

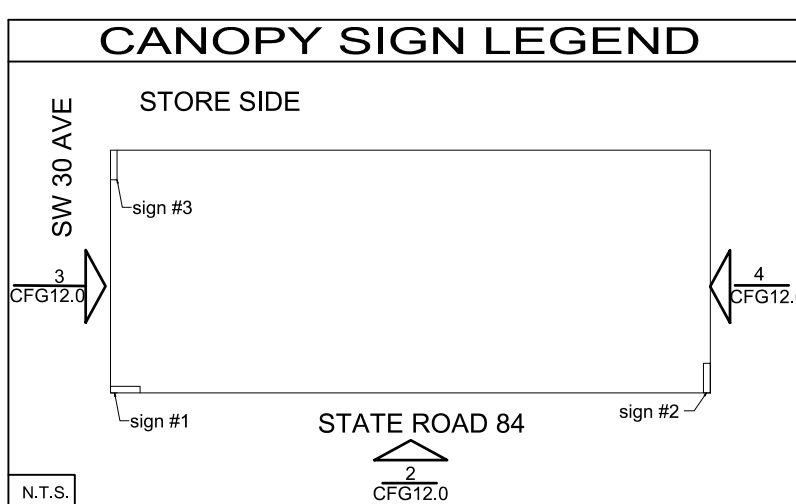
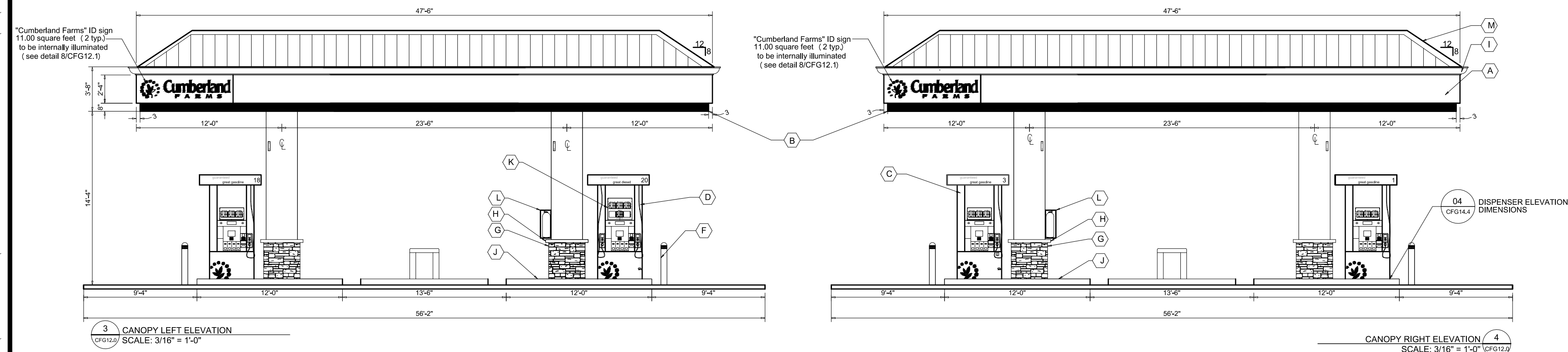
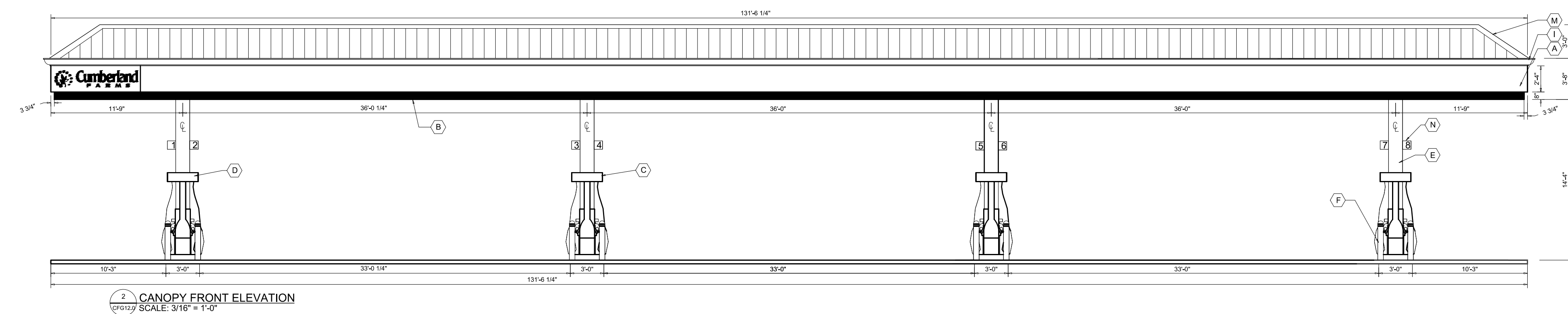
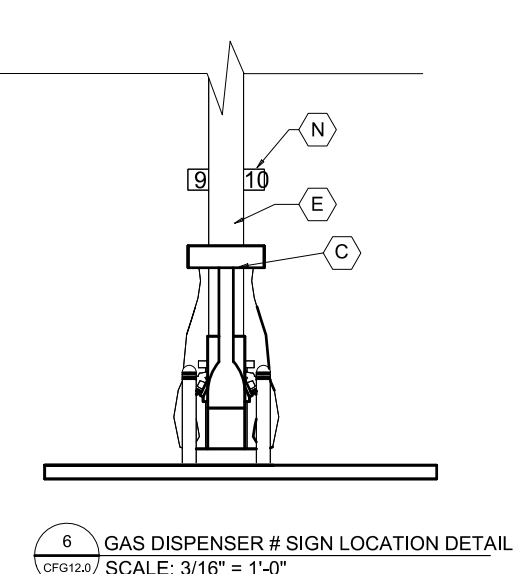
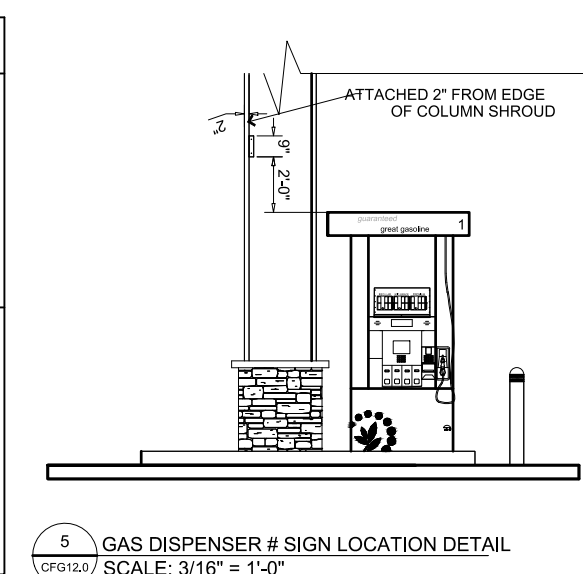
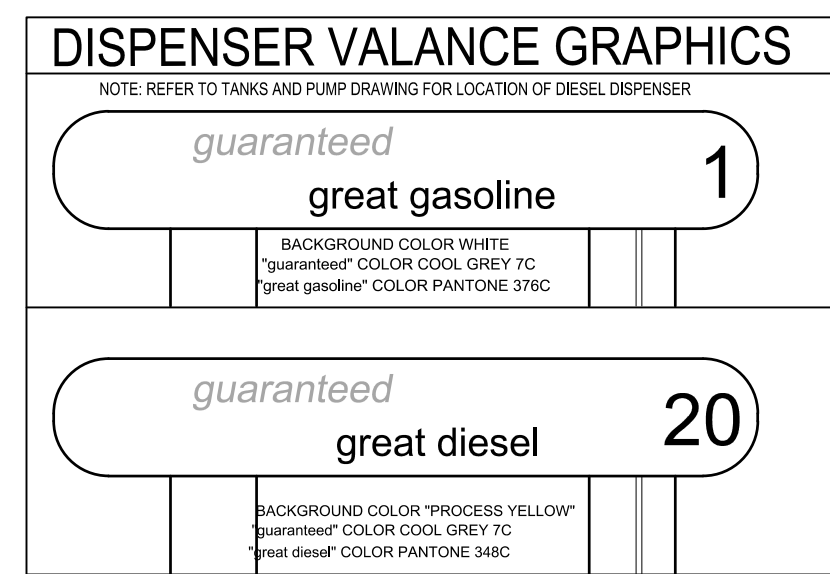
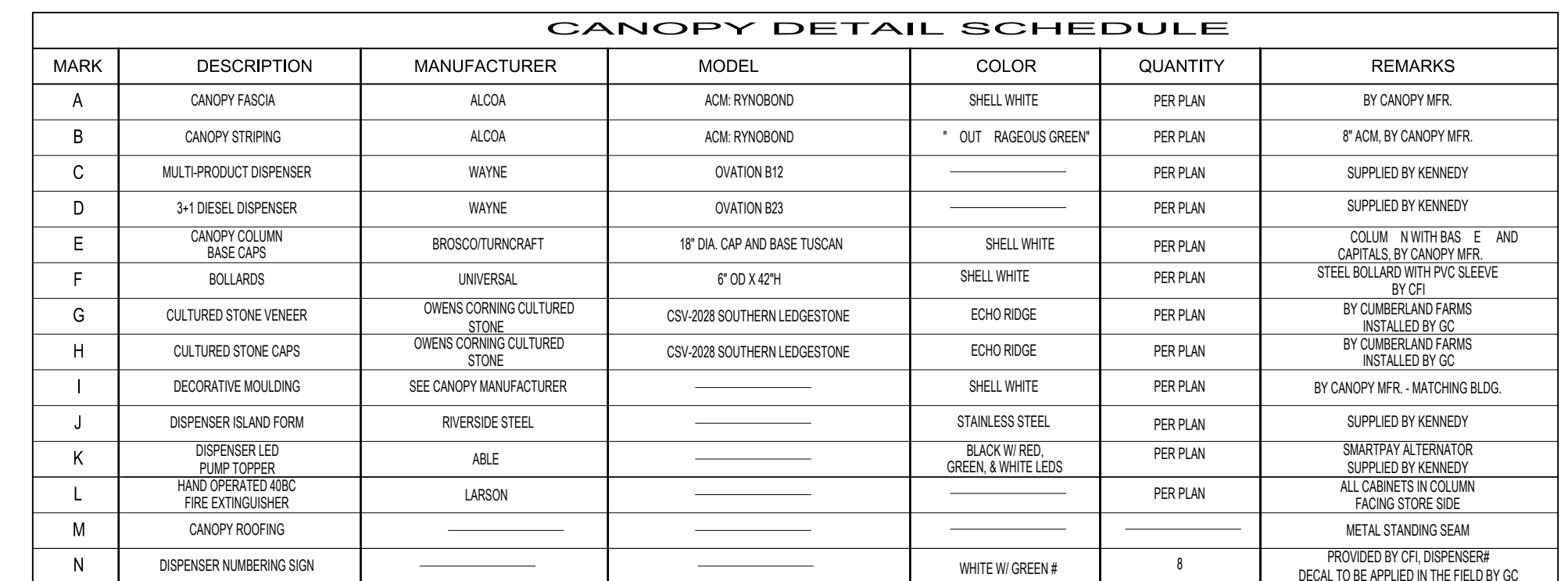


	CALCULATION SUMMARY					
	LABEL	AVG	MAX	MIN	AVG/MIN	MAX/MIN
	CANOPY	35.50	50	27	1.31	1.85
	PAVED AREA	3.13	24.1	0.3	10.43	80.33
RADE.	UNDEFINED AREA	0.29	5.1	0.0	N.A.	N.A.

NOTE:

- FOOTCANDLE LEVELS CALCULATED AT GRADE USING INITIAL LUMEN VALUES
- EXCEPT FOR TYPE "AR" FIXTURES, ALL POLE MOUNTED FIXTURES ARE MOUNTED ON A 15FT POLE ATOP A CONCRETE BASE FLUSH AT GRADE.
- TYPE "AR" FIXTURE IS MOUNTED ON AN 8 FT POLE ATOP A CONCRETE BASE FLUSH AT GRADE.

[illegible]



NOTES:
1. COORDINATE APRON ELEVATIONS WITH CIVIL DRAWINGS AND FIELD ELEVATIONS.
2. DISPENSER SUMPS TO BE SET IN PLACE AND USED AS A FORM TO POUR CONCRETE AROUND.
3. CONCRETE SPECIFICATIONS:
-SOIL BEARING CAPACITY REQ'D: AS PER GEOTECHNICAL REPORT
-CONC. STRENGTH: 4000psi @ 28 DAYS 3% TO 7% AIR
-TROWELLED SMOOTH FINISH WITH TWO COATS SEALING/CURING COMPOUND.
-CANOPY FOOTING CONC. STRENGTH: REFER TO DRAWINGS PROVIDED BY MANUFACTURER

4. ALL EQUIPMENT INSTALLATIONS MUST COMPLY WITH MANUFACTURER'S SPECIFICATIONS.
5. ALL EQUIPMENT AND CONSTRUCTION ARE NEW AND FACILITY IS TO BE ATTENDED
6. SELF-SERVICE
7. REFER TO CANOPY MANUFACTURERS DRAWINGS FOR SPECIFIC CANOPY FOOTING OPTIONS.
8. REFER TO CANOPY MANUFACTURERS DRAWINGS FOR ARCHITECTURAL DETAILS
9. ON CANOPY AND COLUMNS.
10. SEE CIVIL PLANS FOR ORIENTATION ON SITE, AND FOR TRAFFIC FLOW
11. REFER TO CANOPY DETAIL SCHEDULE ON SHEET 1 FOR ADDITIONAL INFORMATION
12. GC TO COORDINATE THE SPECIFIC LOCATIONS OF THE APRON EXPANSION JOINTS BASED ON THE FINAL POSITIVE LIMITING BARRIER DESIGN. REFER TO THE FIRE SUPPRESSION PLAN FOR THE PLB LAYOUT

THOMAS
ENGINEERING GROUP

CIVIL ENGINEERS • PROJECT MANAGERS • LAND PLANNING • LANDSCAPE ARCHITECTS

100 CORPORATE DR.
SUITE 600
FT. LAUDERDALE FL 33334
P. 954-202-7000

450 W. KENNEDY BLVD.
SUITE 600
TAMPA FL 33609
P. 813-379-4100

125 WILBURDAWN RD.
SUITE 200
JUPTER FL 33458
P. 561-203-7508

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[illegible]

FINAL TAC SUBMITTAL
11/20/2017

PROJECT No.: F160039
DRAWN BY: JFV
CHECKED BY: MAT
DATE: 11-20-2017
CAD I.D.: F160039 CANOPY ELEVATIONS

PROJECT:

**CUMBERLAND FARMS
STATE ROAD 84 &
SW 30TH AVENUE**

FOR
CUMBERLAND
FARMS, INC.

CITY OF HOLLYWOOD
BROWARD COUNTY, FLORIDA



RADICE III
1000 CORPORATE DRIVE, SUITE 250
FORT LAUDERDALE, FL 33334
PH: (954) 202-7000
FX: (954) 202-7070
www.ThomasEngineeringGroup.com

MICHAEL A. TROXELL

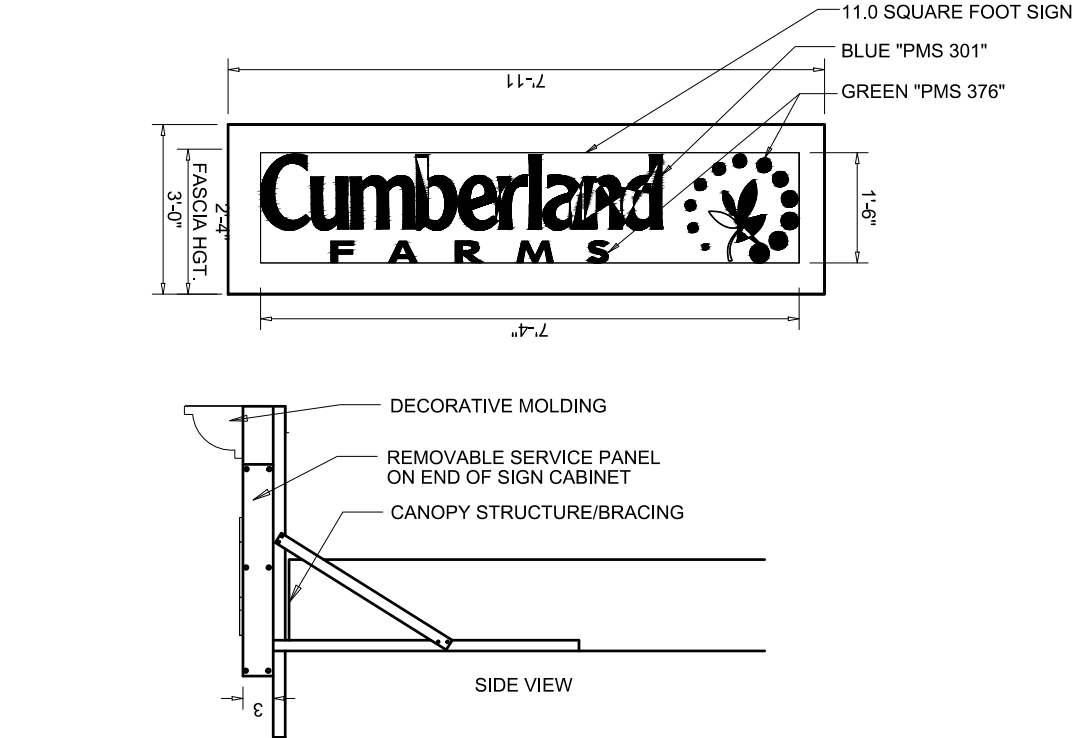
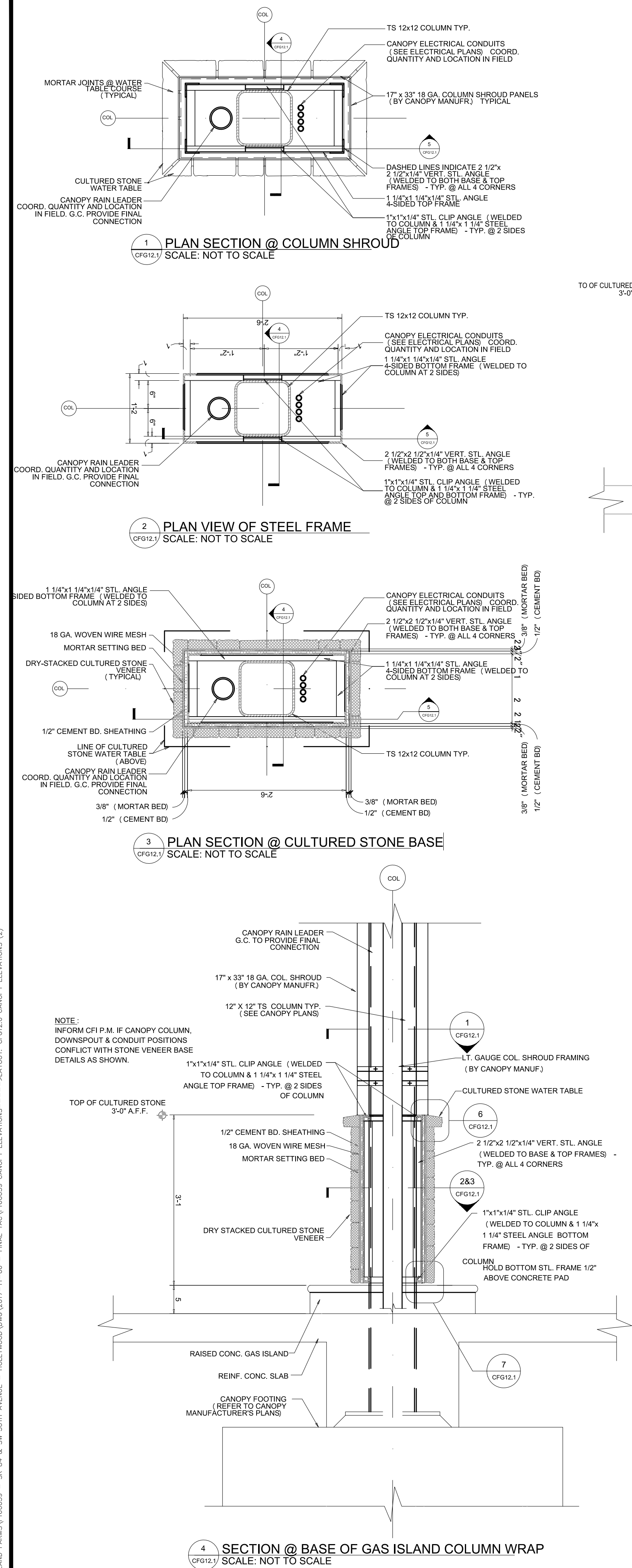
PROFESSIONAL ENGINEER
November 17, 2017
FLORIDA LICENSE No. 50572
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

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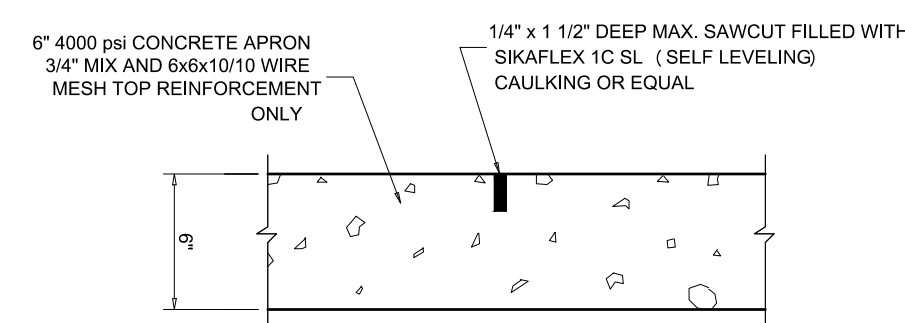
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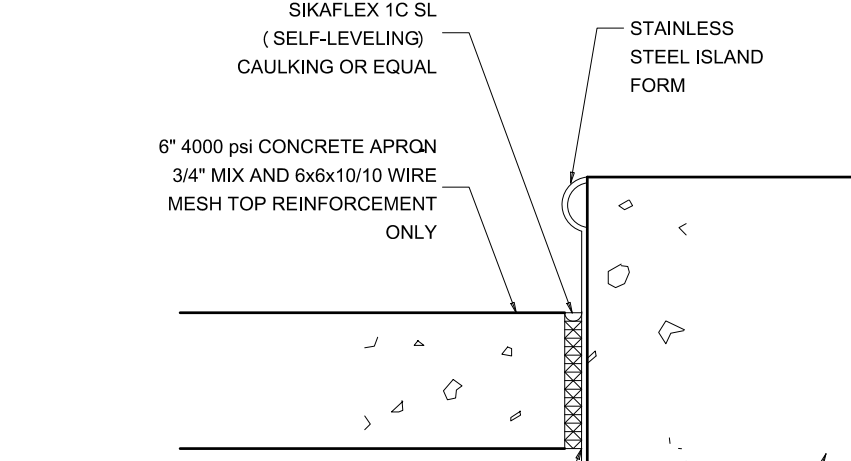
CFG12.0



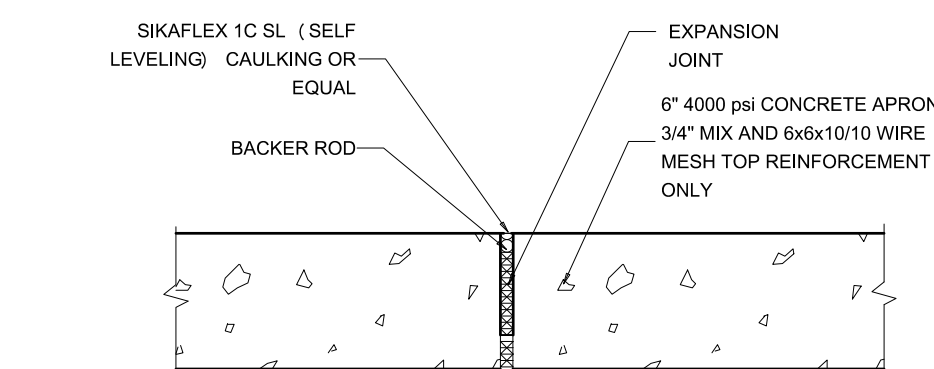
8 CANOPY SIGN DETAIL
CFG12.1 SCALE: NOT TO SCALE



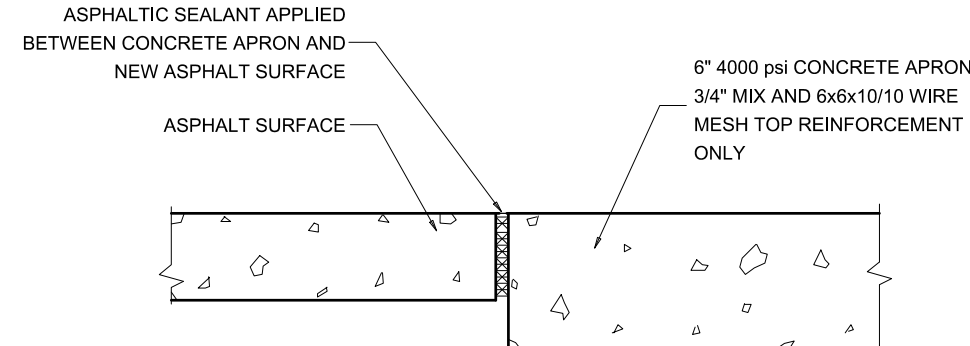
09 TYPICAL SAWCUT DETAIL
CFG12.1 SCALE: NOT TO SCALE



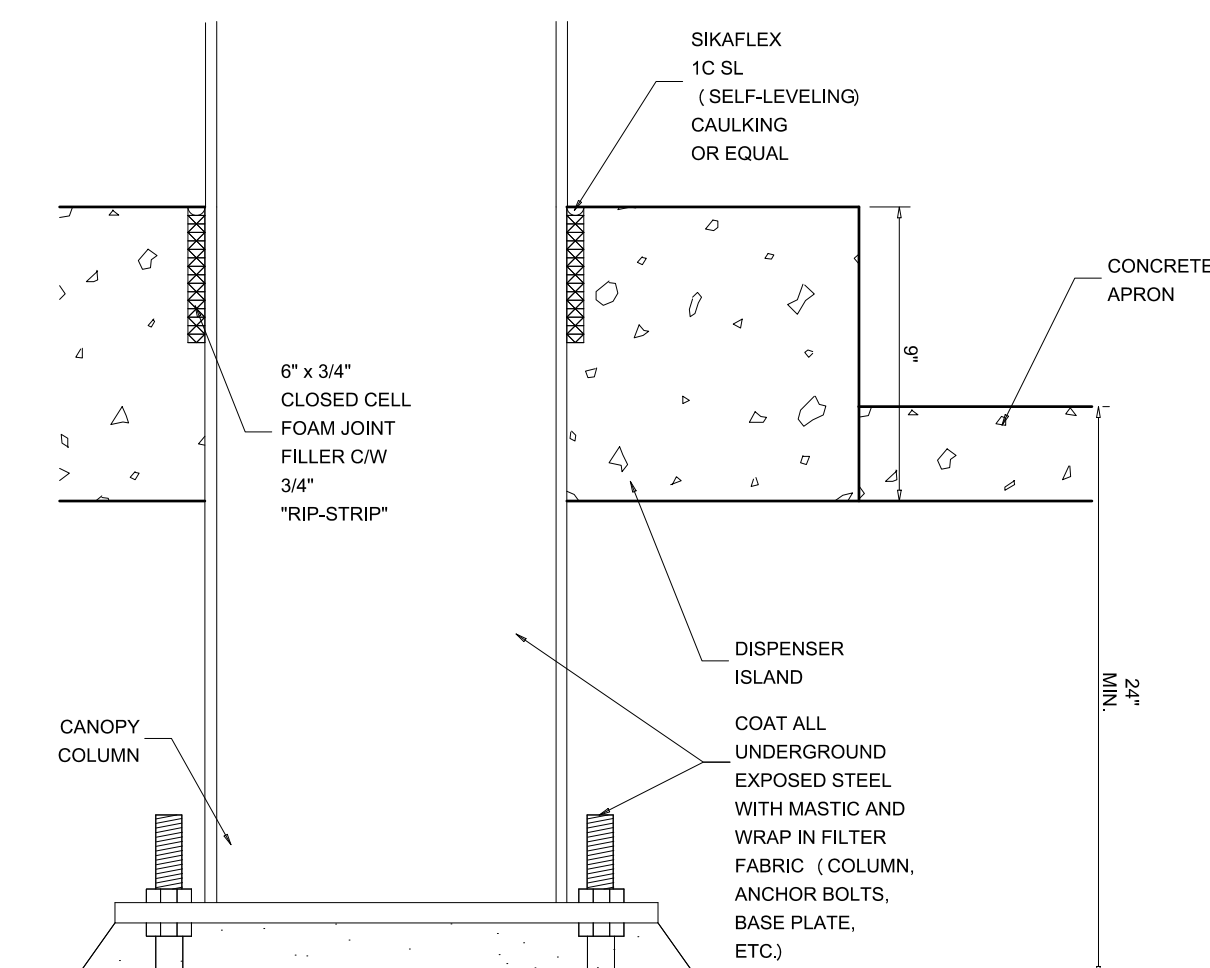
10 TYPICAL ISLAND/APRON DETAIL
CFG12.1 SCALE: NOT TO SCALE



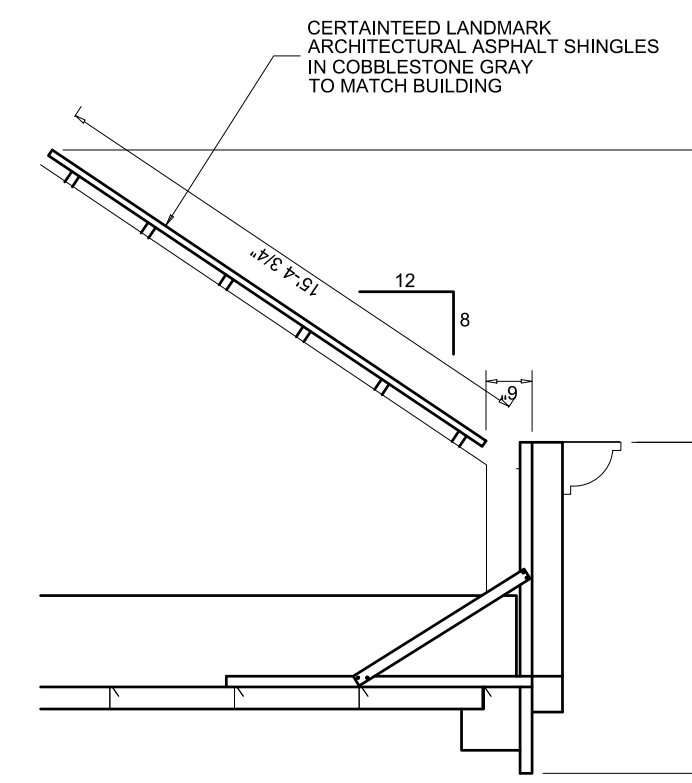
11 TYPICAL EXPANSION JOINT DETAIL
CFG.12.1 SCALE: NOT TO SCALE



12 TYPICAL CONCRETE/ASPHALT DETAIL
CFG.12.1 SCALE: NOT TO SCALE



13 ISLAND COLUMN DETAIL
CFG12.1 SCALE: NOT TO SCALE



14 TYPICAL CANOPY ROOF SECTION
CFG12.1 SCALE: NOT TO SCALE

[illegible]



AREA/WEIGHT	
SIGN SQUARE FOOTAGE	
80	SQ.FT.
ESTIMATED SIGN WEIGHT	
3000	LBS.

