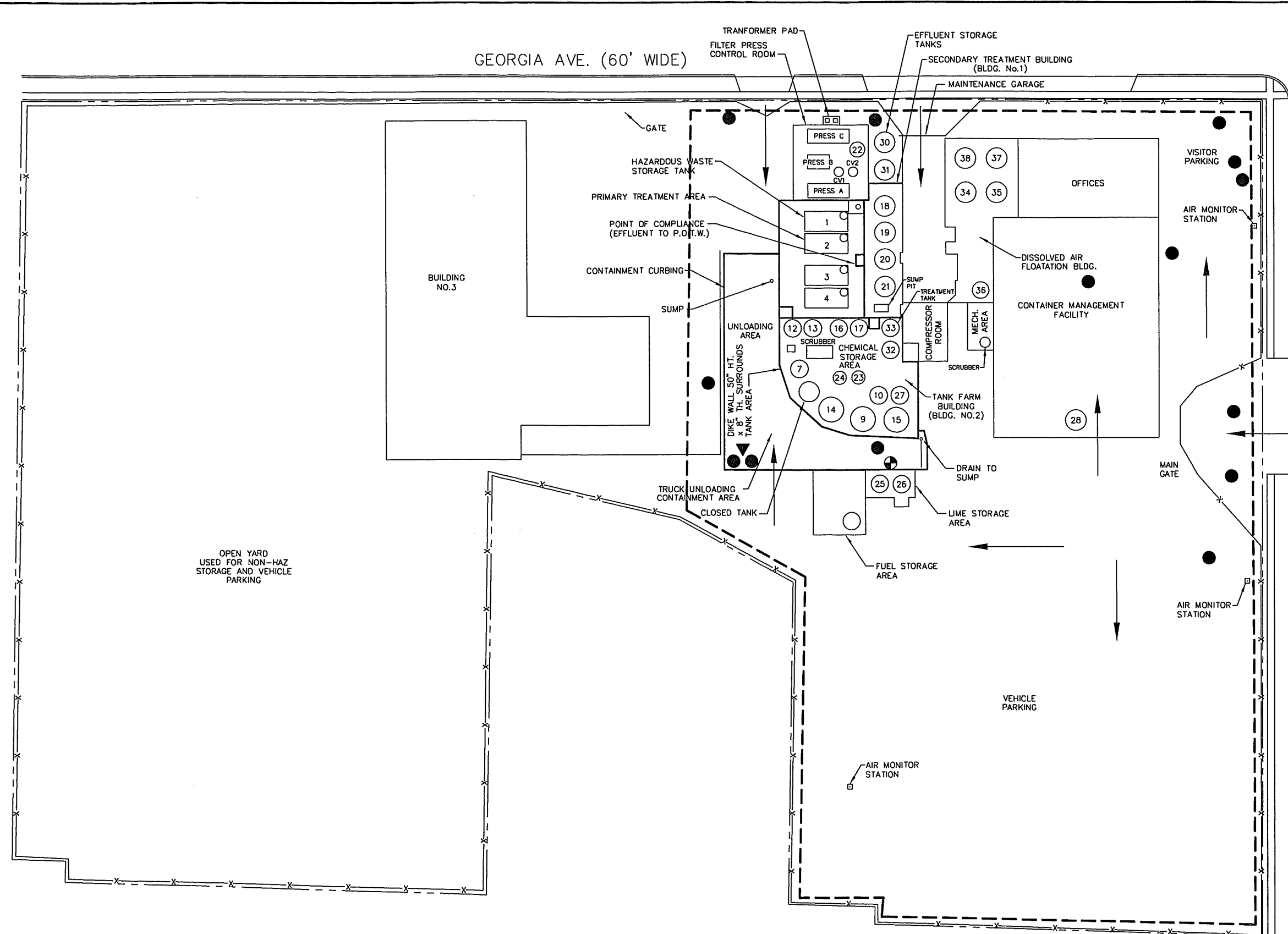


ATTACHMENT 6  
ENGINEERING PLANS

## GLOSSARY

Effective April 22, 2019, the Michigan Department of Environmental Quality (DEQ), Waste Management and Radiological Protection Division (WMRPD), became the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Materials Management Division (MMD).

40 CFR	Title 40 of the Code of Federal Regulations
ABR	Adopted by reference
Act 207	Michigan Fire Protection Act, PA 207, as amended
Act 451	Natural Resources and Environmental Protection Act, 1994 PA 451, as amended
Dynecol	former name of facility, now known as US Ecology Detroit North, Inc US Ecology Michigan?
EPA	United States Environmental Protection Agency
HWSA	Hazardous and Solid Waste Amendments of 1984
Part 111	Part 111, Hazardous Waste Management, of Act 451
Part 111 Rules	Administrative rules promulgated pursuant to Part 111, Hazardous Waste Management, of Act 451
R	Rule (example: R 299.9504)

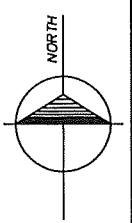



**List of Tanks**

Tank No.	Tank Type	Tank Description
1	R	Primary Treatment
2	R	Primary Treatment
3	R	Primary Treatment
4	R	Primary Treatment
7	R	Storage
9	NR	Alkaline Reagent Storage
10	R	Storage
12	NR	Non-Haz Recycled/Reused Products
13	NR	Non-Haz Recycled/Reused Products
14	NR	Lime Slurry
15	NR	Alkaline Reagent Storage
16	NR	Non-Haz Recycled/Reused Products
17	NR	Non-Haz Recycled/Reused Products
18	R	Secondary Treatment
19	R	Secondary Treatment
20	R	Secondary Treatment
21	R	Secondary Treatment
22	NR	Mild Acid Cleaning Solution
23	NR	Lime Slurry
24	NR	Sodium Hydroxide for Scrubber
25	NR	Dry Lime
26	NR	Dry Lime
27	NR	Non-Haz Recycled/Reused Products
28	NR	Non-Haz Recycled/Reused Products
30	R	Effluent
31	R	Effluent
32	NR	Sodium Hydroxide
33	NR	Aluminum Sulfate
34	R	Effluent
35	R	Effluent
36	R	Storage
37	R	Effluent
38	R	Effluent
CV1	R	Treatment
CV2	R	Treatment

**Legend:**  
 R Regulated Tanks  
 NR Non-Regulated Tanks

**LEGEND:**  
 - - - - - PROPERTY BOUNDARY  
 x x x x x FENCE LINE  
 - - - - - APPROXIMATE BOUNDARY OF ACT 451 PART 111 AREA  
 ● FORMER SOIL BORING LOCATION  
 ⊕ EXISTING WELL LOCATION  
 ⊖ ABANDONED WELL LOCATION  
 → TRAFFIC FLOW PATTERN

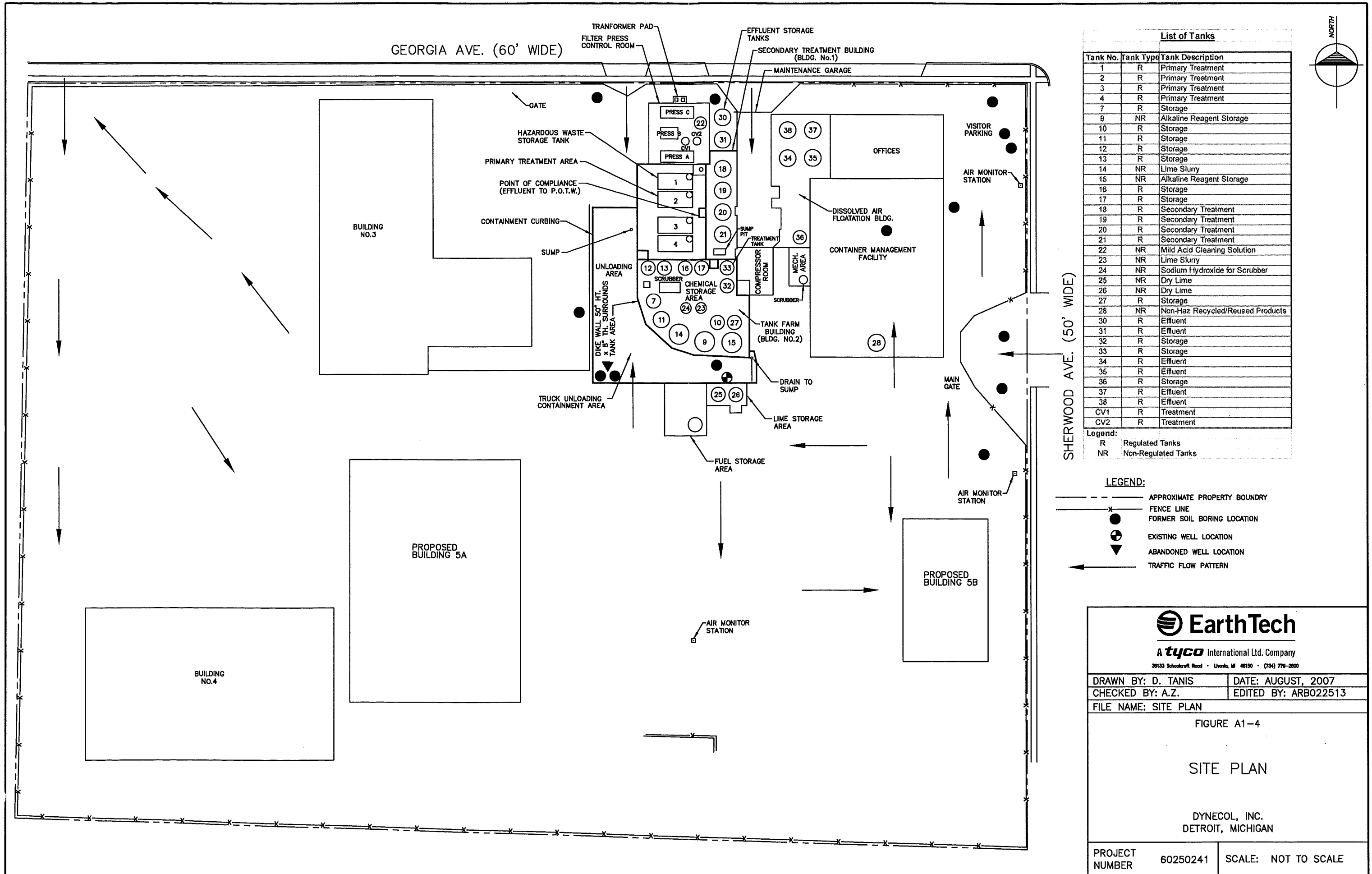




**EarthTech**  
 A tyco International Ltd. Company  
36133 Schoecraft Road • Livonia, MI 48150 • (734) 779-2800

DRAWN BY: D. TANIS	DATE: AUGUST, 2007
CHECKED BY: A.Z.	EDITED BY: DCT080907
FILE NAME: SITE PLAN	
FIGURE A1-4	
SITE PLAN	
DYNECOL, INC. DETROIT, MICHIGAN	
PROJECT NUMBER 101130	SCALE: 1" = 60'

L:\work\60250241\60250241\_Reports\CADD\Figure A1-4.dwg; 2/25/2013 12:15:30 PM; YANCHULA, JOHN; monochr



List of Tanks		
Tank No.	Tank Type	Tank Description
1	R	Primary Treatment
2	R	Primary Treatment
3	R	Primary Treatment
4	R	Primary Treatment
7	R	Storage
9	NR	Alkaline Reagent Storage
10	R	Storage
11	R	Storage
12	R	Storage
13	R	Storage
14	NR	Lime Slurry
15	NR	Alkaline Reagent Storage
16	R	Storage
17	R	Storage
18	R	Secondary Treatment
19	R	Secondary Treatment
20	R	Secondary Treatment
21	R	Secondary Treatment
22	NR	Mild Acid Cleaning Solution
23	NR	Lime Slurry
24	NR	Sodium Hydroxide for Scrubber
25	NR	Dry Lime
26	NR	Dry Lime
27	R	Storage
28	NR	Non-Haz Recycled/Reused Products
30	R	Effluent
31	R	Effluent
32	R	Storage
33	R	Storage
34	R	Effluent
35	R	Effluent
36	R	Storage
37	R	Effluent
38	R	Effluent
CV1	R	Treatment
CV2	R	Treatment

Legend:  
R Regulated Tanks  
NR Non-Regulated Tanks

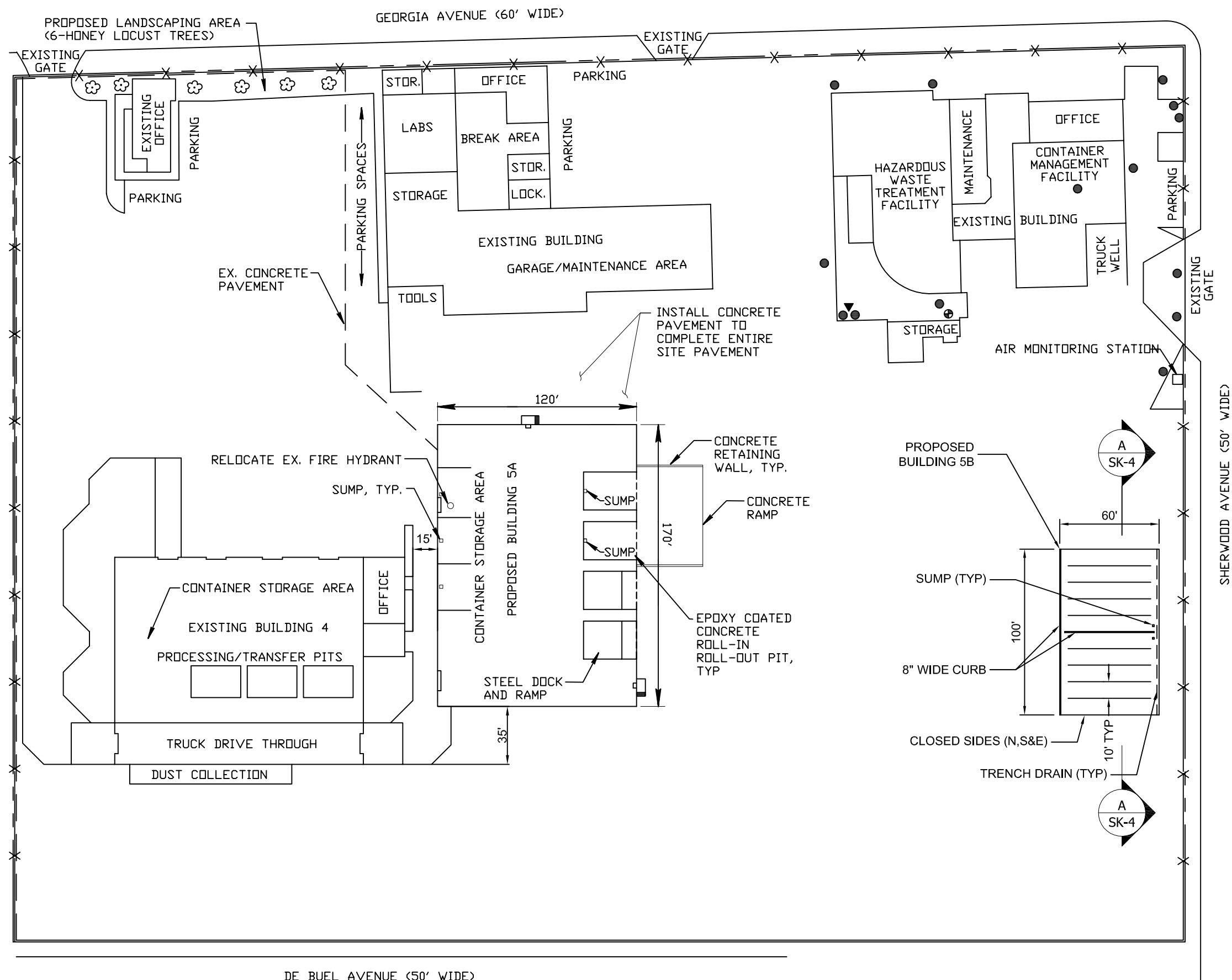
**LEGEND:**

- APPROXIMATE PROPERTY BOUNDARY
- x- FENCE LINE
- FORMER SOIL BORING LOCATION
- ⊕ EXISTING WELL LOCATION
- ⊖ ABANDONED WELL LOCATION
- TRAFFIC FLOW PATTERN

**EarthTech**  
A tyco International Ltd. Company  
39133 Schookroff Road • Livonia, MI 48150 • (734) 779-2000

DRAWN BY: D. TANIS	DATE: AUGUST, 2007
CHECKED BY: A.Z.	EDITED BY: ARB022513
FILE NAME: SITE PLAN	
FIGURE A1-4	
SITE PLAN	
DYNECOL, INC. DETROIT, MICHIGAN	
PROJECT NUMBER	60250241
SCALE:	NOT TO SCALE

US ECOLOGY, MICHIGAN  
PROPOSED EXPANSION  
SITE PLAN



1 SITE PLAN  
A1-5

SCALE: N.T.S.

Drawn: CKL 01/04/2016

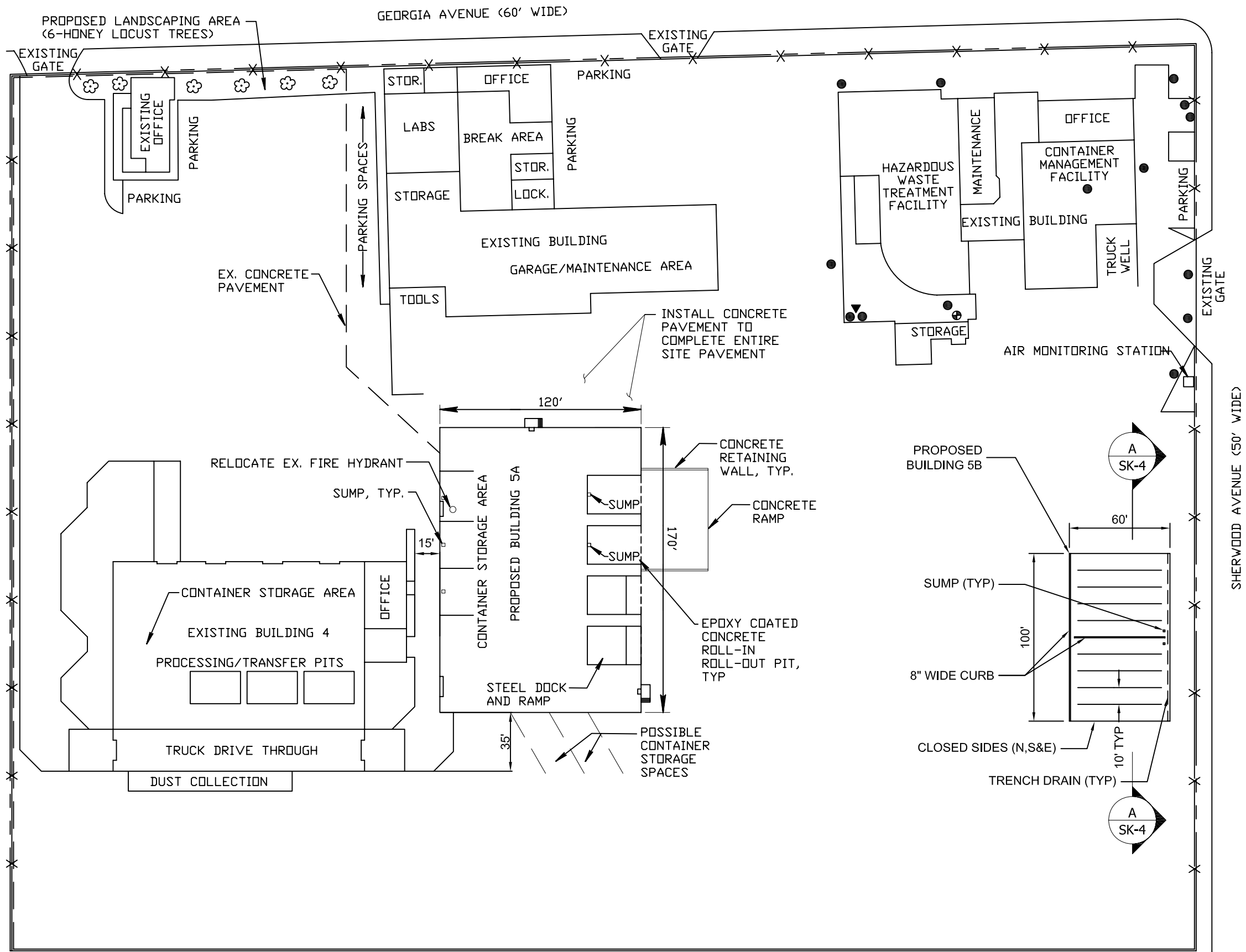
Checked: SMG 01/04/2016

Approved: SMG 01/04/2016

PROJECT NUMBER 60250241

FIGURE NUMBER A1-5

US ECOLOGY, MICHIGAN  
PROPOSED EXPANSION  
SITE PLAN



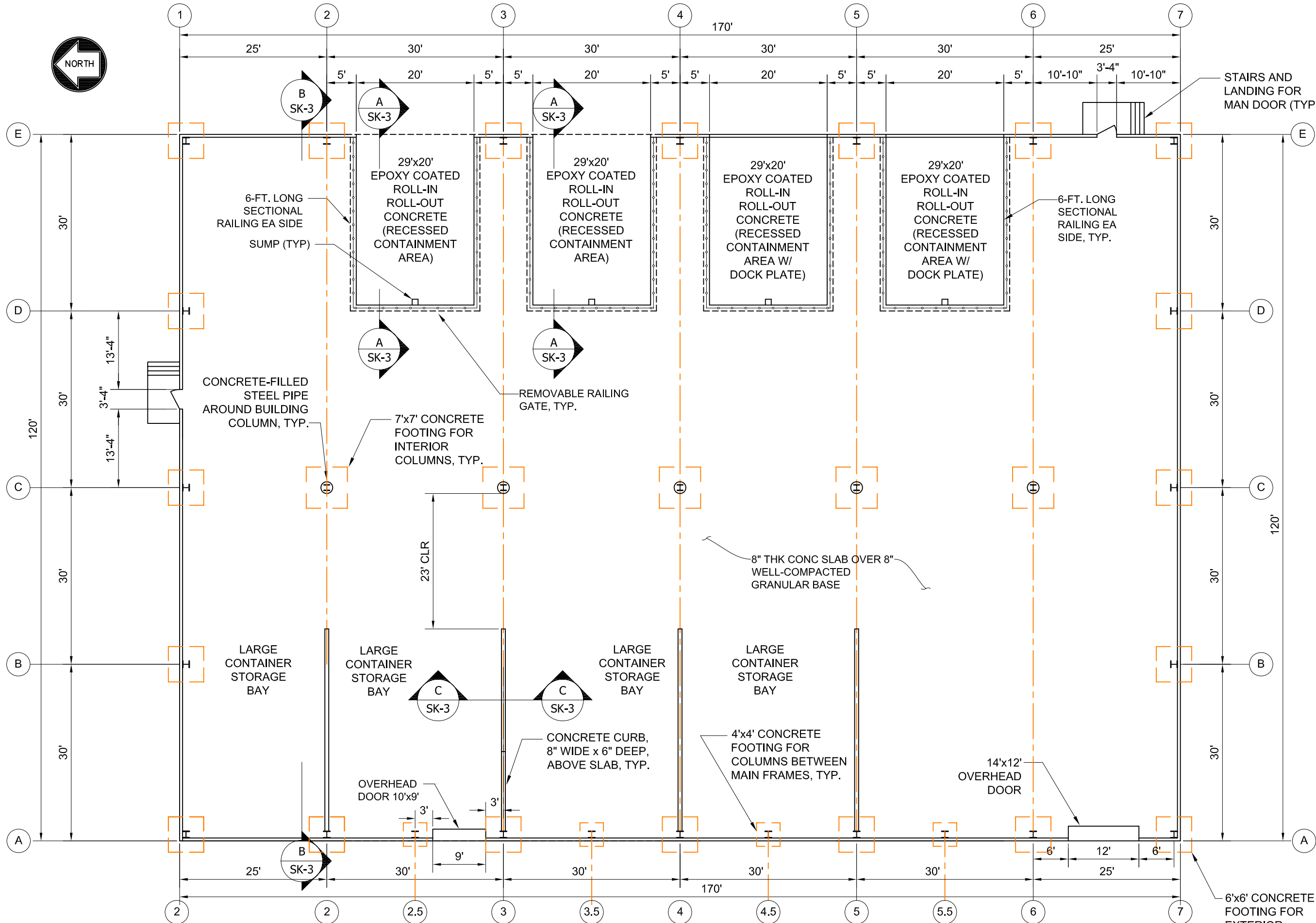
DE BUEL AVENUE (50' WIDE)

1 SITE PLAN  
SK-1

SCALE: N.T.S.

Drawn :	JEA	12/14/2012
Checked:	TMR	12/14/2012
Approved:	TMR	12/14/2012
PROJECT NUMBER	60250241	
FIGURE NUMBER	SK-1	

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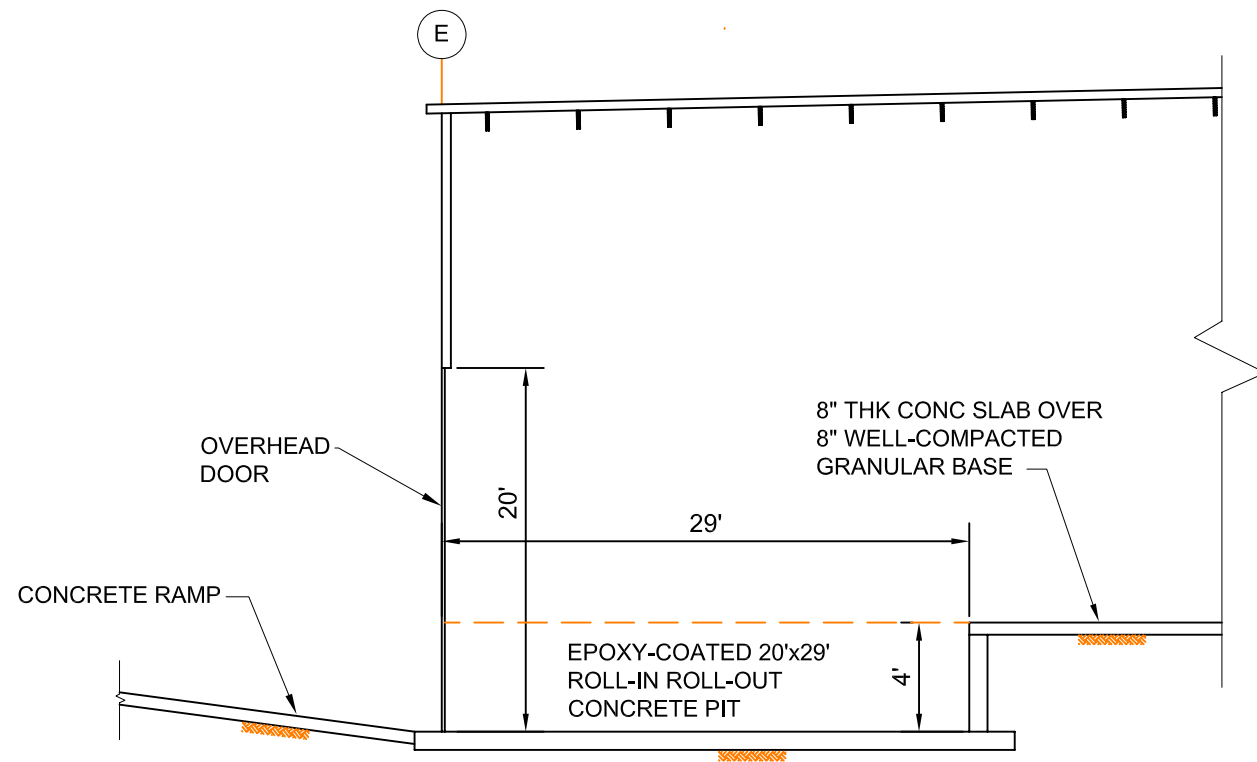


US ECOLOGY, MICHIGAN  
PROPOSED BUILDING 5A  
PLAN

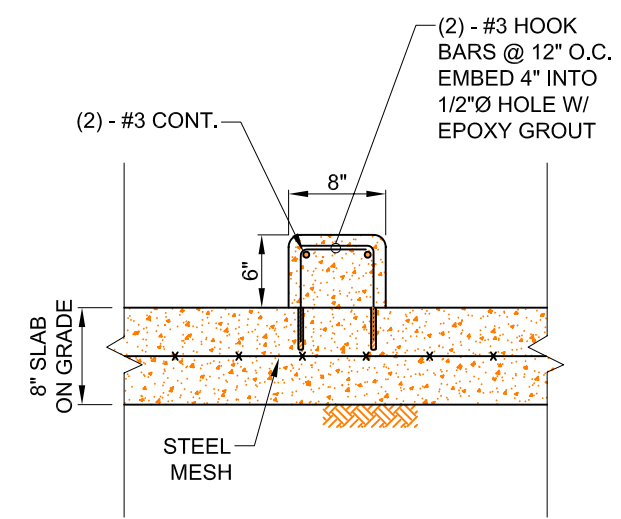
Drawn :	JEA 12/14/2012
Checked:	TMR 12/14/2012
Approved:	TMR 12/14/2012
PROJECT NUMBER	60250241
FIGURE NUMBER	SK-2

1 PLAN - BUILDING LAYOUT  
SCALE: 1/16"=1'-0"

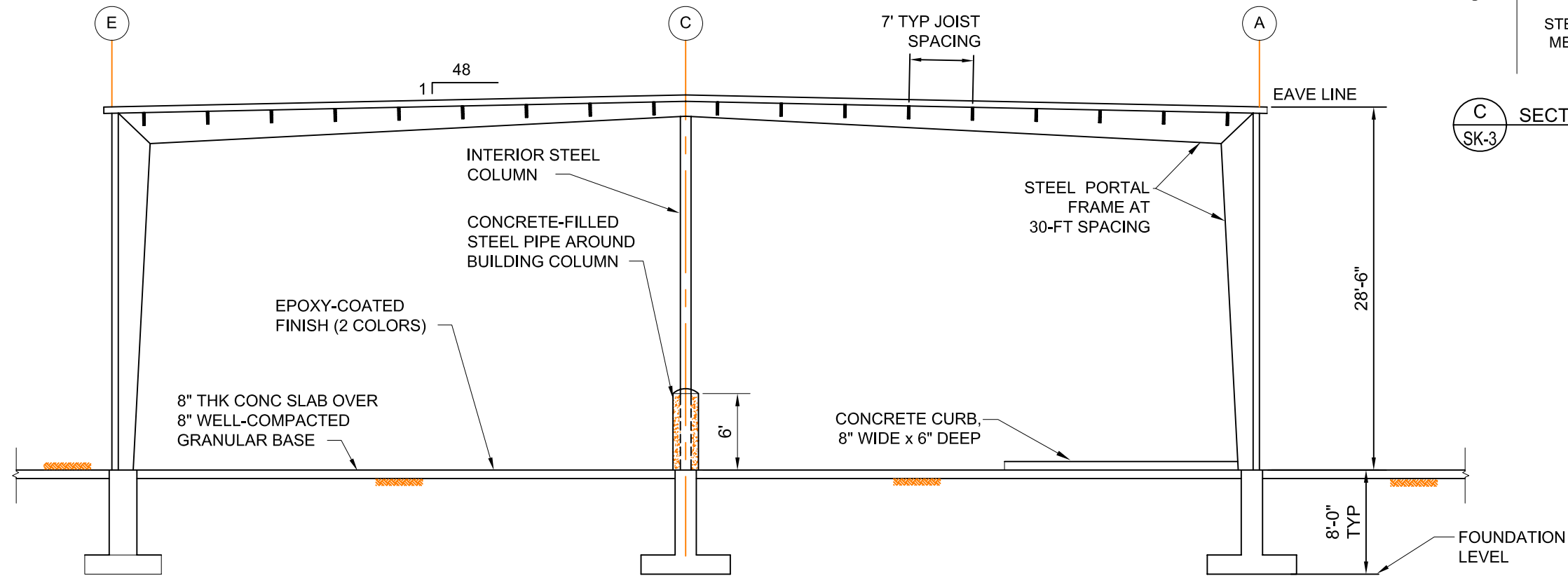
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**A** CROSS SECTION  
 SK-3 SCALE: N.T.S.



**C** SECTION TYPICAL CONCRETE CURB  
 SK-3 SCALE: N.T.S.



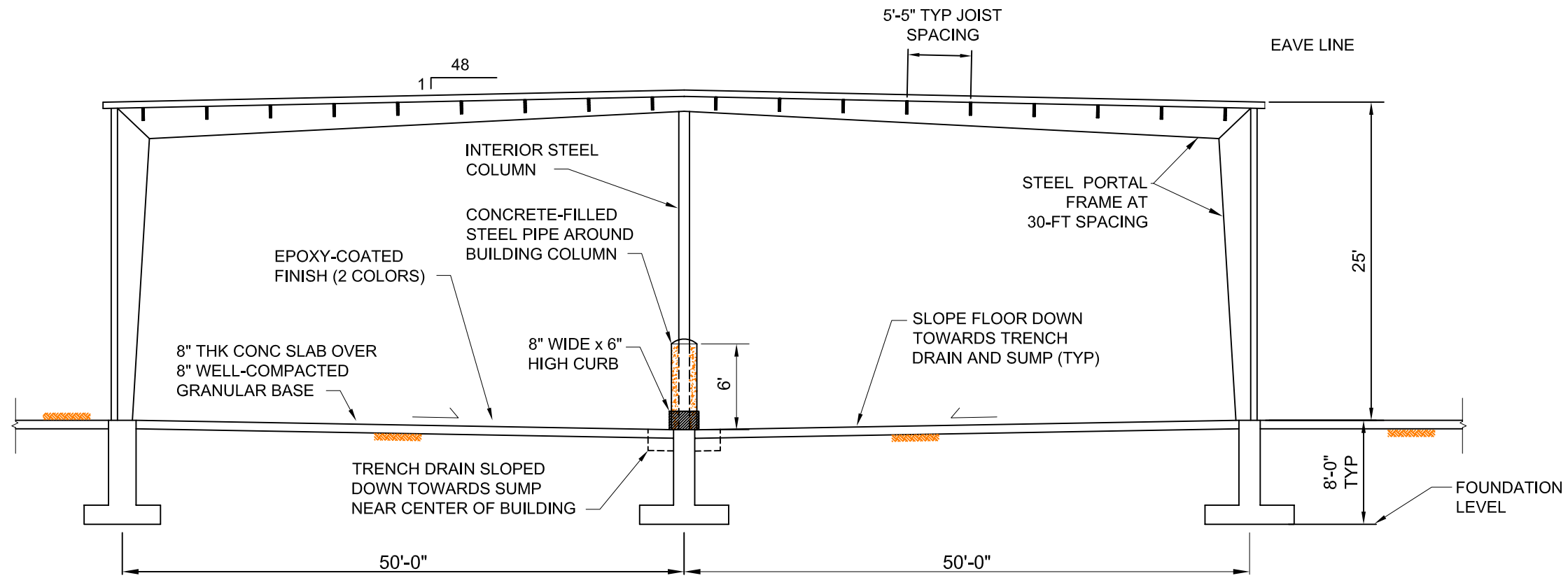
**B** CROSS SECTION  
 SK-3 SCALE: N.T.S.

US ECOLOGY, MICHIGAN  
 PROPOSED BUILDING 5A  
 SECTIONS

Drawn :	JEA	12/14/2012
Checked:	TMR	12/14/2012
Approved:	TMR	12/14/2012
PROJECT NUMBER	60250241	
FIGURE NUMBER	SK-3	

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US ECOLOGY, MICHIGAN  
 PROPOSED BUILDING 5B  
 SECTION

**A**  
 SK-4 CROSS SECTION  
 SCALE: N.T.S.

Drawn : JEA 12/14/2012

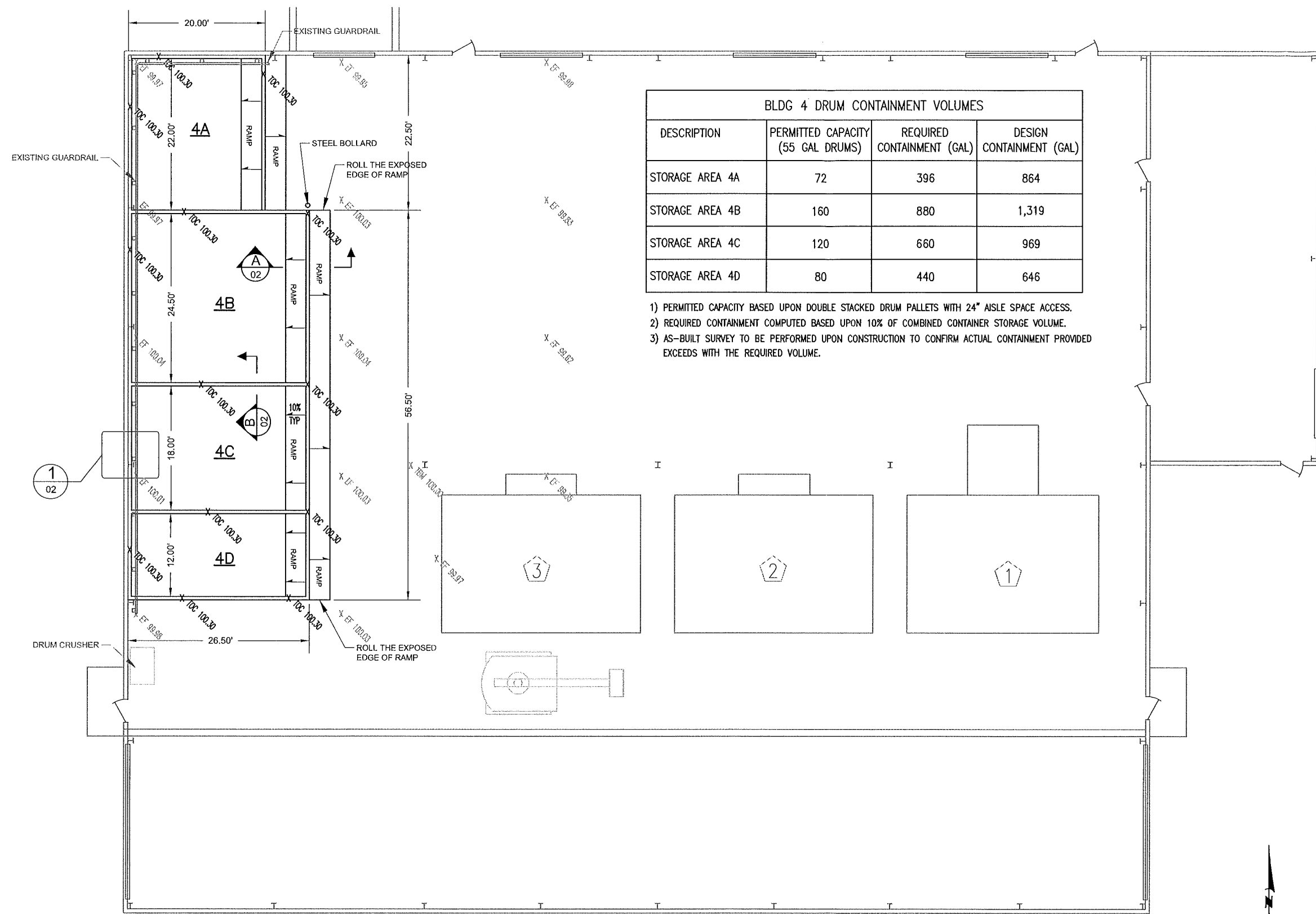
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Approved: TMR 12/14/2012

PROJECT NUMBER 60250241

FIGURE NUMBER SK-4

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BLDG 4 DRUM CONTAINMENT VOLUMES			
DESCRIPTION	PERMITTED CAPACITY (55 GAL DRUMS)	REQUIRED CONTAINMENT (GAL)	DESIGN CONTAINMENT (GAL)
STORAGE AREA 4A	72	396	864
STORAGE AREA 4B	160	880	1,319
STORAGE AREA 4C	120	660	969
STORAGE AREA 4D	80	440	646

- 1) PERMITTED CAPACITY BASED UPON DOUBLE STACKED DRUM PALLETS WITH 24" AISLE SPACE ACCESS.
- 2) REQUIRED CONTAINMENT COMPUTED BASED UPON 10% OF COMBINED CONTAINER STORAGE VOLUME.
- 3) AS-BUILT SURVEY TO BE PERFORMED UPON CONSTRUCTION TO CONFIRM ACTUAL CONTAINMENT PROVIDED EXCEEDS WITH THE REQUIRED VOLUME.

- NOTES:**
1. EXISTING CONCRETE SURFACES TO BE SCARIFIED AND CLEANED PRIOR TO CURB AND RAMP CONSTRUCTION. BLASTING MEDIA REQUIRED, OR OTHER TECHNIQUES AS APPROVED BY THE ENGINEER.
  2. APPLY BONDING AGENT TO CLEANED SURFACES PRIOR TO POURING CURBS AND RAMPS.
  3. ALL REINFORCING STEEL IS GRADE 60.
  4. CONCRETE MATERIALS REQUIRED TO ACHIEVE 4,000 PSI COMPRESSIVE STRENGTH IN 28 DAYS. APPLY CURING COMPOUND APPROPRIATE FOR WEATHER CONDITIONS.
  5. PROVIDE 3/4" X 3/4" CHAMFER ON ALL EXPOSED EDGES OF CURBS.
  6. INTERIOR PORTIONS OF STORAGE BAYS TO BE COATED WITH AN EPOXY SEAL, BY OTHERS.
  7. SURVEY MEASUREMENTS OF EXISTING CONCRETE SLAB ELEVATIONS WERE MEASURED BY USEM ON JUNE 4, 2013.
  8. DIMENSION LABELS HAVE PRECEDENCE OVER SCALED DIMENSIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

**LEGEND**

FF	EXISTING FLOOR ELEVATION
TOC	TOP OF CURB ELEVATION
TBM	TEMPORARY BENCH MARK
—	EXISTING BUILDING

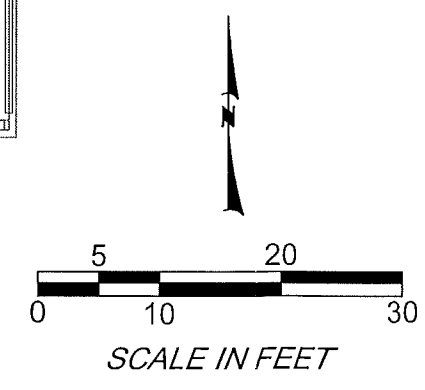
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**NOT FOR CONSTRUCTION**

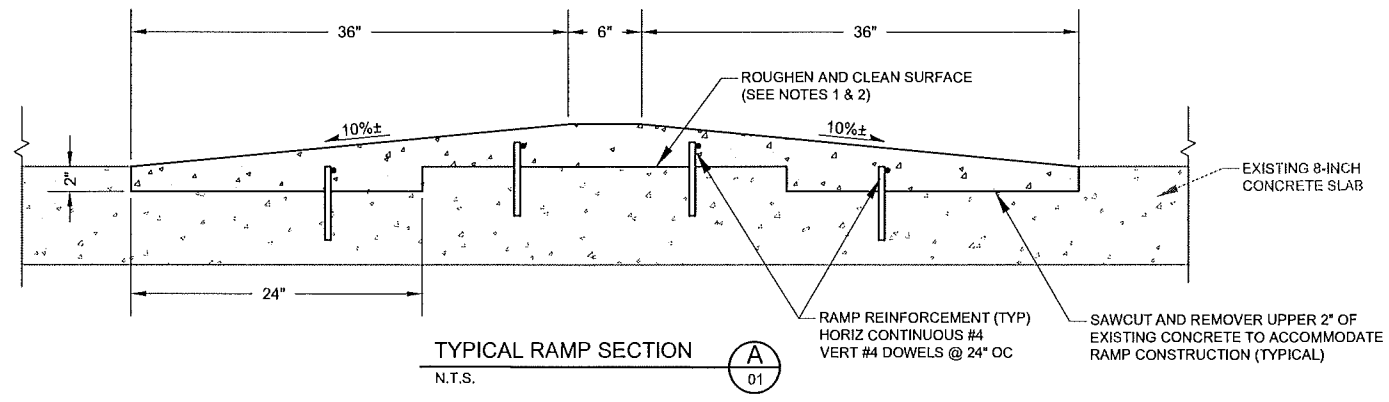
REV	DATE	BY	DESCRIPTION
A	7/24/13	VJT	INTERNAL REVIEW
B	7/31/13	VJT	REGULATORY REVIEW

**USEcology Michigan**  
6520 Georgia Street • Detroit, MI 48211  
Phone (313) 571-7140

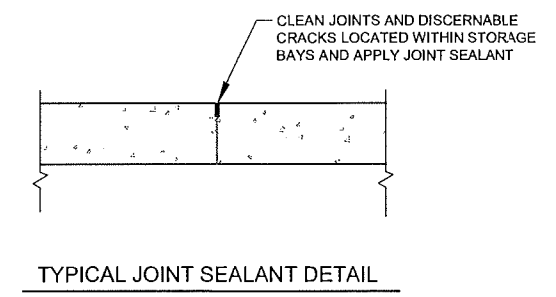
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PROJECT NAME CONTAINMENT CURBS - BUILDING 4		
BUILDING 4 PLAN VIEW		
DRAWING NUMBER CC-13-01	REV B	

**BUILDING 4 - DRUM STORAGE BAYS LAYOUT**

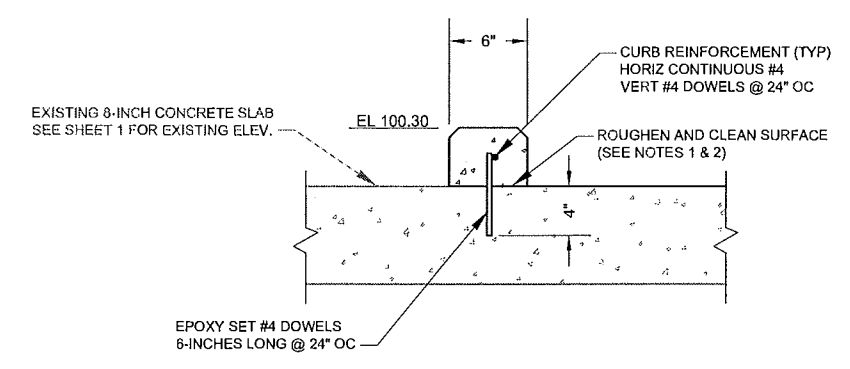




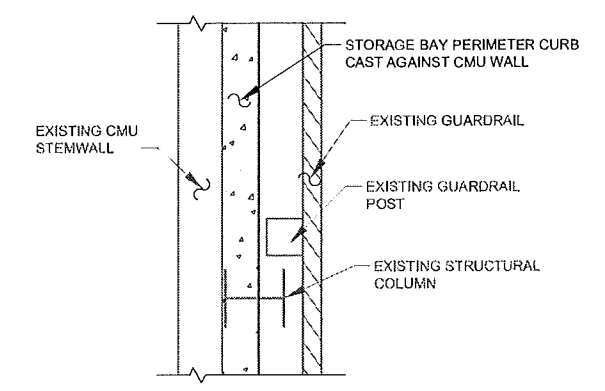
TYPICAL RAMP SECTION  
N.T.S. A  
01



TYPICAL JOINT SEALANT DETAIL



TYPICAL INTER-BAY CURB  
N.T.S. B  
01



TYPICAL PERIMETER DETAIL  
N.T.S. 1  
01

- NOTES:**
- EXISTING CONCRETE SURFACES TO BE SCARIFIED AND CLEANED PRIOR TO CURB AND RAMP CONSTRUCTION. BLASTING MEDIA REQUIRED, OR OTHER TECHNIQUES AS APPROVED BY THE ENGINEER.
  - APPLY BONDING AGENT TO CLEANED SURFACES PRIOR TO POURING CURBS AND RAMP.
  - ALL REINFORCING STEEL IS GRADE 60.
  - CONCRETE MATERIALS REQUIRED TO ACHIEVE 4,000 PSI COMPRESSIVE STRENGTH IN 28 DAYS. APPLY CURING COMPOUND APPROPRIATE FOR WEATHER CONDITIONS.
  - PROVIDE 3/4" X 3/4" CHAMFER ON ALL EXPOSED EDGES OF CURBS.
  - INTERIOR PORTIONS STORAGE BAYS TO BE COATED WITH AN EPOXY SEAL, BY OTHERS.
  - SURVEY MEASUREMENTS OF EXISTING CONCRETE SLAB ELEVATIONS WERE MEASURED BY USEM ON JUNE 4, 2013.
  - DIMENSION LABELS HAVE PRECEDENCE OVER SCALED DIMENSIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

DRAFT  
NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION
A	7/24/13	VJT	INTERNAL REVIEW
B	7/31/13	VJT	REGULATORY REVIEW

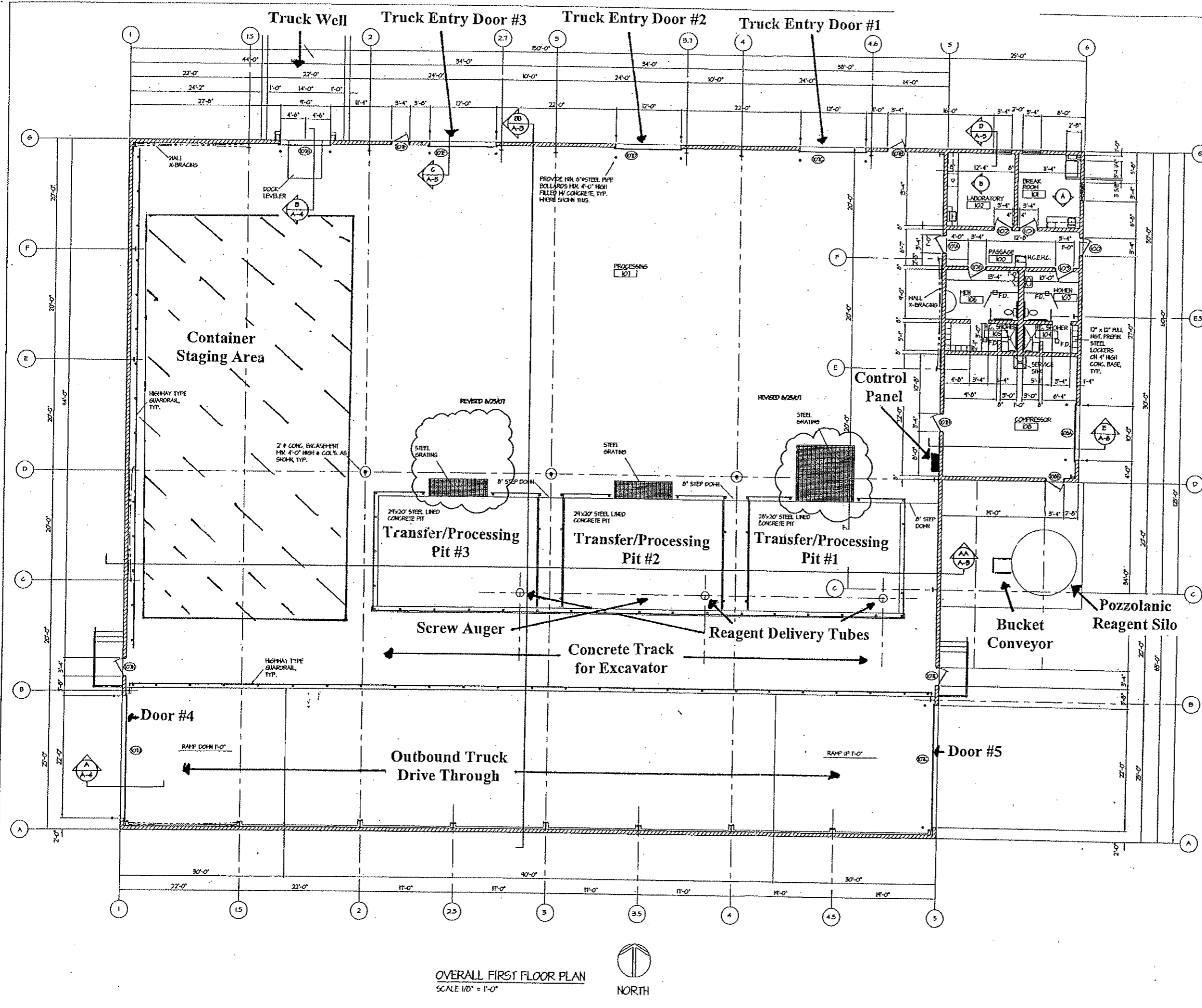
**USEcology Michigan**  
6520 Georgia Street • Detroit, MI 48211  
Phone (313) 571-7140

DRAWN BY VJT	CHECKED BY	PROJECT NUMBER 2013-D012
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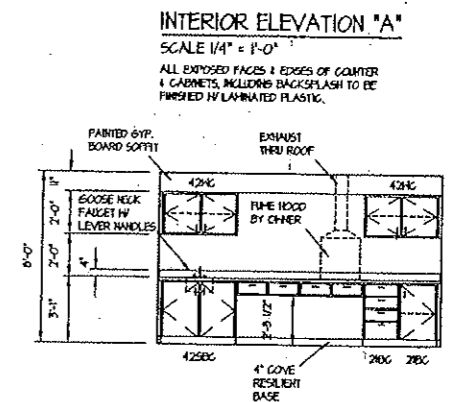
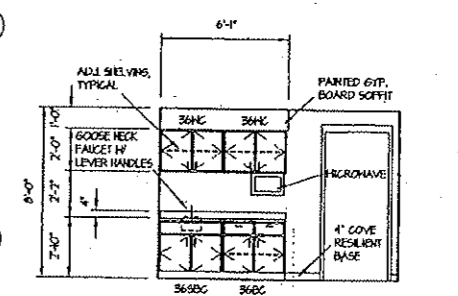
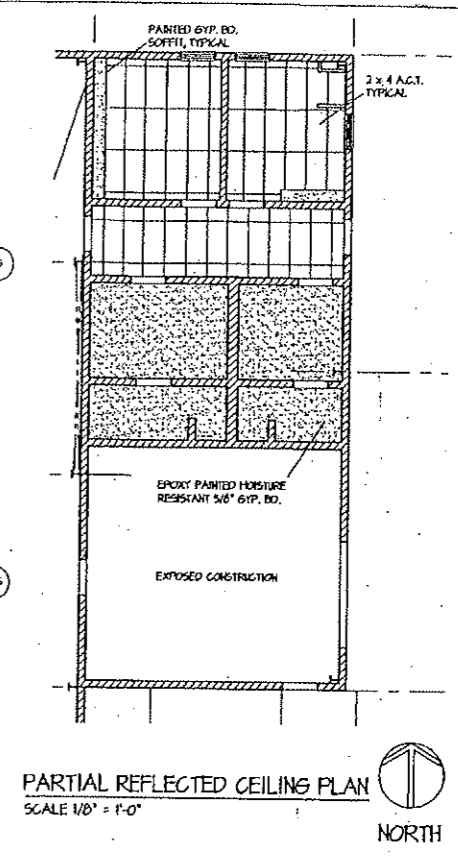
PROJECT NAME CONTAINMENT CURBS - BUILDING 4

SECTIONS AND DETAILS

DRAWING NUMBER CC-13-02	REV B
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OVERALL FIRST FLOOR PLAN  
SCALE 1/8" = 1'-0"  
NORTH



INTERIOR ELEVATION "A"  
SCALE 1/4" = 1'-0"  
ALL EXPOSED FACES & EDGES OF COUNTER & CABINETS, INCLUDING BACKSPASH TO BE FINISHED IN LAMINATED PLASTIC.

