BID | LJC |
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In charge of _ LJC _
Designed by _ GBC _
Drawn by _ KJL _
Checked by _ GBC _



ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
CLINTON CSO STORAGE FACILITY PROJECT

STORAGE FACILITY & EAST STRUCTURE
DETAILS
PLUMBING



File Number
00663
Date
04/11

P-301

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| PLUMBING FIXTURE SCHEDULE | | | | | | | | | | |
|---------------------------|-----------------------|-------------------|----------|-----------------|----------------------|------|--------|-------------------|-------------------------|---|
| MARK | DESCRIPTION | MAKE | MODEL | FIXTURE SUPPORT | MIN. CONNECTION SIZE | | | MINIMUM VENT SIZE | MTG. HEIGHT FLR. TO RIM | REMARKS |
| | | | | | CW | HW | WASTE | | | |
| WC-1 | WATER CLOSET | AMERICAN STANDARD | 2257.001 | WALL MTD. | 1" | - | 4" | 2" | 17-1/4" | WALL MOUNTED, POWER FLUSH MODEL, PROVIDE SLOAN MODEL 186-1 ES-S SENSOR OPERATED FLUSH VALVE (1.6 GPF), ADA HEIGHT. WHITE VITREOUS CHINA, PROVIDE CHURCH 9500C WHITE OPEN SEAT LESS COVER. PROVIDE WALL CARRIER. |
| LV-1 | LAVATORY | AMERICAN STANDARD | 0355.012 | WALL MTD. | 1/2" | 1/2" | 1 1/4" | 2" | - | WALL MOUNTED, CONCEALED ARMS SUPPORT VITREOUS CHINA WHITE, 8 IN. CENTER. SELF DRAINING DECK, 4801.862 AMARILIS HERITAGE FAUCET WITH TRIUNE CROSS HANDLES. MOUNT UNIT 34" A.F.F. FOR ADA COMPLIANCE. |
| MS-1 | MOP SINK | FIAT | MSB-2424 | FLR. MTD. | 3/4" | 3/4" | 3" | 2" | - | 24"x24"x10" MOLDED STONE. PROVIDE 830-AA SERVICE FAUCET, 832-AA HOSE AND BRACKET, MSG 2424 STAINLESS STEEL WALL GUARDS. |
| EWC-1 | ELECTRIC WATER COOLER | OASIS | P8AC | WALL MTD. | 1/2" | - | 1-1/4" | 2" | 40" | ELECTRIC WATER COOLER 8 GPH, 1-1/4" TRAP. MOUNT UNIT AT ADA HEIGHT |

| ELECTRIC WATER HEATER (EWH) SCHEDULE | | | | | | | |
|--------------------------------------|--------------------------|------------------|----------|---------------------|---------|-------|-----------------|
| NO. | BUILDING | LOCATION | TYPE | HEATING INFORMATION | | | |
| | | | | INPUT RATING | VOLTAGE | PHASE | SET TEMPERATURE |
| EWH-1 | CLINTON STORAGE FACILITY | JANITOR ROOM 112 | TANKLESS | 20KW | 277 | | 105°F |

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 DIR/DWG

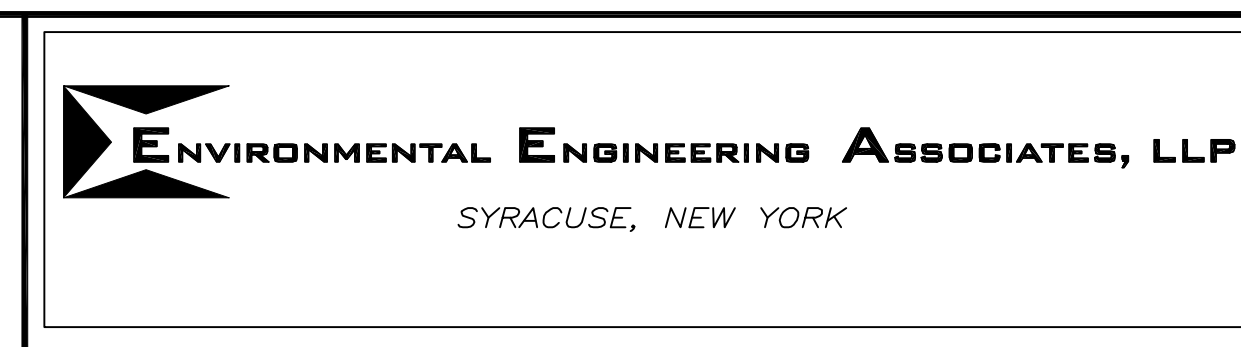
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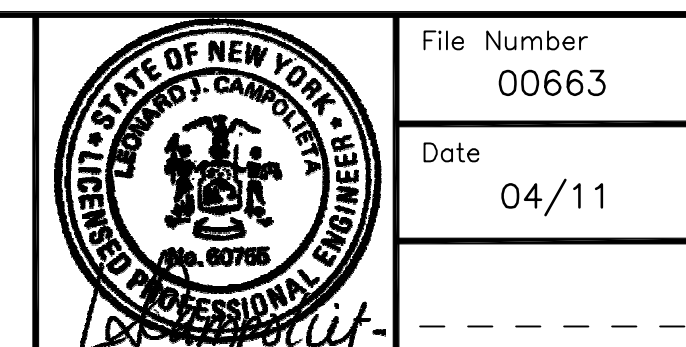
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|--------------|-----|
| In charge of | LJC |
| Designed by | GBC |
| Drawn by | KJL |
| Checked by | SWM |

