Exhibit B

Preliminary Site Plan

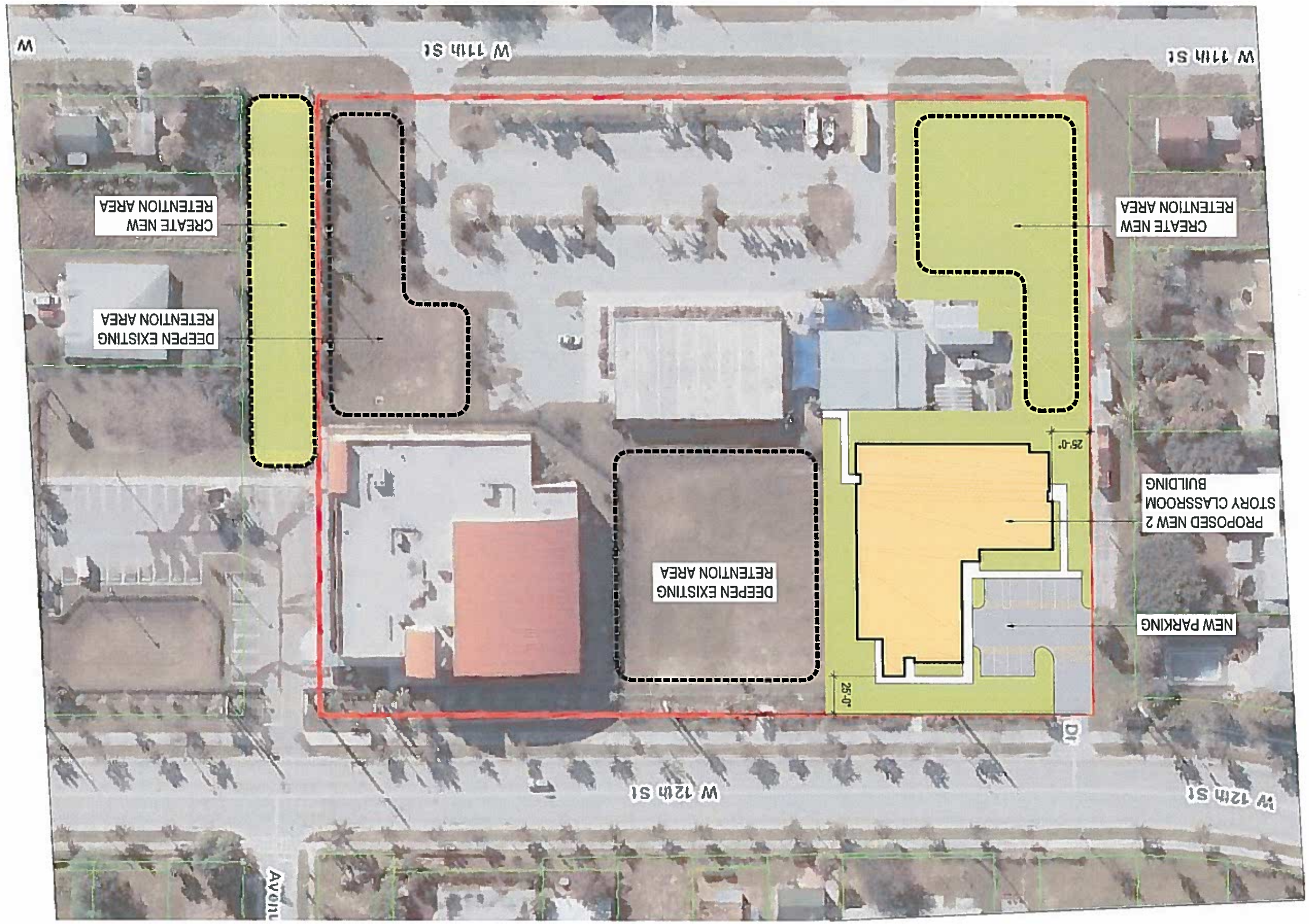
The community of Riviera Beach is currently comprised of 8,122 people under the age of 18.[1] While the City has several fine schools, with a number of youth this high another venue for education is necessary and will help to provide more individualized and personalized teaching to the students. The RBMA is poised to continue to provide education to the City of Riviera Beach and its surrounding areas with this brand new, twenty-eight thousand square foot classroom building. The expansion will allow the RBMA to enroll significantly more students to the program and provide a significantly higher class of education to all current and future students. As an added benefit, the design of the school and its façade will complement the area and existing school facilities giving it a purposeful, but aesthetically pleasing appeal. Though no amenities other than the school are planned, RBMAC will deepen and expand retention areas on the property.

What follows below and in the corresponding addenda to this Tab are the relevant site plans, design work, engineering, and architectural schematics necessary to complete this expansion and to demonstrate the full scope and scale of the proposed school.

Presentation Drawings:

1. Aerial overlay of expansion footprint and new retention areas.
2. First and Second floor plans
3. Visual depiction of the North Elevation of the expansion
4. Visual depiction of the East Elevation of the expansion
5. Visual depiction of the South Elevation of the expansion
6. Visual depiction of the West Elevation of the expansion
7. Topographic Survey of the premises
8. Landscape plan
9. Irrigation plan
10. Architectural Schematics and Interior Design plans
11. Demolition plan
12. Civil Engineering drawings
13. Site demolition and erosion control plan
14. Signing, striping, and geometric plan
15. Paving, grading, and drainage plan
16. Potable water and sanitary sewer plan
17. Electrical plan
18. Light fixture plan
19. Fire alarm plan
20. Electric panelboard drawings
21. Fire sprinkler plan
22. Parking and gate drawings
23. Life safety plan
24. Mechanical plans
25. Plumbing plans
26. Structural plans

[1] According to the 2010 Census; information available here http://quickfacts.census.gov/qfd/states/12/1260975.html.



01 CONCEPT SITE PLAN

SCALE: 1"=60'

NEW CLASSROOM BUILDING

RIVIERA BEACH MARITIME ACADEMY

RIVIERA BEACH, FLORIDA

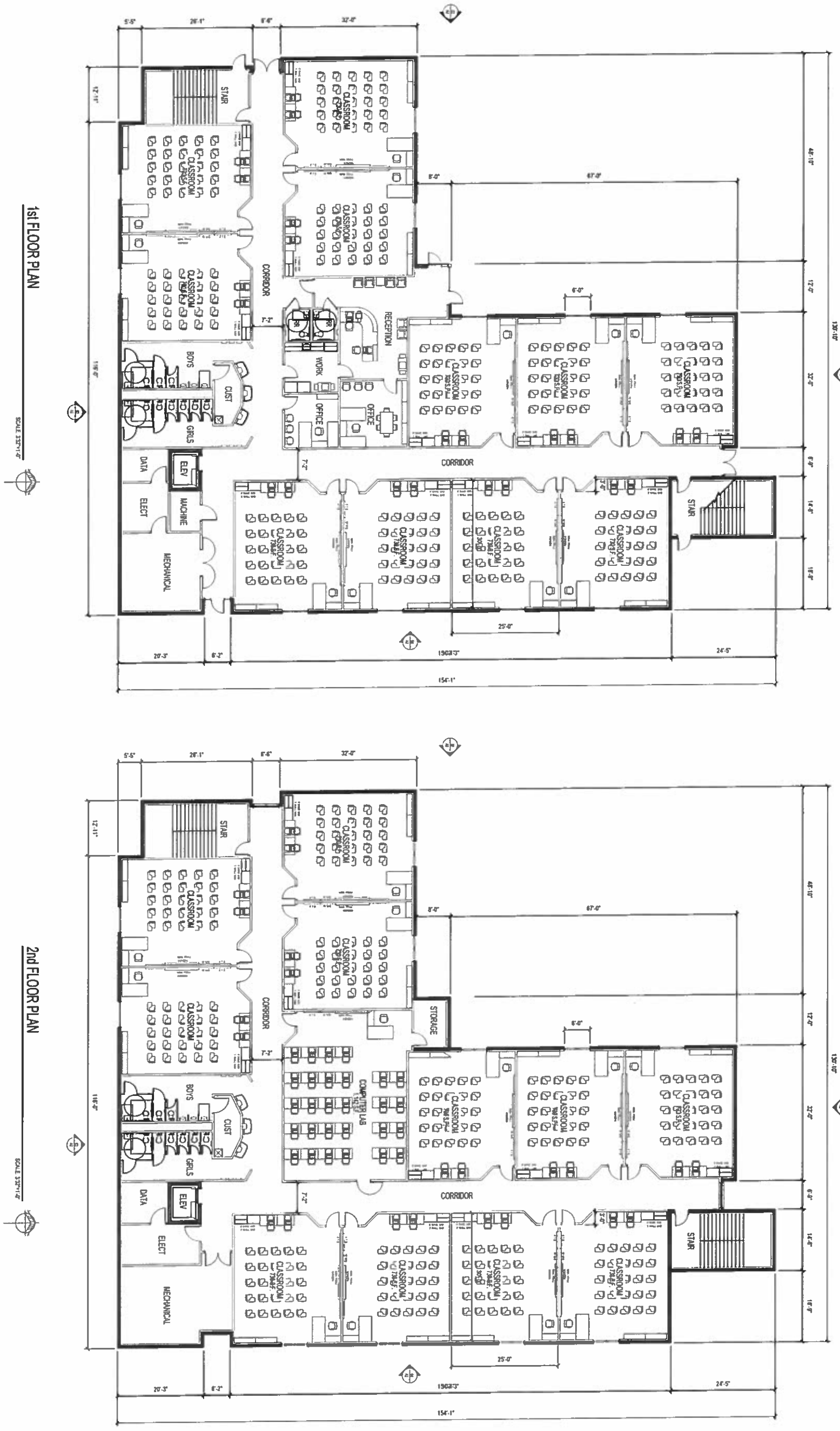
commission	X
date:	1-7-14
revision	date
no.	
drawing	

G1

copyright 2014

Rene Tercilla AIA, NEFP

tercilla courtemanche architects
AA 0003111
2017 vista parkway; suite 100
west palm beach, florida 33411 ph: 561.478.4457 fx: 561.478.1692



1st FLOOR PLAN

SCALE 1/32"=1'-0"

2nd FLOOR PLAN

SCALE 1/32"=1'-0"

AREA TABULATION

1ST FLOOR = 14,190 GSF
2ND FLOOR = 13,432 GSF
TOTAL GSF = 27,622 GSF

NEW CLASSROOM BUILDING

RIVIERA BEACH MARITIME ACADEMY

RIVIERA BEACH, FLORIDA

tercilla courtemanche architects
AA 0003414
2047 vista parkway, suite 100
west palm beach, florida 33411 ph: 561.478.4457 fx: 561.478.4102

commission X
date: 1-7-14
revision date
no.

drawing A1

Rene Tercilla AIA, REFP

tercilla *courtemanche* architects, inc.

The Weitz Company

North Elevation

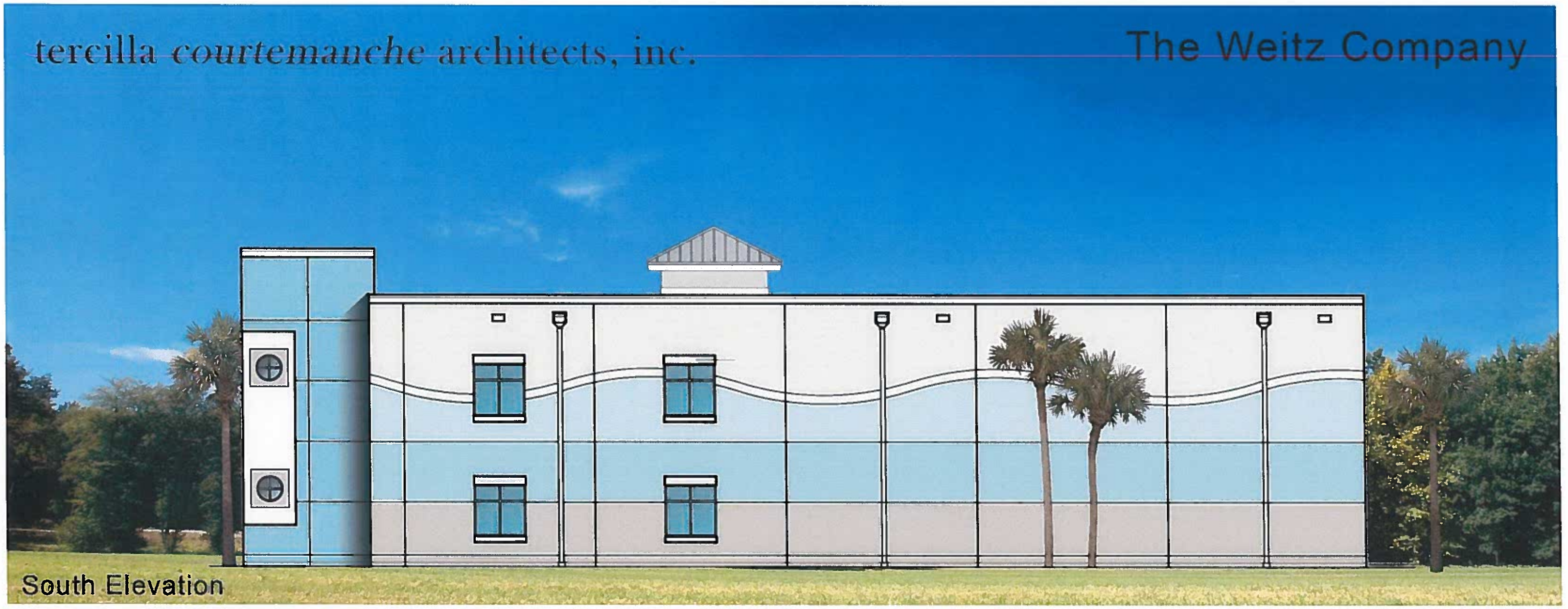
tercilla *courtemanche* architects, inc.

The Weitz Company

East Elevation

tercilla *courtemanche* architects, inc.

The Weitz Company

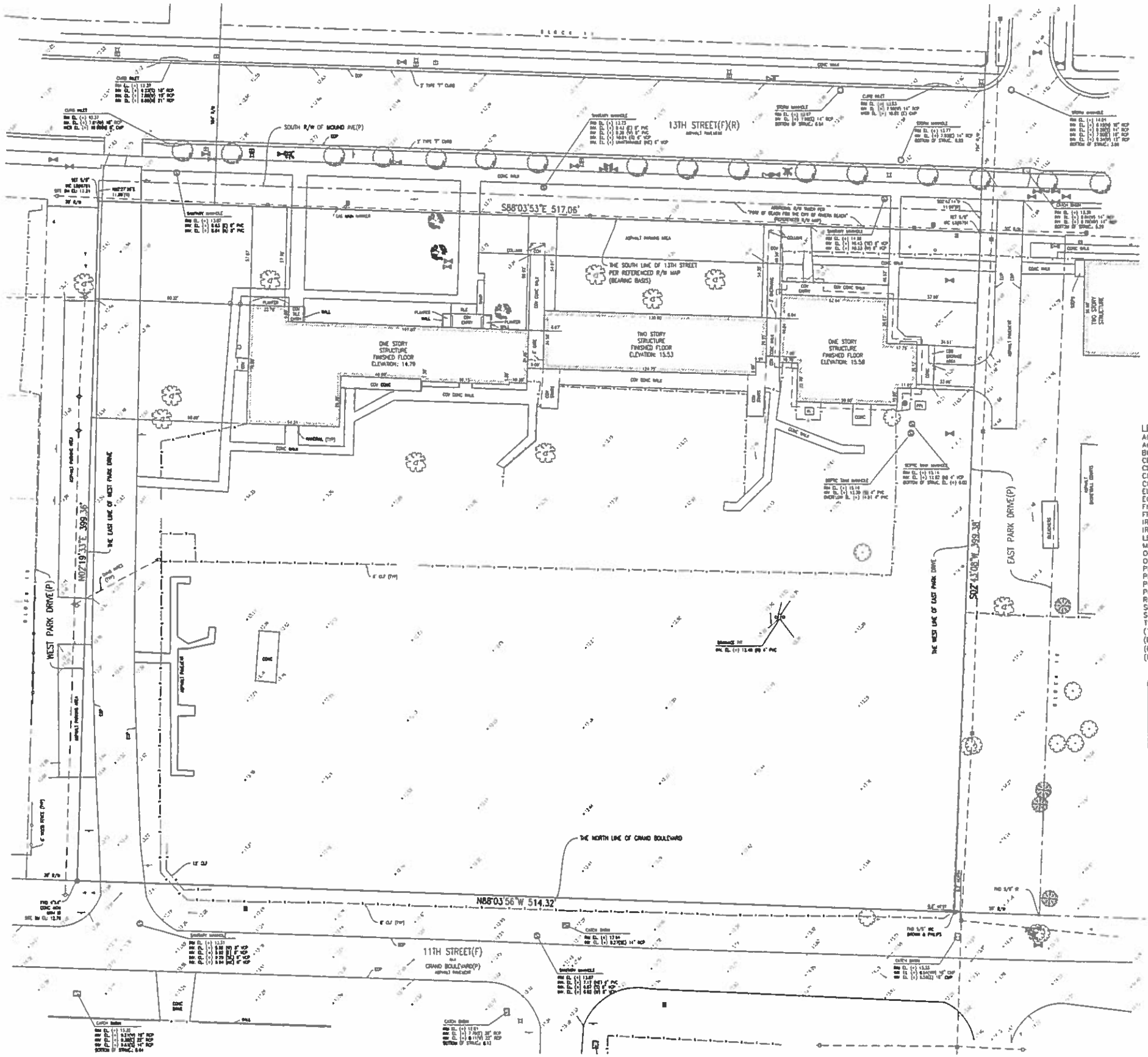


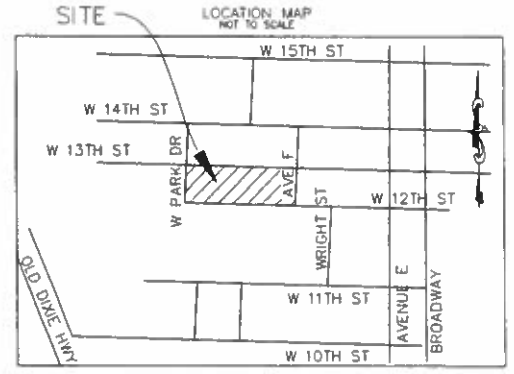
South Elevation

tercilla *courtemanche* architects, inc.

The Weitz Company

West Elevation





NORTH

(IN FEET)
1 inch = 30 ft.

REFERENCE DRAWINGS:

1 RIGHT-OF-WAY MAP: PORT OF PALM BEACH FOR THE CITY OF RIVIERA BEACH
- WEST 13TH STREET, AVENUE "C" AND WEST 11TH STREET

SFRN NUMBER PROJECT NUMBER: 00022
DRAWING NO. 00022CVR.DWG

FLOOD ZONE INFORMATION

Community Name: RIVIERA BEACH
Community Number: 125142
County Name: Palm Beach County
State: Florida Map & Panel Number: 0003
Suffix: D
F.I.R.M. Index Date: September 30, 1983
Flood Zone: C

CERTIFIED TO:

VIKING ASSOCIATES

LEGEND

AC	AIR CONDITIONER
AKA	ALSO KNOWN AS
BM	BENCHMARK
CBS	CONCRETE BLOCK
CLF	CHAIN LINK FENCE
CONC	CONCRETE
COV	COVERED
EL	ELEVATION
EOP	EDGE OF PAVEMENT
FND	FOUND
FPL	FLORIDA POWER AND LIGHT
IR	IRON ROD
IRC	IRON ROD AND CAP
LB	LICENSED BUSINESS
MON	MONUMENT
ORB	OFFICIAL RECORDED DOCUMENT
OVHD	OVERHEAD WIRE
PB	PLAT BOOK
PBC	PALM BEACH COUNTY
PG	PAGE
PK	PARKER KALON NAIL
RNG	RANGE
SEC	SECTION
ST	STREET
TWP	TOWNSHIP
(TYP)	TYPICAL
(P)	PER PLAT
(F)	FIELD ACQUIRED
(R)	PER REFERENCED RIGHT-OF-WAY MAP

SYMBOL LEGEND

SYMBOL	DESCRIPTION
○	BOLLARD
-○-	WOOD POWER POLE
⊠	CONCRETE POLE
⊠	LIGHT POLE
⊹	GUY ANCHOR
—	MISCELLANEOUS SIGN
⋈	WATER VALVE
⋈	GATE VALVE
⋈	IRRIGATION VALVE
⋈	CONTROL VALVE
Ⓢ	SANITARY MANHOLE
	FIRE HYDRANT
◪	CONCRETE GUIDE POLE
WM	WATER METER
CB	CATCH BASIN
E	ELECTRIC HANDHOLE
T	TRAFFIC HANDHOLE
⊙	SANITARY CLEANOUT
W	WELL
Ⓢ	STORM MANHOLE
x x x	CHAINLINK FENCE

SURVEYOR'S NOTES:

1 NOT VALID UNLESS SIGNED AND EMBOSSED WITH A SURVEYOR'S SEAL.

2. THIS SURVEY, AS SHOWN HEREON, HAS BEEN PREPARED FOR THE EXCLUSIVE BENEFIT AND USE OF THE CLIENT NAMED HEREON, AND IS NOT INTENDED FOR ANY REUSE WITHOUT THE WRITTEN CONSENT BY THIS SURVEYOR OF RECORD.