SHEET TITLE:	
SIGN PLAN	
SHEET NUMBER:	
CFG13.0	

STIPULATION FOR REUSE
THIS DRAWING WAS PREPARED FOR
HOLLYWOOD FARM, INC. AND IS NOT
TO BE REPRODUCED OR USED IN ANY
PROJECT WITHOUT THE WRITTEN
CONSENT OF HARRISON FRENCH
& ASSOCIATES, LTD. ANY
UNAUTHORIZED REUSE OR
REPRODUCTION OF THIS
DRAWING IS PROHIBITED AND
THE USER SHALL BE
RESPONSIBLE FOR ALL
CONSEQUENCES THEREOF.

Cumberland
FARM

Store # TBD
YSH # TBD
Grade # FL 8511
SR64 + 30TH AVE
HOLLYWOOD, FL 33312

JOB NUMBER: 41-17-00250

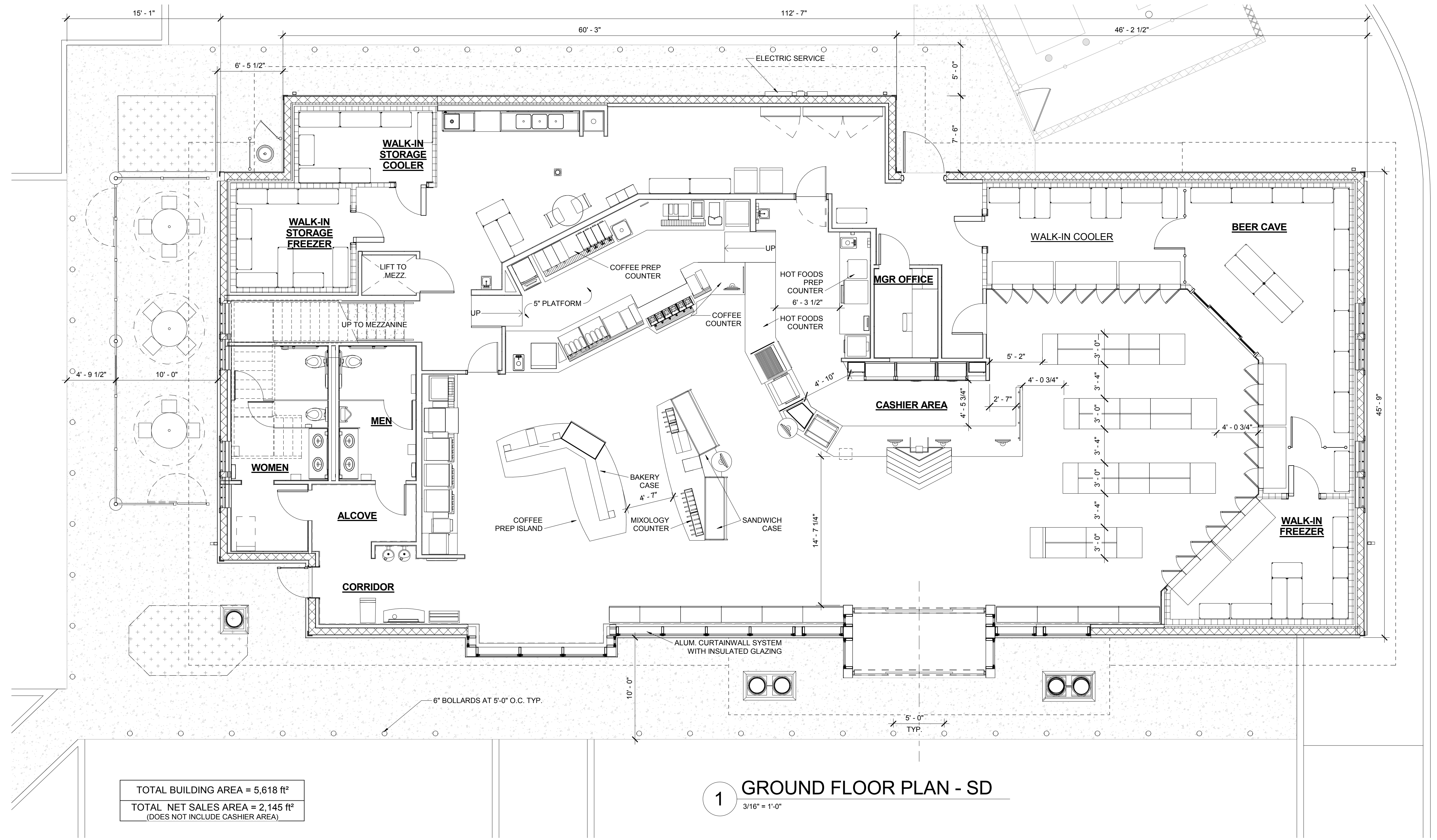
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1	Revision 1	8/28/17
2	Revision 2	11/15/17

CHECKED BY:	DT
DRAWN BY:	ENV
DOCUMENT DATE:	11/15/17

NOT FOR CONSTRUCTION

GROUND FLOOR
PLAN

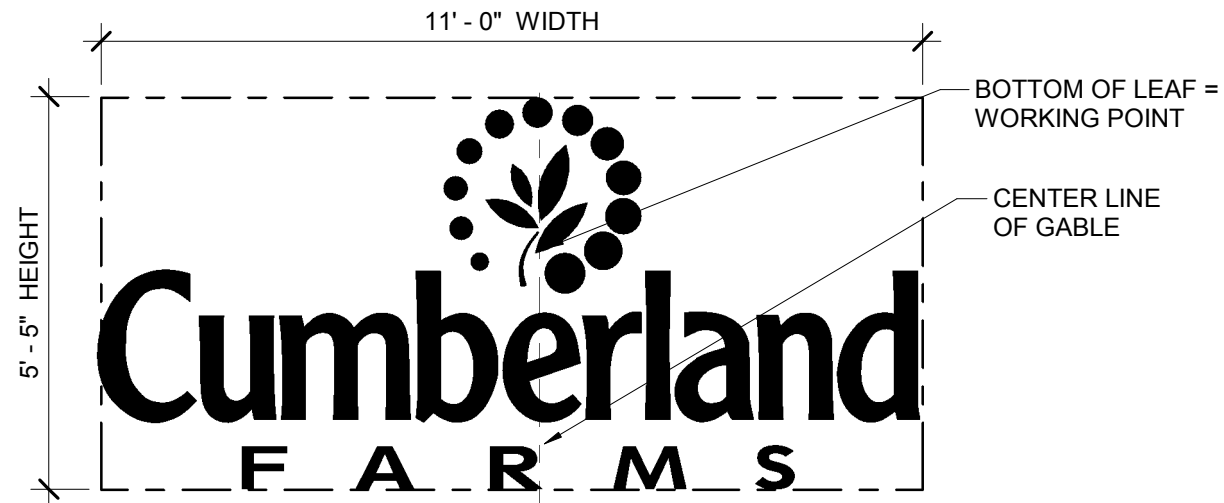
SHEET:
A-101



WALL SIGNAGE SPECIFICATION

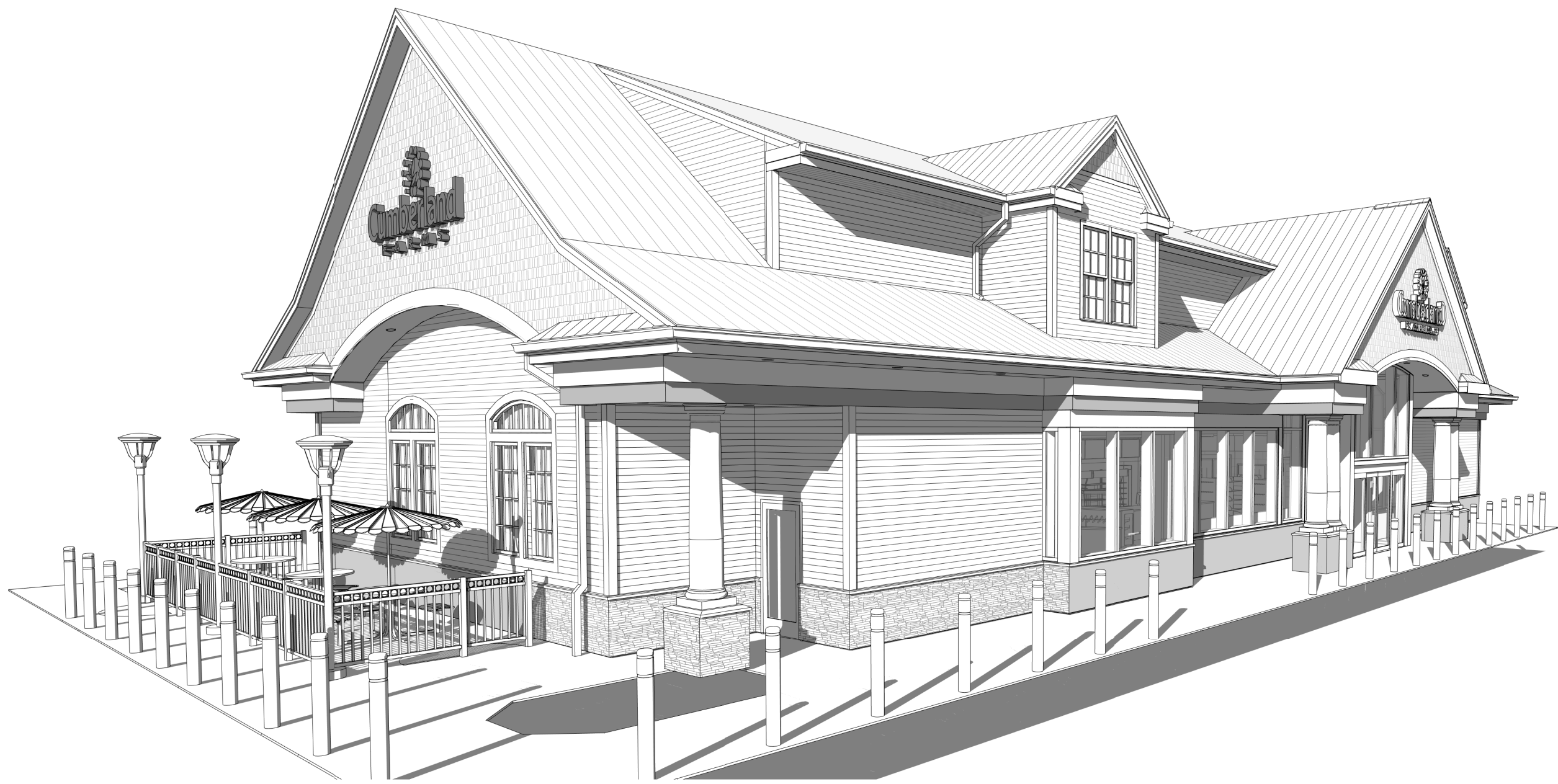
CUSTOM FABRICATED INTERNALLY
ILLUMINATED SIGN THAT IS SUPPLIED BY
OWNER AND IS INSTALLED BY SIGN VENDOR.

SIGN AREA = 37.6 sq'

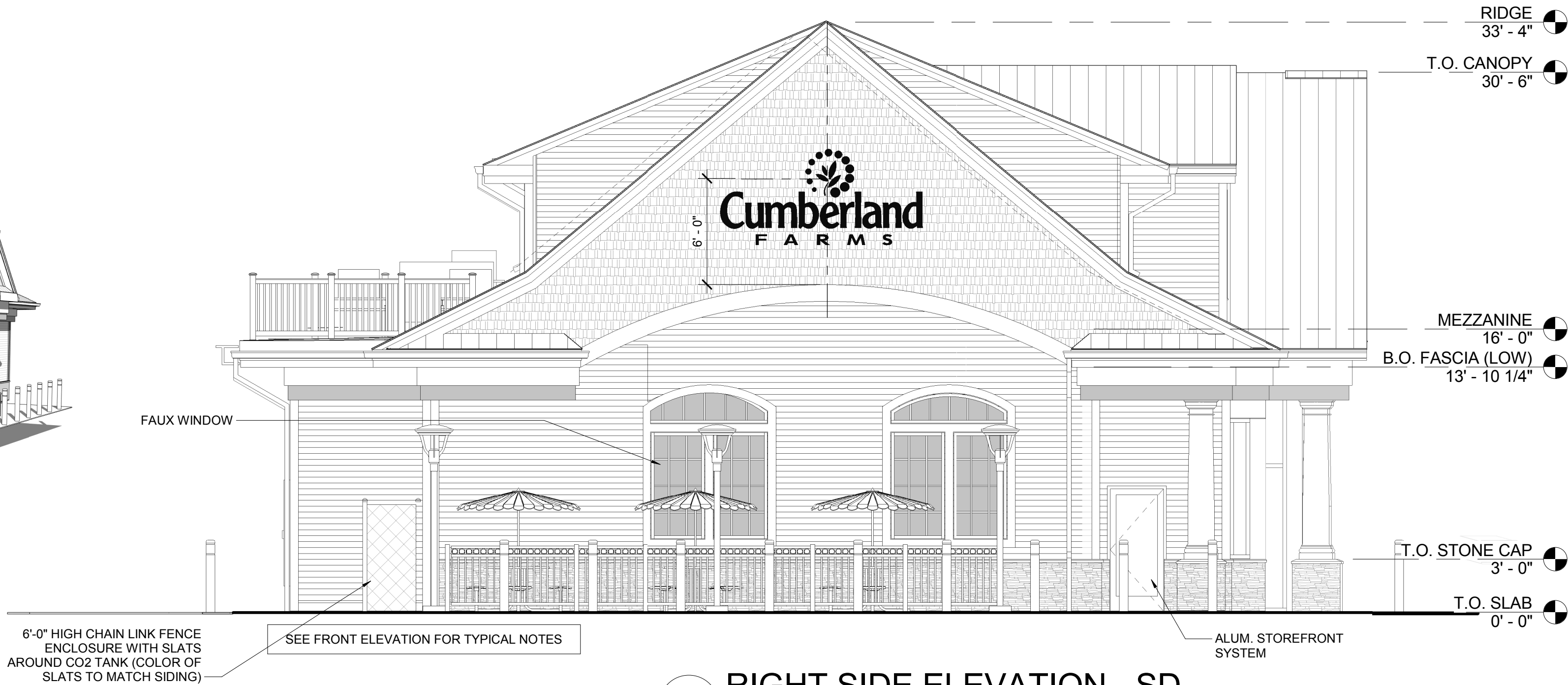


EXTERIOR FINISH SCHEDULE

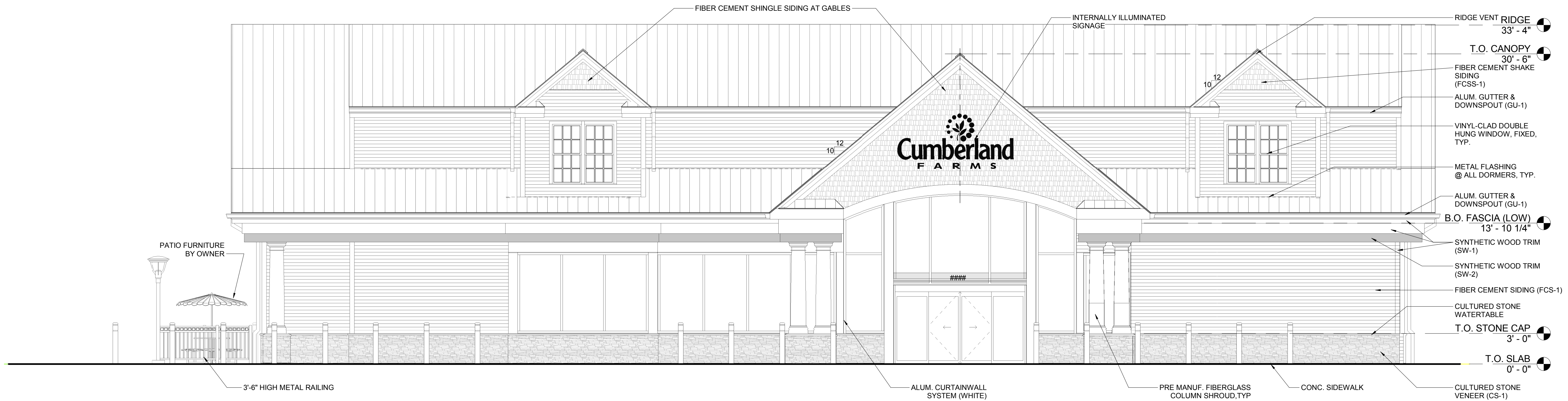
MARK	DESCRIP.	MANUF.	MODEL	COLOR	NOTES
FB-1	FIBERGLASS COLUMN SHROUD	PACIFIC COLUMNS	-	WHITE	16'x9' ENDURA STONE PLAIN COLUMN ROUND SHAFT WITH TRUE ENTASIS TAPERED SMOOTH FINISH.
CS-1	CULTURED STONE	BORAL	COUNTRY LEDGESTONE	ECHO RIDGE	INSTALL DRYSTACK ONLY
SW-2	SYNTHETIC WOOD TRIM	CERTAINTED	-	GREEN	PROVIDE SCARF JOINTS ON ALL EXTERIOR SYNTHETIC WOOD TRIM. G.C. TO PUTTY ALL NAIL HOLES & PAINT ALL SYNTHETIC WOOD TRIM & PANELS.
FCS-1	FIBER CEMENT SIDING	JAMES HARDIE	HARDI PLANK LAP	COBBLESTONE	ROUGH CEDAR FINISH. 6" EXPOSURE
SW-1	SYNTHETIC WOOD TRIM	CERTAINTED	-	WHITE	PROVIDE SCARF JOINTS ON ALL EXTERIOR SYNTHETIC WOOD TRIM. G.C. TO PUTTY ALL NAIL HOLES & PAINT ALL SYNTHETIC WOOD TRIM & PANELS.
SSM-1	STANDING SEAM METAL	BERRIDGE	DOUBLE ZEE LOCK	CITYSCAPE	INSTALL PER NOA
GU-1	ALUMINUM GUTTER SYSTEM	ATAS	.032	WHITE	PROVIDE ALL ACCESSORIES REQ'D FOR A COMPLETE CONTINUOUS INSTALLATION. INSTALL PER MANUF. INSTRUCTIONS. ENSURE SEALED, WATERTIGHT CORNER CONNECTIONS. FLASH & SEAL TO DOWNSPOUTS AS REQ'D. PROVIDE SUPPORT STIFFENERS AT 12" MIN. O.C. GUTTER SHALL BE SEAMLESS & 6" MIN.
FCSS-1	FIBER CEMENT SHAKES	JAMES HARDIE	HARDI SHAKE	COBBLESTONE	ROUGH CEDAR FINISH