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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT

STORAGE FACILITY & EAST STRUCTURE SCHEDULES
 PLUMBING



ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
 RECORD DRAWING

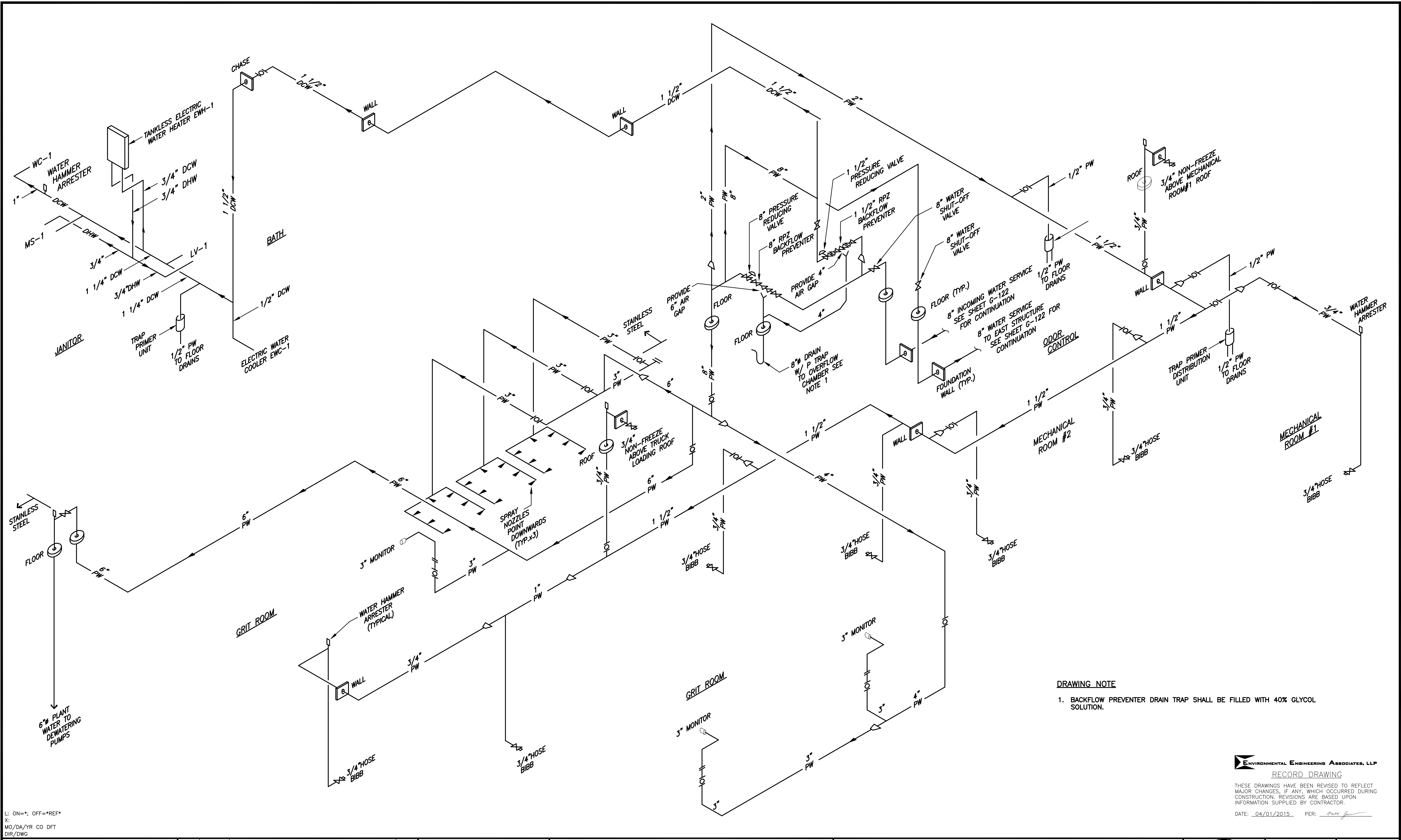
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P-302



DRAWING NOTE
 1. BACKFLOW PREVENTER DRAIN TRAP SHALL BE FILLED WITH 40% GLYCOL SOLUTION.