3. LANDS SHOWN HEREON WERE NOT ABSTRACTED, BY THE SURVEYOR, FOR RIGHT-OF-WAY, EASEMENTS, OWNERSHIP OR OTHER INSTRUMENTS OF RECORD.

4. THE SUBJECT PROPERTY, AS SHOWN HEREON, MAY BE SUBJECT TO ANY EXISTING RIGHT-OF-WAY, RESTRICTIONS, AND SETBACK LINES WHETHER OR NOT THEY MAY BE SHOWN HEREON, OR WHETHER OR NOT INSTRUMENT IS RECORDED IN THE PUBLIC RECORDS.

5. UNLESS OTHERWISE NOTED, THIS FIRM HAS NOT ATTEMPTED TO LOCATE UNDERGROUND UTILITIES, FOOTINGS AND/OR FOUNDATIONS.

6. NO SEARCH OF THE PUBLIC RECORDS WAS PERFORMED BY THIS OFFICE.

7. BEARINGS SHOWN HEREON ARE BASED UPON THE SOUTH RIGHT-OF-WAY LINE OF 13TH STREET AS SHOWN ON REFERENCED RIGHT-OF-WAY MAP, SAID LINE HAVING A BEARING OF S88°03'53"E, AND ALL OTHER BEARINGS SHOWN HEREON ARE RELATIVE THERETO.

8. THE LEGAL DESCRIPTION SHOWN HEREON WAS PROVIDED BY THE CLIENT, AND WITHOUT THE BENEFIT OF THE TITLE REPORT.

9. ELEVATION SHOWN HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.) OF 1929. REFERENCE PALM BEACH COUNTY PUBLISHED BENCHMARK "REDEYE", EL.=7.281 FEET.
MONUMENT TYPE: PALM BEACH COUNTY BRASS DISK IN CONCRETE MONUMENT.
DESCRIPTION: TO REACH THE STATION FROM THE INTERSECTION OF US-1 (BROADWAY) AND 59TH STREET, GO EAST ON 59TH STREET FOR 0.2 MILE TO DIXIE HIGHWAY, THE STATION IS AT THE SOUTHEAST CORNER OF THE INTERSECTION OF 59TH STREET AND DIXIE HIGHWAY.
THE STATION IS A PALM BEACH COUNTY BRASS DISK IN A ROUND CONCRETE MONUMENT STAMPED "REDEYE". THE STATION IS LOCATED 18.58 FEET SOUTHWEST OF AN X-CUT 2.5 FEET UP THE SOUTHEAST CORNER OF A CONCRETE POLE, 10.59 FEET NORTHWEST OF AN X-CUT SET ON TOP OF THE EASTERN CONCRETE CURB FOR DIXIE HIGHWAY, AND 51.05 FEET SOUTHEAST OF A POWER POLE

LEGAL DESCRIPTION:

A PART OF OSCEOLA PARK, AS SHOWN ON THE PLAT OF RIVIERA PLAT BOOK 2, PAGES 90 AND 91, OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BOUNDED ON THE NORTH BY THE SOUTH LINE OF MOUND AVENUE WHEN PRODUCED WEST TO CONNECT WITH THE EAST BOUNDARY LINE OF WEST PARK DRIVE; BOUNDED ON THE EAST BY THE WEST BOUNDARY LINE OF EAST PARK DRIVE; BOUNDED ON THE WEST BY THE EAST BOUNDARY LINE OF WEST PARK DRIVE; BOUNDED ON THE SOUTH BY THE NORTH BOUNDARY LINE OF GRAND BOULEVARD WHEN PRODUCED WEST ACROSS PARK DRIVE; AS ALL OF SAID STREETS AND BOUNDARY LINES APPEAR IN RIVIERA, A SUBDIVISION IN THE TOWN OF RIVIERA, ACCORDING TO THE PLAT OF SAID SUBDIVISION ON FILE IN THE OFFICE OF THE CLERK OF THE CIRCUIT COURT OF PALM BEACH COUNTY, FLORIDA, IN PLAT BOOK 2, PAGES 90 AND 91

TOTAL CONTAINING: 4.728 ACRES MORE OR LESS

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS "SKETCH OF BOUNDARY SURVEY" OF THE PROPERTY DESCRIBED HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS RECENTLY SURVEYED AND DRAWN UNDER MY SUPERVISION. THIS SKETCH COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS SET FORTH BY THE FLORIDA STATE BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE PURSUANT TO 472.027 FLORIDA STATUTES.

CALVIN, GIORDANO & ASSOCIATES, INC.

Signed _____ Dated Signed: _____

RONNIE L. FURNISS
Professional Surveyor and Mapper No. 6272
State of Florida

LAST DATE OF FIELDWORK: 03-29-06 FIELD BOOK/PAGE: P-42/4-34

NO	DATE	REVISION	BY

NO	DATE	REVISION	BY

DESIGNED
DATE
DRAWN C.T.V.
DATE 03-27-06
CHECKED R.L.F.
DATE 03-30-06

Calvin, Giordano & Associates, Inc.
Engineers Surveyors Planners
560 Village Boulevard, Suite 340
West Palm Beach, Florida 33409
Phone: 561.684.6141 Fax 561.684.6360
CERTIFICATE OF AUTHORIZATION NO. LB 6791

VIKING ASSOCIATES

PROPOSED VIKING MARITIME SCHOOL SITE
RIVIERA BEACH, FLORIDA
BOUNDARY/TOPO SURVEY

APPROVED

SCALE 1" = 30'
PROJECT No 05-3017.3
CAD FILE

SHEET 1 / 1
OF

Z:\2005\05-3017 - Viking Marine\SURVEY\SKETCH\05-3017-V-BS.dwg 2/20/2006 9:31:02 AM EST

NEW CLASSROOM BUILDING

RIVIERA BEACH MARITIME ACADEMY

RIVIERA BEACH, FLORIDA

ARCHITECT'S PROJECT NO. 214031.00

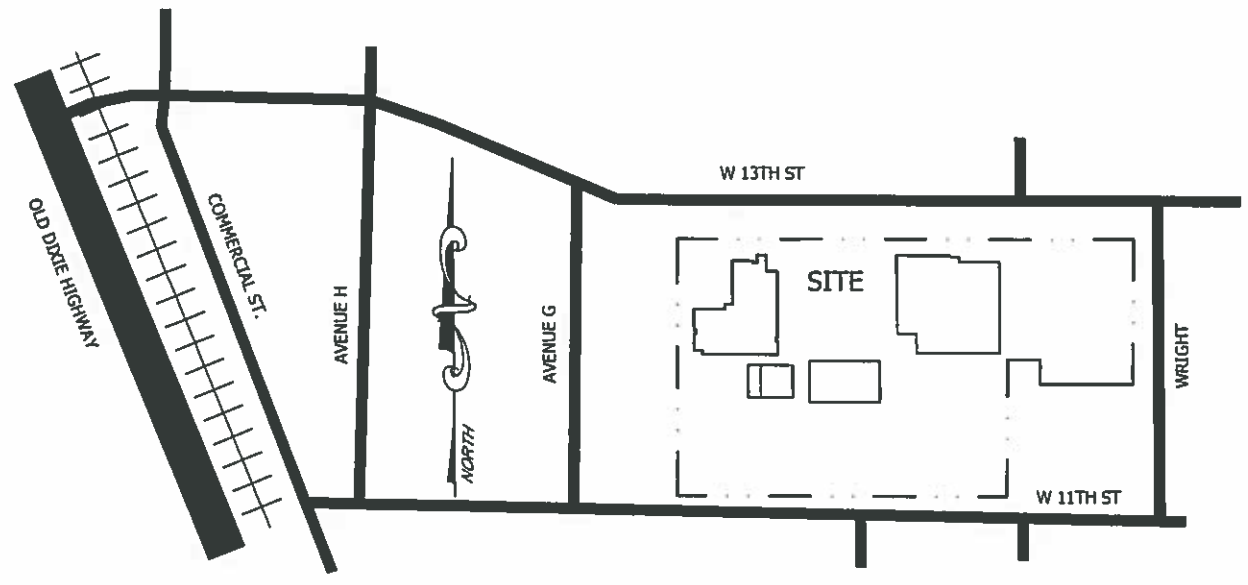
ARCHITECT OF RECORD:
HARVARD JOLLY ARCHITECTURE
2047 VISTA PARKWAY, SUITE 100 WEST
PALM BEACH, FL 33411 PHONE:
561-478-4457 FAX: 561-478-4102

MECHANICAL ELECTRICAL PLUMBING & FIRE ENGINEER:
RGD CONSULTING ENGINEERS
1003 JUPITER PARK LANE SUITE #2
JUPITER, FLORIDA 33458 PHONE:
561-743-0165 FAX: 561-743-0193

CIVIL ENGINEER:
CIVIL DESIGN , INC.
312 9th STREET WEST PALM BEACH,
FLORIDA 33401 PHONE: 561-659-5760
FAX: 561-659-5772

LANDSCAPE ARCHITECT:
Conceptual Design Group, Inc.
900 EAST OCEAN BOULEVARD, SUITE 130D
STUART, FLORIDA 34994
(561) 371-1644

GENERAL CONTRACTOR:
THE WEITZ COMPANY
1720 CENTREPARK DRIVE EAST
WEST PALM BEACH, FL 33401
P: 561-687-4816 F: 561-681-3316



SITE LOCATION MAP
N.T.S.

HARVARD•JOLLY ARCHITECTURE
Ft. Lauderdale 954-486-7910
Ft. Myers 239-275-7774
Jacksonville 904-396-3300
Orlando 407-647-7777
Punta Gorda 941-575-0403
St. Petersburg 727-866-4611
Tampa 813-288-1808
West Palm Beach 561-478-4457
AA0003119
www.HarvardJolly.com
WEST PALM BEACH, FL

NEW CLASSROOM BUILDING
RIVIERA BEACH MARITIME ACADEMY
RIVIERA BEACH, FLORIDA
CONTRUCTION DOCUEMENTS

Comm. No: 214031.00
Date: 09-24-14
Drawn:
Revised:

René Tercilla AIA, REFP

COV.1

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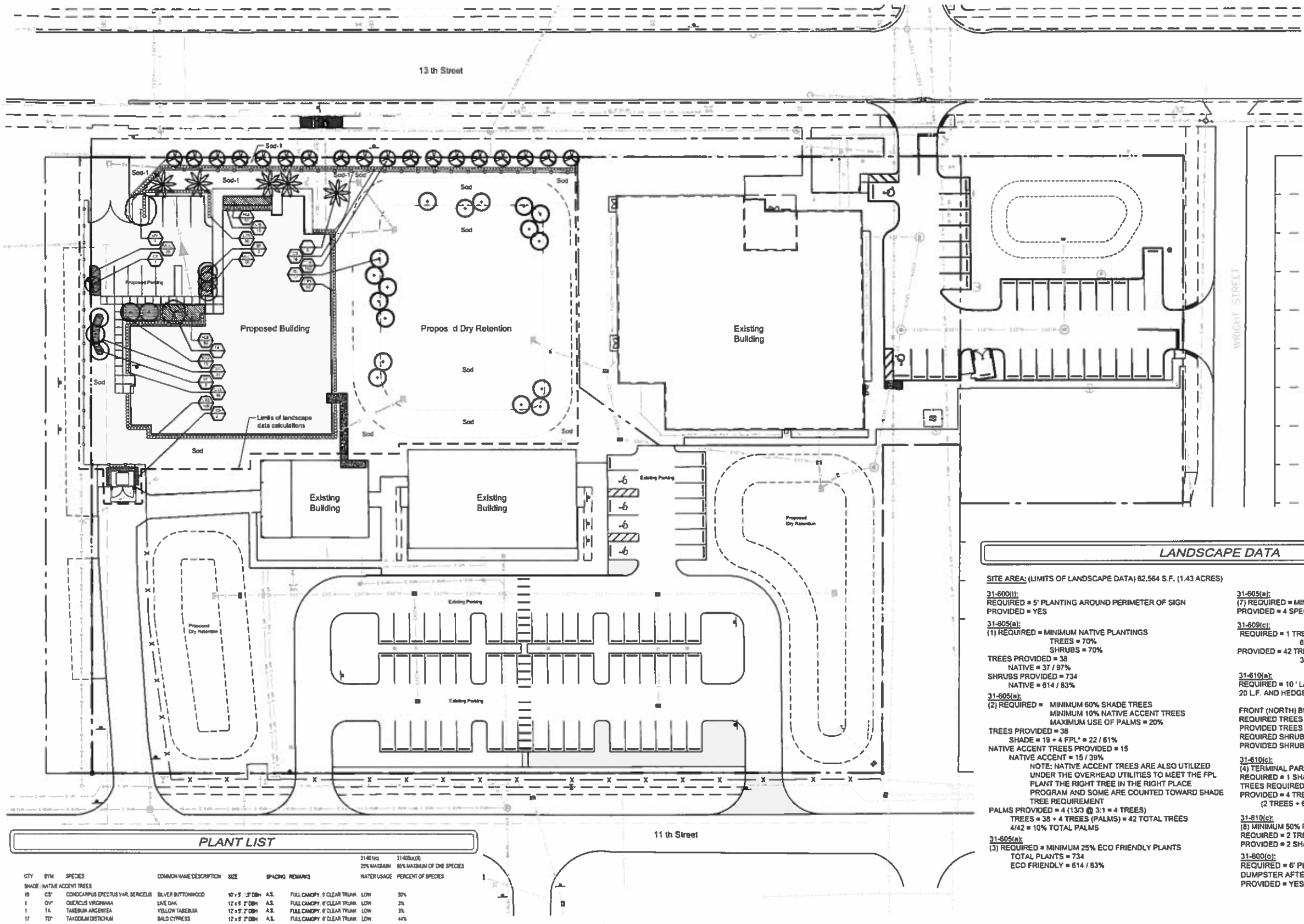


PLANT LIST

QTY	SYM	SPECIES	COMMON NAME/DESCRIPTION	SIZE	SPACING	REMARKS	WATER USAGE	31-601(c) 25% MAXIMUM	31-605(e)(8) 65% MAXIMUM OF ONE SPECIES PERCENT OF SPECIES
SHADE / NATIVE ACCENT TREES									
89	CS*	CONOCARPUS ERECTUS VAR. SERICEUS	SILVER BUTTONWOOD	16' x 5" - 3" DBH	A.S.	FULL CANOPY, 5' CLEAR TRUNK	LOW		50%
6	QV*	QUERCUS VIRGINIANA	LIVE OAK	12' x 5", 2" DBH	A.S.	FULL CANOPY, 6' CLEAR TRUNK	LOW		3%
1	TA	TABEBUIA ARGENTEA	YELLOW TABEBUIA	12' x 5", 2" DBH	A.S.	FULL CANOPY, 6' CLEAR TRUNK	LOW		3%
17	TD*	TAXODIUM DISTICHUM	BALD CYPRESS	12' x 5", 2" DBH	A.S.	FULL CANOPY, 6' CLEAR TRUNK	LOW		44%
PALMS									
8	RE*	ROYSTONEA ELATA	FLORIDA ROYAL PALM	12' C.T.	A.S.	MATCHED	LOW		
8	SP*	SABAL PALMETTO	SABAL PALM	SEE PLAN	A.S.	SLICK TRUNKS	LOW		
SHRUBS / GROUND COVERS									
243	CS*	CONOCARPUS ERECTUS VAR. SERICEUS	SILVER BUTTONWOOD	#3, 7' x 7'	7' O.C.	FULL & THICK	LOW		
21	CES-1*	CONOCARPUS ERECTUS VAR. SERICEUS	SILVER BUTTONWOOD	#7, 4' x 3'	3' O.C.	FULL & THICK	LOW		
158	CHI*	CHRYSOBALANUS ICACO	COCOPLUM	#1, 2' x 2'	2' O.C.	FULL & THICK	LOW		
136	FCI	FICUS MICROCARPA 'GREEN ISLAND'	FICUS GREEN ISLAND	#1, 12" x 18"	7' O.C.	FULL & THICK	LOW		
70	MUC*	MUHLENBERGIA CAPILARIS	MUHLY GRASS	#1, 2' x 2'	2' O.C.	FULL & THICK	LOW		
105	NEB*	NEPHROLEPIS EXALTATA	BOSTON FERN	#7, 12" x 12"	2' O.C.	FULL & THICK	LOW		
169	TDD*	TRIPSACUM DACTYLOIDES DWARF	DWARF FAKAHATCHEE GRASS	#3, 2' x 2'	3' O.C.	FULL & THICK	LOW		
15	VIS	VIBURNUM SUSPENSUM	SANDANKWA VIBURNUM	#3, 2' x 2'	3' O.C.	FULL & THICK	LOW		
	SOD	PASPALUM NOTATUM	BAHIA SOD	SEE SPEC'S			LOW		
	SOD-1	STENOTAPHRUM SECUNDATUS	ST. AUGUSTINE SOD	SEE SPEC'S			MEDIUM - HIGH		

* = FLORIDA NATIVE

LANDSCAPE DATA

SITE AREA: (LIMITS OF LANDSCAPE DATA) 62,564 S.F. (1.43 ACRES)

31-600(i):
REQUIRED = 5' PLANTING AROUND PERIMETER OF SIGN
PROVIDED = YES

31-605(a):
(1) REQUIRED = MINIMUM NATIVE PLANTINGS
TREES = 70%
SHRUBS = 70%
TREES PROVIDED = 38
NATIVE = 37 / 97%
SHRUBS PROVIDED = 734
NATIVE = 614 / 83%

31-605(a):
(2) REQUIRED = MINIMUM 60% SHADE TREES
MINIMUM 10% NATIVE ACCENT TREES
MAXIMUM USE OF PALMS = 20%
TREES PROVIDED = 38
SHADE = 19 + 4 FPL* = 22 / 61%
NATIVE ACCENT TREES PROVIDED = 15
NATIVE ACCENT = 15 / 39%
NOTE: NATIVE ACCENT TREES ARE ALSO UTILIZED UNDER THE OVERHEAD UTILITIES TO MEET THE FPL PLANT THE RIGHT TREE IN THE RIGHT PLACE PROGRAM AND SOME ARE COUNTED TOWARD SHADE TREE REQUIREMENT
PALMS PROVIDED = 4 (13/3 @ 3:1 = 4 TREES)
TREES = 38 + 4 TREES (PALMS) = 42 TOTAL TREES
4/42 = 10% TOTAL PALMS

31-605(a):
(3) REQUIRED = MINIMUM 25% ECO FRIENDLY PLANTS
TOTAL PLANTS = 734
ECO FRIENDLY = 614 / 83%

31-605(e):
(7) REQUIRED = MINIMUM SHADE TREE SPECIES (31-50) = 4
PROVIDED = 4 SPECIES

31-609(c):
REQUIRED = 1 TREE / 1,500 S.F. OF SITE AREA
62,564 S.F. / 1,500 S.F. = 42 TREES
PROVIDED = 42 TREES
38 TREES + 4 PALMS @ 3:1) = 42 TREES

31-610(a):
REQUIRED = 10 ' LANDSCAPE STRIP WITH 1 TREE / 20 L.F. AND HEDGE AT 2' O.C.