INTERIOR ELEVATION "B"  
SCALE 1/4" = 1'-0"  
ALL EXPOSED FACES & EDGES OF CABINETS TO BE FINISHED IN LAMINATED PLASTIC. (VERIFY IN OTHER IF CORROSION RESISTANT COUNTERTOP & BACKSPASH ARE USED) IF NOT, FINISH COUNTER & BACKSPASH W/ LAM. PLASTIC.

PAUL H. RICCA, ARCHITECT  
3400 Lakeshore Road  
Ann Arbor, MI 48106  
Tel: 313-384-9500  
Fax: 313-384-9505

MCCATTY INCORPORATED  
CONSULTING ENGINEER  
2355 GAYLARD ROAD  
FERRISVILLE, MICHIGAN 48220  
PHONE: 313-348-1010 FAX: 313-348-1030

improvements to:  
**DYNECOL, INC.**  
6520 Georgist Street  
Detroit, Michigan

ISSUED FOR:  
revisions:   
construction:   
record:   
revisions:

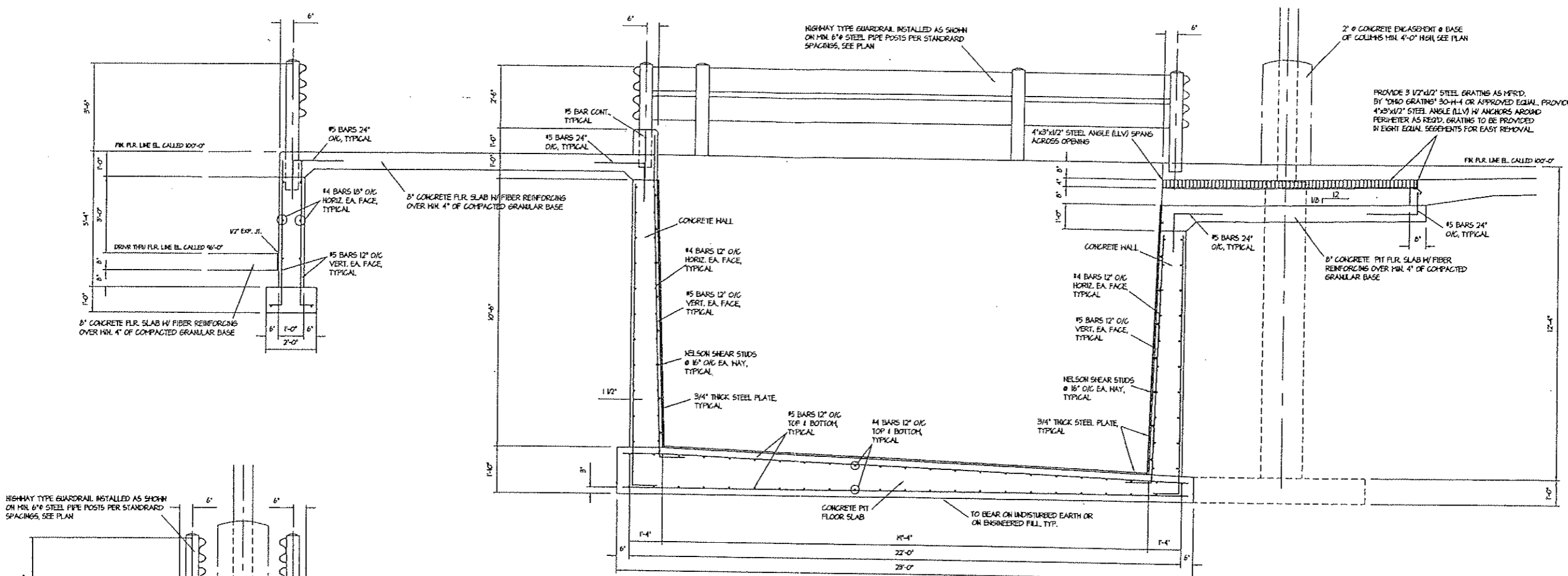
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REVISIONS 01/25/07  
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drawn by:  
checked by:  
approved by:  
date:  
project:  
drawing:

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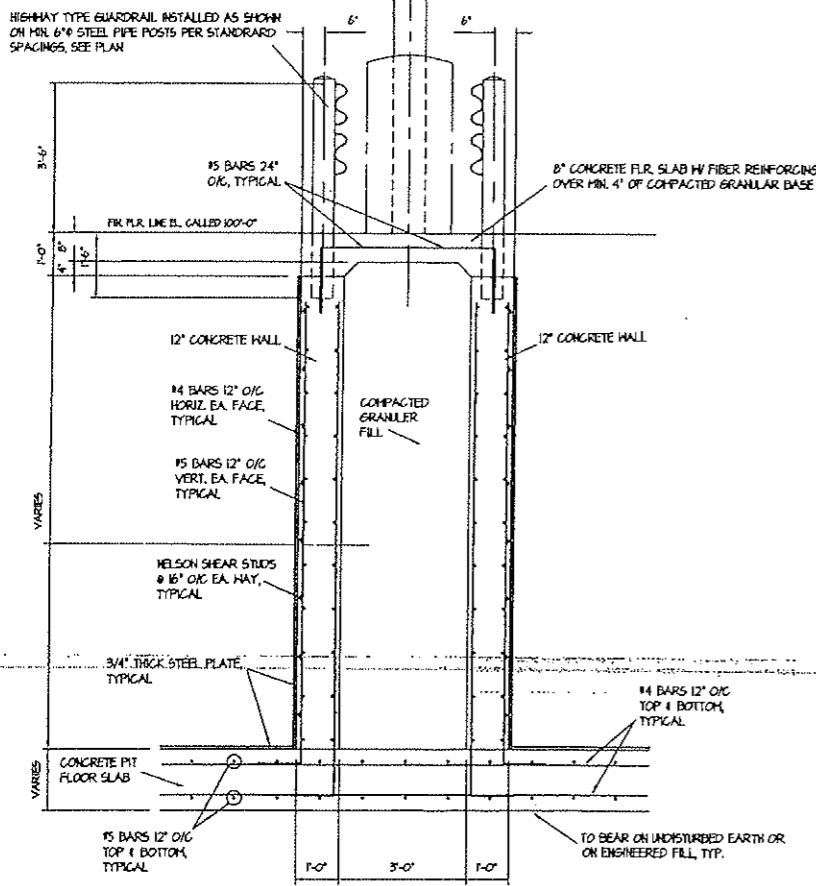
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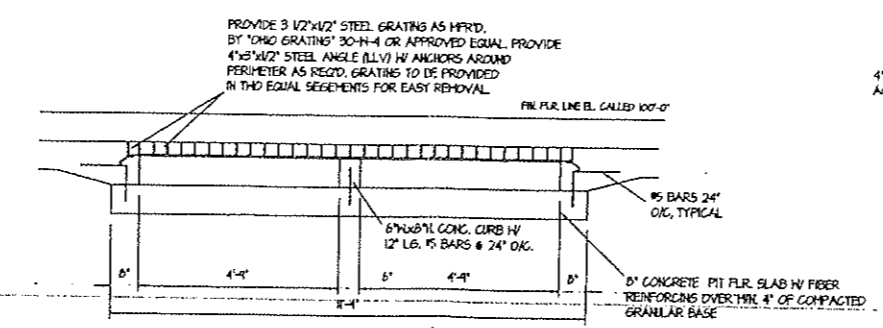
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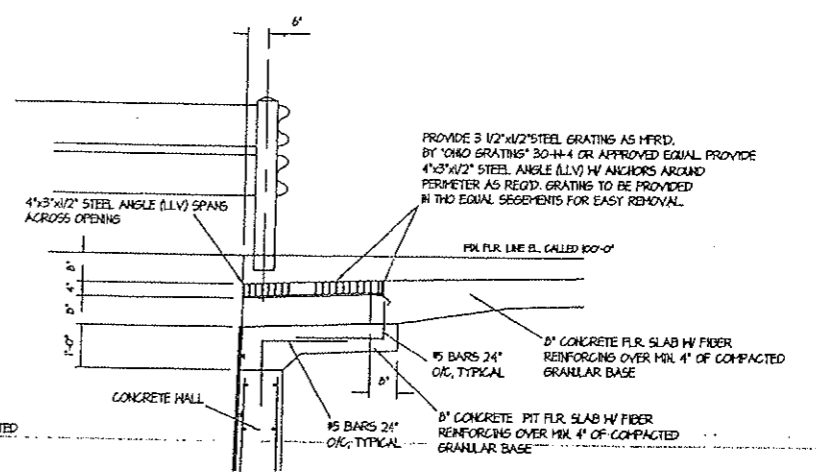
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SCALE 1/2" = 1'-0"



SECTION 2  
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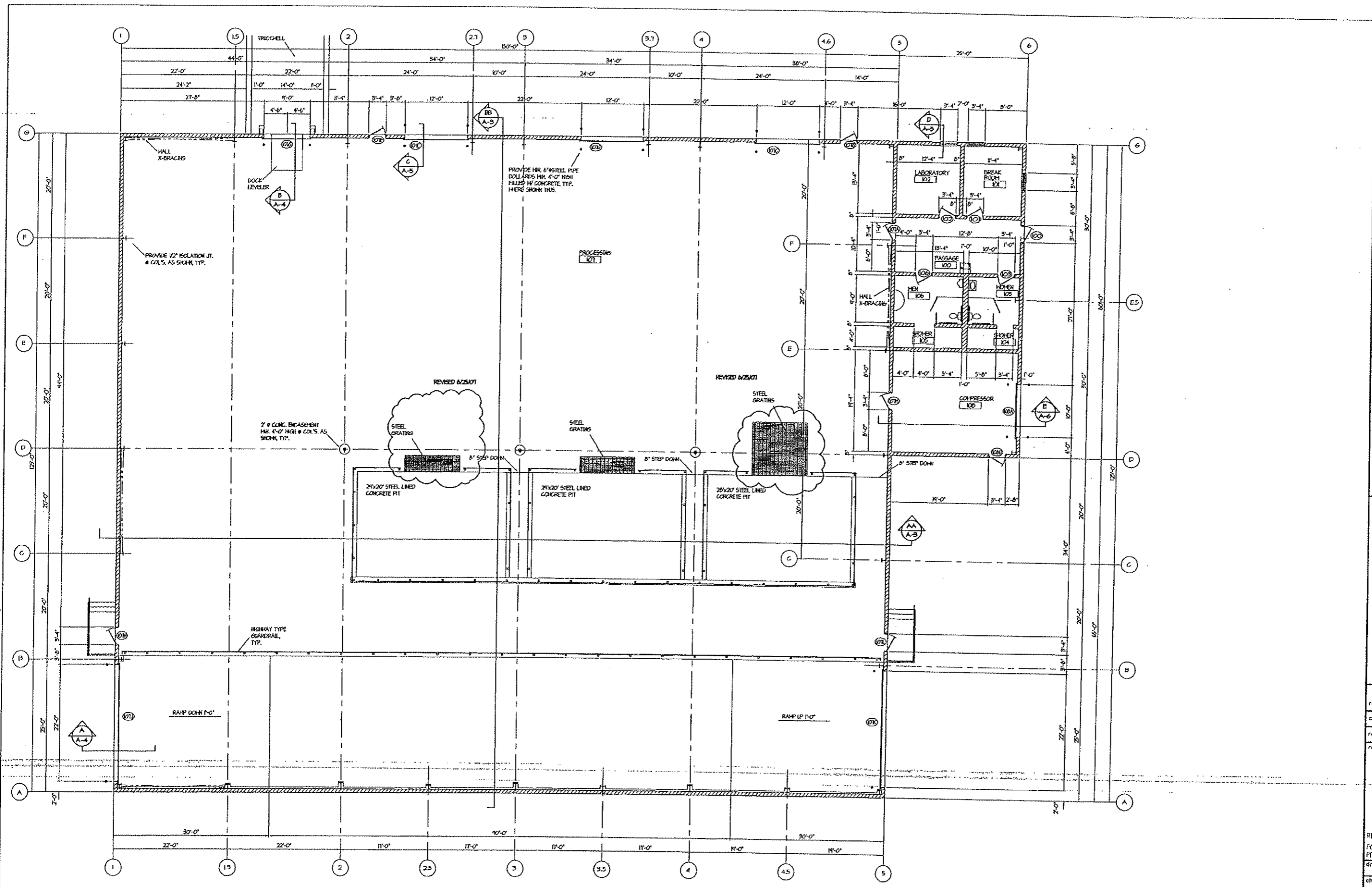


SECTION 3  
SCALE 1/2" = 1'-0"



SECTION 4  
SCALE 1/2" = 1'-0"

*Mcco*



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



FAM M. RICCA, ARCHITECTS  
3400 LUDWIG ROAD  
FORT GROVE, MI 48024  
TEL: 810-985-4502  
FAX: 810-985-4503

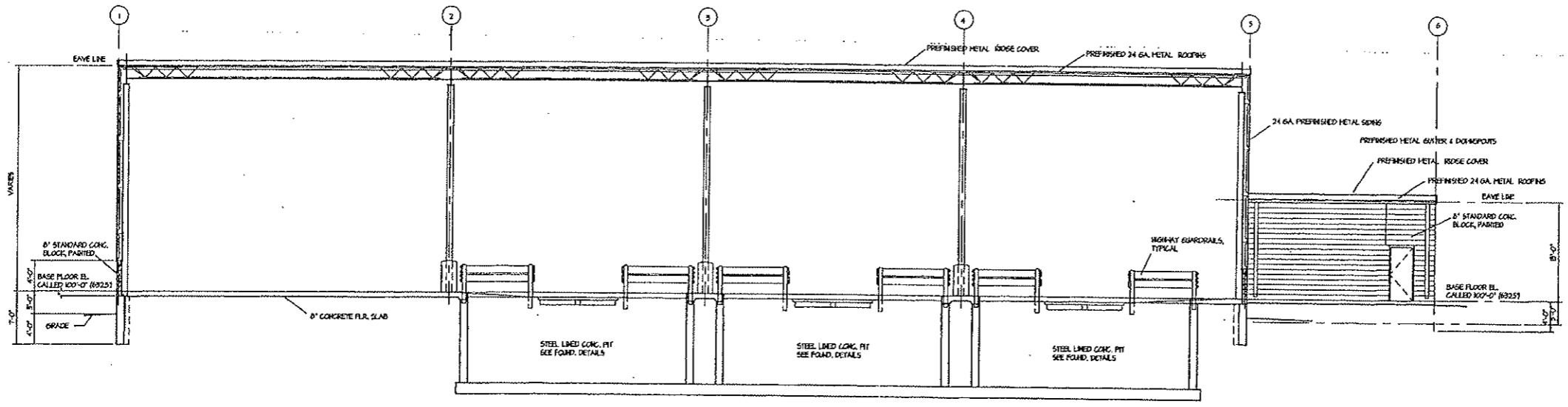
MCCATTY INCORPORATED  
CONSTRUCTION CONSULTING DESIGN DEVELOPMENT  
2355 CHAYKIN ROAD  
FARMVILLE, MICHIGAN 48220  
PHONE: 248-348-1910 FAX: 248-348-1020

IMPROVEMENTS TO:  
**DYNECOL, INC.**  
6520 GEORGIA STREET  
DETROIT, MICHIGAN

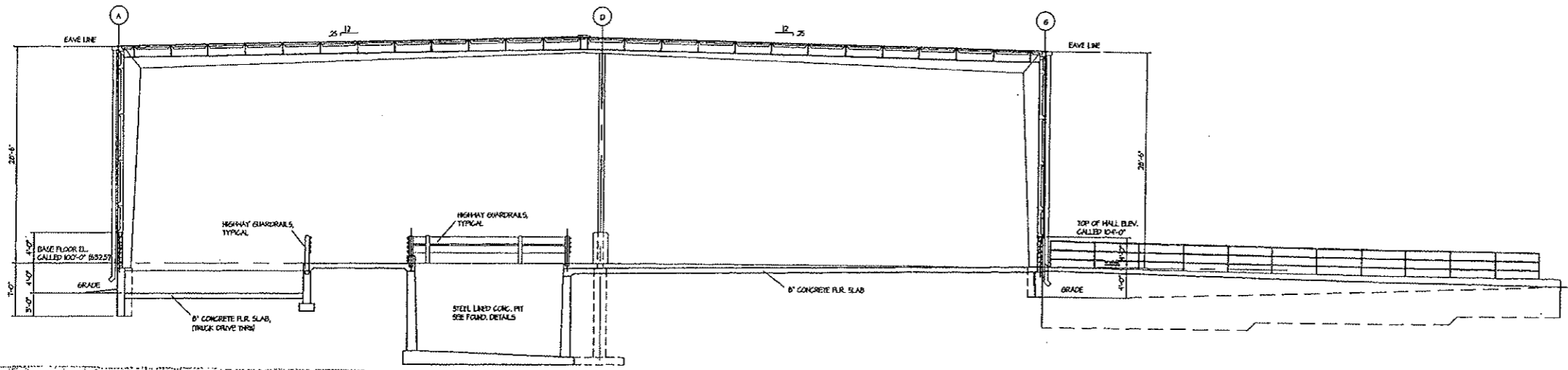
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 record:   
 revisions:

REVISED 6/25/01  
 FOUNDATION PERMITS 6/4/01  
 drawn by:  
 checked by:  
 approved by:  
 date:  
 project:  
 drawing:

A-1



CROSS SECTION  
SCALE 1/8" = 1'-0"  
AA  
A-1



CROSS SECTION  
SCALE 1/8" = 1'-0"  
BB  
A-1

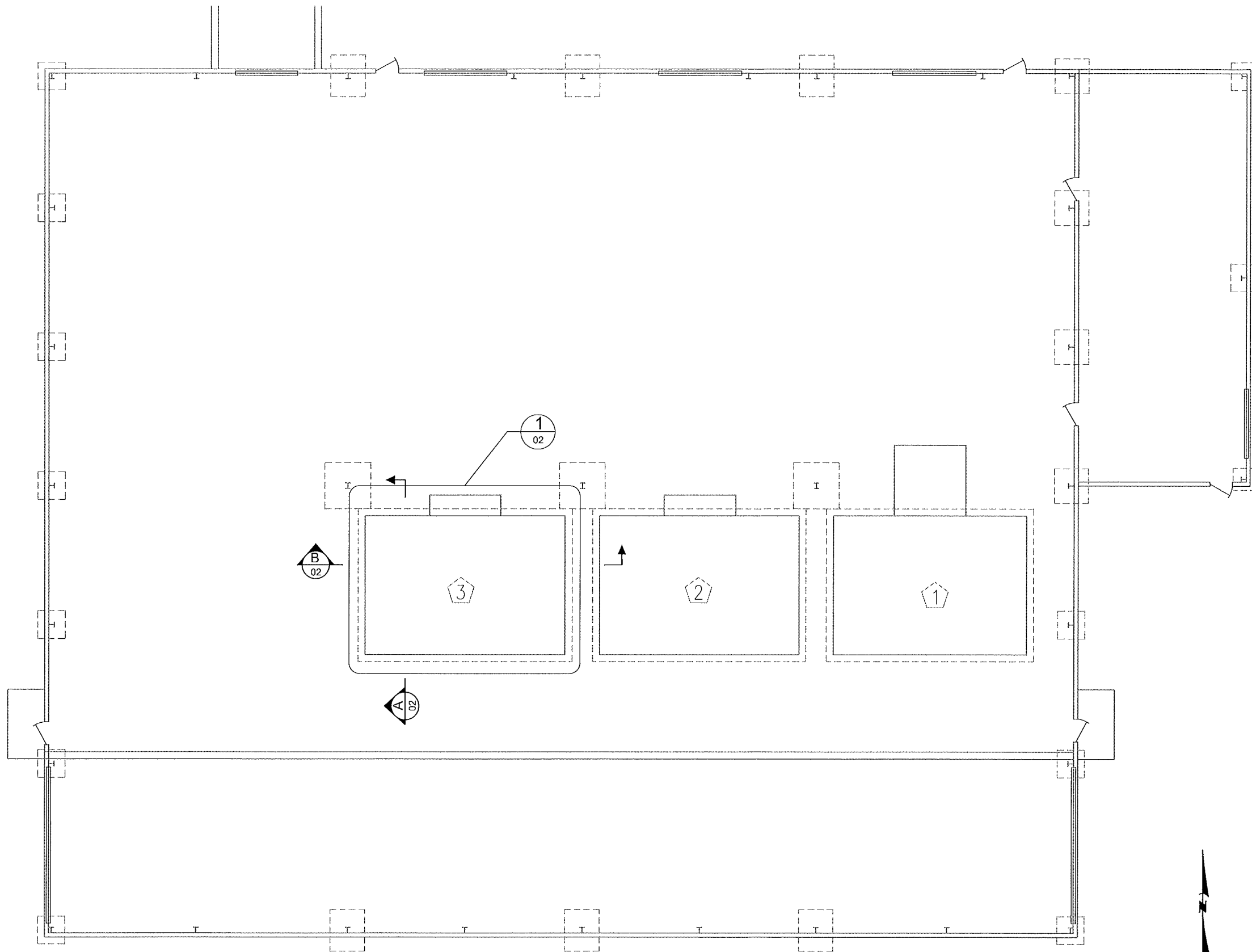
FALL N. RICCA, ARCHITECT  
2400 UNIVERSITY ROAD  
PORT GORDON, MI 48054  
PHONE: 313-385-8502  
FAX: 313-385-8505

MCCATTY INCORPORATED  
CONSTRUCTION CONSULTING DESIGN DEVELOPMENT  
2355 BRAYDON ROAD #4220  
FARMVILLE, MICHIGAN 48720  
PHONE: 248-545-1010 FAX: 248-545-1020

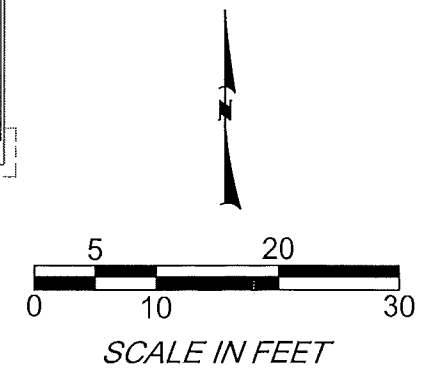
IMPROVEMENTS, INC.  
DYNACOL, INC.  
8520 GEORGIA STREET  
DETROIT, MICHIGAN

ISSUED FOR:  
revisions:   
construction:   
record:   
revisions:

ISSUED 6/25/01  
drawn by:  
checked by:  
approved by:  
date:  
project:  
drawing:  
A-3



**BUILDING 4 - EXISTING LAYOUT**



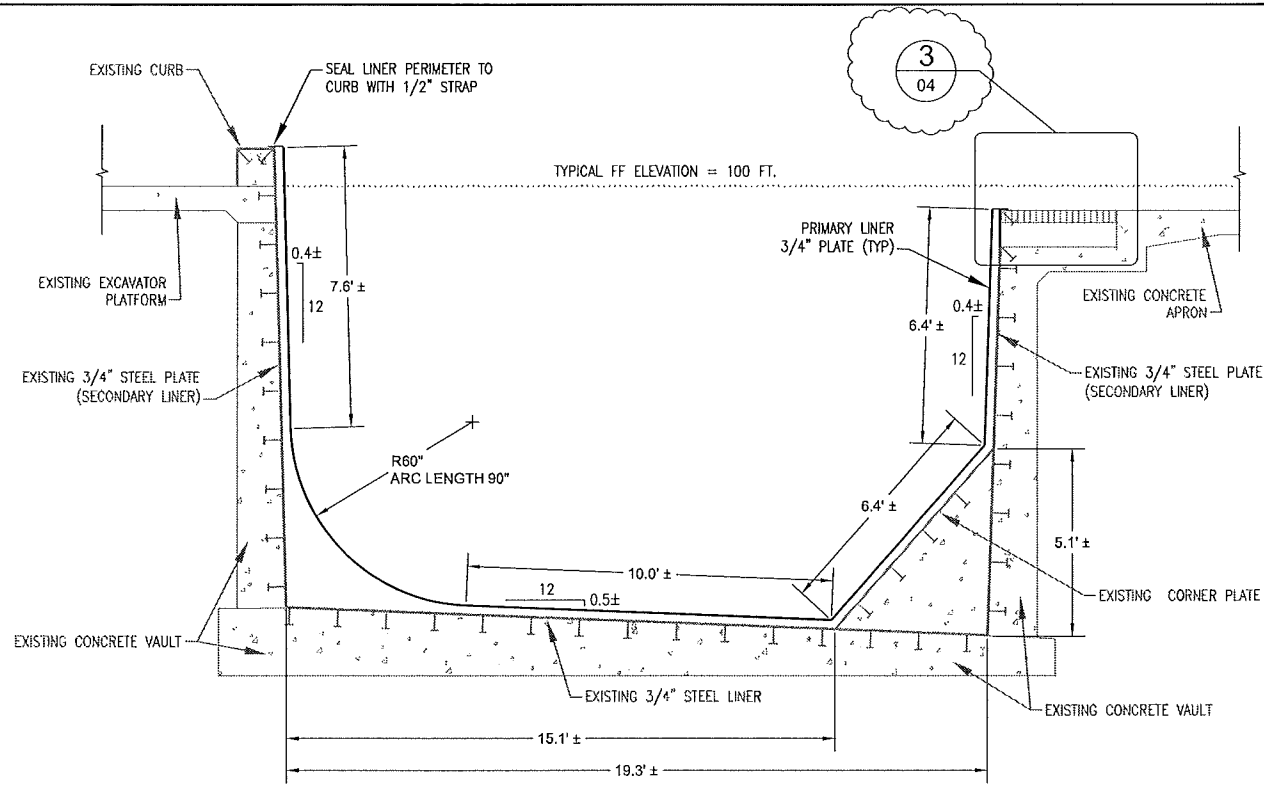
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**NOT FOR CONSTRUCTION**

REV	DATE	BY	DESCRIPTION
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B	7/18/13	VJT	REGULATORY REVIEW

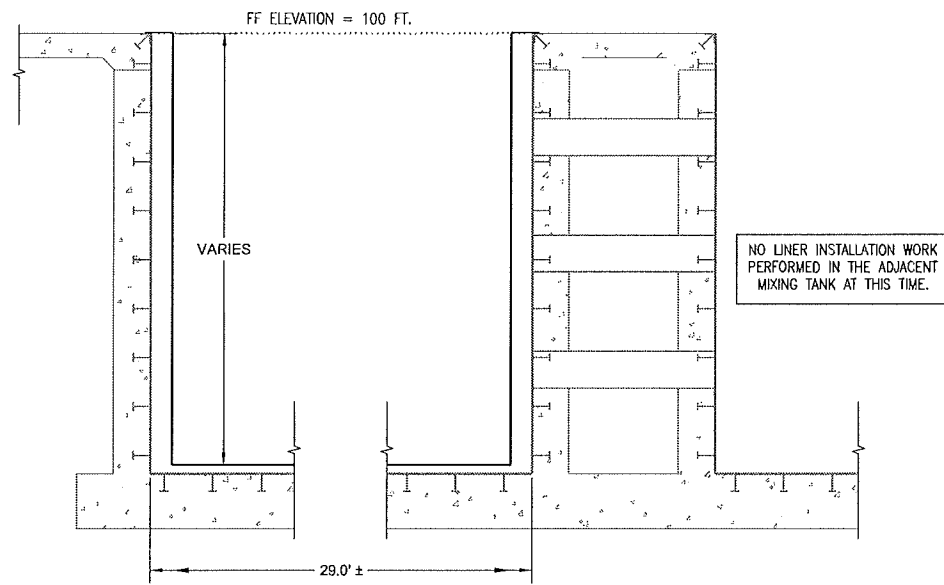
**USEcology Michigan**  
6520 Georgia Street • Detroit, MI 48211  
Phone (313) 571-7140

DRAWN BY VJT	CHECKED BY	PROJECT NUMBER 2013-D012
PROJECT NAME LINER INSTALLATION - MIXING TANK 3		
BUILDING 4 PLAN VIEW		
DRAWING NUMBER TL-13-01	REV B	



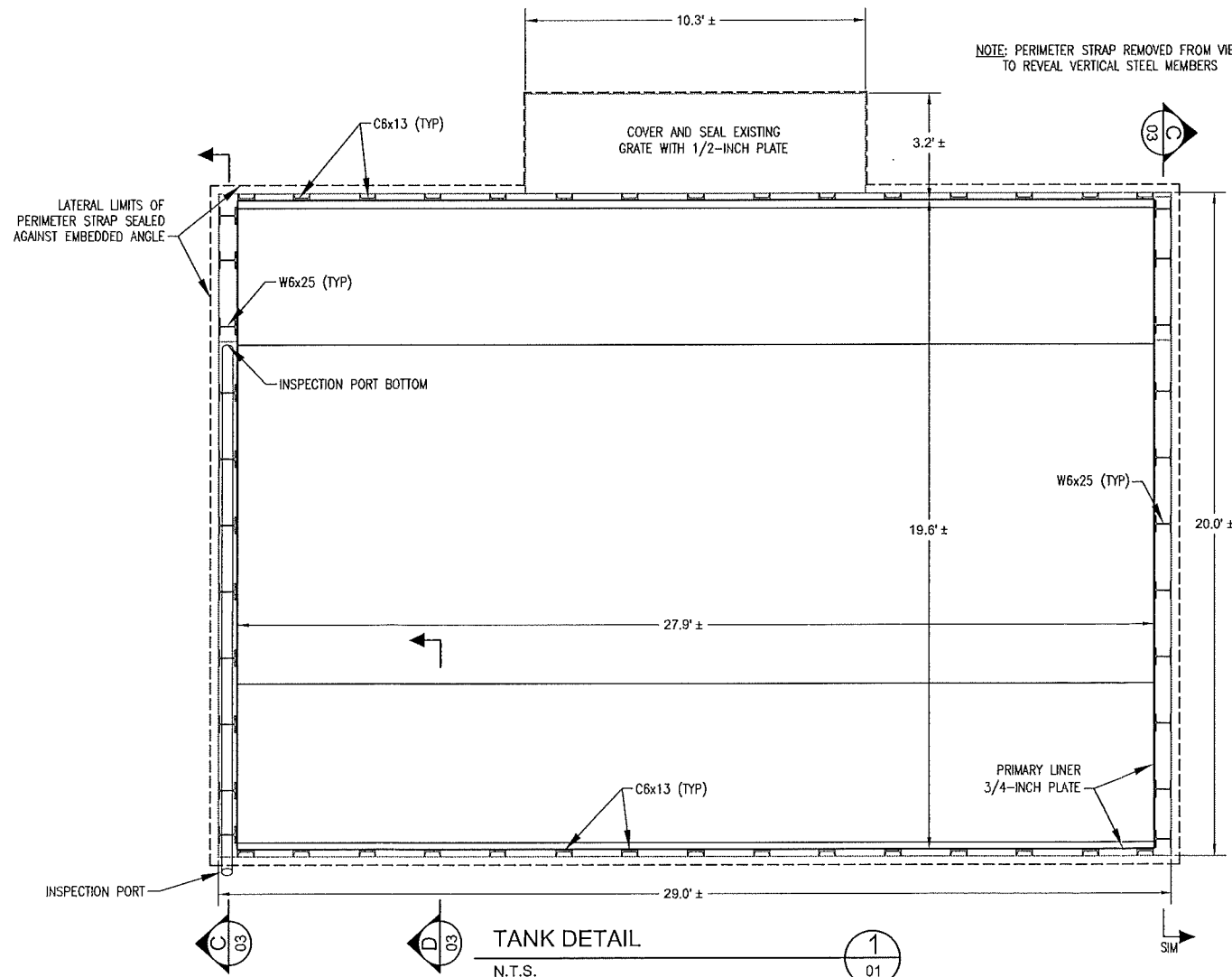


TANK SECTION N-S  
N.T.S. A  
01



TANK SECTION E-W  
N.T.S. A  
01

WASTE CAPACITY – MIXING TANK A	
FEATURE	WASTE CAPACITY (gal)
ULTIMATE CAPACITY (zero freeboard)	40,500
WORKING CAPACITY (2 ft freeboard)	32,100



TANK DETAIL  
N.T.S. 1  
01

**NOTES:**

1. ALL DIMENSIONS WHICH ARE NOTATED WITH '±' ARE APPROXIMATE AND MUST BE CONFIRMED BASED UPON MEASUREMENTS OBTAINED IN THE FIELD FROM THE RESPECTIVE TANK.
2. ALL LINER COMPONENTS TO CONSIST OF A36 MILD STEEL UNLESS OTHERWISE SPECIFIED.
3. LEAK TEST TO BE PERFORMED ON THE SECONDARY LINER BY THE OWNER PRIOR TO INSTALLATION OF THE PRIMARY LINER. RETAIN, PROTECT, AND REPAIR THE SECONDARY LINER AS NEEDED.
4. ALL VERTICAL PERIMETER FRAMING COMPONENTS MUST BE TERMINATED 2 INCHES ABOVE THE EXISTING FLOOR. FRAMING COMPONENTS LOCATED ALONG THE FLOOR SHOULD ALSO MAINTAIN AT LEAST 2 INCHES OF CLEARANCE ALONG TERMINAL ENDS TO PROMOTE UNIMPEDED LATERAL DRAINAGE TOWARDS THE INSPECTION PORTS.
5. FRAMING AND LINER COMPONENTS TO BE SHOP FABRICATED FOR FIELD INSTALLATION.
6. ALL WELDING SHALL CONFORM TO APPLICABLE AWS CODES. AWS VISUAL INSPECTION METHODS WILL BE USED TO VERIFY WELD QUALITY.
7. FULL PENETRATION WELDS ARE REQUIRED FOR THE 3/4-INCH PRIMARY LINER CONNECTIONS. SHOP DRAWINGS OF PRIMARY LINER COMPONENTS TO BE DETAILED WITH PROPOSED WELDING CALLOUTS AND SUBMITTED FOR APPROVAL BY THE ENGINEER PRIOR TO COMMENCEMENT OF FABRICATION.

**DRAFT**

**NOT FOR CONSTRUCTION**

REV	DATE	BY	DESCRIPTION
A	8/19/13	VJT	INTERNAL REVIEW
B	7/18/13	VJT	REGULATORY REVIEW
C	7/24/13	VJT	DRAIN GATE DETAIL

**USEcology Michigan**

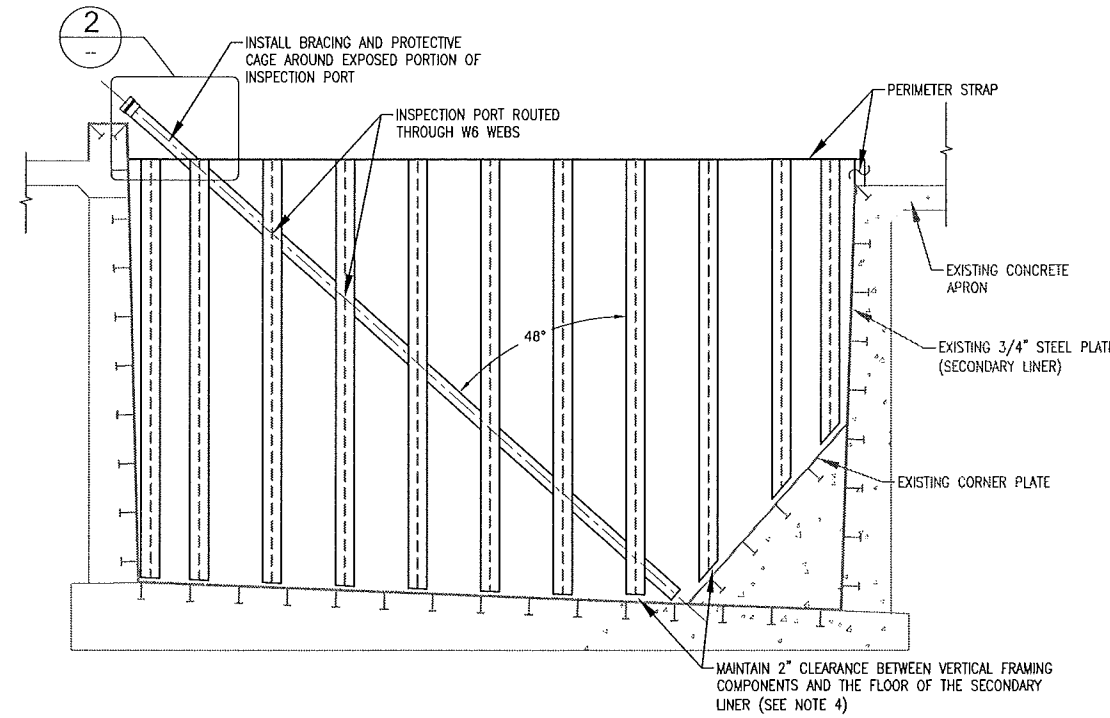
6520 Georgia Street • Detroit, MI 48211  
Phone (313) 571-7140

DRAWN BY VJT	CHECKED BY	PROJECT NUMBER 2013-D012
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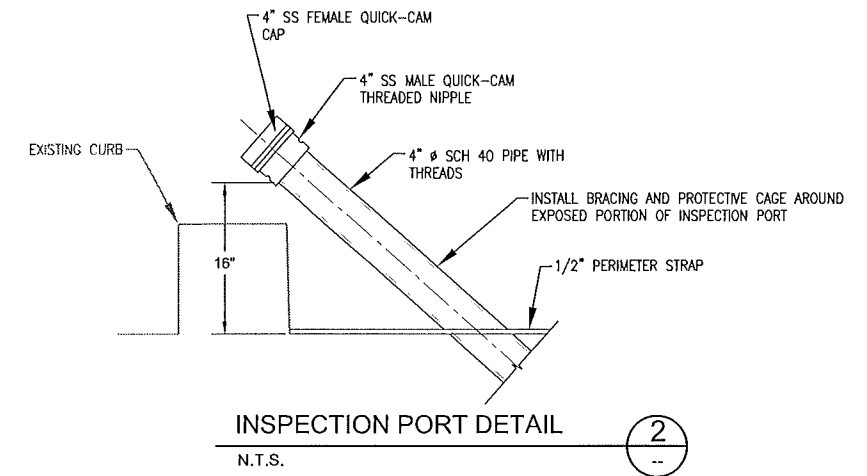
PROJECT NAME  
LINER INSTALLATION – MIXING TANK 3

PRIMARY STEEL LINER  
SECTIONS AND DETAILS

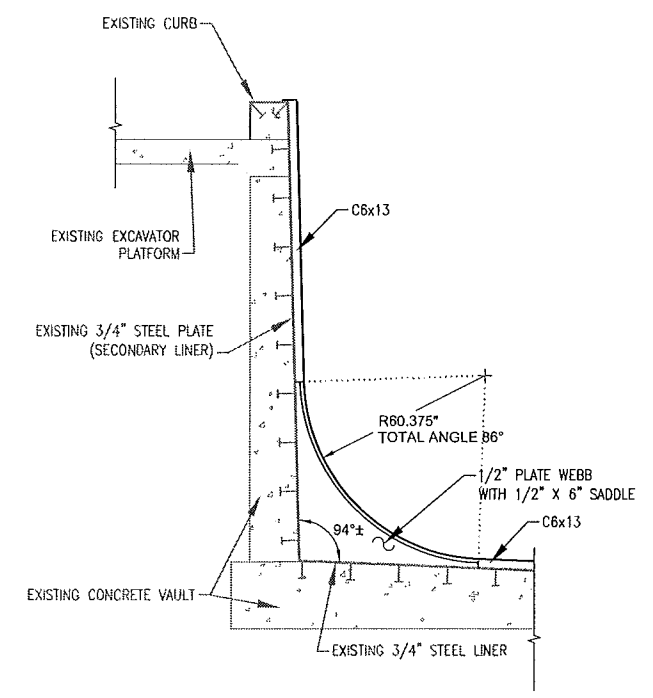
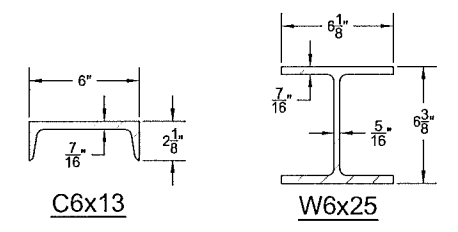
DRAWING NUMBER TL-13-02	REV C
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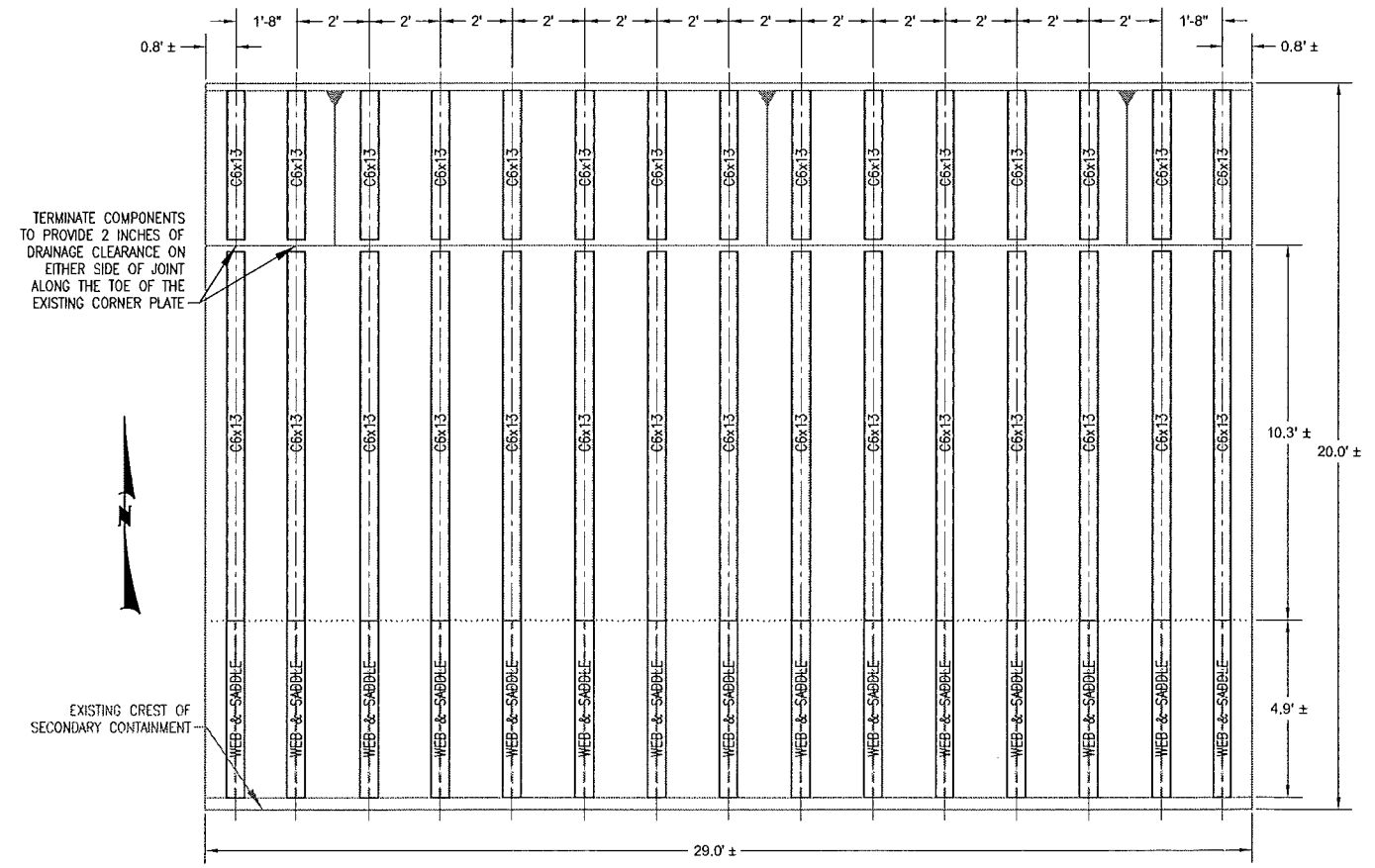
INSPECTION PORT SECTION  
N.T.S. (C) 02



INSPECTION PORT DETAIL  
N.T.S. (2)



WEBB RADIUS SECTION  
N.T.S. (D) 02



FRAMING PLAN - FLOOR PLAN VIEW

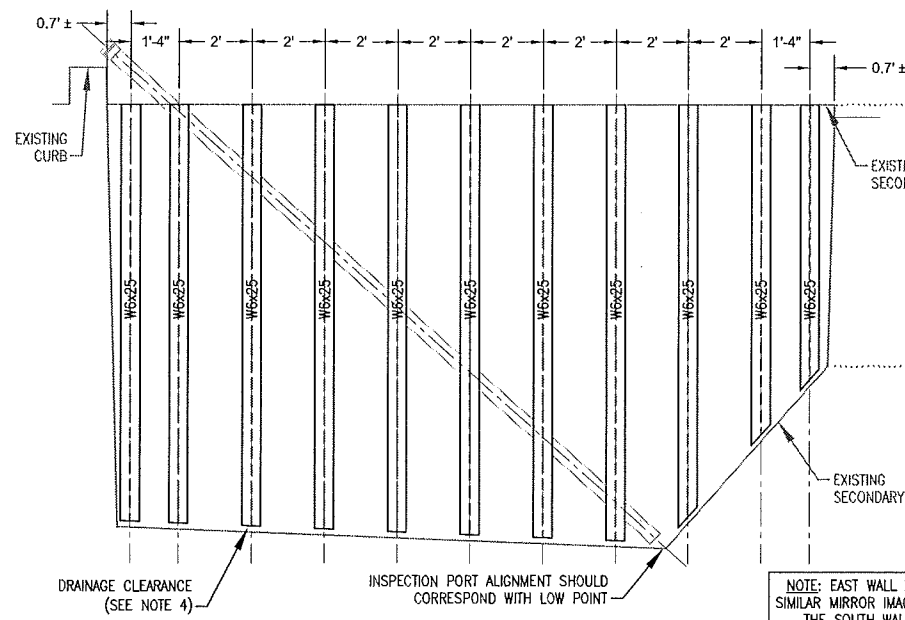
- NOTES:**
1. ALL DIMENSIONS WHICH ARE NOTATED WITH '±' ARE APPROXIMATE AND MUST BE CONFIRMED BASED UPON MEASUREMENTS OBTAINED IN THE FIELD FROM THE RESPECTIVE TANK.
  2. ALL LINER COMPONENTS TO CONSIST OF A36 MILD STEEL UNLESS OTHERWISE SPECIFIED.
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**DRAFT**  
**NOT FOR CONSTRUCTION**

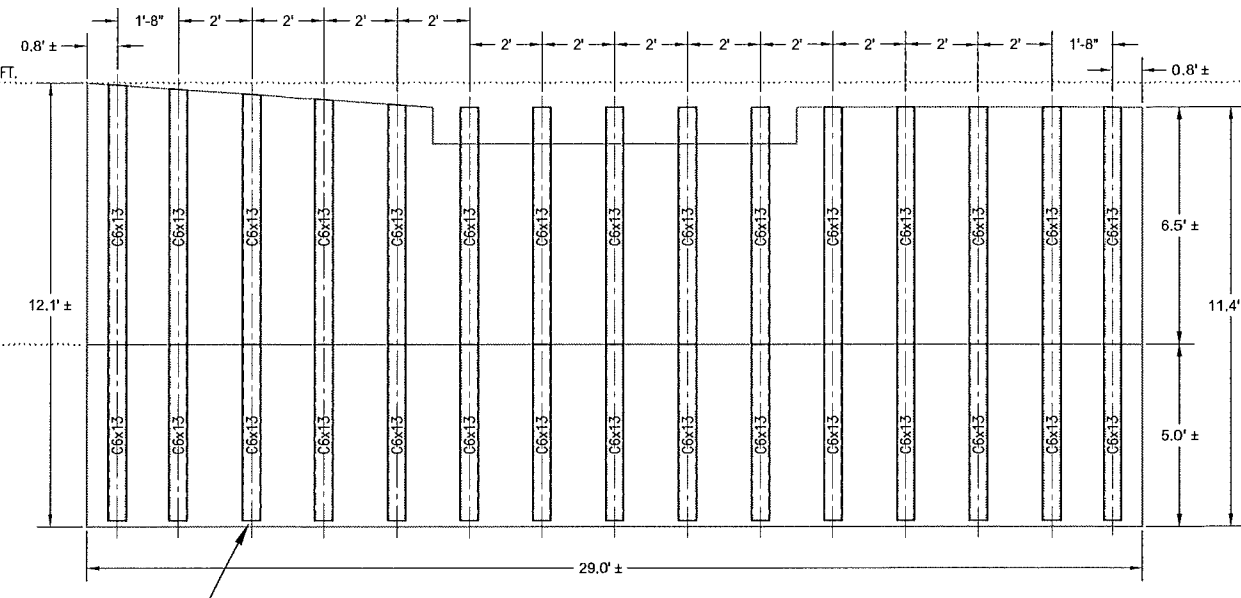
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B	7/18/13	VJT	REGULATORY REVIEW

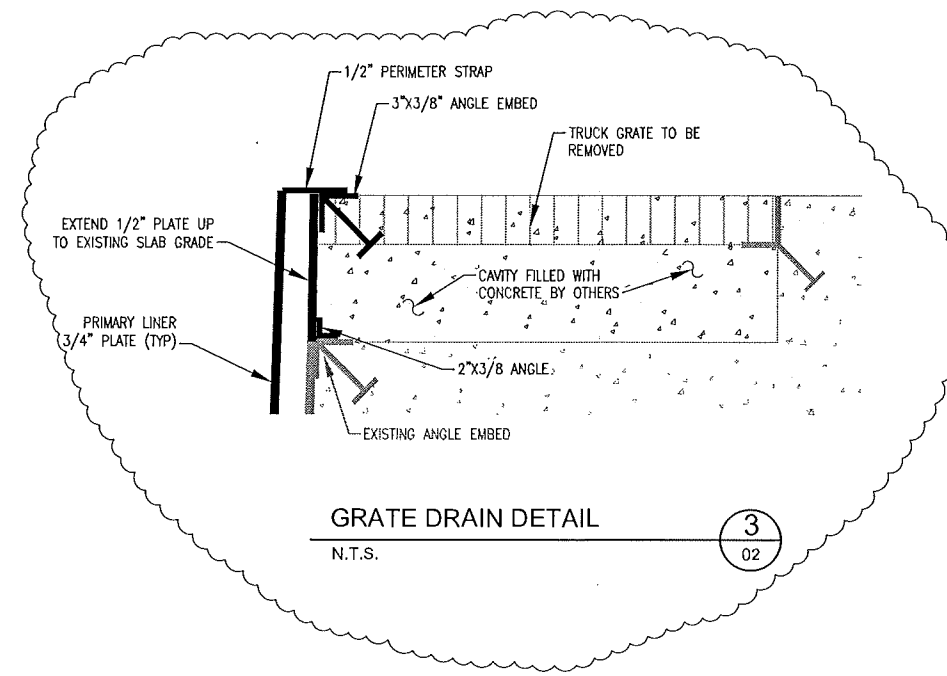
<b>USEcology Michigan</b>		
6520 Georgia Street • Detroit, MI 48211 Phone (313) 571-7140		
DRAWN BY VJT	CHECKED BY	PROJECT NUMBER 2013-D012
PROJECT NAME LINER INSTALLATION - MIXING TANK 3		
PRIMARY STEEL LINER SECTIONS AND DETAILS		
DRAWING NUMBER TL-13-03	REV B	



FRAMING PLAN - WEST WALL ELEVATION



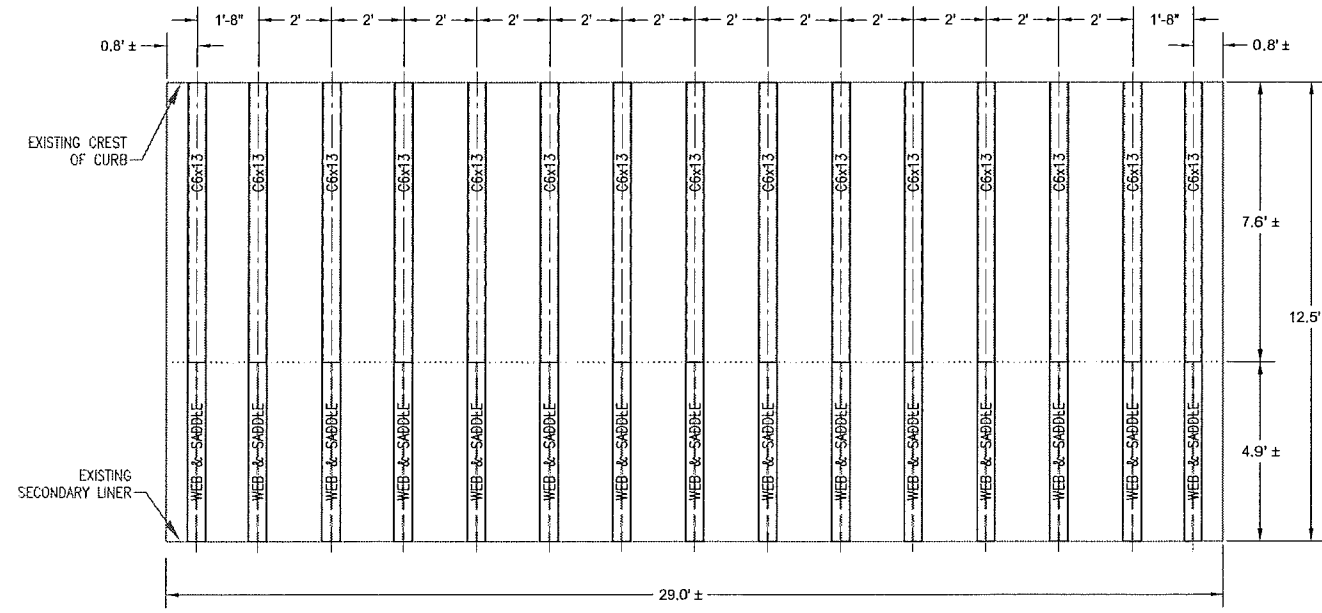
FRAMING PLAN - NORTH WALL ELEVATION



GRATE DRAIN DETAIL

N.T.S.