3 FRONT/RIGHT SIDE PERPECTIVE - SD

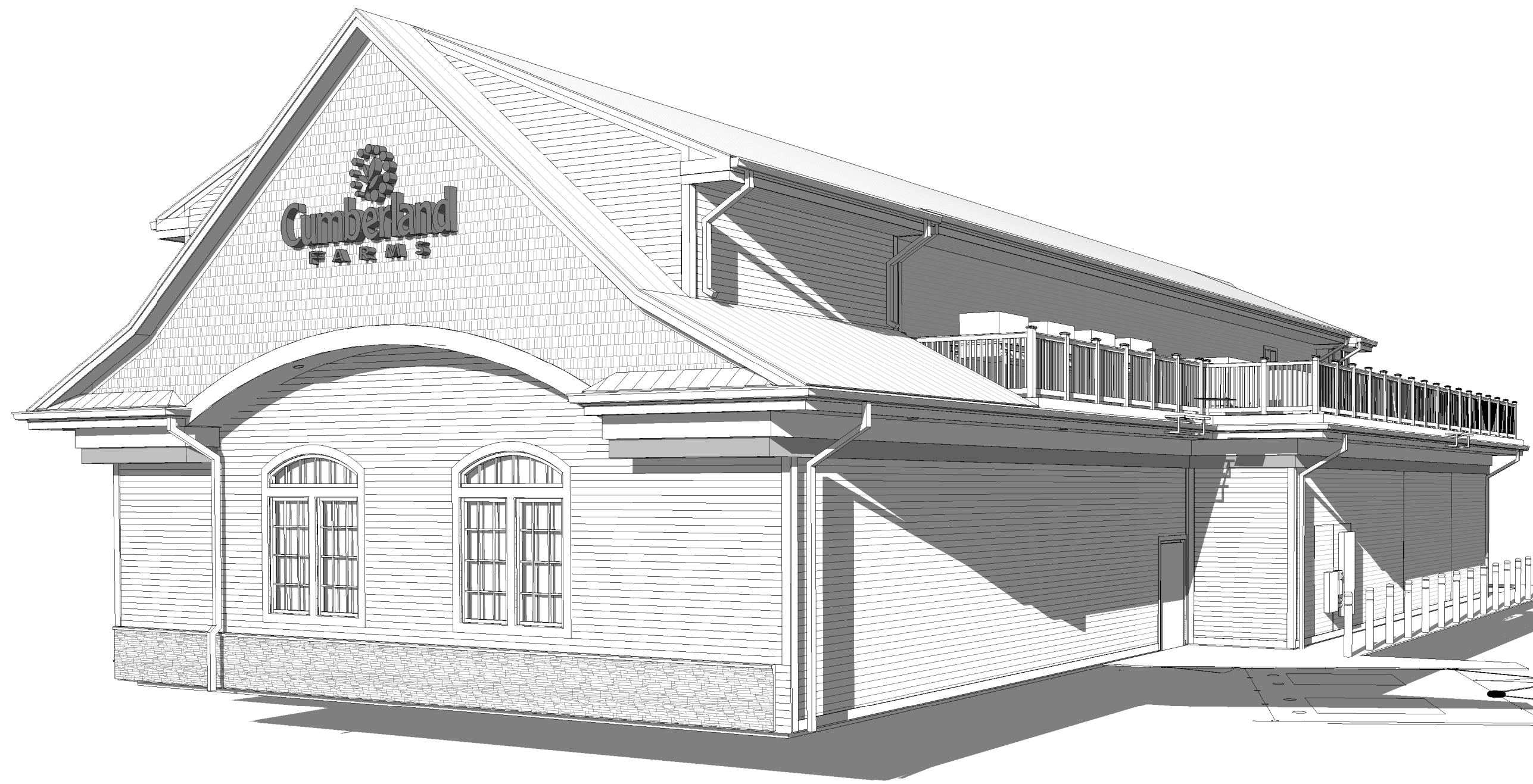


2 RIGHT SIDE ELEVATION - SD

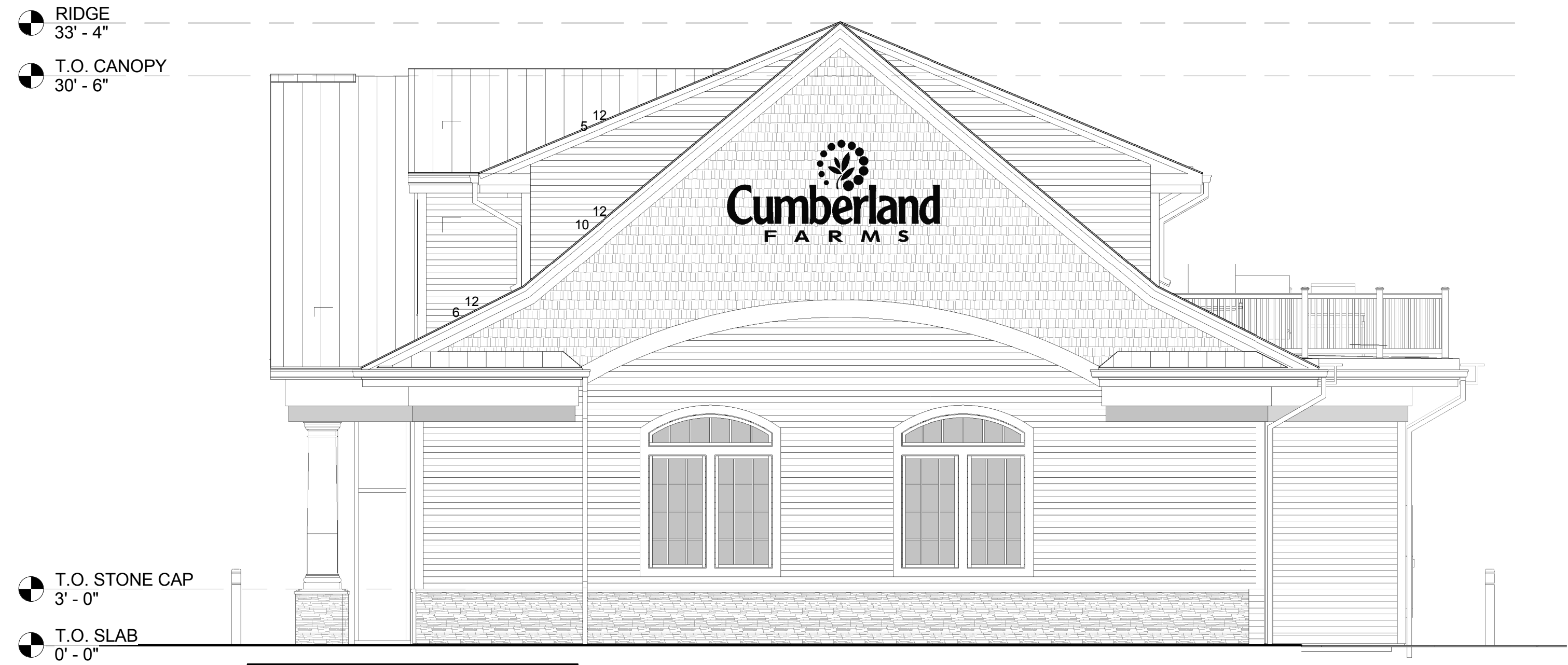


1 FRONT ELEVATION - SD

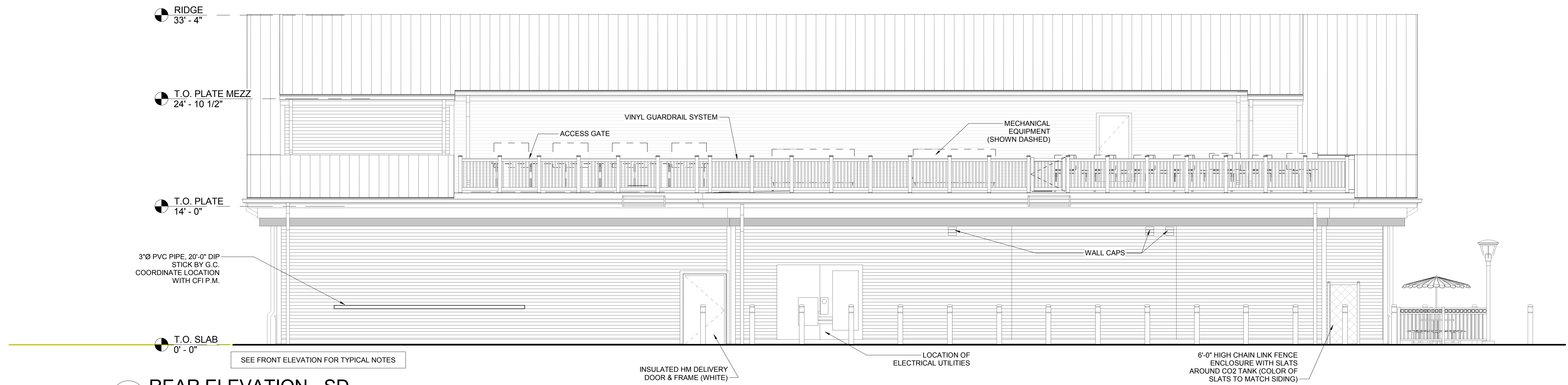
1	Revision 1	8/28/17
2	Revision 2	11/15/17



3 REAR/LEFT SIDE PERSPECTIVE - SD



2 LEFT SIDE ELEVATION - SD



1 REAR ELEVATION - SD

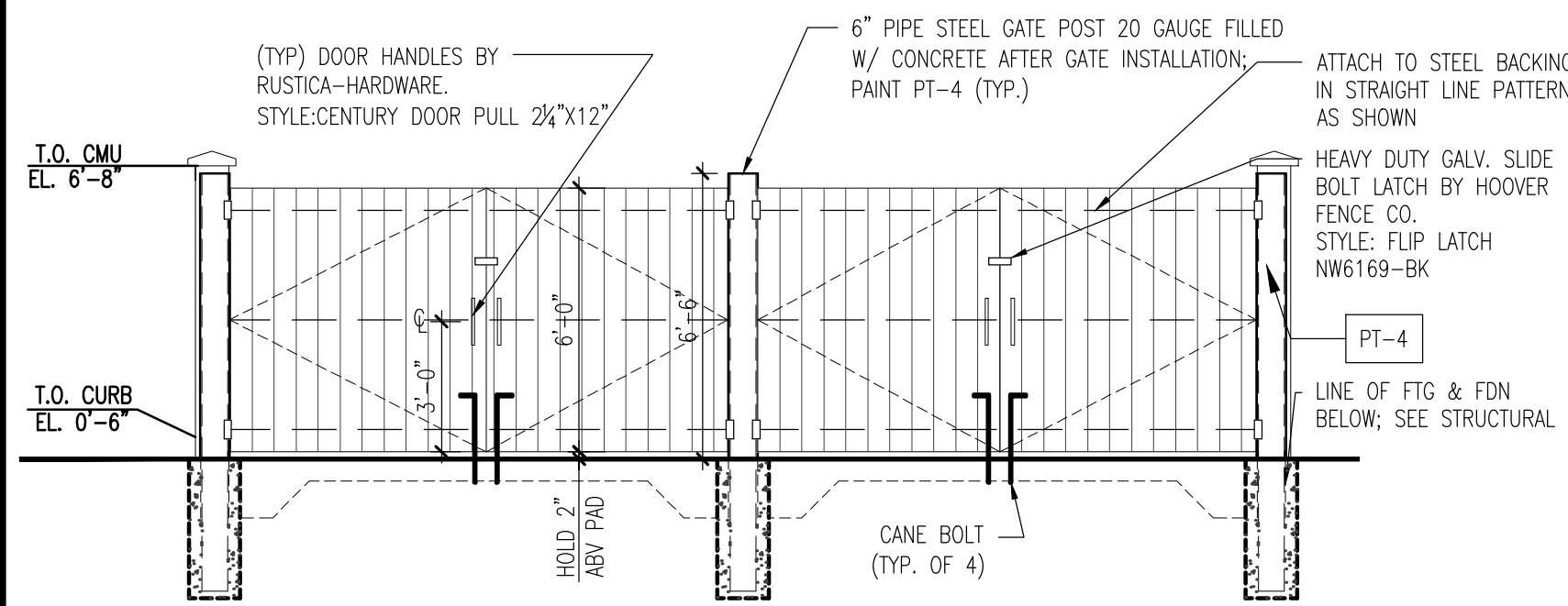
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DRAWN BY:	ENV
DOCUMENT DATE:	11/15/17

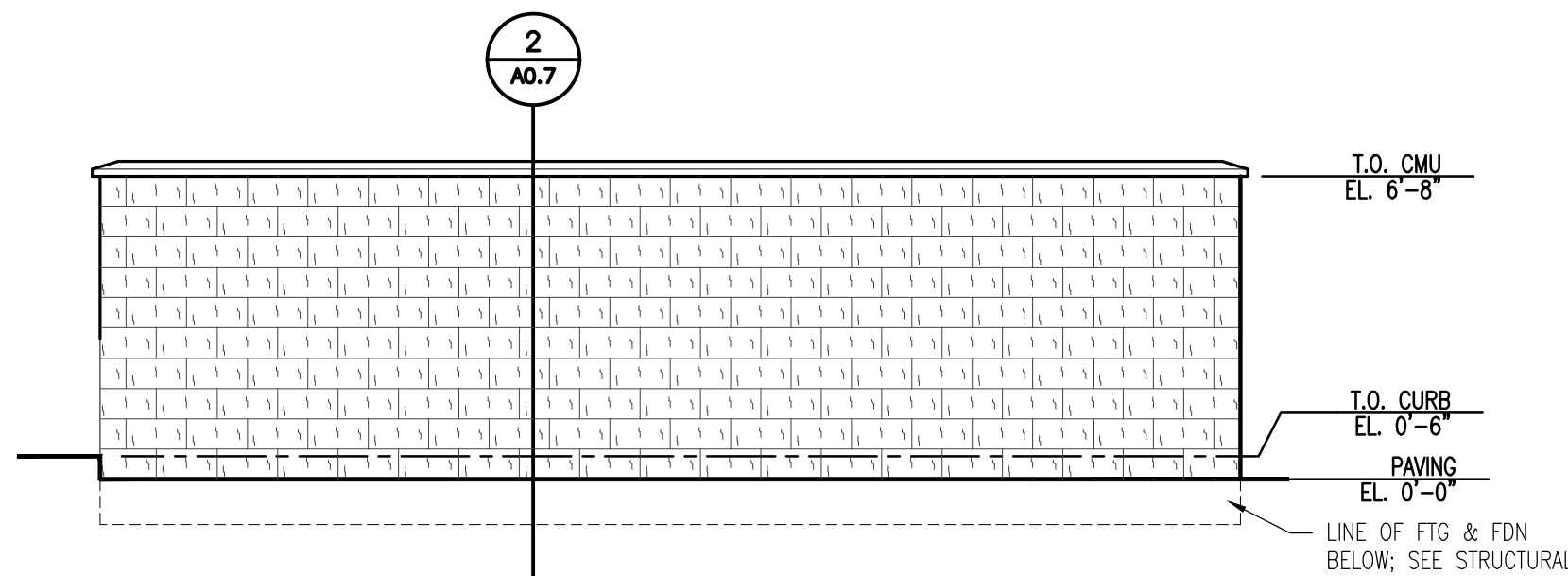
NOT FOR CONSTRUCTION

FINISH SCHEDULE					
ANNO #	DESC.	MANUFACTURER	MODEL	COLOR	NOTES
CMU-1	SPLIT FACE CMU	-	-	TO COMPLEMENT BUILDING	SUBMIT SAMPLES TO ARCHITECT FOR REVIEW
PT-4	PAINT	SHERWIN WILLIAMS	SW # 7035	AESTHETIC WHITE	METALASTIC DTM SEMI-GLOSS (FOR METAL SURFACES)
PT-5	PAINT	SHERWIN WILLIAMS	SW # 7006	EXTRA WHITE	A100 SATIN FINISH (FOR PLASTIC, CMU, &WD SURFACE)
PT-6	PAINT	SHERWIN WILLIAMS	B66R600	SAFETY YELLOW	PRO INDUSTRIAL ACRYLIC COATING

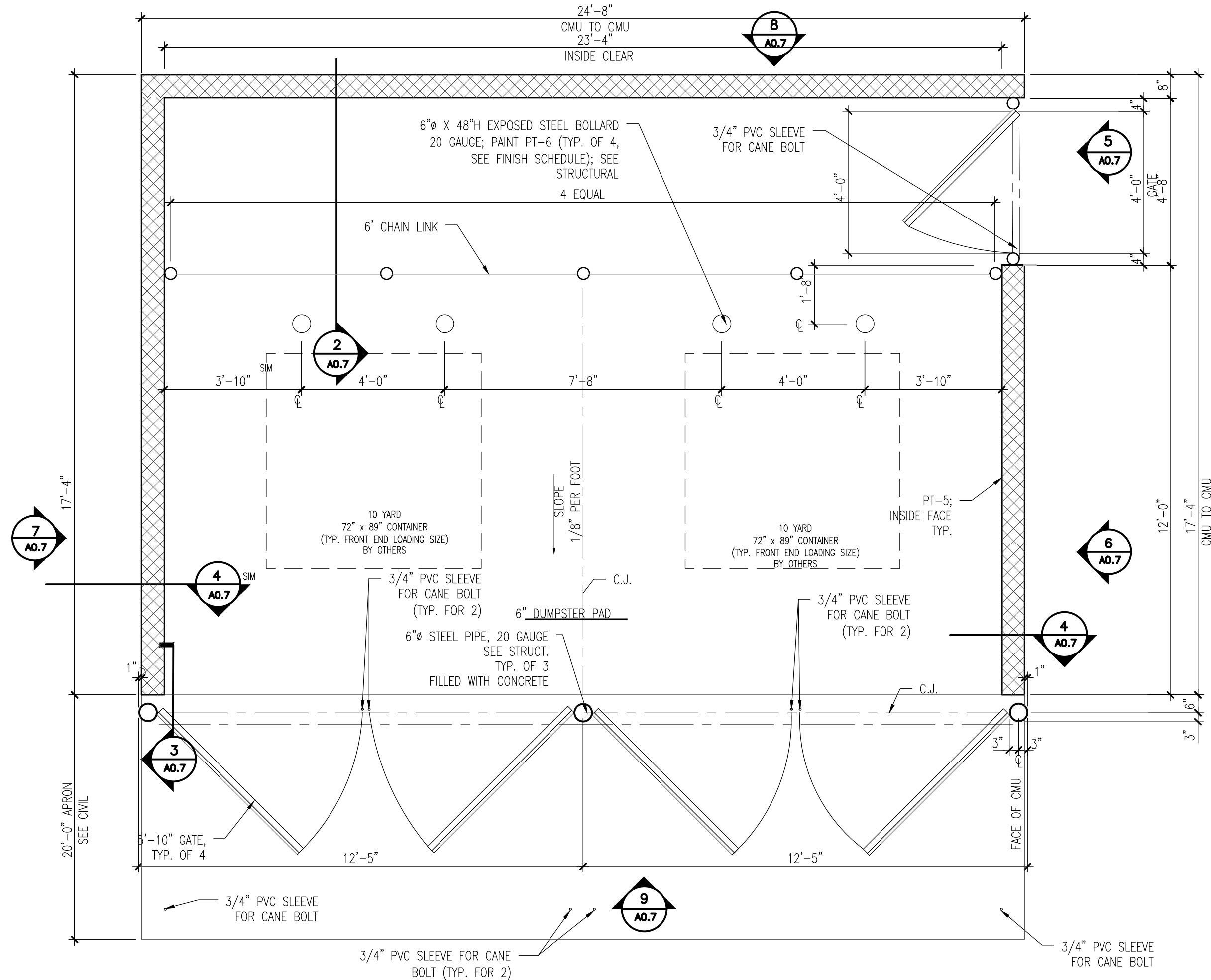
10 FINISH SCHEDULE
SCALE: NTS



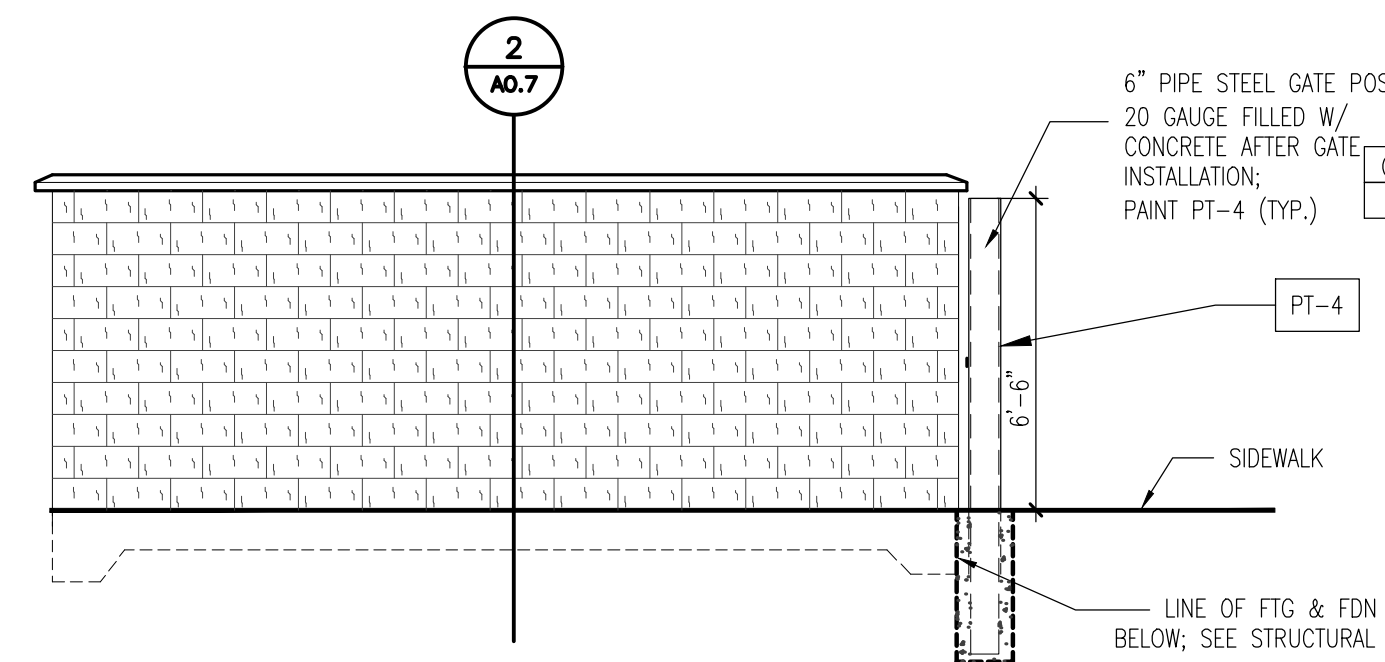
9 FRONT ELEVATION
SCALE: 1/4" = 1'-0"



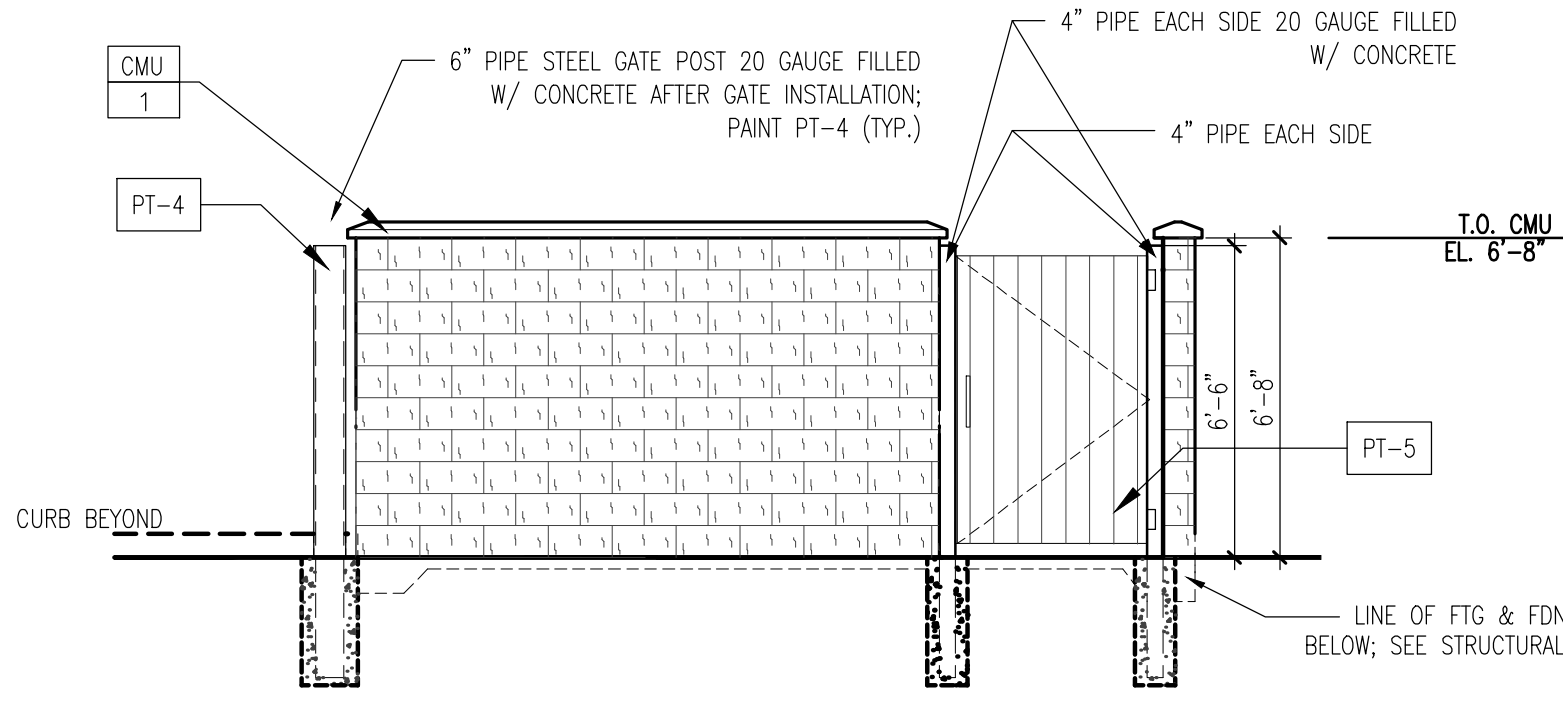
8 REAR ELEVATION
SCALE: 1/4" = 1'-0"



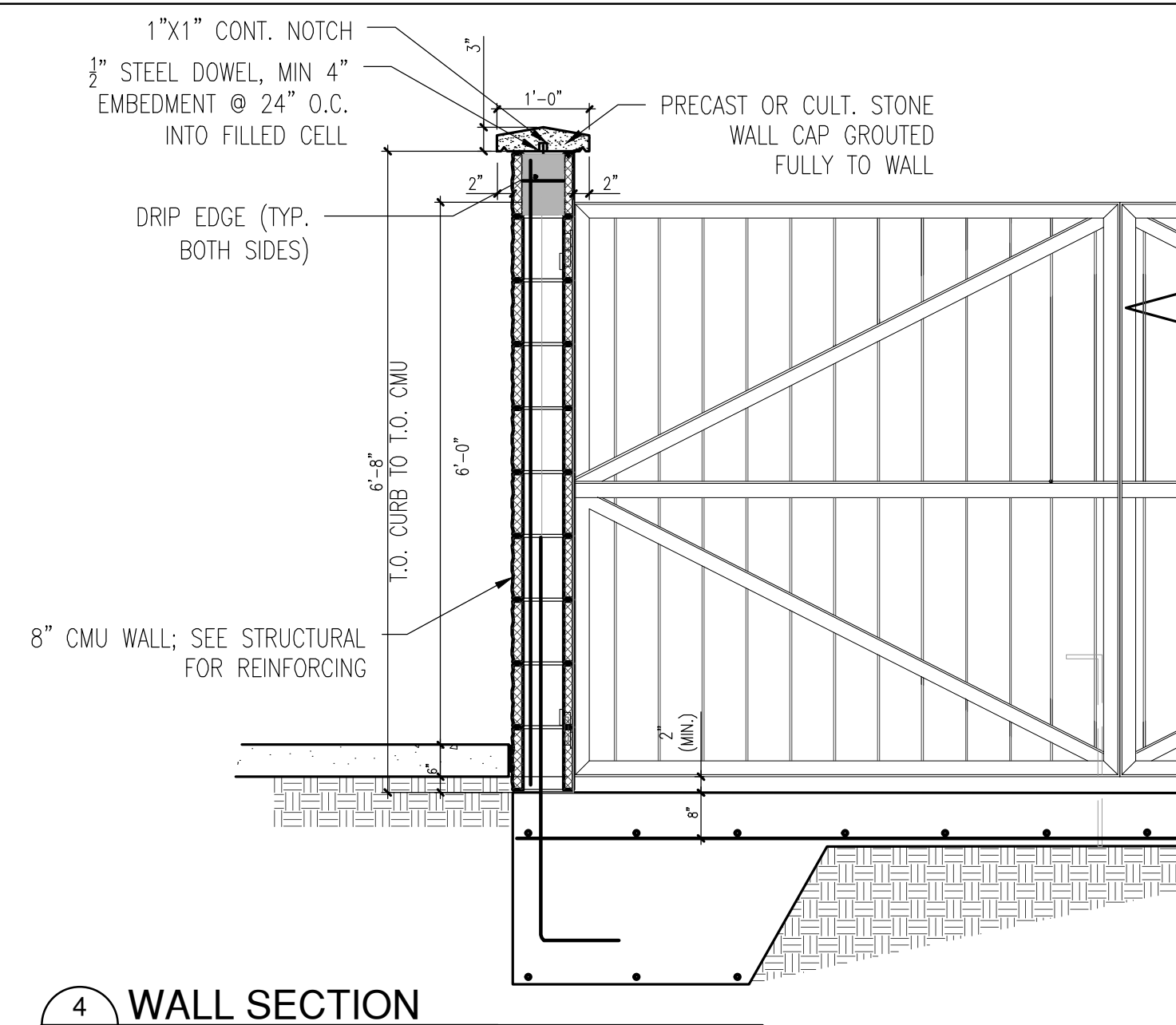
1 ENLARGED FLOOR PLAN @ DUMPSTER ENCLOSURE (REFER TO CIVIL DRAWINGS FOR DUMPSTER ORIENTATION)
SCALE: 3/8" = 1'-0"



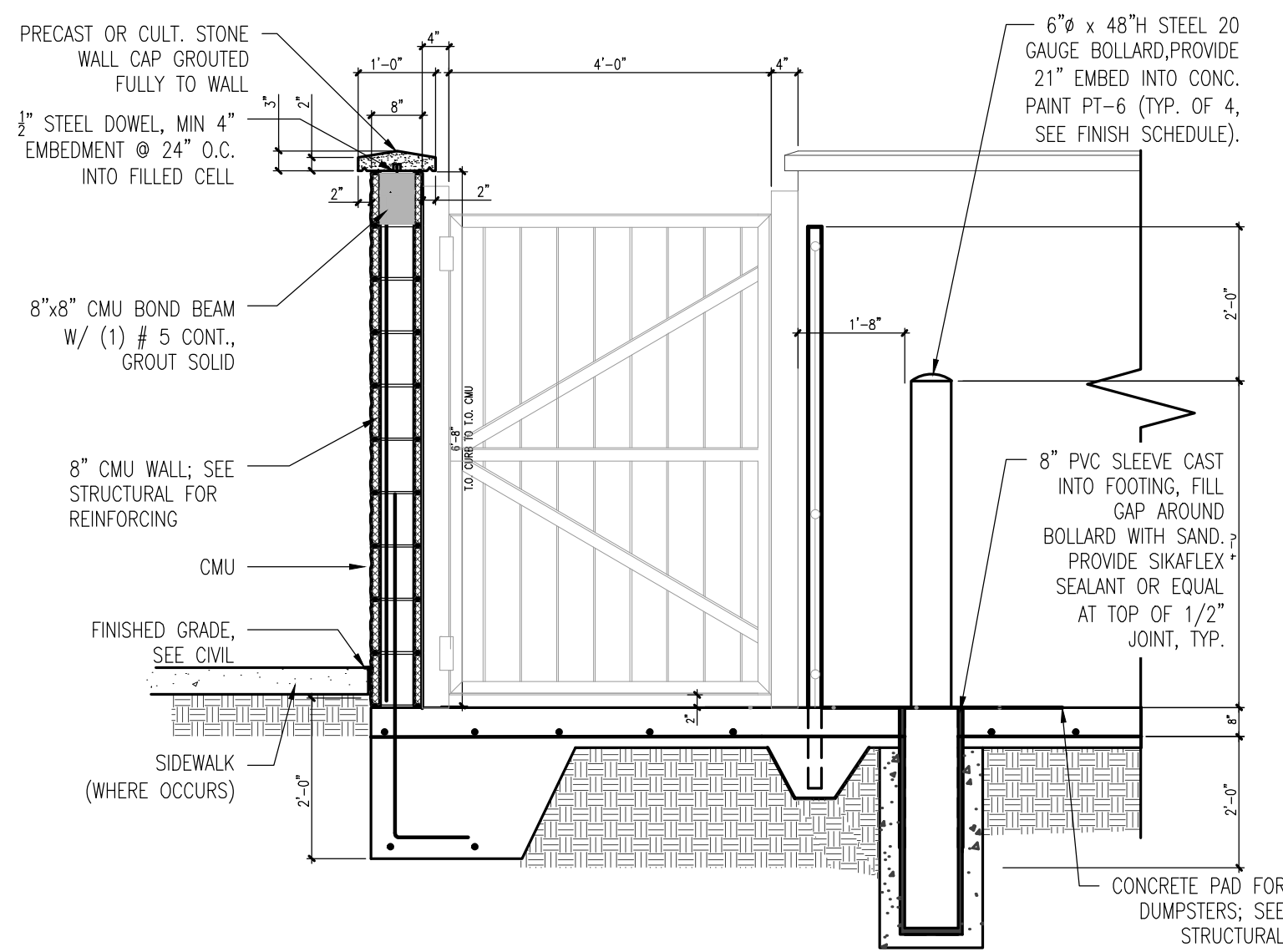
7 LEFT ELEVATION
SCALE: 1/4" = 1'-0"