FRONT (NORTH) BUFFER = 317.22'
REQUIRED TREES = 317.22 / 20 = 16
PROVIDED TREES = 16 (FPL TREES)
REQUIRED SHRUBS = 317.22 / 2 = 159
PROVIDED SHRUBS = 185

31-610(c):
(4) TERMINAL PARKING LOT ISLANDS
REQUIRED = 1 SHADE TREE PER ISLAND
TREES REQUIRED = 4 ISLANDS = 4 TREES
PROVIDED = 4 TREES
(2 TREES + 6 PALMS @ 3:1 = 4 TREES)

31-610(c):
(8) MINIMUM 50% PARKING LOT SHADE TREES
REQUIRED = 2 TREES (4 TERMINAL ISLANDS)
PROVIDED = 2 SHADE TREES / 50%

31-600(o):
REQUIRED = 6' PLANTING AROUND PERIMETER OF DUMPSTER AFTER ONE YEAR
PROVIDED = YES

LANDSCAPE PLAN

15' 30' 60' 90' 120'
SCALE 1" = 30'

Conceptual Design Group, Inc.
Landscape Architecture - Site Planning
900 East Ocean Boulevard, Suite 130d
Stuart, Florida 34994
(772) 344-2340
LC. 26000198

LAND DEVELOPERS
Urban Planning . Engineering
Landscape Architecture
500 Australian Avenue, Suite 518
West Palm Beach, Florida 33401
Office: 561-812-1653
Fax: 561-683-4574

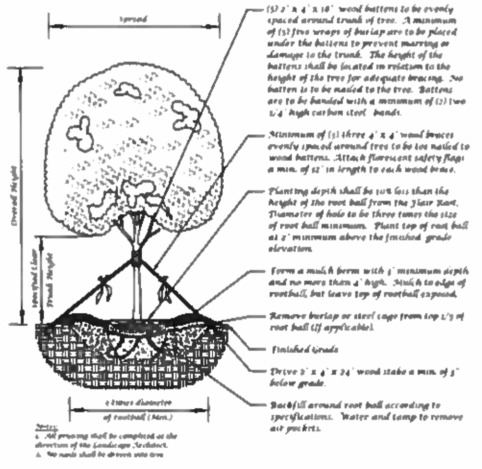
Riviera Beach Maritime Academy Addition
City of Riviera, Florida

DESIGNED JWS
DATE 9.4.2014
REVISIONS

SCALE · 1" = 30'

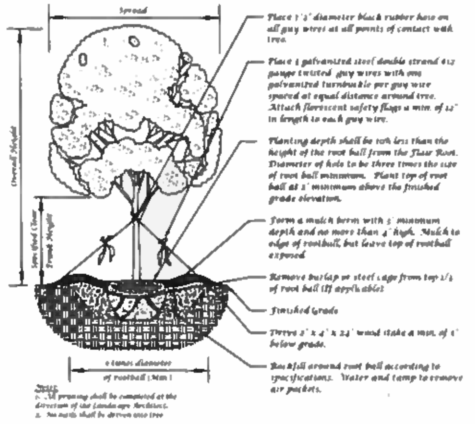
SHEET 1 OF 2

Landscape Details



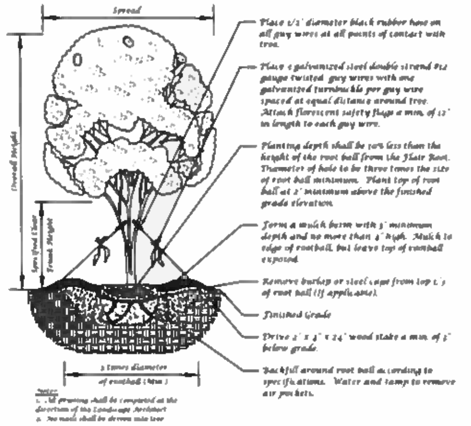
Large Tree Planting Detail (5" Caliper or Greater)

Not to Scale



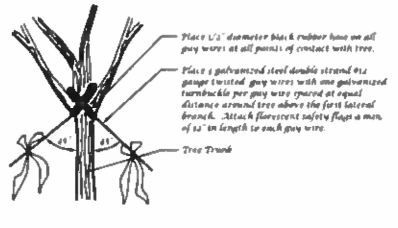
Tree Planting Detail

Not to Scale



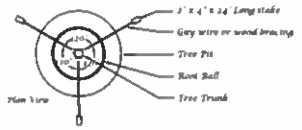
Multi-Trunk Tree Planting Detail

Not to Scale



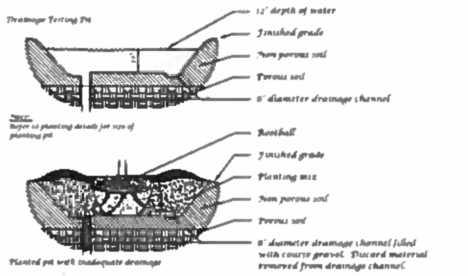
Guy Wire Attachment Detail

Not to Scale



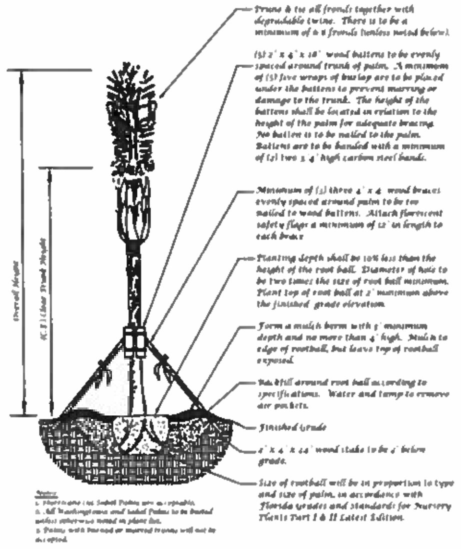
Staking Detail

Not to Scale



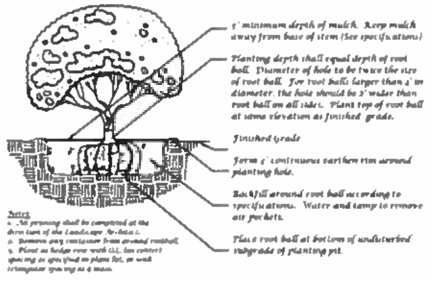
Drainage Testing Detail

Not to Scale



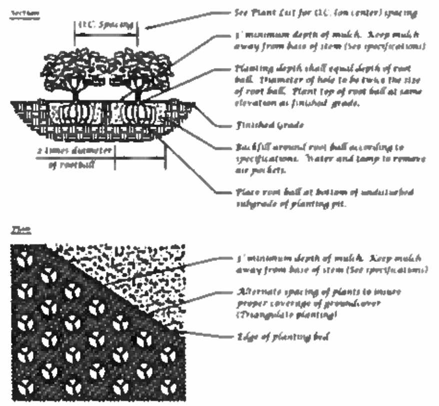
Palm Planting Detail

Not to Scale



Shrub Detail

Not to Scale



Ground Cover Detail

Not to Scale

Landscape Specifications

1. All tree and plant material to be Florida No. 1 or better, as classified in "Grades and Standards for Nursery Plants", Part 1 and Part II, State of Florida, Dept. of Agriculture, Tallahassee. All plants not listed in "Grades and Standards for Nursery Plants" shall conform to a Florida No. 1 as to: (1) health and vitality, (2) condition of foliage, (3) root system, (4) freedom from pest or mechanical damage, (5) heavily branched and densely foliated according to the accepted normal shape of the species.
2. Undersizing or substitution of one species or cultivar for another species is a breach of contract and will be "Rejected" at the time of final landscape inspection unless approved by Landscape Architect.
3. Project Warranty: All plant material shall be warranted for a period of one (1) year after date of substantial completion against defects, including death and unsatisfactory growth, except for defects resulting from abuse or damage by others or unusual phenomena or incidents which are beyond the contractor's control.
4. Any and all conditions which the contractor feels will be detrimental to the success of the planting shall be brought to the owner or representative's attention.
5. The contractor shall verify the location of underground utilities prior to commencing work on any project area.
6. Mulch planting areas with 3" layer of Melaleuca, Eucalyptus, or Enviromulch. Cypress Mulch is NOT ACCEPTABLE. Planting beds to receive mulch throughout entire bed area.
7. All plants to be set to ultimate grade. No filling will be permitted around trunks or stems. Mulch to be kept a minimum of 2" away from trunks and stems.
8. Planting trees and shrubs: Excavate hole per planting detail. When plant is set, place additional backfill consisting of a 50% mixture of Peat humus and natural soil around the base and sides of ball, and work each layer to settle backfill and eliminate voids and air pockets. When excavation is approximately 2/3 full, water thoroughly before placing remainder of backfill. Water again after placing final layer of backfill and before installing mulch.
9. Guy and stake trees in 3 directions with galvanized wire, through flexible hose chafing guards, with wooden stake anchors immediately after planting. (See Detail)
10. Trees and shrubs shall be fertilized with a complete natural organic fertilizer with a ratio of approximately 3:1:2 or 3:1:3 (e.g. one labeled 12-4-8). Similar analysis such as 16-4-8 (4:1:2) can also be used. Fertilizers that are slow release, controlled release, sulphur coated or with nitrogen as IBDU or ureaformaldehyde have extended release period. Thirty to fifty percent of the nitrogen should be water insoluble or slow release.

Palms should receive a complete granular fertilizer formulated for palms ("Palm Special") at a rate of 5 to 6 lbs. per palm.

Agriform 20-10-5 twenty-one gram planting tablets may be substituted for granular fertilizer. If utilized, the following rates shall be utilized: Position plant in hole. Backfill halfway up the rootball. Place tablet(s) beside rootball about 1" from root tips. Do not place tablet(s) in bottom of hole.

1 Gallon 1 Tablet
3 Gallon 2 Tablets
25 Gallon & B&B Trees 2 per 1" caliper

11. All planting areas and sod to be irrigated to provide 100% coverage. Shop drawings to be submitted by the irrigation contractor for approval prior to installation.
12. Maintain trees, shrubs, and other plants by watering, cultivating, and weeding as required for healthy growth. Restore planting saucers and mulch. Tighten and repair stake and guying and reset trees and shrubs to proper grade or vertical position as required. Spray as necessary to keep trees and shrubs free of insects and disease. The contractor shall begin maintenance immediately after planting and shall continue maintenance through final acceptance when Certificate of Occupancy is issued to the General Contractor by City and project is released by the General Contractor to Client.
13. Prune trees and shrubs only to remove damaged branches as directed by the Landscape Architect.
14. Planting Lawns: Provide clean, strongly rooted, uniformly sized strips of Stenotaphrum secundatum Floritam (unless otherwise noted), machine stripped not more than 24 hours prior to laying. Grade and roll prepared lawn surface. Water thoroughly but not to create muddy soil conditions. Lay sod strips with tight joints, roll or tamp lightly, and water thoroughly.
15. Maintain positive drainage, no planting is to block drainage.
16. Drainage Testing
    Prior to planting of trees, palms, and specimen material, each planting pit shall be tested in the following manner to verify adequate drainage.
    A) Dig each planting pit to the minimum specified size.
    B) Fill the planting pit with (12") twelve inches of water. If the water level in the planting pit drops (4") four or more inches within (4) four hours, the drainage is sufficient and a drainage channel is not required. If the water level drops less than (4") four inches within the (4) four hour period, then a drainage channel is required.
    C) When a drainage channel is required, the drainage channel must extend down through the non porous soil and into porous soil. (See Drainage Testing Detail)
    D) Discard all material removed from the drainage channel.
    E) When backfilling the planting pit, add course gravel to the drainage channel. Also, care must be taken to keep the consistency of the soil mix the same throughout the planting pit.

NOTE:
Contractor to include drainage testing for all trees and palms in bid. If drainage is inadequate, the soil specification in item #8 above shall be revised for site conditions. Contractor shall notify the Owner and Landscape Architect of poor drainage conditions in writing and written direction will be provided to the contractor of appropriate soil mixture specification to be used.

General Notes

ALL PLANT MATERIAL SHALL BE FLORIDA NUMBER 1 OR BETTER AS DEFINED BY THE DIVISION OF PLANT INDUSTRY 'GRADES AND STANDARDS' LATEST EDITION.

VEGETATION REMOVAL PERMITS ARE REQUIRED PRIOR TO REMOVING, CLEARING OR STRIPPING ANY VEGETATION FROM THE PROPERTY.

ALL PROHIBITED TREE SPECIES SHALL BE REMOVED FROM THE SITE AND TREATED TO PREVENT REINFESTATION.

THE LANDSCAPE CONTRACTOR SHALL NOT MAKE ANY SUBSTITUTIONS CHANGES WITHOUT THE AUTHORIZATION OF THE CITY OF RIVIERA BEACH, THE OWNER AND THE LANDSCAPE ARCHITECT.

THE LANDSCAPE CONTRACTOR SHALL REVIEW THE PROJECT DRAINAGE AND UTILITY PLANS PRIOR TO CONSTRUCTION AND AVOID ALL CONFLICTS. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK.

THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS.

ALL TREES PLANTED UNDER OR ADJACENT TO FPL POWER LINES WILL COMPLY WITH THE FPL RIGHT TREE IN THE RIGHT PLACE GUIDELINES (REV 5/95)

PERIMETER TREES AT THE TIME OF PLANTING SHALL BE SPACED IN A WAY THAT COMPLEMENTS THE SPACING OF ANY EXISTING TREES ON ADJACENT DEVELOPED AREAS.

TREES SHALL BE POSITIONED TO AVOID CONFLICTS WITH SIGNAGE AND SITE LIGHTING.

ALL ABOVE GROUND UTILITIES I.E. TRANSFORMERS, SWITCH BOXES, AC CONDENSERS AND ALIKE SHALL BE FULLY SCREENED FROM VIEW ON THREE SIDES WITH LANDSCAPING. THE LANDSCAPING SHALL BE TO THE TALLEST POINT OF SAID EQUIPMENT AT TIME OF PLANTING.

ALL VEGETATION SHALL BE SELECTED AND POSITIONED SO THAT IT DOES NOT PRESENT OBSTRUCTIONS TO THE LINE OF SIGHT AT INTERSECTIONS PURSUANT TO THE CITY OF WEST PALM BEACH CODE SECTION 94-305(e).

TREES AT ENTRANCE WAYS AND WITHIN SIGHT TRIANGLES SHALL BE TRIMMED IN SUCH A FASHION TO MINIMIZE SIGHT VISIBILITY CONFLICTS. CLEAR VISIBILITY SHALL BE MAINTAINED BETWEEN 18" AND 8'. TWENTY FIVE BY TWENTY FIVE FOOT SIGHT VISIBILITY TRIANGLES SHALL BE PROVIDED AT THE INTERSECTIONS WITH THE PUBLIC RIGHT OF WAY. IN ADDITION, ALL LANDSCAPING SHALL CONFORM TO THE REQUIREMENTS OF FDOT INDEX 546.

ALL LANDSCAPE ISLANDS AND BEDS WILL BE FREE OF SHELL ROCK AND CONSTRUCTION DEBRIS, EXCAVATED TO A DEPTH OF 30 INCHES OR TO CLEAN NATIVE SOILS AND FILLED WITH THE SPECIFIED BACKFILL MIXTURE.

ALL LANDSCAPE AREAS WILL BE PROVIDED WITH PERMANENT, AUTOMATIC IRRIGATION.

PLANTING ADJACENT TO FIRE HYDRANTS IS TO HAVE A MINIMUM CLEAR RADIUS OF 7.5' AS REQUIRED BY THE NFPA UNIFORM FIRE CODE FLORIDA EDITION 18.3.4.1 HYDRANTS

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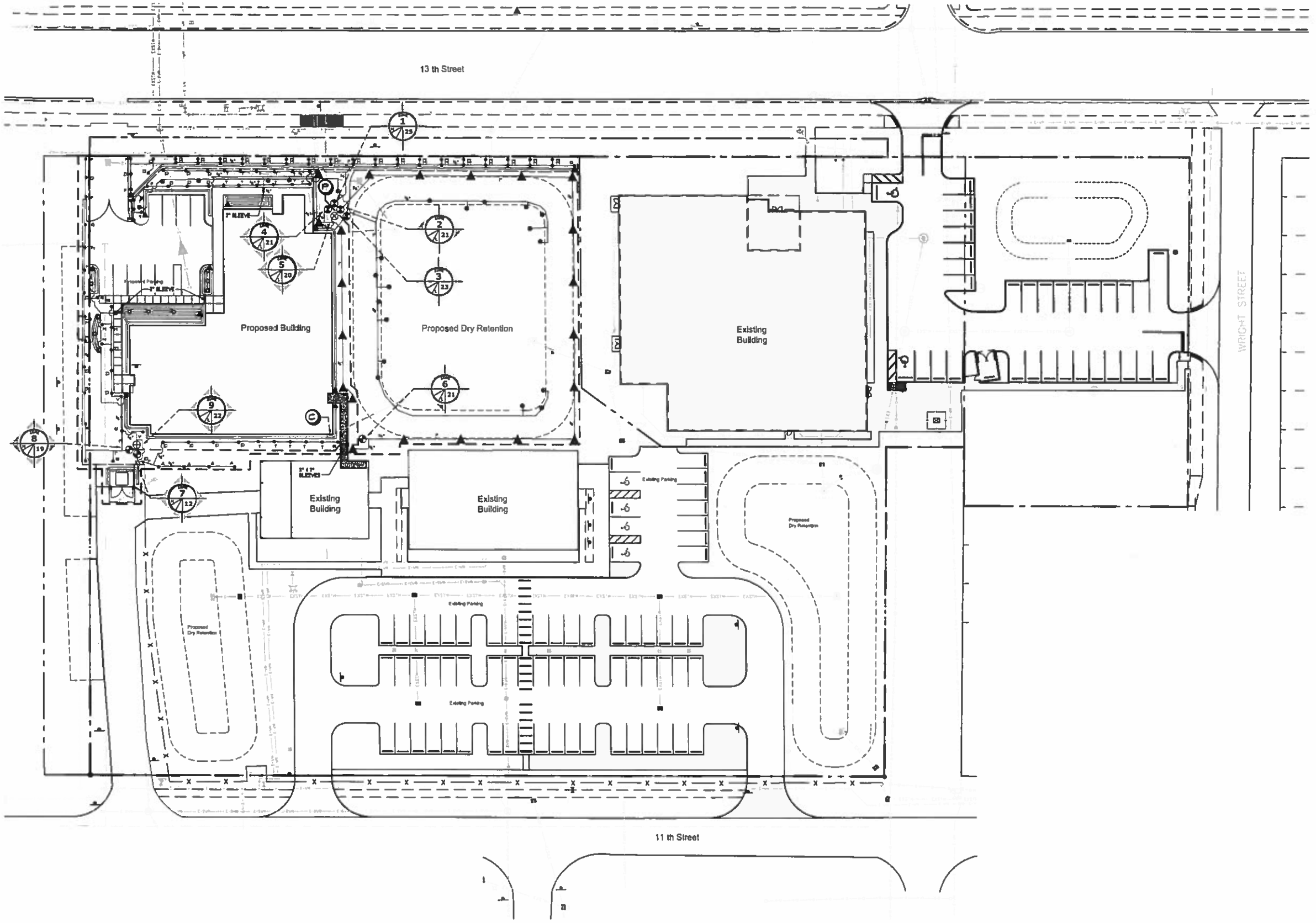
Group, Inc.

DESIGNED	JWS
DATE	9-9-2014
REVISIONS	

LANDSCAPE PLAN

NOT TO SCALE

SHEET 2 OF 2



IRRIGATION PLAN

SCALE 1" = 30'

Conceptual Design Group. Inc.

Landscape Architecture - Site Planning

900 East Ocean Boulevard, Suite 130d
Stuart, Florida 34994
(772) 344-2340
LC: 26000196

LAND DEVELOPERS

Urban Planning . Engineering
Landscape Architecture

500 Australian Avenue, Suite 518
West Palm Beach, Florida 33401
Office: 561-832-1653
Fax: 561-683-4574

Riviera Beach Maritime Academy Addition

City of Riviera, Florida

DESIGNED	JWS
DATE	9-29-2014
REVISIONS	

SCALE · 1" = 30'

LEGEND

•	HUNTER PRS40 6" POP-UP SPRAY HEAD W/ CHECK VALVE
	TREE BUBBLERS- TWO PER TREE. REFER TO THE DETAIL
	NETAFIM DRIP BUBBLER TREE RING- REFER TO DRIP BUBBLER DETAIL
	NETAFIM FLAG INDICATOR- REFER TO THE DETAIL
	NETAFIM FLUSH VALVE
	NETAFIM TECHLINE CV-RW 17MM DRIP TUBING- 1 GPH EMITTERS EVERY 12". PLACE ROWS 12" APART IN ALL GROUND COVER BEDS. INSTALL A DOUBLE ROW ON ALL HEDGE ROWS. DRIP LINES ARE SHOWN PERPENDICULAR TO LANDSCAPE BEDS IN SOME AREAS FOR CLARITY PURPOSES ONLY. INSTALL DRIP TUBING ALONG THE LONGEST WIDTH OF THE PLANT BED. REFER TO ALL NOTES AND DETAILS ON THIS SHEET.
	CLASS 200 PVC MAINLINE-1 1/2"
	CLASS 200 PVC LATERAL LINE- SIZE AS SHOWN UNTIL A SMALLER SIZE IS SHOWN. MINIMUM SIZE OF 3/4"
	SCH. 40 SLEEVE (MINIMUM OF 24" DEPTH AND 2 SIZES LARGER THAN THE PIPE SIZE OR AS LABELED ON THE PLAN)
	HUNTER ICV ELECTRIC VALVE. 1" OR SIZE AS SHOWN BELOW. INSTALL VALVE IN AN 11"X17" VALVE BOX AND COVER 0-24 GPM=1" 25-55 GPM=1 1/2" 56 AND HIGHER GPM=2"
	HUNTER ZONE CONTROL KIT- REFER TO THE DETAIL.
	CONTROLLER- HUNTER I-CORE SERIES 12 STATION, WHERE SHOWN ON THE PLAN. INSTALL WITH A MINI-CLIK RAIN SENSOR. GROUND WITH A MINIMUM 8' COPPER CLAD ROD. SLEEVE TO AS REQUIRED.
	POINT OF CONNECTION TO A 1" IRRIGATION METER. REFER TO THE UTILITY PLAN FOR THE EXACT LOCATION AND DETAILS.