3  
02



FRAMING PLAN - SOUTH WALL ELEVATION

NOTES:

1. ALL DIMENSIONS WHICH ARE NOTATED WITH '±' ARE APPROXIMATE AND MUST BE CONFIRMED BASED UPON MEASUREMENTS OBTAINED IN THE FIELD FROM THE RESPECTIVE TANK.
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DRAFT

NOT FOR CONSTRUCTION

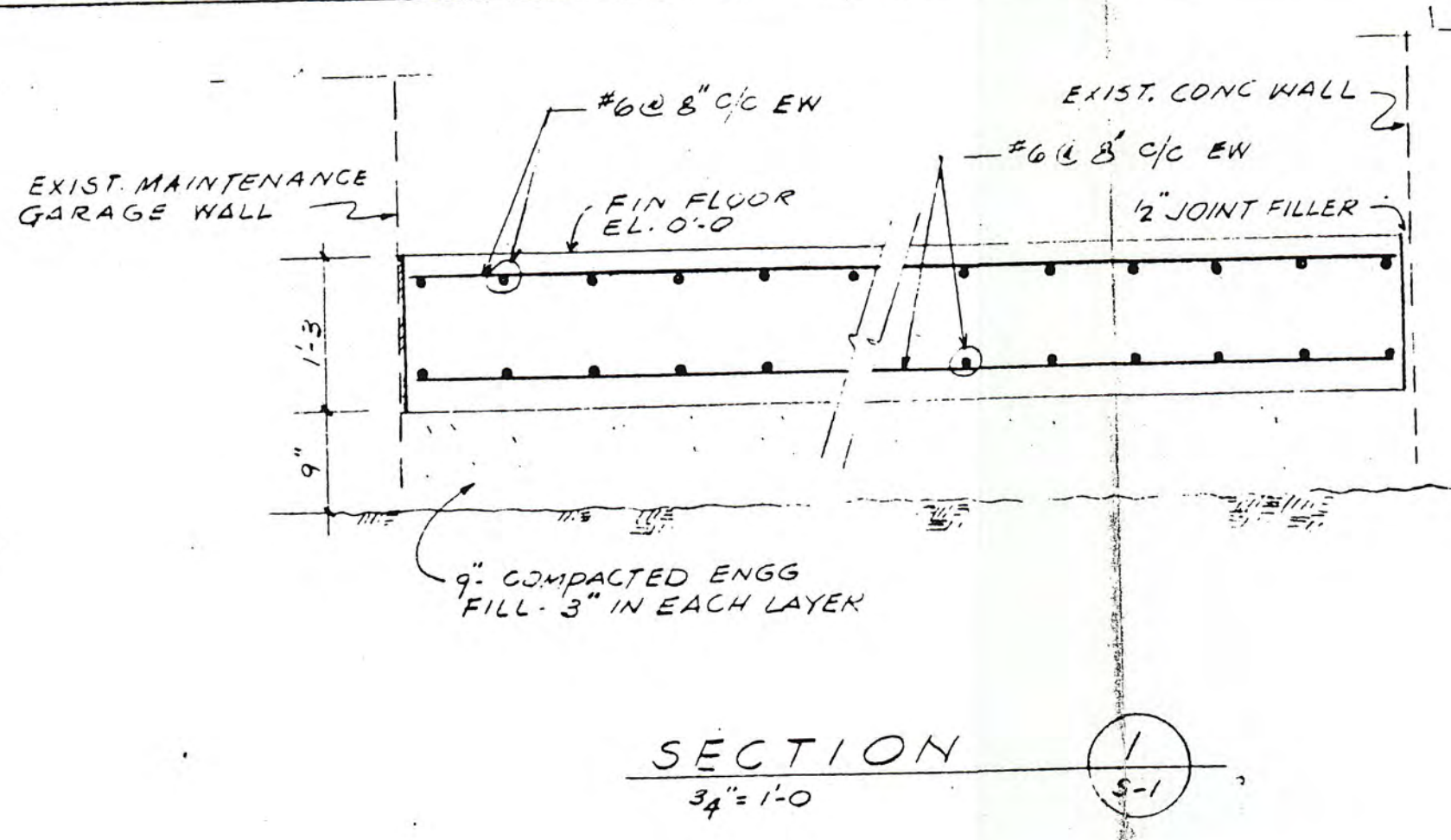
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A	5/19/13	VJT	INTERNAL REVIEW
B	7/18/13	VJT	REGULATORY REVIEW
C	7/24/13	VJT	DRAIN GATE DETAIL

**USEcology Michigan**  
 6520 Georgia Street • Detroit, MI 48211  
 Phone (313) 571-7140

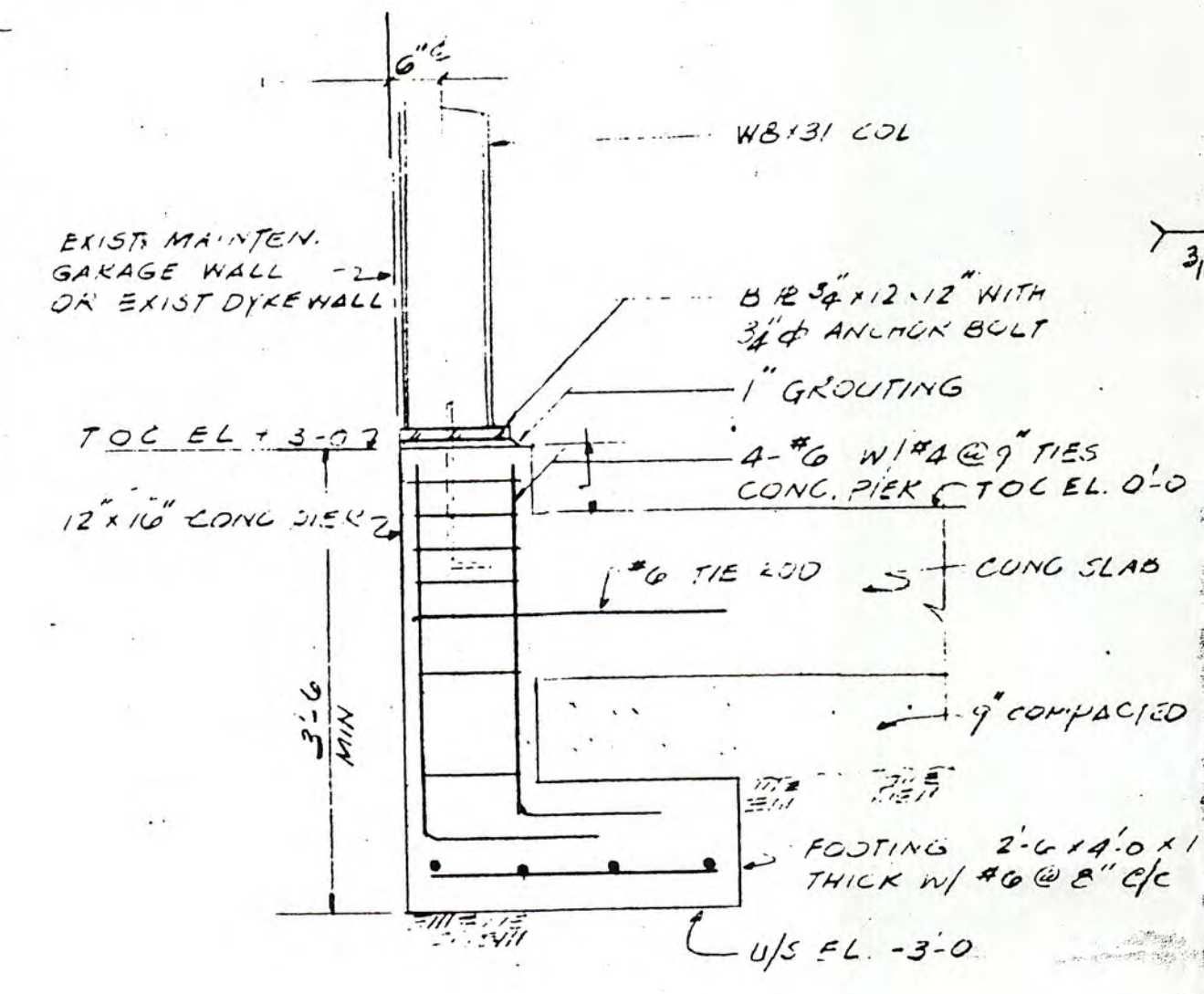
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PROJECT NAME LINER INSTALLATION - MIXING TANK 3		

FRAMING DETAILS

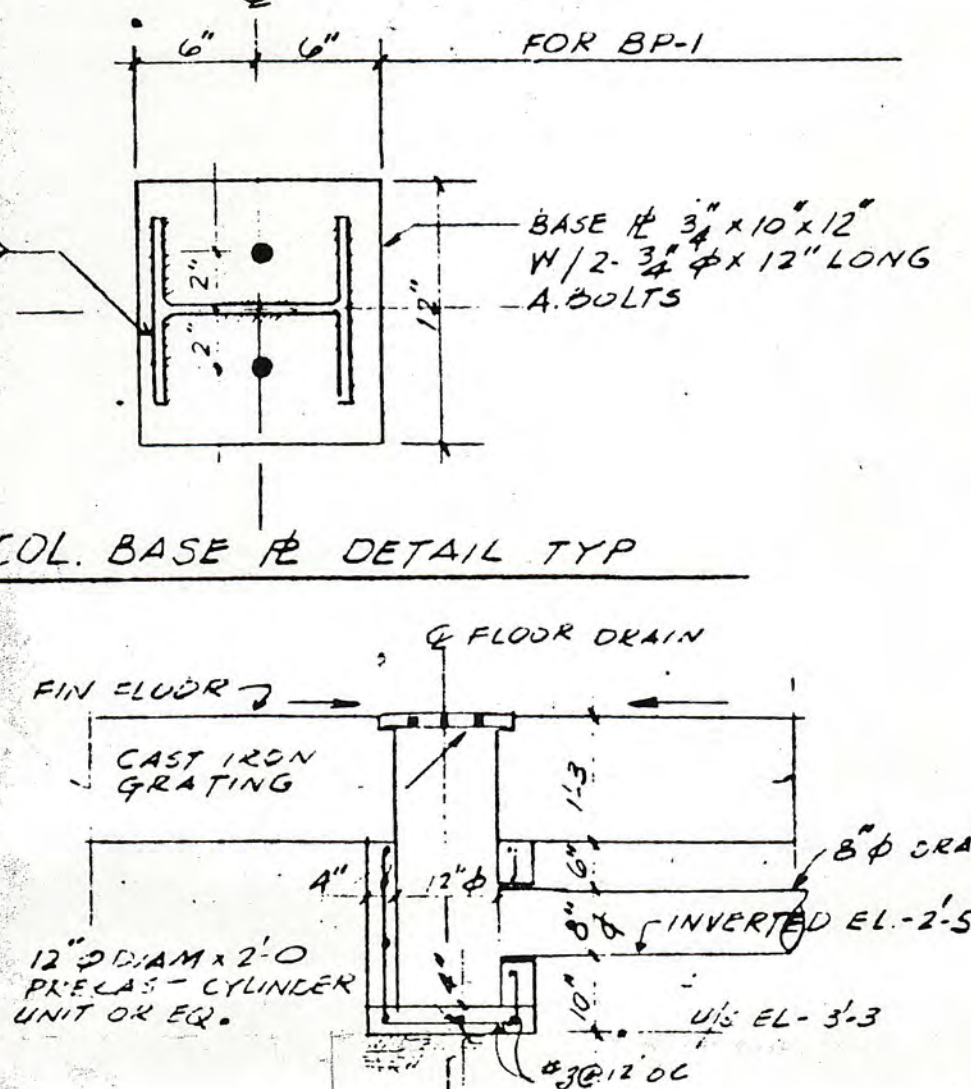
DRAWING NUMBER TL-13-04	REV C
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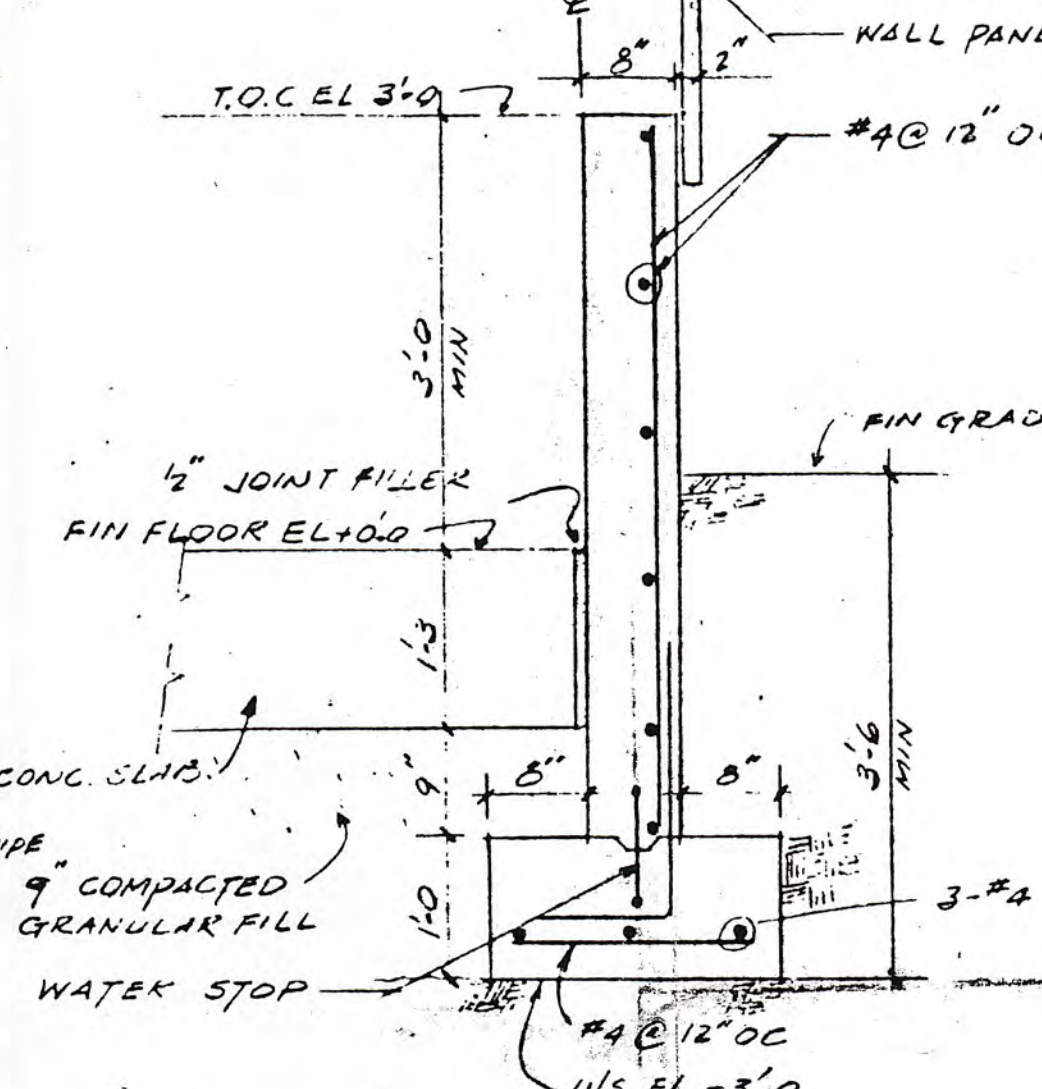
SECTION 1  
3/4" = 1'-0"



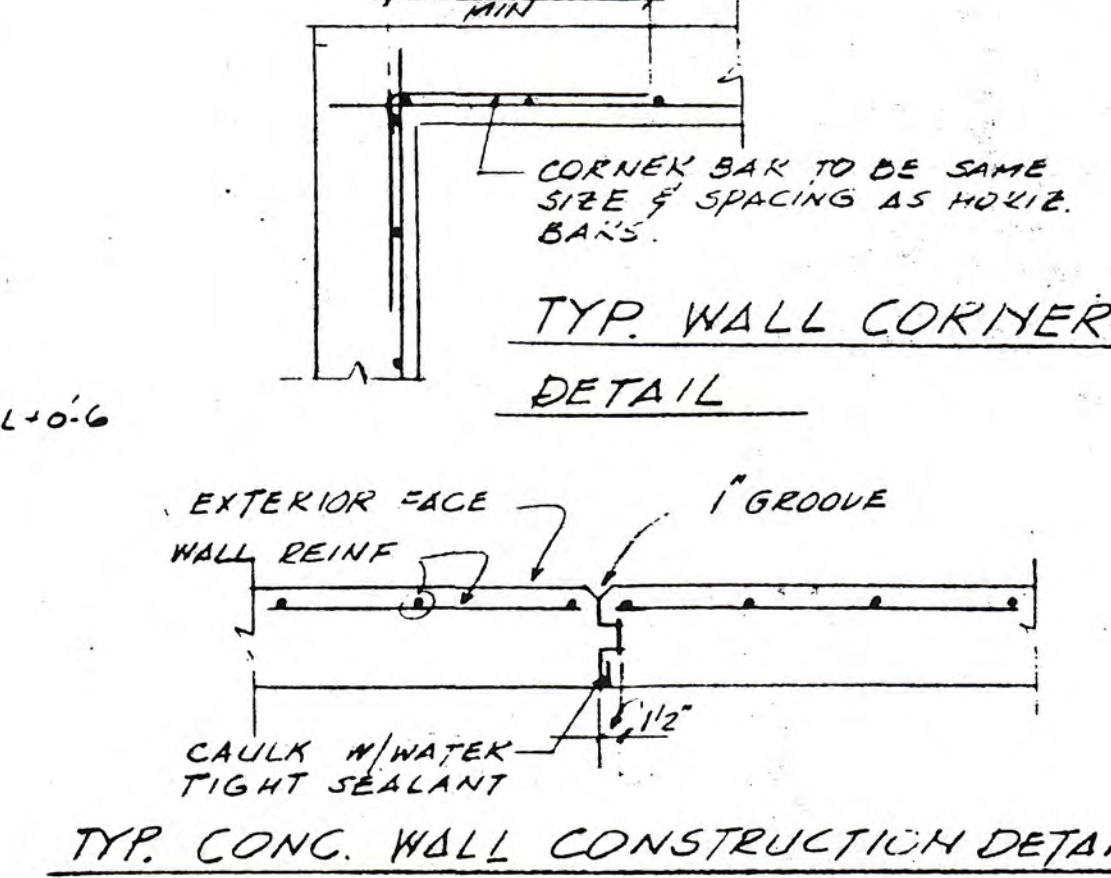
SECTION 2  
3/4" = 1'-0"



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

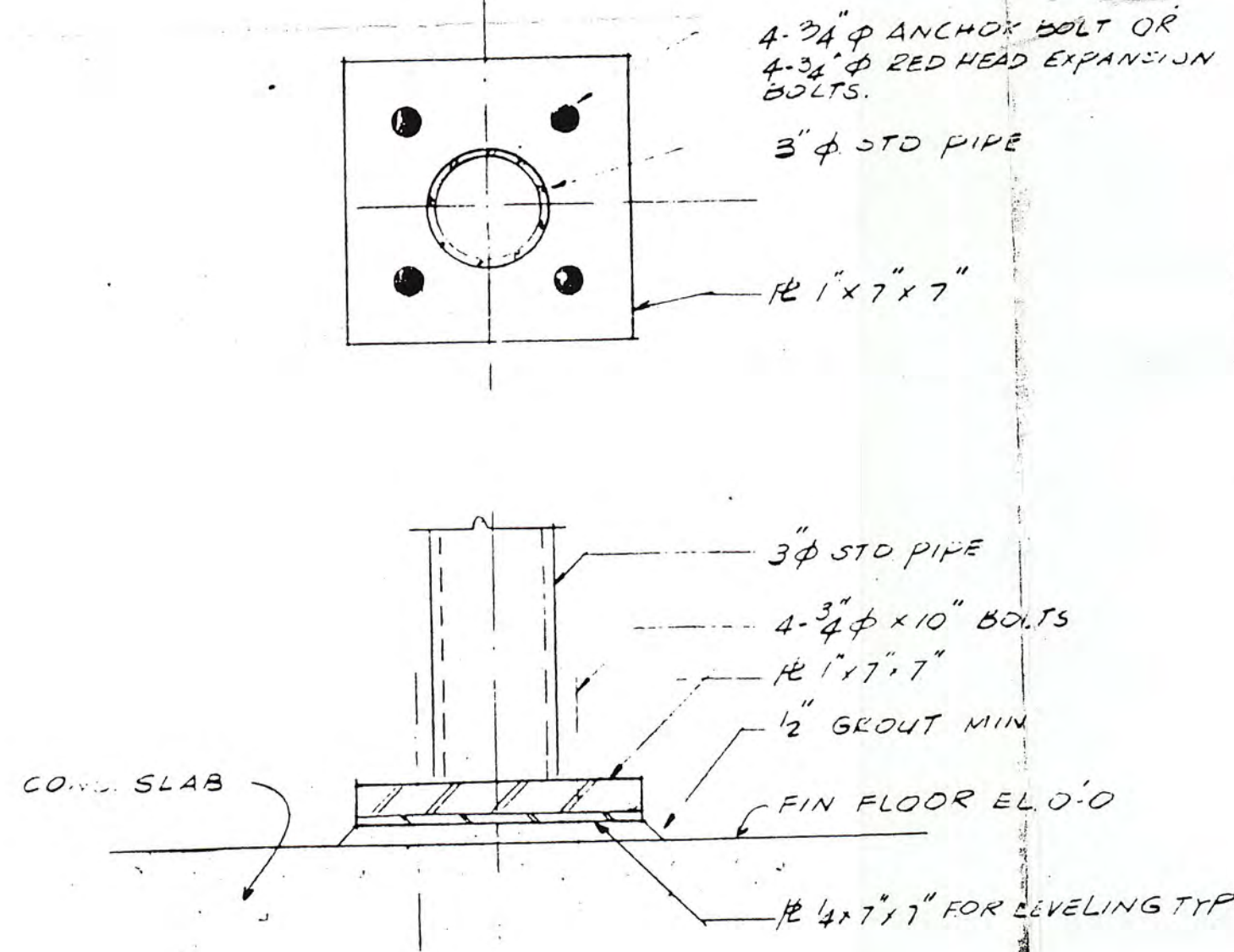


SECTION 4  
3/4" = 1'-0"

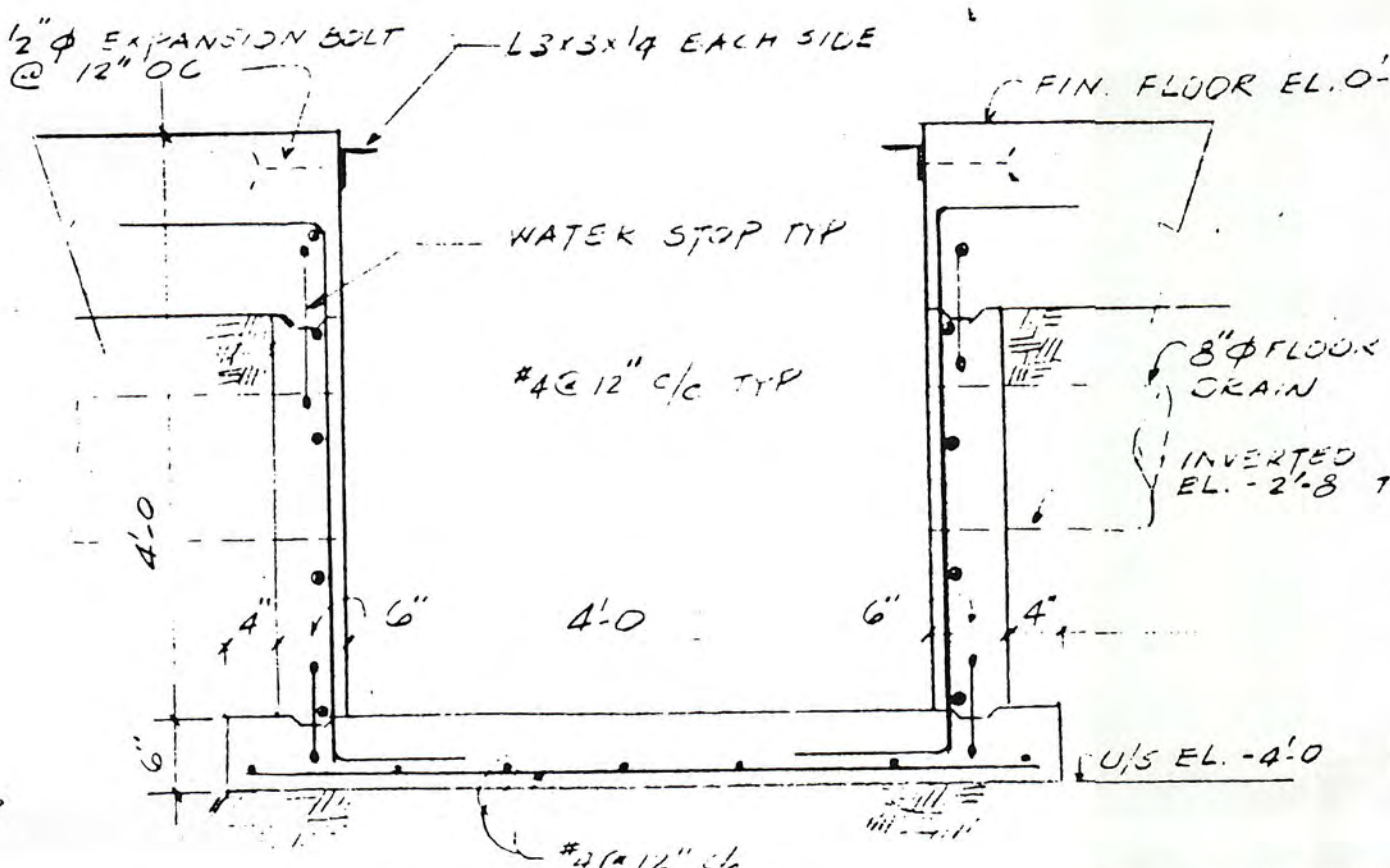


TYP. WALL CORNER DETAIL

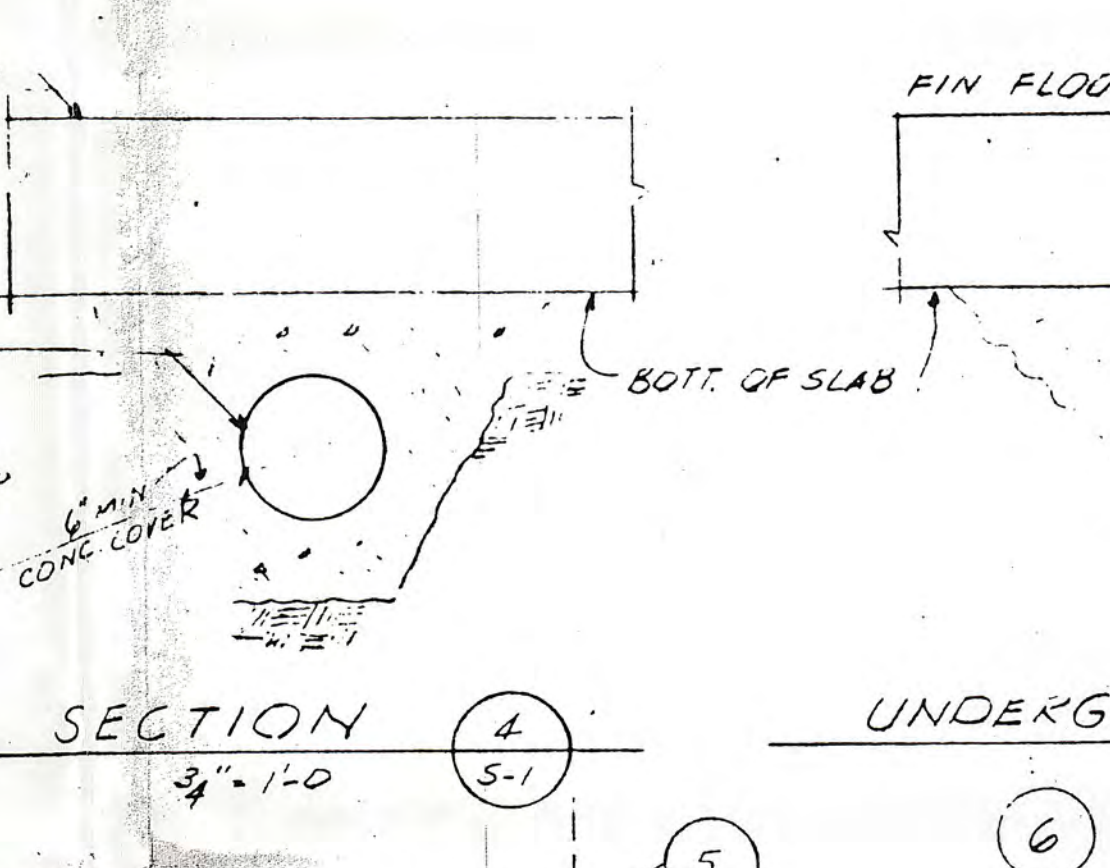
- GENERAL NOTE:
- Cone fiberglass tanks raft foundation is designed for soil pressure of 1000 psf and column footing is designed for soil pressure of 2000 psf at the depth indicated. Contact the engineer for correction action.
  - All concrete shall have a 28 day compressive strength of 3000 psi min.
  - Reinforcement steel yield strength shall be grade of 60,000 psi unless noted otherwise.
  - Contractor shall verify location of foundation layout with plant operator before casting footing and slab if plant is required to be shutdown.
  - The standards of ACI Building Code 318-83 and the standards of practice ACI 318-80 shall be followed for all detailing, fabrication and placement of all reinforcing steel and accessories.
  - All fill under slab foundation and footings shall be compacted to 95% of maximum density (Modified Proctor Test) at optimum moisture content.
  - Provide temporary bracing as required to insure the stability of existing and new structures.
  - Contractor shall coordinate with engineer during construction activities for any discrepancy.



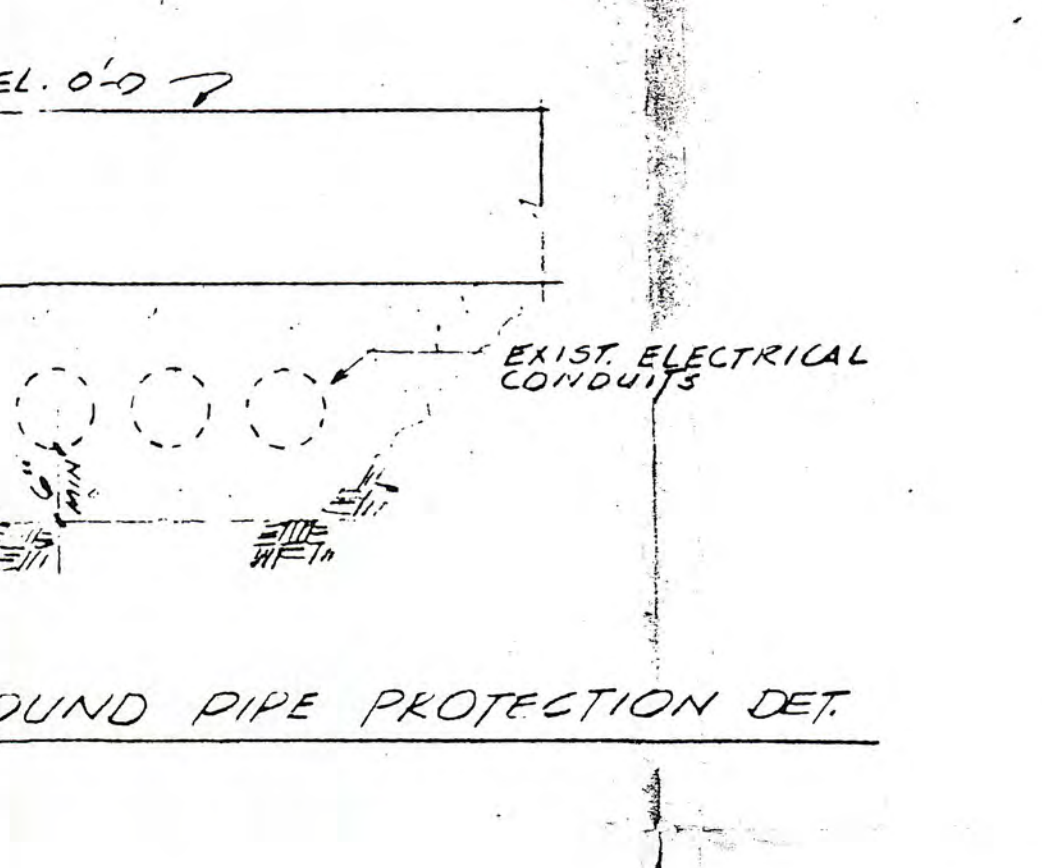
TANK LEG BASE RATE DETAIL  
3/4" = 1'-0"



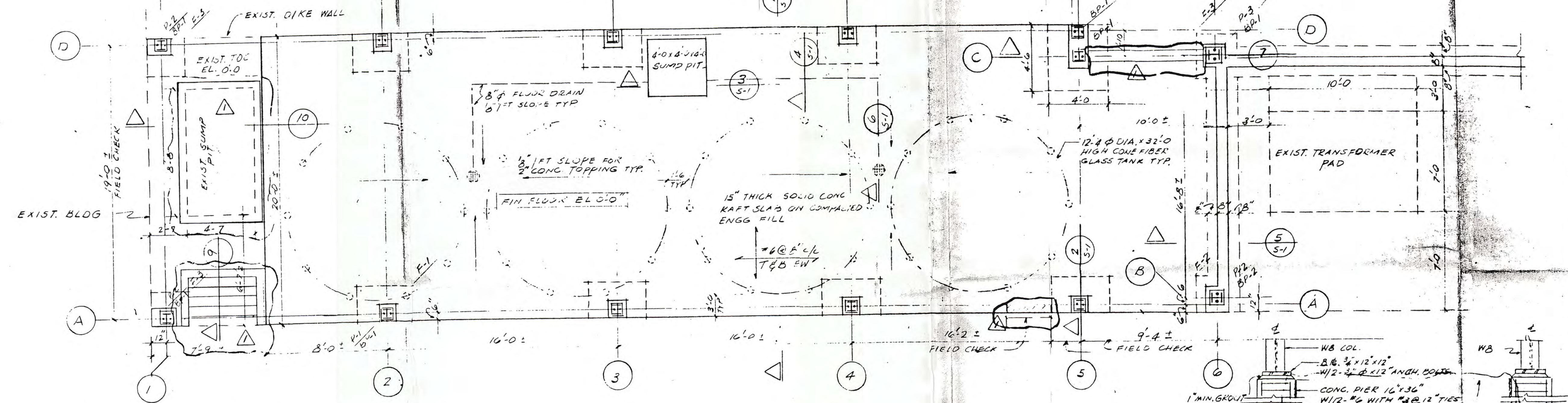
SECTION 5  
3/4" = 1'-0"



SECTION 6  
3/4" = 1'-0"



SECTION 7  
3/4" = 1'-0"



FOUNDATION PLAN  
1/4" = 1'-0"

FOUNDATION SCHEDULE			
MARK	SIZE	REINF.	REMARK
PIER			
P-1	12" x 16"	#6 @ 12" OC EW	TOC EL. 0'-0"
P-2	16" x 20"	#6 @ 12" OC EW	TOC EL. 0'-0"
P-3	16" x 16"	#6 @ 12" OC EW	TOC EL. 3'-0"
BASE #			
BP-1	3/4" x 10" x 12"	#6 @ 12" OC EW	2-3/4" x 12" AB
FOOTING			
F-1	2'-6" x 4'-0" x 1'-0"	#6 @ 8" OC EW	U/S EL. -3'-0"
F-2	2'-4" x 2'-6" x 1'-0"	#6 @ 8" OC EW	U/S EL. -3'-0"
F-3	2'-6" x 2'-6" x 1'-0"	#6 @ 8" OC EW	U/S EL. -3'-0"

Dynacol, Inc. - 1988 Act 64 License Reapplication

NO.	REVISION	DATE
1	SUMP PIT & NEW DIKE WALL REFER SHI-A-1 ISSUED FOR CONSTRUCTION	3-31-87
2	ISSUED FOR CONSTRUCTION	10-2-85
3	ISSUED FOR REVIEW & APPROVAL	9-30-85

CONSULTING ENGINEERS  
CHEMTEC RESEARCH ASSOCIATES, INC.  
16241 WESTMORELAND  
DETROIT, MICH. 48219

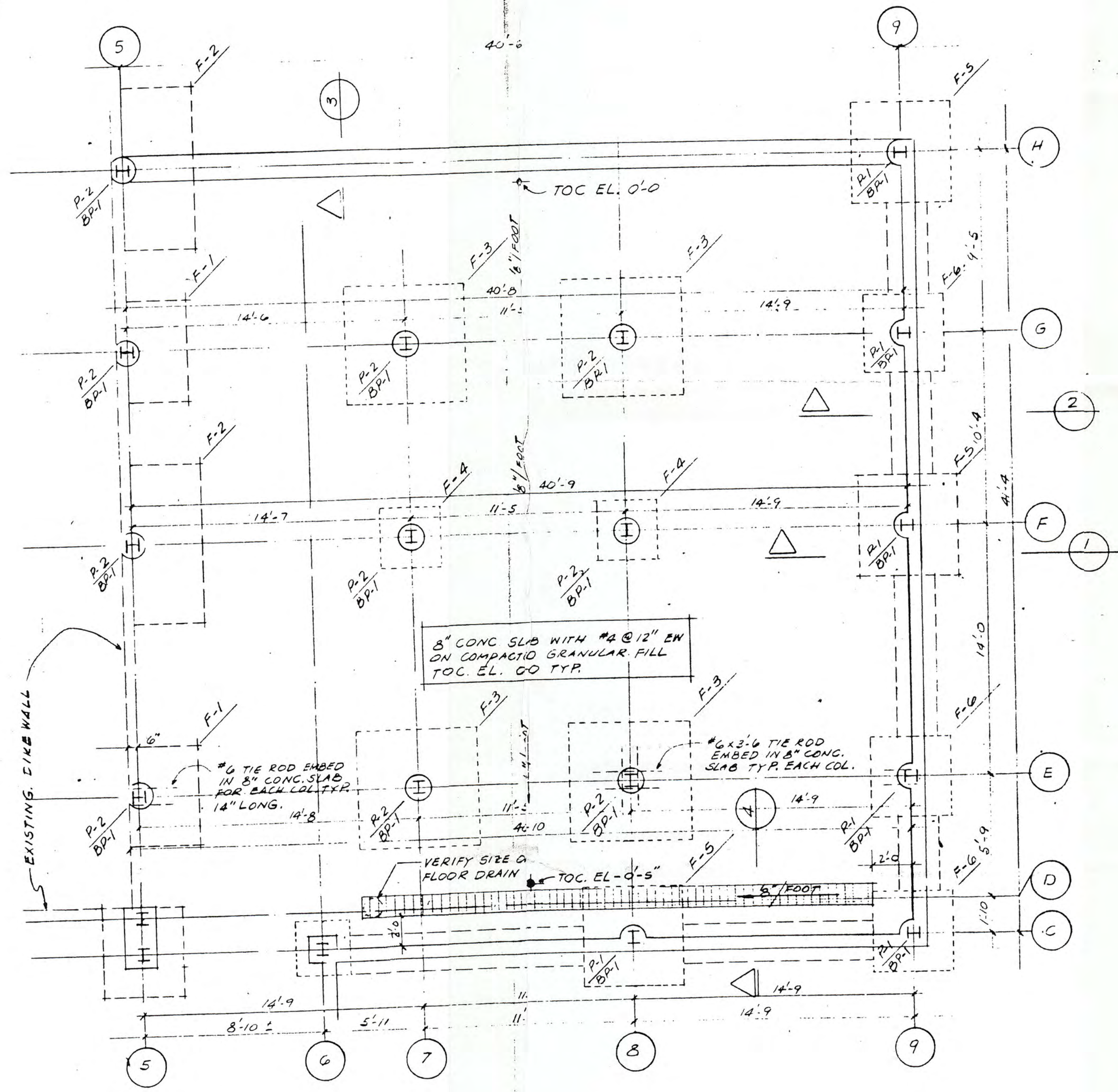
OWNER  
DYNACOL, INC.  
6520 GEORGIA ST.  
DETROIT, MICH. 48211

TITLE  
CONE FIBERGLASS TANKS  
FOUNDATION PLAN  
SECTIONS & DETAILS

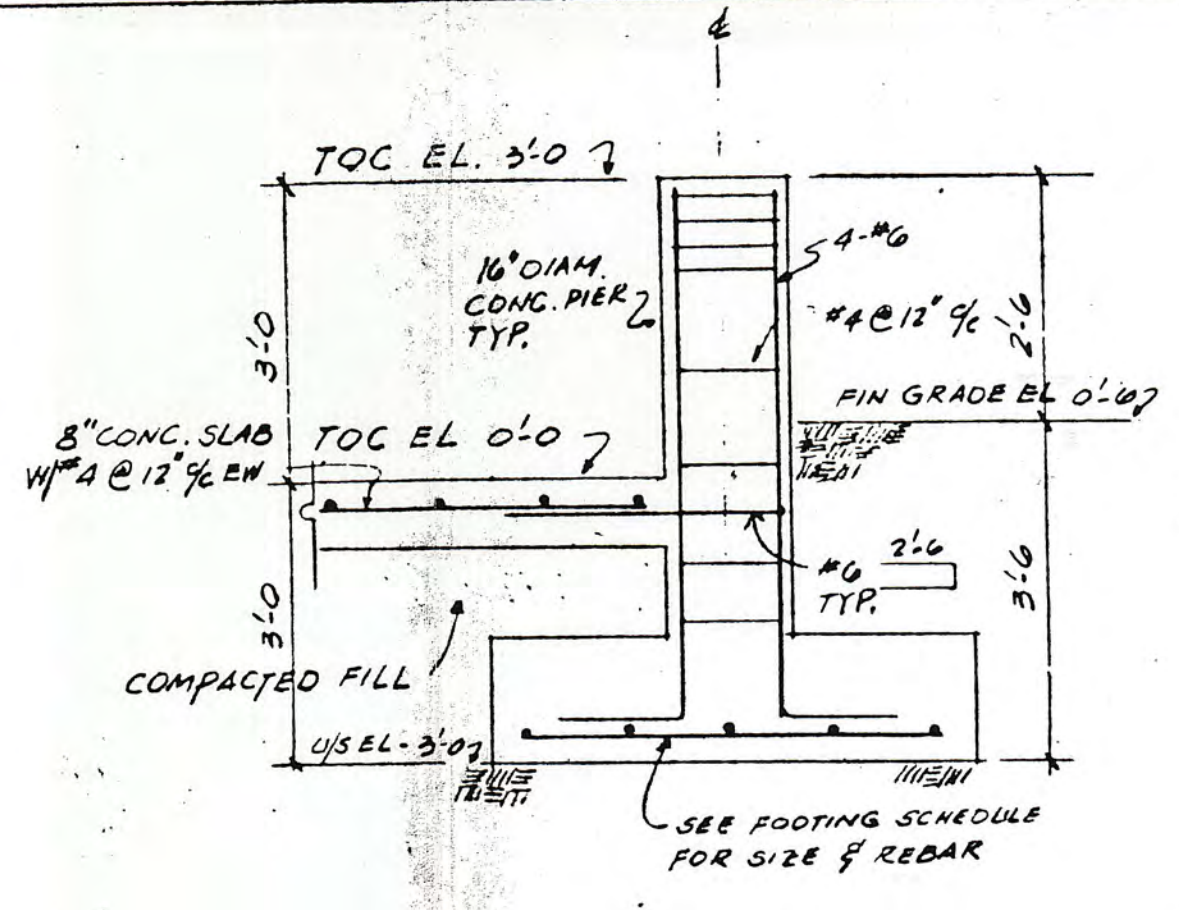
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AS NOTED	9/30/85	
DRAWN BY HB	9/30/85	
DESIGNED BY HB	9/30/85	
CHECKED BY HB, RB	9/30/85	
APPROVED BY		

RECEIVED  
JAN 04 1985

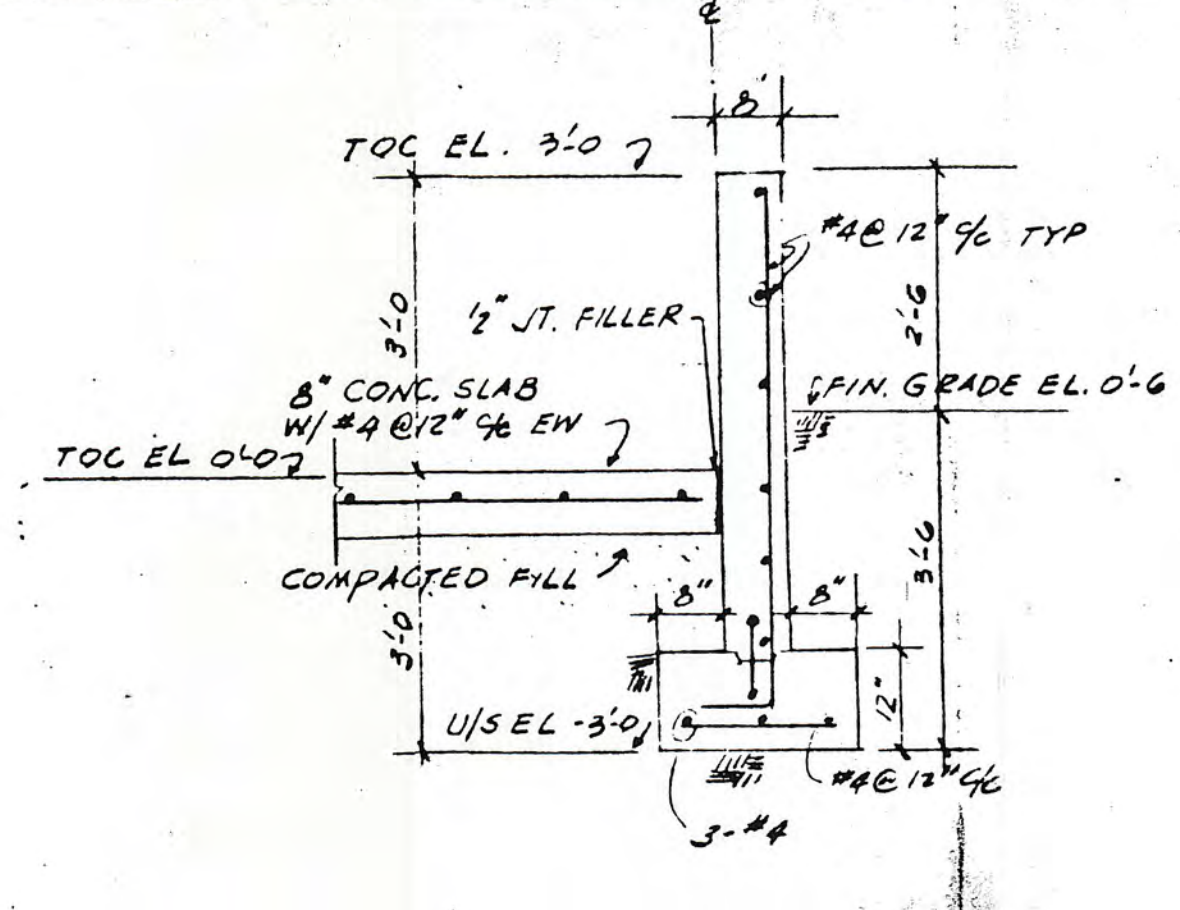
SHEET NO.  
5-1 OF 5



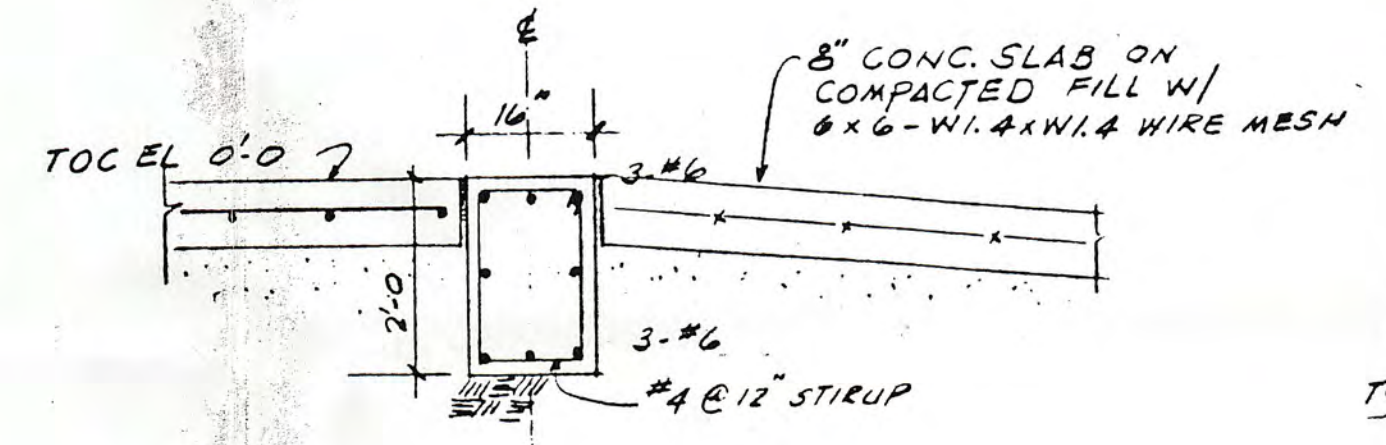
FOUNDATION PLAN  
4" = 1'-0"