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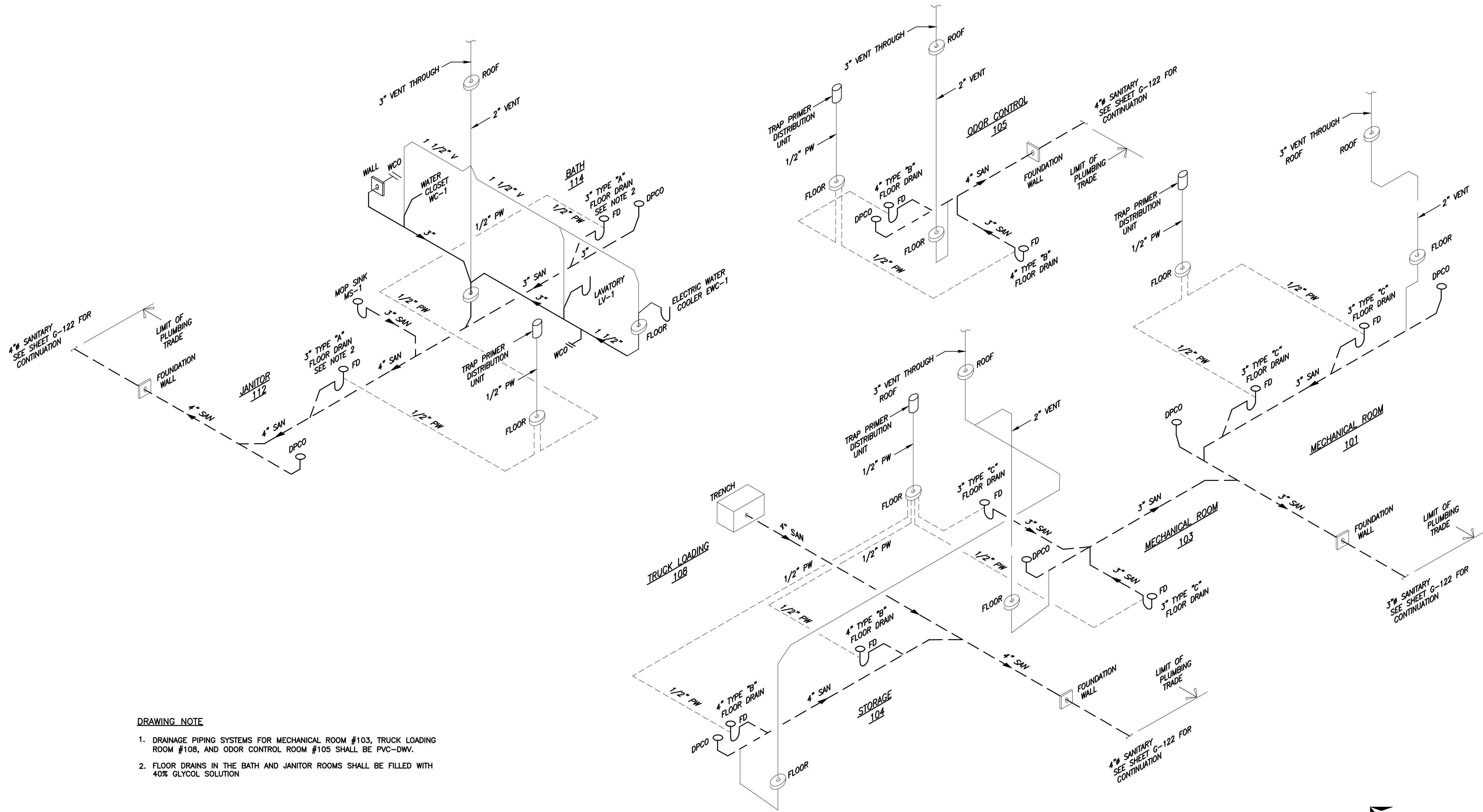
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| 5 | 03/15 | RECORD DRAWINGS | LJC |
| 4 | 02/13 | RFP#15 BACKFLOW PREVENTER MODIFICATIONS | LJC |
| 3 | 10/12 | BACKFLOW APPLICATION SUBMITTAL | LJC |
| 2 | 04/11 | AS BID | LJC |
| 1 | 01/11 | ISSUED FOR APPROVAL | LJC |
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ONONDAGA COUNTY • DEPARTMENT OF WATER ENVIRONMENT PROTECTION
 CLINTON CSO STORAGE FACILITY PROJECT
CLINTON STORAGE FACILITY
WATER PIPING SCHEMATIC
 PLUMBING

ENVIRONMENTAL ENGINEERING ASSOCIATES, LLP
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 File Number: 00663
 Date: 04/11
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- DRAWING NOTE**
1. DRAINAGE PIPING SYSTEMS FOR MECHANICAL ROOM #103, TRUCK LOADING ROOM #108, AND ODOR CONTROL ROOM #105 SHALL BE PVC-DWV.
 2. FLOOR DRAINS IN THE BATH AND JANITOR ROOMS SHALL BE FILLED WITH 40% GLYCOL SOLUTION

DRAINAGE PIPING SCHEMATIC
NOT TO SCALE

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CLINTON CSO STORAGE FACILITY PROJECT

**STORAGE FACILITY
DRAINAGE PIPING SCHEMATIC**
PLUMBING



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