ZONE CHART

ZONE	GPM	HEAD TYPE	WATER USE	PRECIP RATE (in. per hour)	RUN TIME (minutes)
1	25	Spray	HIGH	.85	60
2	31	Rotor	LOW	.85	60
3	23	Bubbler	LOW	LS	20
4	21	Rotor	LOW	.85	60
5	20	Drip	LOW	LS	20
6	21	Rotor	LOW	.85	60
7	12	Spray	HIGH	.85	60
8	19	Spray	HIGH	.85	60
9	22	Drip	LOW	LS	20

THIS CHART IS PROVIDED AS A GENERAL OUTLINE ONLY AND IS BASED ON PROVIDING APPROXIMATELY 1 INCH OF WATER PER WEEK. THE CONTRACTOR SHALL BE RESPONSIBLE TO SET THE RUN TIMES ON THE CONTROLLER BASED FOR THE SPECIFIC SITE CONDITIONS. THIS SHALL INCLUDE, BUT NOT LIMITED TO SOIL, WEATHER, PLANT NEEDS AND ESTABLISHMENT PERIOD. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CHECK EQUIPMENT QUANTITIES AND SHALL BE RESPONSIBLE TO INSTALL AND INCLUDE IN THE PROPOSAL ALL EQUIPMENT SHOWN ON THE PLAN. THE PLAN OVERRIDES ANY ERRORS IN QUANTITIES.

GENERAL NOTES

1) REFER TO THE LANDSCAPE PLANS WHEN TRENCHING TO AVOID TREES AND SHRUBS. HAND DIG AROUND ANY EXISTING TREES. DO NOT CUT ANY ROOTS OVER 2" IN DIAMETER.

2) ALL MAINLINE PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 18" OF COVER. ALL LATERAL PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 12" OF COVER.

3) ALL POP-UP ROTORS AND SPRAYS SHALL BE INSTALLED USING AN 18" PVC FLEX PIPE CONNECTION. DO NOT USE POLYETHYLENE PIPE.

4) ADJUST ALL NOZZLES TO REDUCE WATER WASTE ON HARD SURFACES (BLDG. WALLS, THROTTLE ALL VALVES ON SHRUB LINES AS REQUIRED TO PREVENT FOGGING. USE ADJUSTABLE NOZZLES WHERE REQUIRED TO AVOID ANY WATER ON BUILDING WINDOWS.

5) ALL RISERS SHALL BE PAINTED BLACK OR A COLOR CHOSEN BY THE OWNER'S REPRESENTATIVE (IF ALLOWED BY CODE) AND SHALL BE STAKED WITH A STEEL ANGLE AND SECURED WITH PVC ULTRAVIOLET LIGHT PROTECTED PVC CLAMPS. RECLAIMED SYSTEMS MAY REQUIRE THE PIPE TO BE PURPLE.

6) ALL CONTROL WIRE SPLICES SHALL BE MADE IN VALVE BOXES USING 3M DBR-Y WIRE CONNECTORS AND SEALANT WITH WIRE NUTS.

7) THE CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING SHOWING ALL IRRIGATION INSTALLATION. THE CONTRACTOR SHALL NEATLY MARK IN RED INK ON A WHITE BOND PAPER COPY OF THE IRRIGATION PLAN ANY INSTALLATION THAT DEVIATES FROM THE PLAN. THE AS-BUILT DRAWING SHALL ALSO LOCATE ALL MAINLINE AND VALVES BY SHOWING EXACT MEASUREMENTS FROM HARD SURFACES. MEASUREMENTS SHALL BE MARKED ON THE PLAN EVEN WHEN THE EQUIPMENT IS INSTALLED IN THE EXACT LOCATION AS THE PLAN.

8) ALL VALVES, GATE VALVES AND QUICK COUPLERS SHALL BE INSTALLED IN VALVE BOXES. THE VALVE BOXES SHALL BE PURPLE WHEN USING RECLAIMED WATER.

9) ANY PIPING SHOWN OUTSIDE THE PROPERTY LINE OR RUNNING OUTSIDE A LANDSCAPE AREA IS SHOWN THERE FOR CLARITY ONLY. ALL LINES SHALL BE INSTALLED ON THE PROPERTY AND INSIDE THE LANDSCAPE AREAS OR INSIDE A SCH. 40 SLEEVE.

10) ALL HEADS SHALL BE INSTALLED A MINIMUM OF 24" FROM ANY WALL AND A MINIMUM OF 6" FROM ANY SIDEWALK, PATIO OR ROAD, (MINIMUM OF 3' WHERE THERE ARE NO BUFFER STORM) THE EXACT HEIGHT OF ANY 12" POP-UP THAT IS SHOWN IN A SHRUB BED SHALL BE DETERMINED BY THE OWNER'S REPRESENTATIVE IN THE FIELD.

11) THE CONTRACTOR SHALL EXERCISE CARE SO AS NOT TO DAMAGE ANY EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIRS AND COST OF ANY DAMAGE CAUSED BY THEIR WORK.

12) ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE AGAINST ALL DEFECTS IN EQUIPMENT AND WORKMANSHIP. (OR AS OUTLINED IN THE WRITTEN SPECIFICATIONS)

13) ELECTRICAL SERVICE TO LOCATION OF THE CONTROLLER, BELL OR FUSE SHALL BE PROVIDED TO A JUNCTION BOX OR DISCONNECT AT THE EQUIPMENT LOCATION BY THE ELECTRICAL CONTRACTOR OR BY OWNER WHEN IT IS NOT PART OF THIS BID PACKAGE. CONFIRM THE LOCATION OF THE CONTROLLER WITH THE OWNER OR GENERAL CONTRACTOR BEFORE ANY INSTALLATION.

14) IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCALE THE PLAN AND CHECK NOZZLE TYPES TO DETERMINE THE CORRECT SPACING OF THE HEADS. THE CONTRACTOR SHALL NOT SPACE THE HEADS FURTHER APART OR USE LESS HEADS THAN SHOWN ON THE PLAN. ANY CHANGES TO THE HEAD SPACING OR LAYOUT, WITHOUT THE CONSENT OF THE LANDSCAPE ARCHITECT OR OWNER, SHALL HOLD THE IRRIGATION CONTRACTOR RESPONSIBLE FOR WARRANTY OF THE PLANTS AND OR SOD IN THESE AREAS.

15) 48 HOURS BEFORE DIGGING, CALL 1-888-432-4770 (SUNSHINE STATE ONE CALL CENTER)

DRIP TUBING NOTES

1) INSTALL ALL DRIP TUBING AT GROUND LEVEL. AFTER PLANT INSTALLATION, INSTALL NETAFIM TUBE U SHAPED WIRE STABILIZERS A MIN. OF 4" O.C. TO HOLD THE LINES IN PLACE.

2) KEEP ALL DRIP LINE CLEAN AT ALL TIMES BEFORE THE FINAL CONNECTION. ALL TUBE ENDS SHALL BE INTERCONNECTED TO ALL OTHER DRIP TUBES. DO NOT DEAD END TUBING. SINGLE ROWS SHALL HAVE A END CAP AND NOT BENT OVER OR TAPED.

3) AVOID SHARP BENDS IN THE TUBING. DO NOT BEND THE TUBING WITH LESS THEN A 5" RADIUS. THERE SHALL NOT BE ANY KINKS IN THE TUBING.

4) ALL DRIP TUBING SHALL HAVE UNIFORM SPACING AND BURIAL DEPTH. THE PLAN DOES NOT ALWAYS REFLECT THE EXACT SPACING OR LAYOUT OF THE TUBING. LAYOUT THE TUBING FROM THE LONGEST WIDTH WHEN POSSIBLE. ADAPT THE TUBING TO CURVED BEDS OR PLANTERS AS REQUIRED. ADJUST AND ADAPT THE TUBING FOR ALL TREES. REFER TO THE TREE DRIP RING DETAIL.

5) INSTALL DRIP TUBING TO ALL AREAS THAT SHALL RECEIVE PLANT MATERIAL. SEE THE LANDSCAPE PLAN FOR THE EXACT LOCATIONS. THERE SHALL BE A MINIMUM OF TWO ROWS OF TUBING ON A SINGLE ROW OF PLANTS.

6) SPACE TUBING AS NOTED ON THE PLAN. DO NOT SNAKE TUBING BACK AND FORTH EXCEPT WHERE SHOWN ON THE PLAN. ALWAYS INSTALL A HEADER PIPE UNLESS THE TOTAL GALLONAGE OF AN AREA IS 3 GPM OR LESS.

7) REFER TO THE MANUFACTURERS DRIP INSTALLATION MANUAL FOR INSTALLATION INSTRUCTIONS. ALL FITTINGS SHALL BE THE SAME TYPE AND MANUFACTURER AS THE DRIP TUBING.

8) ALWAYS FLUSH ALL LINES BEFORE FINAL CONNECTION.

9) INSTALL A "SYSTEM ON" INDICATOR FLAG ON EVERY ZONE WHERE IT IS SEEN FROM THE CONTROL VALVE.

10) INSTALL FLUSH VALVES WHERE SHOWN AT THE ENDS OF EACH RUN OF DRIP TUBING AND ONE FOR EVERY 15 GPM OF TUBING.

11) CLEARLY AND NEATLY MARK THE TOP OF EACH VALVE BOX WITH THE TYPE OF EQUIPMENT THAT IT CONTAINS. (I.E. VALVE, FLUSH VALVE, ETC.)

12) THE DRIP ZONE VALVE ASSEMBLY SHALL BE PLACED INSIDE AN ARMOR JUMBO VALVE BOX. THE VALVE SHALL BE INSTALLED AS PER THE DETAIL ON THE PLANS.

13) THE DRIP TUBING SHALL HAVE EMITTERS EVERY 12" AND SHALL BE SPACED 12" APART IN GROUND COVER BEDS AND A MINIMUM OF TWO RUNS FOR EACH ROW OF SHRUBS WHEN THE SHRUBS ARE SPACED FARTHER THAN 2' ON CENTERS.

14) REFER TO THE ZONE CONTROL KIT DETAIL FOR FILTER SIZES.

15) THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS/HER WORK WITH THE LANDSCAPE CONTRACTOR.

NOZZLE CHART

LETTER • PRODUCT SPEC. • GPM @ 45PSI • RADIUS • RADIUS/ANGLE • ZONE LABELS

A	MP2000	.41	13'	FULL	360	
B	MP CORNER	.48	14'	CORNER	180	
C	MP CORNER	.78	14'	CORNER	90	
D	MP2000	.74	19'	HALF	180	
E	MP2000	.48	13'	QUARTER	90	
F	MP STRIP	.22	5' X 15'	END STRIP		
G	RAINBIRD 5Q-H	.23	4.5'	HALF PATTERN		
H	MP2000	.80	14'	THREE QTR.	270	
I	MP2000	.78	14'	FULL	360	
J	MP SIDE STRIP	.44	9' X 30'	SIDE STRIP		
K	MP3000	1.86	30'	HALF PATTERN	180	
L	MP2000	.75	14'	QUARTER	90	
M	MP SR SERIES	.42	6'	HALF	180	
N	MP2000	.31	14'	HALF	180	
O	MP3000	.86	30'	QUARTER	90	
P	MP3000	1.82	30'	HALF	180	
Q	MP3000	2.73	30'	THREE QTR.	270	
R	MP3000	3.6-4	30'	FULL	360	
S	MP2000	1.19	19'	THREE QTR.	270	

ZONE NUMBER

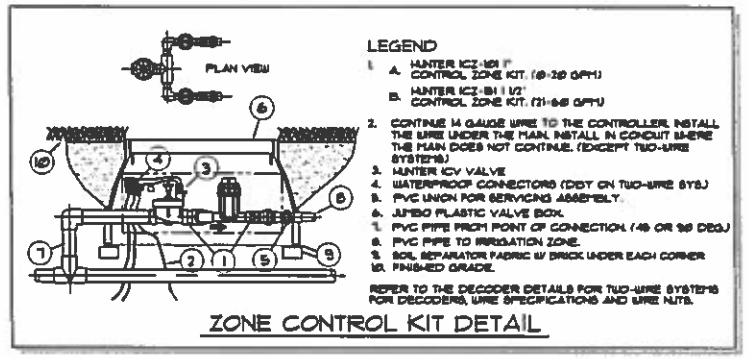
GALLONS PER MINUTE WATER USE

H=HIGH ex. ANNUALS AND ZOYSIA SOD

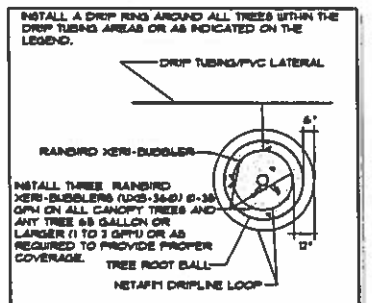
M=MEDIUM PLANT MATERIAL

L=LOW BAHIA SOD NATIVE PLANTS

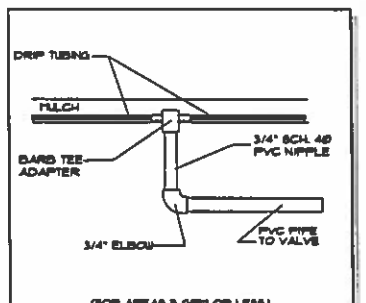
THE NOZZLES LISTED SHOW THE TYPE OF MP ROTATOR NOZZLE THAT SHOULD BE USED. THE CONTRACTOR SHOULD INSTALL THE MP1000, MP2000, MP3000 OR SPECIALTY NOZZLE IN EACH HEAD AS SHOWN BY THE LETTER BESIDE THE HEAD ON THE PLAN. THE GPM, DISTANCE AND ANGLE ON THE NOZZLE CHART ARE APPROXIMATE. THE CONTRACTOR SHALL ADJUST ALL NOZZLES TO PROVIDE THE 100% COVERAGE, BUT LIMIT OVERTHROW ON TO BUILDINGS, WALLS, PAVEMENT, ETC. THE HEADS SHALL BE SPACED AS PER THE PLAN. SCALE THE PLAN FOR DISTANCE. DO NOT ASSUME THAT ALL HEADS ARE SPACED AS PER CONVENTIONAL SPRAY HEADS. THE PRECIPITATION RATE FOR THESE NOZZLES IS LESS THAN A CONVENTIONAL SPRAY NOZZLE. FOLLOW THE ZONE CHART FOR AN APPROXIMATE RUN TIME FOR EACH ZONE, BUT SET THE RUN TIME ON THE CONTROLLER BASED ON THE SPECIFIC SITE CONDITIONS.



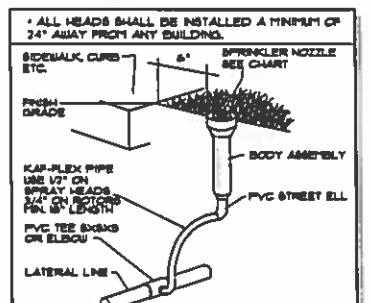
ZONE CONTROL KIT DETAIL



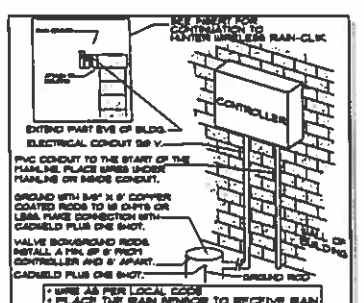
DRIP BUBBLER DETAIL



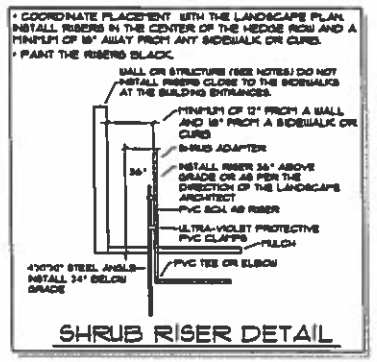
(FOR AREAS 3 GPH OR LESS)
DRIP CONNECTION DETAIL



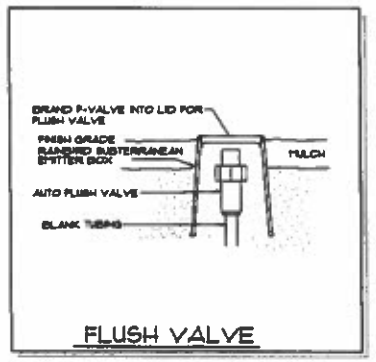
HEAD DETAIL



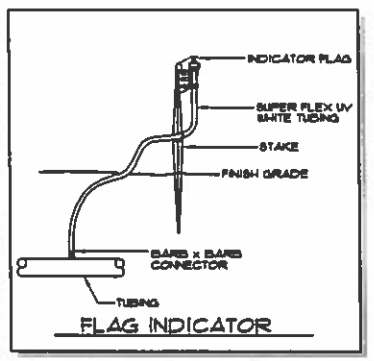
CONTROLLER DETAIL



SHRUB RISER DETAIL

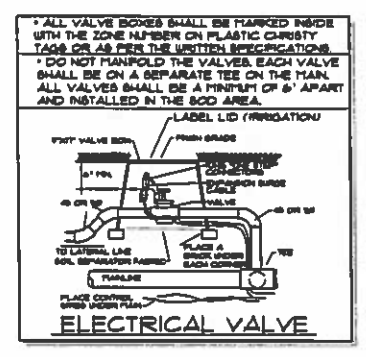


FLUSH VALVE

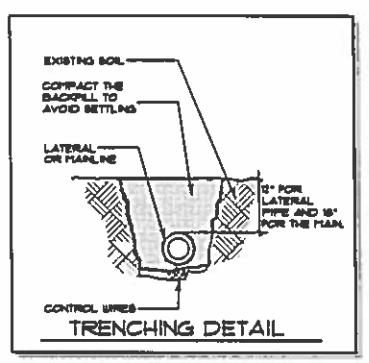


FLAG INDICATOR

TREE BUBBLER DETAIL



ELECTRICAL VALVE



TRENCHING DETAIL

NOT TO SCALE

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Office: 561-932-1653
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Riviera Beach Maritime Academy Addition
City of Riviera, Florida

DESIGNED	JWS
DATE	9-29-2014
REVISIONS	

SHEET 2 OF 2

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DOOR HARDWARE:

Hardware Group No. 01 - Exterior-Card Access
Provide each PR door(s) with the following
6 EA HINGE 5BB1 4.5 X 4.5 NRP 630 IVE
2 EA POWER TRANSFER EPT10 CON 689 FAL
2 EA ELEC PANIC HARDWARE RX-QEL-9847-L-996-06-CON 626 VON
2 EA RIM HOUSING C953 626 FAL
2 EA SFIC CORE C606 626 FAL
2 EA SURFACE CLOSER SC71 SS 689 FAL
2 EA TOP RAIL DROP PLATES C73-18PA 689 FAL
1 EA MULTITECH READER MT15 BLK SCE
1 EA POWER SUPPLY PS902 LDR VON
Balance of hardware by storefront manufacturer. Hurricane code compliant opening.
Card access system by security supplier.
Operational Description
Free Egress at all times. Pressing Push Bar retracts latchbolt. Latchbolt retracted by lever unless locked by key. Key locks and unlocks lever. Control contact electrically retracts the latchbolt, either for momentary unlatching or for extended periods of time. Provides dual operation. One internal SPDT switch monitors the depression of the pushbar or crossbar.

Hardware Group No. 02 - Exterior-Stair
Provide each PR door(s) with the following
6 EA HINGE 5BB1 4.5 X 4.5 NRP 630 IVE
1 EA KEYED FIRE RATED REMOVABLE MULLION KR9954-M754SP28 VON
2 EA PANIC HARDWARE 99-25-R-EO-SNB 630 FAL
1 EA MULLION STABILIZER 154 689 VON
1 EA MORTISE CYLINDER 986 626 FAL
2 EA SURFACE CLOSER SC71 SS 689 FAL
2 EA KICK PLATE 8400 10" X 2" LDW 630 IVE
2 SET SEALS 303AS 108" 2/84" AL PEM
1 EA THRESHOLD 2005AV 72" MSES10 AL PEM
Hurricane code compliant opening. Hardware as scheduled per Ingersoll Rand NOA #12-0325.15
Operational Description
Mullion removable by key.
Free Egress at all times. Pressing Push Bar retracts latchbolt. No outside trim. Dogging by hex key locks down the pushbar or crossbar so the latchbolt remains retracted.