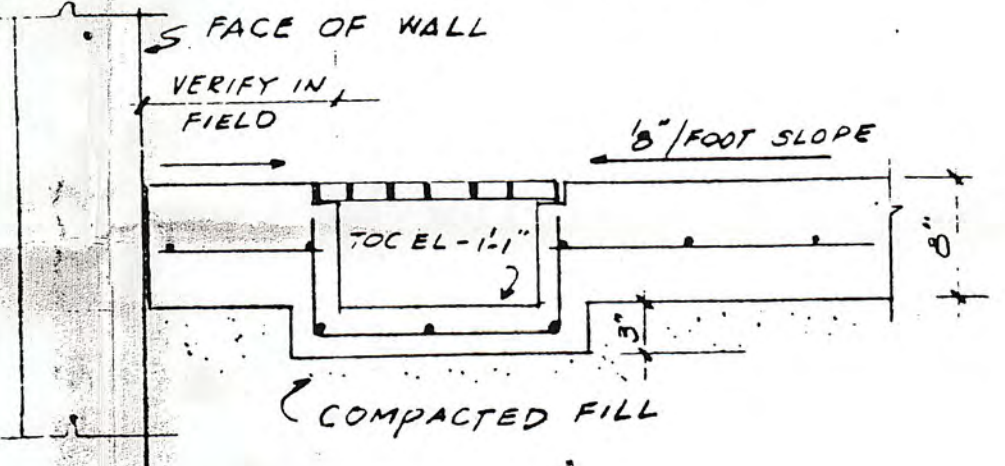
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1/2" = 1'-0"



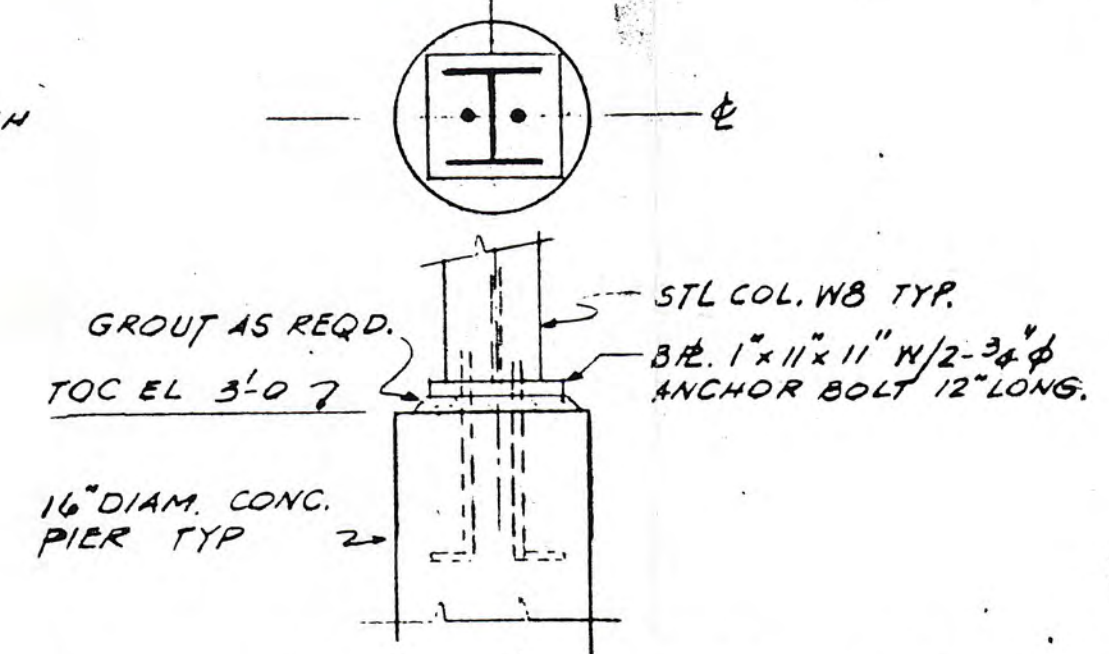
SECTION 2  
1/2" = 1'-0"



SECTION 3  
1/2" = 1'-0"



SECTION 4  
1" = 1'-0"



COL. BASE PLATE DETAIL TYP

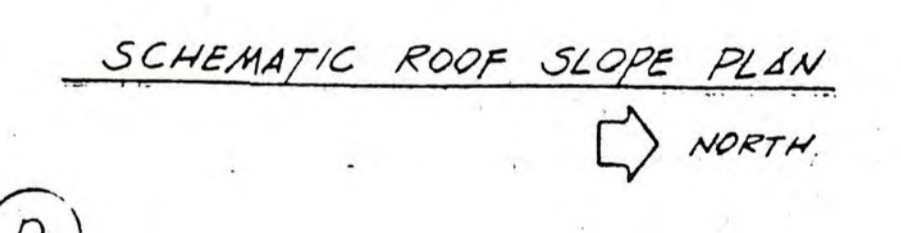
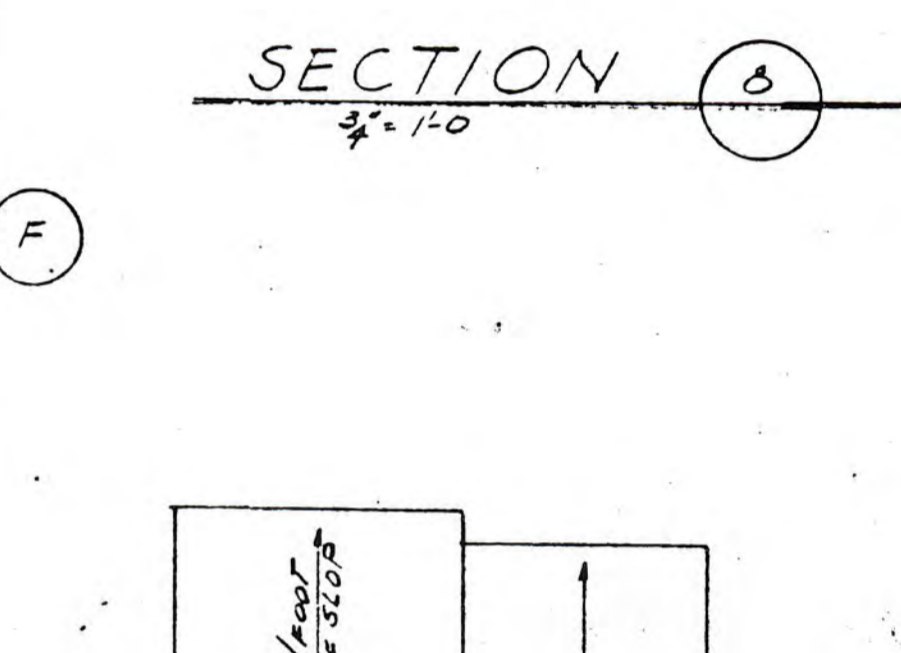
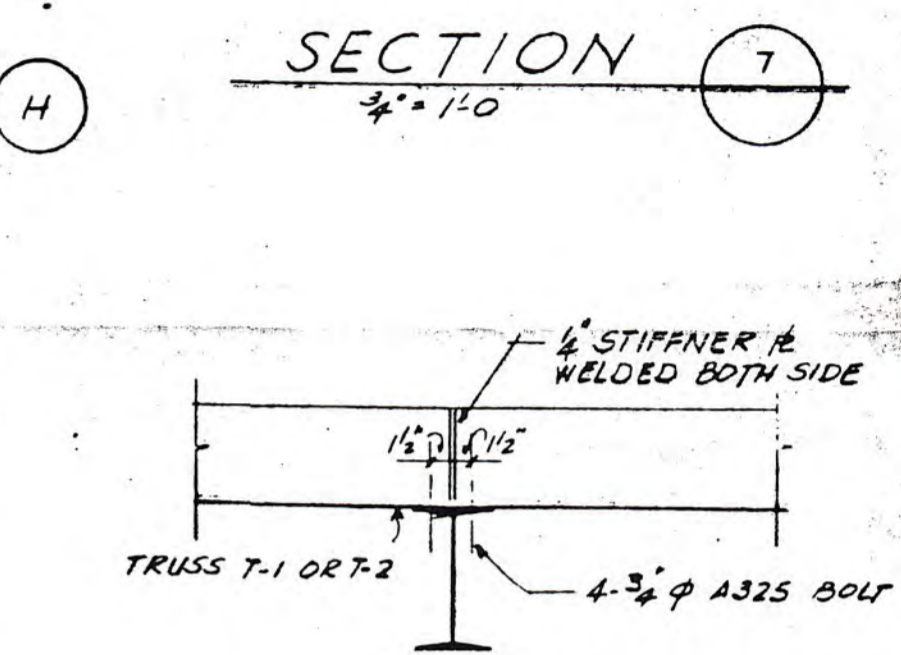
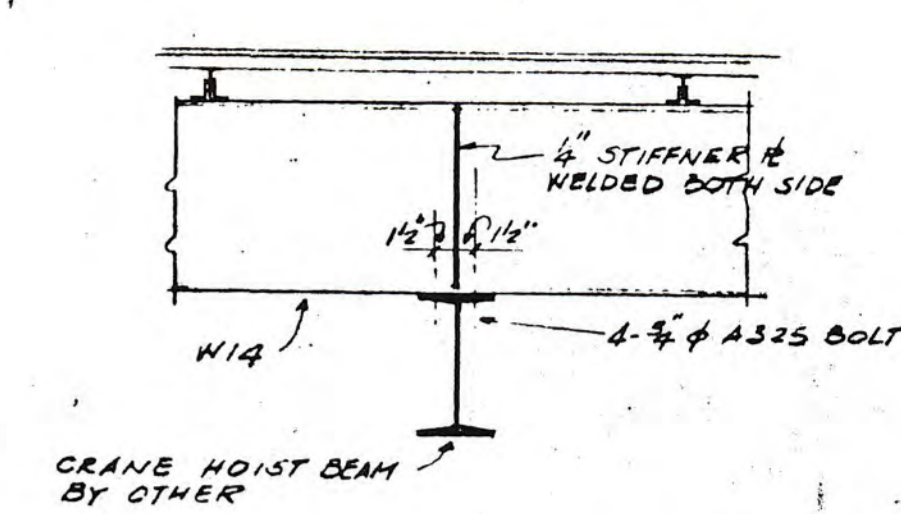
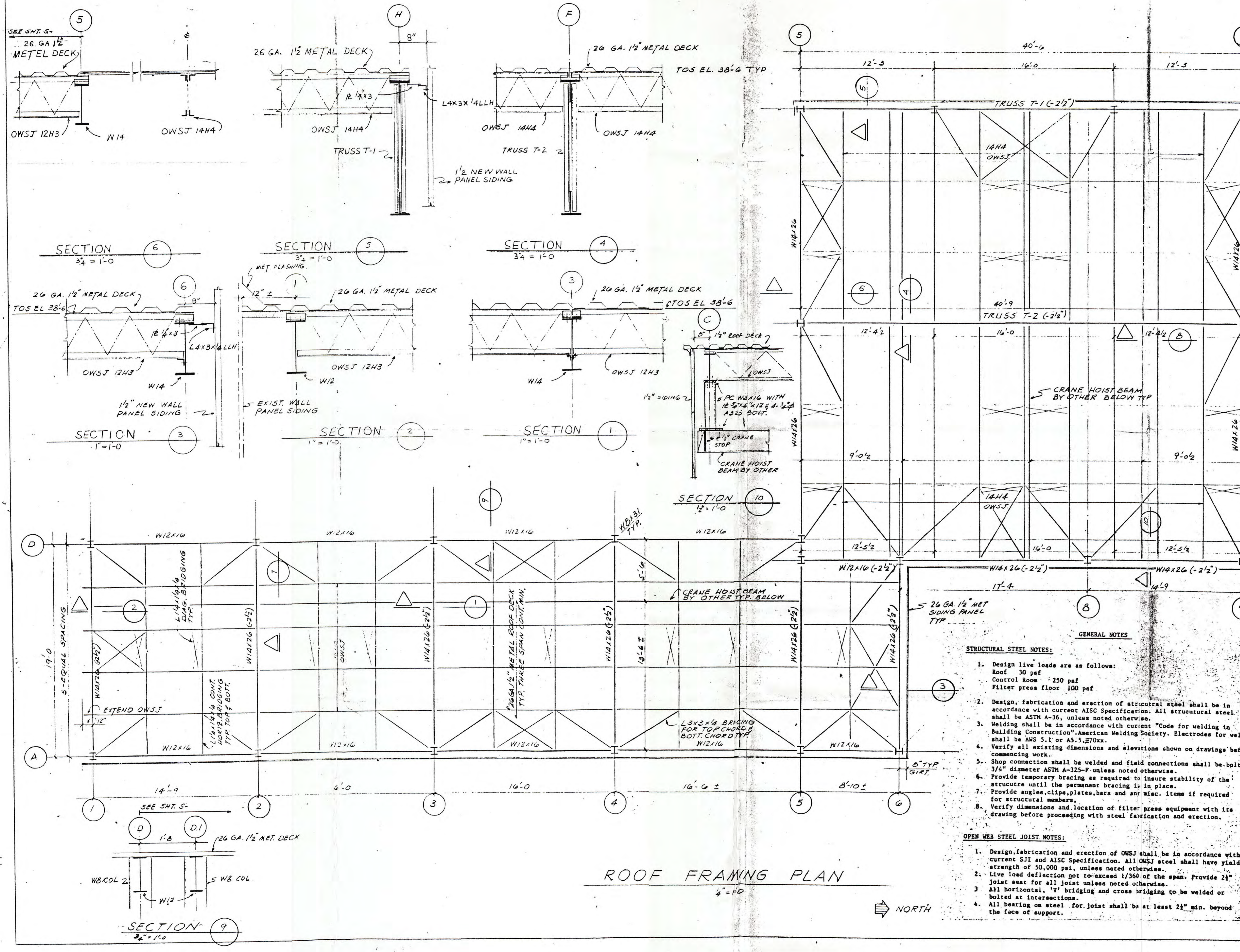
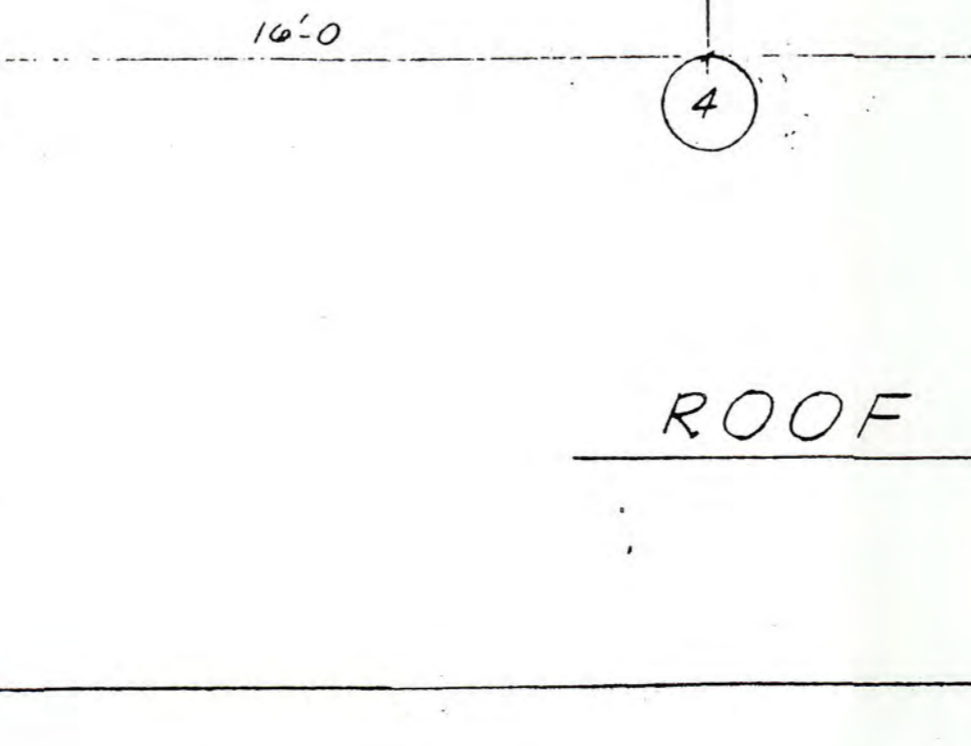
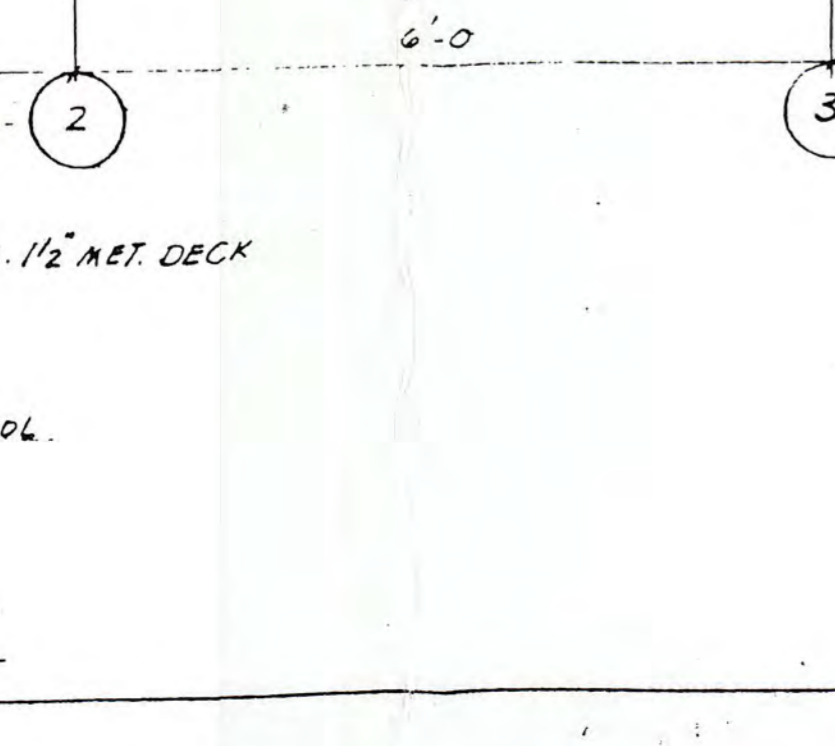
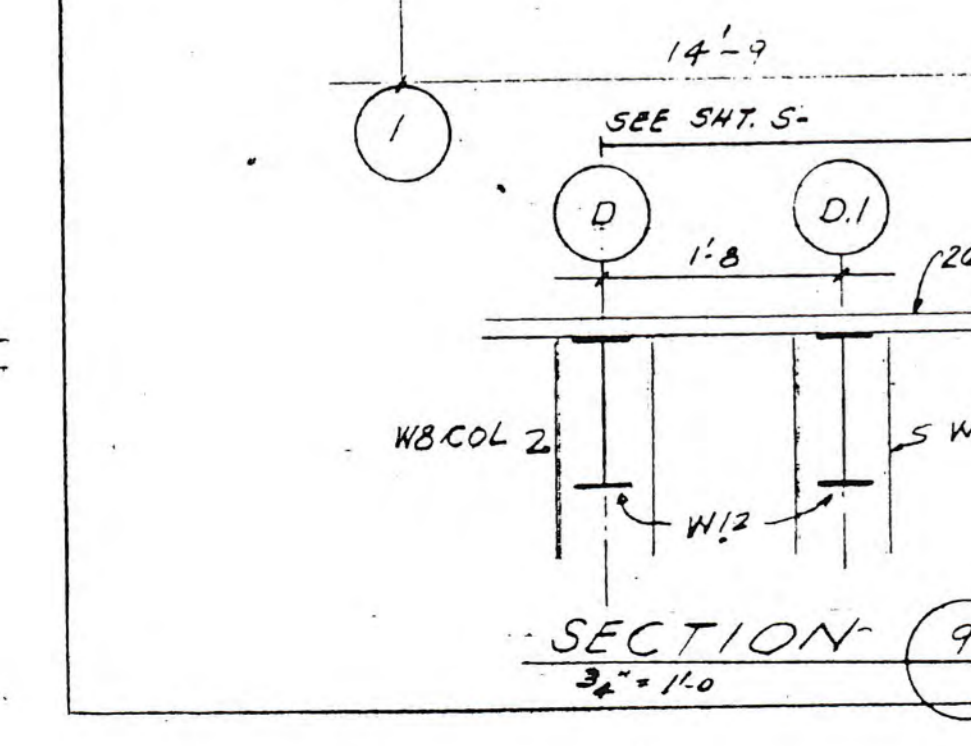
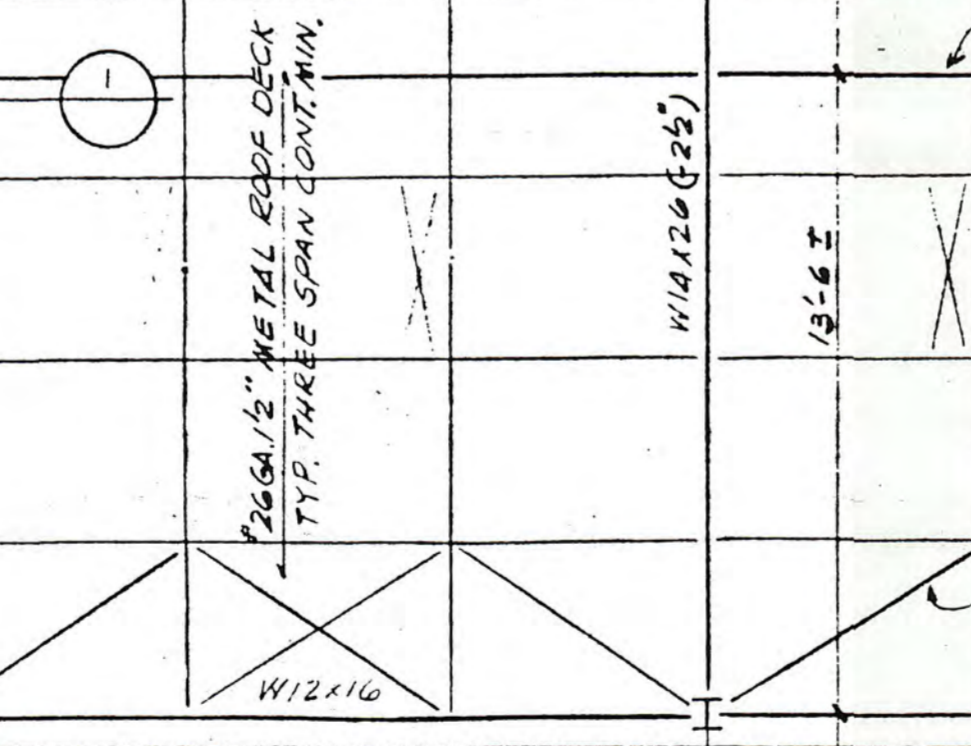
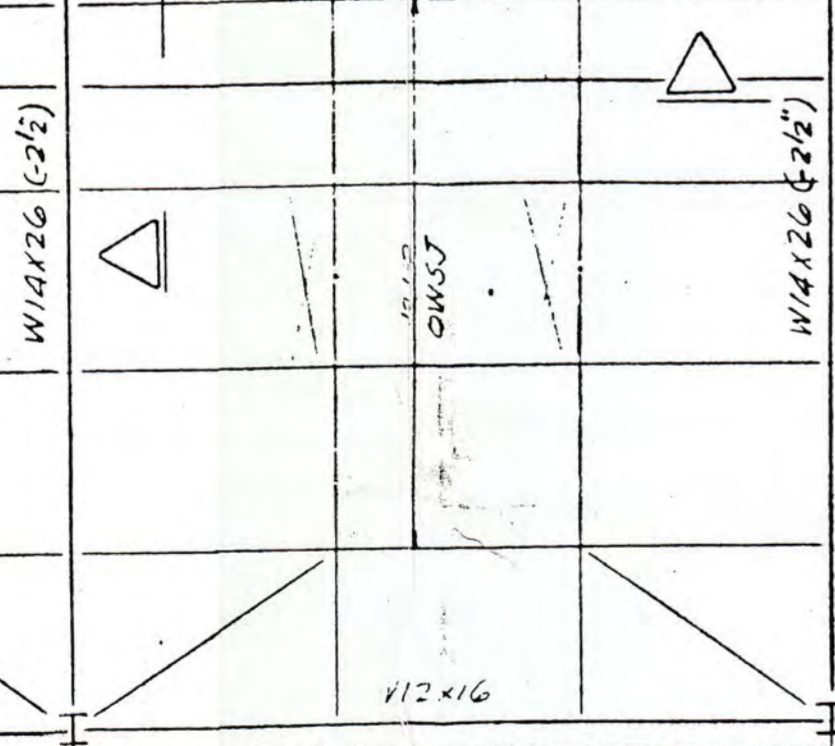
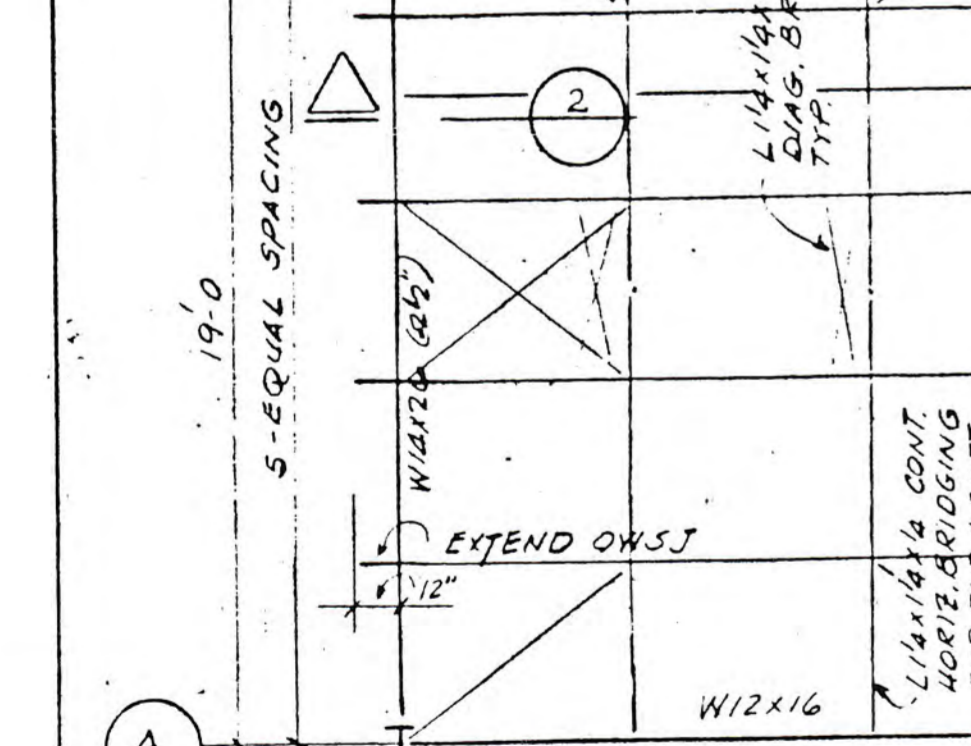
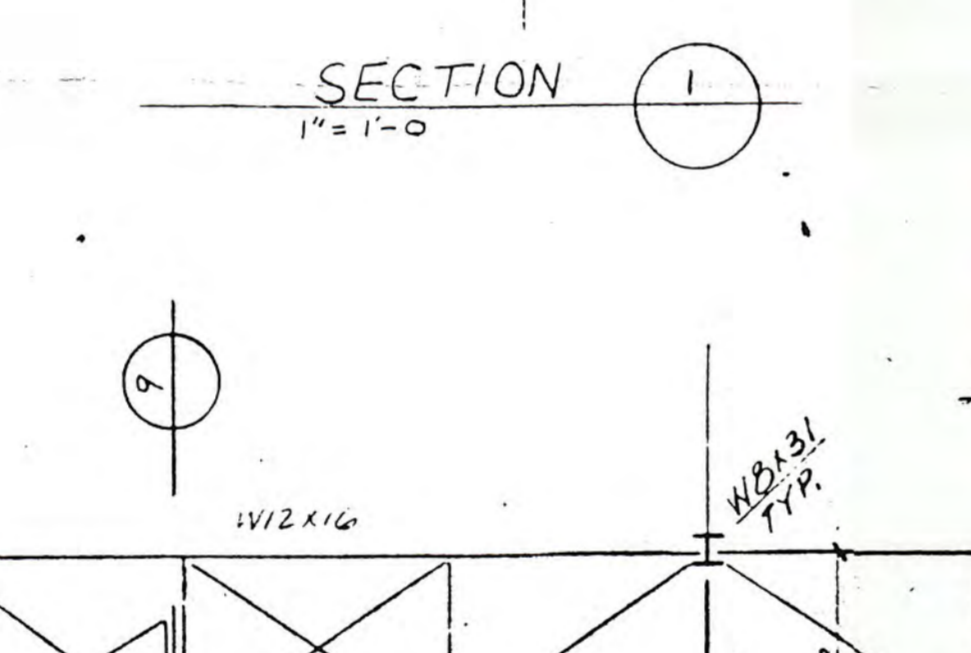
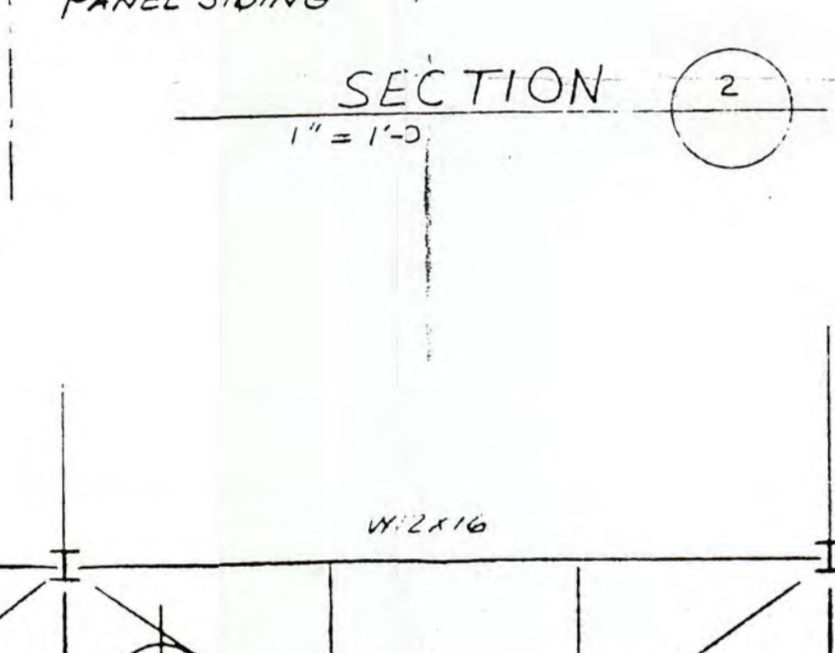
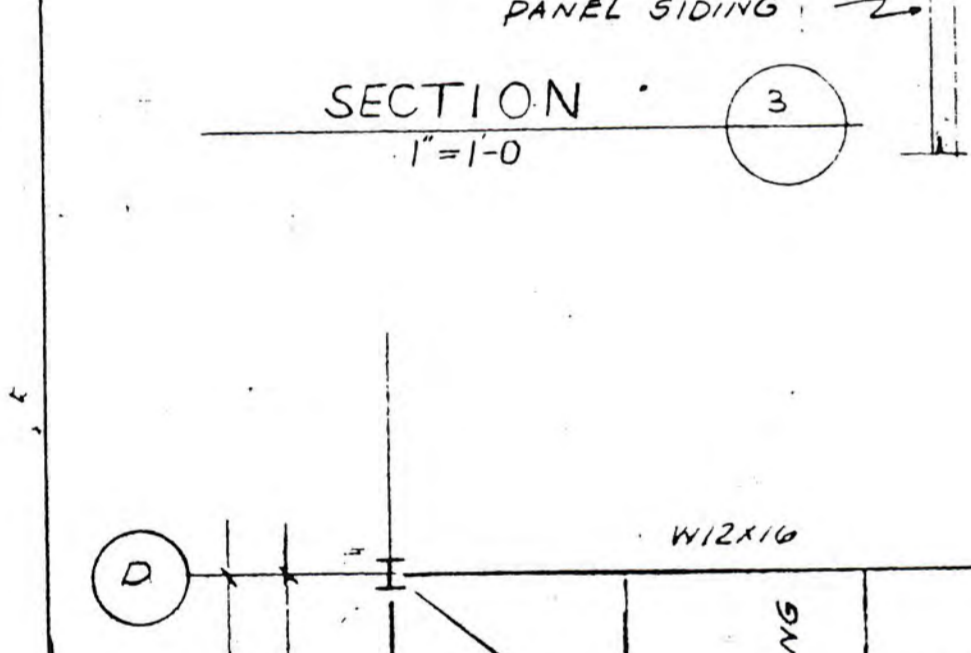
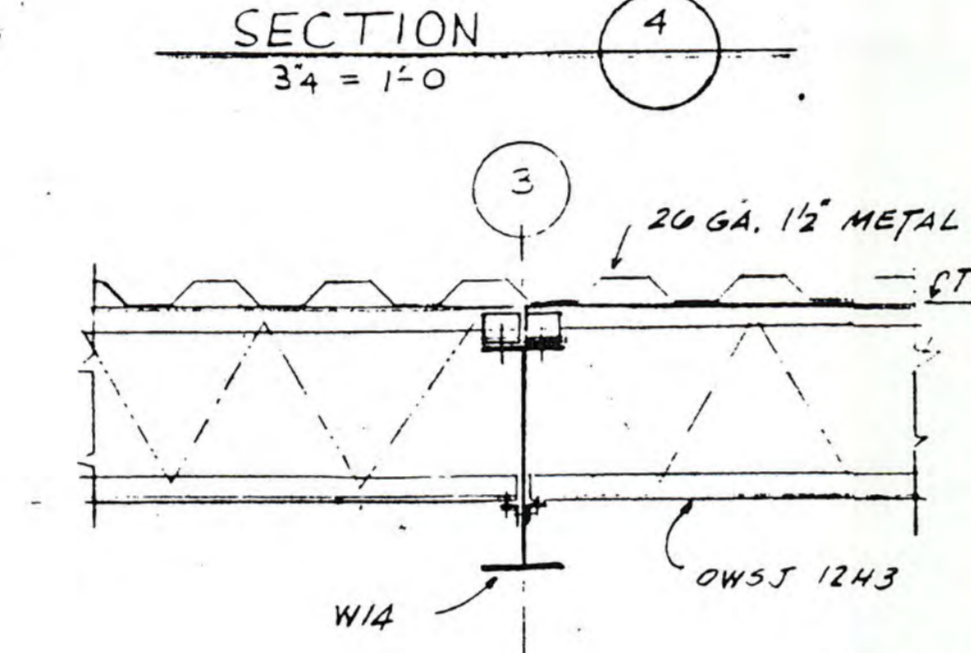
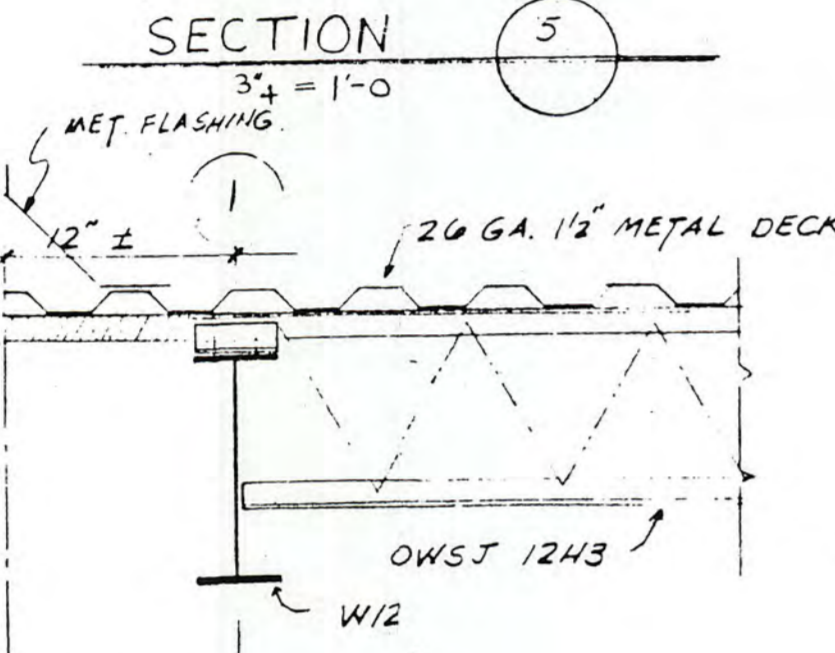
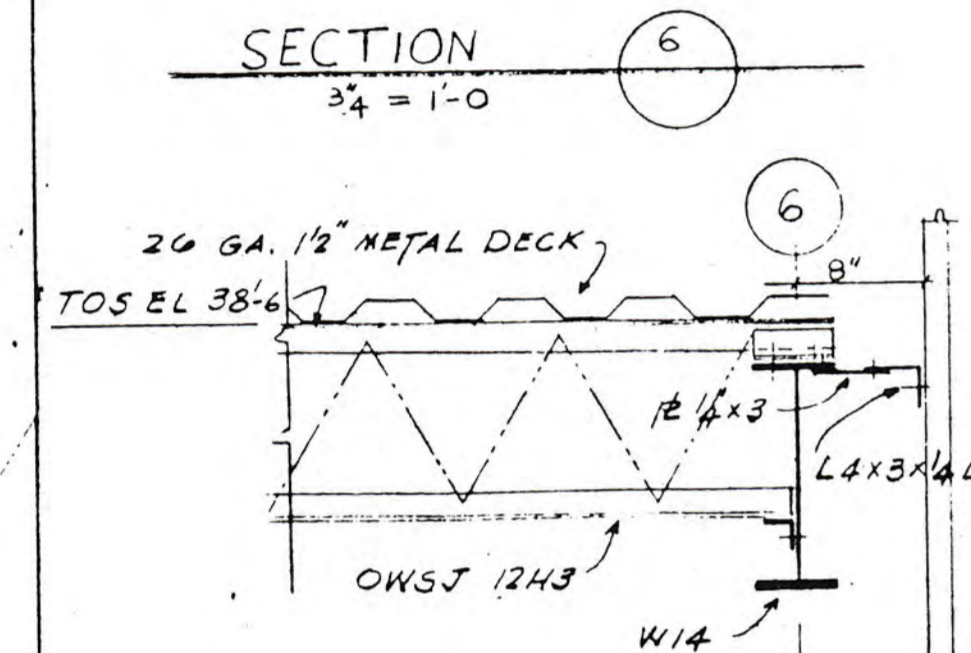
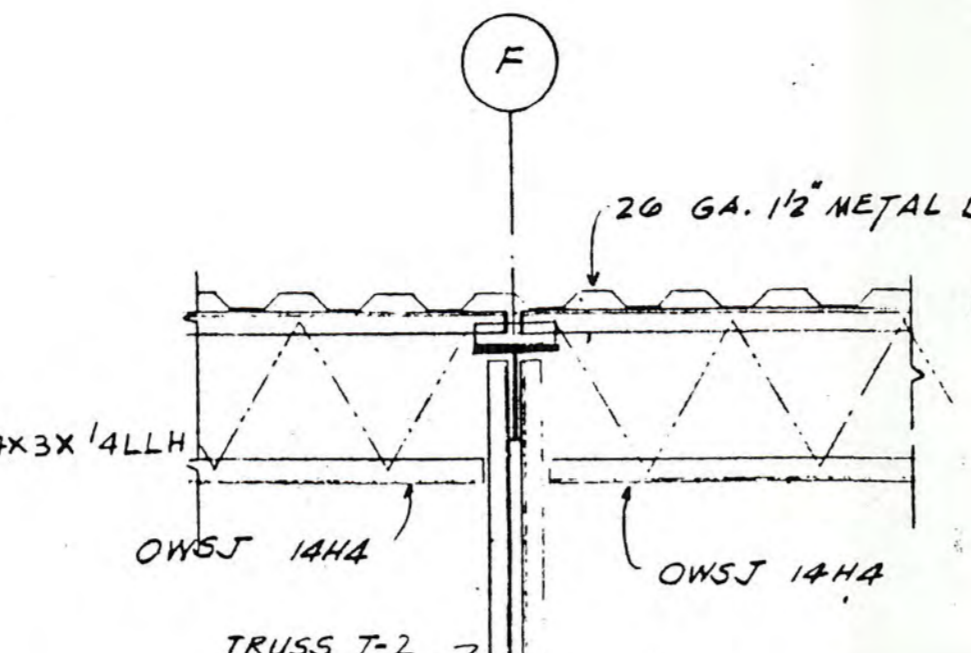
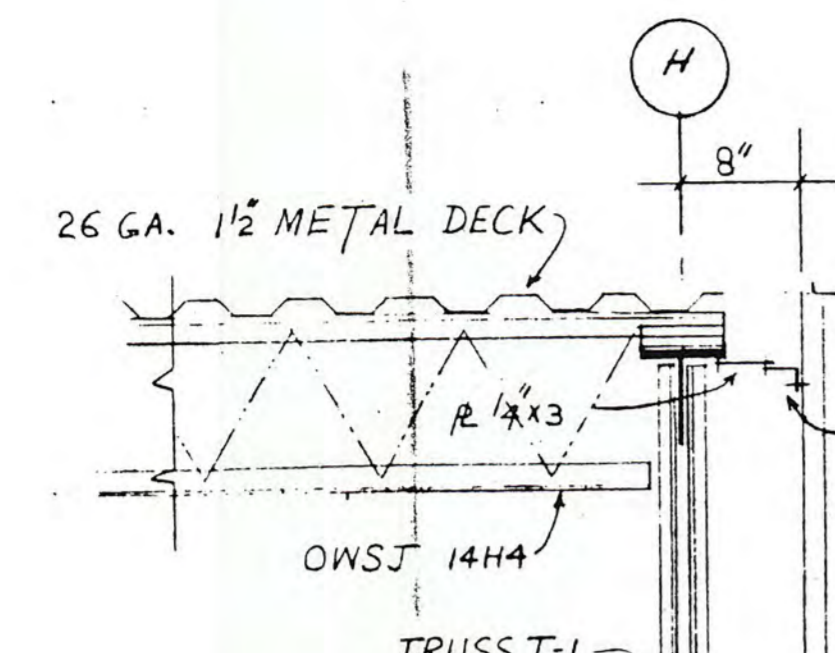
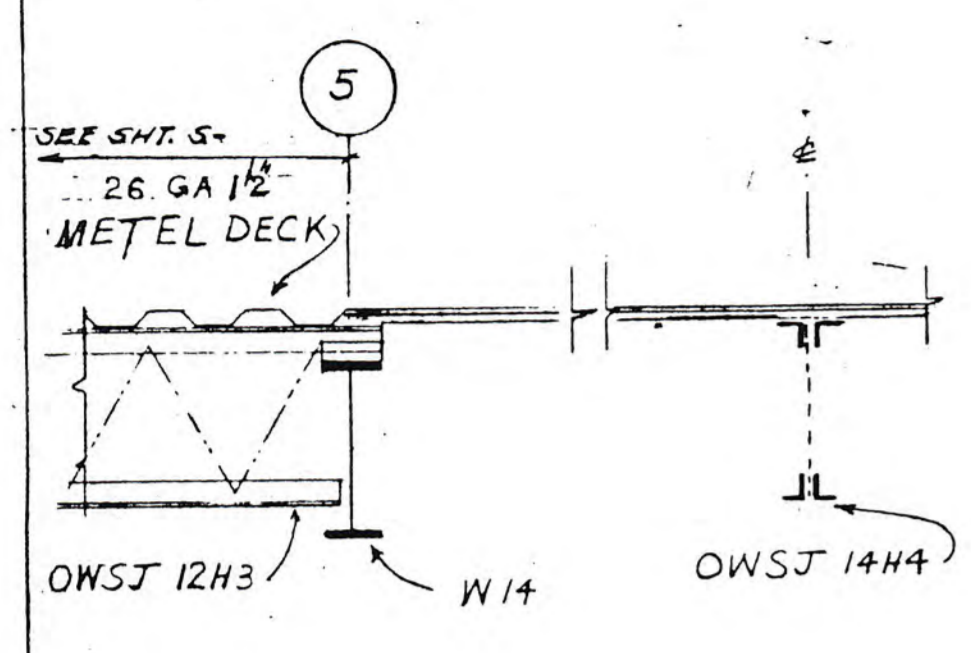
NOTE:  
1. REFER SHEET S-1 FOR GENERAL NOTE, SECTION 2 DETAIL CONNECTION WITH THIS DRAWING.

PIER & FOOTING SCHEDULE

MARK	SIZE	REINFORCEMENT	REMARK
P-1	16" DIAM.	4-#6 W/#4 @ 9" TIES	TOC EL. 3'-0"
P-2	16" DIAM.	4-#6 W/#4 @ 9" TIES	TOC EL. 0'-0"
BP-1	B/E. 1" x 11" x 11"		2-3/8" φ x 18" AB.
F-1	3'-0" x 3'-0" x 1'-0"	6-#6 NS, 10-#6 EW	U/S EL. -3'-0"
F-2	3'-6" x 8'-0" x 1'-4"	7-#6 NS, 14-#6 EW	U/S EL. -3'-0"
F-3	6'-0" x 6'-0" x 1'-4"	7-#6 EW @ BOT.	U/S EL. -3'-0"
F-4	3'-0" x 3'-0" x 1'-0"	4-#6 EW @ BOT.	U/S EL. -3'-0"
F-5	5'-0" x 5'-0" x 1'-4"	6-#6 EW @ BOT.	U/S EL. -3'-0"
F-6	4'-0" x 4'-0" x 1'-0"	5-#6 EW @ BOT.	U/S EL. -3'-0"