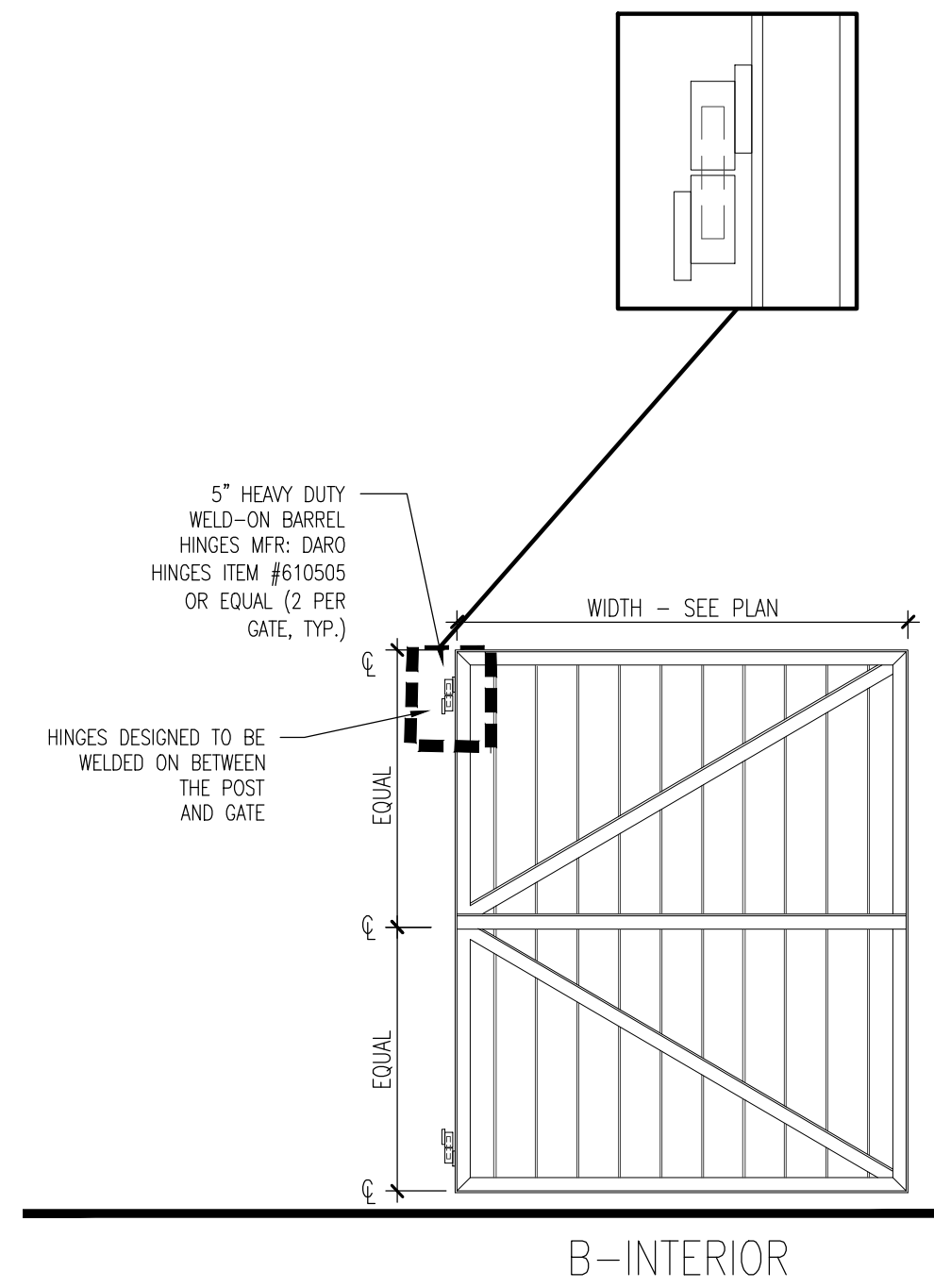
6 RIGHT ELEVATION
SCALE: 1/4" = 1'-0"



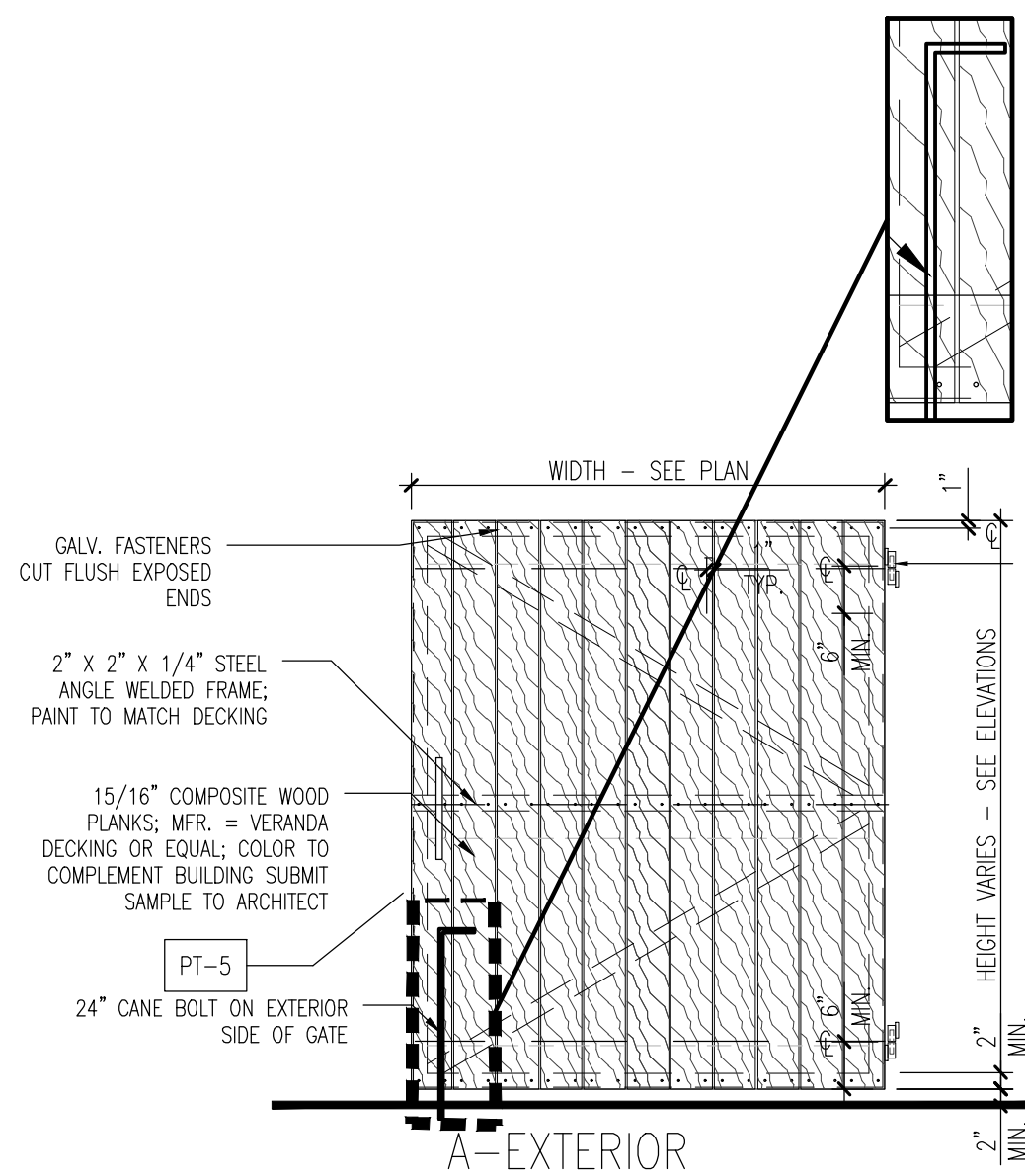
4 WALL SECTION
SCALE: N.T.S.



2 WALL SECTION @ SIDEWALK & CURB
SCALE: 1/2" = 1'-0"

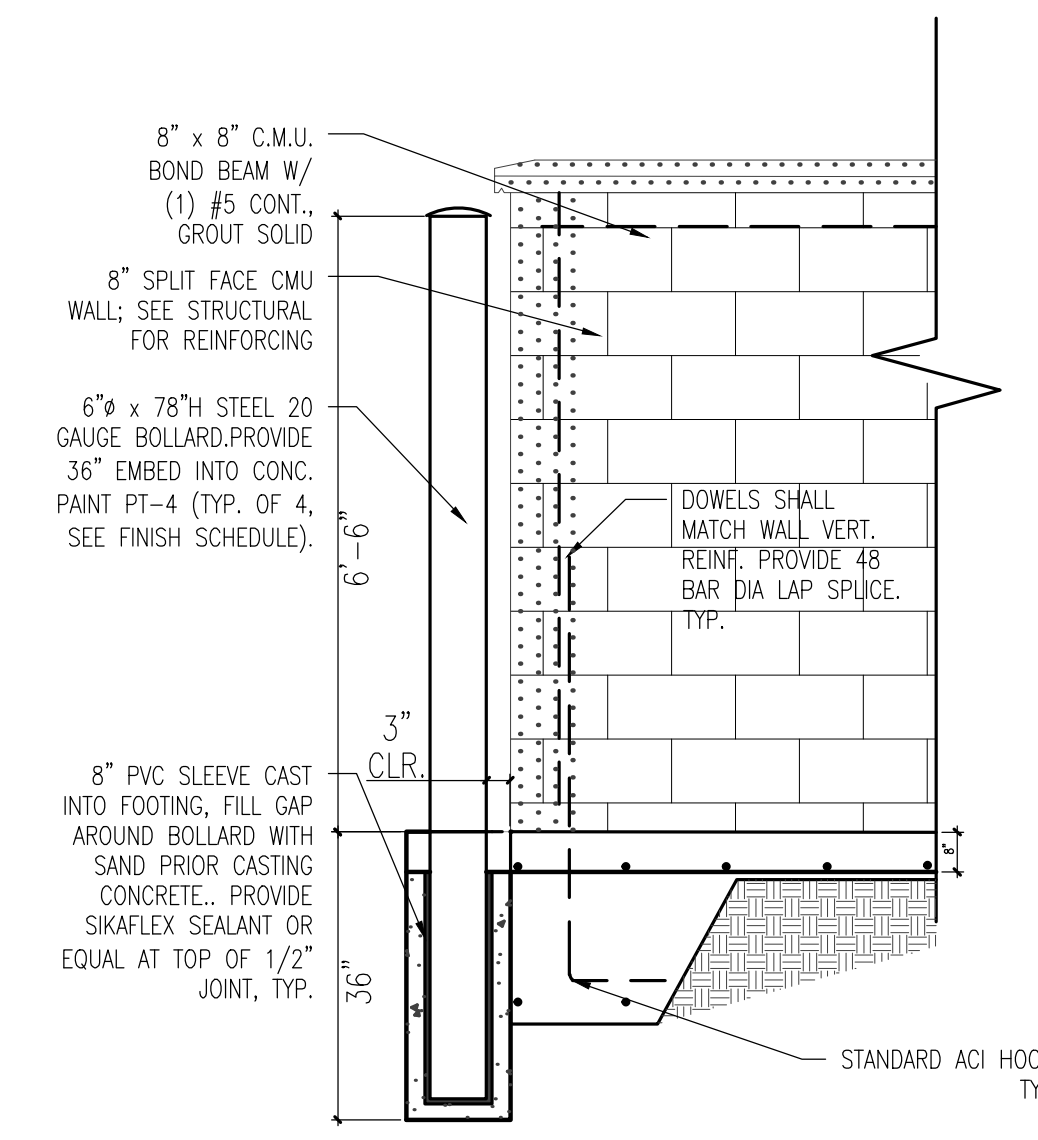


B-INTERIOR



A-EXTERIOR

5 DUMPSTER GATE ELEVATION DETAILS
SCALE: 1/2" = 1'-0"



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









Cumberland

F A R M S

SR84 & 30th
Hollywood City, FL 33020

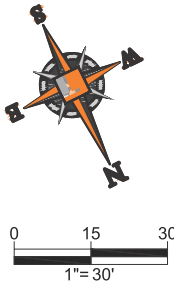
Job Number: 61756

Sales Rep: LJ

Designer: DS

October 31, 2017





Proposed Signage

- E01 Qty (1) Monument Sign (14' tall)
- E02 E03 E04 Qty (3) Exterior Wall Signs
- E05 E06 E07 Qty (3) Canopy Signs
- E08 E10 E12 E14 E15 Qty (5) "Welcome" Directional Signs
- E09 E11 E13 Qty (3) "See You Soon" Directional Signs
- E16 Qty (1) Interior Sign (above checkout)



130 Commerce Road, Boynton Beach FL 33426 | (561) 547-3760
171 Freeman Avenue, Islip NY 11751 | (631) 273-4800
americansigncrafters.com

PROJECT



SR 84 & 30th, Hollywood City, FL 33020

DATE

10.31.17

ACCOUNT EXECUTIVE

LJ

PROJECT MANAGER

CD

DESIGNER

DS

REVISIONS

- 6.30.17 RKN - Adjusted placement of all signs, updated qties & mfg methods
- 7.27.17 HY - Revised plan to include key
- 8.15.17 RKN - Added monument sign
- 10.31.17 DS - Revised sign details

Approval

- ☐ Approved
- ☐ Approved as Noted
- ☐ Revise & Resubmit

Approved: _____
Date: _____

- ALL ELECTRICAL COMPONENTS ARE TO BE U.L. LISTED AND APPROVED AS PER NEC 5 2011
- ALL TRANSFORMERS GROUND FAULT PROTECTED & COMPLY WITH NEC 600-23
- ALL SECONDARY WIRING INSIDE LETTER IS TO BE HIGH TENSION GTO AS PER NEC 600-31
- ALL PRIMARY WIRING TO BE #12 THWN AS PER NEC 60-5
- GROUNDING AND BONDING AS PER NEC 250
- INSTALLATION WILL COMPLY WITH ALL OF THE REQUIREMENTS OF NEC 600 & FBC 505.2.4 SIGNS WILL BE CONTROLLED BY A PHOTOCELL OR ASTRONOMICAL TIME CLOCK.



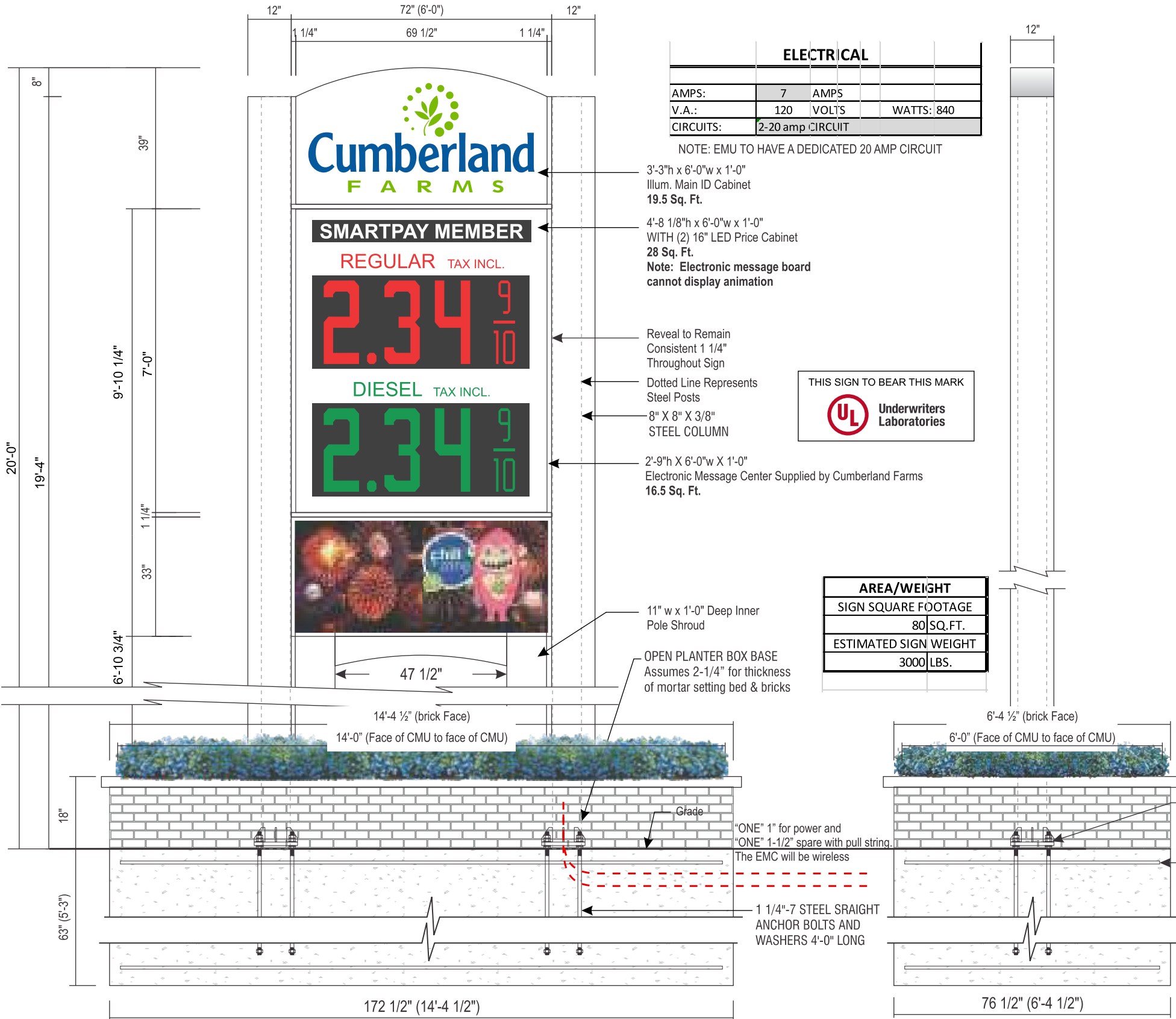
Job #

61756

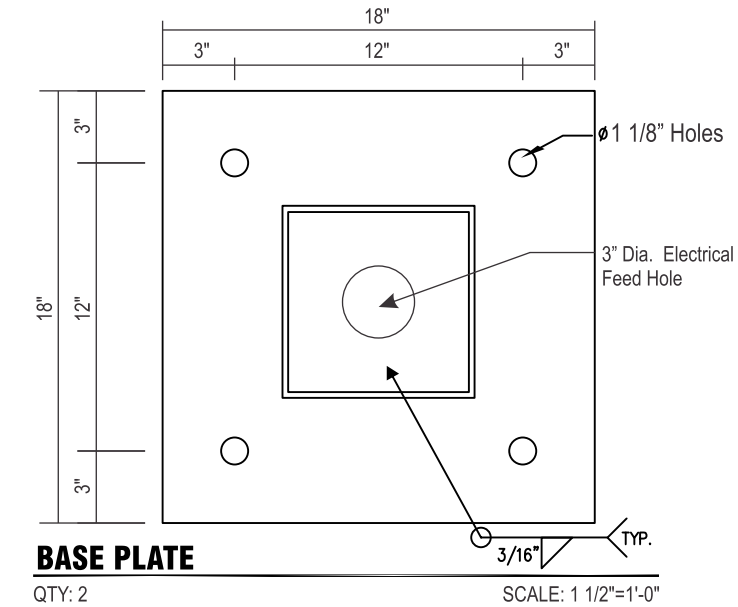
Page

2

OF 11



- STRUCTURAL STEEL SPECIFICATIONS:**
- ☐ **SUPPORT MEMBERS** SHALL BE FREE FROM DEFECTS. TUBE SHALL MEET ASTM A500 GRADE B, WITH A MINIMUM YIELD STRENGTH OF 46000 PSI. PIPE SHALL MEET ASTM A53 GRADE B, WITH A MINIMUM YIELD STRENGTH OF 35000 PSI. PLATE AND ANGLE SHALL MEET ASTM A36.
 - ☐ **STRUCTURAL BOLTS** SHALL BE ZINC COATED A325 UNLESS OTHERWISE NOTED.
 - ☐ **WELDS** SHALL BE MADE WITH E70XX ELECTRODES BY PERSONS QUALIFIED IN ACCORDANCE WITH AWS STANDARDS WITHIN THE PAST TWO YEARS.
 - ☐ **REINFORCING BARS** SHALL CONFORM TO ASTM A615 GRADE 60 WITH DEFORMATIONS IN ACCORDANCE WITH ASTM A-305. WELDING OF REINFORCING BARS IS PROHIBITED.
 - ☐ **ANCHOR BOLTS** SHALL BE ASTM F1554-07 GRADE 55 ROUND STOCK. EXPOSED SURFACES SHALL BE GALVANIZED OR HAVE BITUMINOUS COATING TO PREVENT CORROSION.



THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF SIGN.

SIGN BASED ON DESIGN LOADS: 2014 FLORIDA BUILDING CODE, SECTION 16 WIND LOAD. RISK CATEGORY II. EXPOSURE C. ASCE 7-10, 150 mph. SOIL RESISTANCE 151 psf/ft

FOUNDATION NOTE:
3000 PSI CONCRETE @ 28 DAYS
2000 PSF SOIL BEARING
150 PSF/FT SOIL LATERAL BEARING
UNDISTURBED SOIL

CUSTOM D.F. ILLUMINATED PYLON - (64 Sq. Ft.)
SCALE: 3/8"=1'-0"
Pylon Layout & Dimensions to be Verified Prior to Manufacturing

AMERICAN / INTERSTATE SIGNCRAFTERS
130 Commerce Road, Boynton Beach FL 33426 | (561) 547-3760
171 Freeman Avenue, Islip NY 11751 | (631) 273-4800
americansigncrafters.com

PROJECT
Cumberland FARMS
SR 84 & 30th, Hollywood City, FL 33020

DATE 10.31.17
ACCOUNT EXECUTIVE LJ
PROJECT MANAGER CD
DESIGNER DS

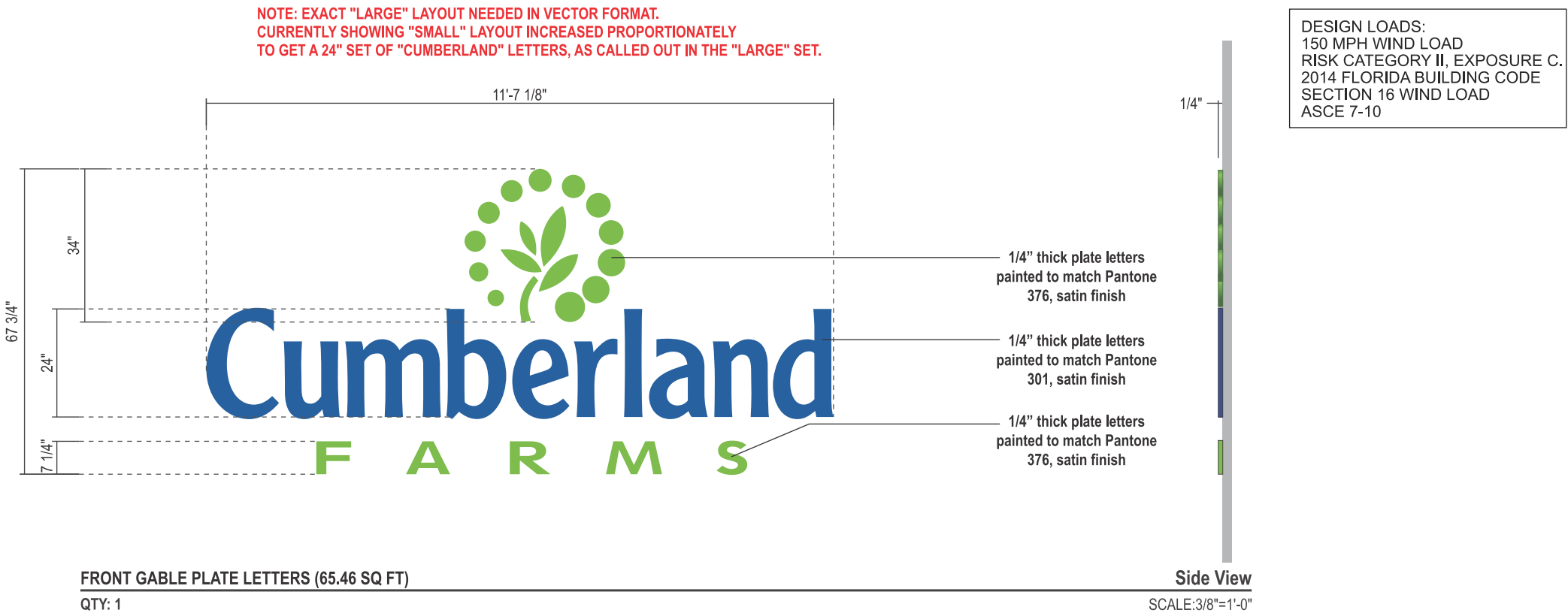
REVISIONS
6.30.17 RKN - Adjusted placement of all signs, updated qties & mfg methods
7.27.17 HY - Revised plan to include key
8.15.17 RKN - Added monument sign
10.31.17 DS - Revised sign details

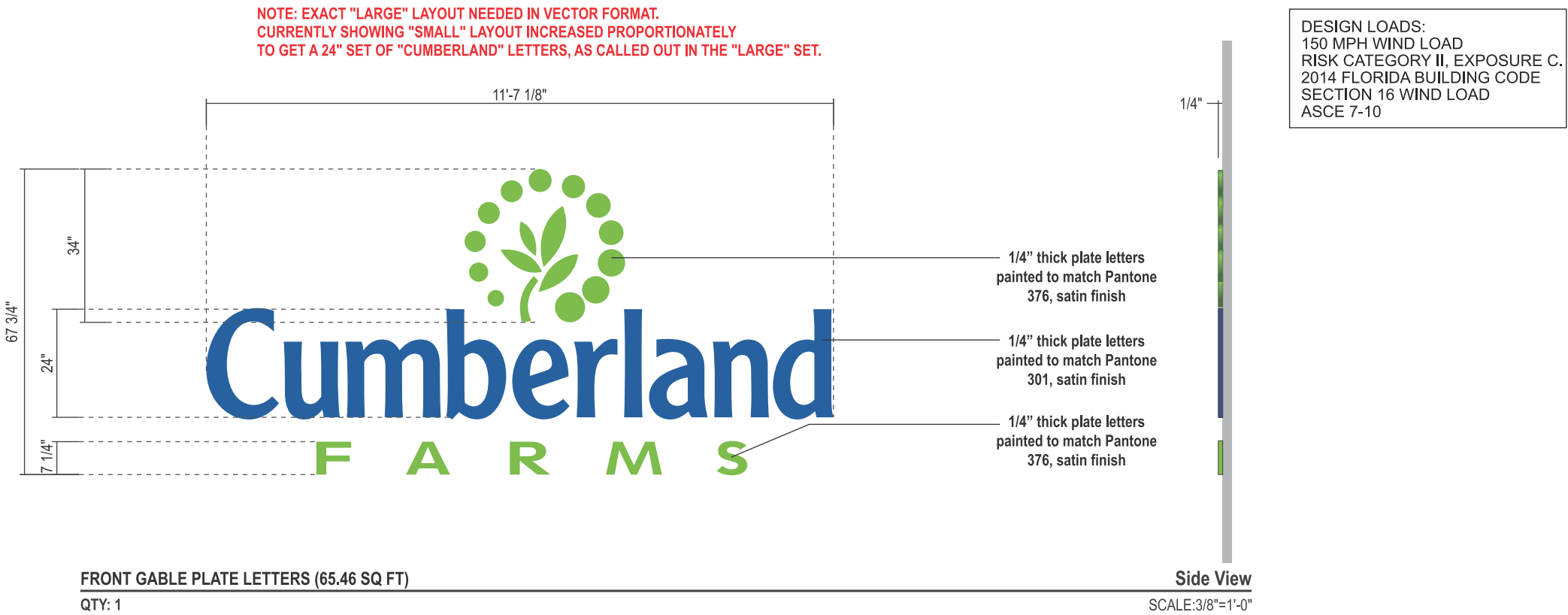
Approval
☐ Approved
☐ Approved as Noted
☐ Revise & Resubmit
Approved: _____
Date: _____

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• ALL TRANSFORMERS GROUND FAULT PROTECTED & COMPLY WITH NEC 600-23
• ALL SECONDARY WIRING INSIDE LETTER IS TO BE HIGH TENSION GTO AS PER NEC-600-31
• ALL PRIMARY WIRING TO BE #12 THWN AS PER NEC-60-5
• GROUNDING AND BONDING AS PER NEC 250
• INSTALLATION WILL COMPLY WITH ALL OF THE REQUIREMENTS OF NEC 600 & FBC 505.2.4
SIGNS WILL BE CONTROLLED BY A PHOTOCELL OR ASTRONOMICAL TIME CLOCK.