Hardware Group No. 03 - Exterior-Card Access
Provide each SGL door(s) with the following
3 EA HINGE 5BB1 4.5 X 4.5 NRP 630 IVE
1 EA POWER TRANSFER EPT10 CON 689 FAL
1 EA ELEC PANIC HARDWARE QEL-9847-L-996-06-CON 626 VON
1 EA RIM HOUSING C953 626 FAL
1 EA SFIC CORE C606 626 FAL
1 EA SURFACE CLOSER SC71 SS 689 FAL
1 EA TOP RAIL DROP PLATE SC73-18PA 689 FAL
1 EA MULTITECH READER MT15 BLK SCE
1 EA POWER SUPPLY PS902 LDR VON
Balance of hardware by storefront manufacturer. Hurricane code compliant opening.
Antenna by security supplier.

Hardware Group No. 04 - Exterior-Electrical
Provide each SGL door(s) with the following
3 EA HINGE 5BB1 4.5 X 4.5 NRP 630 IVE
1 EA PANIC HARDWARE 99-25-R-L-619-DANE-SNB 630 FAL
1 EA MORTISE CYLINDER 0967 626 FAL
1 EA SFIC CORE C606 626 FAL
1 EA SURFACE CLOSER SC71 SS 689 FAL
1 EA KICK PLATE 8400 10" X 2" LDW 630 IVE
1 SET SEALS 303AS 108" 2/84" AL PEM
1 EA THRESHOLD 2005AV 36" MSES10 AL PEM
Hurricane code compliant opening. Hardware as scheduled per Ingersoll Rand NOA #12-0325.14
Operational Description
Free Egress at all times. Pressing Push Bar retracts latchbolt. Latchbolt retracted by lever unless locked by key. Key locks and unlocks lever. Dogging by hex key locks down the pushbar or crossbar so the latchbolt remains retracted.

Hardware Group No. 05 - Exterior-Elevator Machine Room
Provide each SGL door(s) with the following
3 EA HW HINGE 5BB1HW 4.5 X 4.5 NRP 630 IVE
1 EA STOREROOM LOCK T581PD DANE 626 FAL
1 EA SURFACE CLOSER SC71 SS 689 FAL
1 EA KICK PLATE 8400 10" X 2" LDW 630 IVE
1 SET SEALS 303AS 144" 2/84" AL PEM
1 EA THRESHOLD 2005AV 48" MSES10 AL PEM
Hurricane code compliant opening. Hardware as scheduled per Ingersoll Rand NOA #12-0325.14

Hardware Group No. 06 - Stair
Provide each PR door(s) with the following
6 EA HINGE 5BB1 4.5 X 4.5 NRP 652 IVE
1 EA KEYED FIRE RATED REMOVABLE MULLION KR9954 SP28 VON
1 EA FIRE EXIT HARDWARE F-25-R-L-BE-619-DANE-SNB 626 FAL
1 EA MULLION STABILIZER 154 689 VON
1 EA MORTISE CYLINDER 985 626 FAL
2 EA SURFACE CLOSER SC71 SS 689 FAL
2 EA KICK PLATE 8400 10" X 2" LDW 630 IVE
2 SET SEALS 303AS 108" 2/84" AL PEM
1 EA THRESHOLD 2005AV 72" MSES10 AL PEM
Hurricane code compliant opening. Hardware as scheduled per Ingersoll Rand NOA #12-0325.15
Operational Description
Mullion removable by key.
Free Egress at all times. Pressing Push Bar retracts latchbolt. Latchbolt retracted by lever at all times.

Hardware Group No. 07 - Closet
Provide each BF door(s) with the following
2 EA SINGLE DUMMY TRIM T12 DANE 626 FAL
Balance of hardware by bifold manufacturer

Hardware Group No. 08 - Stair
Provide each SGL door(s) with the following
3 EA HINGE 5BB1 4.5 X 4.5 NRP 652 IVE
1 EA FIRE EXIT HARDWARE F-25-R-L-BE-619-DANE-SNB 626 FAL
1 EA SURFACE CLOSER SC81 HDPA 689 FAL
EA KICK PLATE 8400 10" X 2" LDW 630 IVE
EA FLOOR STOP FS434 604 IVE
1 SET SEALS 303AS 108" 2/84" AL PEM
1 EA THRESHOLD 2005AV 36" MSES10 AL PEM
Operational Description
Free Egress at all times. Pressing Push Bar retracts latchbolt. Latchbolt retracted by lever at all times.

Hardware Group No. 09 - Reception
Provide each SGL door(s) with the following
3 EA HINGE 5BB1 4.5 X 4.5 652 IVE
1 EA PASSAGE SET T101S DANE 626 FAL
1 EA WALL STOP WS406/407CVX 630 IVE
3 EA SILENCER SR64 GRY IVE
Operational Description
Latch bolt by levers at all times.

Hardware Group No. 10 - Restroom
Provide each SGL door(s) with the following
3 EA HINGE 5BB1 4.5 X 4.5 652 IVE
1 EA PRIVACY LOCK T301S DANE 626 FAL
1 EA SURFACE CLOSER SC81 REG OR PA AS REQ 689 FAL
1 EA KICK PLATE 8400 10" X 2" LDW 630 IVE
1 EA FLOOR STOP FS436 626 IVE
3 EA SILENCER SR64 GRY IVE

Hardware Group No. 11 - Principle Guidance Bus. Manager
Provide each SGL door(s) with the following
3 EA HINGE 5BB1 4.5 X 4.5 652 IVE
1 EA ENTRY LOCK T501PD DANE 626 FAL
1 EA KICK PLATE 8400 10" X 2" LDW 630 IVE
1 EA WALL STOP WS 406/407 CVX 630 IVE
3 EA SILENCER SR64 GRY IVE

Group No. 12 - Conference Work Room Asst. Principal
Provide each SGL door(s) with the following
3 EA HINGE 5BB1 4.5 X 4.5 652 IVE
1 EA ENTRY/OFFICE LOCK T511PD DANE 626 FAL
1 EA SURFACE CLOSER SC81 REG OR PA AS REQ 689 FAL
1 EA KICK PLATE 8400 10" X 2" LDW 630 IVE
1 EA WALL STOP WS 406/407 CVX 630 IVE
3 EA SILENCER SR64 GRY IVE

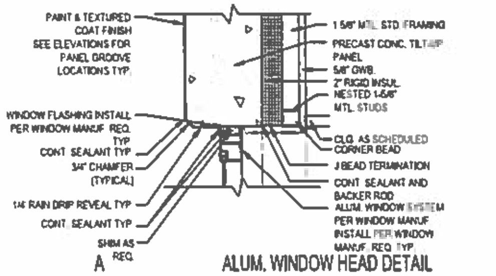
Hardware Group No. 13 - Classroom
Provide each SGL door(s) with the following
3 EA HINGE 5BB1 4.5 X 4.5 NRP 652 IVE
1 EA CLASSROOM LOCK T561PD DANE 626 FAL
1 EA SURFACE CLOSER SC81 SS 689 FAL
1 EA KICK PLATE 8400 10" X 2" LDW 630 IVE
3 EA SILENCER SR64 GRY IVE

Hardware Group No. 14 - Classroom Storage
Provide each SGL door(s) with the following
3 EA HINGE 5BB1 4.5 X 4.5 652 IVE
1 EA CLASSROOM LOCK T561PD DANE 626 FAL
1 EA KICK PLATE 8400 10" X 2" LDW 630 IVE
1 EA WALL STOP WS 406/407CVX 630 IVE
3 EA SILENCER SR64 GRY IVE

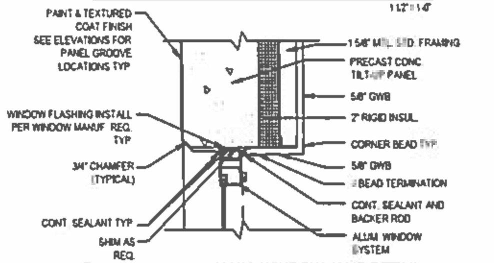
Hardware Group No. 15 - Reception-Electric Release
Provide each SGL door(s) with the following
3 EA HINGE 5BB1 4.5 X 4.5 652 IVE
1 EA STOREROOM LOCK T581PD DANE 626 FAL
1 EA ELECTRIC STRIKE 6211AL FSE [illegible] CON 630 VON
1 EA SURFACE CLOSER SC81 HDPA 689 FAL
1 EA WALL STOP WS 406/407 CVX 630 IVE
3 EA SILENCER SR64 GRY IVE
Buzzer to be mounted at reception desk by electrical supplier.
Operational Description
Entry buzzer will sound when strike is activated. Electric strike is released when power is applied (Fail Secure). Wire Connector

Hardware Group No. 16 - Data/Custodial Storage
Provide each SGL door(s) with the following
3 EA HINGE 5BB1 4.5 X 4.5 652 IVE
1 EA STOREROOM LOCK T581PD DANE 626 FAL
1 EA SURFACE CLOSER SC81 REG OR PA AS REQ 689 FAL
1 EA KICK PLATE 8400 10" X 2" LDW 630 IVE
1 EA FLOOR STOP FS434 604 IVE
3 EA SILENCER SR64 GRY IVE

DOOR HARDWARE SETS
Mark # HW Set #
[illegible]



A ALUM. WINDOW HEAD DETAIL
1 1/2" = 1'-0"



B ALUM. WINDOW JAMB DETAIL
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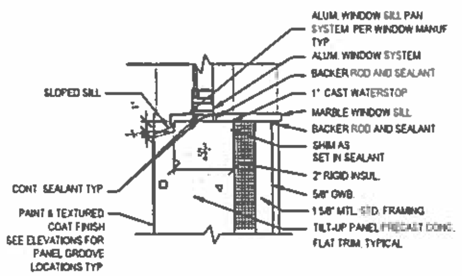
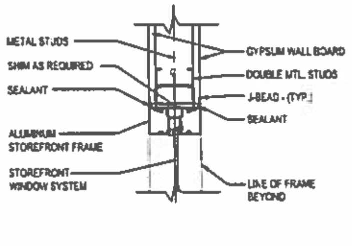
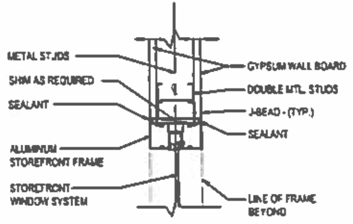


C ALUM. WINDOW SILL DETAIL
1 1/2" = 1'-0"



D HEAD DETAIL
SCALE 1-1/2"=1'-0"



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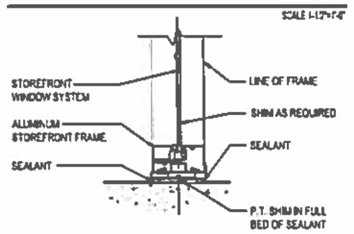
SCALE 1-1/2"=1'-0"



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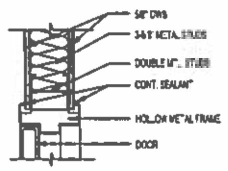
SCALE 1-1/2"=1'-0"



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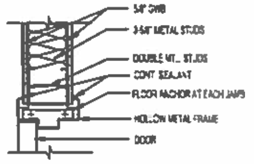

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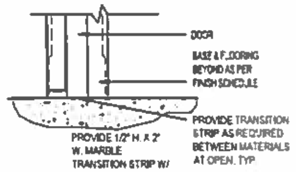

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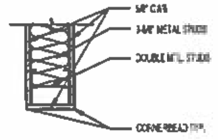

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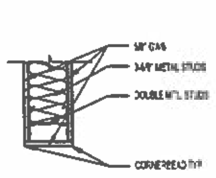

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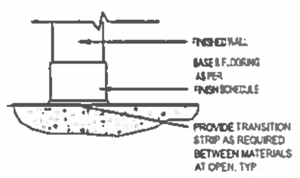

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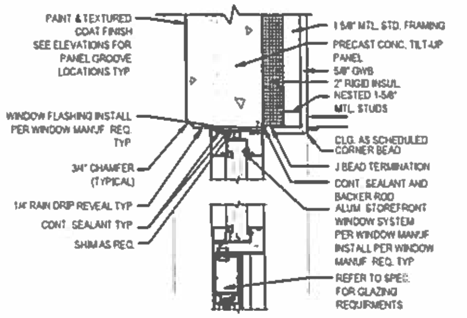

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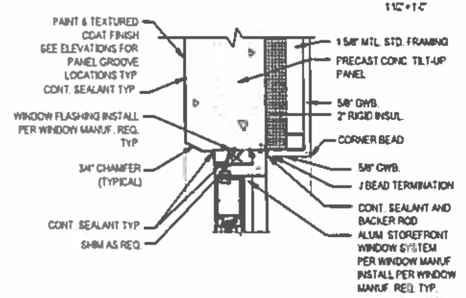

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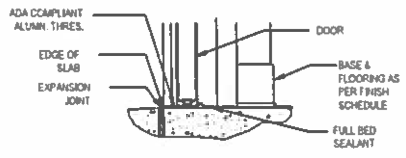

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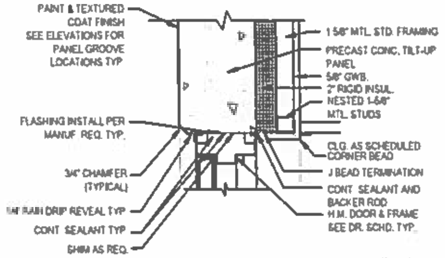

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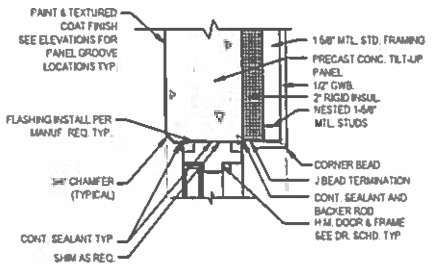

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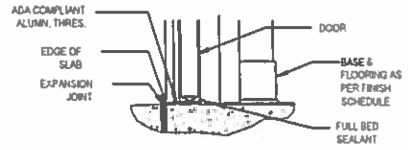
1 1/2" = 1'-0"



12 SILL DETAIL
1 1/2" = 1'-0"

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Comm. No	214031.00
Date	09-24-14
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Rene Tercilla AIA, REFP

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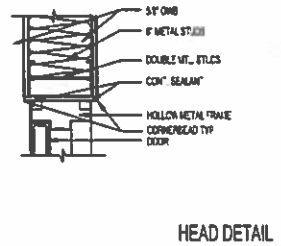

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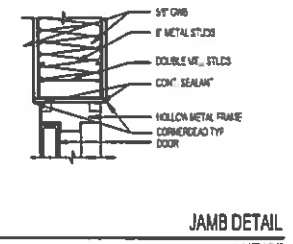

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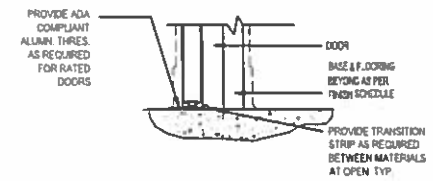
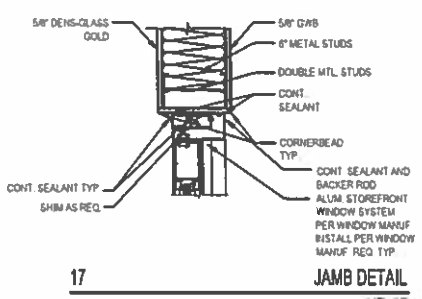


15 SILL DETAIL

16 HEAD DETAIL



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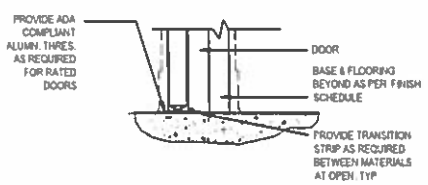

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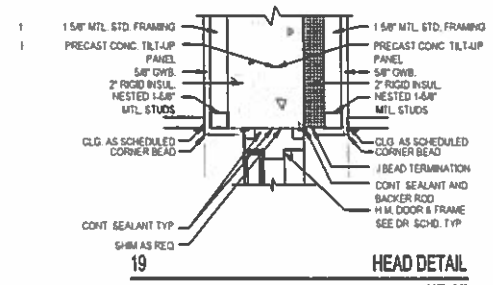

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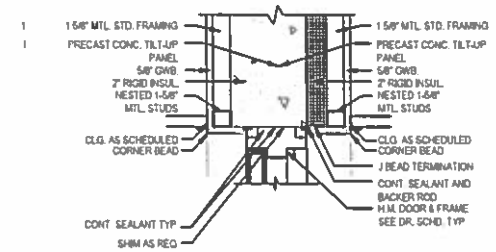

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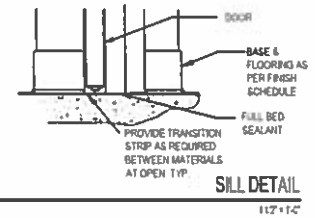

21 SILL DETAIL

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Revised:

René Torcilla AIA, REFP

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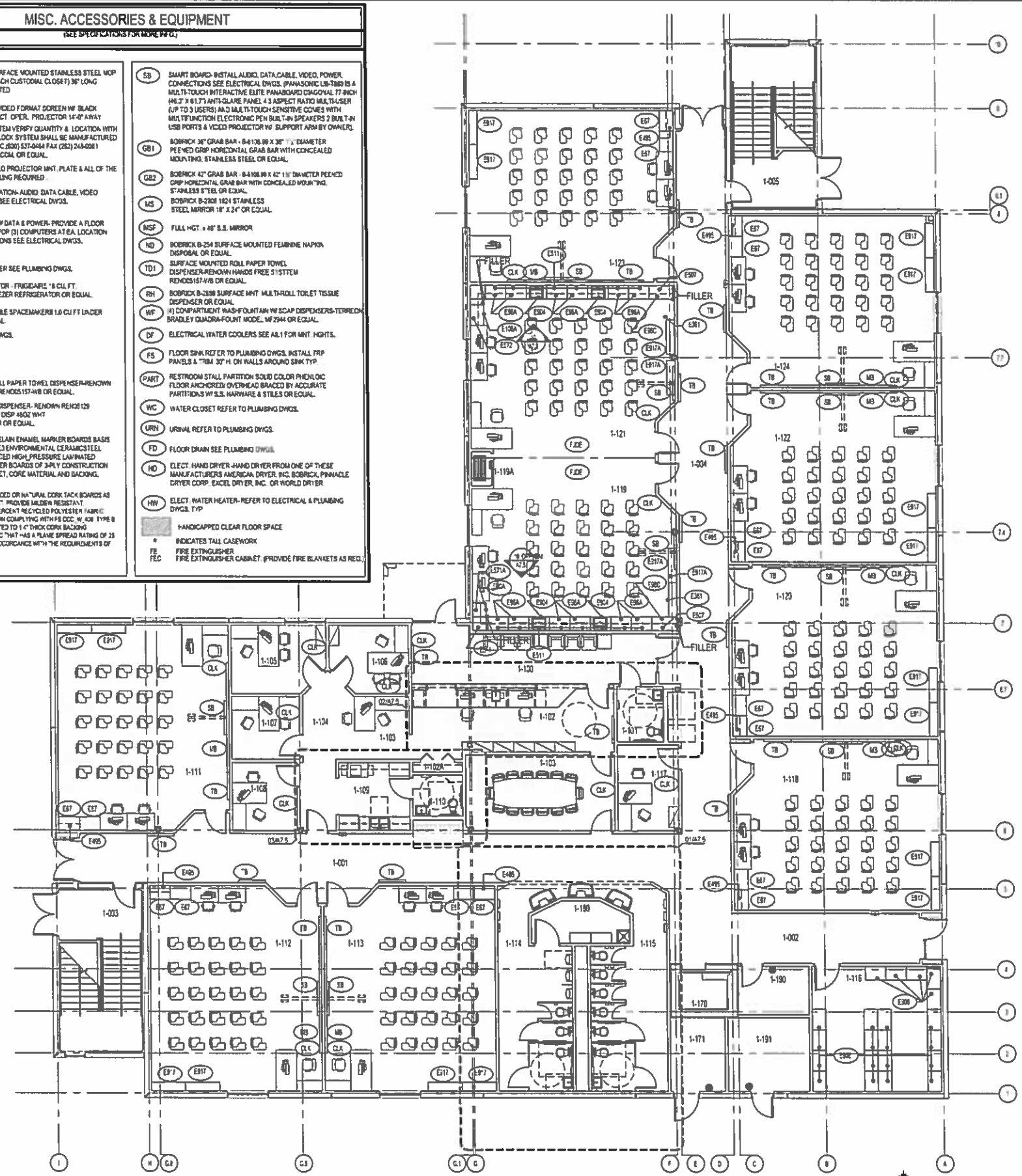
MISC. ACCESSORIES & EQUIPMENT

(SEE SPECIFICATIONS FOR MORE INFO.)