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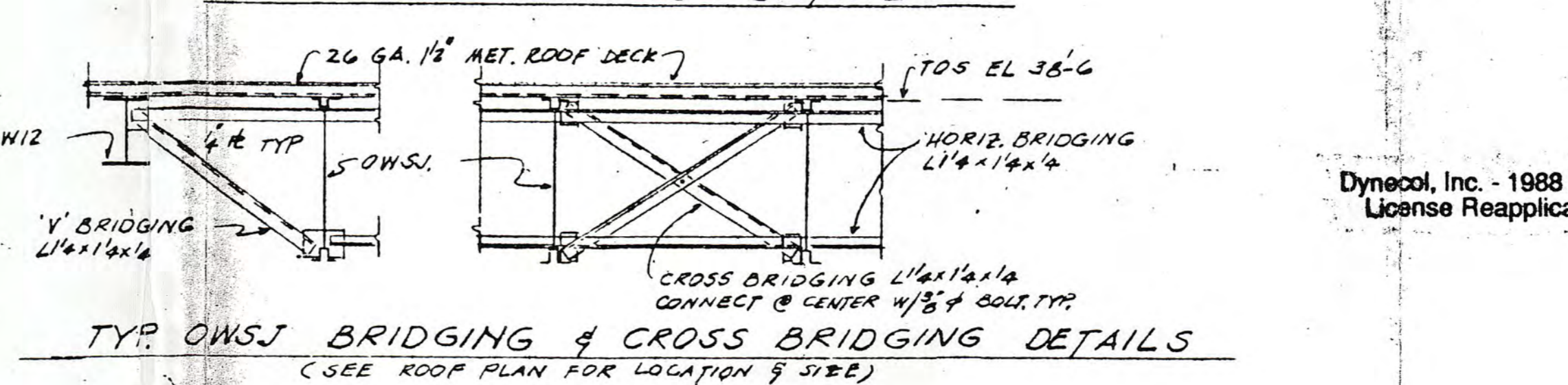
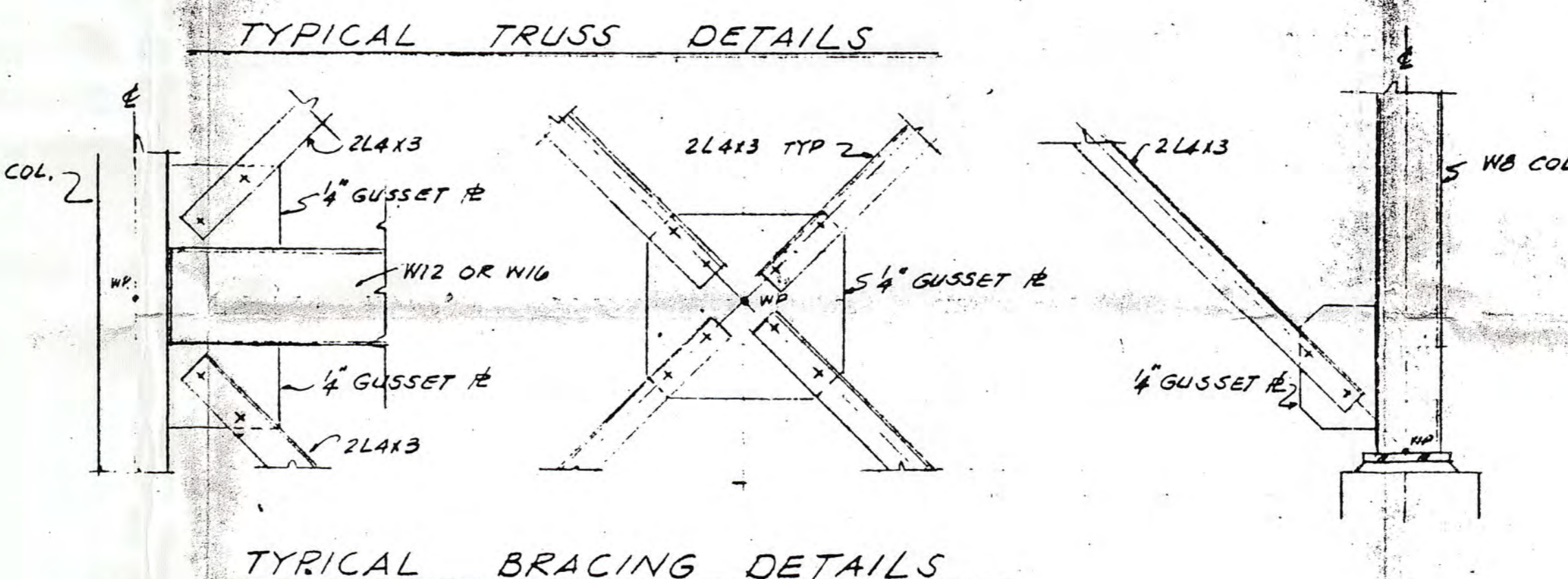
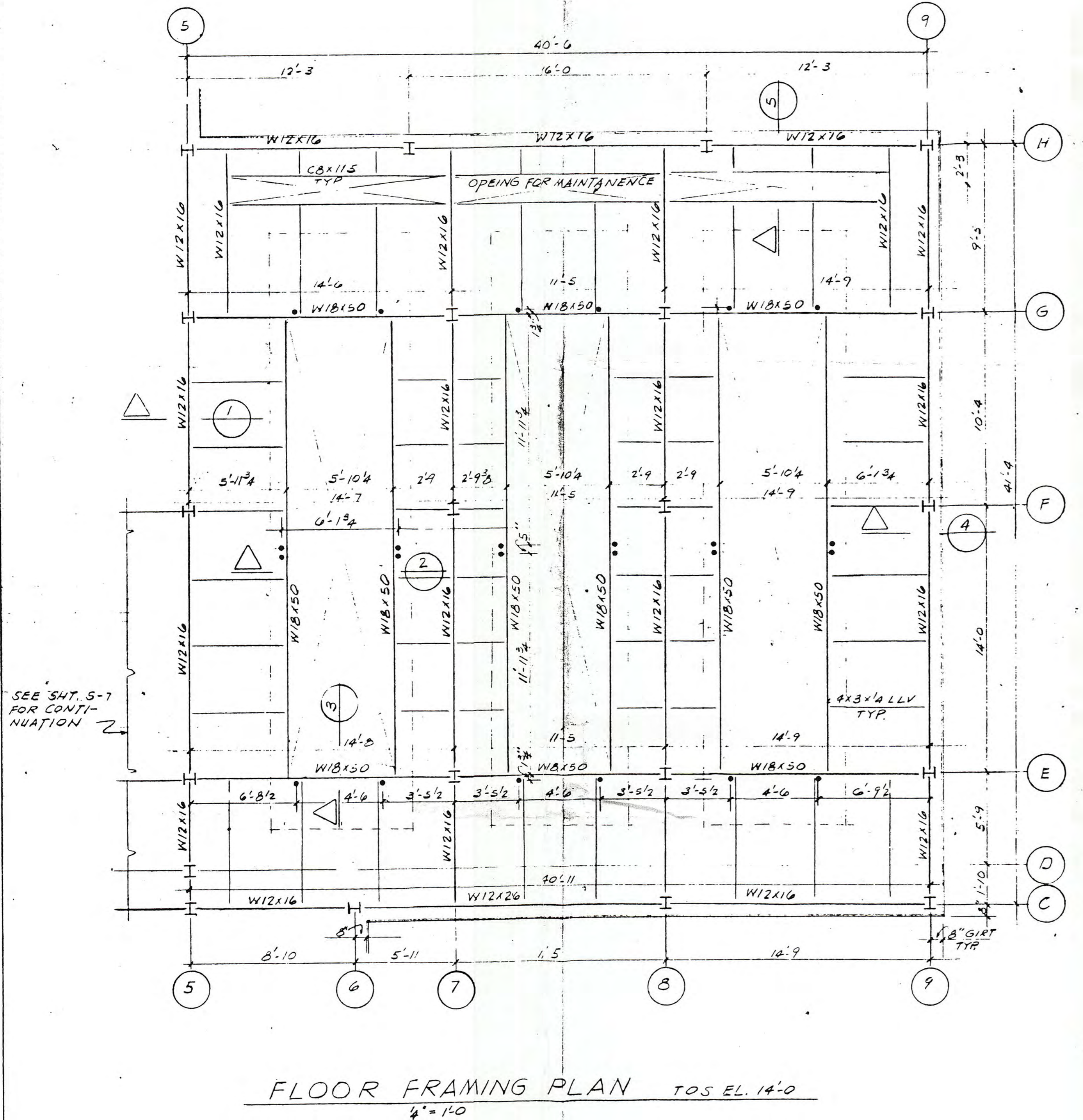
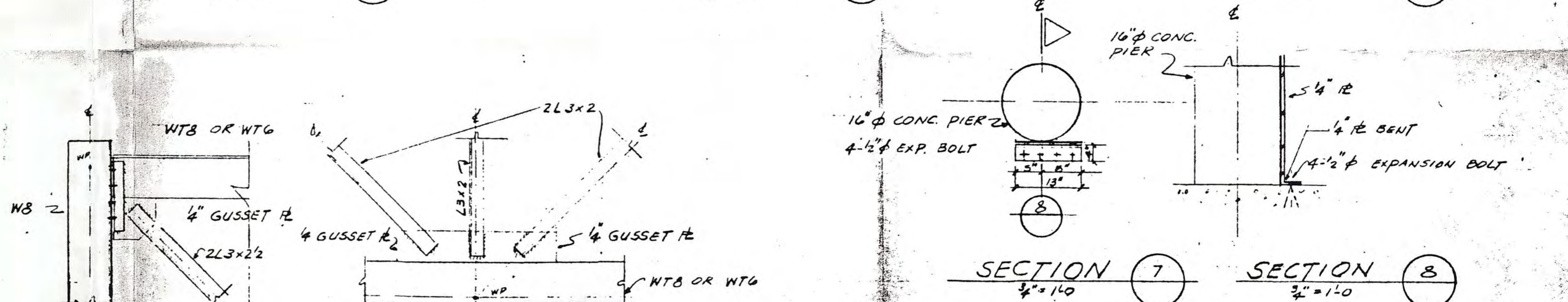
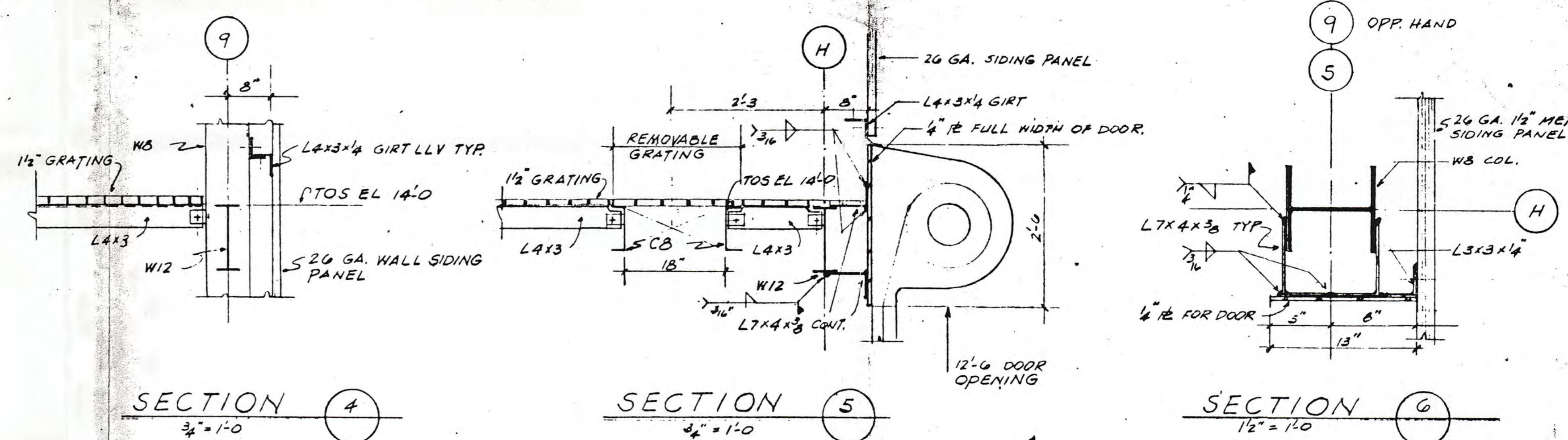
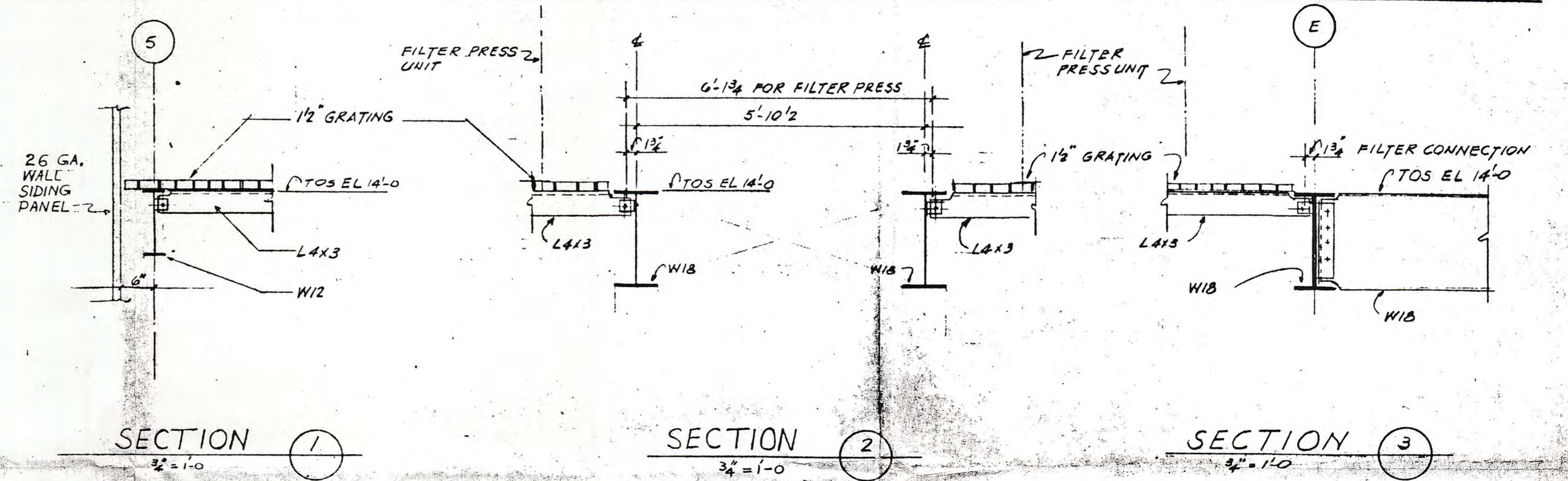
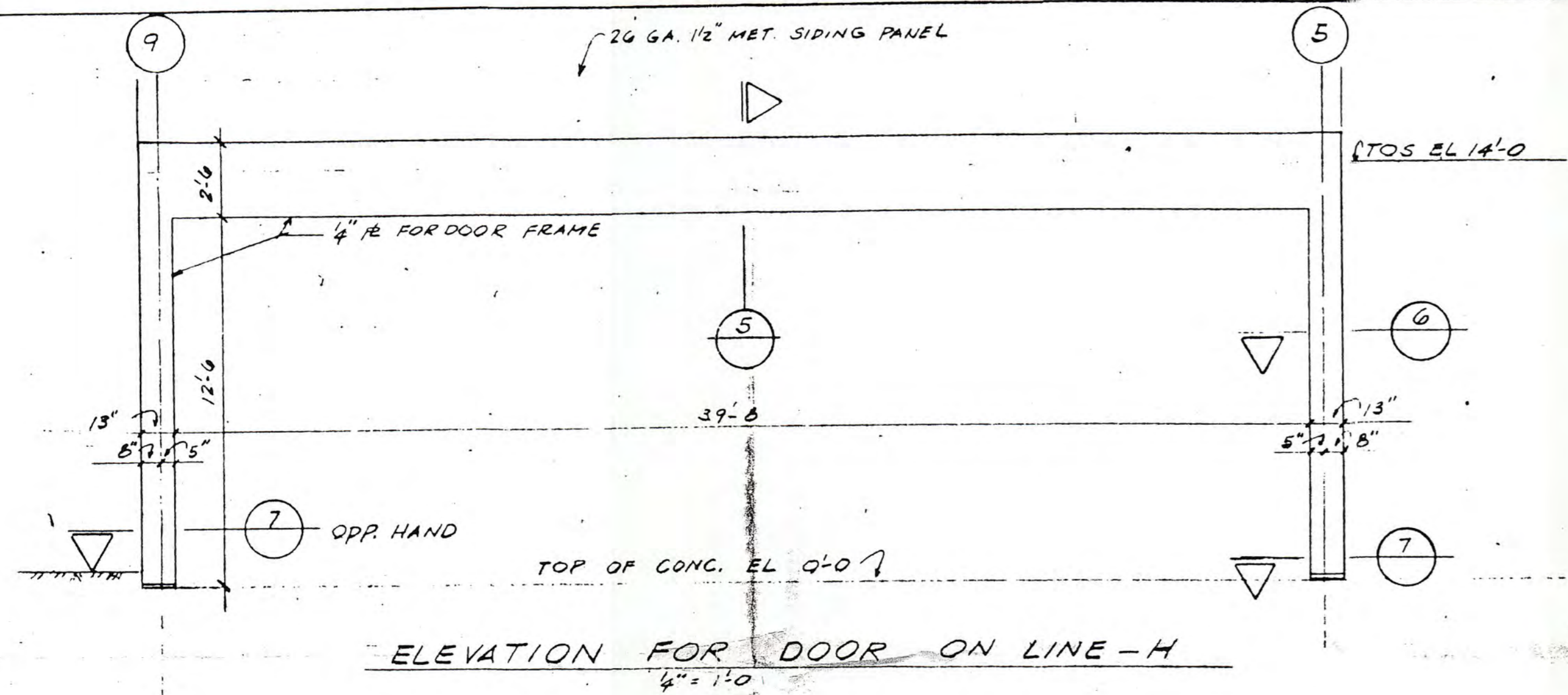
ISSUED FOR CONSTRUCTION		11-11-85
NO.	REVISION	DATE
CONSULTING ENGINEERS CHEMTEC RESEARCH ASSOCIATES, INC. 16241 WESTMORELAND DETROIT, MICH. 48219		
OWNER WASTE ACID SERVICES, INC. 6520 GEORGIA ST. DETROIT, MICH. 48211 JAN 04 1995		
TITLE: <u>RECEIVED</u> <u>FOUNDATION PLAN</u> <u>SECTION 4 &amp; DETAIL</u>		
SCALE: AS NOTED	DATE: 10-31-85	PROJECT NO.
DRAWN BY: <u>HS</u>	DESIGNED BY: <u>HS</u>	SHEET NO.
CHECKED BY: <u>HS, RB</u>	APPROVED BY: <u>RB</u>	11-09-85
		5-2 OF



Dynecol, Inc. - 1988 Act 64 License Reapplication

- GENERAL NOTES**
- Design live loads are as follows:  
Roof 30 paf  
Control Room 250 paf  
Filter press floor 100 paf
  - Design, fabrication and erection of structural steel shall be in accordance with current AISC Specification. All structural steel shall be ASTM A-36, unless noted otherwise.
  - Welding shall be in accordance with current "Code for welding in Building Construction", American Welding Society. Electrodes for welding shall be AWS E1 or AS 5.5, E70xx.
  - Verify all existing dimensions and elevations shown on drawings before commencing work.
  - Shop connection shall be welded and field connections shall be bolted.
  - Provide temporary bracing as required to insure stability of the structure until the permanent bracing is in place.
  - Provide angles, clips, plates, bars and any misc. items if required for structural members.
  - Verify dimensions and location of filter press equipment with its drawing before proceeding with steel fabrication and erection.
- OPEN WEB STEEL JOIST NOTES:**
- Design, fabrication and erection of OWSJ shall be in accordance with current SJI and AISC Specification. All OWSJ steel shall have yield strength of 50,000 psi, unless noted otherwise.
  - Live load deflection not to exceed 1/360 of the span. Provide 2 1/2" joint seat for all joist unless noted otherwise.
  - All horizontal, "V" bridging and cross bridging to be welded or bolted at intersections.
  - All bearing on steel for joist shall be at least 2 1/2" min. beyond the face of support.

ISSUED FOR CONSTRUCTION		11-25-85
ISSUED FOR REVIEW		10-21-85
NO.	REVISION	DATE
CONSULTING ENGINEERS		
CHEMTEC RESEARCH ASSOCIATES, INC.		
16241 WESTMORELAND		
DETROIT, MICH. 48219		
OWNER		
WASTE ACID SERVICES, INC.		
6520 GEORGIA ST.		
DETROIT, MICH. 48211		
JAN 04 1985		
RECEIVED		
TITLE CONE FIBERGLASS TANK & FILTER PRESS		
ROOF FRAMING PLAN		
SECTIONS & DETAILS		
SCALE	DATE	PROJECT NO.
AS NOTED	10-8-85	
DRAWN BY HB	10-8-85	SHEET NO.
CHECKED BY HB RB	11-25-85	5-30F
APPROVED BY RB	11-25-85	



NOTE:  
 1. REFER FOR GENERAL NOTE SMT. 5-3.

ISSUED FOR CONSTRUCTION	11-25-85	
ISSUED FOR REVIEW	10-21-85	
NO.	REVISION	DATE

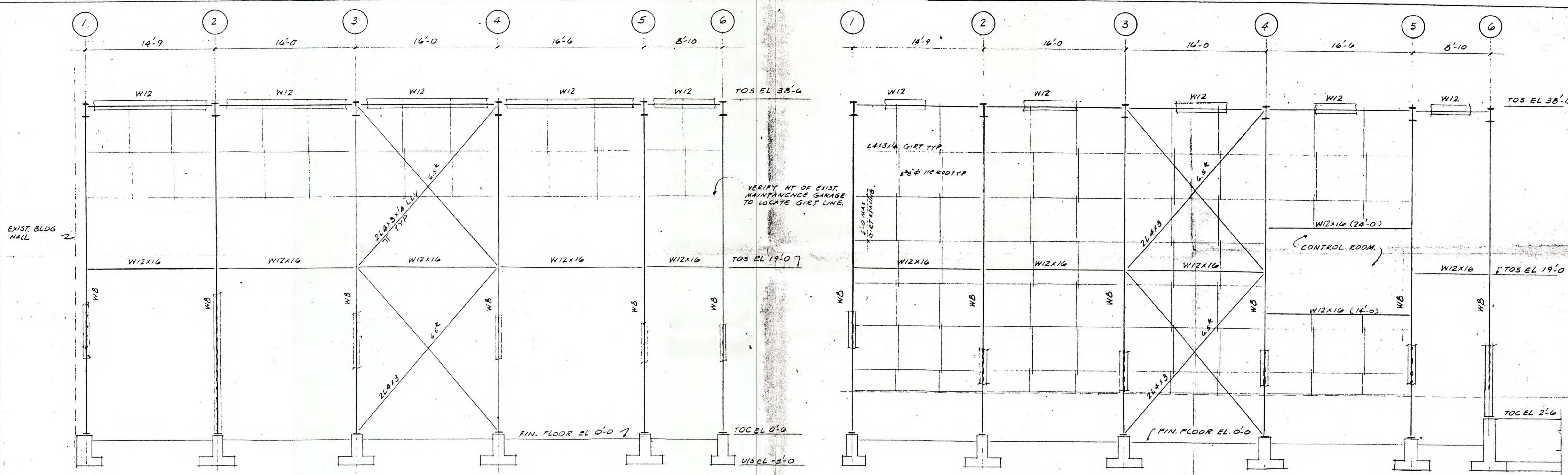
CONSULTING ENGINEERS  
**CHEMTEC RESEARCH ASSOCIATES, INC.**  
 18241 WESTMORELAND  
 DETROIT, MICH. 48219

OWNER  
**WASTE ACID SERVICES, INC.**  
 6520 GEORGIA ST.  
 DETROIT, MICH. 48211  
 JAN 04 1995

TITLE  
**FILTER PRESS**  
**FLOOR FRAMING PLAN**  
**SECTIONS & DETAILS**

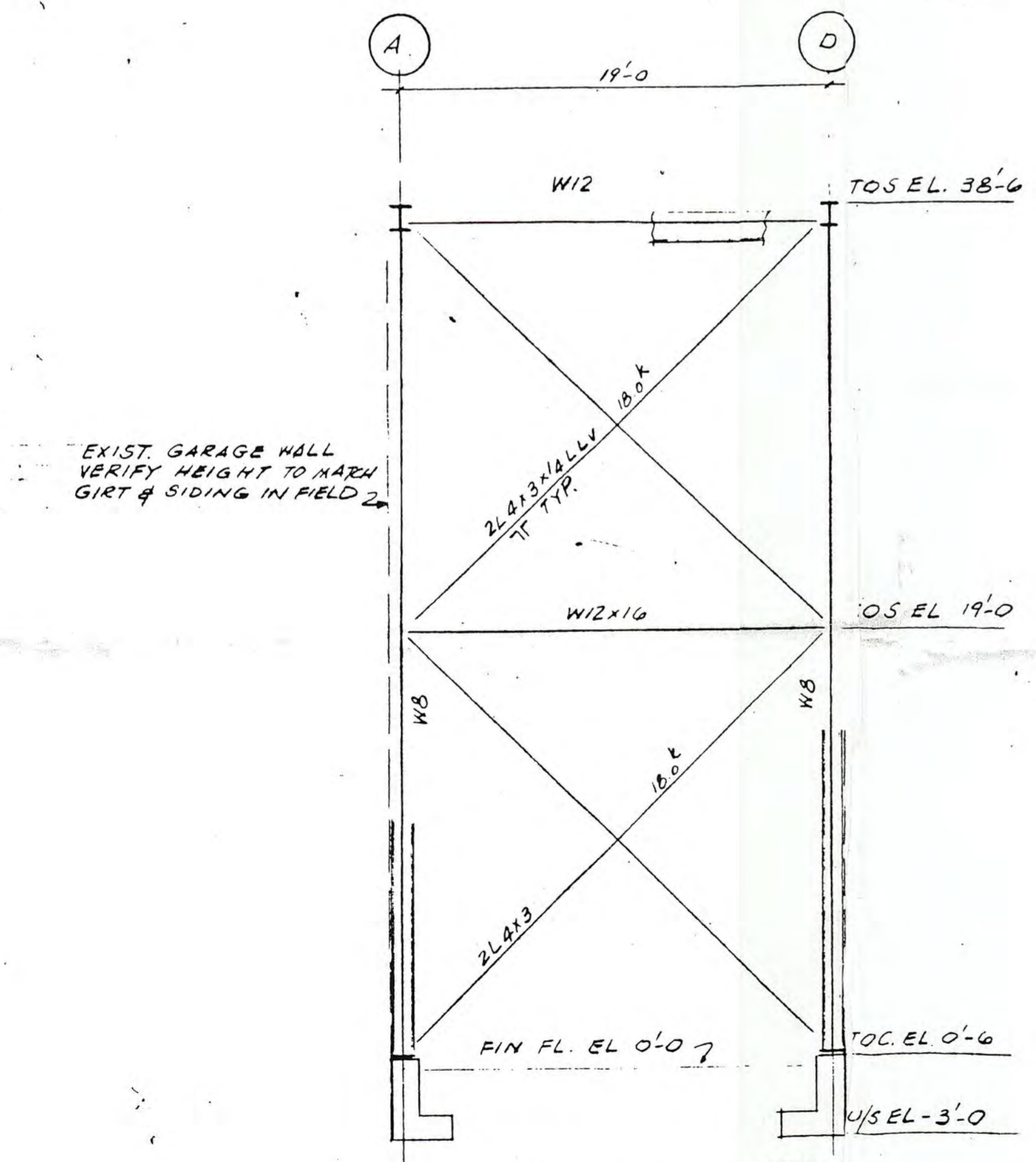
SCALE	AS NOTED	DATE	PROJECT NO.
DRAWN BY	NR	10-12-85	
DESIGNED BY	NR	10-10-85	SHEET NO.
CHECKED BY			5-4 OF
APPROVED BY			

Dynecol, Inc. - 1988 Act 6  
 License Reapplication

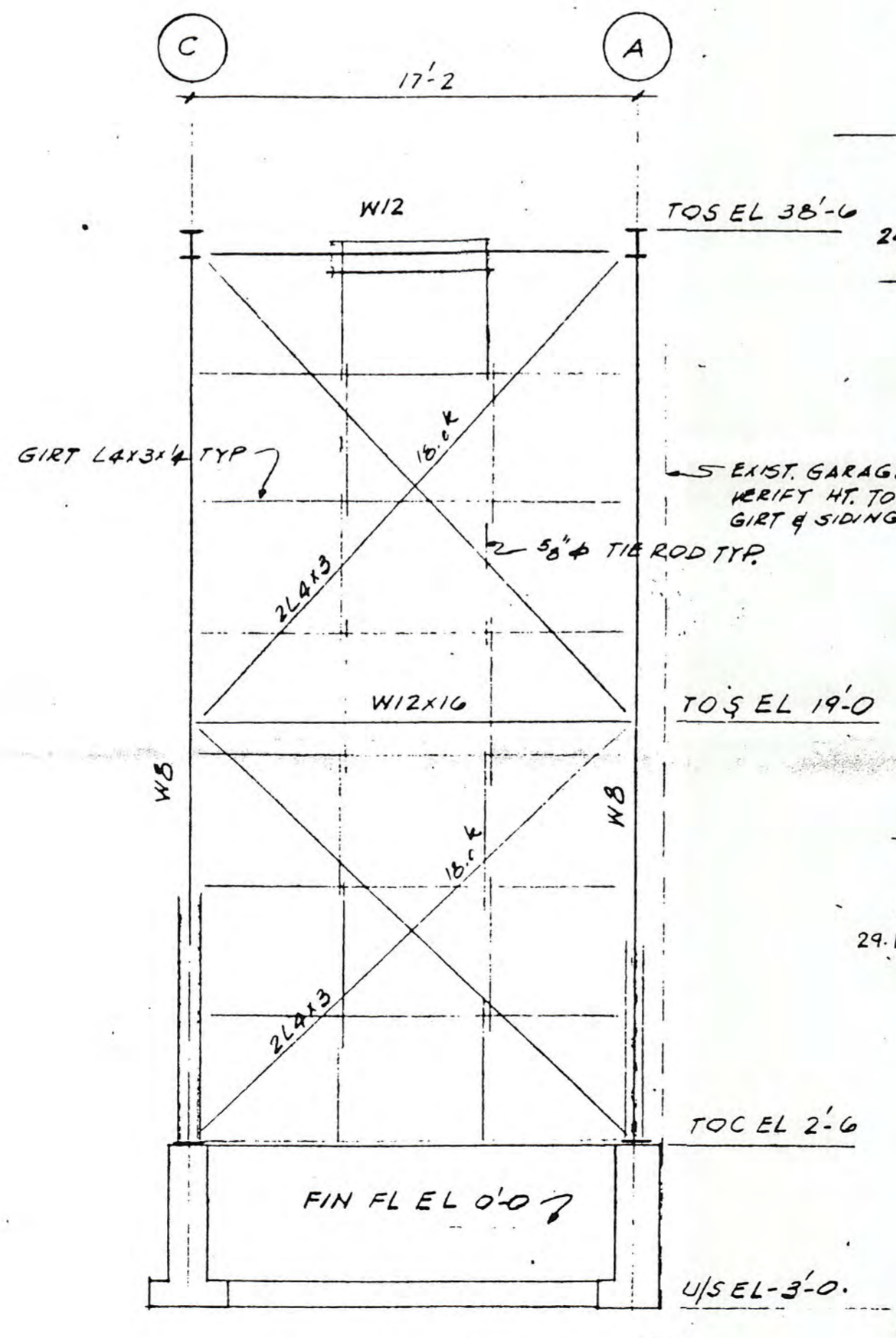


ELEVATION ON LINE A  
 $\frac{3}{16}'' = 1'-0''$

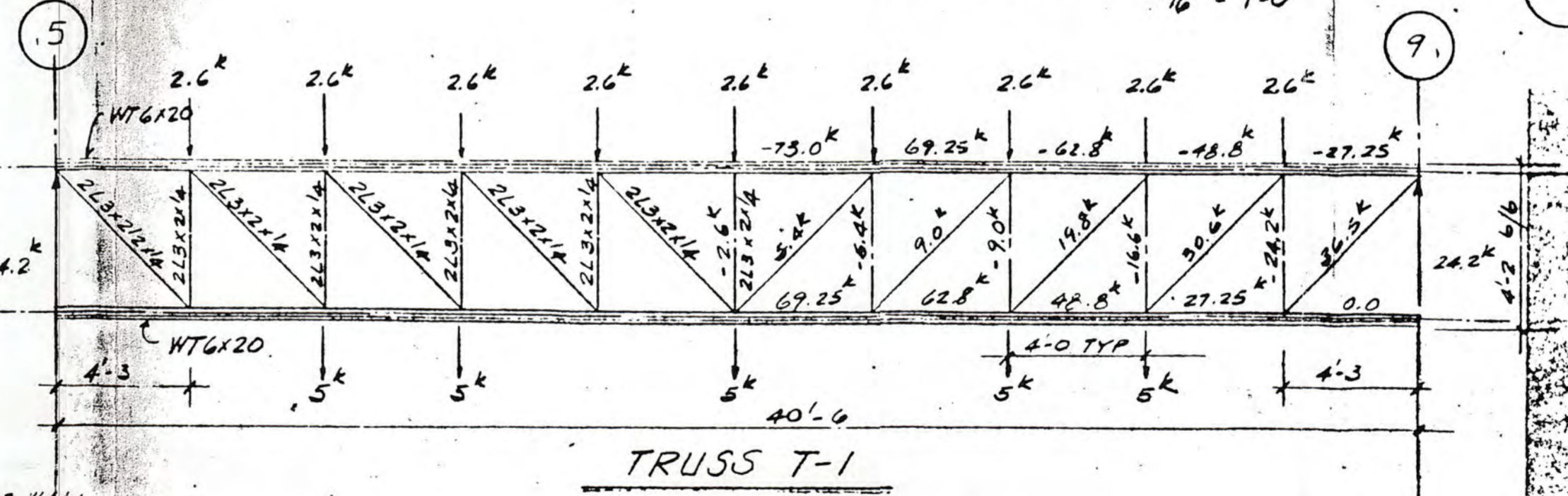
ELEVATION ON LINE D  
 $\frac{3}{16}'' = 1'-0''$



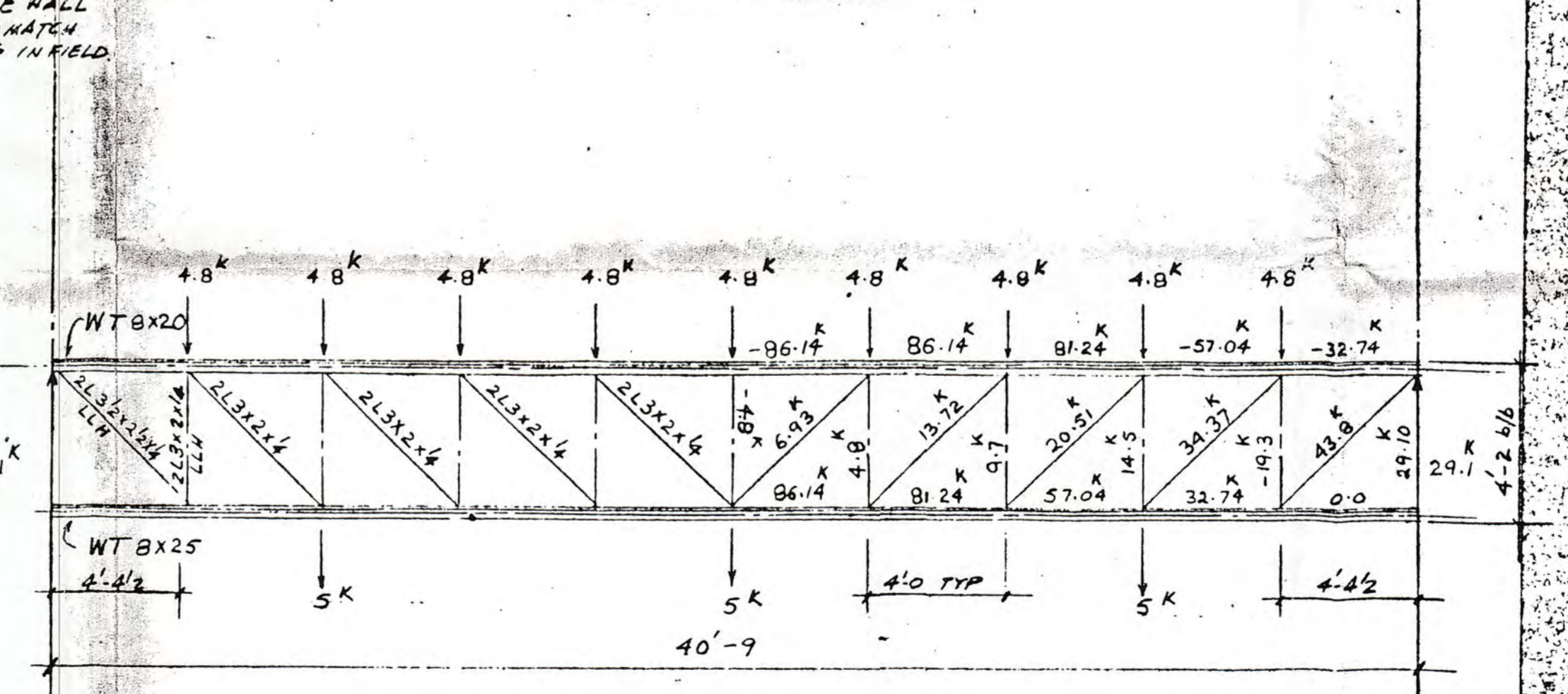
ELEVATION ON LINE 1  
 $\frac{3}{16}'' = 1'-0''$



ELEVATION ON LINE 6  
 $\frac{3}{16}'' = 1'-0''$



TRUSS T-1

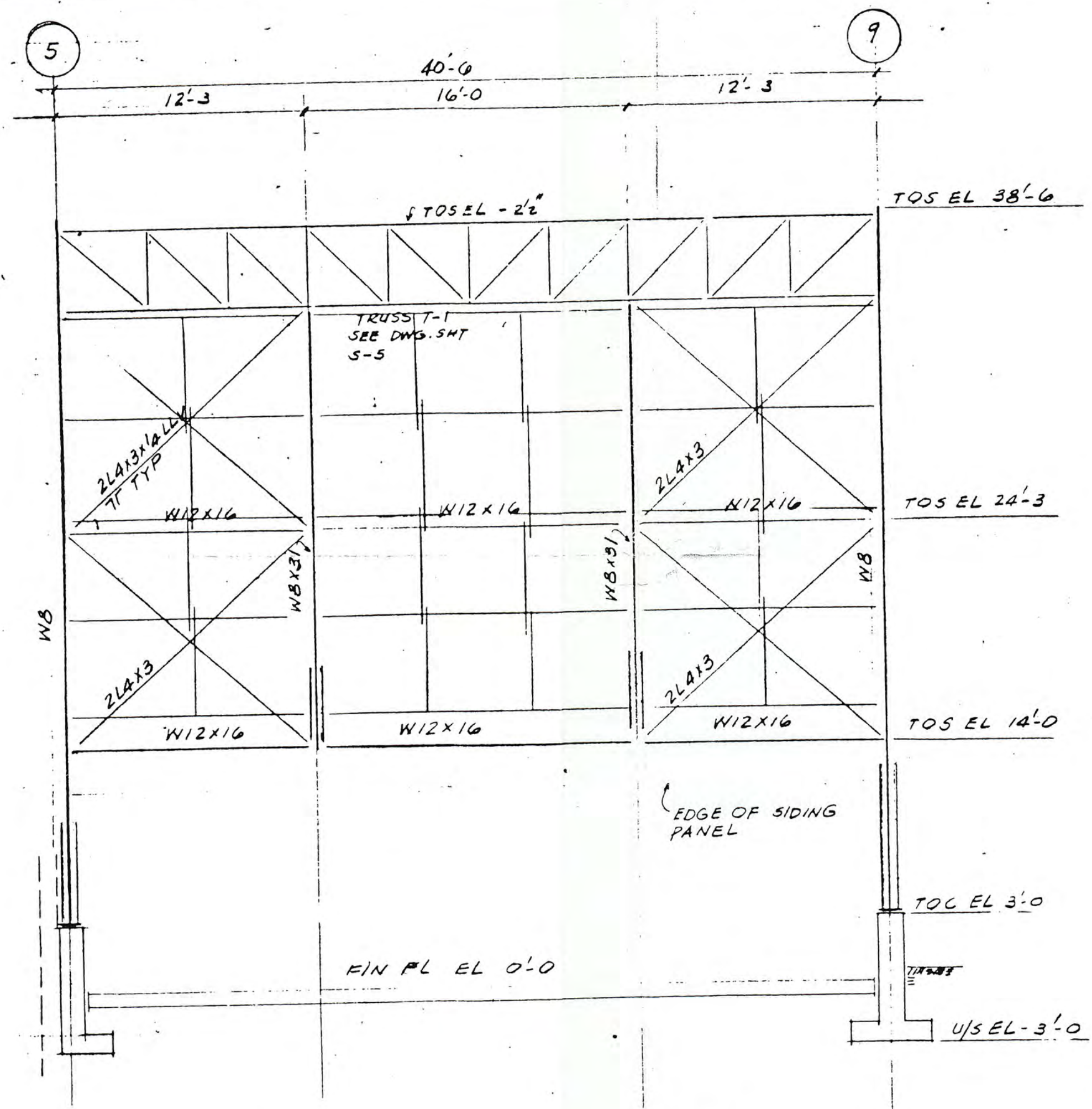


TRUSS T-2

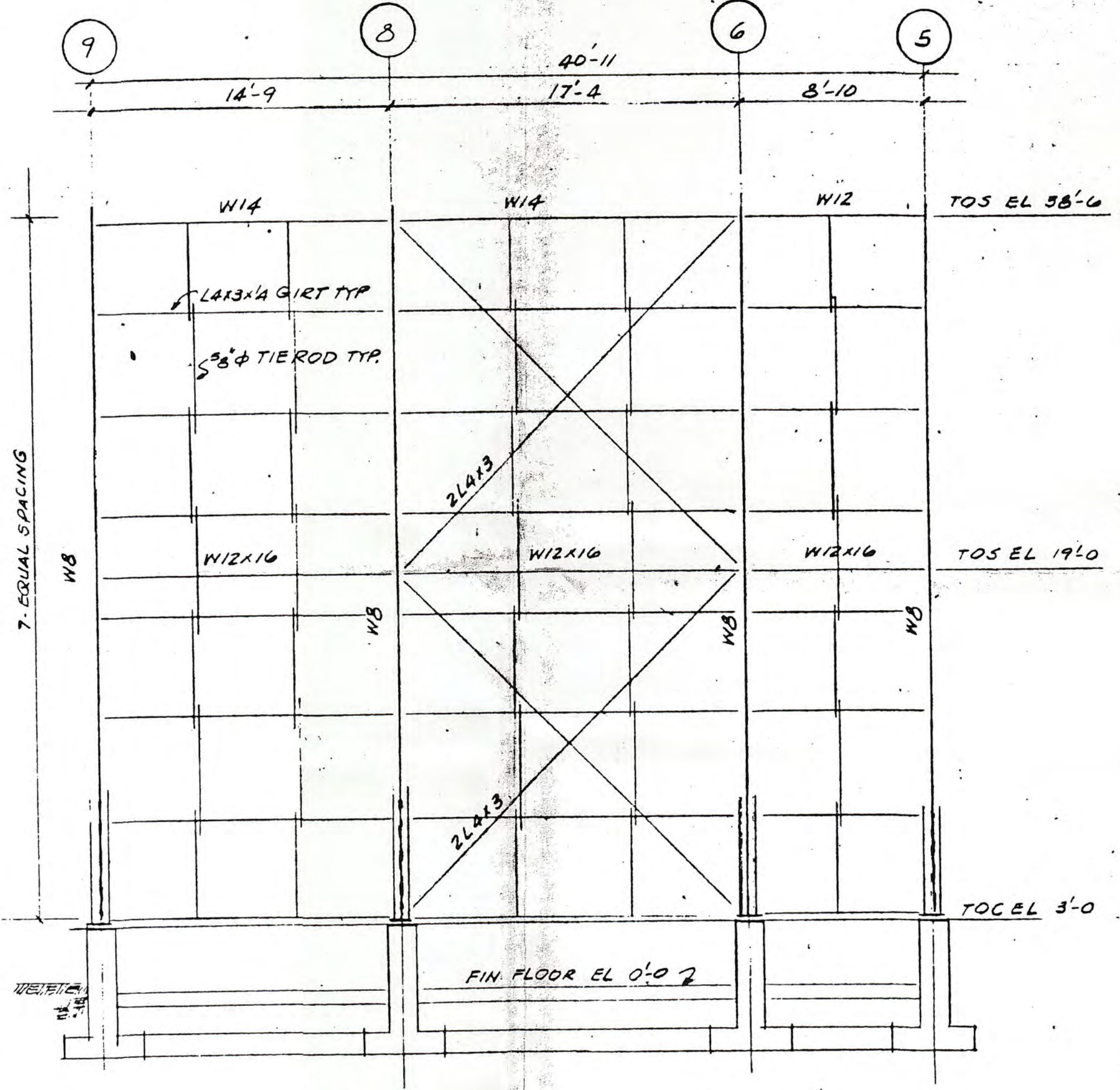
NOTES:  
 1. REFER SMT 5-6 FOR GENERAL NOTES

NO.	REVISION	DATE
1	ISSUED FOR CONSTRUCTION	11-23-85
2	ISSUED FOR REVIEW	11-21-85
CONSULTING ENGINEERS <b>CHEMTEC RESEARCH ASSOCIATES, INC.</b> 16241 WESTMORELAND DETROIT, MICH. 48219		
OWNER <b>WASTE ACID SERVICES, INC.</b> 6520 GEORGIA ST DETROIT, MICH. 48211		
TITLE <b>CONE FIBERGLASS TANKS</b> <b>ELEVATIONS SECTIONS &amp; DETAILS</b>		
SCALE	AS NOTED	DATE
DRAWN BY	HA	10-17-85
DESIGNED BY	HA, SH	10-15-85
CHECKED BY	HA, SH	11-24-85
APPROVED BY	RA	11-23-85
		PROJECT NO.
		SHEET NO.
		5 OF 7

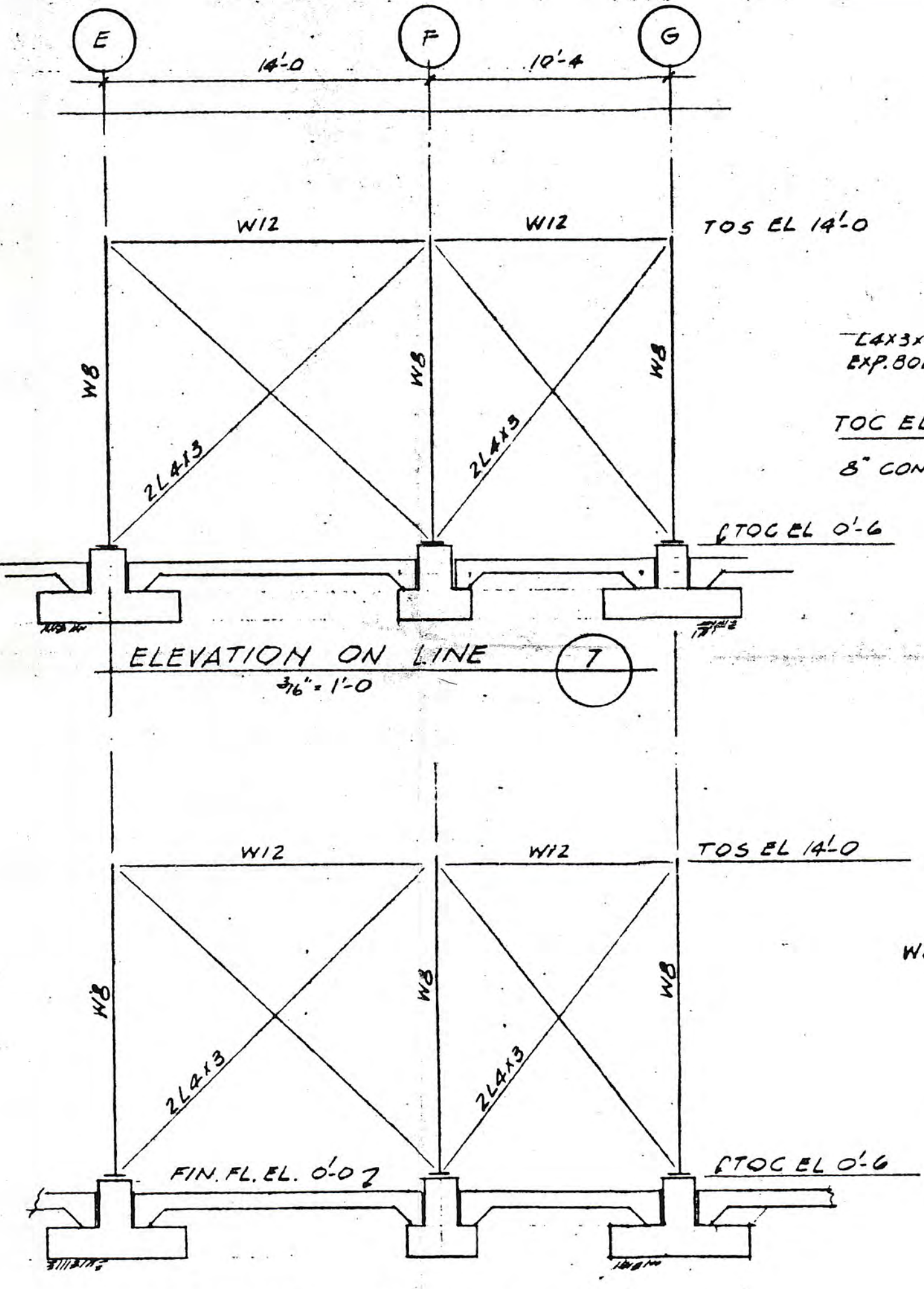




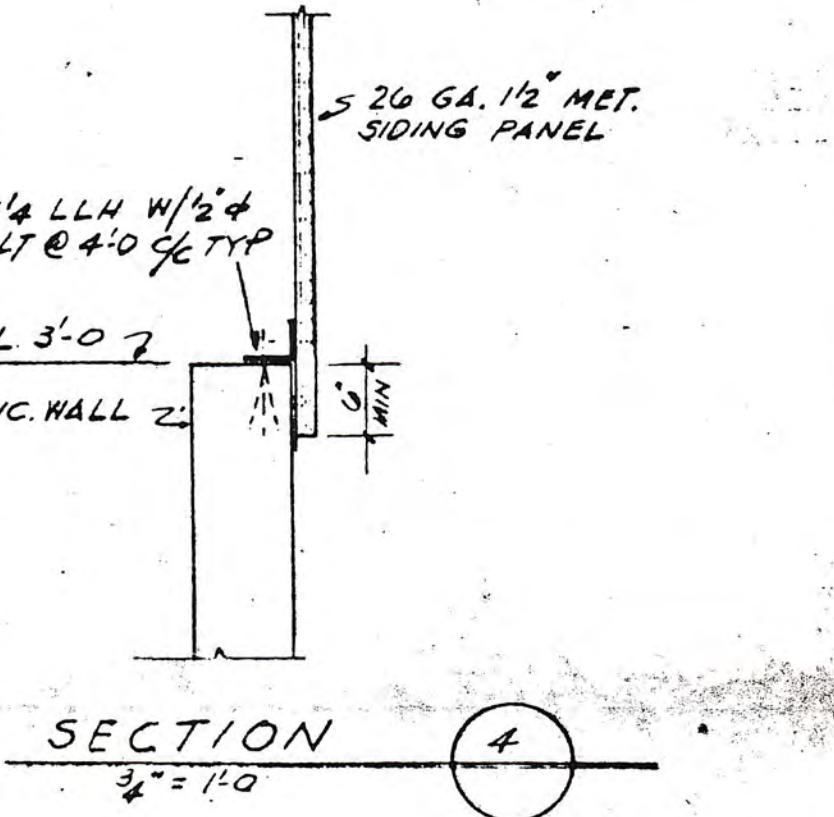
ELEVATION ON LINE (H)  
3/16" = 1'-0"



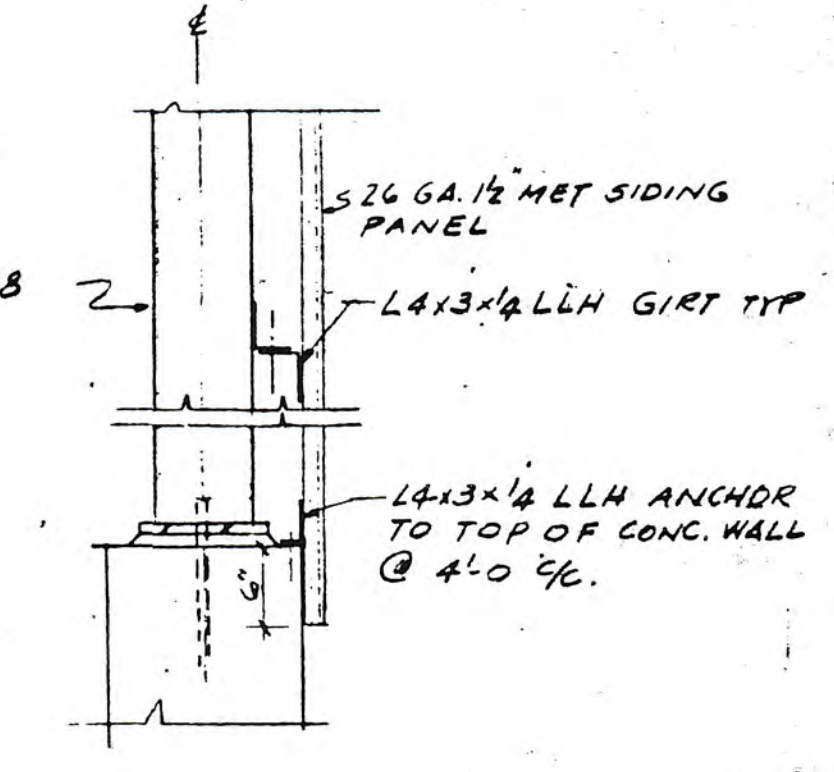
ELEVATION ON LINE (C)  
3/16" = 1'-0"



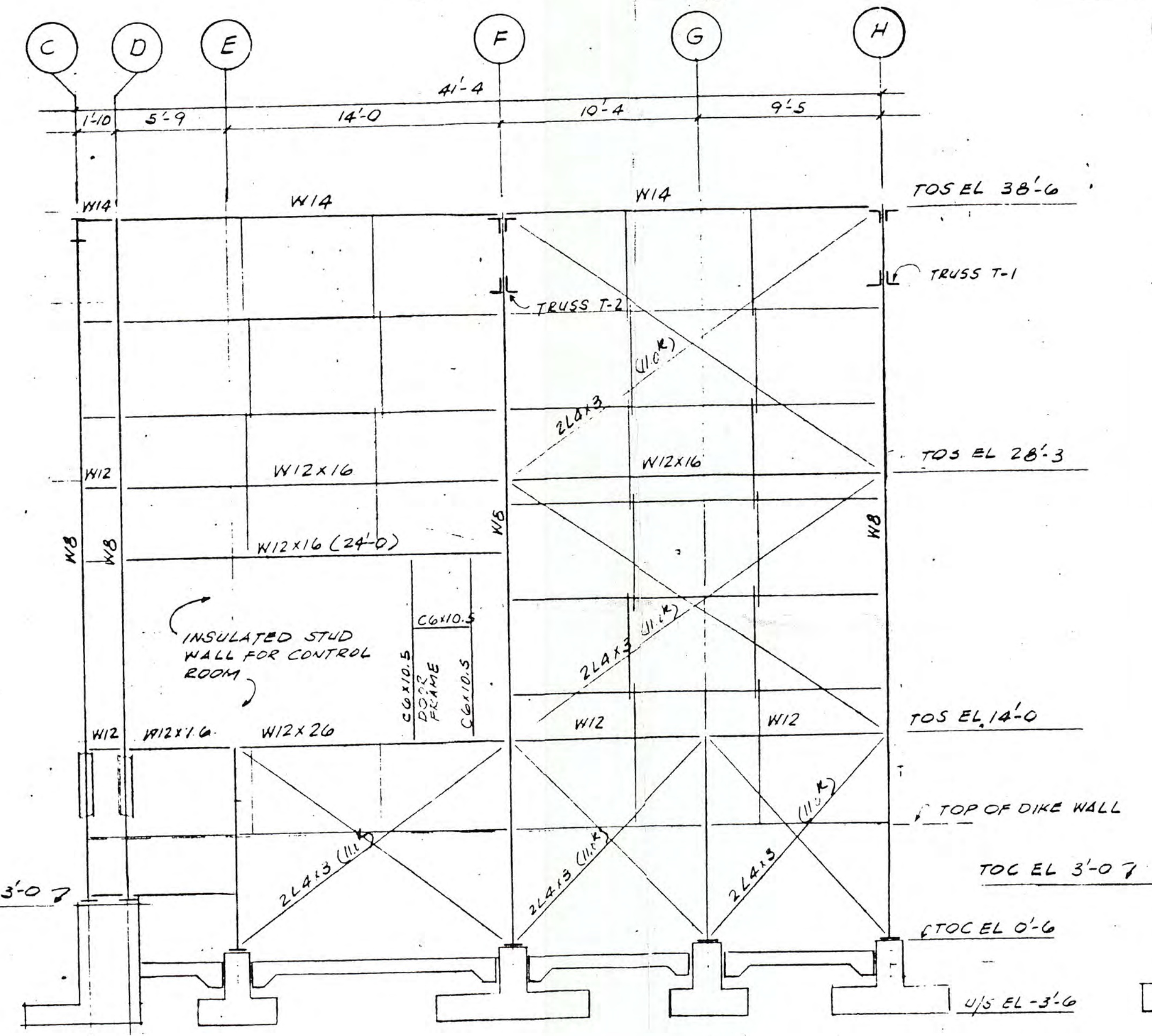
ELEVATION ON LINE (8)  
3/16" = 1'-0"



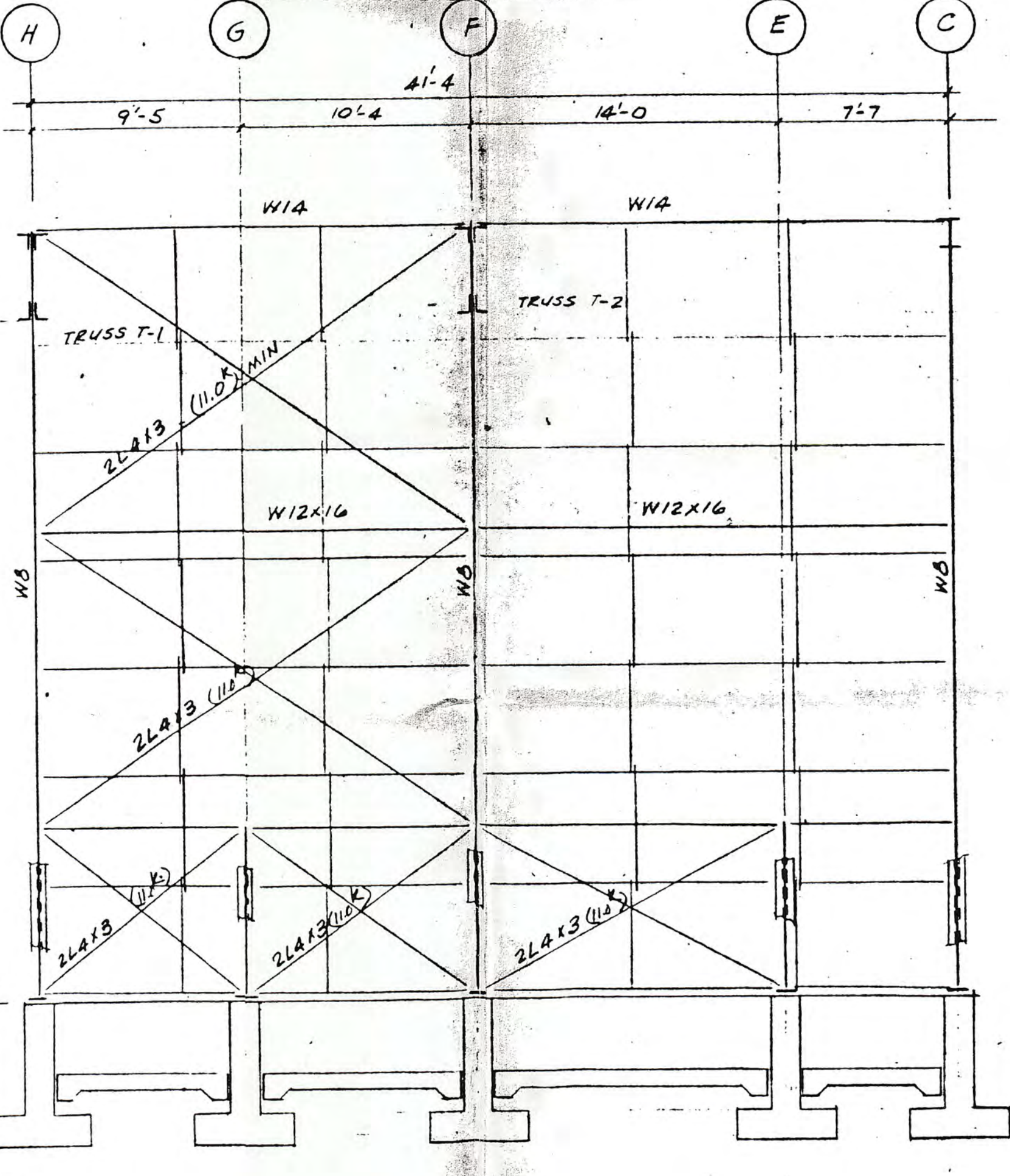
SECTION (4)  
3/4" = 1'-0"