Job # 61756
Page 3 **OF 11**





130 Commerce Road, Boynton Beach FL 33426 | (561) 547-3760
171 Freeman Avenue, Islip NY 11751 | (631) 273-4800
americansigncrafters.com

PROJECT



SR 84 & 30th, Hollywood City, FL 33020

DATE

10.31.17

ACCOUNT
EXECUTIVE

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REVISIONS

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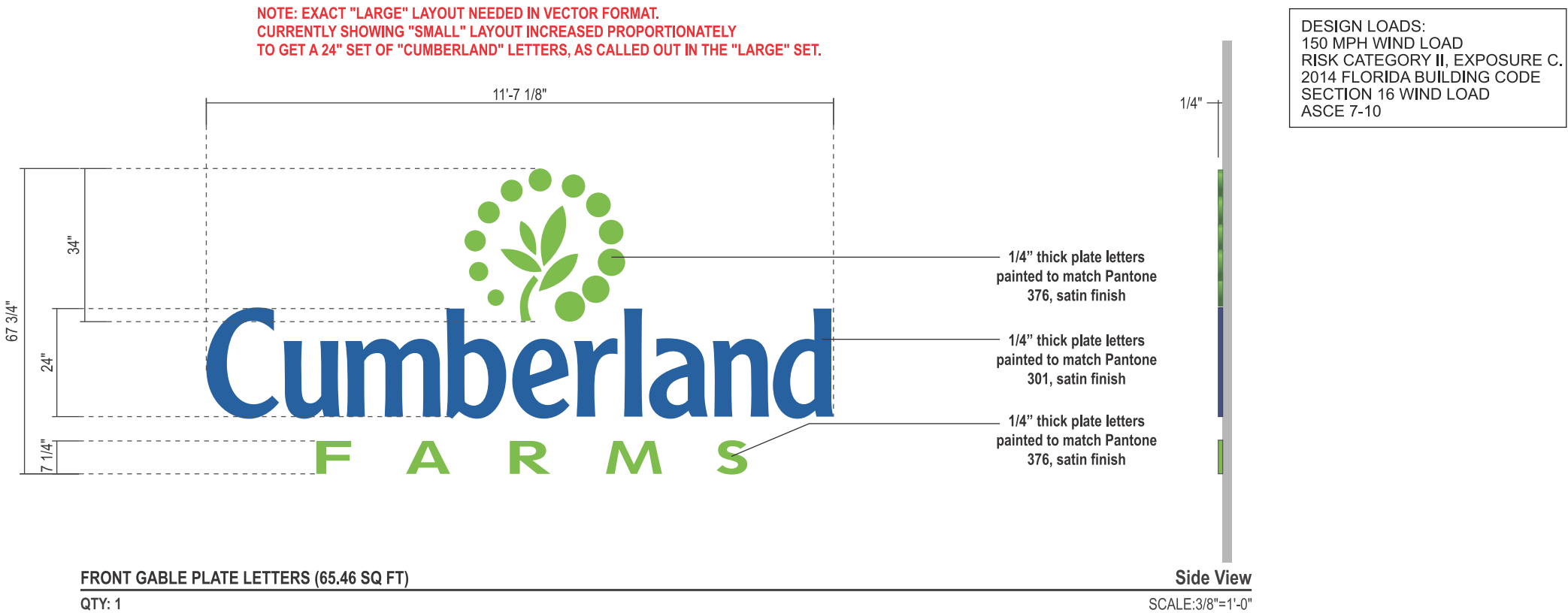
Job #

61756

Page

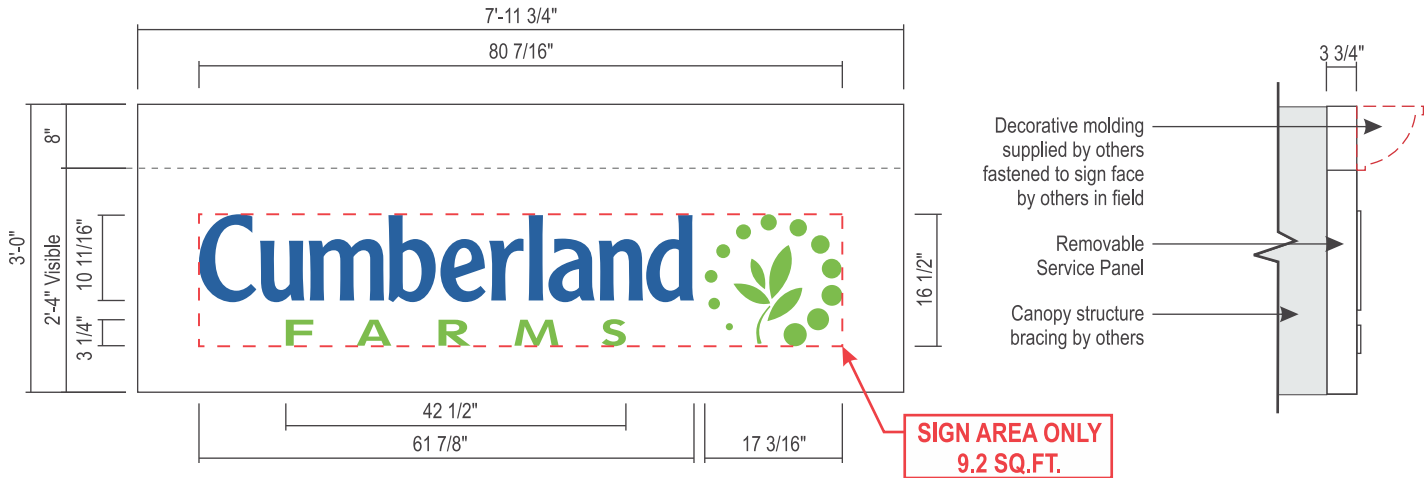
5

OF 11



E-05

Canopy Sign



ILLUMINATED CANOPY SIGN - RIGHT

- Router Cut 1/8" **Alcoa-Shell White** Aluminum Face
- 3/4" Clear Acrylic Push Thru (1/2" ± *Exposed*) "Cumberland Farms" Text & Logo Attached with stud welded fastening to Rear of Aluminum Face
- Main Text ("Cumberland")** to be Laminated w/ 3M™ Scotchcal™ Translucent Graphic Film **3630-97 Bristol Blue**
- Logo & Sub Text ("Farms")** to be Laminated w/ 3M™ Scotchcal™ Translucent Graphic Film **3630-106 Brilliant Green**
- Internal White Led Illumination mounted to Slide Out "Service Tray"
- 60 Watt Power Supply Mounted to "Service Tray" Near Access Door
- Service Switch & (4) Drain Holes
- Sign to Mount To Canopy Fascia using non-corrosive hardware
- All existing holes & seams to be caulked and sealed
- Sign to be UL labeled

SIGN BASED ON DESIGN LOADS:
2014 FLORIDA BUILDING CODE,
SECTION 16 WIND LOAD.
RISK CATEGORY II. EXPOSURE C.
ASCE 7-10, 150 mph.

Side View

CLOSE UP DETAIL

SCALE: 1/2"=1'-0"
60'-0"

Removable service panel on left end of sign.
Cabinet held in place with (6) countersunk screws.
Access to slide out LED tray and power supplies.

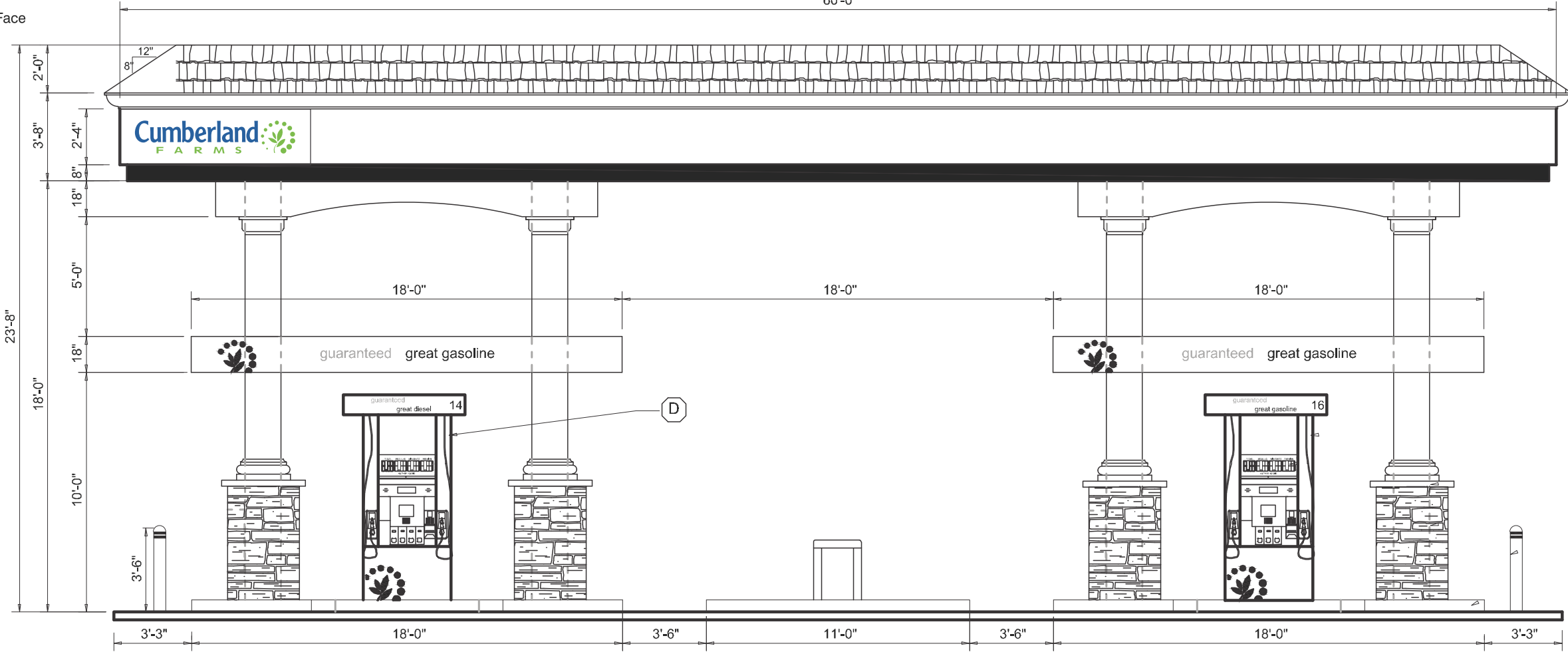
Side View

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

SECTION			
ANCHOR TYPE	Ø1/2" SLEEVE ANCHOR (Ø3/8" BOLT), 2" MINIMUM EMBEDMENT	Ø3/8" EXPANSION ANCHOR, 2 1/2" MINIMUM EMBEDMENT	Ø3/8" THREADED ROD w/ ALUMINUM OR PVC COMPRESSION SLEEVE
WALL TYPE	CMU, BRICK	PRE-CAST CONCRETE, CONCRETE	EIFS WALL w/ FOAM INSULATION

MOUNTING OPTIONS

SCALE: N.T.S.



CANOPY WEST SIDE ELEVATION

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



130 Commerce Road, Boynton Beach FL 33426 | (561) 547-3760
171 Freeman Avenue, Islip NY 11751 | (631) 273-4800
americansigncrafters.com

PROJECT



SR 84 & 30th, Hollywood City, FL 33020

DATE

10.31.17

ACCOUNT
EXECUTIVE

LJ

PROJECT
MANAGER

CD

DESIGNER

DS

REVISIONS

6.30.17 RKN - Adjusted placement of all signs, updated qties & mfg methods
7.27.17 HY - Revised plan to include key
8.15.17 RKN - Added monument sign
10.31.17 DS - Revised sign details

Approval

- ☐ Approved
- ☐ Approved as Noted
- ☐ Revise & Resubmit

Approved:

Date:

• ALL ELECTRICAL COMPONENTS ARE TO BE U.L. LISTED AND APPROVED AS PER NEC 5 2011
• ALL TRANSFORMERS GROUND FAULT PROTECTED & COMPLY WITH NEC 600-23
• ALL SECONDARY WIRING INSIDE LETTER IS TO BE HIGH TENSION GTO AS PER NEC 600-31
• ALL PRIMARY WIRING TO BE #12 THWN AS PER NEC 600-5
• GROUNDING AND BONDING AS PER NEC 250
• INSTALLATION WILL COMPLY WITH ALL OF THE REQUIREMENTS OF NEC 600 & FBC 505.2.4
SIGNS WILL BE CONTROLLED BY A PHOTOCELL OR ASTRONOMICAL TIME CLOCK.



Job #

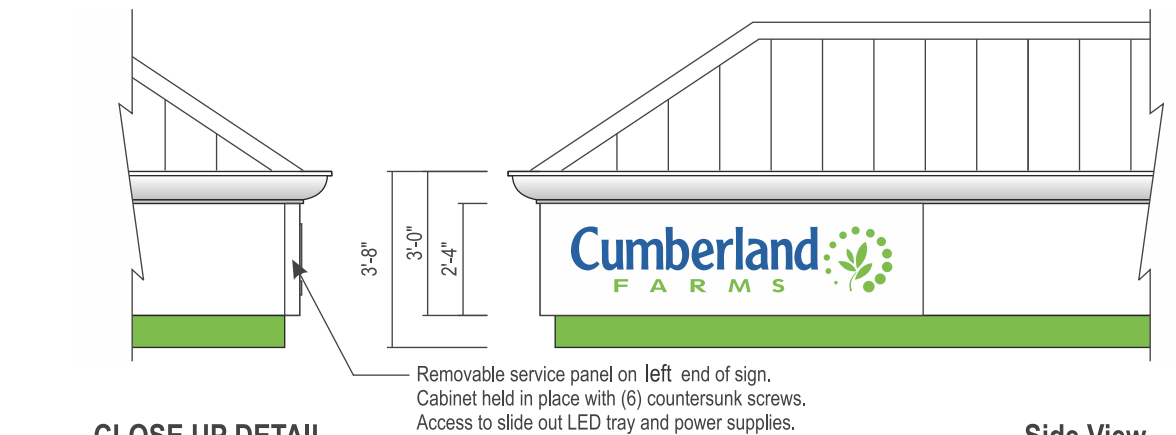
61756

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OF 11

Canopy Sign



Side View

SIGN BASED ON DESIGN LOADS:
2014 FLORIDA BUILDING CODE,
SECTION 16 WIND LOAD.
RISK CATEGORY II. EXPOSURE C.
ASCE 7-10, 150 mph.

MOUNTING OPTIONS

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



CANOPY NORTH SIDE ELEVATION

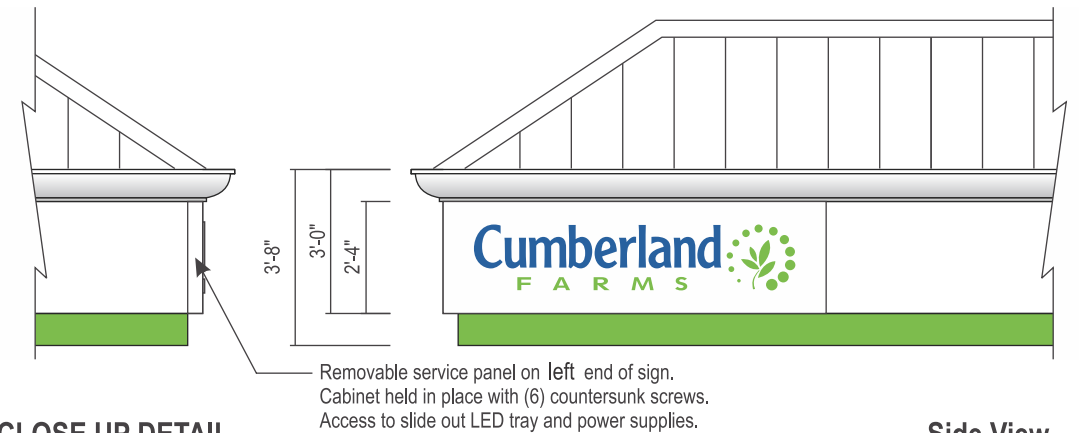


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61756 - Cumberland Farms Hollywood 10-31-17

Z:\[RENDERINGS]\C\Cumberland Farms\61753- Hollywood

Canopy Sign

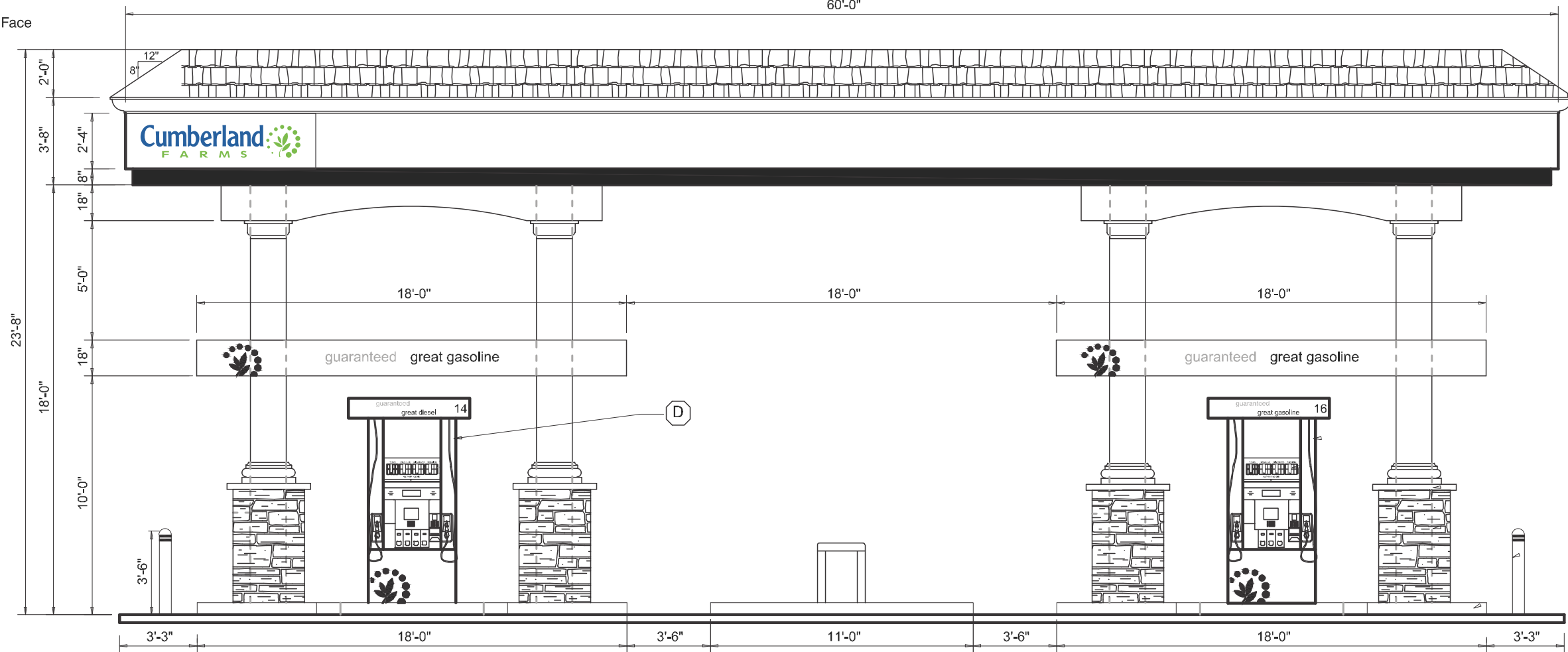


Side View

SIGN BASED ON DESIGN LOADS:
2014 FLORIDA BUILDING CODE,
SECTION 16 WIND LOAD.
RISK CATEGORY II. EXPOSURE C.
ASCE 7-10, 150 mph.

MOUNTING OPTIONS

SCALE: N.T.S.



CANOPY EAST SIDE ELEVATION

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



SR 84 & 30th, Hollywood City, FL 33020

6.30.17 RKN - Adjusted placement of all signs, updated qty's & mfg methods
7.27.17 HY - Revised plan to include key
8.15.17 RKN - Added monument sign
10.31.17 DS - Revised sign details

- ☐ Approved
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- ☐ Revise & Resubmit

Approved: _____
Date: _____

- ALL ELECTRICAL COMPONENTS ARE TO BE U.L. LISTED AND APPROVED AS PER NEC 500.2
- ALL TRANSFORMERS GROUND FAULT PROTECTED & COMPLY WITH NEC-600-23
- ALL SECONDARY WIRING INSIDE LETTER IS TO BE HIGH TENSION TGO AS PER NEC-600-31
- ALL PRIMARY WIRING TO BE #12 THWN AS PER NEC-60-5
- GROUNDING AND BONDING AS PER NEC 250
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DESIGNS WILL BE CONTROLLED BY A PHOTOCELL OR ASTRONOMICAL TIME CLOCK.



The logo consists of a circle containing the letters 'UL' in a stylized font, with the word 'LISTED' in a bold, sans-serif font directly below the circle.



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OF 11

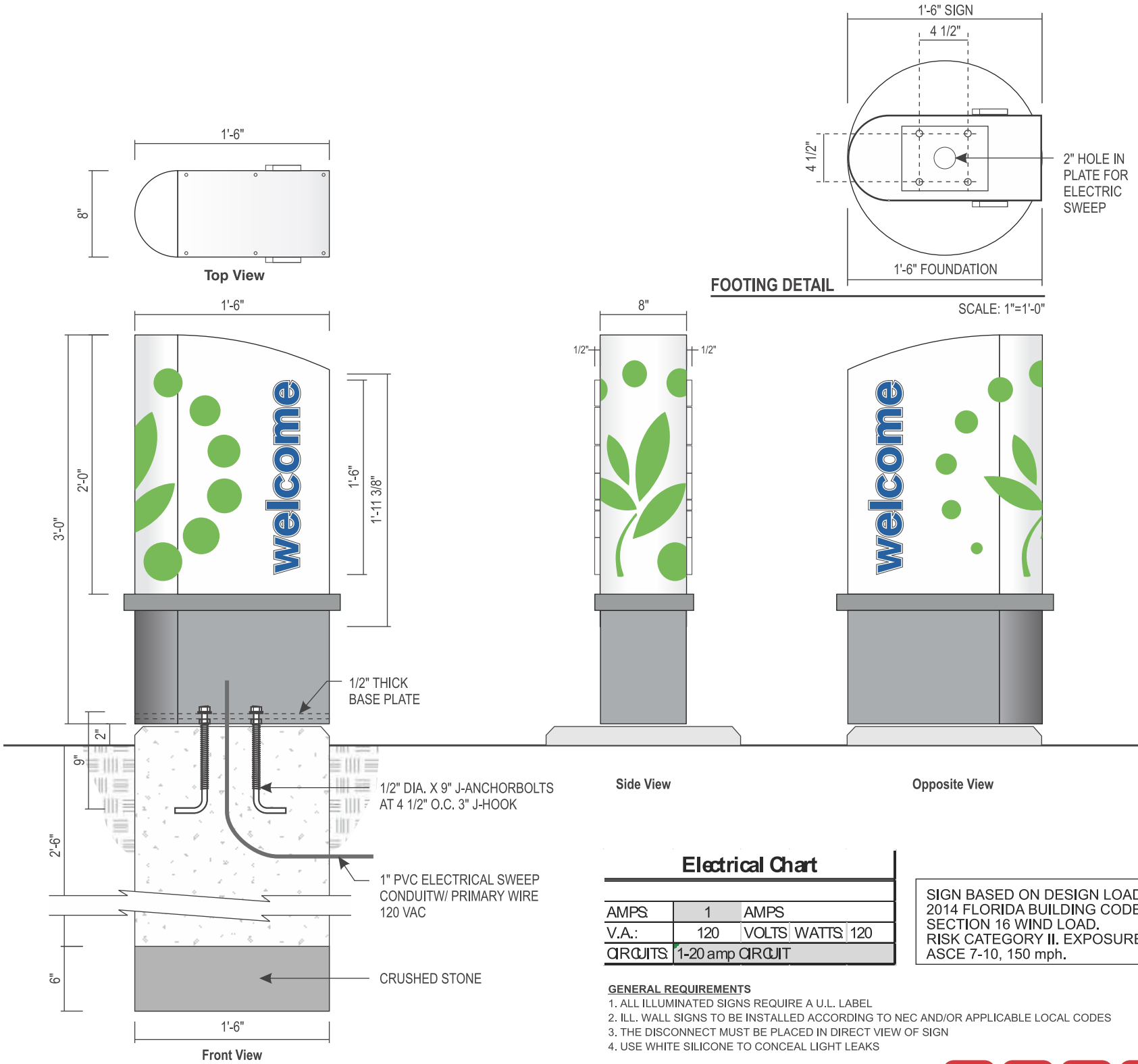
THIS DRAWING IS PROPERTY OF AND FOR EXCLUSIVE USE BY AMERICAN / INTERSTATE SIGNCRAFTERS. IT IS SUBMITTED FOR YOUR USE, AND IT IS NOT TO BE COPIED, REPRODUCED OR EXHIBITED TO ANYONE OUTSIDE YOUR ORGANIZATION WITHOUT PERMISSION FROM AMERICAN / INTERSTATE SIGNCRAFTERS.