MH	MOP HOLDER- B-223 SURFACE MOUNTED STAINLESS STEEL MOP HOLDER (PROVIDE AT EACH CUSTODIAL CLOSET) 36" LONG UNLESS OTHERWISE NOTED
VF-1	96"W X 72"H POWERED- VIDEO FORMAT SCREEN W/ BLACK MASKING BORDERS- ELECT. OPER. PROJECTOR 14'-0" AWAY
CLK	CLOCK- GPS CLOCK SYSTEM VERIFY QUANTITY & LOCATION WITH PLANS.GPS WIRELESS CLOCK SYSTEM SHALL BE MANUFACTURED BY PRIMEX WIRELESS, INC.(800) 537-0464 FAX (262) 248-0061 WWW.PRIMEXWIRELESS.COM, OR EQUAL.
VP	PROVIDE & INSTALL VIDEO PROJECTOR MNT. PLATE & ALL OF THE SYSTEMS WIRING & CABLING REQUIRED.
SCS	SATELLITE CONTROL STATION- AUDIO, DATA CABLE, VIDEO POWER. CONNECTIONS SEE ELECTRICAL DWGS.
FJDE	FLOOR JUNCTION BOX W/ DATA & POWER- PROVIDE A FLOOR J-BOX DATA & POWER FOR (3) COMPUTERS AT EA. LOCATION SHOWN. FOR CONNECTIONS SEE ELECTRICAL DWGS.
DF	ELECTRIC WATER COOLER SEE PLUMBING DWGS.
REF	FULL SIZE REFRIGERATOR - FRIGIDAIRE 18 CU. FT. FGHT 1846 KP TOP FREEZER REFRIGERATOR OR EQUAL.
MC	MICROWAVE - GE PROFILE SPACEMAKER II 1.0 CU FT UNDER CABINET MNT. OR EQUAL.
SINK	REFER TO PLUMBING DWGS.
TD1	SURFACE MOUNTED ROLL PAPER TOWEL DISPENSER-RENOWN HANDS FREE SYSTTEM RENO05157-WB OR EQUAL.
SD1	WALL MOUNTED SOAP DISPENSER- RENOWN RENO5129 CLEAR VIEW BULK SOAP DISP 46OZ WHT LIQUID SOAP DISPENSER OR EQUAL.
MB	MARKER BOARD- 4X4- PORCELAIN ENAMEL MARKER BOARDS BASIS OF DESIGN. POLYVISION. E3 ENVIRONMENTAL CERAMICSTEEL SURFACE.PROVIDE BALANCED HIGH_PRESSURE LAMINATED PORCELAIN ENAMEL MARKER BOARDS OF 3-PLY CONSTRUCTION CONSISTING OF FACE SHEET, CORE MATERIAL AND BACKING.
TB	TACK BOARD- 4X4-FABRIC FACED OR NATURAL CORK TACK BOARDS AS SELECTED BY THE ARCHITECT. PROVIDE MILDEW RESISTANT, WASHABLE, TWO-PLY, 100 PERCENT RECYCLED POLYESTER FABRIC WITH A PLAIN WEAVE PATTERN COMPLYING WITH FS CCC_W_408, TYPE II MILDEW RESISTANT. LAMINATED TO 1/4" THICK CORK BACKING SHEET.PROVIDE ONLY FABRIC THAT HAS A FLAME SPREAD RATING OF 25 OR LESS WHEN TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM E 84.
SB	SMART BOARD- INSTALL AUDIO, DATA,CABLE, VIDEO, POWER. CONNECTIONS SEE ELECTRICAL DWGS. (PANASONIC UB-T880 IS A MULTI-TOUCH INTERACTIVE ELITE PANABOARD DIAGONAL 77-INCH (46.3" X 61.7") ANTI-GLARE PANEL 4:3 ASPECT RATIO MULTI-USER (UP TO 3 USERS) AND MULTI-TOUCH SENSITIVE COMES WITH MULTIFUNCTION ELECTRONIC PEN BUILT-IN SPEAKERS 2 BUILT-IN USB PORTS & VIDEO PROJECTOR W/ SUPPORT ARM BY OWNER).
GB1	BOBRICK 36" GRAB BAR - B-6106.99 X 36" 1½" DIAMETER PEENED GRIP HORIZONTAL GRAB BAR WITH CONCEALED MOUNTING, STAINLESS STEEL OR EQUAL.
GB2	BOBRICK 42" GRAB BAR - B-6106.99 X 42" 1½" DIAMETER PEENED GRIP HORIZONTAL GRAB BAR WITH CONCEALED MOUNTING, STAINLESS STEEL OR EQUAL.
MS	BOBRICK B-2908 1824 STAINLESS STEEL MIRROR 18" X 24" OR EQUAL.
MSF	FULL HGT. x 48" S.S. MIRROR
ND	BOBRICK B-254 SURFACE MOUNTED FEMININE NAPKIN DISPOSAL OR EQUAL.
TD1	SURFACE MOUNTED ROLL PAPER TOWEL DISPENSER-RENOWN HANDS FREE SYSTTEM RENO05157-WB OR EQUAL.
RH	BOBRICK B-2890 SURFACE MNT. MULTI-ROLL TOILET TISSUE DISPENSER OR EQUAL.
WF	(4) COMPARTMENT WASHFOUNTAIN W/ SOAP DISPENSERS-TERRECON BRADLEY QUADRA-FOUNT MODEL WF2944 OR EQUAL.
DF	ELECTRICAL WATER COOLERS SEE A8.1 FOR MNT. HGHTS.
FS	FLOOR SINK REFER TO PLUMBING DWGS. INSTALL FRP PANELS & TRIM 30" H. ON WALLS AROUND SINK TYP.
PART	RESTROOM STALL PARTITION SOLID COLOR PHENLOIC FLOOR ANCHORED/ OVERHEAD BRACED BY ACCURATE PARTITIONS W/ S.S. HARWARE & STILES OR EQUAL.
WC	WATER CLOSET REFER TO PLUMBING DWGS.
URN	URINAL REFER TO PLUMBING DWGS.
FD	FLOOR DRAIN SEE PLUMBING DWGS.
HD	ELECT. HAND DRYER -HAND DRYER FROM ONE OF THESE MANUFACTURERS AMERICAN DRYER, INC. BOBRICK, PINNACLE DRYER CORP., EXCEL DRYER, INC., OR WORLD DRYER.
HW	ELECT. WATER HEATER- REFER TO ELECTRICAL & PLUMBING DWGS. TYP
▨	HANDICAPPED CLEAR FLOOR SPACE
•	INDICATES TALL CASEWORK
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET. (PROVIDE FIRE BLANKETS AS REQ.)



01 1st FLOOR EQUIP. PLAN- BLDG. 1

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

ROOM CHART

ROOM NO.	ROOM NAME	SF	ROOM NO.	ROOM NAME	SF
1-001	CORRIDOR	690	1-200	CLASSROOM	730
1-002	CORRIDOR	281	1-201	IT LAB	636
1-003	STAIR	290	1-202	CLASSROOM	730
1-004	CORRIDOR	1073	1-203	IT LAB	625
1-005	STAIR	290	1-204	CLASSROOM	711
1-006	CORRIDOR	723	1-204A	STORAGE	82
1-007	CORRIDOR	1690	1-205	RESTROOM-BOYS	294
			1-206	RESTROOM-GIRLS	305
1-100	RECEPTION	290	1-207	CLASSROOM	749
1-101	RESTROOM	57	1-208	TEACHER PLANNING	126
1-102	ADMINISTRATION	301	1-208A	RESTROOM	44
1-102A	STORAGE	18	1-209	CLASSROOM	730
1-103	ADMINISTRATION	101	1-210	CONFERENCE	213
1-104	CORRIDOR	111	1-211	CLASSROOM	730
1-105	PRINCIPAL	132	1-212	CLASSROOM	730
1-106	GUIDANCE	100	1-213	CLASSROOM	730
1-107	BUSINESS MANAGER	92	1-214	CLASSROOM	730
1-108	GUIDANCE	96	1-215	CLASSROOM	730
1-109	WORK ROOM	108	1-216	CLASSROOM	730
1-110	RESTROOM	44			
1-111	CLASSROOM	730	1-260	CUSTODIAL	80
1-112	CLASSROOM	730	1-290	DATA	103
1-113	CLASSROOM	730			
1-114	RESTROOM-BOYS	294			
1-115	RESTROOM-GIRLS	388			
1-116	STORAGE	344			
1-117	ASSISTANT PRINCIPAL	113			
1-118	CLASSROOM	730			
1-119	CLASSROOM-SCIENCE	721			
1-120	CLASSROOM	730			
1-121	CLASSROOM-SCIENCE	731			
1-122	CLASSROOM	730			
1-123	CLASSROOM	730			
1-124	CLASSROOM	730			
1-170	ELEVATOR	92			
1-171	ELEVATOR EQUIPMENT	88			
1-180	CUSTODIAL	50			
1-190	DATA	73			
1-191	ELECTRICAL	128			

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Comm. No: 214031.00
Date: 09-24-14
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René Tercilla AIA, REFP

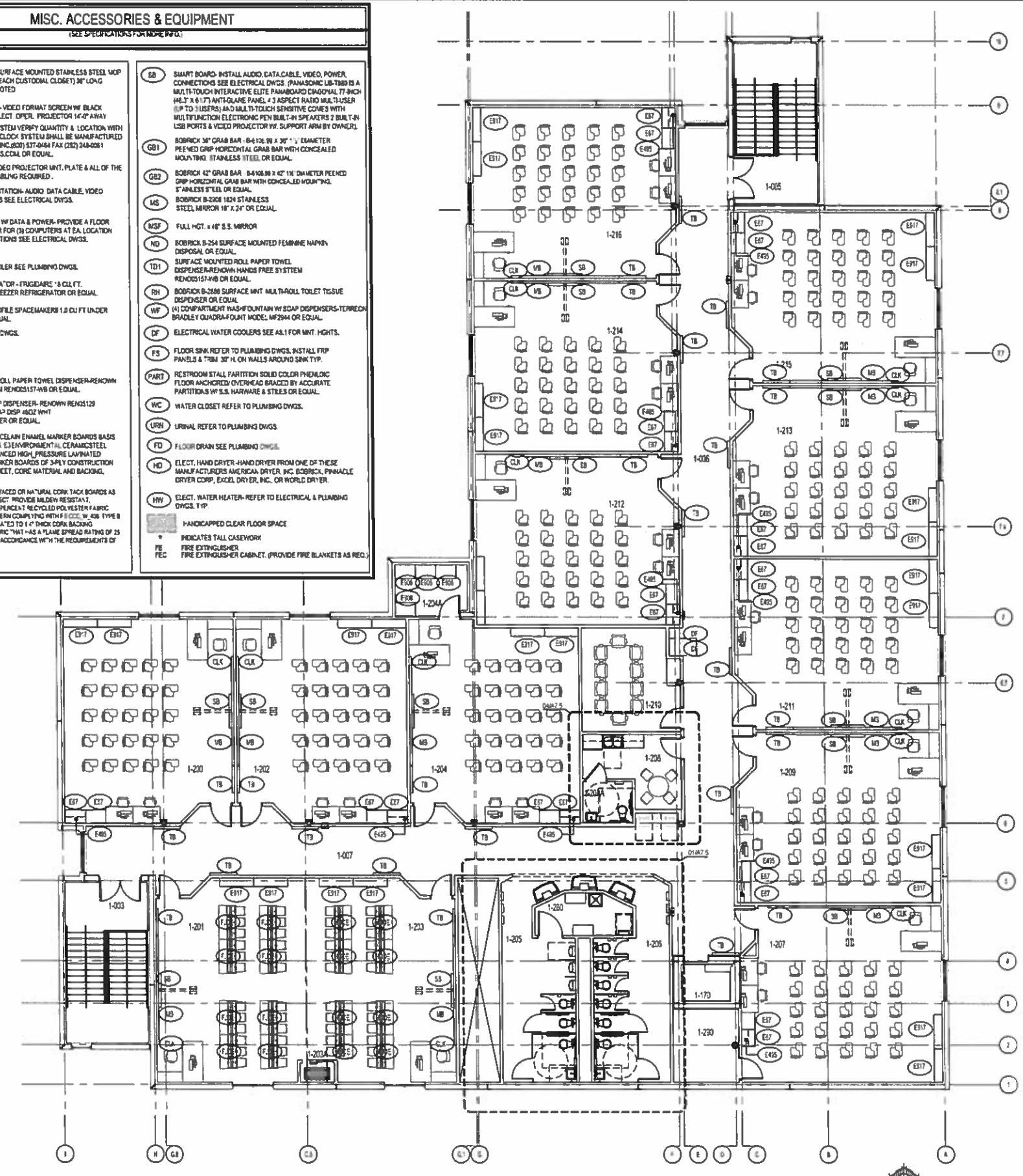
A7.1

MISC. ACCESSORIES & EQUIPMENT

(SEE SPECIFICATIONS FOR MORE INFO.)

- (MIP) MOP HOLDER- B-223 SURFACE MOUNTED STAINLESS STEEL MOP HOLDER (PROVIDE AT EACH CUSTODIAL CLOSET) 36" LONG UNLESS OTHERWISE NOTED
- (VS-1) 90"W X 72"H POWERED- VIDEO FORMAT SCREEN W/ BLACK MASKING BORDERS- ELECT. OPER. PROJECTOR 14'-0" AWAY
- (CLK) CLOCK- GPS CLOCK SYSTEM VERIFY QUANTITY & LOCATION WITH PLANS.GPS WIRELESS CLOCK SYSTEM SHALL BE MANUFACTURED BY PRIMEX WIRELESS INC.(800) 537-0494 FAX (252) 248-0081 WWW.PRIMEXWIRELESS.COM, OR EQUAL.
- (VP) PROVIDE & INSTALL VIDEO PROJECTOR MNT. PLATE & ALL OF THE SYSTEMS WIRING & CABLING REQUIRED..
- (SCS) SATELLITE CONTROL STATION- AUDIO DATA CABLE, VIDEO POWER. CONNECTIONS SEE ELECTRICAL DWGS.
- (FJDE) FLOOR JUNCTION BOX W/ DATA & POWER- PROVIDE A FLOOR J-BOX DATA & POWER FOR (3) COMPUTERS AT EA. LOCATION SHOWN. FOR CONNECTIONS SEE ELECTRICAL DWGS.
- (DF) ELECTRIC WATER COOLER SEE PLUMBING DWGS.
- (REF) FULL SIZE REFRIGERATOR - FRIGIDAIRE - 9 CU FT. FGHT 1846 KP TOP FREEZER REFRIGERATOR OR EQUAL
- (MC) MICROWAVE - GE PROFILE SPACEMAKER® 1.0 CU FT UNDER CABINET MNT. OR EQUAL.
- (SINK) REFER TO PLUMBING DWGS.
- (TD1) SURFACE MOUNTED ROLL PAPER TOWEL DISPENSER-RENOWN HANDS FREE SYSTEM RENDS157-WB OR EQUAL.
- (SD1) WALL MOUNTED SOAP DISPENSER- RENOWN REN03129 CLEAR VIEW BULK SOAP DISP 46OZ WHT LIQUID SOAP DISPENSER OR EQUAL.
- (MB) MARKER BOARD- 4'-0 PORCELAIN ENAMEL MARKER BOARDS BASIS OF DESIGN POLYVISION ECOENVIRONMENTAL CERAMICSTEEL SURFACE.PROVIDE BALANCED HIGH_PRESSURE LAMINATED PORCELAIN ENAMEL MARKER BOARDS OF 3-PLY CONSTRUCTION CONSISTING OF FACE SHEET, CORE MATERIAL AND BACKING.
- (TB) TACK BOARD- 4'X4'-0" FABRIC FACED OR NATURAL CORK TACK BOARDS AS SELECTED BY THE ARCHITECT. PROVIDE MILDEW RESISTANT, WASHABLE, TWO-PLY 100 PERCENT RECYCLED POLYESTER FABRIC WITH A PLAIN WEAVE PATTERN COMPLYING WITH FS CCC-W-408 TYPE II MILDEW RESISTANT LAMINATED TO 1/4" THICK CORK BACKING SHEET.PROVIDE ONLY FABRIC THAT HAS A FLAME SPREAD RATING OF 25 OR LESS WHEN TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM E 84.

- (GB) SMART BOARD- INSTALL AUDIO, DATA CABLE, VIDEO, POWER. CONNECTIONS SEE ELECTRICAL DWGS. (PANASONIC UB-T880 IS A MULTI-TOUCH INTERACTIVE ELITE PANABOARD DIAGONAL 77-INCH (48.3" X 61.3") ANTI-GLARE PANEL 4:3 ASPECT RATIO MULTI-USER (UP TO 3 USERS) AND MULTI-TOUCH SENSITIVE CURVES WITH MULTIFUNCTION ELECTRONIC PEN BUILT-IN SPEAKERS 2 BUILT-IN USB PORTS & VIDEO PROJECTOR W/. SUPPORT ARM BY OWNER).
- (GB1) BOBRICK 36" GRAB BAR - B-6106.99 X 36" 1 ½" DIAMETER PEENED GRIP HORIZONTAL GRAB BAR WITH CONCEALED MOUNTING. STAINLESS STEEL OR EQUAL.
- (GB2) BOBRICK 42" GRAB BAR - B-6106.99 X 42" 1½" DIAMETER PEENED GRIP HORIZONTAL GRAB BAR WITH CONCEALED MOUNTING. 5" AINLESS STEEL OR EQUAL.
- (MS) BOBRICK B-2028 1824 STAINLESS STEEL MIRROR 18" X 24" OR EQUAL.
- (MSF) FULL HGT. x 48" S.S. MIRROR
- (ND) BOBRICK B-254 SURFACE MOUNTED FEMININE NAPKIN DISPOSAL OR EQUAL.
- (TD1) SURFACE MOUNTED ROLL PAPER TOWEL DISPENSER-RENOWN HANDS FREE SYSTEM RENDS157-WB OR EQUAL.
- (RH) BOBRICK B-2888 SURFACE MNT. MULTI-ROLL TOILET TISSUE DISPENSER OR EQUAL
- (WF) (4) COMPARTMENT WASH-FOUNTAIN W/ SOAP DISPENSERS-TERRAZZO BRADLEY QUADRA-FOUNT MODEL MF2944 OR EQUAL.
- (DF) ELECTRICAL WATER COOLERS SEE AS.1 FOR MNT. HGHTS.
- (FS) FLOOR SINK REFER TO PLUMBING DWGS, INSTALL FRP PANELS & TRIM 30" H. ON WALLS AROUND SINK TYP.
- (PART) RESTROOM STALL PARTITION SOLID COLOR PHENOLIC FLOOR ANCHORED/ OVERHEAD BRACED BY ACCURATE PARTITIONS W/ S.S. HARWARE & STILES OR EQUAL.
- (WC) WATER CLOSET REFER TO PLUMBING DWGS.
- (URN) URINAL REFER TO PLUMBING DWGS.
- (FD) FLOOR DRAIN SEE PLUMBING DWGS.
- (HD) ELECT. HAND DRYER -HAND DRYER FROM ONE OF THESE MANUFACTURERS AMERICAN DRYER INC. BOBRICK, PINNACLE DRYER CORP, EXCEL DRYER, INC., OR WORLD DRYER.
- (HW) ELECT. WATER HEATER- REFER TO ELECTRICAL & PLUMBING DWGS, TYP.
- HANDICAPPED CLEAR FLOOR SPACE
- * INDICATES TALL CASEWORK
- FE FIRE EXTINGUISHER
- FEC FIRE EXTINGUISHER CABINET. (PROVIDE FIRE BLANKETS AS REQ.)