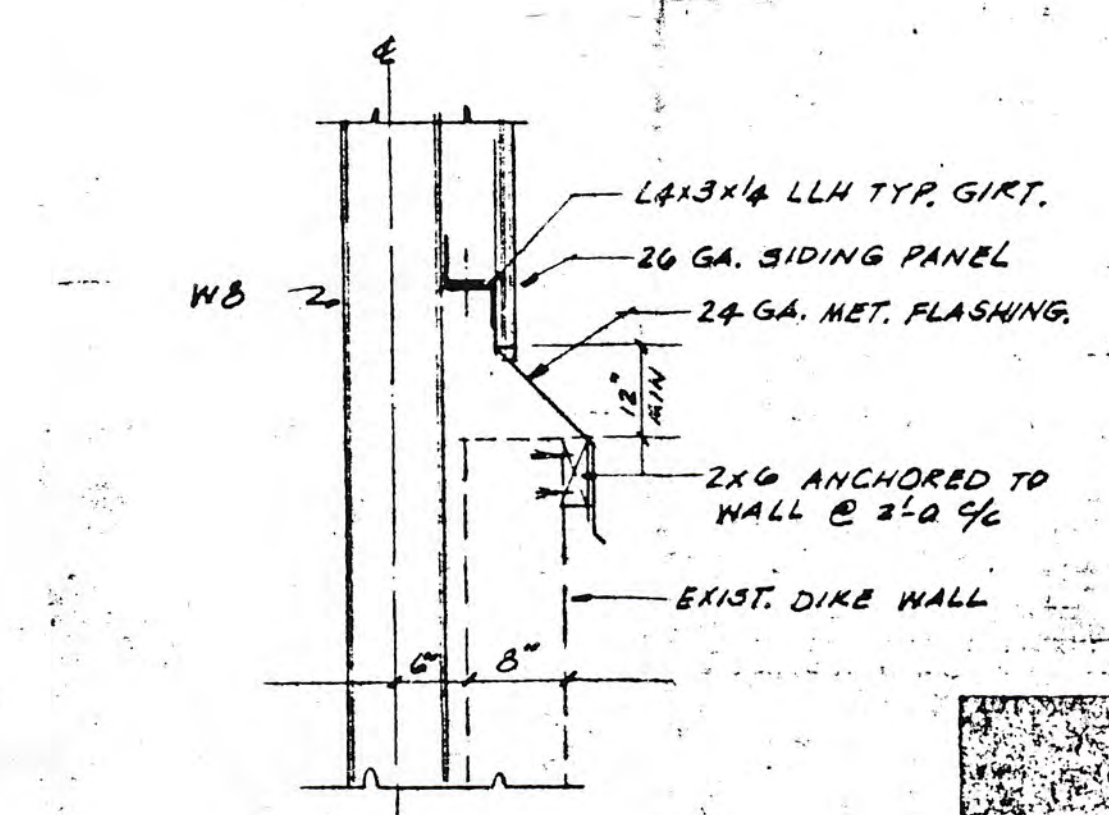
SECTION (3)  
3/4" = 1'-0"



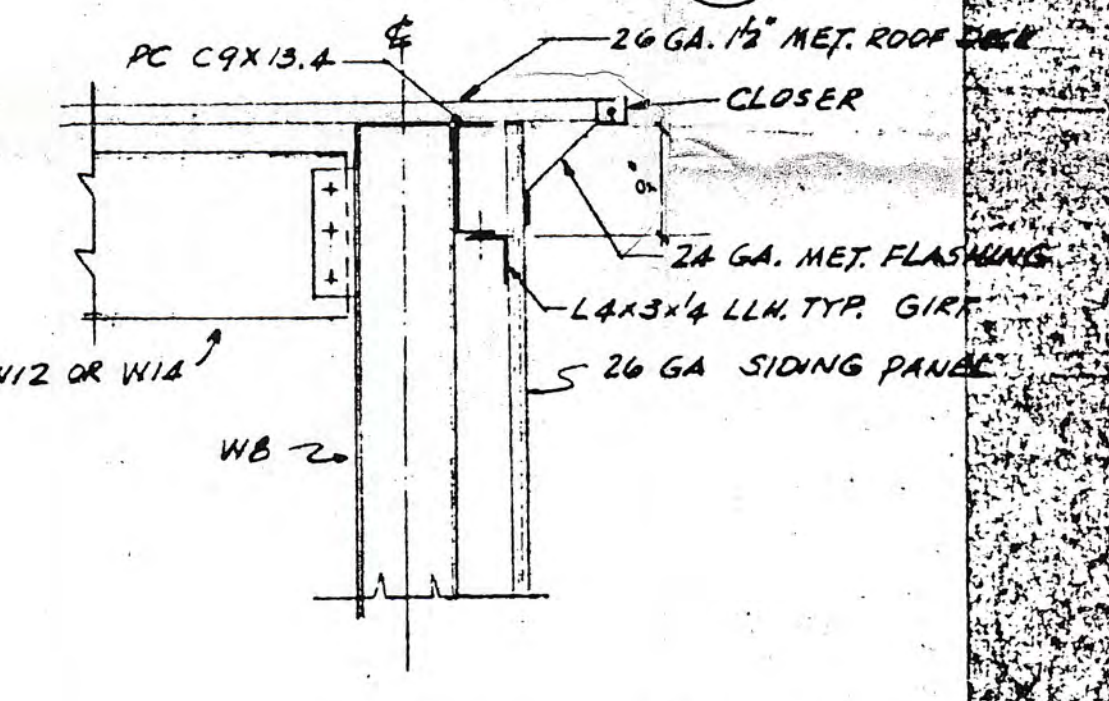
ELEVATION ON LINE (5)  
3/16" = 1'-0"



ELEVATION ON LINE (9)  
3/16" = 1'-0"



SECTION (1)  
3/4" = 1'-0"



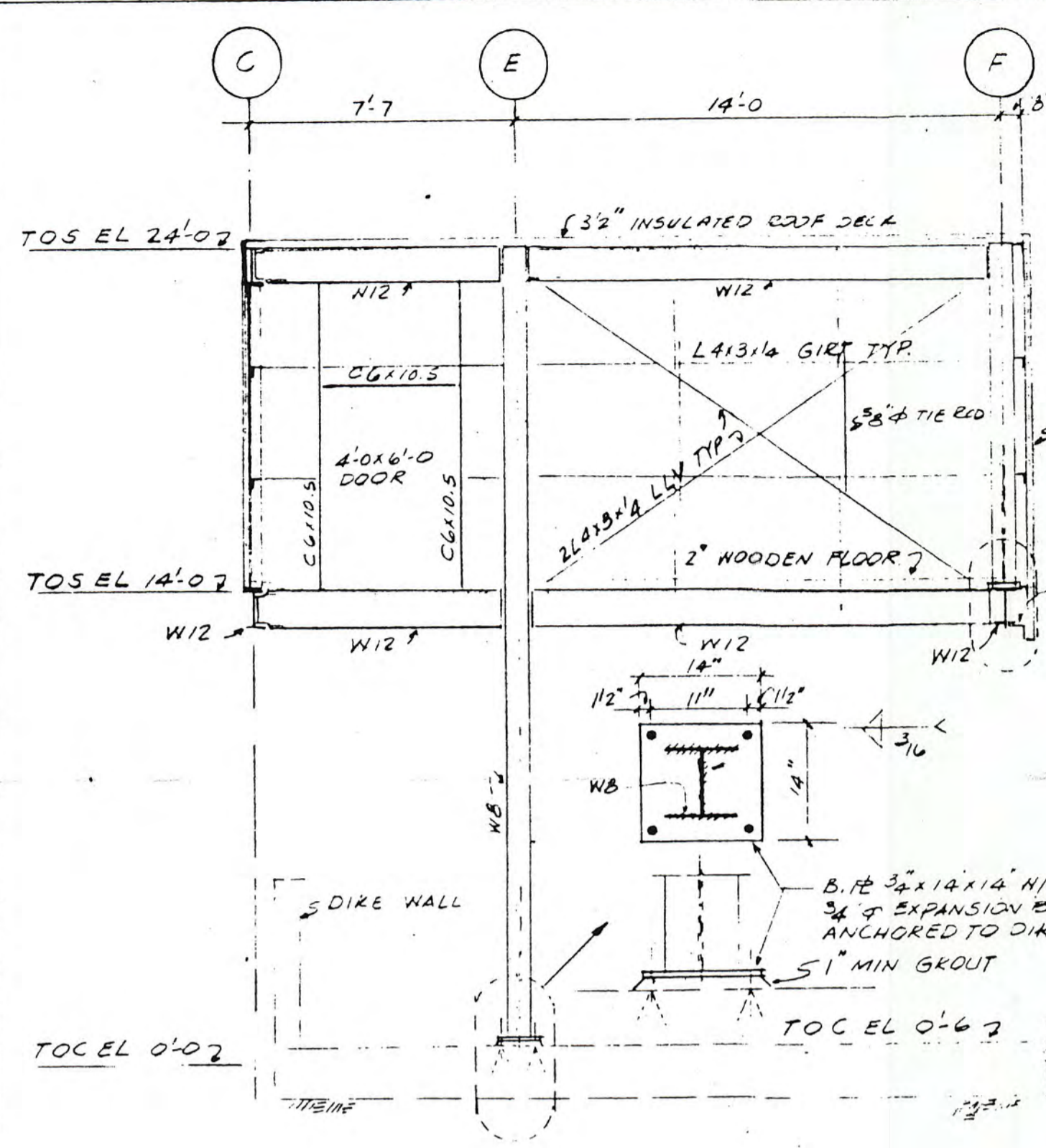
SECTION (2)  
3/4" = 1'-0"

NOTE:  
1. REFER SMT. 5-3 FOR GENERAL NOTES.

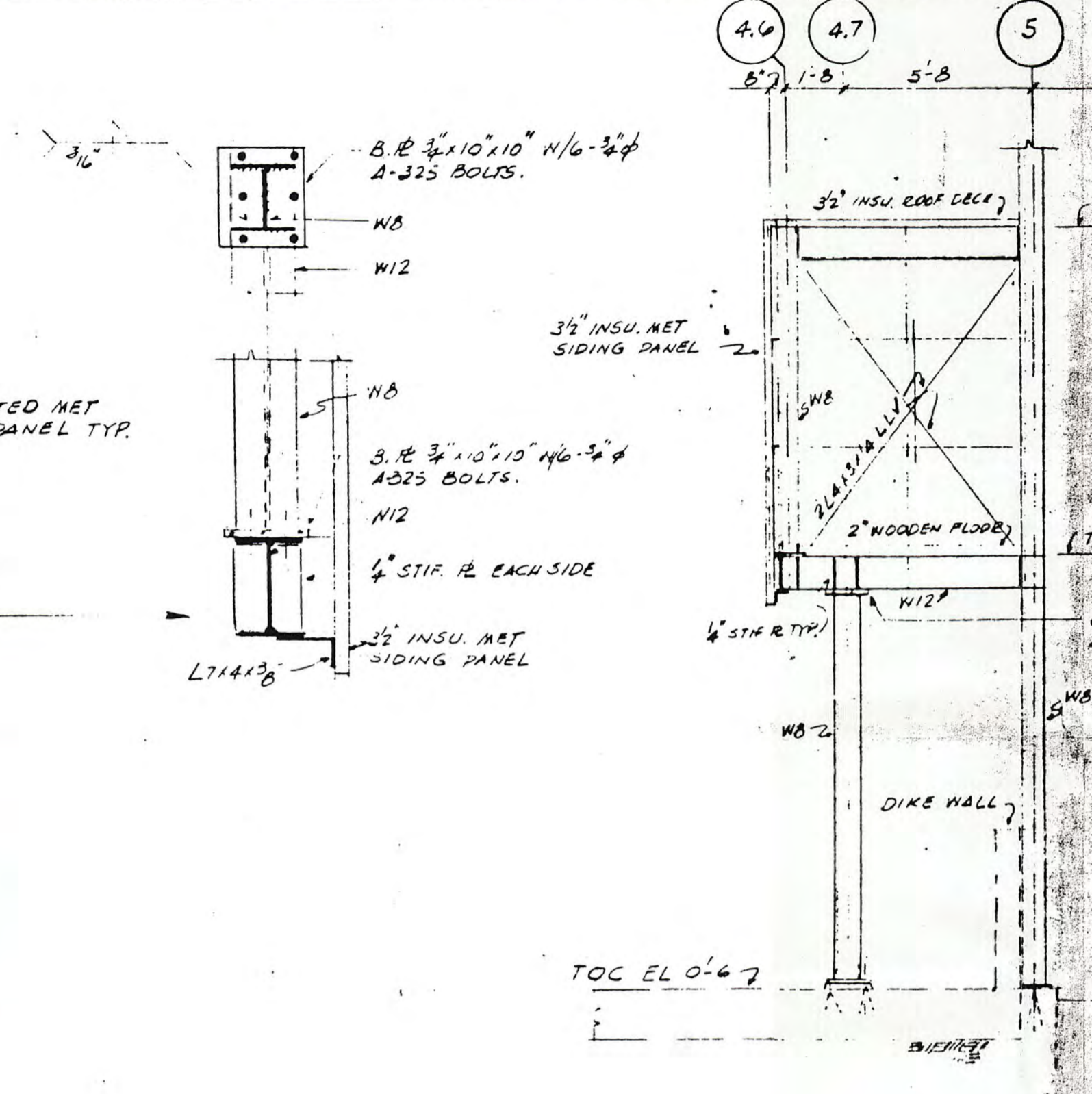
Dynecol, Inc. - 1988 Act 64 License Reapplication

ISSUED FOR CONSTRUCTION	11-23-85	
ISSUED FOR REVIEW	11-21-85	
NO. REVISED	DATE	
CONSULTING ENGINEERS		
CHEMTEC RESEARCH ASSOCIATES, INC.		
6241 WESTMORELAND		
DETROIT, MICH. 48219		
OWNER		
WASTE ACID SERVICES, INC.		
6520 BEDFORD ST.		
DETROIT, MICH. 48211		
TITLE	FILTER PRESS RECEIVED	
ELEVATIONS SECTION		
DETAILS		
SCALE AS NOTED	DATE	PROJECT NO.
DESIGNED BY: HB	10-16-85	
DRAWN BY: HB	10-14-85	SHEET NO.
CHECKED BY: HB, RB	11-24-85	
APPROVED BY: RB	11-23-85	56-01

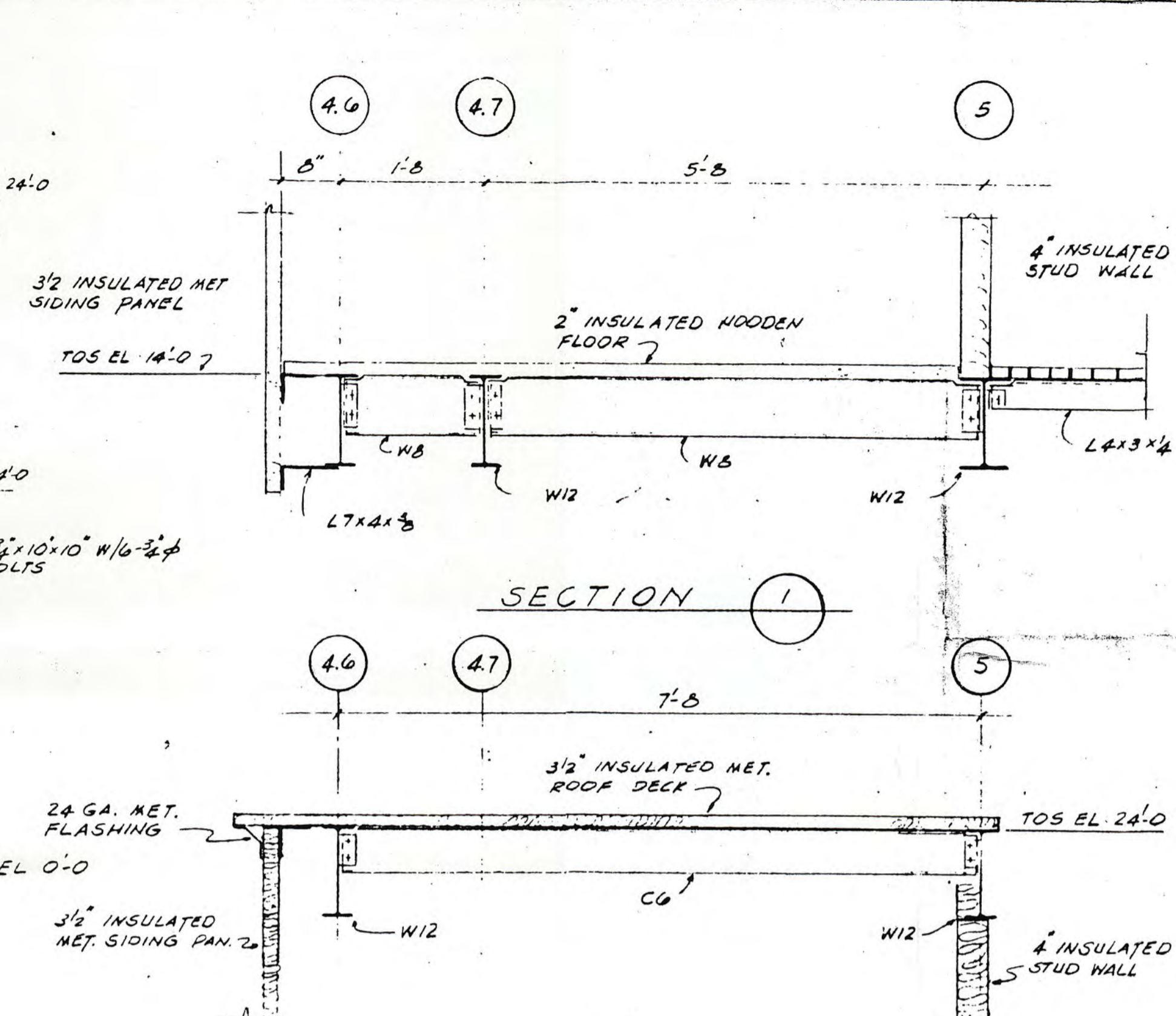
TYPICAL WALL SECTIONS



ELEVATION ON LINE 4.6  
4" = 1'-0"

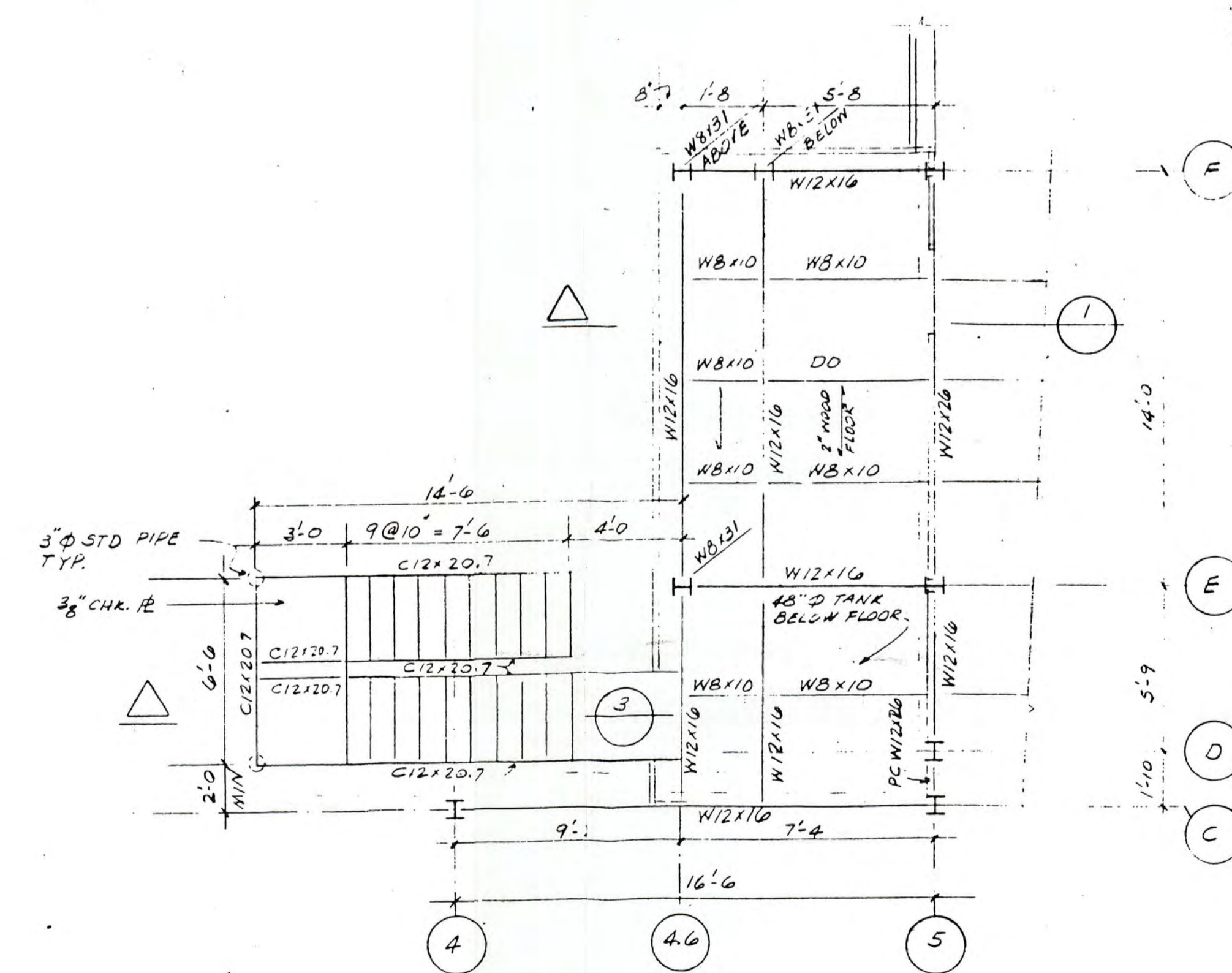


ELEVATION ON LINE - F  
4" = 1'-0"

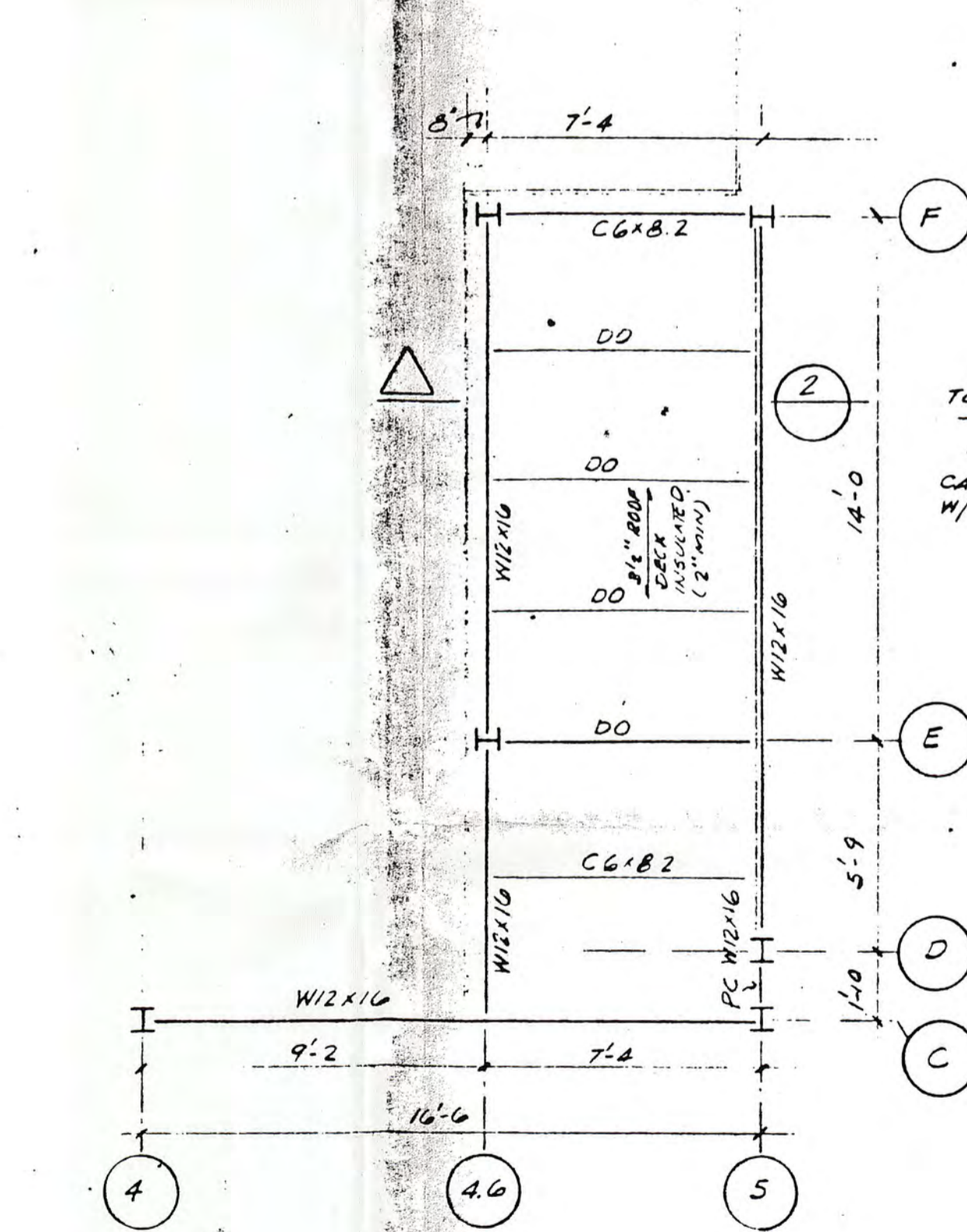


SECTION 1

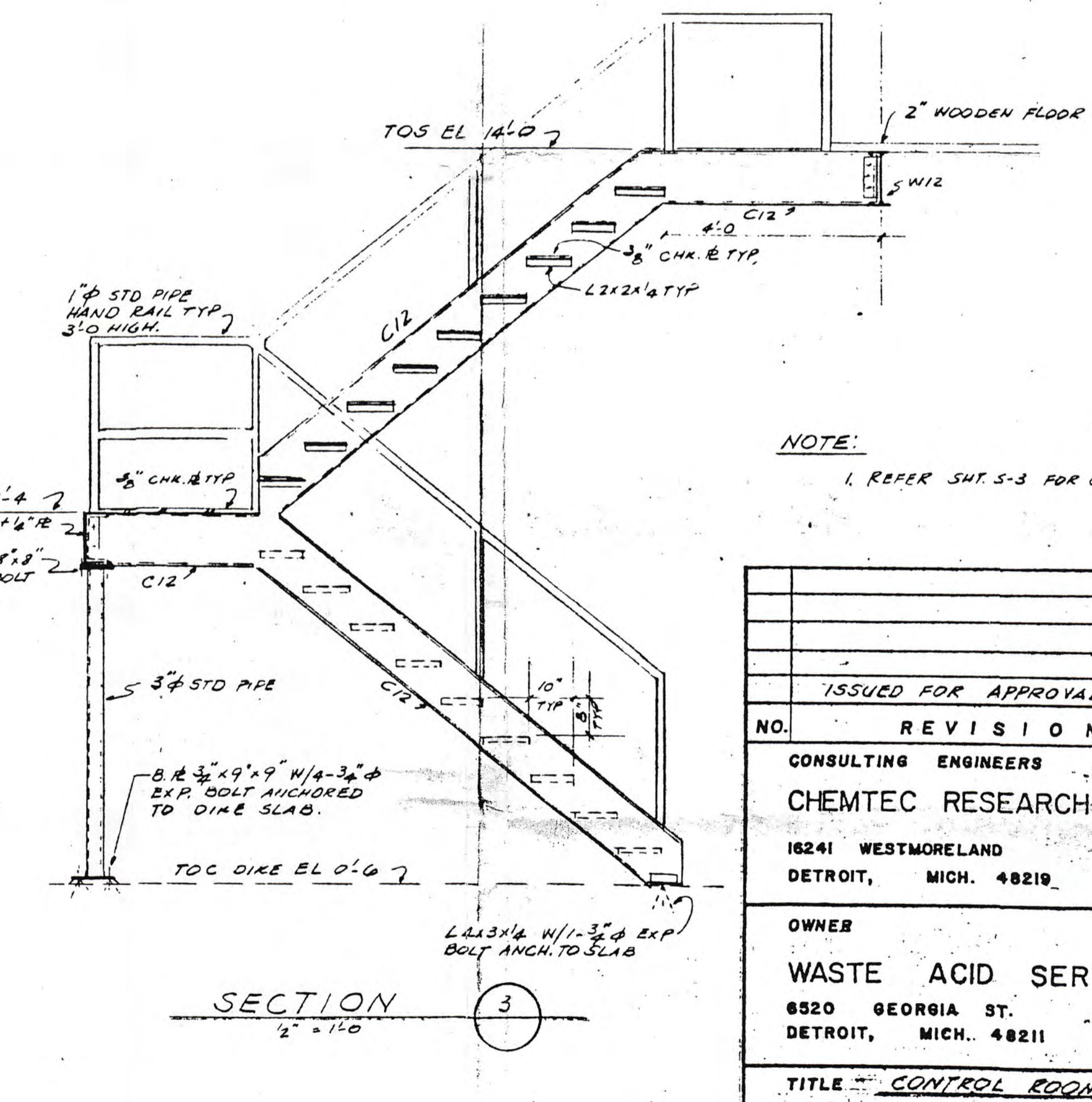
SECTION 2



CONTROL ROOM FLOOR FRAMING PLAN TOS EL 14'-0"  
4" = 1'-0"



CONTROL ROOM ROOF FRAMING PLAN TOS EL 24'-0"  
4" = 1'-0"

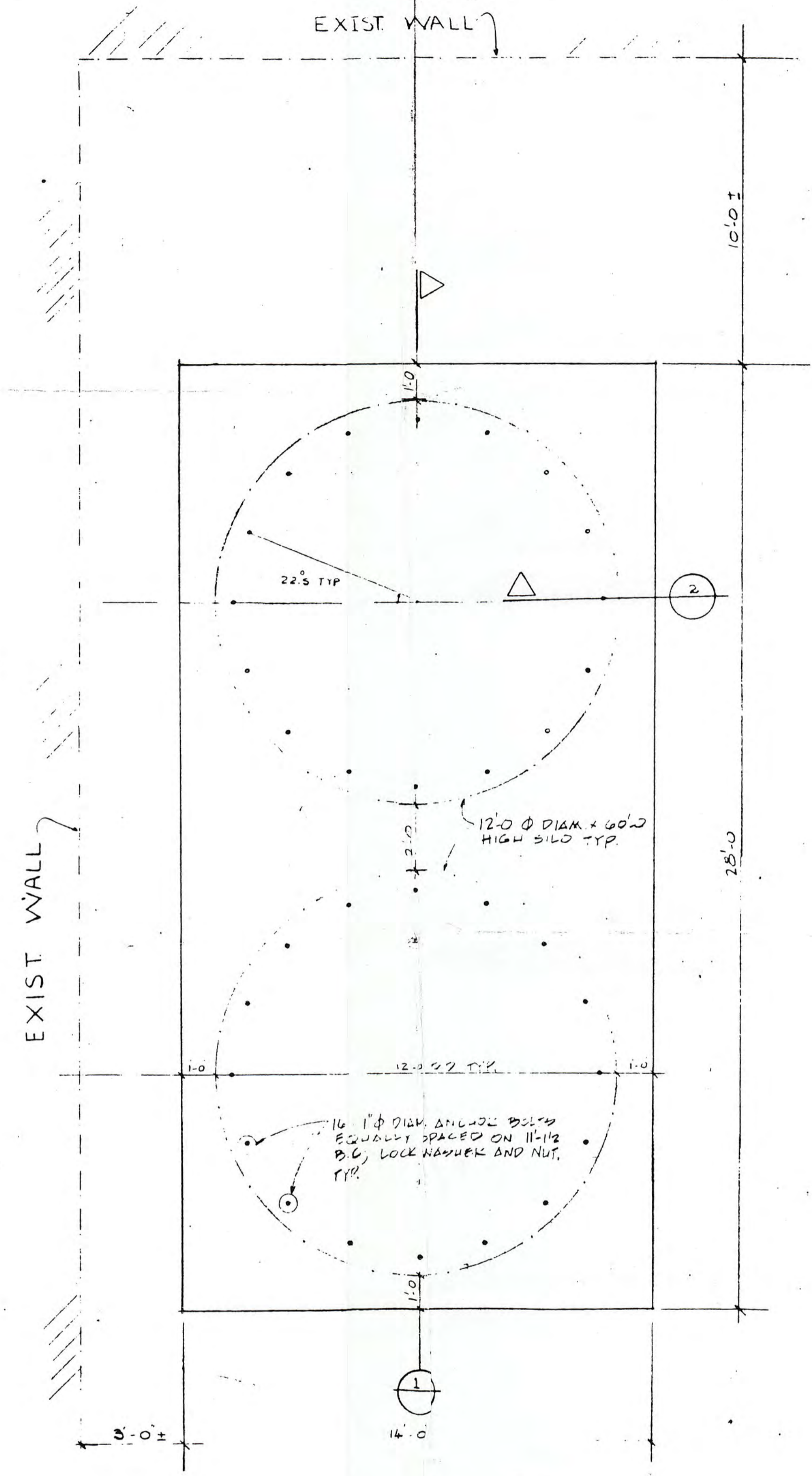


SECTION 3  
2" = 1'-0"

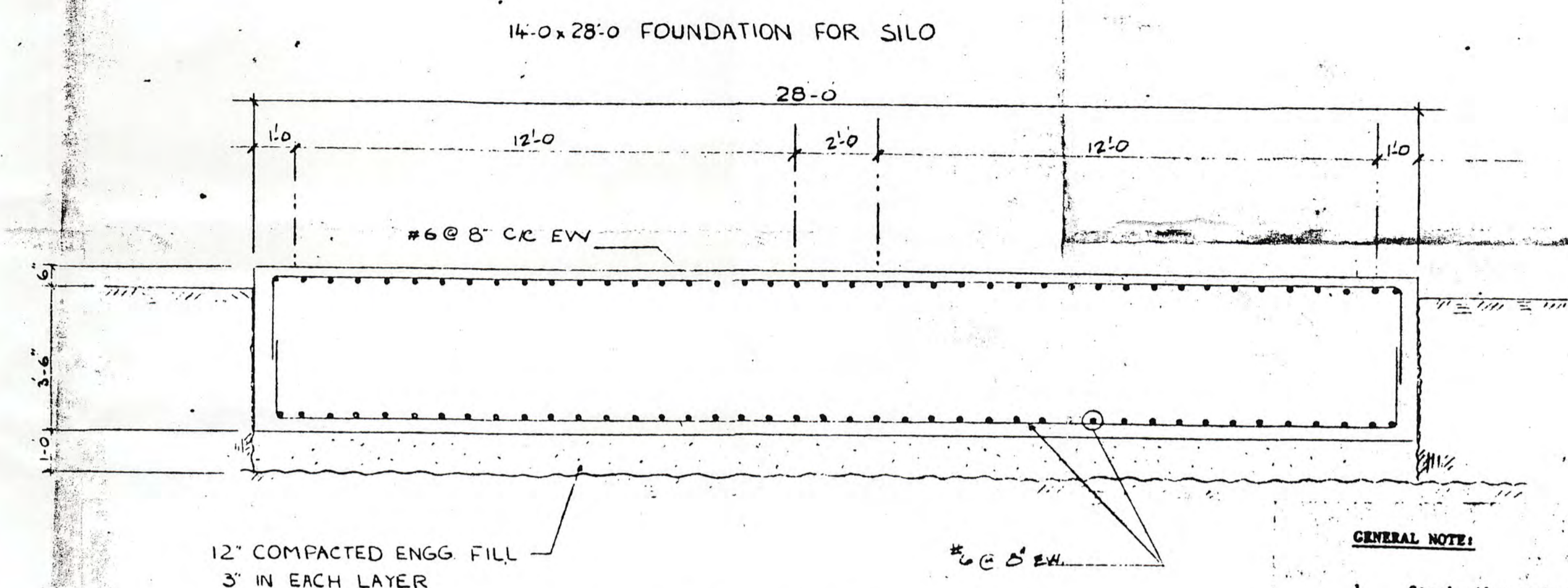
NOTE:  
1. REFER SH. 5-3 FOR GENERAL NOTES.

ISSUED FOR APPROVAL		11-25-85
NO.	REVISION	DATE
CONSULTING ENGINEERS		
CHEMTEC RESEARCH ASSOCIATES, INC.		
16241 WESTMORELAND		
DETROIT, MICH. 48219		
OWNER		
WASTE ACID SERVICES, INC.		
6520 GEORGIA ST.		
DETROIT, MICH. 48211		
JAN 04 1995		
TITLE CONTROL ROOM		
FLOOR AND ROOF FRAMING PLAN		
SECTIONS & ELEVATIONS		
SCALE AS NOTED	DATE	PROJECT NO.
DRAWN BY HB	11-18-85	
DESIGNED BY HB	11-15-85	SHEET NO.
CHECKED BY HB RB	11-24-85	
APPROVED BY RB	11-24-85	S-7 OF

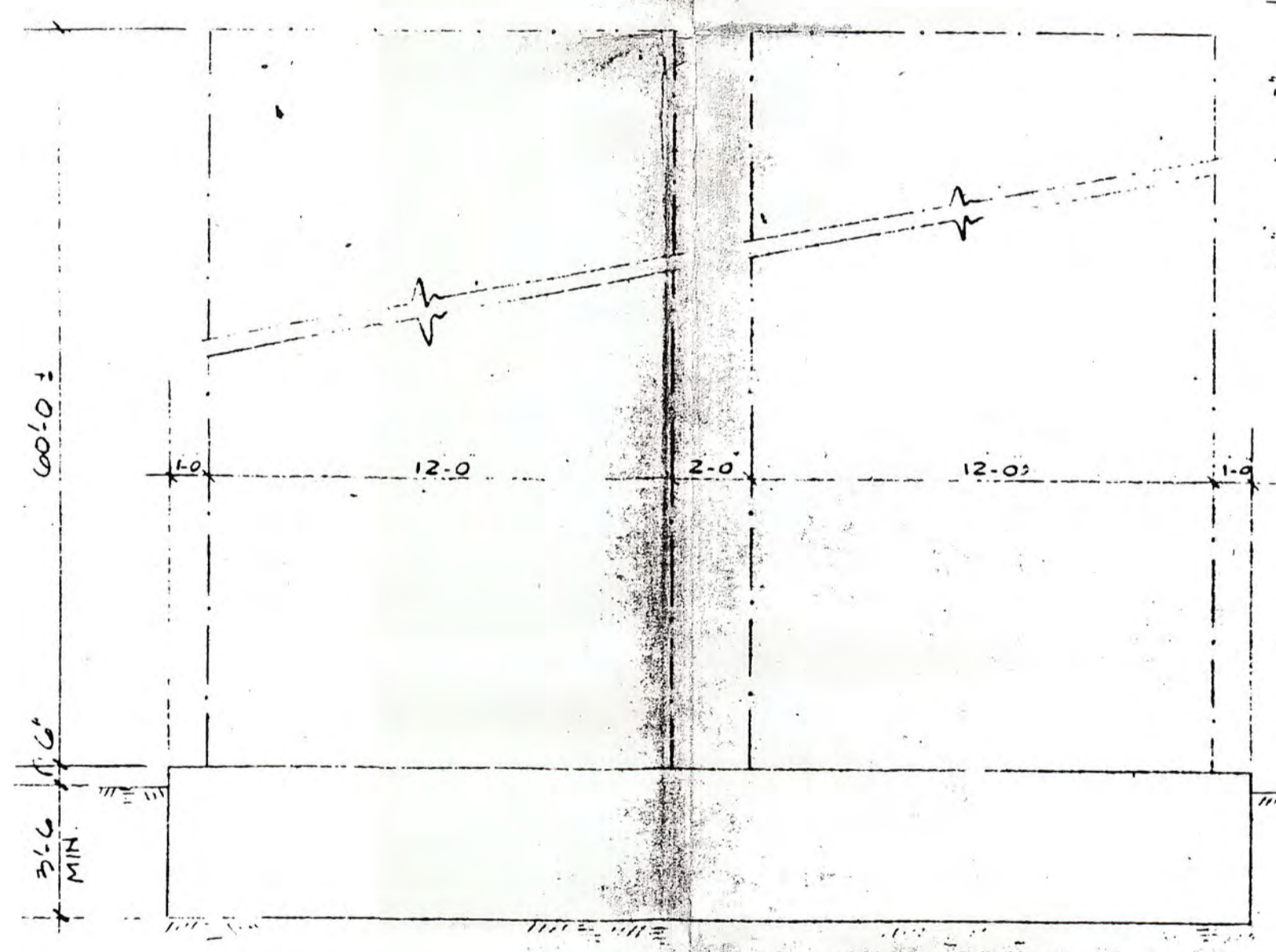
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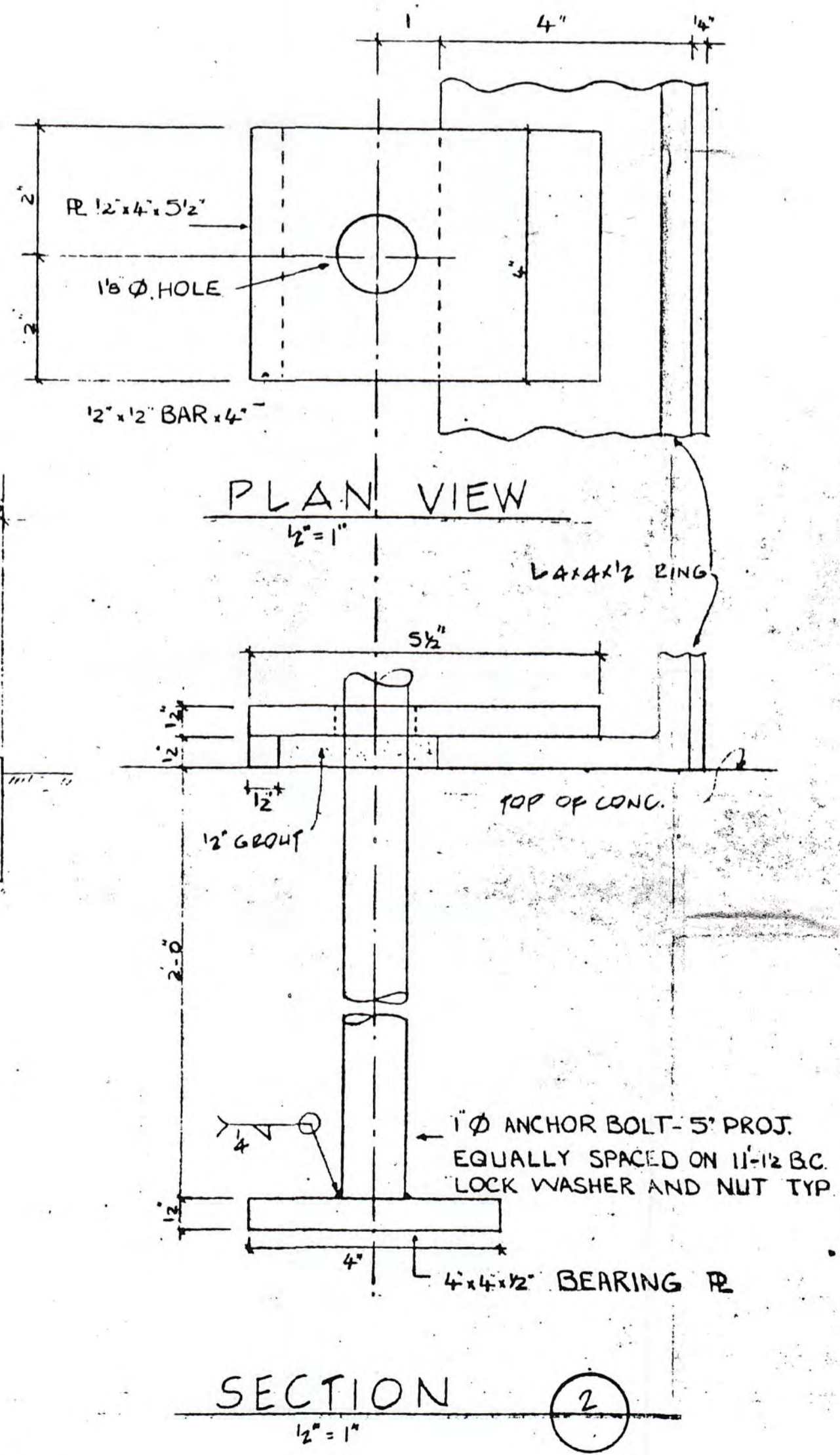
FOUNDATION PLAN  
28" = 1'-0"



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



SILO TANK SECTIONAL ELEVATION  
4" = 1'-0"