61756 - Cumberland Farms Hollywood 10-31-17

Z:\[RENDERINGS]\C\Cumberland Farms\61753- Hollywood

E-08-15

Directionals

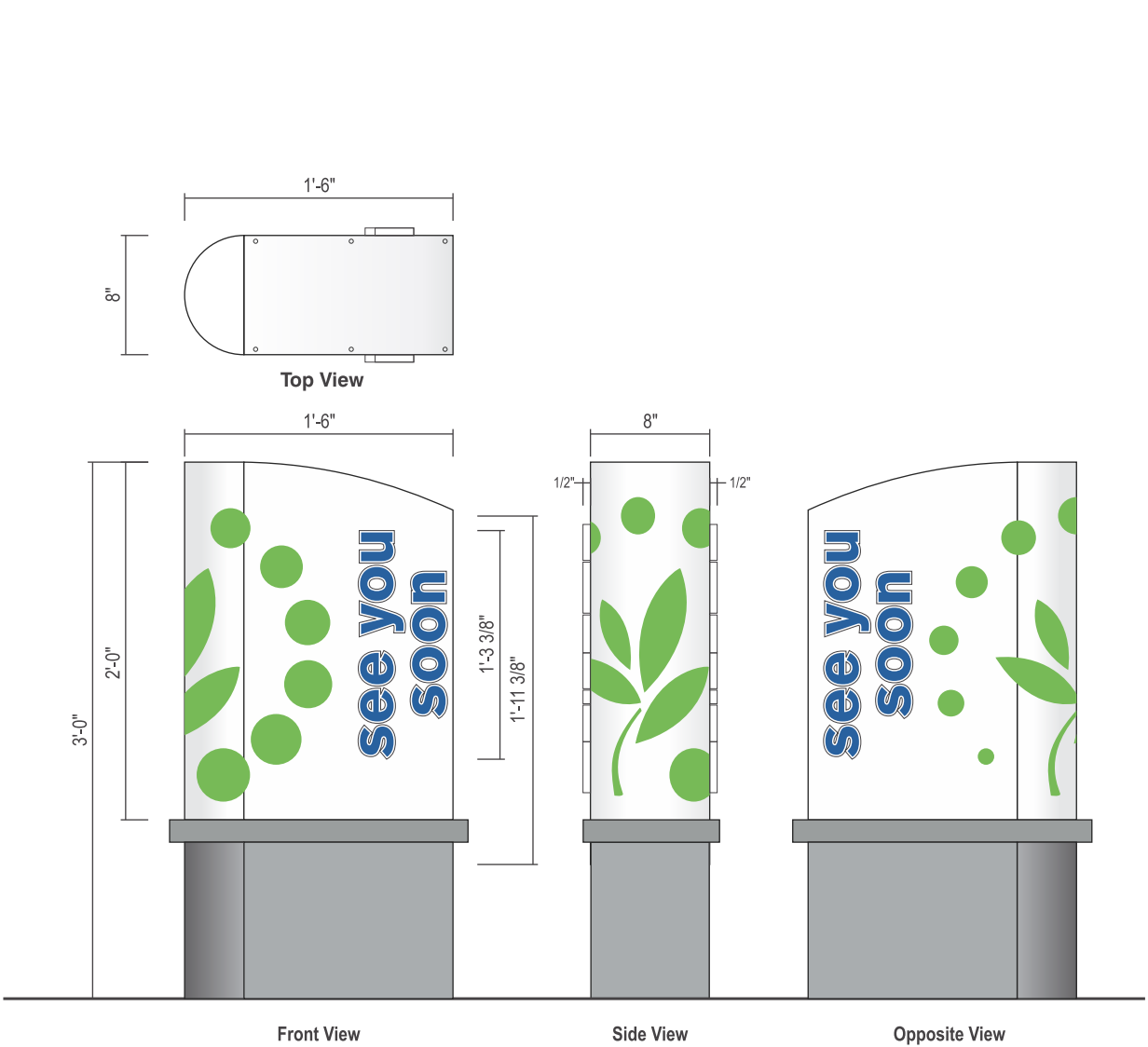


D.F. ILLUMINATED "WELCOME" DIRECTIONAL - (3.0 SQ. FT. Sign Area)

QTY: 2

Sign Locations: **E08** **E10** **E12** **E14** **E15**

SCALE: 1"=1'-0"



D.F. ILLUMINATED "SEE YOU SOON" DIRECTIONAL - (3.0 SQ. FT. Sign Area)

QTY: 2

Sign Locations: **E09** **E11** **E13**

SCALE: 1"=1'-0"

GENERAL NOTES

- 8" Deep aluminum fabricated sign cabinet with single radius end.
- Painted Alcoa shell white and medium grey.
- Removable service panel at top w/countersunk screws.
- .125" routed sign face w/1/2" white acrylic push-thru text.
- Text to have first surface applied 3M™ Scotchcal™ Translucent Graphic Film 3630-97 Bristol Blue w/1/8" inline.
- Aluminum face to have 3M™ Controltac™ Opaque Graphic Film 180C-196 Apple Green (Pending approval) logo first surface applied, and to wrap around radius.
- Internally illuminated with Samsung GOQ White LED's. (Text only).
- Internal 1/4" aluminum mounting plate across bottom of base cover.
- Sign to be UL labeled.



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171 Freeman Avenue, Islip NY 11751 | (631) 273-4800
americansigncrafters.com

PROJECT



SR 84 & 30th, Hollywood City, FL 33020

DATE

10.31.17

ACCOUNT
EXECUTIVE

LJ

PROJECT
MANAGER

CD

DESIGNER

DS

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6.30.17 RKN - Adjusted placement of all signs, updated qties & mfg methods
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Job #

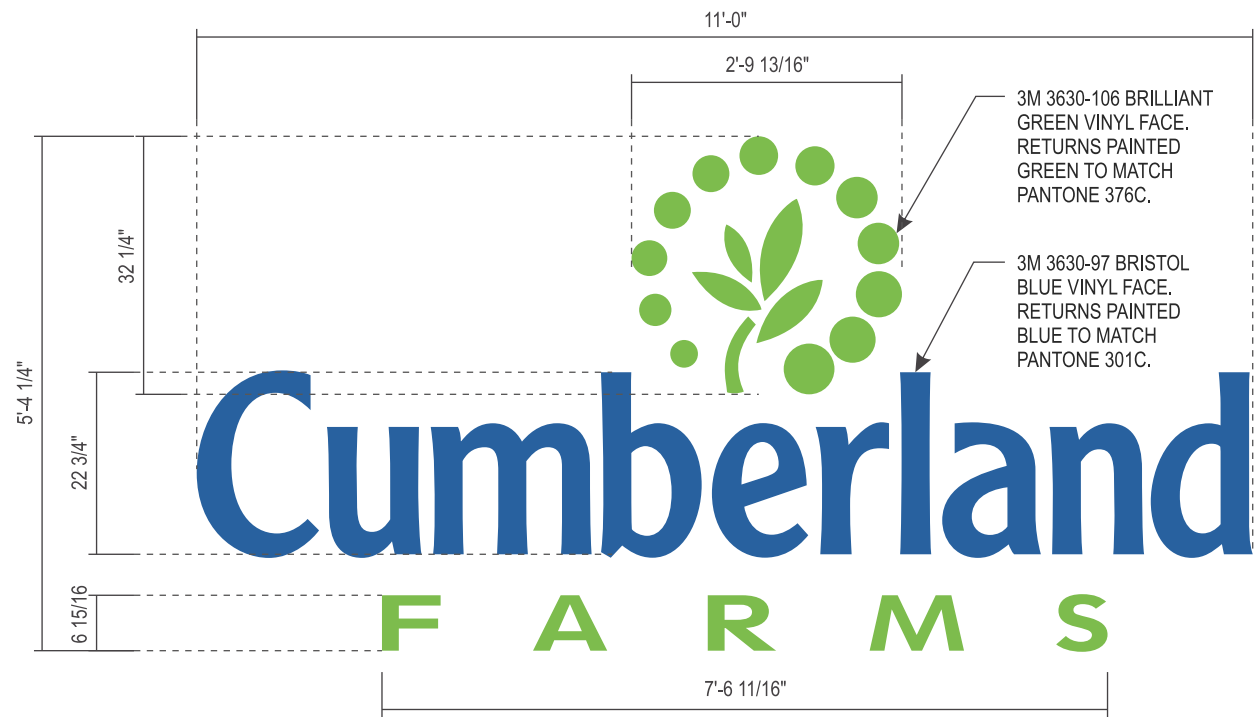
61756

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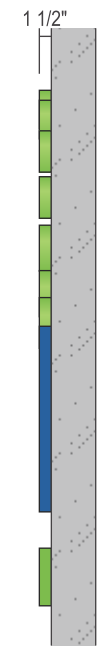
10

OF 11

E-16
Interior Sign

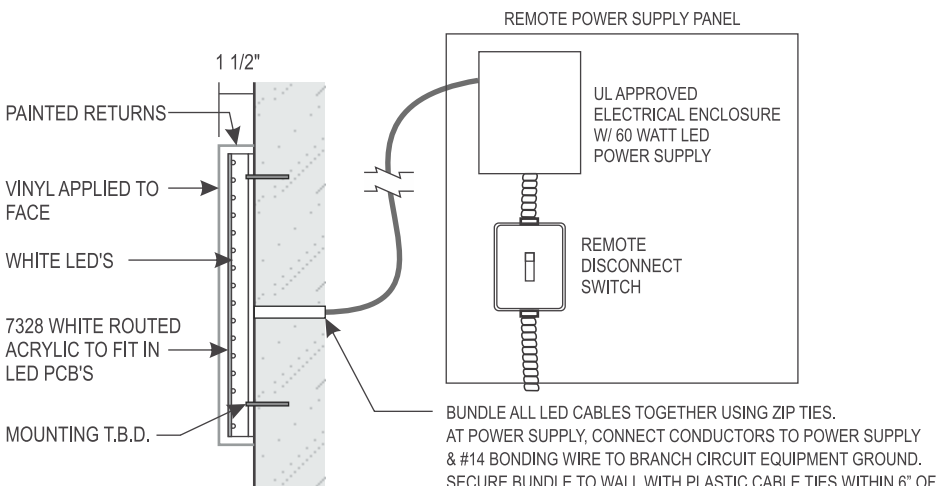


INTERIOR FACE LIT LO-PRO ILLUMINATED LETTERS



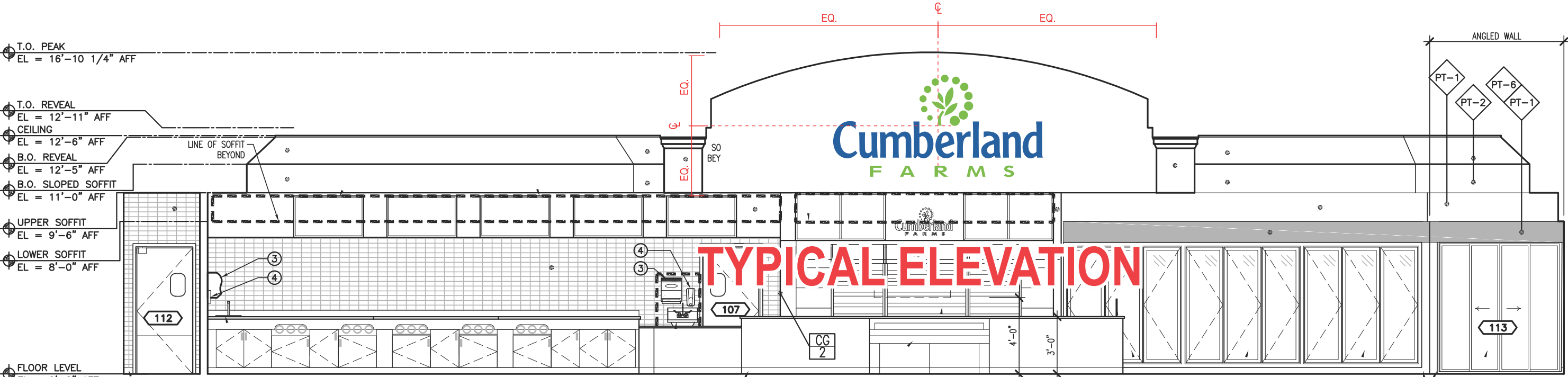
SIDE VIEW

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



SECTION DETAIL

SCALE: N.T.S.



INTERIOR ELEVATION

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

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171 Freeman Avenue, Islip NY 11751 | (631) 273-4800
americansigncrafters.com

PROJECT
Cumberland FARMS
SR 84 & 30th, Hollywood City, FL 33020

DATE 10.31.17
ACCOUNT EXECUTIVE LJ
PROJECT MANAGER CD
DESIGNER DS

REVISIONS
6.30.17 RKN - Adjusted placement of all signs, updated qtls & mfg methods
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Approval
☐ Approved
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☐ Revise & Resubmit
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Job # **61756**
Page **11** OF **11**

November 17th, 2017

THOMAS ENGINEERING GROUP
1000 Corporate Drive
Suite 250
Fort Lauderdale, FL 33334
Attn: Maxwell Kaplan, P.E.

SUBJECT: ARC REVIEW – PORT 95 COMMERCE PARK
Parcel A - W State Road 84 & SW 30th Ave
Hollywood, FL 33312
County Parcel Control Number 5042 29 40 0010

Dear Mr. Kaplan,

As discussed, I am sending you this letter as confirmation that I have completed the initial review of the proposed Cumberland Farms, currently planned to be located on Parcel A of the Port 95 Commerce Park.

Although the Master Association reserves the right to potentially request future modifications to the Architectural Design as we move through the approval process, the prototypical building design employed by Cumberland Farms and included in your submittal is generally agreeable, and something that we are very familiar with, now having seen it on several recently constructed sites in South Florida.

The proposed development includes a new site access drive on the north side of the parcel, directly inbound from State Road 84. As I have discussed with you and representatives from your design team, the original Plat included a non-vehicular access line (NVAL) designation along the entire north side of the parcel. It also appears that an NVAL issue exists on the proposed west site access driveway. Navigating from State Road 84 inbound to your site would be challenging as the vehicles are traveling at a high rate of speed, and sight lines are affected by the grading condition created by the nearby bridge. Per our discussion, you have already started the process of modifying the NVAL and the access issue has been discussed with FDOT. Please provide documentation regarding the process as it becomes available, as our final approval will be contingent on fully resolving this issue to the satisfaction of our Master Association as well as all agencies having jurisdiction.

During our review, I have also discussed with your design team the need to address existing overhead wires, as there are locations in close proximity to your site that will be in conflict with your proposed Site Plan as currently presented. Per our discussion, this issue is being addressed as your design and approval process progresses. Similar to the NVAL issue, please supply documentation as it becomes available.

CONSULTANT

1825 NW Corporate Boulevard - Suite 110 - Boca Raton, FL 33431

954.234.3287

Please review the proposed drainage design and determine if there will be impacts to the surface of the adjacent roadways, since it appears that your proposed drainage system is connected an underground pipe and creating additional off-site discharge. The adjacent roadways are connected to the same drainage system, and calculations that quantify the flood staging in relation to the adjacent roadway should be prepared. Standard FDOT spread calculations should be prepared to clarify this issue and demonstrate compliance with all applicable standards.

Please also implement a proper Operation & Maintenance Plan for the parking lot to ensure that the landscaping is successful, and that the parking lot drainage system operates properly. This can be provided in note-form and included on the design plans as a revision.

Note that from the Port 95 Design Standards, parcel owners shall ensure adequate design capacity of the storm water system to handle runoff, and provide oil & grease traps in drainage inlets for all areas of the project site which are engaged in the handling of petroleum products. Parcel Owners may be required to designate additional drainage easements in providing for parcel run-off. Creation of additional easements shall be subject to the City of Hollywood Engineering Standards, but shall also be subject to review and approval by the Port 95 ARC.

Please provide clarification of how you are meeting the ARC requirement for earth berms at 3' in height. There should also be planning of informal shrub masses in several locations per our criteria, however the landscape plans do not seem to indicate that.

If you have any further questions or require my attendance at any upcoming meetings, please advise.

Regards,

Eric Grainger



CONSULXTANT

1825 NW Corporate Boulevard - Suite 110 - Boca Raton, FL 33431

954.234.3287



Public Works Department • Water and Wastewater Services
WATER AND WASTEWATER ENGINEERING DIVISION
2555 West Copans Road • Pompano Beach Florida 33069
PHONE: 954-831-0745 • FAX: 954 831-0798/0925



November 17, 2017

Maxwell Kaplan, P.E.
Thomas Engineering Group
1000 Corporate Drive, Suite 250
Fort Lauderdale, FL 33334

Dear Mr. Kaplan:

Per your email of November 15th, 2017, you intend to construct a 5,600 square foot Cumberland Farms convenience store with 16 fueling positions at the property located on the southwest corner of SR 84 and SW 30th Avenue, within the City of Hollywood.

Broward County Water and Wastewater Services (BCWWS) currently has water and sewer facilities fronting this property available for connection. These facilities currently have the capacity to serve the water and sewer demands of this project, however off-site improvements may be required. Further analysis will be conducted should you decide to move forward with this project.

This property is located within the City of Hollywood's water and sewer service area, and therefore BCWWS does not have jurisdiction to serve this property without permission from the City. Should the City agree to relinquish jurisdiction over this property in terms of water and sewer, and convey jurisdiction to BCWWS, we will agree to accept the property into our service area.

BCWWS will not serve this property in any form whatsoever without authorization from the City of Hollywood, along with the appropriate documentation.

Please let me know if you need additional information.

Regards,

Jeremy Seiden, P.E., BCEE
Plan Review Supervisor

JS/am

Cc: Rolando Nigaglioni, P.E., PMP, Planning, Development and GIS Manager

STORMWATER MANAGEMENT REPORT

for

Cumberland Farms – SR 84 & SW 30th Avenue

SWC SR 84 & SW 30th Avenue
Hollywood, FL

Prepared for:

Cumberland Farms, Inc.

Prepared by



1000 Corporate Drive, Suite 250
Ft Lauderdale, FL 33334
954-202-7000

Maxwell Kaplan, P.E.
Florida Professional Engineer License No. 83366

November 6, 2017

The purpose of this report is to provide drainage calculations and supporting documentation for the design of the storm water management system which shall serve the proposed Cumberland Farms store in Hollywood, Florida.

The site is located on the southwest corner of the intersection of State Road 84 and southwest 30th Avenue the City of Hollywood. The existing site consists of one 2.48-acre property that is currently undeveloped.

The site falls under the South Florida Water Management District Environmental Resource Permit 06-01010-S for the 256 acre Port 95 Commerce Park Parcel B. The 2.48 acre Cumberland Farms property makes up part of Basin “A” in the original permit. Basin “A” is 5.80 acres total and includes the proposed Cumberland Farms site and the SW 30th Avenue roadways and drainage ditches. An exhibit from the original permit that demonstrates the location of Basin A has been provided.

Based on existing grades, most of the site runoff flows into the on-site swale or off-site to the surrounding right-of-way. The existing swale along the north side of the site runs east-west parallel to SR 84 serves as a conveyance ditch for the roadways within Basin “A”. There is an existing pipe under the access road to the west of the property that connects to a detention area across the street. An existing control structure within this detention area connects to an outfall to the existing Florida Power & Light lake to the west. This lake connects to the south fork of the North New River just north of the outfall.

Cumberland Farms proposes to construct a 5,600 square foot convenience store with fuel canopy and associated parking lot and infrastructure. The proposed drainage system consists of catch basins, HDPE pipe, and three dry detention areas. The existing connection along the conveyance ditch will be maintained via 18” pipe and swale areas. Runoff from the site will outfall through the existing 24” pipe to the existing control structure in the detention area to the northwest of the site.

Water quality for the 2.48 acre site will be handled within the dry detention areas. The water quality requirement is calculated to be 3.33 ac-in. or 0.28 acre-feet. Due to the use of dry

detention areas, the required water quality volume shall be 75% of the requirement for the wet detention area, which is calculated to be 2.5 acre-in. or 0.21 acre-feet. Based on the proposed stage-storage table, this volume occurs at elevation 3.07 feet NAVD within the on-site dry detention areas.

Stage-storage calculations for the post development conditions can be found on the following pages. The 10-year 1-day, 25-year 3-day, and 100-year 3-day storm events have been analyzed and the resultant stages and discharges are listed in the following tables. The stages and discharges from the permitted calculations have been provided as well. It should be noted that the permitted calculations used a water table at (-)1.09 NAVD (0.50 NGVD), while the post-development calculations are using a water table of 1.50 NAVD (3.09 NGVD) based on the new Broward County Average Wet Season Groundwater Elevations map.

10-year 1-day Storm	Max. Stage (NAVD)	Discharge (cfs)
Permitted	3.91 (5.50 NGVD)	1.10
Post-Development	3.98 (5.57 NGVD)	1.09

25-year 3-day Storm	Max. Stage (NAVD)	Discharge (cfs)
Permitted	4.38 (5.97 NGVD)	1.10
Post-Development	4.49 (6.08 NGVD)	1.30

100-year 3-day Storm	Max. Stage (NAVD)	Discharge (cfs)
Permitted	5.38 (6.97 NGVD) (for entire 256 acres)	N/A
Post-Development	5.61 (7.20 NGVD)	N/A

The Finished Floor Elevation of the proposed building is set at 7.00 NAVD. The site is in FEMA Flood Zone AH with a required base flood elevation of 6.00 NAVD per FEMA Flood Panel 12011C0558H. The site is required to be at least one (1) foot above the base flood elevation.

Based on the results, we believe the proposed construction of the Cumberland Farms store complies with all applicable design criteria.

PROPOSED DRAINAGE CALCULATIONS

Design Criteria:

Estimated Seasonal High Water Level:

1.50 NAVD

Proposed Acreages

Lake Areas (A_L):	0	sf	or	0.000	ac
Roof Areas (A_R):	5,600	sf	or	0.129	ac
Paved Areas (A_P):	54,908	sf	or	1.261	ac
Green Areas (A_G):	47,628	sf	or	1.093	ac
Total (A_T):	108,136	sf	or	2.482	ac

Compute Required Water Quality Volume:

- 1) Provide at least 1 inch over the developed project:

$$\begin{aligned} V_{PRE} &= 1 \text{ inch} \times A_T \times 1 \text{ ft} / 12 \text{ inches} \\ &= 1 \times 2.482 / 12 \\ &= 0.21 \text{ ac-ft or } 2.52 \text{ ac-in} \end{aligned}$$

- 2) Provide 2.5" over % impervious area:

- a) Site Area for water quality pervious/impervious calculation:

$$\begin{aligned} A_S &= A_T - (A_L + A_R) \\ &= 2.482 - (0 + 0.129) \\ &= 2.35 \text{ ac of site area for water quality pervious/impervious} \end{aligned}$$

- b) Impervious area for water quality pervious/impervious calculation:

$$\begin{aligned} A_{IMP} &= A_S - A_G \\ &= 2.353 - 1.093 \\ &= 1.26 \text{ ac of impervious area for water quality pervious/impervious} \end{aligned}$$

- c) Percent of impervious for water quality calculation:

$$\begin{aligned} &= A_{IMP} / A_S \times 100\% \\ &= 1.26 / 2.353 \times 100\% \\ &= 53.5\% \text{ impervious} \end{aligned}$$

- d) For 2.5" times the percent impervious:

$$\begin{aligned} &= 2.5" \times \% \text{ impervious area} \\ &= 2.5 \times 0.535 \\ &= 1.34 \text{ inches to be treated} \end{aligned}$$

- e) Compute volume required volume for quality detention

$$\begin{aligned} V_{PRE} &= \text{inches to be treated} \times (A_T - A_L) \\ &= 1.34 \times (2.482 - 0) \times 1 \text{ foot} / 12 \text{ inches} \\ &= 0.28 \text{ ac-ft or } \boxed{3.33 \text{ ac-in}} \end{aligned}$$

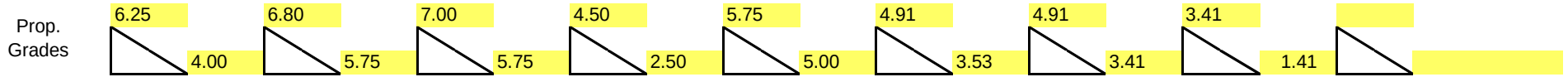
- 3) Since the 3.33 ac-in is greater than the 2.52 ac-in computed for the first inch of runoff the volume of 3.33 ac-in controls.