01 2nd FLOOR EQUIP. PLAN- BLDG. 1

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

ROOM CHART

ROOM NO	ROOM NAME	SF	ROOM NO	ROOM NAME	SF
1-001	CORRIDOR	896	1-208	CLASSROOM	736
1-002	CORRIDOR	291	1-201	IT LAB	636
1-003	STAIR	239	1-202	CLASSROOM	736
1-004	CORRIDOR	1075	1-203	IT LAB	625
1-005	STAIR	296	1-204	CLASSROOM	711
1-006	CORRIDOR	725	1-204A	STORAGE	82
1-007	CORRIDOR	1088	1-205	RESTROOM-BOYS	294
			1-206	RESTROOM-GIRLS	305
1-100	RECEPTION	288	1-207	CLASSROOM	749
1-101	RESTROOM	87	1-208	TEACHER PLANNING	128
1-102	ADMINISTRATOR	301	1-208A	RESTROOM	64
1-102A	STORAGE	10	1-209	CLASSROOM	736
1-103	ADMINISTRATION	191	1-210	CONFERENCE	213
1-104	CORRIDOR	113	1-211	CLASSROOM	736
1-105	PRINCIPAL	132	1-212	CLASSROOM	736
1-106	GUIDANCE	188	1-213	CLASSROOM	736
1-107	BUSINESS MANAGER	82	1-214	CLASSROOM	736
1-108	GUIDANCE	86	1-215	CLASSROOM	736
1-109	MUSIC ROOM	688	1-216	CLASSROOM	736
1-110	RESTROOM	64			
1-111	CLASSROOM	736	1-268	CUSTODIAL	80
1-112	CLASSROOM	736	1-269	DATA	102
1-113	CLASSROOM	736			
1-114	RESTROOM-BOYS	294			
1-115	RESTROOM-GIRLS	283			
1-116	STORAGE	344			
1-117	ASSISTANT PRINCIPAL	112			
1-118	CLASSROOM	730			
1-119	CLASSROOM-SCIENCE	721			
1-120	CLASSROOM	730			
1-121	CLASSROOM-SCIENCE	731			
1-122	CLASSROOM	730			
1-123	CLASSROOM	736			
1-124	CLASSROOM	736			
1-170	ELEVATOR	53			
1-171	ELEVATOR EQUIPMENT	89			
1-180	CUSTODIAL	80			
1-190	DATA	72			
1-191	ELECTRICAL	129			

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Drawn: -
Revised:

René Tercilla AIA, REFP

A7.2

SINK BASE CABINETS

DESCRIPTION
SINK BASE UNIT WITH ONE DOOR HINGED LEFT.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E160	24"Wx30"Hx24"D
E161	21"Wx30"Hx24"D
E162	18"Wx30"Hx24"D

DESCRIPTION
SINK BASE UNIT WITH TWO HINGED DOORS.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E163	48"Wx28"Hx24"D
E164	45"Wx28"Hx24"D
E165	42"Wx28"Hx24"D
E166	39"Wx28"Hx24"D
E166A	36"Wx28"Hx30"D
E167	36"Wx28"Hx24"D
E167A	36"Wx24"Hx24"D
E168	33"Wx28"Hx24"D
E169	30"Wx28"Hx24"D
E170	27"Wx28"Hx24"D

DESCRIPTION
SINK BASE UNIT WITH ONE DOOR HINGED RIGHT.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E171	24"Wx30"Hx24"D
E172	21"Wx30"Hx24"D
E173	18"Wx30"Hx24"D

DESCRIPTION
SINK BASE UNIT WITH ONE DOOR HINGED LEFT.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E174	24"Wx28"Hx24"D
E175	21"Wx28"Hx24"D
E176	18"Wx28"Hx24"D

DESCRIPTION
SINK BASE UNIT WITH TWO HINGED DOORS, AND ONE BLANK DRAWER PANEL.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E107	48"Wx34"Hx24"D
E108	45"Wx34"Hx24"D
E109	42"Wx34"Hx24"D
E110	39"Wx34"Hx24"D
E111	36"Wx34"Hx24"D
E112	33"Wx34"Hx24"D
E113	30"Wx34"Hx24"D
E114	27"Wx34"Hx24"D

DESCRIPTION
SINK BASE UNIT WITH ONE DOOR HINGED RIGHT AND ONE BLANK DRAWER PANEL.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E115	24"Wx34"Hx24"D
E116	21"Wx34"Hx24"D
E117	18"Wx34"Hx24"D

DESCRIPTION
SINK BASE UNIT WITH ONE DOOR HINGED LEFT AND ONE BLANK DRAWER PANEL.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E118	24"Wx34"Hx24"D
E119	21"Wx34"Hx24"D
E120	18"Wx34"Hx24"D

DESCRIPTION
SINK BASE UNIT WITH TWO HINGED DOORS, AND ONE BLANK DRAWER PANEL.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E121	48"Wx30"Hx24"D
E122	45"Wx30"Hx24"D
E123	42"Wx30"Hx24"D
E124	39"Wx30"Hx24"D
E125	36"Wx30"Hx24"D
E125A	36"Wx24"Hx24"D
E126	33"Wx30"Hx24"D
E127	30"Wx30"Hx24"D
E128	27"Wx30"Hx24"D

DESCRIPTION
SINK BASE UNIT WITH ONE DOOR HINGED RIGHT AND ONE BLANK DRAWER PANEL.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E129	24"Wx30"Hx24"D
E130	21"Wx30"Hx24"D
E131	18"Wx30"Hx24"D

SINK BASE CABINETS

DESCRIPTION
SINK BASE UNIT WITH ONE DOOR HINGED LEFT AND ONE BLANK DRAWER PANEL.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E132	24"Wx30"Hx24"D
E133	21"Wx30"Hx24"D
E134	18"Wx30"Hx24"D

DESCRIPTION
SINK BASE UNIT WITH TWO HINGED DOORS.
SERVICES: HOT AND COLD WATER

ITEM	SIZE	ITEM	SIZE
E135	48"Wx34"Hx24"D	E148	48"Wx30"Hx24"D
E135A	48"Wx34"Hx24"D	E148A	48"Wx30"Hx30"D
E135B	48"Wx34"Hx28"D	E148B	36"Wx30"Hx30"D
E136	45"Wx34"Hx24"D	E150	45"Wx30"Hx24"D
E137	42"Wx34"Hx24"D	E151	42"Wx30"Hx24"D
E137A	42"Wx34"Hx24"D	E152	39"Wx30"Hx24"D
E138	39"Wx34"Hx24"D	E153	36"Wx30"Hx24"D
E139	36"Wx34"Hx24"D	E154	33"Wx30"Hx24"D
E139A	36"Wx34"Hx24"D	E155	30"Wx30"Hx24"D
E140	33"Wx34"Hx24"D	E156	27"Wx30"Hx24"D
E141	30"Wx34"Hx24"D		
E142	27"Wx34"Hx24"D		

DESCRIPTION
SINK BASE UNIT WITH ONE DOOR HINGED RIGHT.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E143	24"Wx34"Hx24"D
E144	21"Wx34"Hx24"D
E145	18"Wx34"Hx24"D

DESCRIPTION
SINK BASE UNIT WITH ONE DOOR HINGED LEFT.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E146	24"Wx34"Hx24"D
E147	21"Wx34"Hx24"D
E148	18"Wx34"Hx24"D

DRAWER CABINETS

FILE CABINETS

DESCRIPTION
FILE DRAWER UNIT WITH FOLLOWERS, ONE FILE DRAWER AND TWO TOP DRAWERS.

ITEM	SIZE
E337	21"Wx30"Hx24"D (LEGAL SIZE)
E338	18"Wx30"Hx24"D (LETTER SIZE)
E338A	15"Wx30"Hx24"D (LETTER SIZE)

DESCRIPTION
FILE DRAWER UNIT WITH FOLLOWERS, ONE FILE DRAWER AND THREE TOP DRAWERS.

ITEM	SIZE
E339	21"Wx34"Hx24"D (LEGAL SIZE)
E340	18"Wx34"Hx24"D (LETTER SIZE)

DESCRIPTION
FILE DRAWER UNIT WITH FOLLOWERS. AND TWO EQUAL DRAWERS.

ITEM	SIZE
E341	21"Wx30"Hx24"D (LEGAL SIZE)
E342	15"Wx30"Hx24"D (LETTER SIZE)
E342A	15"Wx36"Hx30"D

DESCRIPTION
FILE DRAWER UNIT WITH FOLLOWERS, TWO EQUAL DRAWERS AND ONE TOP DRAWER.

ITEM	SIZE
E343	21"Wx34"Hx24"D (LEGAL SIZE)
E344	18"Wx34"Hx24"D (LETTER SIZE)

DESCRIPTION
FILE DRAWER UNIT WITH FOLLOWERS AND 3 EQUAL DRAWERS.

ITEM	SIZE
E345	21"Wx42"Hx24"D (LEGAL SIZE)
E346	18"Wx42"Hx24"D (LETTER SIZE)

DESCRIPTION
DRAWER UNIT WITH FIVE EQUAL DRAWERS.

ITEM	SIZE
E318	48"Wx30"Hx24"D
E317	42"Wx30"Hx24"D
E318	36"Wx30"Hx24"D
E319	30"Wx30"Hx24"D
E320	24"Wx30"Hx24"D
E321	18"Wx30"Hx24"D
E322	12"Wx30"Hx24"D

NOTE: HEIGHT SHOWN ARE TOP OF COUNTERS, ADJUST CABINET UNITS HEIGHT AS REQUIRED. ALL EXPOSED SIDES OF CASEWORK TO BE FINISHED LIKE THE FACE OF CASEWORK. TYP.

BASE CABINETS

DESCRIPTION
SINK BASE UNIT WITH ONE DOOR HINGED RIGHT.
SERVICES: HOT AND COLD WATER

ITEM	SIZE
E157	24"Wx30"Hx24"D
E158	21"Wx30"Hx24"D
E159	18"Wx30"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE DRAWER, ONE ADJUSTABLE SHELF, & TWO HINGED DOORS.

ITEM	SIZE
E81	48"Wx30"Hx24"D
E82	45"Wx30"Hx24"D
E83	42"Wx30"Hx24"D
E84	39"Wx30"Hx24"D
E85	36"Wx30"Hx24"D
E86	33"Wx30"Hx24"D
E87	30"Wx30"Hx24"D
E88	27"Wx30"Hx24"D

DESCRIPTION
BASE UNIT WITH TWO EQUAL DRAWERS, ONE ADJUSTABLE SHELF, & TWO HINGED DOORS.

ITEM	SIZE
E89	48"Wx30"Hx24"D
E89A	48"Wx34"Hx24"D
E90	45"Wx30"Hx24"D
E91	42"Wx30"Hx24"D
E92	39"Wx30"Hx24"D
E93	24"Wx30"Hx24"D
E93A	24"Wx34"Hx24"D
E94	33"Wx30"Hx24"D
E95	36"Wx30"Hx24"D
E95A	36"Wx24"Hx24"D
E95B	36"Wx30"Hx24"D
E96	30"Wx30"Hx24"D
E96A	36"Wx34"Hx24"D
E96B	36"Wx34"Hx30"D
E96C	44"Wx34"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE DRAWER, ONE ADJUSTABLE SHELF AND ONE DOOR HINGED RIGHT.

ITEM	SIZE
E97	24"Wx30"Hx24"D
E97A	24"Wx34"Hx24"D
E96	21"Wx30"Hx24"D
E96A	21"Wx34"Hx24"D
E98	18"Wx30"Hx24"D
E98A	18"Wx34"Hx24"D
E100	18"Wx30"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE DRAWER, ONE ADJUSTABLE SHELF AND ONE DOOR HINGED LEFT.

ITEM	SIZE
E101	24"Wx30"Hx24"D
E102	21"Wx30"Hx24"D
E102A	21"Wx34"Hx24"D
E103	18"Wx30"Hx24"D
E104	18"Wx30"Hx24"D

DESCRIPTION
BLIND CORNER BASE UNIT (LEFT SIDE EXPOSED) WITH ONE DRAWER, ONE ADJUST-SHELF, AND ONE DOOR HINGED RIGHT.

ITEM	SIZE
E105	45"Wx30"Hx24"D

DESCRIPTION
BLIND CORNER BASE UNIT (RIGHT SIDE EXPOSED) WITH ONE DRAWER, ONE ADJUST-SHELF, AND ONE DOOR HINGED LEFT.

ITEM	SIZE
E106	45"Wx30"Hx24"D

DESCRIPTION
BLIND CORNER BASE UNIT (RIGHT SIDE EXPOSED) WITH ONE DRAWER, ONE ADJUST-SHELF, AND (2) DOORS

ITEM	SIZE
E106A	60"Wx34"Hx24"D

DESCRIPTION
TALL STORAGE LOCKABLE UNIT WITH FIVE ADJUSTABLE SHELVES AND TWO HINGED DOORS.

ITEM	SIZE
E348	48"Wx84"Hx24"D
E348A	72"Wx96"Hx24"D
E348B	48"Wx84"Hx25"D
E348C	60"Wx108"Hx36"D
E350	45"Wx84"Hx24"D
E351	42"Wx84"Hx24"D
E352	39"Wx84"Hx24"D
E353	36"Wx84"Hx36"D
E353A	36"Wx84"Hx24"D
E353B	36"Wx84"Hx30"D
E353C	34"Wx108"Hx24"D
E354	33"Wx84"Hx24"D
E355	30"Wx84"Hx24"D
E356	27"Wx84"Hx24"D
E356A	24"Wx84"Hx24"D
E357	48"Wx84"Hx14"D
E358	45"Wx84"Hx14"D
E359	42"Wx84"Hx14"D
E360	39"Wx84"Hx14"D
E361	36"Wx84"Hx14"D
E362	33"Wx84"Hx14"D
E363	30"Wx84"Hx14"D
E364	27"Wx84"Hx14"D

DESCRIPTION
BASE UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.

ITEM	SIZE
E37	48"Wx28"Hx24"D
E38	45"Wx28"Hx24"D
E39	42"Wx28"Hx24"D
E40	39"Wx28"Hx24"D
E40A	36"Wx24"Hx30"D
E41	36"Wx28"Hx24"D
E41A	36"Wx24"Hx24"D
E42	33"Wx28"Hx24"D
E43	30"Wx28"Hx24"D
E44	27"Wx28"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR HINGED RIGHT.

ITEM	SIZE
E45	24"Wx28"Hx24"D
E46	21"Wx28"Hx24"D
E47	18"Wx28"Hx24"D
E48	15"Wx28"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR HINGED LEFT.

ITEM	SIZE
E48	24"Wx28"Hx24"D
E50	21"Wx28"Hx24"D
E51	18"Wx28"Hx24"D
E52	15"Wx28"Hx24"D

DESCRIPTION
BLIND CORNER BASE UNIT (LEFT SIDE EXPOSED) WITH ONE ADJUSTABLE SHELF, & ONE DOOR HINGED RIGHT.

ITEM	SIZE
E53	45"Wx28"Hx24"D

DESCRIPTION
BLIND CORNER BASE UNIT (RIGHT SIDE EXPOSED) WITH ONE ADJUSTABLE SHELF, & ONE DOOR HINGED LEFT.

ITEM	SIZE
E54	48"Wx34"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE DRAWER, ONE ADJUSTABLE SHELF, & TWO HINGED DOORS.

ITEM	SIZE
E55	48"Wx34"Hx24"D
E56	45"Wx34"Hx24"D
E57	42"Wx34"Hx24"D
E58	39"Wx34"Hx24"D
E59	36"Wx34"Hx24"D
E60	33"Wx34"Hx24"D
E61	30"Wx34"Hx24"D
E62	27"Wx34"Hx24"D

BASE CABINETS

DESCRIPTION
BASE UNIT WITH TWO EQUAL DRAWERS, ONE ADJUSTABLE SHELF & TWO HINGED DOORS.

ITEM	SIZE
E63	48"Wx34"Hx24"D
E64	45"Wx34"Hx24"D
E65	42"Wx34"Hx24"D
E66	39"Wx34"Hx24"D
E67	36"Wx34"Hx24"D
E68	33"Wx34"Hx24"D
E69	30"Wx34"Hx24"D
E70	27"Wx34"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE DRAWER, ONE ADJUSTABLE SHELF AND ONE DOOR HINGED RIGHT.

ITEM	SIZE
E71	24"Wx34"Hx24"D
E72	21"Wx34"Hx24"D
E73	18"Wx34"Hx24"D
E74	15"Wx34"Hx24"D
E74A	18"Wx34"Hx30"D

DESCRIPTION
BASE UNIT WITH ONE DRAWER, ONE ADJUSTABLE SHELF AND ONE DOOR HINGED LEFT.

ITEM	SIZE
E75	24"Wx34"Hx24"D
E76	21"Wx34"Hx24"D
E77	18"Wx34"Hx24"D
E78	15"Wx34"Hx24"D

DESCRIPTION
BLIND CORNER BASE UNIT (LEFT SIDE EXPOSED) WITH ONE DRAWER, ONE ADJUST-SHELF, AND ONE DOOR HINGED RIGHT.

ITEM	SIZE
E78	45"Wx34"Hx24"D

DESCRIPTION
BLIND CORNER BASE UNIT (RIGHT SIDE EXPOSED) WITH ONE DRAWER, ONE ADJUST-SHELF, AND ONE DOOR HINGED LEFT.

ITEM	SIZE
E80	45"Wx34"Hx24"D
E80A	48"Wx34"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.

ITEM	SIZE
E1	48"Wx34"Hx24"D
E1A	48"Wx34"Hx30"D
E2	45"Wx34"Hx24"D
E3	42"Wx34"Hx24"D
E4	39"Wx34"Hx24"D
E5	36"Wx34"Hx24"D
E5A	84"Wx34"Hx36"D
E6	33"Wx34"Hx24"D
E7	30"Wx34"Hx24"D
E8	27"Wx34"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR HINGED RIGHT.

ITEM	SIZE
E9	24"Wx34"Hx24"D
E10	21"Wx34"Hx24"D
E11	18"Wx34"Hx24"D
E12	15"Wx34"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR HINGED LEFT.

ITEM	SIZE
E13	24"Wx34"Hx24"D
E14	21"Wx34"Hx24"D
E15	18"Wx34"Hx24"D
E16	15"Wx34"Hx24"D

DESCRIPTION
BLIND CORNER BASE UNIT (LEFT SIDE EXPOSED) WITH ONE ADJUSTABLE SHELF, & ONE DOOR HINGED RIGHT.

ITEM	SIZE
E17	45"Wx34"Hx24"D
E17A	48"Wx34"Hx24"D

DESCRIPTION
BLIND CORNER BASE UNIT (RIGHT SIDE EXPOSED) WITH ONE ADJUSTABLE SHELF, & ONE DOOR HINGED LEFT

ITEM	SIZE
E18	45"Wx34"Hx24"D
E18A	48"Wx34"Hx24"D

BASE CABINETS

DESCRIPTION
BASE UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS. 5 - TWO SLIDING DOORS. TWO HINGED DOORS.

ITEM	SIZE
E19	48"Wx30"Hx24"D
E19A	48"Wx30"Hx30"D
E19B	36"Wx30"Hx30"D
E20	45"Wx30"Hx24"D
E21	42"Wx30"Hx24"D
E22	36"Wx30"Hx24"D
E23	36"Wx30"Hx24"D
E24	33"Wx30"Hx24"D
E25	30"Wx30"Hx24"D
E26	27"Wx30"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR HINGED RIGHT.

ITEM	SIZE
E27	24"Wx30"Hx24"D
E27A	24"Wx30"Hx18"D
E28	21"Wx30"Hx24"D
E29	18"Wx30"Hx24"D
E30	15"Wx30"Hx24"D

DESCRIPTION
BASE UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR HINGED LEFT.

ITEM	SIZE
E31	24"Wx30"Hx24"D
E32	21"Wx30"Hx24"D
E33	18"Wx30"Hx24"D
E34	15"Wx30"Hx24"D

DESCRIPTION
BLIND CORNER BASE UNIT (LEFT SIDE EXPOSED) WITH ONE ADJUSTABLE SHELF, & ONE DOOR HINGED RIGHT

ITEM	SIZE
E35	45"Wx30"Hx24"D

DESCRIPTION
BLIND CORNER BASE UNIT (RIGHT SIDE EXPOSED) WITH ONE ADJUSTABLE SHELF, & ONE DOOR HINGED LEFT.

ITEM	SIZE
E36	40"Wx34"Hx24"D

DESCRIPTION
BASE UNIT WITH (3) GRADUATED DRAWERS. ONE ADJUSTABLE SHELF, & ONE HINGED DOOR.

ITEM	SIZE
E36A	36"Wx34"Hx24"D

DESCRIPTION
WALL UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR HINGED RIGHT.

ITEM	SIZE
E515	24"Wx30"Hx14"D
E516	21"Wx30"Hx14"D
E517	18"Wx30"Hx14"D
E518	15"Wx30"Hx14"D

DESCRIPTION
WALL UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR HINGED LEFT.

ITEM	SIZE
E519	24"Wx30"Hx14"D
E519A	24"Wx30"Hx18"D (2-ADJ. SHELVES)
E520	21"Wx30"Hx14"D
E521	18"Wx30"Hx14"D
E521A	18"Wx30"Hx18"D
E522	15"Wx30"Hx14"D

DESCRIPTION
WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS. * EXPOSED END

ITEM	SIZE
E523	48"Wx24"Hx14"D *
E523A	48"Wx24"Hx12"D
E523A	48"Wx24"Hx18"D
E524	45"Wx24"Hx14"D
E525	42"Wx24"Hx14"D
E526	39"Wx24"Hx14"D
E526A	36"Wx24"Hx12"D
E527	36"Wx24"Hx14"D
E527A	36"Wx24"Hx18"D
E527B	30"Wx24"Hx18"D
E527C	36"Wx24"Hx18"D
E528	33"Wx24"Hx14"D
E529	30"Wx24"Hx14"D
E530	27"Wx24"Hx14"D

DESCRIPTION
WALL UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR HINGED RIGHT.