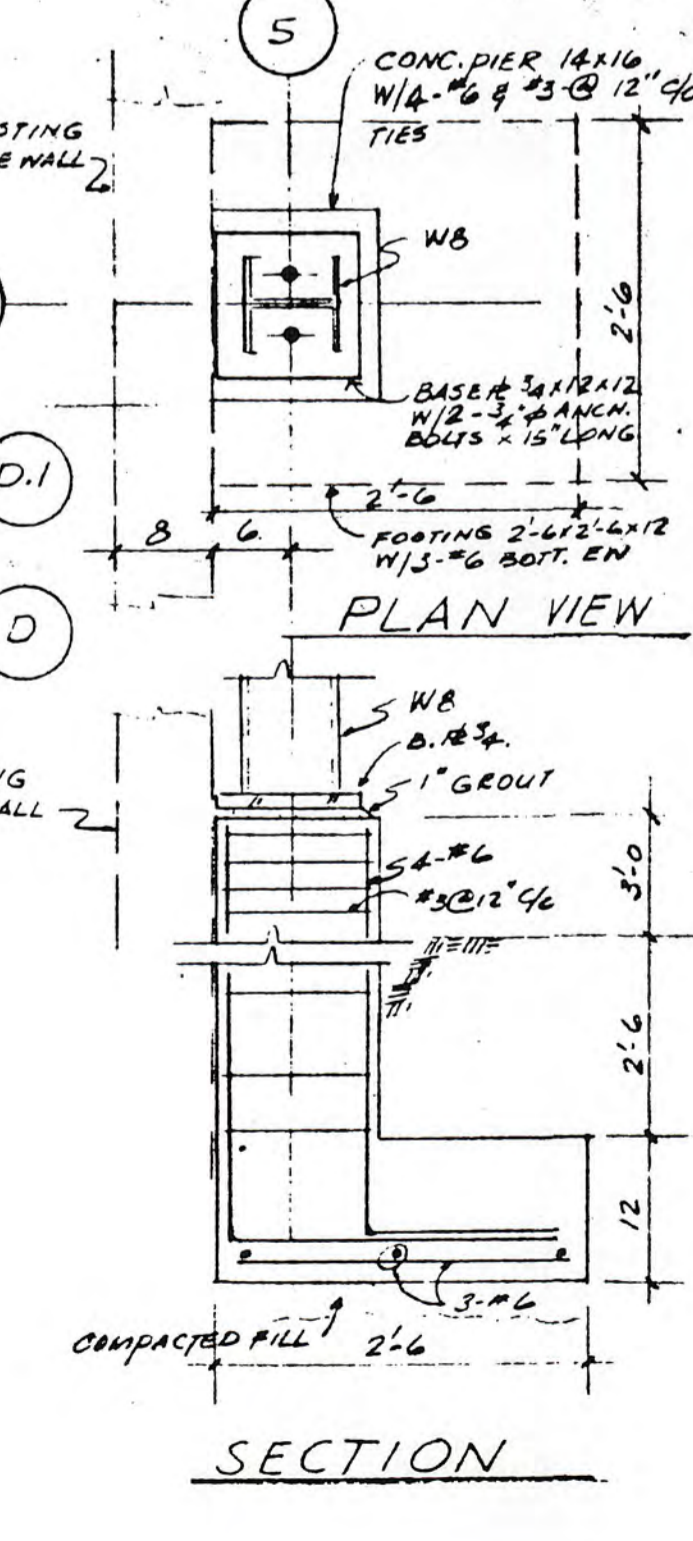
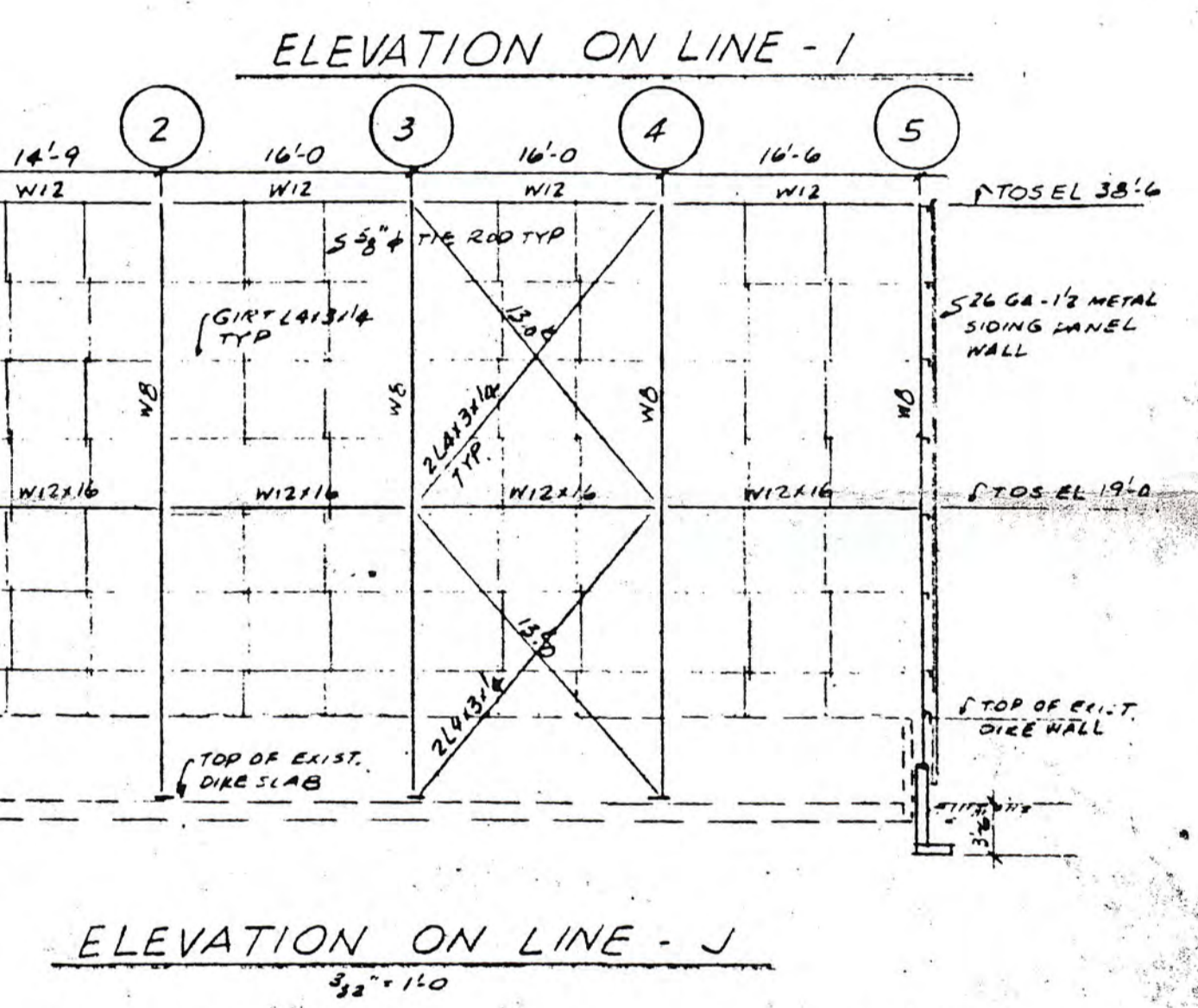
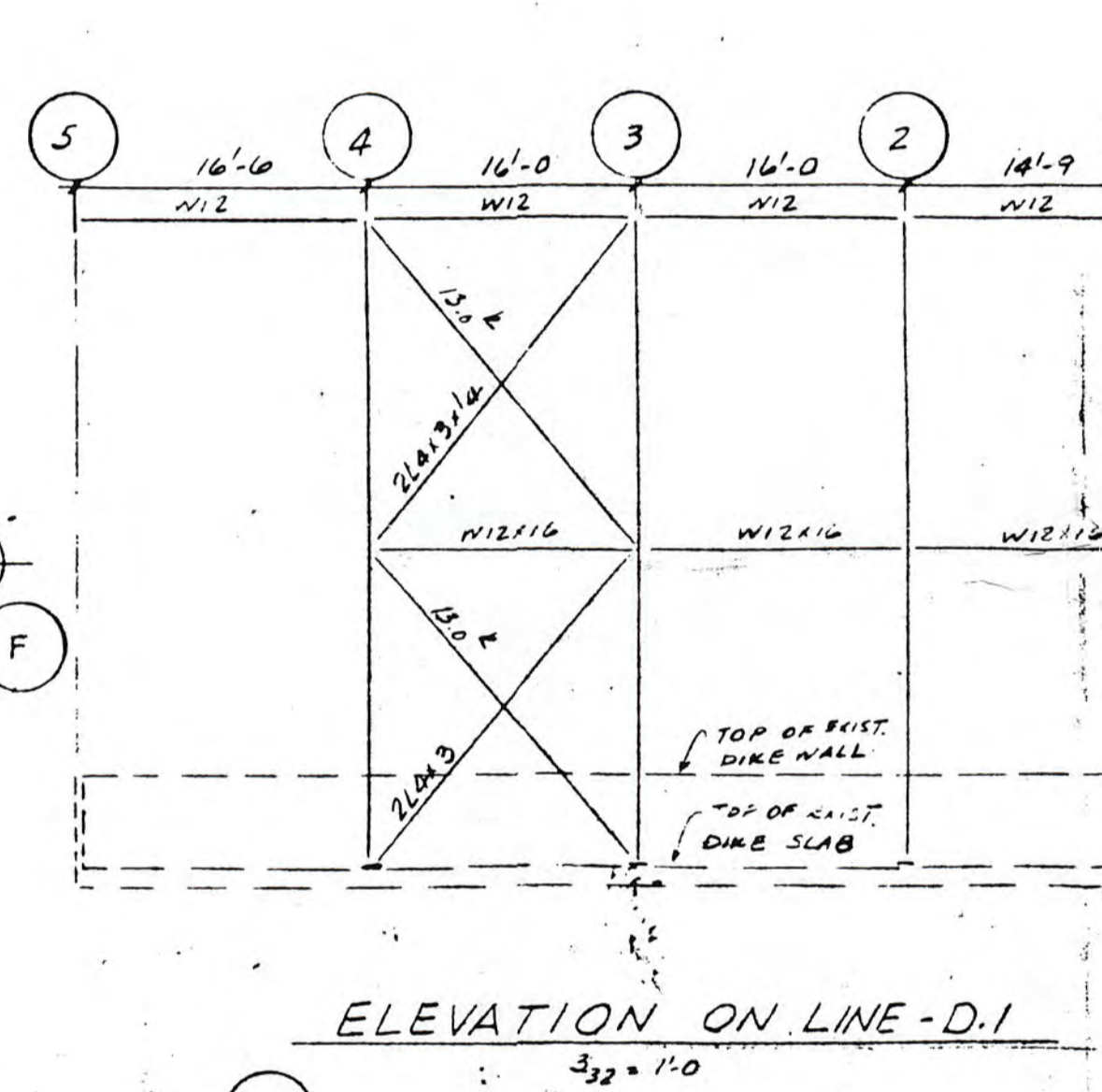
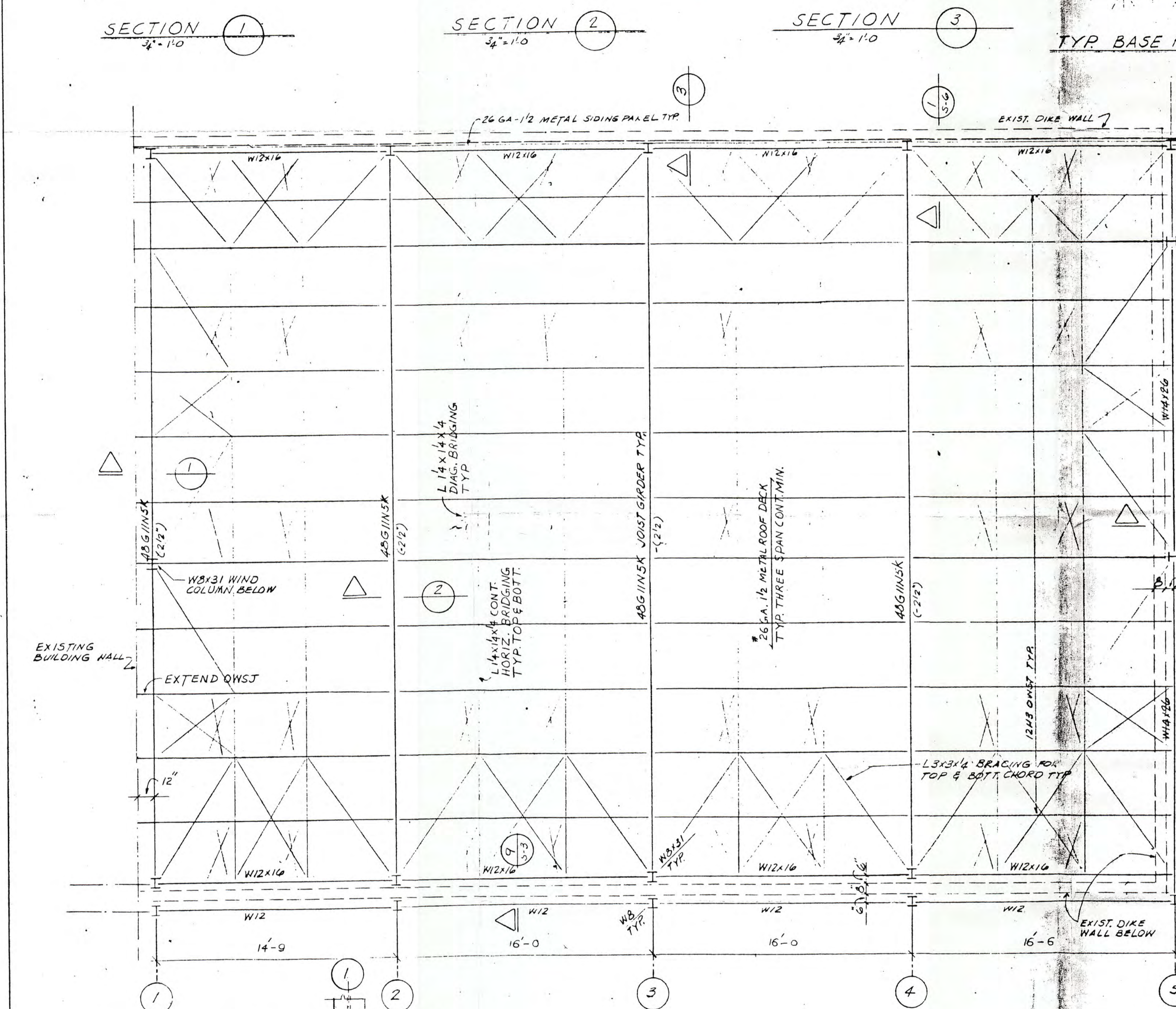
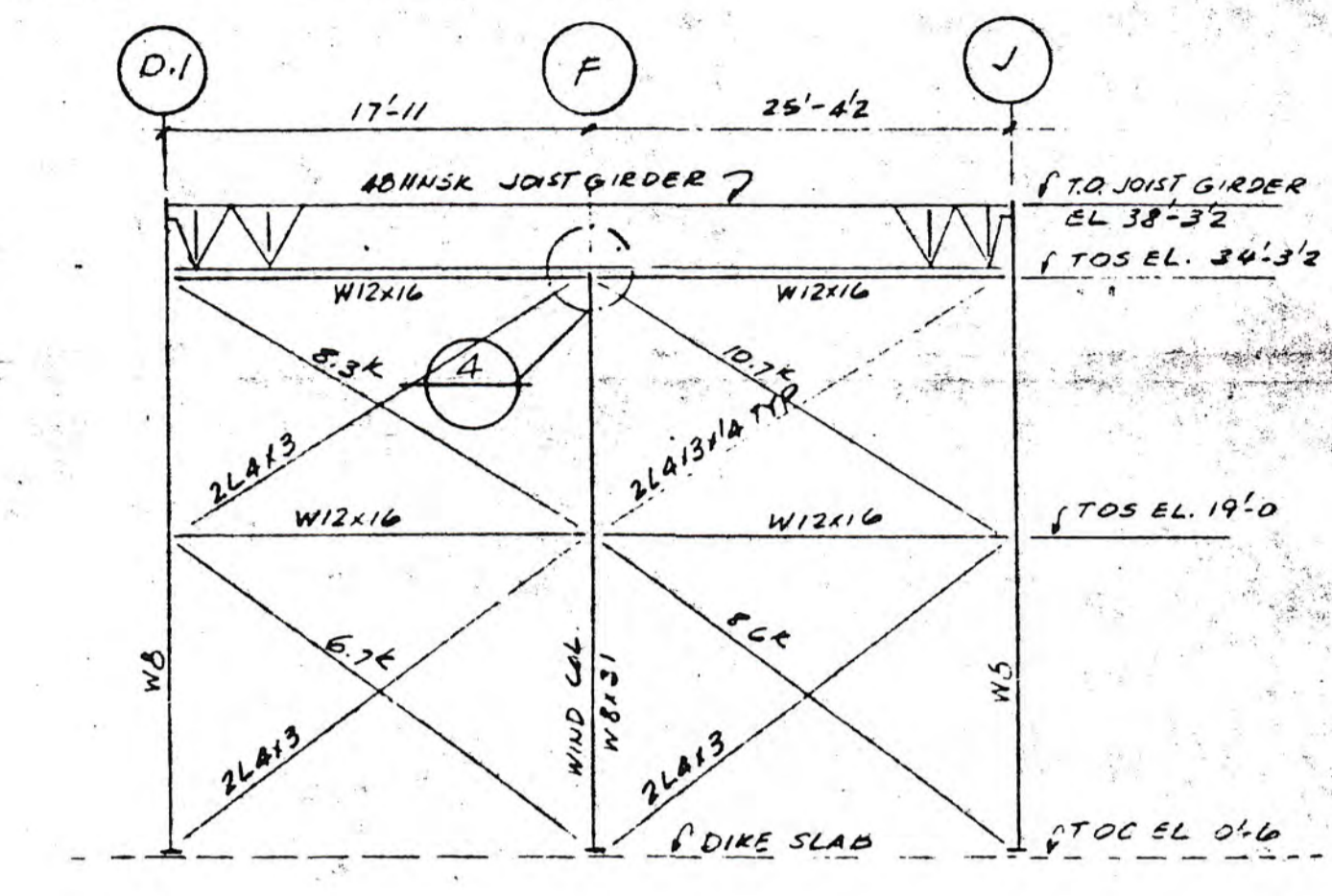
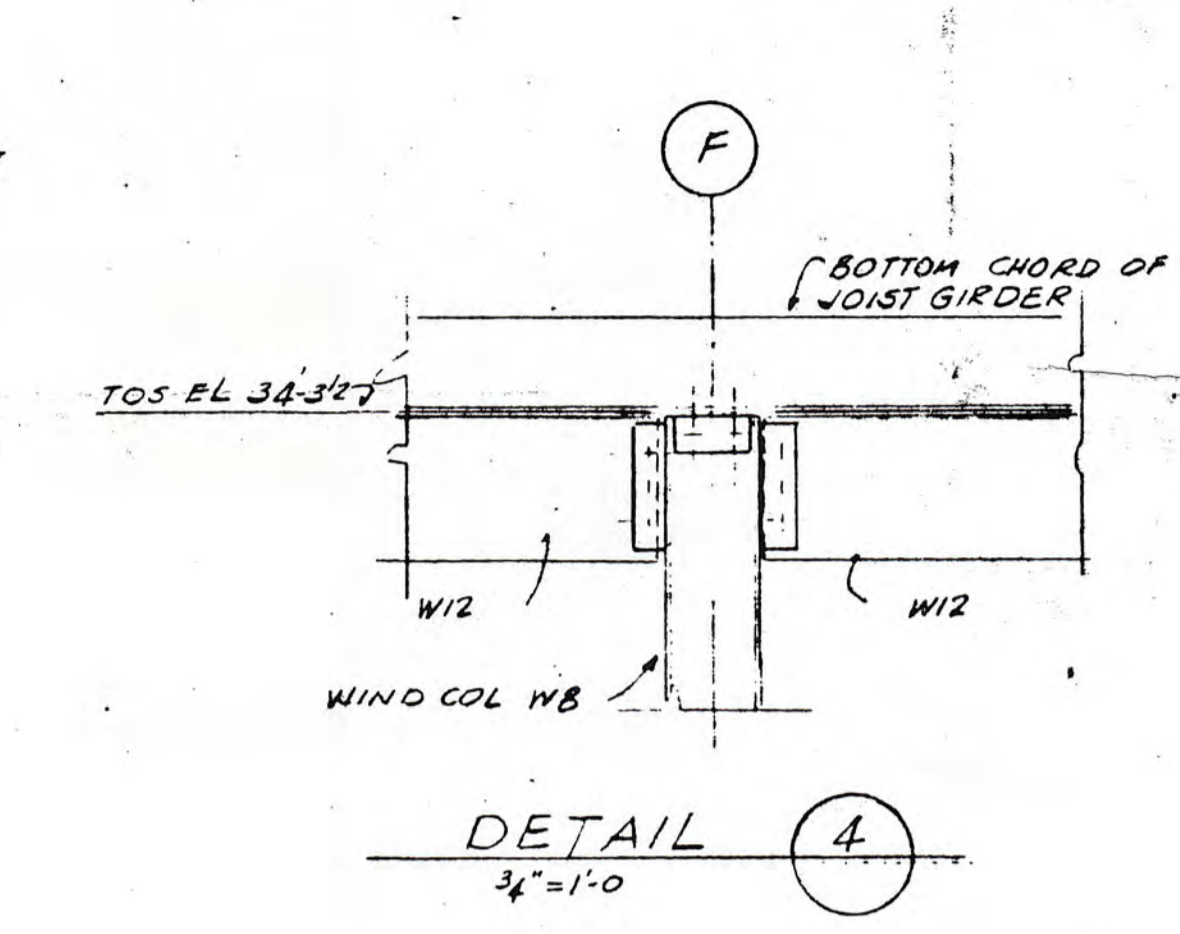
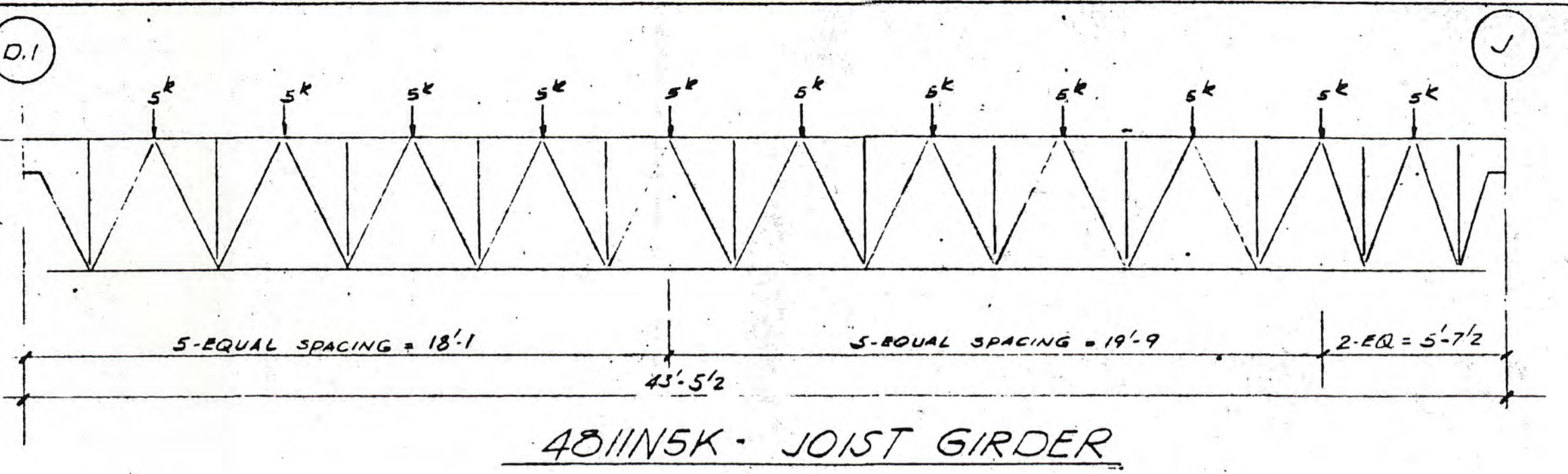
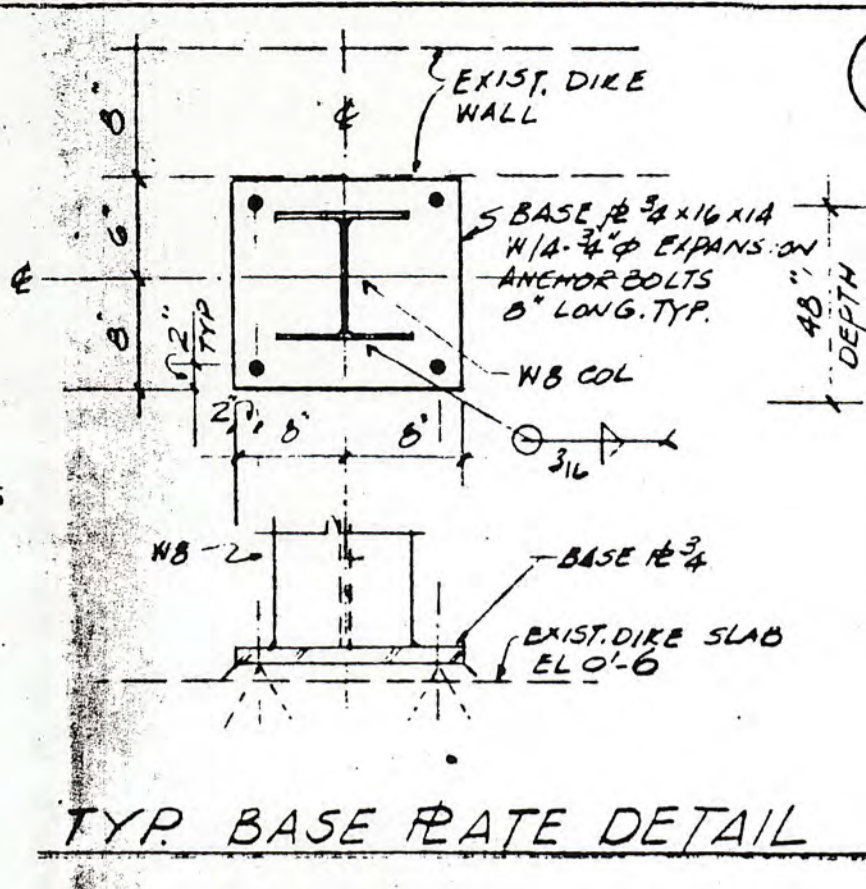
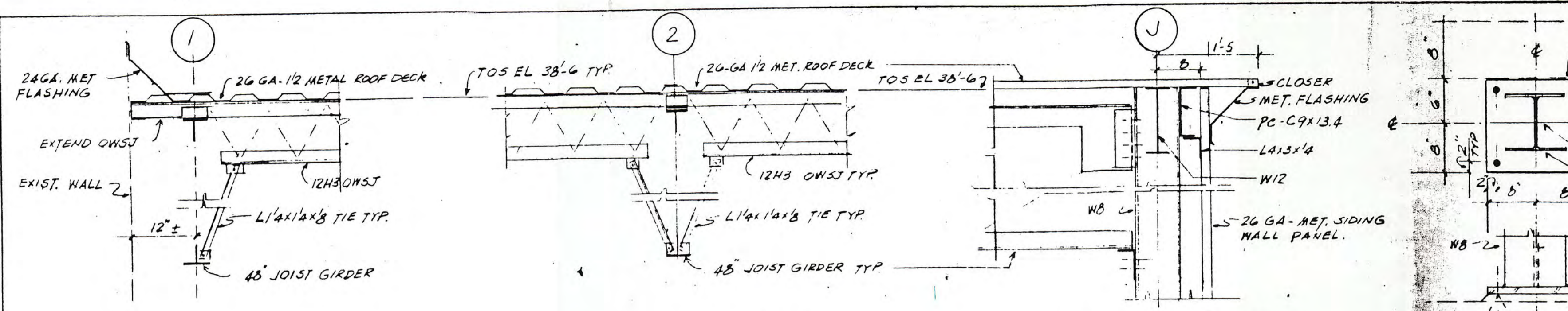
SECTION 2  
1/2" = 1"

GENERAL NOTE:

1. Steel silo raft foundation is designed for soil pressure of 2000 psf at the depth indicated, Contact the engineer for correction action.
2. All concrete shall have a 28 day compressive strength of 3000 psi min.
3. Reinforcement steel yield strength shall be grade of 60,000 psi unless noted otherwise.
4. Contractor shall verify location of foundation layout with plant operator before casting footing and slab if plant is required to be shutdown.
5. The standards of ACI Building Code 318-83 and the standards of practice ACI 318-80 shall be followed for all detailing, fabrication and placement of all reinforcing steel and accessories.
6. All fill under slab foundation and footings shall be compacted to 95% of maximum density (Modified Proctor Test) at optimum moisture content.
7. Provide temporary bracing as required to insure the stability of existing and new structures.
8. Contractor shall coordinate with engineer during construction activities for any discrepancy.

Dynecol, Inc. - 1988 Act 64  
License Reapplication

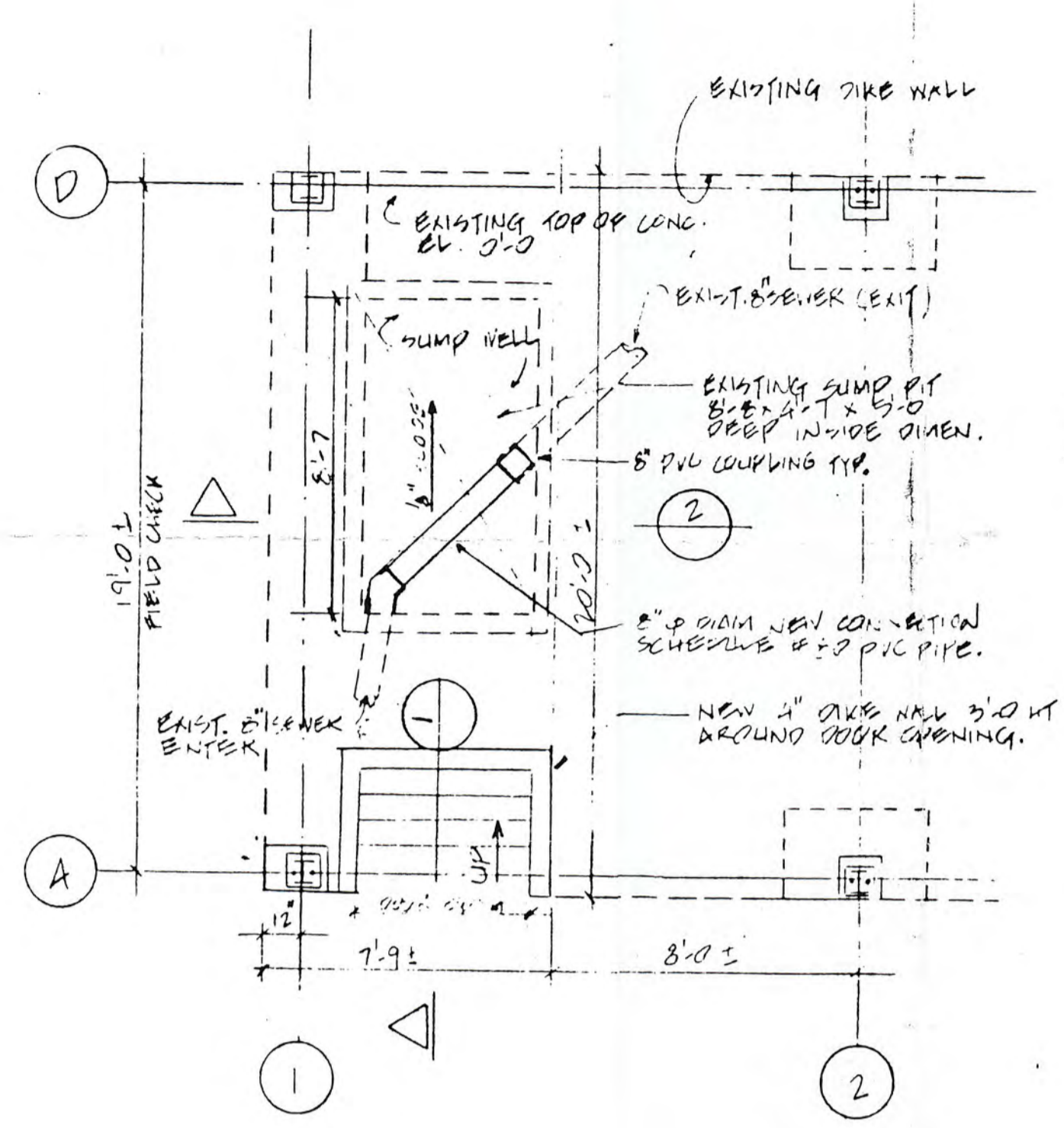
ISSUED FOR CONSTRUCTION		12-05-85
NO.	REVISION	DATE
CONSULTING ENGINEERS CHEMTEC RESEARCH ASSOCIATES, INC. 18241 WESTMORELAND DETROIT, MICH. 48219		
OWNER WASTE ACID SERVICES, INC. 6520 GEORGIA ST. DETROIT, MICH. 48211		
TITLE SILO TANKS FOUNDATION PLAN SECTIONS & DETAILS		
SCALE AS SHOWN	DATE	PROJECT NO.
DRAWN BY SH	11-22-85	
DESIGNED BY SH	11-17-85	SHEET NO.
CHECKED BY HB	12-4-85	5-00P
APPROVED BY RB	11-24-85	



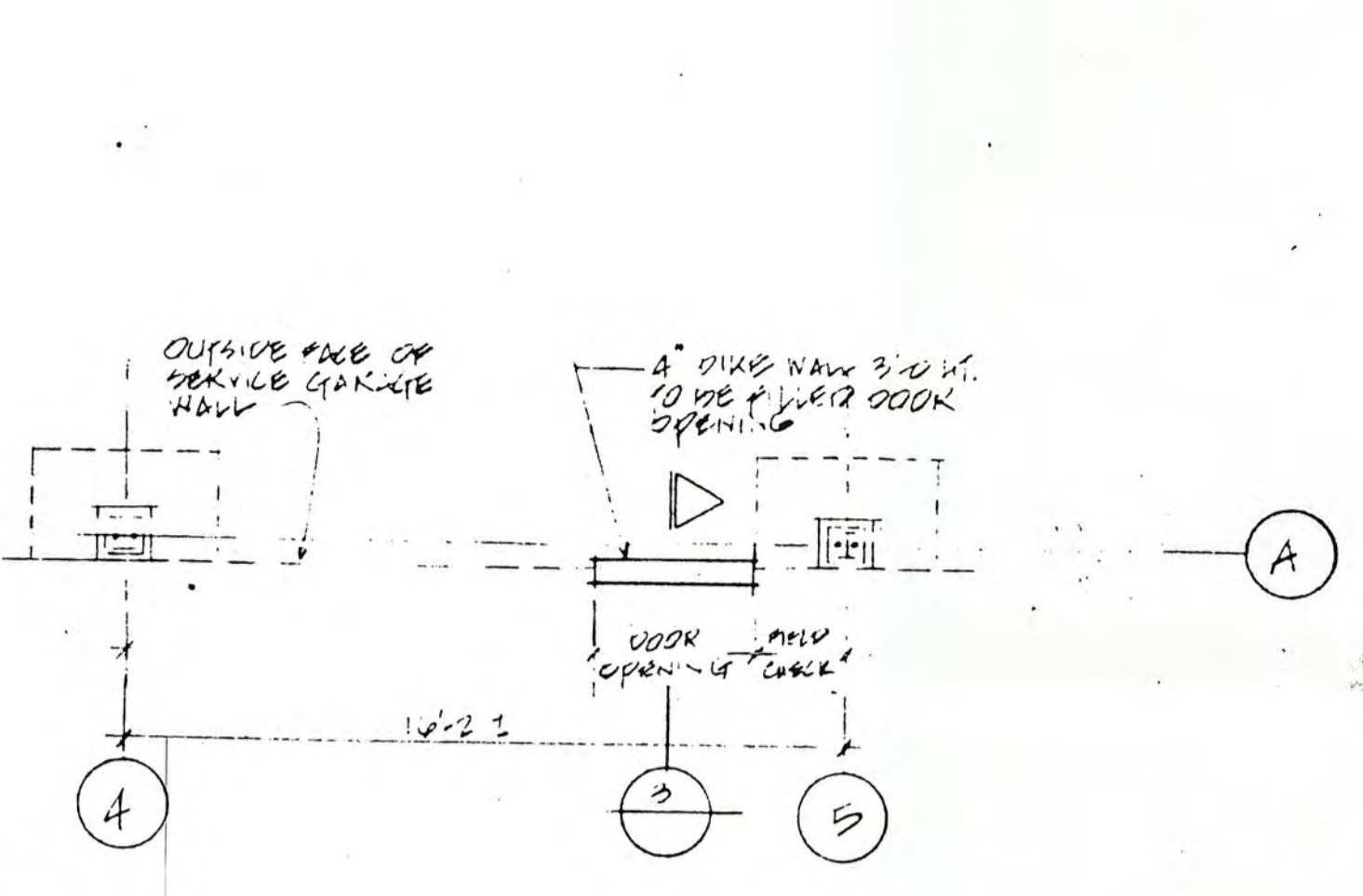
NOTES:  
1. REFER SHEET S-1 TO S-5 FOR GENERAL NOTES, SECTIONS, DETAILS & ETC. CONNECTION WITH THIS DRAWING SHEET S-9.

Dynecol, Inc. - 1988 Act 64 License Reapplication

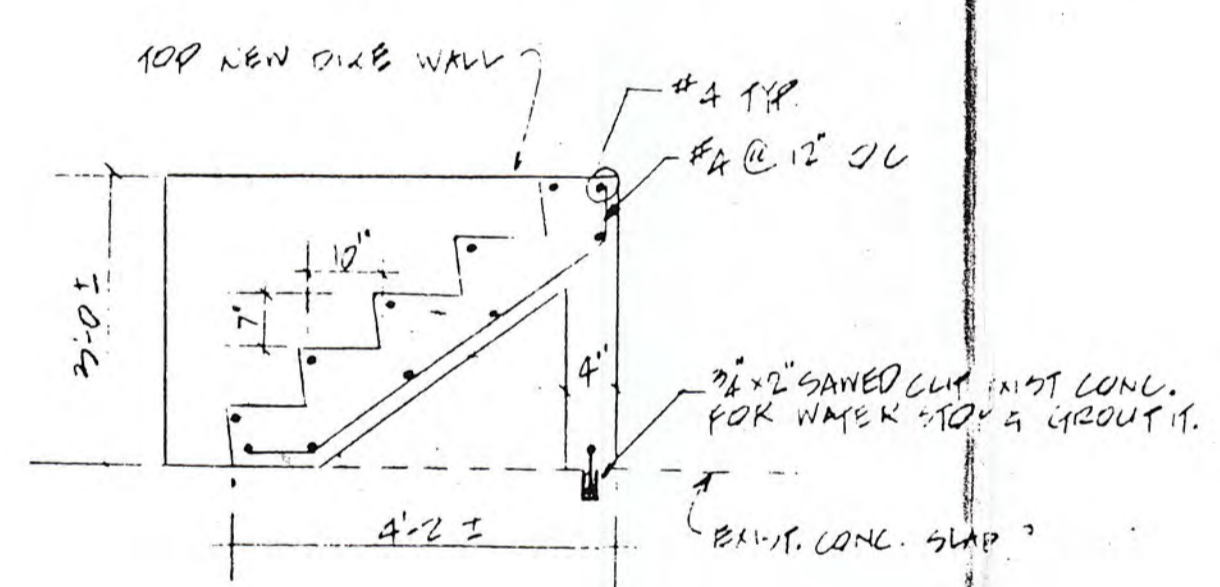
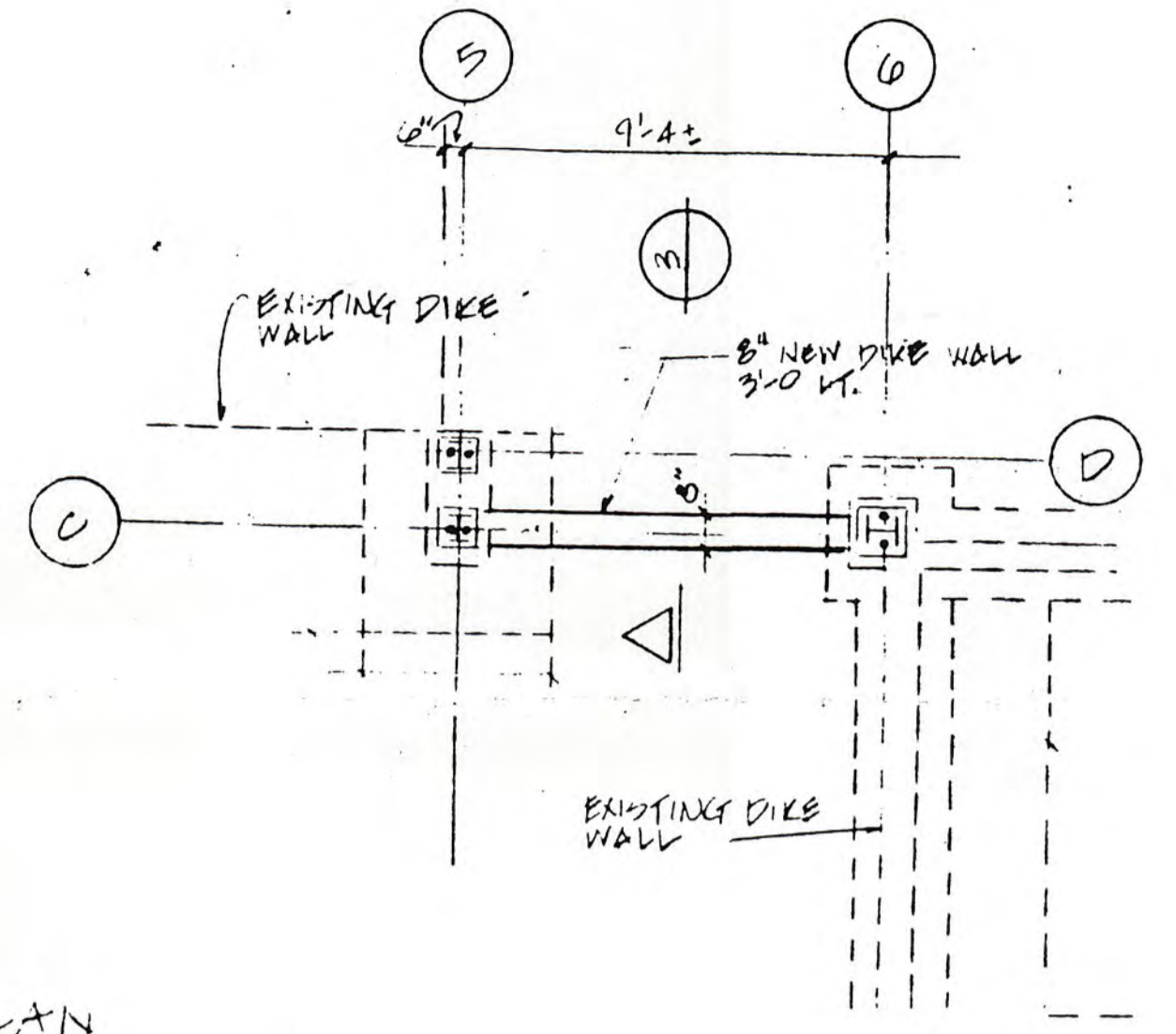
NO.	REVISION	DATE
	ISSUED FOR CONSTRUCTION	12-16-85
CONSULTING ENGINEERS CHEMTEC RESEARCH ASSOCIATES, INC. 16241 WESTMORELAND DETROIT, MICH. 48219.		
OWNER WASTE ACID SERVICES, INC. WASTE INC. PRESENT DIVISION 6520 GEORGIA ST. DETROIT, MICH. 48211. JAN 04 1995		
TITLE TANKS - DIKE AREA ROOF FRAMING PLAN, SECTIONS, ELEVATIONS & DETAILS		
SCALE AS NOTED	DATE	PROJECT NO.
DESIGNED BY HB, AQ	11-10-85	
CHECKED BY HB, RB	12-1-85	SHEET NO.
APPROVED BY RB	12-15-85	S-9 OF



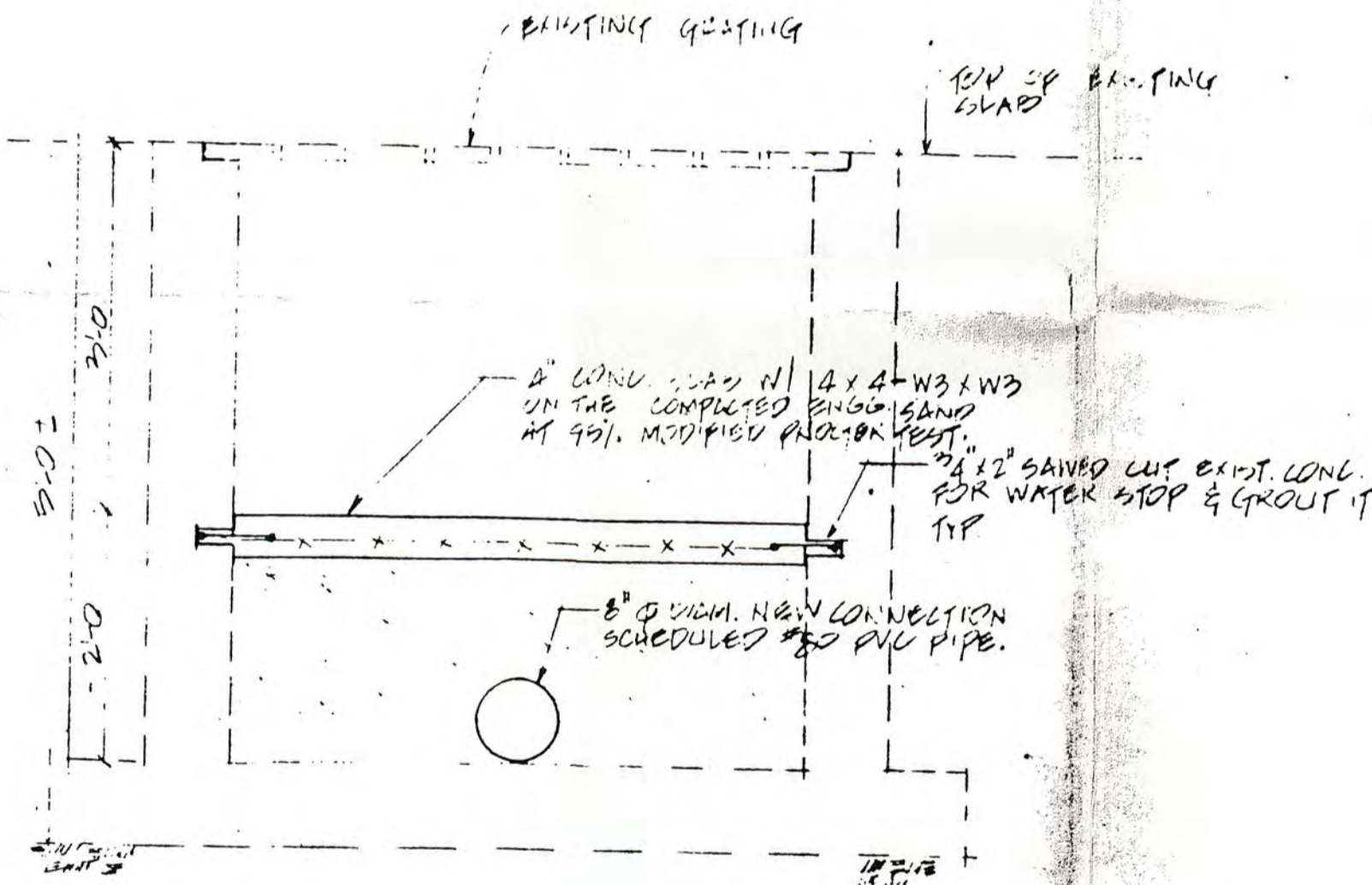
SUMP PIT & DIKE WALL PLAN  
1/4" = 1'-0"



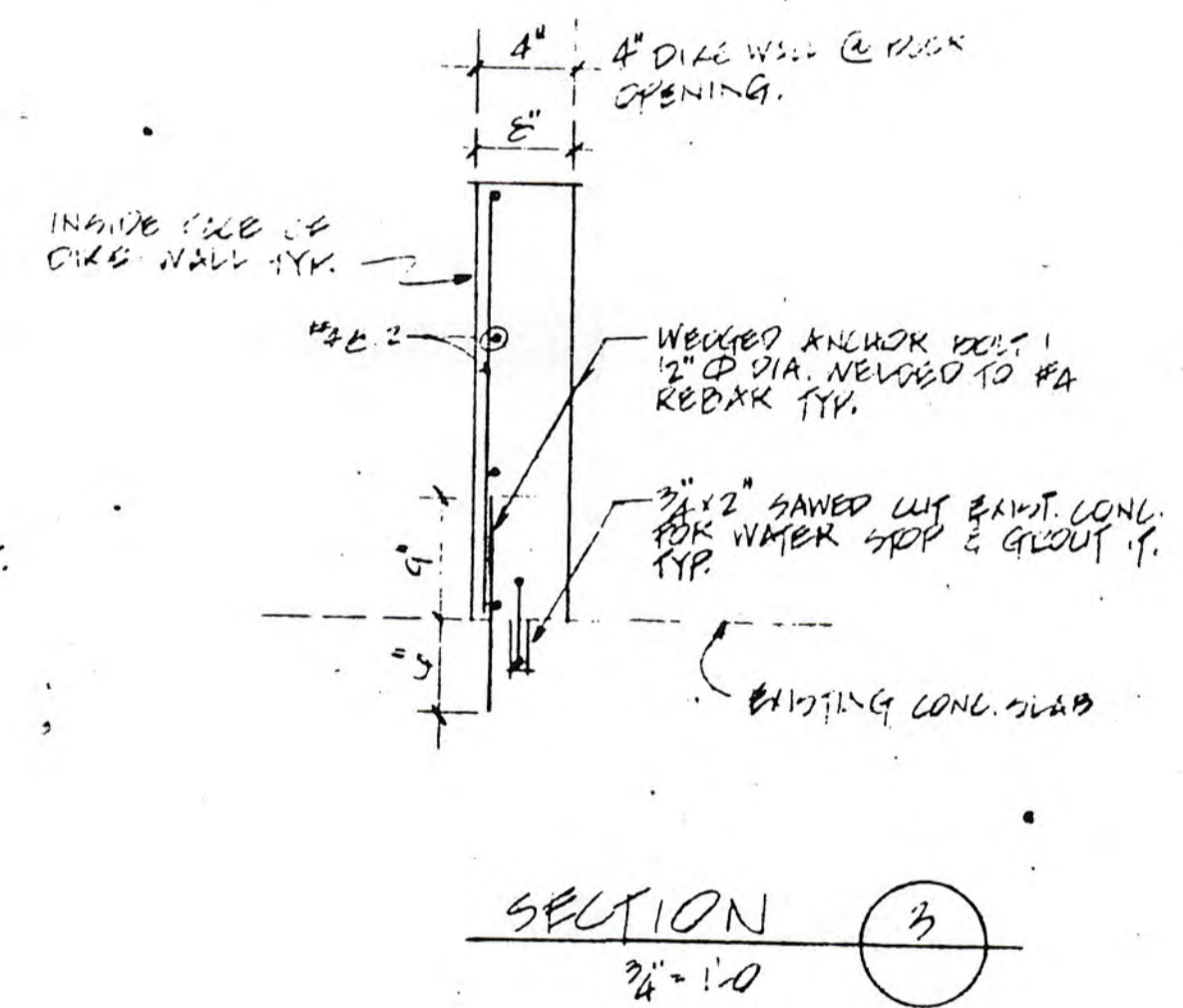
NEW DIKE WALLS PLAN  
1/4" = 1'-0"



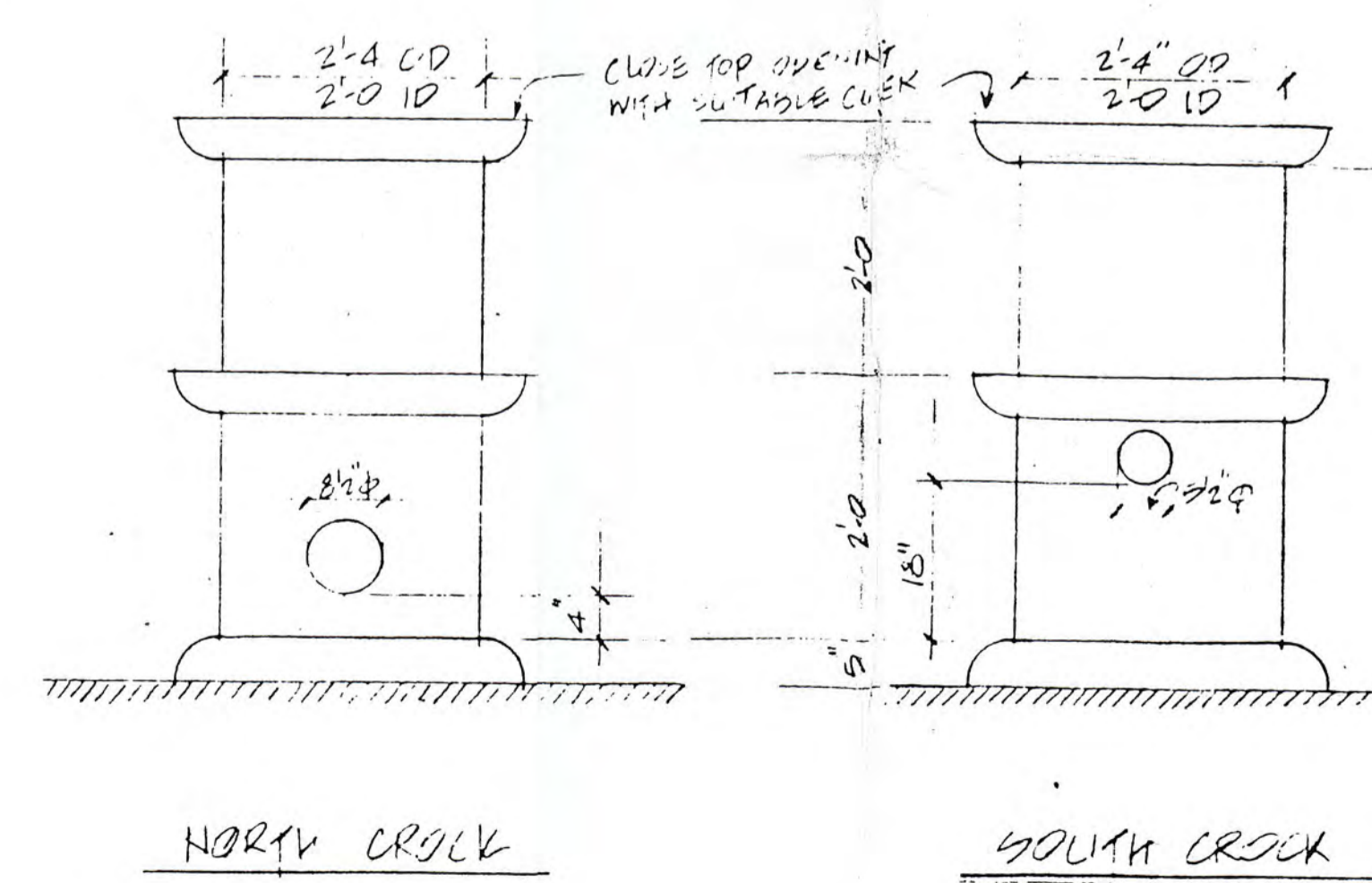
SECTION 1  
1/2" = 1'-0"



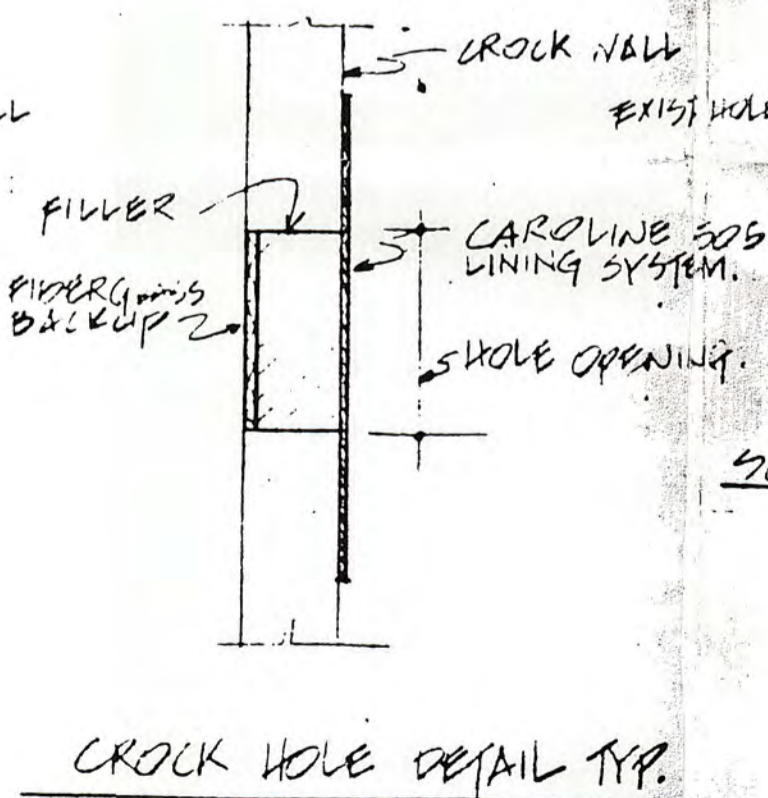
SECTION 2  
1/4" = 1'-0"



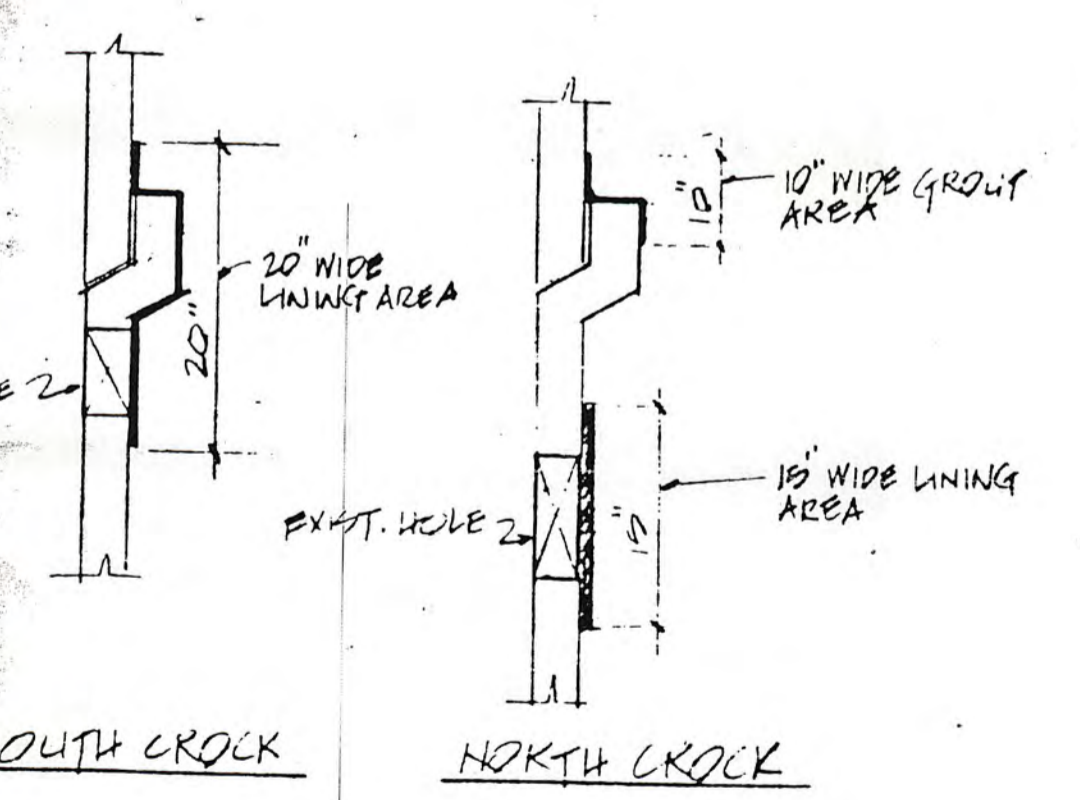
SECTION 3  
1/4" = 1'-0"



NORTH CROCK SOUTH CROCK



CROCK HOLE DETAIL TYP.