- 4) For dry retention, water quality volume shall be 75% of the amounts computed for wet detention.

$$\begin{aligned} \text{Wet detention volume} &= 3.33 \text{ ac-in} \\ \text{Required Water Quality Volume for Dry Retention} &= \text{Wet detention Volume} \times 75\% \\ &= 3.33 \times 0.75 = 2.5 \text{ ac-in} \\ &\text{or } = 0.21 \text{ ac-ft.} \end{aligned}$$

Water Quality Volume occurs at Elevation 3.07 NAVD

PROPOSED STAGE\STORAGE AREA CALCULATION



Stage	Landscape Area Area 0.646 0.000 (ac.-ft.)	Pavement Area High Area 0.408 0.000 (ac.-ft.)	Sidewalk/ Concrete Area 0.038 0.000 (ac.-ft.)	Dry Retention Areas Area 0.447 0.302 (ac.-ft.)	Pavement Area Low Area 0.815 0.000 (ac.-ft.)	Off-site Roadway Area 1.697 (ac.-ft.)	Off-site Landscape Area Area 0.719 0.000 (ac.-ft.)	Off-site Dry Detention Areas Area 0.902 0.452 (ac.-ft.)	Building FF EL. 7.00 Area 0.13 0.000 (ac.-ft.)	Total Site 5.800
1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.04
2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.31
2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.63
3.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	1.00	0.00	1.16
3.50	0.00	0.00	0.00	0.34	0.00	0.00	0.00	1.44	0.00	1.78
4.00	0.00	0.00	0.00	0.53	0.00	0.14	0.08	1.89	0.00	2.64
4.50	0.04	0.00	0.00	0.75	0.00	0.58	0.28	2.34	0.00	3.99
5.00	0.14	0.00	0.00	0.97	0.00	1.32	0.60	2.79	0.00	5.83
5.50	0.32	0.00	0.00	1.20	0.14	2.17	0.96	3.24	0.00	8.03
6.00	0.57	0.01	0.00	1.42	0.51	3.02	1.32	3.69	0.00	10.55
6.50	0.89	0.11	0.01	1.64	0.92	3.87	1.68	4.14	0.00	13.26
7.00	1.21	0.30	0.02	1.87	1.32	4.72	2.04	4.59	0.00	16.07



Date: 11/6/2017
 Project: CF SR84 & SW 30 Ave, Hollywood
 Project No: F160039

DESIGN CRITERIA

October Water Elevation	1.50	NAVD
FEMA Elevation	N/A	

PROPOSED LAND USE SUMMARY

Areas:	Square Ft.	Acres	Percent
Lake	0	0.00	0.0%
Building	5,600	0.129	2.2%
Paved and Sidewalk	128,840	2.958	51.0%
Pervious	118,228	2.714	46.8%
Total Area:	252,668	5.800	100.0%

STAGE\STORAGE AREA CALCULATION

Stage	Site Stage-Storage (previous page)	Exfiltration Trench Storage (ac.-ft.)	Total Storage Area (ac.-ft.)
1.00	0.00	0.00	0.00
1.50	0.04	0.00	0.04
2.00	0.31	0.00	0.31
2.50	0.63	0.00	0.63
3.00	1.16	0.07	1.23
3.50	1.78	0.07	1.84
4.00	2.64	0.07	2.71
4.50	3.99	0.07	4.05
5.00	5.83	0.07	5.90
5.50	8.03	0.07	8.10
6.00	10.55	0.07	10.62
6.50	13.26	0.07	13.33
7.00	16.07	0.07	16.14
7.50	18.91	0.07	18.98
8.00	21.75	0.07	21.81

Soil Storage

Land Use Summary:

	Acres	Percent
Lake Areas (A_L):	0.000	0.0%
Roof Areas (A_R):	0.129	2.2%
Paved Areas (A_P):	2.958	51.0%
Green Areas (A_G):	2.714	46.8%
Total (A_T):	5.800	100.0%

Compacted Soil Storage per
SFWMD Vol. IV Page C-III-1

Depth to Water Table (feet)	Water Storage (inches)
1	0.45
2	1.88
3	4.05
4	6.75

Average Pervious Grade (Elev.): 4.50
Depth to Water Table: 3.00 ft
Soil Storage at Average Depth (S_S): 4.05 inches

Weighted S value:

$$= S_S \times \% \text{ Pervious}$$

$$= 4.05 \times 0.468$$

$$= \boxed{1.90 \text{ inches}}$$

Rainfalls

From Figure C-9, 100-Year 3-day Storm = 20.04 inches

From Figure C-8, 25-Year 3-day Storm = 14.90 inches

From Figure C-4, 10-Year 1-day Storm = 9.75 inches

Results from Flood Routings

$$\begin{aligned}\text{Runoff (Q)} &= (P - 0.2S)^2 / (P + 0.8S) \\ &= (20.04 - (0.2 \times 1.9))^2 / (20.04 + (0.8 \times 1.9)) \\ &= 17.93 \text{ inches of total runoff}\end{aligned}$$

$$\begin{aligned}\text{Runoff Volume} &= Q \times \text{Project Area} \\ &= 17.93 \times 5.8 = 103.99 \text{ acre-inches} = 8.67 \text{ acre-ft.}\end{aligned}$$

Maximum Stage for 100-Year 3-Day Storm (no discharge)	5.61	NAVD
---	------	------

Maximum Stage for 25-Year 3-Day Storm (see ICPR printout)	4.49	NAVD
---	------	------

Maximum Stage for 10-Year 1-Day Storm (see ICPR printout)	3.98	NAVD
---	------	------

=====
Basins =====

Name: Site Node: Site Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 5.800 Time Shift(hrs): 0.00
Curve Number: 84.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

=====
Nodes =====

Name: FPL Lake - 10Y Base Flow(cfs): 0.000 Init Stage(ft): 1.000
Group: BASE Warn Stage(ft): 7.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	0.000
12.00	0.000
36.00	0.000

Name: FPL Lake - 25Y Base Flow(cfs): 0.000 Init Stage(ft): 1.000
Group: BASE Warn Stage(ft): 7.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	0.000
62.00	0.000
96.00	0.000

Name: Site Base Flow(cfs): 0.000 Init Stage(ft): 1.000
Group: BASE Warn Stage(ft): 7.000
Type: Stage/Volume

Stage(ft)	Volume(af)
1.000	0.0000
1.500	0.0400
2.000	0.3100
2.500	0.6300
3.000	1.1600
3.500	1.7800
4.000	2.6400
4.500	3.9900
5.000	5.8300
5.500	8.0300
6.000	10.5500
6.500	13.2600
7.000	16.0700

=====
Drop Structures =====

Name: Control Structu From Node: Site Length(ft): 24.00
Group: BASE To Node: FPL Lake - 10Y Count: 1

UPSTREAM	DOWNSTREAM	Friction Equation: Automatic
Geometry: Circular	Circular	Solution Algorithm: Most Restrictive
Span(in): 18.00	18.00	Flow: Both
Rise(in): 18.00	18.00	Entrance Loss Coef: 0.000
Invert(ft): -3.760	-3.690	Exit Loss Coef: 1.000
Manning's N: 0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000	0.000	Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

*** Weir 1 of 4 for Drop Structure Control Structu ***

Count: 1	Bottom Clip(in): 0.000
Type: Vertical: Mavis	Top Clip(in): 0.000
Flow: Both	Weir Disc Coef: 3.200
Geometry: Circular	Orifice Disc Coef: 0.600
Span(in): 4.00	Invert(ft): 2.830
Rise(in): 4.00	Control Elev(ft): 2.830

TABLE

*** Weir 2 of 4 for Drop Structure Control Structu ***

Count: 1	Bottom Clip(in): 0.000
Type: Vertical: Mavis	Top Clip(in): 0.000
Flow: Both	Weir Disc Coef: 3.200
Geometry: Circular	Orifice Disc Coef: 0.600
Span(in): 3.00	Invert(ft): 2.830
Rise(in): 3.00	Control Elev(ft): 2.830

TABLE

*** Weir 3 of 4 for Drop Structure Control Structu ***

Count: 1	Bottom Clip(in): 0.000
Type: Vertical: Mavis	Top Clip(in): 0.000
Flow: Both	Weir Disc Coef: 3.200
Geometry: Circular	Orifice Disc Coef: 0.600
Span(in): 3.00	Invert(ft): 0.410
Rise(in): 3.00	Control Elev(ft): 0.410

TABLE

*** Weir 4 of 4 for Drop Structure Control Structu ***

Count: 1	Bottom Clip(in): 0.000
Type: Vertical: Mavis	Top Clip(in): 0.000
Flow: Both	Weir Disc Coef: 3.200
Geometry: Rectangular	Orifice Disc Coef: 0.600
Span(in): 24.00	Invert(ft): 4.460
Rise(in): 5.40	Control Elev(ft): 4.460

TABLE

==== Hydrology Simulations =====

Name: 10Y-1D
Filename: G:\2016\Cumberland Farms\F160039 - SR 84 & SW 30th Avenue - Hollywood\Drainage\ICPR\Routings\10Y-1D.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 9.75

Time(hrs)	Print Inc(min)
36.000	5.00

Name: 25Y-3D
Filename: G:\2016\Cumberland Farms\F160039 - SR 84 & SW 30th Avenue - Hollywood\Drainage\ICPR\Routings\25Y-3D.R32

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: Sfwmd72
Rainfall Amount(in): 14.90

Time(hrs)	Print Inc(min)
96.000	5.00

==== Routing Simulations =====

Name: 10Y-1D Hydrology Sim: 10Y-1D
Filename: G:\2016\Cumberland Farms\F160039 - SR 84 & SW 30th Avenue - Hollywood\Drainage\ICPR\Routings\10Y-1D.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00	Delta Z Factor: 0.00500
Time Step Optimizer: 10.000	
Start Time(hrs): 0.000	End Time(hrs): 36.00

Min Calc Time(sec): 0.5000
Boundary Stages:

Max Calc Time(sec): 60.0000
Boundary Flows:

Time(hrs)	Print Inc(min)
36.000	15.000

Group	Run
BASE	Yes

Name: 25Y-3D Hydrology Sim: 25Y-3D
Filename: G:\2016\Cumberland Farms\F160039 - SR 84 & SW 30th Avenue - Hollywood\Drainage\ICPR\Routings\25Y-3D.I32

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00	Delta Z Factor: 0.00500
Time Step Optimizer: 10.000	
Start Time(hrs): 0.000	End Time(hrs): 96.00
Min Calc Time(sec): 0.5000	Max Calc Time(sec): 60.0000
Boundary Stages:	Boundary Flows:

Time(hrs)	Print Inc(min)
96.000	15.000

Group	Run
BASE	Yes

POST DEVELOPMENT

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
FPL Lake - 10Y	BASE	10Y-1D	0.00	0.00	7.00	-1.0000	0	17.73	1.09	0.00	0.00
FPL Lake - 25Y	BASE	10Y-1D	0.00	0.00	7.00	-1.0000	0	0.00	0.00	0.00	0.00
Site	BASE	10Y-1D	17.73	3.98	7.00	0.0050	94775	12.00	29.84	17.73	1.09
FPL Lake - 10Y	BASE	25Y-3D	0.00	0.00	7.00	-1.0000	0	0.00	0.00	0.00	0.00
FPL Lake - 25Y	BASE	25Y-3D	0.00	0.00	7.00	-1.0000	0	64.39	1.30	0.00	0.00
Site	BASE	25Y-3D	64.39	4.49	7.00	0.0050	137699	60.00	37.12	64.39	1.30

POST DEVELOPMENT

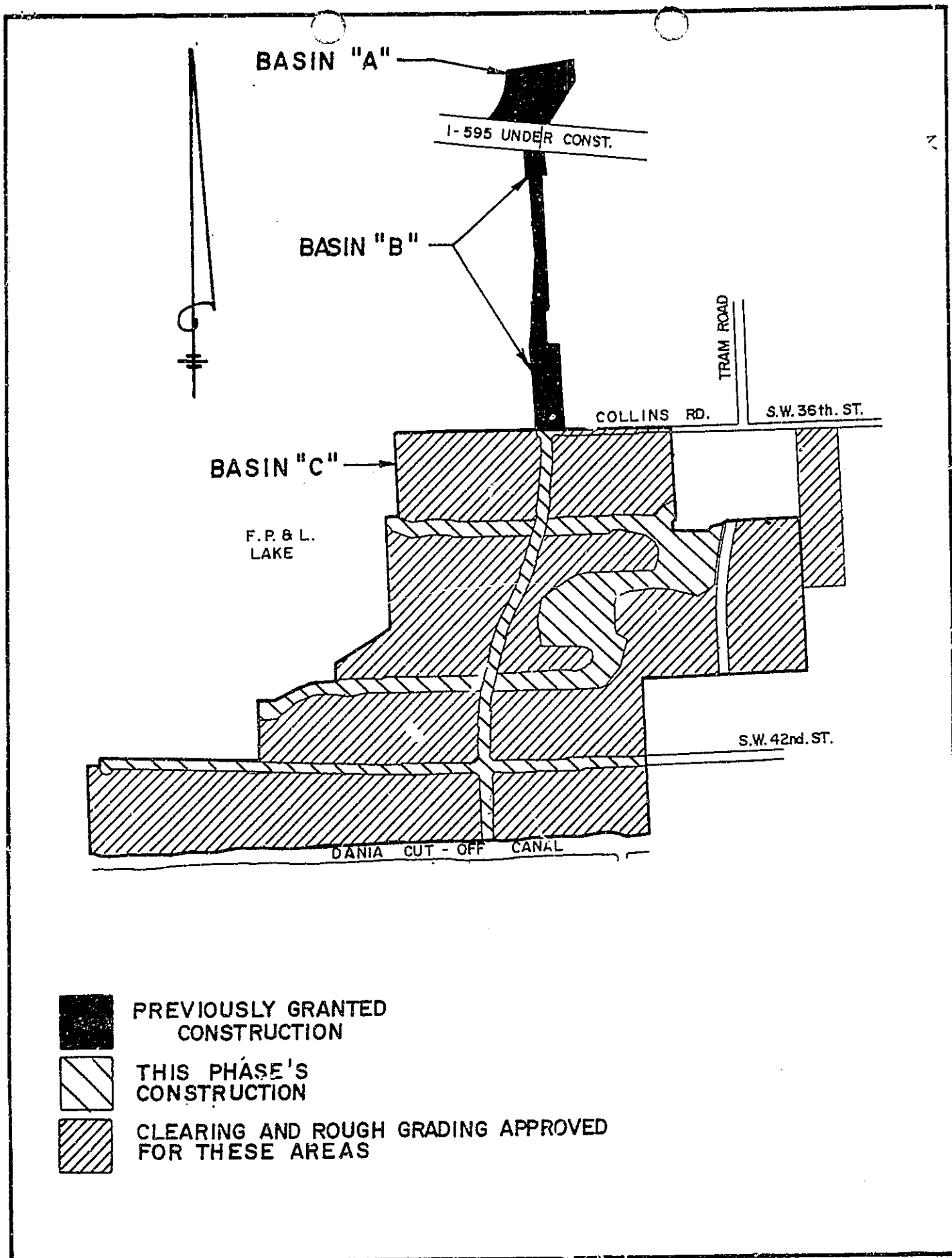


EXHIBIT 1

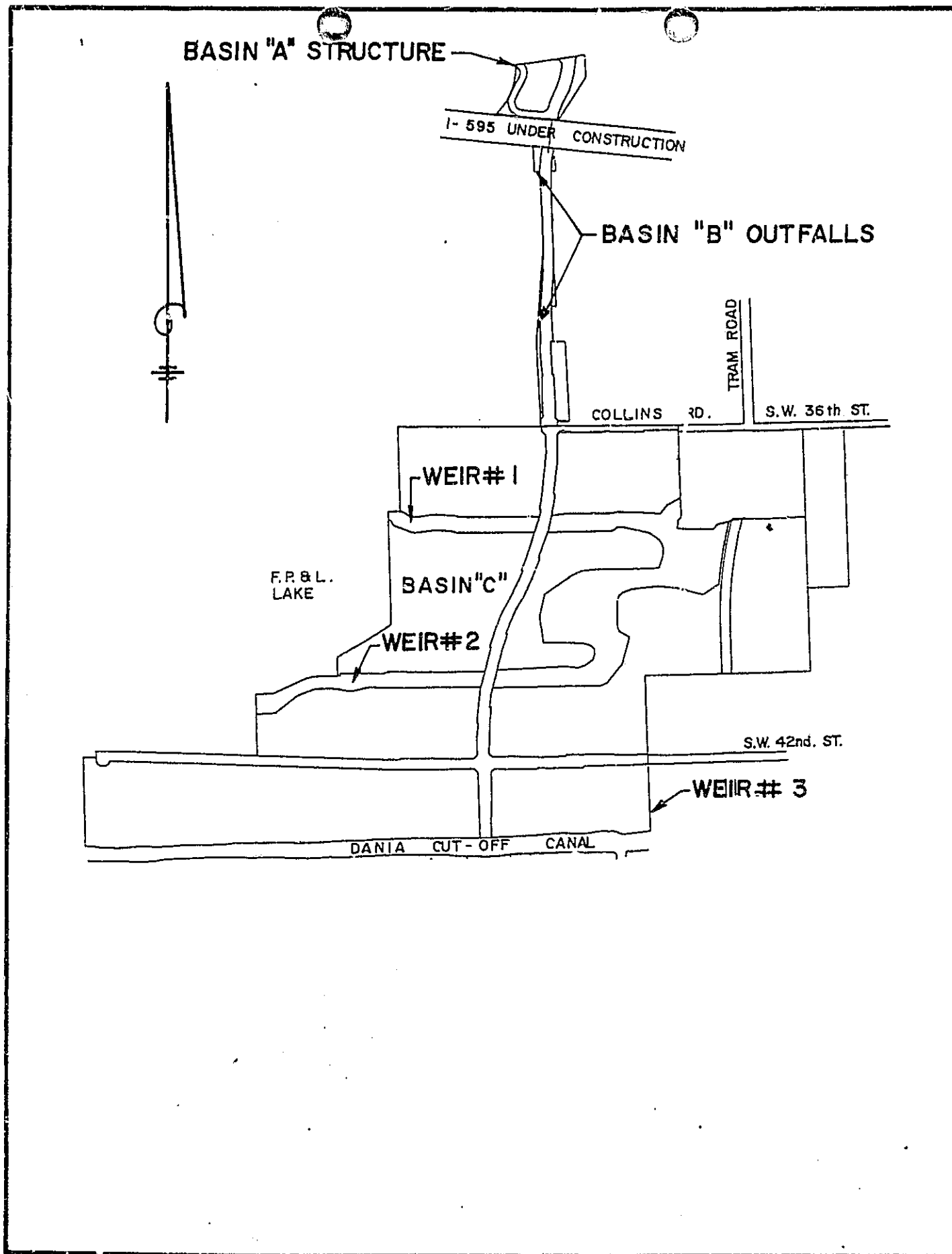


EXHIBIT 2



CRAVEN-THOMPSON & ASSOCIATES INC.

ENGINEERS • PLANNERS • SURVEYORS
5901 N.W. 31 AVENUE FORT LAUDERDALE FLORIDA 33309 (305) 971-7770

JOB ALANCO PROPERTY 84-0217

SHEET NO. 5 OF

CALCULATED BY S.A. DATE 1-26-88

CHECKED BY DATE

DETERMINE PEAK DISCHARGE WEIR DIMENSIONS.

25 712 ZERO DISCHARGE STAGE IS = 6.50

∴ DESIGN HEAD = 6.50 - 4.20 = 2.30 ft

$$Q = 3.13 L H^{1.5}$$

$$Q = 0.64 \text{ cfs}$$

$$H = 2.30 \text{ ft}$$

$$0.64 = 3.13 L \times (2.30)^{1.5}$$

$$L = 0.06 \text{ ft}$$

NOTE: SINCE ϕ & L ARE SMALLER THAN RECOMMENDED DESIGN DIMENSIONS OF AN "V" NOTCH & WEIR PER VOLUME IV PAGE C-28, WE PROPOSE TO DESIGN AN ORIFICE

$$Q = 4.8 A (H)^{0.5}$$

$$Q = 0.24 \text{ AC-FT} = 0.121 \text{ cfs} \quad H = \frac{6.50 - 2.17}{2} = 2.17$$

$$0.121 = 4.8 (2.17)^{0.5} \times A$$

$$A = 0.02 \text{ ft}^2$$

$$A = 2.88 \text{ SQ. IN.}$$

$$D = 1.92 \text{ IN.}$$

$$\text{MIN. } \phi = 3 \text{ IN (PER C-28)}$$

USE 3 IN ϕ ORIFICE

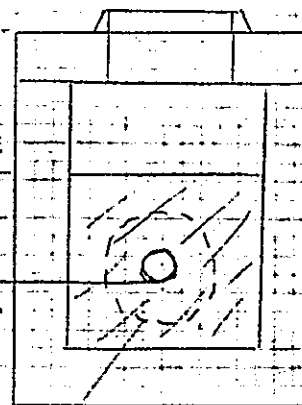
CALCULATE DISCH. THRU 3" OPENING ^{DISCHARGE} PIPE

$$A = 0.049 \text{ ft}^2$$

$$H = 2.19 \text{ ft (FOR 3" OPENING)}$$

$$Q = 4.8 \times 0.049 \times (2.19)^{0.5}$$

$$Q = 0.35 \text{ cfs}$$



REVISED 4-12-88

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CRAVEN THOMPSON & ASSOCIATES INC.

ENGINEERS • PLANNERS • SURVEYORS
5901 N.W. 31 AVENUE FORT LAUDERDALE FLORIDA 33309 (305) 971 7770

JOB ALANDCO PROPERTY 84-0217

SHEET NO 9 OF

CALCULATED BY S.A. DATE 1-26-88

CHECKED BY DATE

NOTE: THE CONTROL STRUCTURE ON THE WEST OF THE PROJECT,
SHALL HAVE 2, 3IN. ϕ BLEEDER ORIFICES,

- 1) FOR WATER QUALITY DISCHARGE REQUIREMENTS
AT ELEV OF 2.0 N.G.V.D. (0.35 cfs)
- 2) FOR ACHIEVING DESIGN DISCHARGE OF 0.64 cfs
AFTER MEETING WATER QUALITY REQUIREMENTS AT
ELEVATION OF 4.20 N.G.V.D

STAGE (FT.)	STORAGE (AC-FT.)	DISCHARGE WEST + EAST STRUCT. (cfs)
2.0	0.0	0.0
3.00	0.0	0.35
3.50	0.25	0.35
4.00	0.54	0.35
4.50	0.87	$0.64 + 0.45 = 1.09$
5.00	1.37	1.09
5.50	2.17	1.09
6.00	3.52	1.09
6.50	5.69	1.09
7.00	8.27	$4.43 \times 2 = 8.86$

$$Q = 3.13 H^{1.5}$$

$$\text{Q) ELEV. 7.0 } Q = 3.13 \times (0.5)^{1.5} (4.0) = 4.43$$

NOTE: ABOVE DISCHARGE VALUES ARE CALCULATED FOR
NEW DIVIDE CANAL CONTROL STRUCTURE, HOWEVER
THERE WILL BE A SECOND CONTROL STRUCTURE WHICH
WILL DISCHARGE TO THE EXISTING LAKE ON THE EAST
SIDE OF THE PROJECT WITH 4" ϕ ORIFICE @ ELEV. 4.20 N.G.V.D
CALCULATE DISCHARGE RATE.

$$H = \frac{6.50 - 4.37}{2} = 1.07$$
$$4" \phi \text{ OPENING} = 0.087 \text{ SQ. FT.}$$

$$Q = 4.8 A (H)^{0.5}$$
$$Q = 4.8 \times 0.087 (1.07)^{0.5}$$
$$Q = 0.45 \text{ cfs}$$

REVISED 4-12-88

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SCS PROGRAM

PROJECT NAME : ALANDCO - BROWARD COUNTY
 REVIEWER : COLE
 PROJECT AREA : 5.80 ACRES
 GROUND STORAGE : 3.26 INCHES
 TERMINATION DISCHARGE : 20.00 CFS
 DISTRIBUTION TYPE : SFWD
 RETURN FREQUENCY : 25.00 YEARS
 RAINFALL DURATION : 3-DAY
 24-HOUR RAINFALL : 11.00 INCHES
 REPORTING SEQUENCE : STANDARDIZED

STAGE (FT)	STORAGE (AF)	DISCHARGE (CFS)
2.00	0.00	0.00
3.00	0.00	0.35
3.50	0.25	0.35
4.00	0.54	0.35
4.50	0.87	1.09
5.00	1.37	1.09
5.50	2.17	1.09
6.00	3.52	1.09
6.50	5.69	1.09
7.00	8.27	8.86

RAIN TIME (HR)	RAINFALL (IN)	ACCUM. RUNOFF (IN)	BASIN DISCHGE (CFS)	ACCUM. INFLOW (AF)	VOLUME (AF)	RESERVOIR ACCUM. OUTFLOW (AF)	INSTANT DISCHGE (CFS)	AVERAGE DISCHGE (CFS)	STAGE (FT)
0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	2.00
4.00	0.27	0.00	0.0	0.0	0.0	0.0	0.0	0.0	2.00
8.00	0.54	0.00	0.0	0.0	0.0	0.0	0.0	0.0	2.00
12.00	0.80	0.01	0.0	0.0	0.0	0.0	0.0	0.0	2.10
16.00	1.07	0.05	0.1	0.0	0.0	0.0	0.1	0.1	2.24
20.00	1.34	0.12	0.1	0.1	0.0	0.1	0.1	0.1	2.35
24.00	1.61	0.22	0.2	0.1	0.0	0.1	0.2	0.1	2.45
28.00	2.00	0.39	0.3	0.2	0.0	0.2	0.3	0.3	2.81
32.00	2.39	0.60	0.3	0.3	0.0	0.3	0.3	0.3	2.94
36.00	2.78	0.84	0.4	0.4	0.0	0.4	0.3	0.3	3.00
40.00	3.17	1.10	0.4	0.5	0.0	0.5	0.3	0.3	3.02
44.00	3.56	1.37	0.4	0.7	0.0	0.7	0.3	0.3	3.05
48.00	3.95	1.66	0.4	0.8	0.0	0.8	0.3	0.3	3.10
52.00	4.44	2.04	0.7	1.0	0.1	0.9	0.3	0.3	3.23
56.00	5.45	2.86	1.6	1.4	0.4	1.0	0.3	0.3	3.76
58.00	6.29	3.57	2.4	1.7	0.7	1.0	0.6	0.4	4.20
59.00	6.90	4.11	3.6	2.0	0.9	1.1	1.1	0.8	4.49
59.50	7.45	4.59	5.8	2.2	1.1	1.1	1.1	1.1	4.68

RAIN TIME (HR)	RAINFALL (IN)	ACCUM. RUNOFF (IN)	BASIN DISCHGE (CFS)	ACCUM. INFLOW (AF)	VOLUME (AF)	RESERVOIR ACCUM. OUTFLOW (AF)	INSTANT DISCHGE (CFS)	AVERAGE DISCHGE (CFS)	STAGE (FT)
59.75	9.26	6.25	40.2	3.0	1.8	1.2	1.1	1.1	5.27
60.00	11.11	7.97	40.8	3.9	2.4	1.3	1.1	1.1	5.66
60.50	11.96	8.77	40.9	4.2	3.0	1.2	1.1	1.1	5.80
61.00	12.38	9.18	4.7	4.4	3.1	1.3	1.1	1.1	5.86
62.00	12.94	9.71	2.8	4.7	3.3	1.4	1.1	1.1	5.92
64.00	13.63	10.37	1.9	5.0	3.4	1.6	1.1	1.1	5.97
66.00	14.42	11.13	1.0	5.4	3.4	2.0	1.1	1.1	5.97
72.00	14.95	11.64	0.5	5.6	3.3	2.3	1.1	1.1	5.93

SUMMARY INFORMATION

MAXIMUM STAGE WAS 5.97 FEET AT 67.99 HOURS
 MAXIMUM DISCHARGE WAS 1.1 CFS AT 59.03 HOURS

REVISED PAGE 21

SCS PROGRAM

PROJECT NAME : ALANDCO - BROWARD COUNTY
 REVIEWER : COLE
 PROJECT AREA : 5.80 ACRES
 GROUND STORAGE : 3.26 INCHES
 TERMINATION DISCHARGE : 20.00 CFS
 DISTRIBUTION TYPE : SFWD
 RETURN FREQUENCY : 10.00 YEARS
 RAINFALL DURATION : 1-DAY
 24-HOUR RAINFALL : 9.75 INCHES
 REPORTING SEQUENCE : STANDARDIZED

STAGE (FT)	STORAGE (AF)	DISCHARGE (CFS)
2.00	0.00	0.00
3.00	0.00	0.35
3.50	0.25	0.35
4.00	0.54	0.35
4.50	0.87	1.09
5.00	1.37	1.09
5.50	2.17	1.09
6.00	3.52	1.09
6.50	5.69	1.09
7.00	8.27	8.86

TIME (HR)	RAIN FALL (IN)	ACCUM. RUNOFF (IN)	BASIN DISCHGE (CFS)	ACCUM. INFLOW (AF)	VOLUME (AF)	RESERVOIR			STAGE (FT)
						ACCUM. OUTFLOW (AF)	INSTANT DISCHGE (CFS)	AVERAGE DISCHGE (CFS)	
0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	2.00
4.00	0.44	0.00	0.0	0.0	0.0	0.0	0.0	0.0	2.00
8.00	1.34	0.12	0.5	0.1	0.0	0.1	0.3	0.2	3.01
10.00	2.08	0.43	1.3	0.2	0.1	0.1	0.3	0.3	3.20
11.00	2.62	0.74	2.2	0.4	0.2	0.2	0.3	0.3	3.44
11.50	3.11	1.06	3.8	0.5	0.4	0.1	0.3	0.3	3.68
11.75	4.76	2.29	30.9	1.1	0.9	0.2	1.1	0.6	4.55
12.00	6.39	3.66	33.2	1.8	1.6	0.2	1.1	1.1	5.12
12.50	7.11	4.29	7.4	2.1	1.8	0.3	1.1	1.1	5.29
13.00	7.48	4.62	3.9	2.2	2.0	0.2	1.1	1.1	5.36
14.00	7.98	5.07	2.4	2.4	2.1	0.3	1.1	1.1	5.44
16.00	8.58	5.62	1.6	2.7	2.2	0.5	1.1	1.1	5.50
20.00	9.28	6.26	0.9	3.0	2.1	0.9	1.1	1.1	5.47
24.00	9.75	6.70	0.6	3.2	2.0	1.2	1.1	1.1	5.37

SUMMARY INFORMATION

MAXIMUM STAGE WAS 5.50 FEET AT 16.02 HOURS
 MAXIMUM DISCHARGE WAS 1.1 CFS AT 11.73 HOURS

PROJECT NAME: ALANDCO BROWARD COUNTY

WATER MANAGEMENT CALCULATIONS

I. GIVEN:

A. Acreages

1. Total Area 256.35 Ac.

2. Impervious Areas

a. Building 64.98 Ac.b. Roads and Parking 79.13 + 10.47 89.60 Ac.3. Lake (Water Surface) Areas 26.0 Ac.4. Pervious Area 48.5 + 8.37 + 35 + 15.4 75.77 Ac.