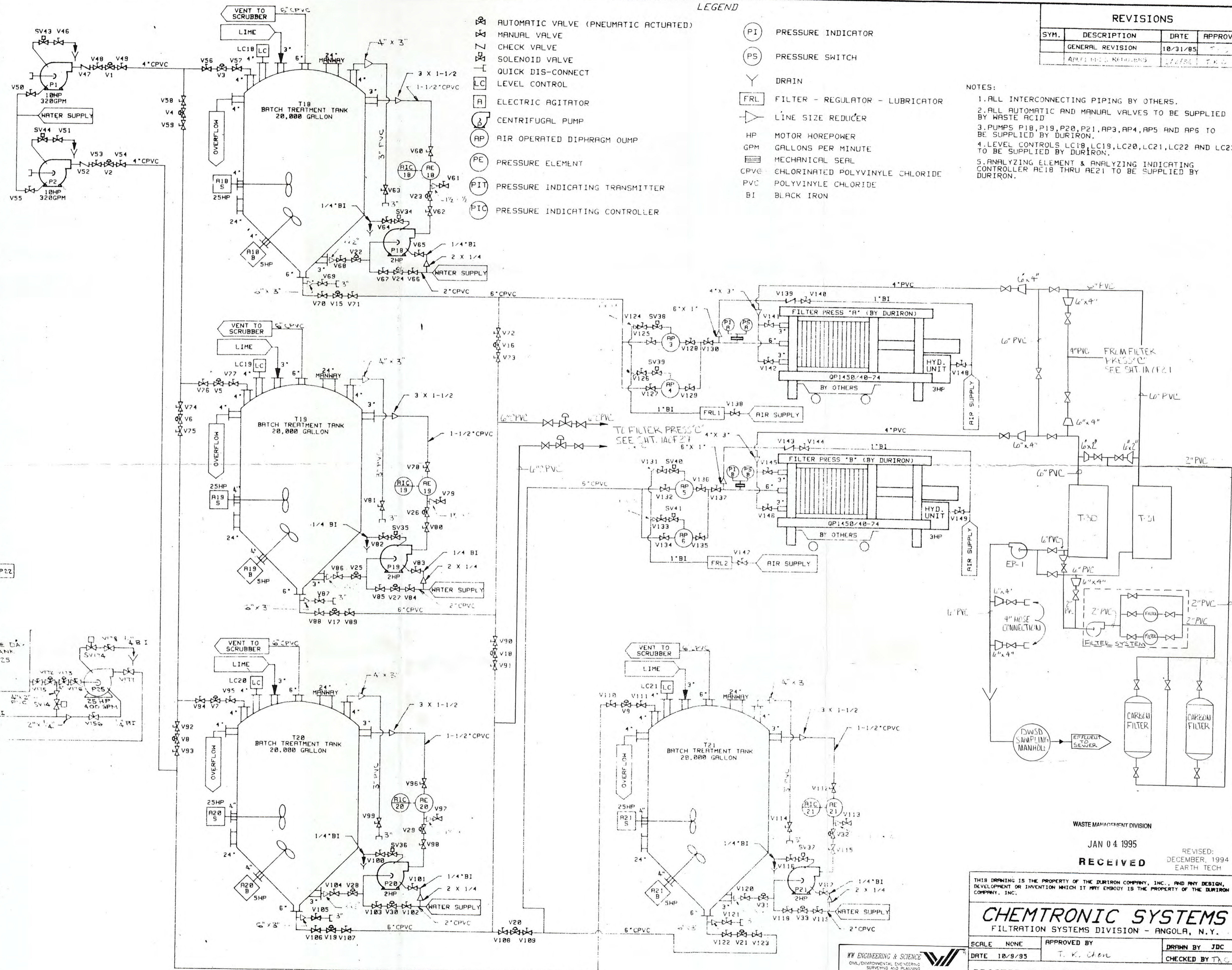
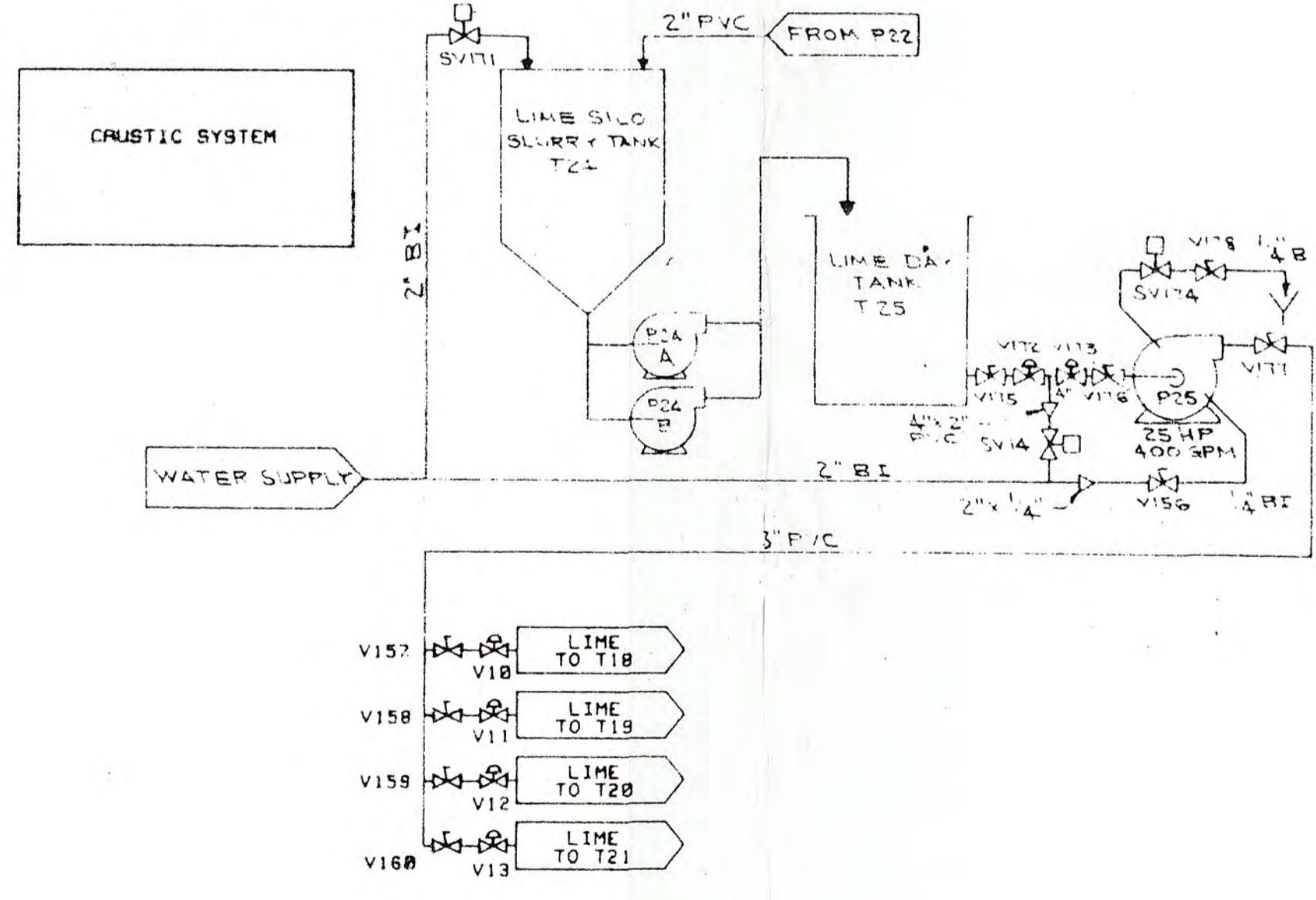
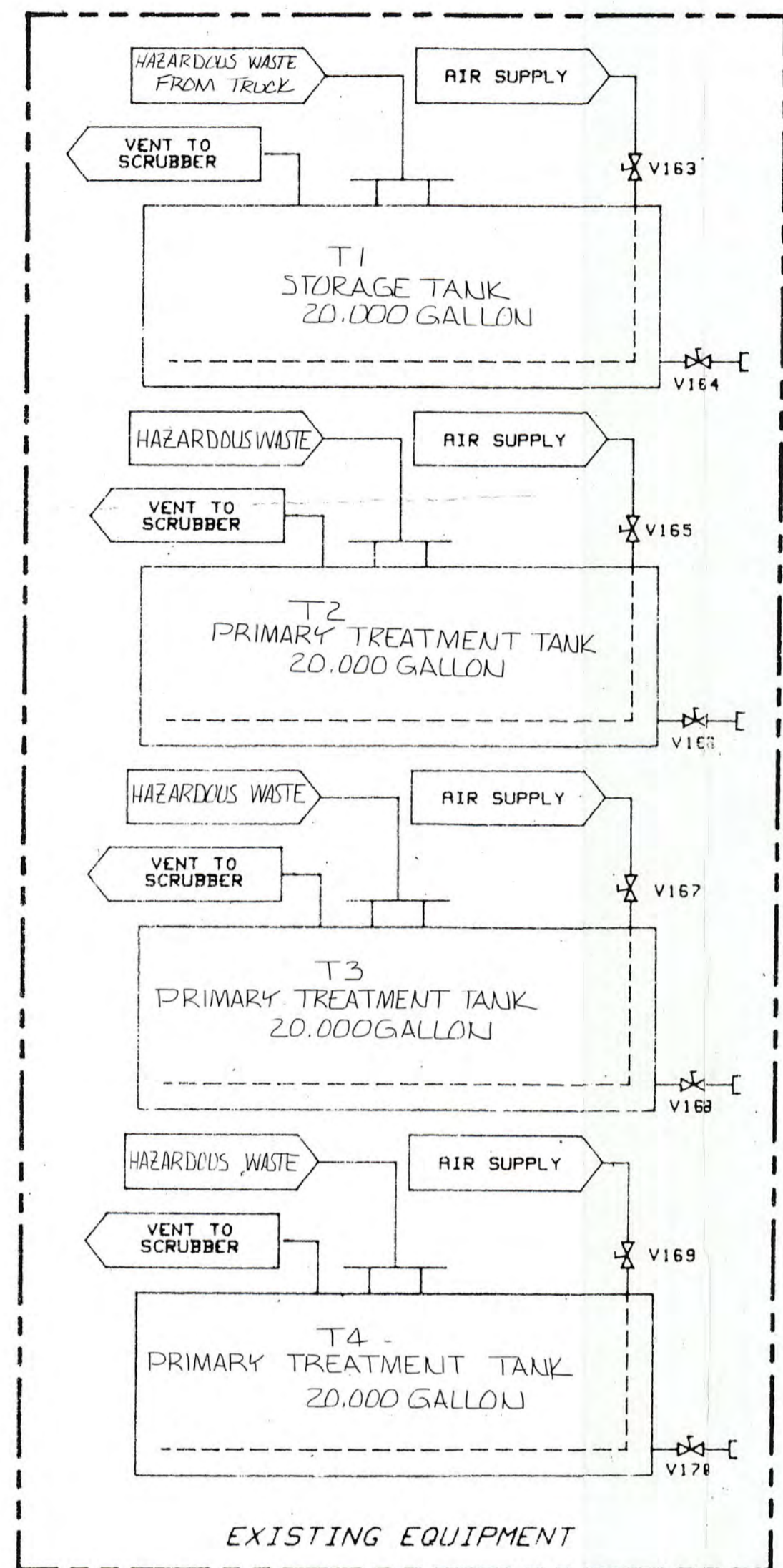
CROCK TYP. SECTION FOR JOINT & HOLE FILLER

**MATERIAL SPECIFICATION:**  
**MATERIAL:**  
 Caroline 505 an epoxy based fiberglass reinforced lining system installed 1/8" thick.  
**FILLING HOLE:**  
 Hole in crack will be patched as follows.  
 1. Install a back up plate—such as a hard piece of fiberglass sheeting.  
 2. Fill crack hole cavity with caroline 505 resin and powder filler.  
 3. After this has set up line this filler area, and exterior of unit with the caroline 505 lining system.

- NOTES:**
1. Refer sheet no. s-1 for general note.
  2. Provide 3/4" x 2" sawed cut or chisel cut between existing concrete surface or existing brick wall and new concrete construction to have installed water-stop as shown in the sections.
  3. All dike walls and floor should be coated with CEILCOTE flakeline epoxy coating or equivalent.
  4. 3'-0" height of existing service garage brick wall and new dike walls are capable to resist fluid pressure in the dike.
  5. REFER SHEET NO S-1 FOR SUMP PIT & DIKE WALLS LOCATION.
  6. TOTAL VOLUME OF DIKE SHALL BE 4492.0 CU FT.

Dynecol, Inc. - 1988 Act 64  
 License Reapplication

NO.	REVISION	DATE
CONSULTING ENGINEERS <b>CHEMTEC RESEARCH ASSOCIATES, INC.</b> 16241 WESTMORELAND DETROIT, MICH. 48219		
OWNER <b>DYNECOL, INC.</b> WASTE MANAGEMENT DIVISION 6520 GEORGIA ST. DETROIT, MICH. 48211 JAN 04 1995 <b>RECEIVED</b>		
TITLE <b>SUMP PIT AND NEW DIKE WALL PLANS &amp; SECTIONS</b>		
SCALE AS NOTED	DATE	PROJECT NO.
DRAWN BY HB	4-27-87	
DESIGNED BY HB	4-27-87	SHEET NO.
CHECKED BY HB KF	5-2-87	
APPROVED BY		A-1 OF 1



**LEGEND**

- AUTOMATIC VALVE (PNEUMATIC ACTUATED)
- MANUAL VALVE
- CHECK VALVE
- SOLENOID VALVE
- QUICK DIS-CONNECT
- LEVEL CONTROL
- ELECTRIC AGITATOR
- CENTRIFUGAL PUMP
- AIR OPERATED DIAPHRAGM PUMP
- PRESSURE ELEMENT
- PRESSURE INDICATING TRANSMITTER
- PRESSURE INDICATING CONTROLLER
- PRESSURE INDICATOR
- PRESSURE SWITCH
- DRAIN
- FILTER - REGULATOR - LUBRICATOR
- LINE SIZE REDUCER
- HP MOTOR HORSEPOWER
- GPM GALLONS PER MINUTE
- MECHANICAL SEAL
- CPVC CHLORINATED POLYVINYL CHLORIDE
- PVC POLYVINYL CHLORIDE
- BI BLACK IRON

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
GENERAL	REVISION	10/31/85	
AP1	REV. NUMBER	27,786	T.K.C.

- NOTES:**
- ALL INTERCONNECTING PIPING BY OTHERS.
  - ALL AUTOMATIC AND MANUAL VALVES TO BE SUPPLIED BY WASTE ACID
  - PUMPS P18, P19, P20, P21, AP3, AP4, AP5 AND AP6 TO BE SUPPLIED BY DURIRON.
  - LEVEL CONTROLS LC18, LC19, LC20, LC21, LC22 AND LC23 TO BE SUPPLIED BY DURIRON.
  - ANALYZING ELEMENT & ANALYZING INDICATING CONTROLLER RE18 THRU RE21 TO BE SUPPLIED BY DURIRON.

WASTE MANAGEMENT DIVISION  
 JAN 04 1995  
**RECEIVED**  
 REVISION: DECEMBER, 1994  
 EARTH TECH

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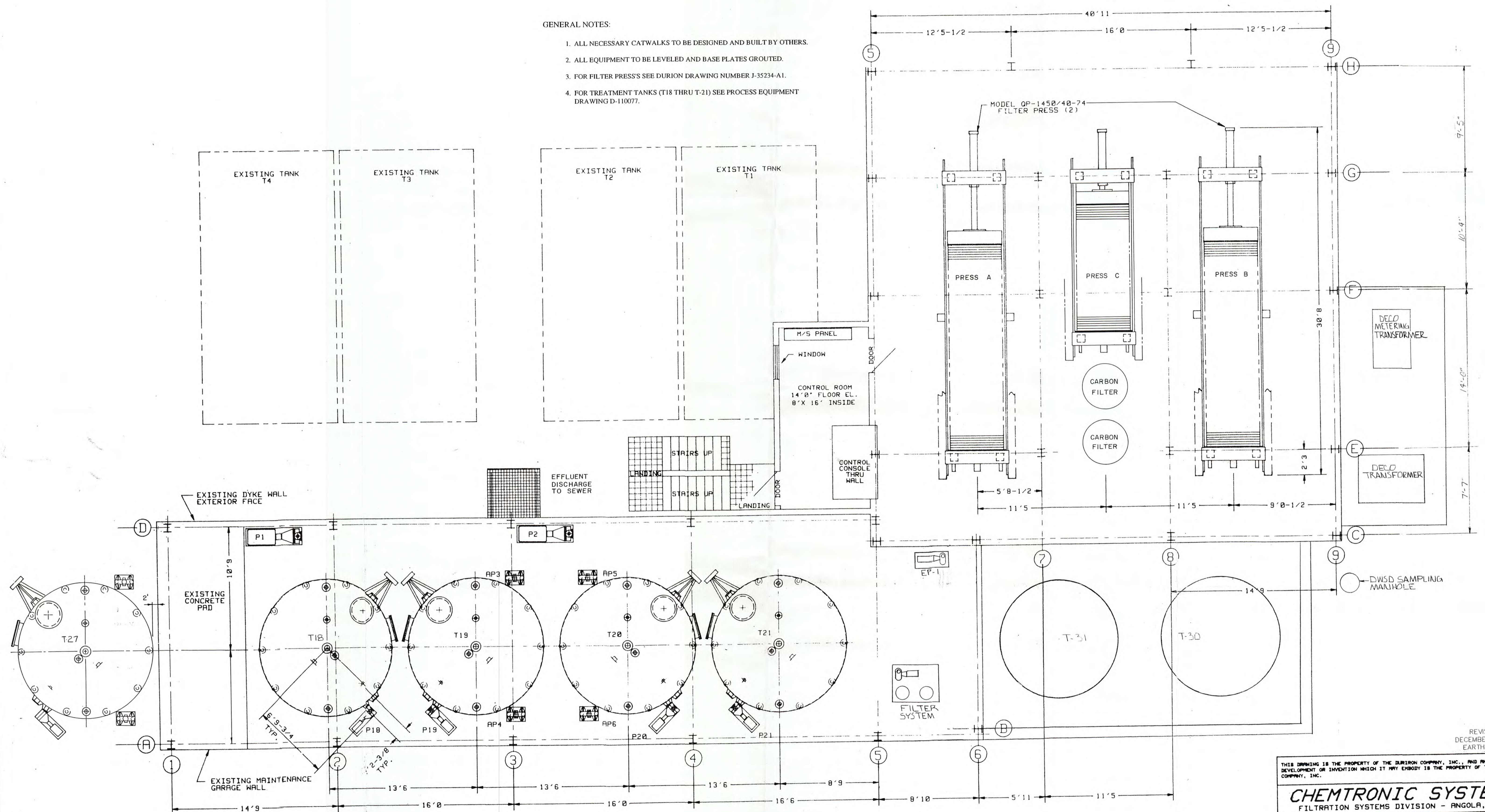
**CHEMTRONIC SYSTEMS**  
 FILTRATION SYSTEMS DIVISION - ANGOLA, N.Y.

SCALE NONE APPROVED BY T. K. Chen  
 DATE 10/9/95 DRAWN BY JDC  
 CHECKED BY T.K.C.

PROCESS FLOW DIAGRAM  
 Revision: Jan. 1991  
 CARBON FILTRATION SYSTEM  
 DYNACOL INC.  
 DWG. NO. D-29019-2  
 SHEET 1 OF 27

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
NONE	REVISED PER APPROVAL PRINT DATED 10/24/85	10/31/85	TJK

- GENERAL NOTES:
1. ALL NECESSARY CATWALKS TO BE DESIGNED AND BUILT BY OTHERS.
  2. ALL EQUIPMENT TO BE LEVELED AND BASE PLATES GROUTED.
  3. FOR FILTER PRESS'S SEE DURION DRAWING NUMBER J-35234-A1.
  4. FOR TREATMENT TANKS (T18 THRU T-21) SEE PROCESS EQUIPMENT DRAWING D-110077.



REVISED: DECEMBER, 1994  
EARTH TECH

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**CHEMTRONIC SYSTEMS**  
FILTRATION SYSTEMS DIVISION - ANGOLA, N.Y.

SCALE 1/4" = 12"  
DATE 10/18/85  
APPROVED BY  
DRAWN BY JDC  
CHECKED BY

EQUIPMENT LAYOUT PLAN

HW ENGINEERING & SCIENCE  
CIVIL/ENVIRONMENTAL ENGINEERING  
SURVEYING AND PLANNING  
3000 West 10th Street Suite 110 Lincoln NE 68502 (402) 341-1522

Revision: Jan. 1991  
LISTED  
HAZARDOUS WASTES

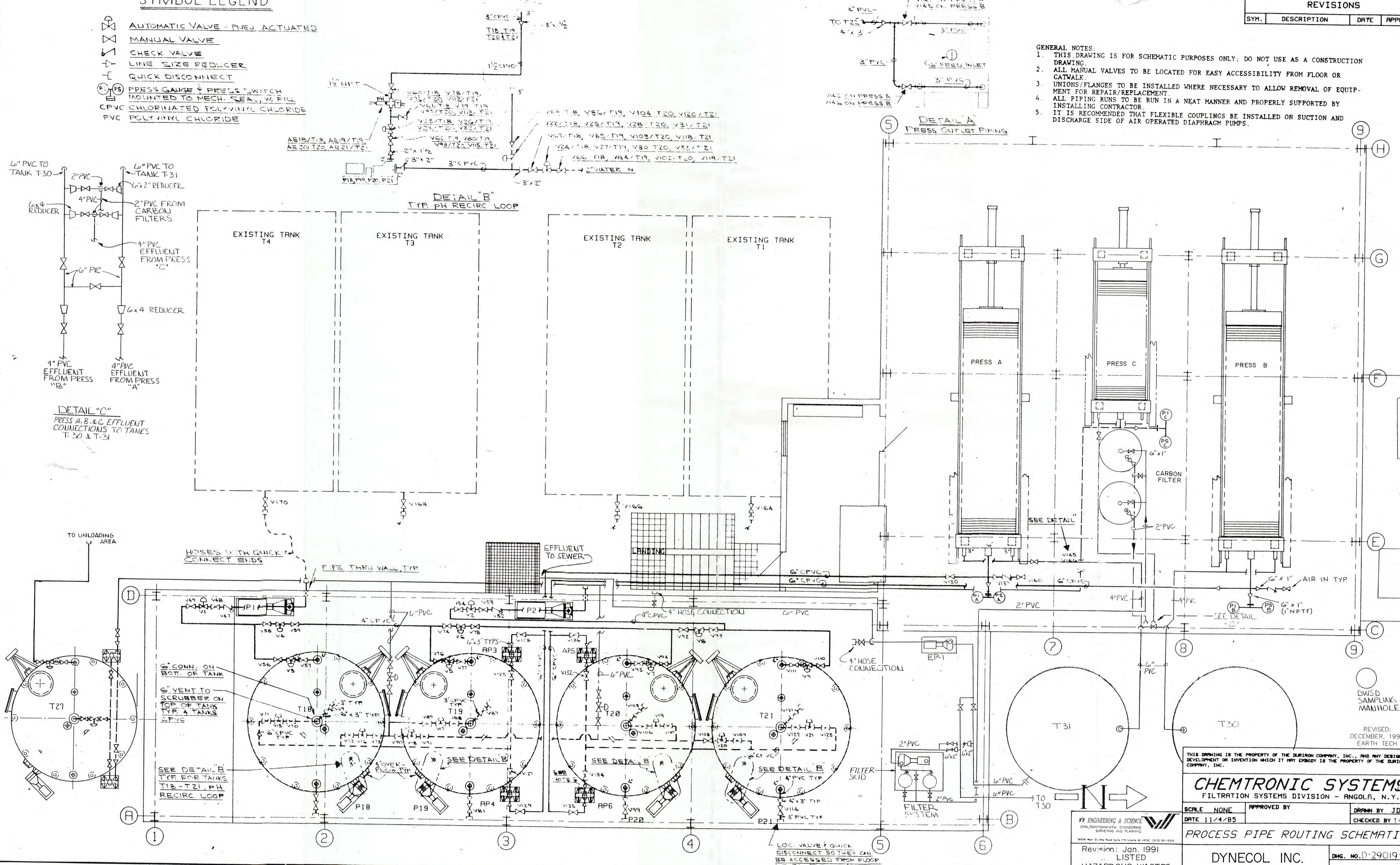
DYNECOL INC.  
DWG. NO. D-29019-3  
SHEET 2 OF 27

**SYMBOL LEGEND**

- AUTOMATIC VALVE - PNEU. ACTUATED
- MANUAL VALVE
- CHECK VALVE
- LINE SIZE REDUCER
- QUICK DISCONNECT
- PRESS GAUGE & PRESS SWITCH MOUNTED TO MECH. SEAL, W/ FILL
- CPVC CHLORINATED POLYVINYL CHLORIDE
- PVC POLYVINYL CHLORIDE

REVISIONS			
SYH.	DESCRIPTION	DATE	APPROVED

- GENERAL NOTES**
- THIS DRAWING IS FOR SCHEMATIC PURPOSES ONLY; DO NOT USE AS A CONSTRUCTION DRAWING.
  - ALL MANUAL VALVES TO BE LOCATED FOR EASY ACCESSIBILITY FROM FLOOR OR CATWALK.
  - UNIONS/FLANGES TO BE INSTALLED WHERE NECESSARY TO ALLOW REMOVAL OF EQUIPMENT FOR REPAIR/REPLACEMENT.
  - ALL PIPING RUNS TO BE RUN IN A NEAT MANNER AND PROPERLY SUPPORTED BY INSTALLING CONTRACTOR.
  - IT IS RECOMMENDED THAT FLEXIBLE COUPLINGS BE INSTALLED ON SUCTION AND DISCHARGE SIDE OF AIR OPERATED DIAPHRAGM PUMPS.



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**CHEMTRONIC SYSTEMS**  
FILTRATION SYSTEMS DIVISION - ANGOLA, N.Y.

SCALE NONE APPROVED BY DATE 11/4/85 DRAWN BY JDC CHECKED BY T15


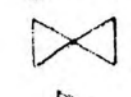
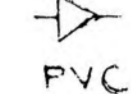
PROCESS PIPE ROUTING SCHEMATIC

Revision: Jan. 1991  
LISTED  
HAZARDOUS WASTES

DYNECOL INC. DNG. NO. D-29019-5 SHEET 3 OF 27



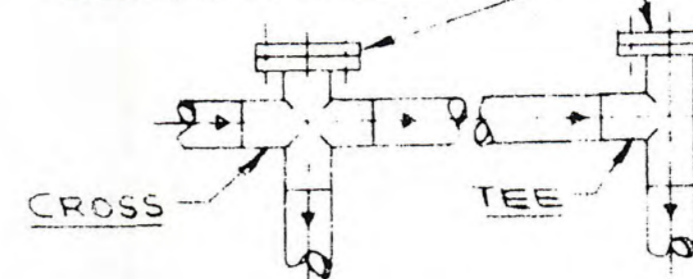
**SYMBOL LEGEND**

-  AUTOMATIC VALVE
-  MANUAL VALVE
-  LINE SIZE REDUCER
- PVC POLYVINYL CHLORIDE (PIPE)

**GENERAL NOTES**

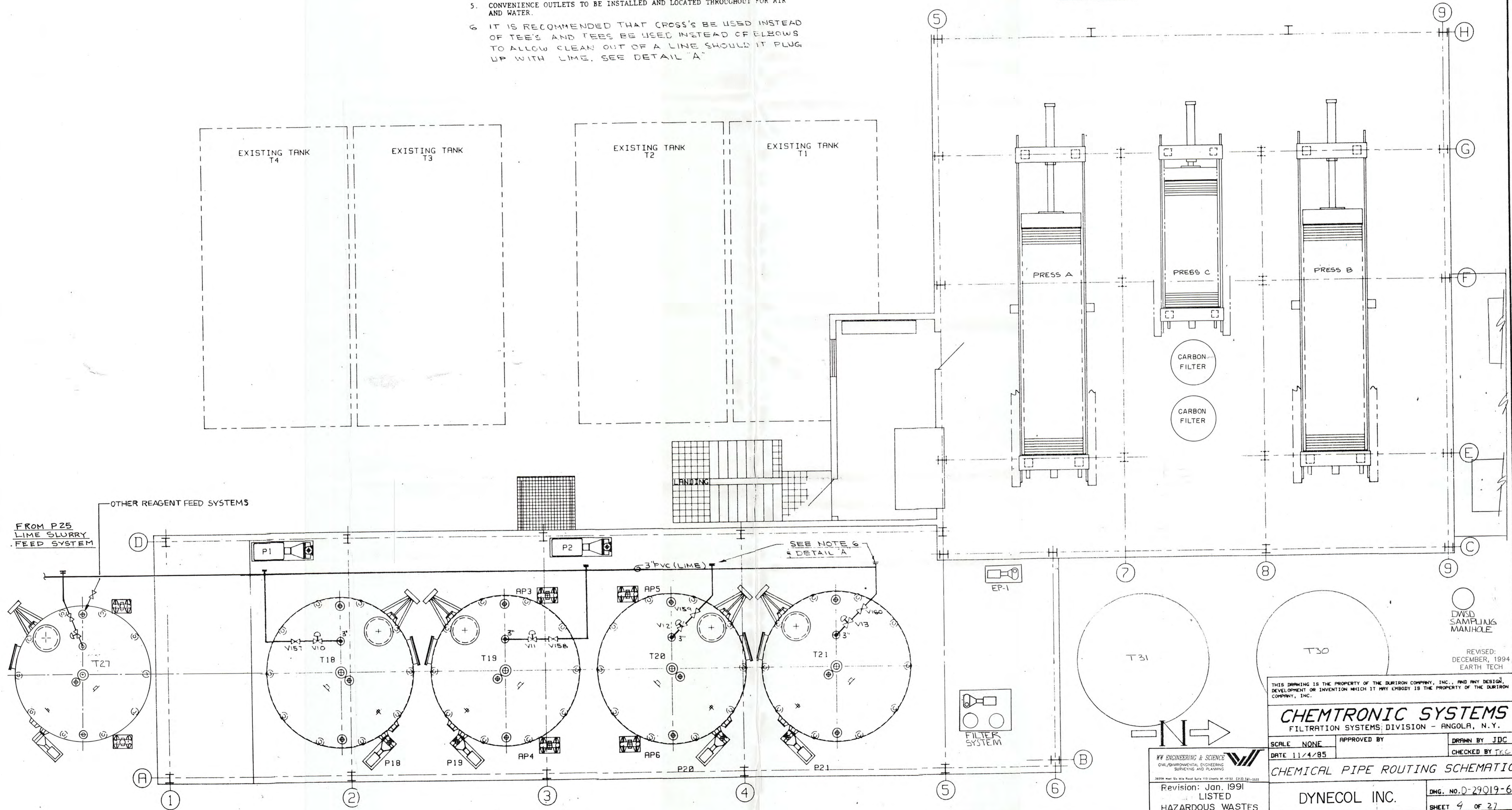
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3. UNIONS/FLANGES TO BE INSTALLED WHERE NECESSARY TO ALLOW REMOVAL OF EQUIPMENT FOR REPAIR/REPLACEMENT.
4. ALL PIPING RUNS TO BE RUN IN A NEAT MANNER AND PROPERLY SUPPORTED BY INSTALLING CONTRACTOR.
5. CONVENIENCE OUTLETS TO BE INSTALLED AND LOCATED THROUGHOUT FOR AIR AND WATER.
6. IT IS RECOMMENDED THAT CROSS'S BE USED INSTEAD OF TEE'S AND TEE'S BE USED INSTEAD OF ELBOWS TO ALLOW CLEAN OUT OF A LINE SHOULD IT PLUG UP WITH LIME. SEE DETAIL "A"

FLANK OFF W/BLIND  
FLANGE TYP. LINE  
CLEAN-OUT CONN.



DETAIL "A"

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



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**CHEMTRONIC SYSTEMS**  
FILTRATION SYSTEMS DIVISION - ANGOLA, N.Y.

SCALE NONE APPROVED BY \_\_\_\_\_ DRAWN BY JDC  
DATE 11/4/85 CHECKED BY T.K.C.

CHEMICAL PIPE ROUTING SCHEMATIC










HW ENGINEERING & SCIENCE  
CIVIL/ENVIRONMENTAL ENGINEERING  
SURVEYING AND PLANNING  
34209 West 50th Road Suite 110 Lincoln NE 68502 (402) 431-2222  
Revision: Jan. 1991  
LISTED  
HAZARDOUS WASTES

DYNECOL INC.  
DWG. NO. D-29019-6  
SHEET 4 OF 27

REVISED:  
DECEMBER, 1994  
EARTH TECH

DWSD  
SAMPLING  
MANHOLE

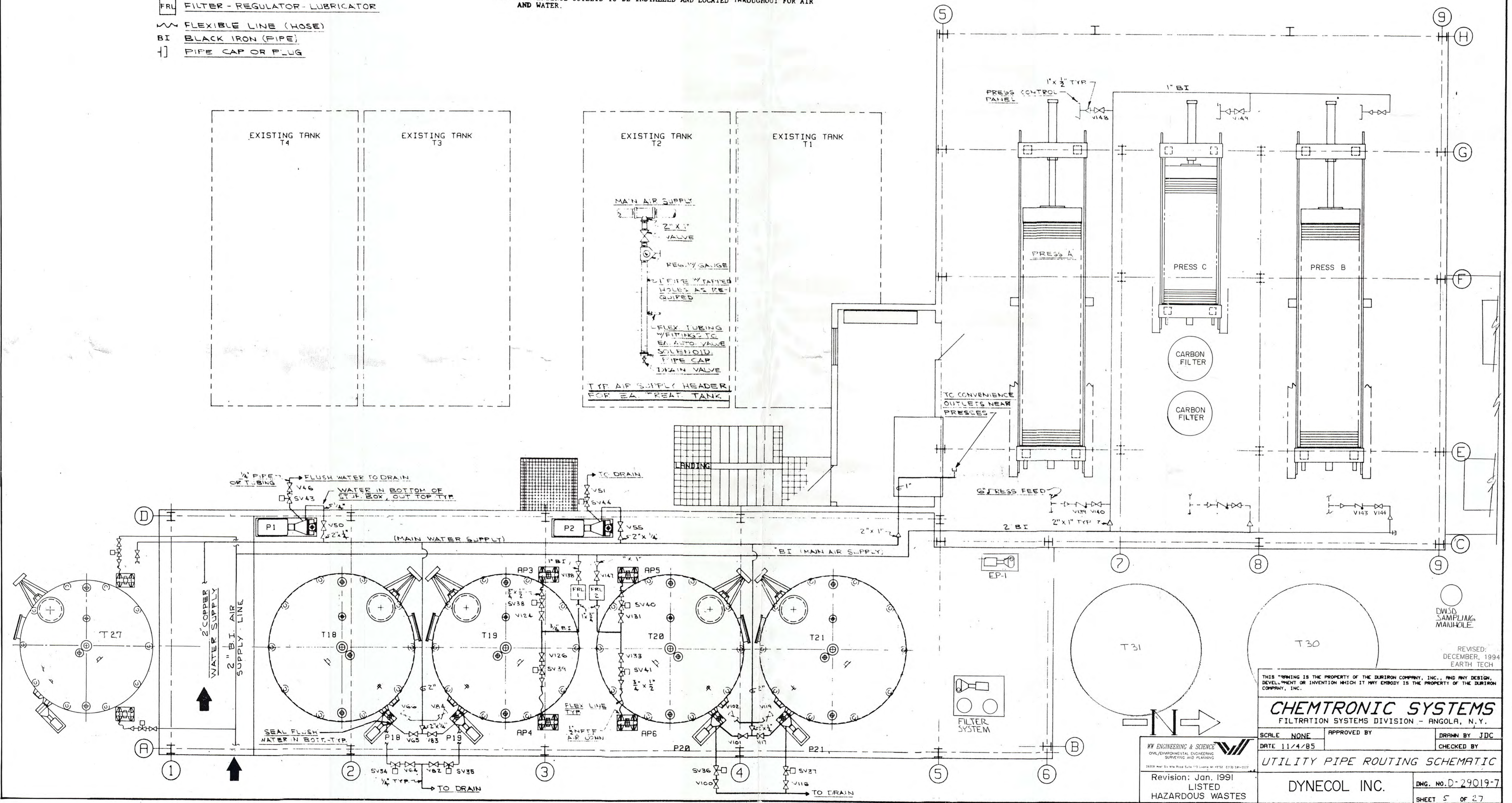
**SYMBOL LEGEND**

-  SOLENOID VALVE, 2-WAY
-  MANUAL VALVE
-  VALVE SHOWN AS REFERENCE
-  CHECK VALVE
-  LINE SIZE REDUCER
-  FRL FILTER - REGULATOR - LUBRICATOR
-  FLEXIBLE LINE (HOSE)
-  BI BLACK IRON (PIPE)
-  PIPE CAP OR PLUG

**GENERAL NOTES**

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4. ALL PIPING RUNS TO BE RUN IN A NEAT MANNER AND PROPERLY SUPPORTED BY INSTALLING CONTRACTOR.
5. CONVENIENCE OUTLETS TO BE INSTALLED AND LOCATED THROUGHOUT FOR AIR AND WATER.

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



REVISED: DECEMBER, 1994  
EARTH TECH

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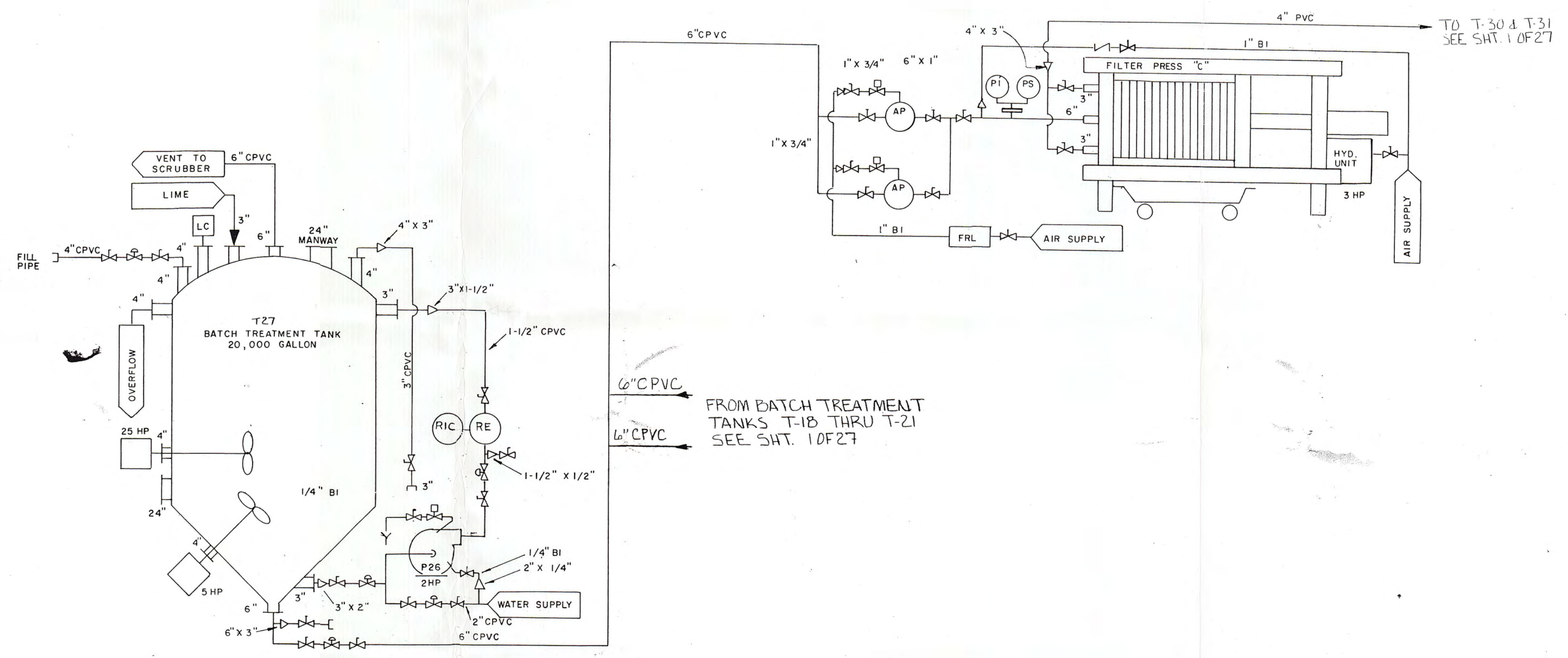
**CHEMTRONIC SYSTEMS**  
FILTRATION SYSTEMS DIVISION - ANGOLA, N.Y.

SCALE: NONE  
DATE: 11/4/85  
APPROVED BY: [Signature]  
DRAWN BY: JDC  
CHECKED BY: [Signature]

**UTILITY PIPE ROUTING SCHEMATIC**

Revision: Jan. 1991  
LISTED  
HAZARDOUS WASTES

DYNECOL INC.  
DWG. NO. D-29019-7  
SHEET 5 OF 27



WASTE MANAGEMENT DIVISION

REVISED:  
DECEMBER, 1994  
EARTH TECH

JAN 04 1995

ENGINEERING & SCIENCE  
ENVIRONMENTAL, ENGINEERING,  
SURVEYING AND PLANNING

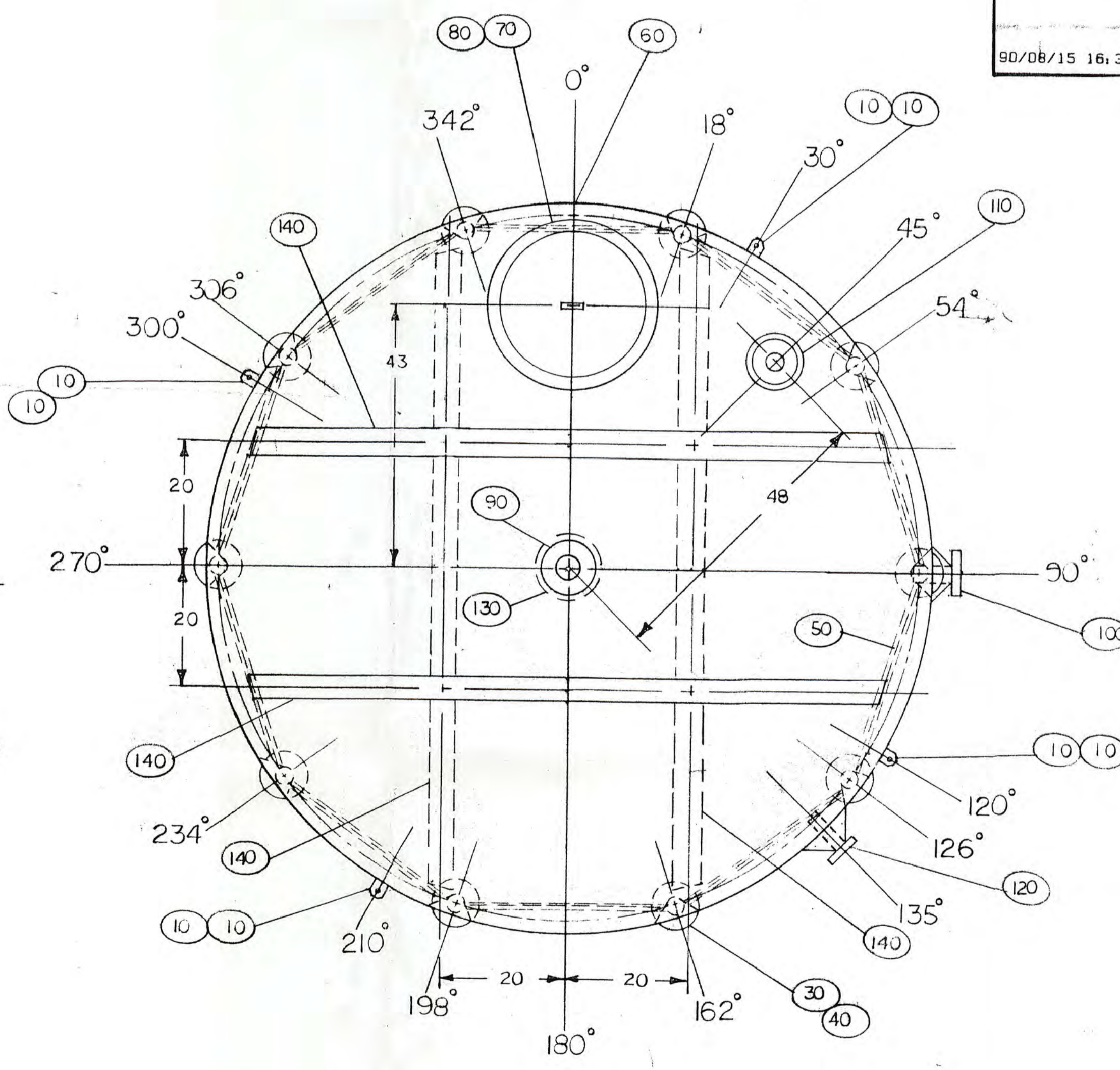
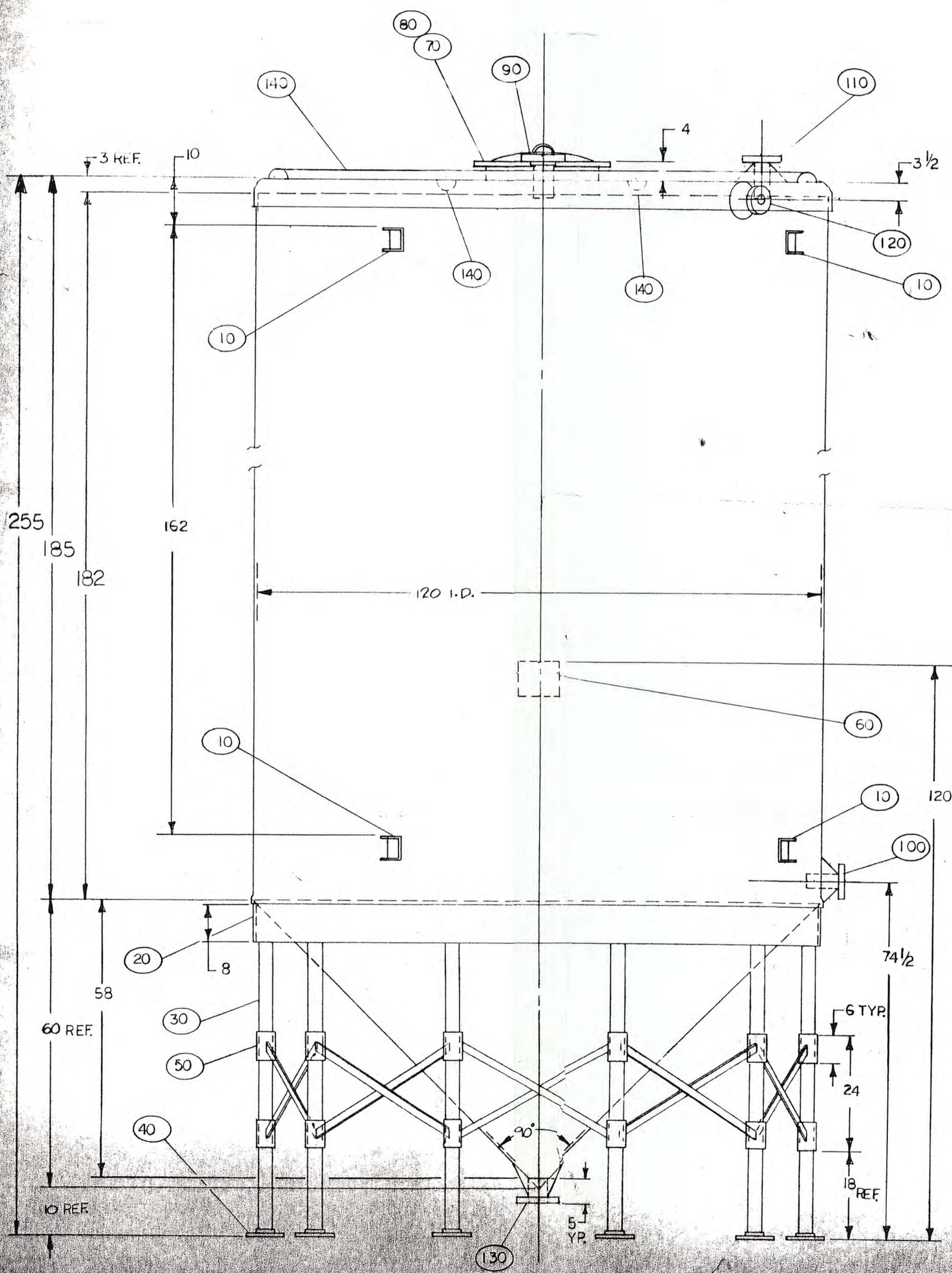
RECEIVED

SCALE NONE		DRAWN BY MOL
DATE 1-10-91		

PROCESS FLOW DIAGRAM  
LISTED WASTE TREATMENT SCHEMATIC

DYNECOL INC.

SHEET 1A OF 27



ORIENTATION PER CUSTOMER'S ORIENTATION A.  
 VERT. DIMS. NOT TO SCALE

DESIGN CONDITIONS				MODEL NO. CV9-120-10036 P S/N 53764 120 dia. x 185 str. side										
SP. GR.	1.2	PRESSURE	ATMOSPHERIC, VENTED	FOUNDATION REQD.	Supported by legs									
				INNER SURFACE	Double Glass veil									
CONTENTS				CAPACITY 10036 US gallons, total										
ITEM	THK.	TOP HEAD	SIDE WALL	SIDE WALL	CONICAL BOTTOM	FALSE BOTTOM	TOP INS. CASE	SIDEWALL INS. CASE	LUG WIND	PREM. RESIN	ECON. RESIN	GLASS TYPES	GLASS WTS.	
WT. RESIN	22		117		27							VEIL	14	
WT. VEIL	183 (2)		9.79 (2)		2.22 (2)							CHOP	366	
WT. RESIN	173		294		267							WIND	395	
WT. CHOP	86		147		133							F/M	85	
WT. RESIN	20				160							UNI		
WT. F/M	11 (0)	UNI			84 (4)							TOTAL	TOTAL	
WT. RESIN			164						34			1-1/2 OZ	19	
WT. WIND			327 (3)						68 (2)			TOTAL FRP NET WT. (TRIMMED)	2260	
TOTAL ACCESSORY WT. 1097				JOINT(S) 58				TOTAL TANK WT. 3357 #						
INSULATION WT. Balsa cu. ft.				CURE SYSTEM REQD. Co/MEK peroxide with no post cure				DIGITAL DATA						
TESTING REQD. None				CHOP RATIO	ST WIND RATIO	HELI WIND RATIO	Y-COUNT	X-COUNT	PASS PER FT	LENGTH	GLASS WTS.			
4 H/D Lugs at 8 inches, with 4 Lifting Lugs at 10"				410	80	9	1282	1464	2	16	188.7	310		
						9	1282	39	1	16	10.2	17		
NOTES														
1-Tank to be built to P.E.C. Engineering Standard Specifications.														
2-All flanges to be 150 # ANSI drilled. Gasket Must be full face type.														
3-Flange bolt-holes are to straddle the centerline unless otherwise specified.														
4-Tank must have FREE VENTING with flow capacity equal to or larger than largest nozzle or fitting.														
5-See resin manufacturer's literature for strength and corrosion ratings vs temperature.														
6-TANK DESIGNED FOR SEISMIC ZONE 0, 0 MPH WINDLOAD.														
7-Load tank with 300° down. Loaded width of 126 inches, approx.														
90/08/15 16:30:57														

SEP 27 1994

NO	QTY	REINF. P/B	STD. X 106 LG	FRP
130	1	INTEGRAL FLG.	4 IRS 1/2 CONICAL JOCKET	FRP
120	1	INTEGRAL FLG.	2 IRS 1/2 CONICAL JOCKET	FRP
110	1	INTEGRAL FLG.	3 IRS 1/2 CONICAL JOCKET	FRP
100	1	INTEGRAL FLG.	3 IRS 1/2 CONICAL JOCKET	FRP
90	1	FLANGE NOZ.	4 IRS (VENT)	FRP
80	1	COVER W/ BOLT GASKET HANDLE	2.8 DIA	FRP NEOP
70	1	MANHOLE TOP	24 DIA	FRP
60	1	NAMERPLATE	STD X 10 7/8 X 9 7/8 X 1/4	FRP
50	1	DOUBLE LEG REINF. BAND	PER REQ. APPROX 9 C.I.	PRIMED
40	10	PIPE FLANGE	3 IN. ST. 1/2 X 3/4	PRIMED
30	10	PIPE LEG (T.B.E.)	3 IRS X 62 LG	PRIMED
20	1	SKIRT	100 IN. 1/8 X 3/8 X 3/8	PRIMED
10	8	LIFTING LUGS	TYPE #2	CENRAL.
		FILAMENT WINDING	UNIDIRECTIONAL METRON 9022	
		CORROSION BARRIER	UNIDIRECTIONAL METRON 9222	
Item	Reqd.	Descrip.	Mat.	

**Viatec** PROCESS/STORAGE SYSTEMS MANAGEMENT DIVISION  
 500 Reed St.  
 P.O. Box 99  
 Belding, MI 48809

Title: CV9C-120-10036PTANK (1) REQD.  
 Cust: DYNACOL S/N 53764  
 Dwn by: AG Dwg No: DFT-900541.02-1  
 Date: 8-16-90  
 Scale: 1" = 1/16"

Revision: 3 (WAS CV9-120-10036 P (REDRAWN) 8-16-90 AG)  
 Date: 8-16-90  
 Sheet 1 of 1  
 JM 8

TANK # 27