B. Minimum Elevations

1. Road Crown 5.50 NGVD2. Finish Floors 7.00 NGVDC. Zoning: INDUSTRIALD. Allowable Discharge: 70.8 CSM (NEW RIVER) (256.35) 640 = 28.36 CFS

E. Water Level Elevations

NO LIMIT FOR DANIA
CUT OFF CANAL1. Wet Season Water Table 2.00 NGVD2. Receiving Canal Water Level 1.0 TO 2.0 NGVD

F. Design Storm Rainfall Amounts

1. Roads: 10 YR - 1 DAY = 9.75"2. Design: 25 YR - 1 DAY = 11.00" $\times 1.359 = 14.95$ 3. Floors: 100 YR - 1 DAY = 14.75" $\times 1.359 = 20.04$

Borden Sparks
6/10/89

II. DESIGN CRITERIA

A. Quality

1. If a wet detention system, then whichever is the greater of:

a. The first inch of runoff from the entire site.

b. The amount of 2.5 inches times the percentage of imperviousness.

2. If a dry detention system, then 75% of the volume required for wet detention.

3. If a retention system, then 50% of the volume required.

4. If the project is zoned commercial or industrial, at least 0.5 inches of dry retention or detention for pretreatment will be required unless reasonable assurances can be offered that hazardous materials will not enter the project's surface water management system.

5. Any detention system shall be designed to discharge not more than 0.5 inches of the detained volume per day. A V-shaped configuration is desirable.

B. Quantity

1. The allowable discharge for the basin in which this project is located is 28.36 CFS (NEW RIVER).

2. First floors can be no lower than elevation 7.00 NGVD. NO LIMIT INTO DANIA CUT OFF CANAL

3. Roads and Parking:

a. Road crowns can be no lower than elevation 5.50 NGVD. The rims of catch basins of commercial non-residential parking lots may be set 6" below the minimum road crown elevation if given local approval.

b. Road and parking elevations shall be at least 2 feet above the control elevation.

Gordon Spahr
6/20/89

III. COMPUTATIONS:

A. Quality

1. Compute the first inch of runoff from the developed project:

$$= 1 \text{ inch} \times 1 \text{ ft./12 inches} \times 256.35 \text{ Acres}$$

$$= 21.36 \text{ Ac.-Ft. for the first inch of runoff}$$

2. Compute 2.5 inches times the percentage of imperviousness:

- a. Site area for water quality pervious/impervious calculations only:

$$= \text{Total Project} - (\text{Water Surface} + \text{Building})$$

$$= 256.35 \text{ Ac.} - (26.0 \text{ Ac.} + 64.98 \text{ Ac.})$$

$$= 165.37 \text{ Acres of site area for water quality pervious/impervious.}$$

- b. Impervious area for water quality pervious/impervious calculations only:

$$= (\text{Site area for water quality pervious/impervious}) - \text{pervious}$$

$$= (165.37 \text{ Ac.} / \text{Ac.}) - 75.77 \text{ Ac.}$$

$$= 89.60 \text{ Acres of impervious area for water quality pervious/impervious}$$

- c. Percentage of imperviousness for water quality:

$$= \frac{\text{Impervious Area for Water Quality}}{\text{Site Area for Water Quality}} \times 100\%$$

$$= \frac{89.60 \text{ Ac.}}{165.37 \text{ Ac.}} \times 100\%$$

$$= 54\% \text{ Impervious}$$

Robert J. Smith
6/20/89

d. For 2.5 inches times the percentage impervious:

$$= 2.5 \text{ inches} \times \text{percentage impervious}$$

$$= 2.5 \text{ inches} \times \underline{54} \%$$

$$= \underline{1.36} \text{ inches (less 0.2 inches if catch basins are in grassed swale areas)}$$

$$= \underline{1.16} \text{ inches to be treated}$$

e. Compute volume required for quality detention:

$$= \text{Inches to be treated} \times (\text{Total Site} - \text{Water Surface})$$

$$= \underline{1.16} \text{ In.} \times 1 \text{ Ft./12 In.} \times (\underline{256.35} \text{ Ac.} - \underline{26.0} \text{ Ac.})$$

$$= \underline{22.27} \text{ Ac.-Ft. required detention storage}$$

3. Since the 22.27 Ac.-Ft. are greater than the 21.36 Ac.-Ft., the volume of 22.27 Ac.-Ft. controls.

4. Compute 0.5 inches of pretreatment (if applicable):

$$= 0.5 \text{ inches} \times (\text{Total Site} - \text{Water Surface})$$

$$= 0.5 \text{ In.} \times 1 \text{ Ft./12 In.} \times (\underline{256.35} \text{ Ac.} - \underline{26.0} \text{ Ac.})$$

$$= \underline{9.60} \text{ Ac.-Ft. required for pretreatment}$$

5. Compute required lake volume and/or dry detention volume.

$$= \text{Total required detention} - \text{pretreatment}$$

$$= (\underline{22.27} \text{ Ac.-Ft.}) - (\underline{9.60} \text{ Ac.-Ft.})$$

$$= \underline{12.67} \text{ Required Lake Volume}$$

B. Project Surface Storage

1. Assumption:

a. Water surface areas store vertically from elevation 2.0 NGVD.

b. Dry detention areas store vertically from elevation 5.0 NGVD. (3.0 TO 5.0 LINEARLY)

c. Pavement area is graded from elevation 5.0 NGVD to elevation 6.75 NGVD.

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d. Pervious areas vary from elevation 2.0 NGVD to elevation 7.0 NGVD.

C. Ground Storage Computations

1. Depth to water table:

= Average finished site grading - wet season water table

$$= 5.50 - 2.00$$

$$= 3.50 \text{ feet}$$

$$\begin{aligned} \text{EL. 3.00} &= 4.95 \\ \text{EL. 4.00} &= 8.18 \end{aligned} \quad 6.57''$$

2. Available soil moisture storage:

INTERPOLATE COMPACTED WATER STORAGE

From Figure C-24 on Page C-34 of the South Florida Water Management District Permit Information Manual, 6.57 inches of soil storage is available.

3. Compute composite site soil moisture storage: (S)

Pervious Area

+ ----- X Soil Storage
Total Site Area

$$= 75.77 \text{ Ac.} / 256.35 \text{ Ac.} \times 6.57 \text{ inches}$$

$$= 1.94 \text{ inches of soil storage available over the entire site.}$$

D. 100 Year - 3 Day Rainfall

1. Total Rainfall: (P)

$$= 100 \text{ year rainfall} \times 1.359$$

$$= 14.75 \text{ inches} \times 1.359$$

$$+ 20.04 \text{ inches}$$

2. Calculate total volume of runoff:

a. Reducing for ground storage:

$$(P - 0.2S)^2 / (P + 0.8S)$$

$$= (20.04 - (.2 \times 1.94)^2) / (20.04 + (.8 \times 1.94))$$

$$= 17.89 \text{ inches of total runoff (Q)}$$

London Sparks
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b. Volume of runoff:

= 0 X Project Area

= 17.89 inches X 1 Ft./12 In. X 256.35 Ac.= 382.18 Ac.-Ft. of runoff

3. The 100 year - 3 day elevation:

a. From the stage-storage curve, 382.18 Ac.-Ft. of runoff generates a 100 year - 3 day elevation of 6.97 NGVD.

b. The minimum building floor elevation shall be at least as high as the 100 year - 3 day storm, zero discharge runoff.

E. Weir Design Calculations

1. Assumptions:

a. Size weir for the allowable peak discharge.

b. Maximum design head is based on the design storm, 25YR-3DAY, no discharge elevation.

c. Size the detention discharge weir (bleed-down device) to discharge not more than 0.5 inches of the detained volume per day. A V-notch is preferable.

2. Computations:

mfa/102-16

London Sparks
6/20/89

Company Name..... Craven Thompson & Associates, Inc.
Execution Date..... 02-16-1989

Program Name..... SCS -- (05/06/86)

Project Name..... alandco
Engineer's Name..... ges
Project Area..... 256.35 acres
Ground Storage..... 1.94 inches
Termination Discharge..... 10 cfs
Distribution Type..... SFWMD
Return Frequency..... 100 years
Rainfall Duration..... 3 -day
24-hr Rainfall..... 14.75 inches
Reporting Sequence..... Standardized

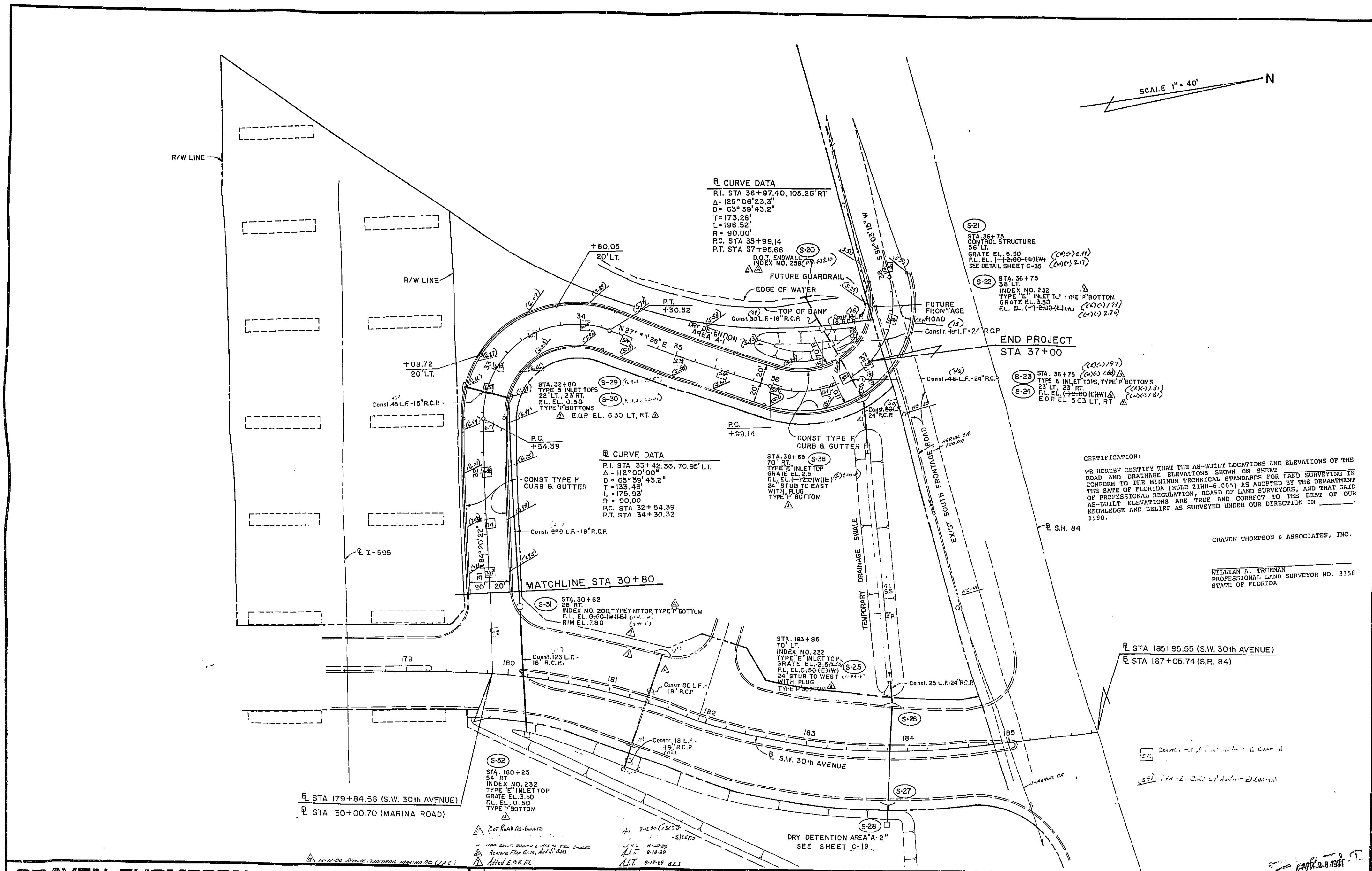
Storage Information.....	Component Name	Storage Type	Area (acres)	Start Elev (NGVD-ft)	Ending Elev (NGVD-ft)
Entry No. 1.....	pavement	1	89.6	5.0	6.75
Entry No. 2.....	site	1	72.3	3.0	7.0
Entry No. 3.....	lake	v	26.0	2.0	
Entry No. 4.....	lake bank	1	3.5	2.0	5.0

Point No.	Stage (ft)	Storage (af)	Discharge (cfs)
1	2.00	0.00	0.00
2	2.50	13.15	0.00
3	3.00	26.58	0.00
4	3.50	42.57	0.00
5	4.00	63.37	0.00
6	4.50	88.98	0.00
7	5.00	119.40	0.00
8	5.50	160.83	0.00
9	6.00	219.69	0.00
10	6.50	295.81	0.00
11	7.00	387.65	0.00
12	7.50	483.35	0.00
13	8.00	579.05	0.00

----- R E S E R V O I R -----									
Time (hr)	Rain fall (in)	Accum. Runoff (in)	Basin Dischge (cfs)	Accum. Inflow (af)	Volume (af)	Accum. Outflow (af)	Instant Dischge (cfs)	Average Dischge (cfs)	Stage (ft)
0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	2.00
4.00	0.36	0.00	0.0	0.0	0.0	0.0	0.0	0.0	2.00
8.00	0.72	0.05	6.1	1.0	1.0	0.0	0.0	0.0	2.04
12.00	1.08	0.18	10.5	3.9	3.9	0.0	0.0	0.0	2.14
16.00	1.44	0.37	13.3	7.8	7.8	0.0	0.0	0.0	2.29
20.00	1.79	0.59	15.3	12.6	12.6	0.0	0.0	0.0	2.47
24.00	2.15	0.84	16.8	18.0	18.0	0.0	0.0	0.0	2.67
28.00	2.68	1.24	26.7	26.5	26.5	0.0	0.0	0.0	2.99
32.00	3.20	1.66	28.2	35.6	35.6	0.0	0.0	0.0	3.27
36.00	3.72	2.11	29.2	45.1	45.1	0.0	0.0	0.0	3.55
40.00	4.25	2.57	30.0	54.9	54.9	0.0	0.0	0.0	3.79
44.00	4.77	3.04	30.6	64.9	64.9	0.0	0.0	0.0	4.02
48.00	5.30	3.52	31.1	75.1	75.1	0.0	0.0	0.0	4.22
52.00	5.96	4.13	49.8	88.3	88.3	0.0	0.0	0.0	4.48
56.00	7.32	5.41	108.8	115.6	115.6	0.0	0.0	0.0	4.92
58.00	8.44	6.49	161.3	138.6	138.6	0.0	0.0	0.0	5.21
59.00	9.26	7.28	236.0	155.6	155.6	0.0	0.0	0.0	5.41
59.50	10.00	8.00	370.2	170.9	170.9	0.0	0.0	0.0	5.57
59.75	12.49	10.43	2510.1	222.7	222.7	0.0	0.0	0.0	5.81
60.00	14.97	12.87	2528.0	275.0	275.0	0.0	0.0	0.0	6.19
60.50	16.05	13.93	549.7	297.7	297.7	0.0	0.0	0.0	6.47
61.00	16.61	14.49	286.4	309.5	309.5	0.0	0.0	0.0	6.56
62.00	17.36	15.23	173.5	325.4	325.4	0.0	0.0	0.0	6.65
64.00	18.28	16.14	113.3	344.7	344.7	0.0	0.0	0.0	6.76
68.00	19.34	17.19	68.0	367.2	367.2	0.0	0.0	0.0	6.88
72.00	20.05	17.89	45.4	382.2	382.2	0.0	0.0	0.0	6.97

Maximum Stage = 6.97 feet
Maximum Discharge = 0.00 cfs

Gordon Sparks
4/20/89





CRAVEN THOMPSON & ASSOCIATES INC.
ENGINEERS • PLANNERS • SURVEYORS
5901 N.W. 31st AVE • FT. LAUDERDALE, FLORIDA 33309 • (305) 971-7770

REVISIONS		DATE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED BY:
1	Added E.C.P.	6-22				
2	Added E.C.P.	6-22				
3	Added INLET BOTTOM TYPE	6-27				
4	Added F.L. GATE	6-27				
5	Added F.L. GATE	6-27				
6	Added F.L. GATE	6-27				
7	Added F.L. GATE	6-27				
8	Added F.L. GATE	6-27				
9	Added F.L. GATE	6-27				
10	Added F.L. GATE	6-27				

PLAN SHEET

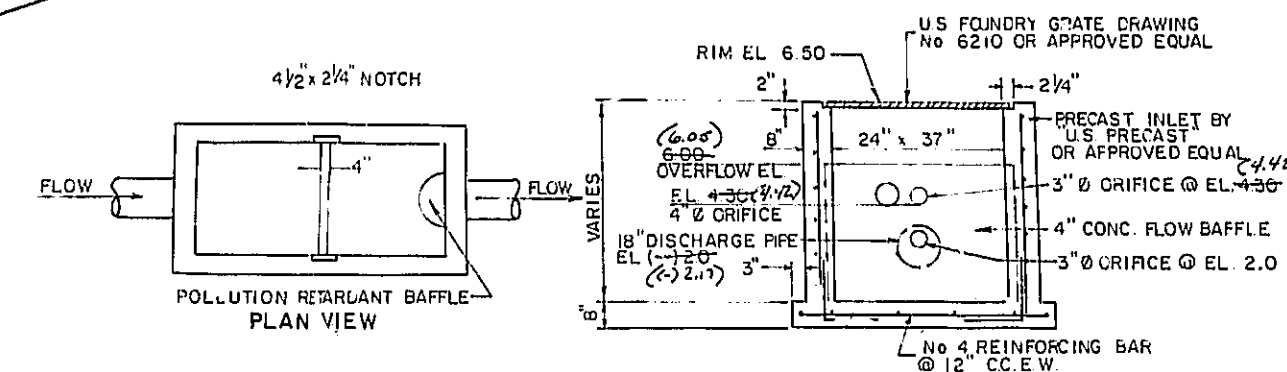
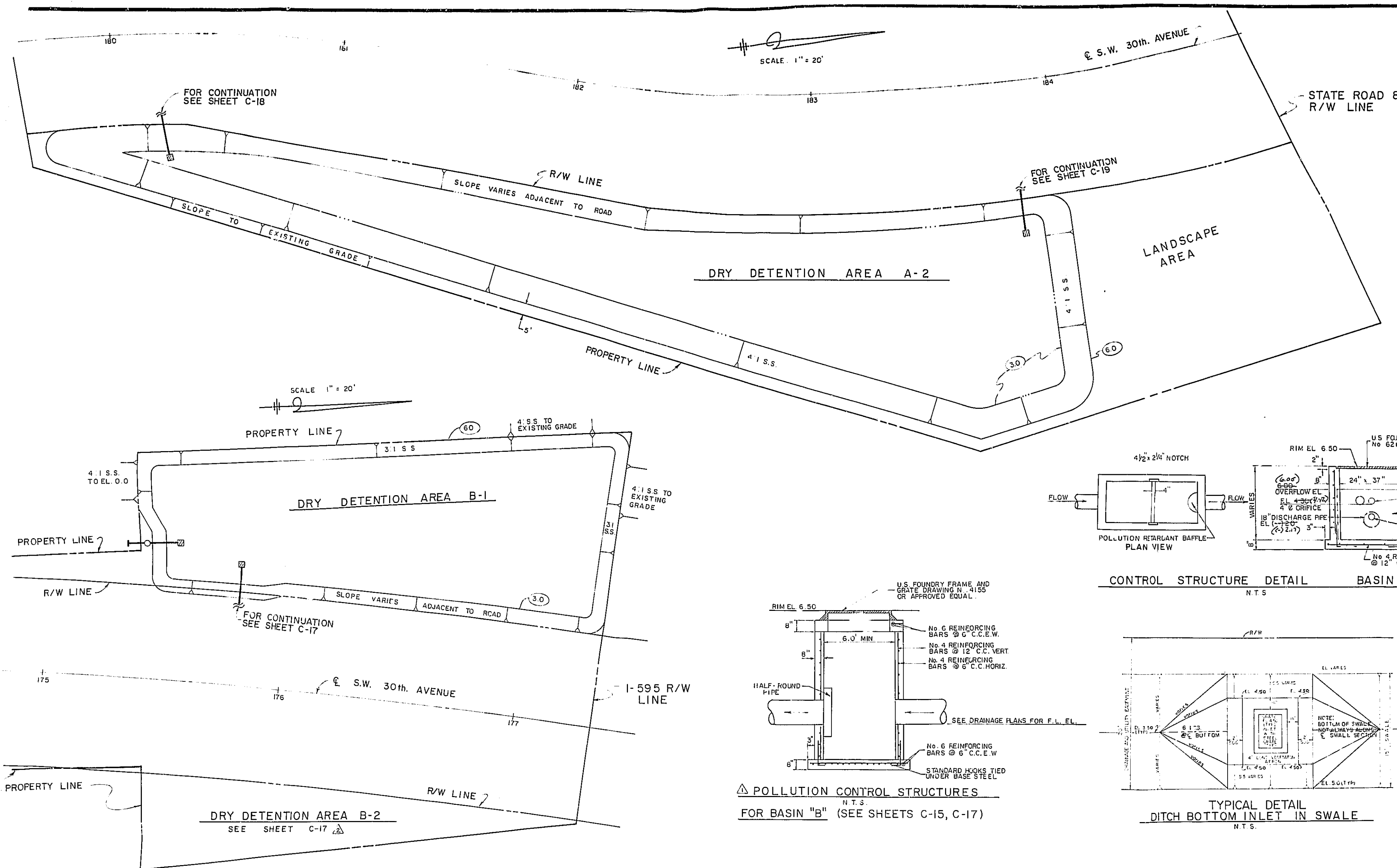
MARINA ROAD

JOB NO.
84-0217

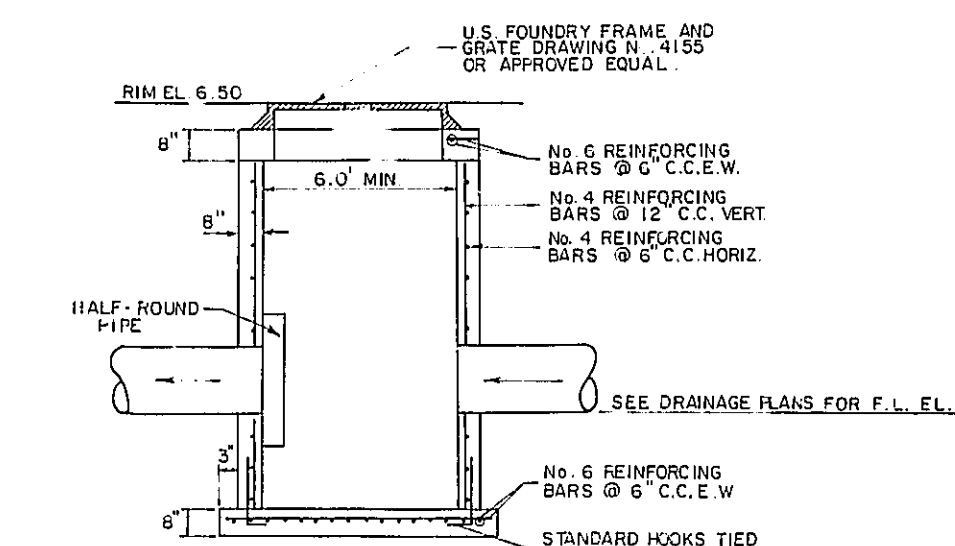
SCALE:
1" = 40'

SHEET
C-31 OF 52

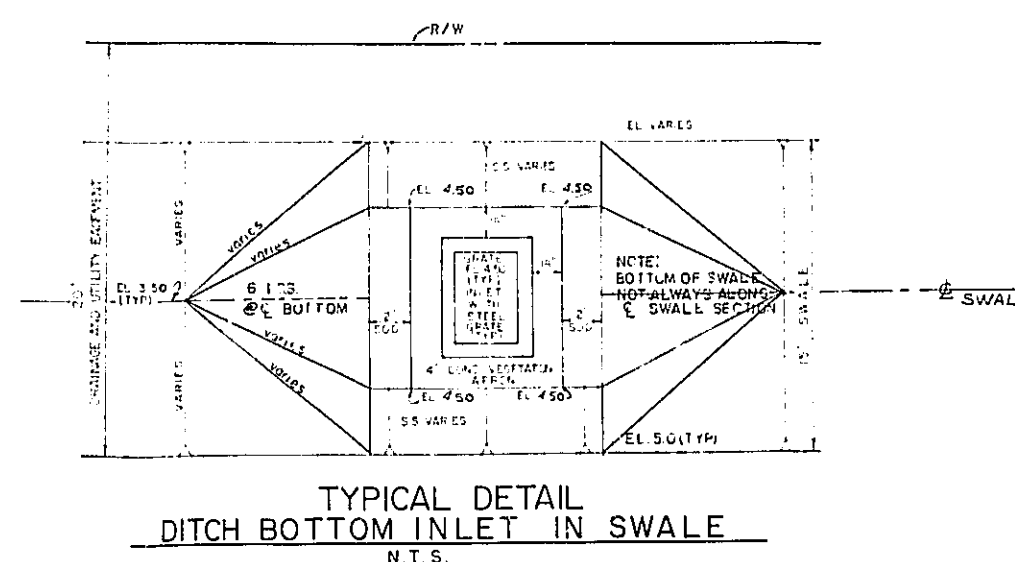
06-01010-5



CONTROL STRUCTURE DETAIL BASIN "A"
N.T.S.



POLLUTION CONTROL STRUCTURES
FOR BASIN "B" (SEE SHEETS C-15, C-17)
N.T.S.



TYPICAL DETAIL
DITCH BOTTOM INLET IN SWALE
N.T.S.

CRAVEN · THOMPSON & ASSOCIATES INC.



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OFFICES: FORT LAUDERDALE, WEST PALM BEACH

REVISION	DESCRIPTION	BY	DATE	CHKD.
1	REVISED MANHOLE DETAIL	ET	8-10-89	GES
2	REVISION SHEET NO.	ET	8-10-89	GES
3				
4				
5				
6				
7				
8				
9				
10				

DATE: LINE, 1990
DESIGNED BY: G.S.
DRAWN BY: J.A.C.
CHECKED BY:
APPROVED BY:

ALANDCO
PORT 95 COMMERCE PARK
SUB BASINS "A" AND "B" DRY DETENTION AREAS
AND CONTROL STRUCTURE DETAILS

JOB NO.:
84-0217
SCALE:
AS SHOWN
SHEET:
C-35 OF 52

06-01010-5