ITEM	SIZE
E531	24"Wx24"Hx14"D
E532	21"Wx24"Hx14"D
E533	18"Wx24"Hx14"D
E534	15"Wx24"Hx14"D

DESCRIPTION
WALL UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR HINGED LEFT.

ITEM	SIZE
E535	24"Wx24"Hx14"D
E535A	24"Wx24"Hx16"D
E536	21"Wx24"Hx14"D
E537	18"Wx24"Hx14"D
E538	15"Wx24"Hx14"D

WALL CABINETS

DESCRIPTION
WALL UNIT WITH TWO HINGED DOORS.

ITEM	SIZE
E539	48"Wx18"Hx14"D
E540	45"Wx18"Hx14"D
E541	42"Wx18"Hx14"D
E542	36"Wx18"Hx14"D
E543	36"Wx18"Hx14"D
E544	33"Wx18"Hx14"D
E545	30"Wx18"Hx14"D
E546	27"Wx18"Hx14"D

DESCRIPTION
WALL UNIT WITH ONE DOOR HINGED RIGHT.

ITEM	SIZE
E547	24"Wx18"Hx14"D
E548	21"Wx18"Hx14"D
E548	18"Wx18"Hx14"D
E550	15"Wx18"Hx14"D

DESCRIPTION
WALL UNIT WITH ONE DOOR HINGED LEFT

ITEM	SIZE
E551	24"Wx18"Hx14"D
E552	21"Wx18"Hx14"D
E553	18"Wx18"Hx14"D
E554	15"Wx18"Hx14"D

DESCRIPTION
WALL UNIT WITH TWO HINGED DOORS.

ITEM	SIZE
E555	48"Wx15"Hx14"D
E555A	48"Wx15"Hx16"D
E556	45"Wx15"Hx14"D
E557	42"Wx15"Hx14"D
E557A	42"Wx15"Hx18"D
E558	39"Wx15"Hx14"D
E559	36"Wx15"Hx14"D
E559A	36"Wx15"Hx18"D
E559B	36"Wx12"Hx14"D
E560	33"Wx15"Hx14"D
E561	30"Wx15"Hx14"D
E562	27"Wx15"Hx14"D

DESCRIPTION
WALL UNIT WITH ONE DOOR HINGED RIGHT.

ITEM	SIZE
E563	24"Wx15"Hx14"D
E564	21"Wx15"Hx14"D
E565	18"Wx15"Hx14"D
E566	15"Wx15"Hx14"D

DESCRIPTION
WALL UNIT WITH ONE DOOR HINGED LEFT

ITEM	SIZE
E567	24"Wx15"Hx14"D
E568	21"Wx15"Hx14"D
E569	18"Wx15"Hx14"D
E570	15"Wx15"Hx14"D

WALL CABINETS

DESCRIPTION
WALL UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.

ITEM	SIZE
E475	48"Wx42"Hx14"D
E476	45"Wx42"Hx14"D
E477	42"Wx42"Hx14"D
E478	39"Wx42"Hx14"D
E479	36"Wx42"Hx14"D
E480	33"Wx42"Hx14"D
E481	30"Wx42"Hx14"D
E482	27"Wx42"Hx14"D

DESCRIPTION
WALL CORNER UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR WITH A CONTINUOUS PIANO HINGE AT DOOR CENTER.

ITEM	SIZE
E571	24"Wx30"Hx14"D
E571A	48"Wx30"Hx14"D

DESCRIPTION
WALL UNIT WITH TWO ADJUSTABLE SHELVES AND ONE DOOR HINGED RIGHT.

SECTION A — SECTION B

E571A

ITEM	SIZE
E483	24"Wx42"Hx14"D
E484	21"Wx42"Hx14"D
E485	18"Wx42"Hx14"D
E485A	15"Wx50"Hx14"D
E485B	15"Wx54"Hx14"D
E485C	18"Wx54"Hx14"D
E485D	18"Wx60"Hx14"D
E486	15"Wx42"Hx14"D
E486A	15"Wx48"Hx14"D
E486B	18"Wx42"Hx14"D

DESCRIPTION
WALL UNIT WITH TWO ADJUSTABLE SHELVES AND ONE DOOR HINGED LEFT.

DESCRIPTION
WALL CORNER UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR WITH A CONTINUOUS PIANO HINGE AT DOOR CENTER.

ITEM	SIZE
E571B	42"Wx30"Hx24"D

ITEM	SIZE
E487	24"Wx54"Hx14"D
E488	21"Wx42"Hx14"D
E489	18"Wx42"Hx14"D
E489A	15"Wx50"Hx14"D
E489B	15"Wx54"Hx14"D
E489C	18"Wx54"Hx14"D
E489D	18"Wx60"Hx14"D
E492	15"Wx42"Hx14"D
E490A	15"Wx48"Hx14"D
E490B	18"Wx42"Hx14"D

ITEM	SIZE
E572	36"Wx30"Hx14"D
E572A	28"Wx30"Hx14"D NO DOOR OPEN CAB.
E572B	36"Wx54"Hx14"D

DESCRIPTION
WALL CORNER UNIT WITH ONE ADJUSTABLE SHELF AND ONE DOOR WITH A CONTINUOUS PIANO HINGE AT DOOR CENTER.

ITEM	SIZE
E572C	36"Wx30"Hx14"D

DESCRIPTION
WALL UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.

ITEM	SIZE
E491	48"Wx36"Hx14"D
E492	45"Wx36"Hx14"D
E493	42"Wx36"Hx14"D
E494	39"Wx36"Hx14"D
E495	36"Wx36"Hx14"D
E496	33"Wx36"Hx14"D
E497	30"Wx36"Hx14"D
E498	27"Wx36"Hx14"D
E498A	36"Wx36"Hx14"D
E498B	30"Wx36"Hx14"D
E498C	30"Wx54"Hx14"D
E495A	36"Wx54"Hx14"D

DESCRIPTION
WALL CORNER UNIT WITH TWO ADJUSTABLE SHELVES AND A DOOR HINGED RIGHT.

ITEM	SIZE
E573	24"Wx30"Hx24"D

DESCRIPTION
WALL UNIT WITH TWO ADJUSTABLE SHELVES AND ONE DOOR HINGED RIGHT.

DESCRIPTION
WALL CORNER UNIT WITH TWO ADJUSTABLE SHELVES AND A DOOR HINGED LEFT.

ITEM	SIZE
E574	24"Wx30"Hx24"D

DESCRIPTION
WALL UNIT WITH TWO ADJUSTABLE SHELVES AND ONE DOOR HINGED LEFT.

ITEM	SIZE
E499	24"Wx36"Hx14"D
E500	21"Wx36"Hx14"D
E500A	21"Wx36"Hx14"D
E501	18"Wx36"Hx14"D
E502	15"Wx36"Hx14"D

DESCRIPTION
WALL UNIT WITH TWO ADJUSTABLE SHELVES AND ONE DOOR HINGED LEFT.

ITEM	SIZE
E503	24"Wx36"Hx14"D
E503A	24"Wx36"Hx14"D
E504	21"Wx36"Hx14"D
E505	18"Wx36"Hx14"D
E506	15"Wx36"Hx14"D
E506A	15"Wx36"Hx14"D

DESCRIPTION
WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.

ITEM	SIZE
E507	44"Wx30"Hx14"D
E507A	48"Wx30"Hx16"D (2-ADJ. SHELVES)
E508	45"Wx30"Hx14"D
E508	42"Wx30"Hx14"D
E508A	42"Wx30"Hx18"D (2-ADJ. SHELVES)
E510	39"Wx30"Hx14"D
E511	36"Wx30"Hx14"D
E511A	36"Wx30"Hx18"D (2-ADJ. SHELVES)
E511B	36"Wx30"Hx18"D (2-ADJ. SHELVES) LOCKED CABINET
E512	33"Wx30"Hx14"D
E513	30"Wx30"Hx14"D (2-ADJ. SHELVES)
E513A	30"Wx30"Hx18"D (2-ADJ. SHELVES)
E514	27"Wx30"Hx14"D
E514A	24"Wx30"Hx14"D

NOTE: ALL CASEWORK TO BE LOCKABLE ON PROJECT. VERIFY WITH OWNER THE KEY SEQUENCE. ALL EXPOSED SURFACES TO BE LAMINATED.

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Comm. No	214031.00
Date:	09-24-14
Drawn:	
Revised:	

René Torcilla AIA, REFP

A7.3

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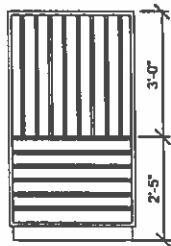
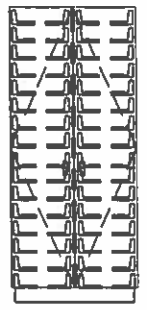
MISCELLANEOUS



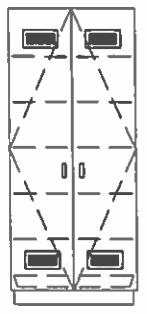
DESCRIPTION
TALL OPEN SHELVING UNIT WITH REMOVABLE ADJUSTABLE SHELVES AND NO DOORS.

ITEM	SIZE
E900	36"Wx65"Hx24I"D



DESCRIPTION
TALL TOTE TRAY STORAGE WITH 32 #0004 TRAYS (16"Wx3 5/8"Hx13"D) AND TWO HINGED DOORS.

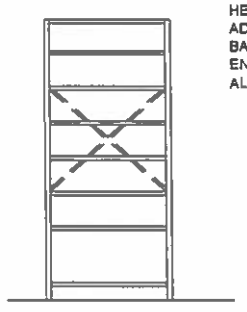
ITEM	SIZE
E901	36"Wx84"Hx15"D



DESCRIPTION
DRY STORAGE UNIT WITH FIVE PERFORATED SHELVES (#0507), ONE DRIP PAN, AND TWO HINGED DOORS WITH LOUVERS.

DRY STORAGE UNIT WITH REMOVABLE ADJUSTABLE SHELVES AND TWO HINGED DOORS WITH LOUVERS.

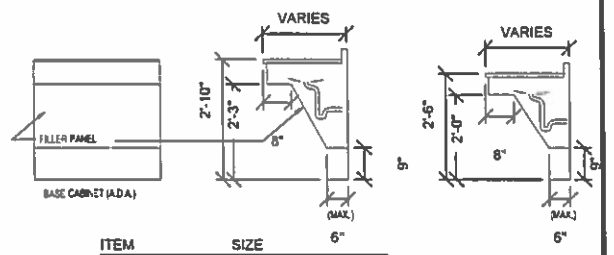
ITEM	SIZE
E902	36"Wx84"Hx24"D
E903	36"Wx84"Hx30"D



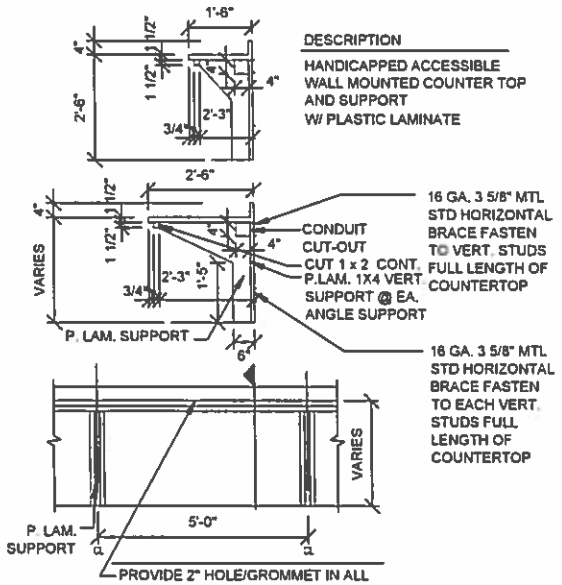
DESCRIPTION
HEAVY DUTY METAL OPEN ADJUSTABLE SHELVING W/ BAKED ENAMEL FINISH END PANELS BETWEEN ALL UNITS AND @ ENDS

ITEM	SIZE
E905	36"Wx84"Hx18"D
E905A	48"Wx84"Hx18"D
E905B	30"Wx84"Hx18"D
E906	36"Wx84"Hx12"D
E907	36"Wx84"Hx24"D
E907A	36"Wx107"Hx36"D
E907B	24"Wx107"Hx12"D
E907C	26"Wx48"Hx12"D MTD. FROM MID WALL TO CLG.

DESCRIPTION
HANDICAPPED ACCESSIBLE BASE CABINET TO ACCOMODATE A STAINLESS STEEL SINK.



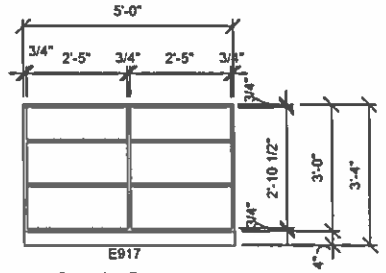
ITEM	SIZE
E904	36"Wx34"Hx24"D
E904A	36"Wx34"Hx30"D
E904B	48"Wx34"Hx24"D
E904C	36"Wx30"Hx24"D
E904D	48"Wx30"Hx30"D
E904E	36"Wx24"Hx24"D



DESCRIPTION
HANDICAPPED ACCESSIBLE WALL MOUNTED COUNTER TOP AND SUPPORT W/ PLASTIC LAMINATE

ITEM	SIZE
E908	(PER PLAN)L x30"Hx2'-6"W
E908A	(PER PLAN)L x30"Hx2'-6"W
E908B	(PER PLAN)L x34"Hx2'-6"W
E908C	(PER PLAN)L x24"Hx2'-6"W
E908D	(PER PLAN)L x30"Hx2'-0"W
E908E	(PER PLAN)L x30"Hx2'-4"W
E908F	(PER PLAN)L x30"Hx2'-4"W
E908G	(PER PLAN)L x30"Hx3'-4"W
E908H	(PER PLAN)L x28"Hx24"W
E908J	(PER PLAN)L x30"Hx18"W

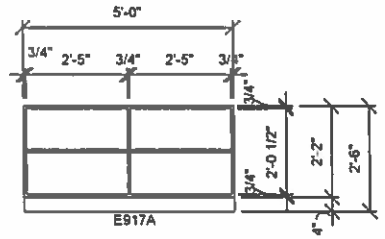
NOTE: CASEWORK IS TO BE LOCKABLE FOR PROJECT & CARRY A LINE ITEM. ALSO ALL EXPOSED SURFACES TO BE LAMINATED OR FINISHED AS NOTED.



BOOKCASE

ITEM	SIZE
E917	5'-0"W x 3-4"H x 15"D

DESCRIPTION
P. LAM. BOOKCASE W/ ADJUSTABLE SHELVES.



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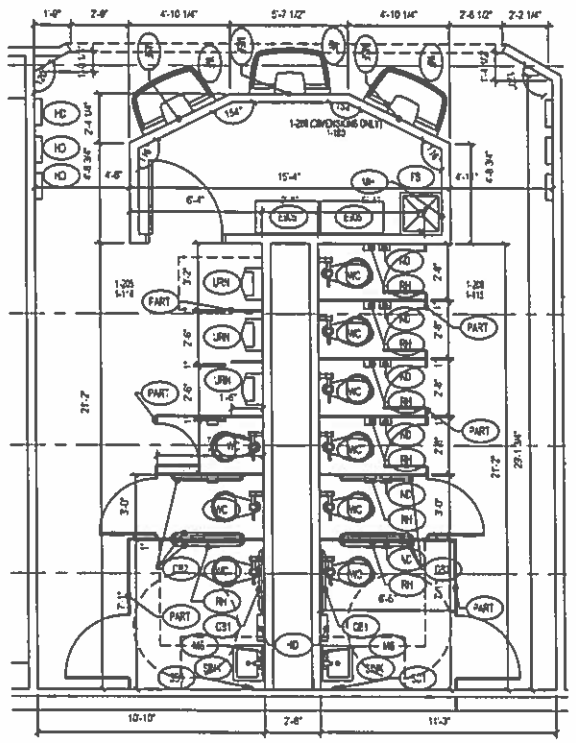
Revised:

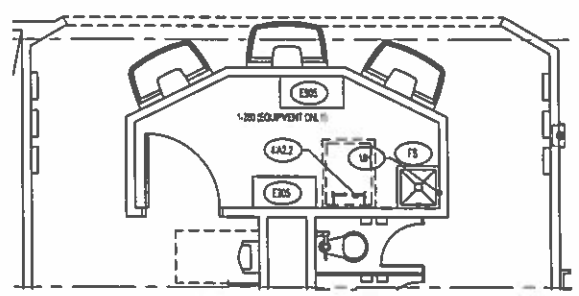
René Tercilla AIA, REFP

A7.4



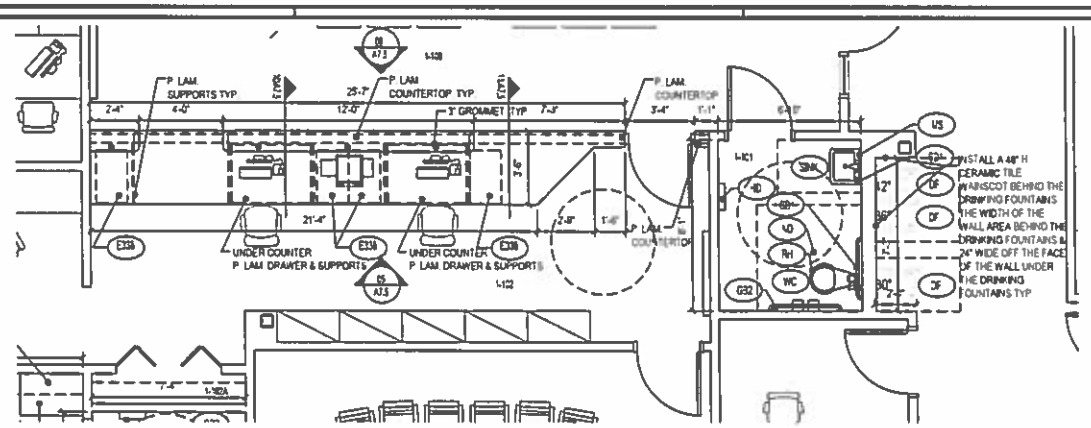
01 ENLARGED R.R. PLAN

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



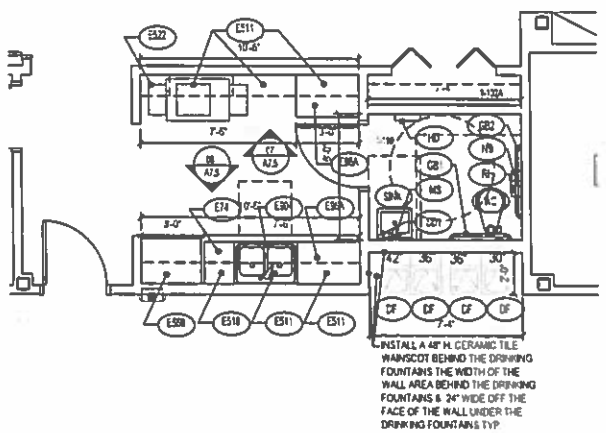
01A ENLARGED PLAN

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



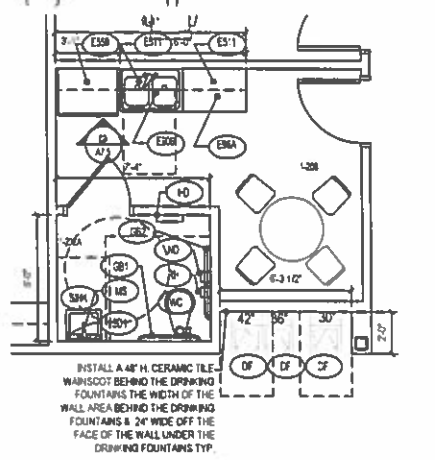
02 ENLARGED EQUIPMENT PLAN

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



03 ENLARGED EQUIPMENTPLAN

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



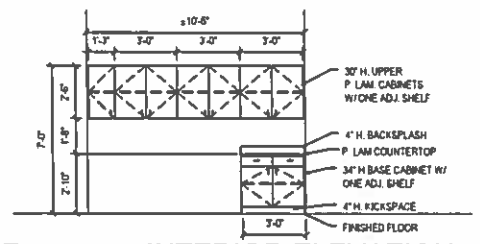
04 ENLARGED EQUIPMENTPLAN

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

MISC. ACCESSORIES & EQUIPMENT

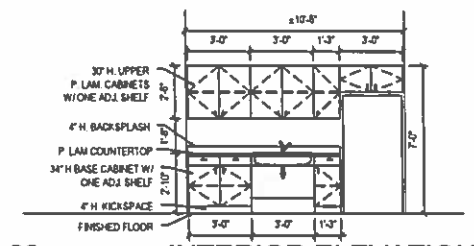
(SEE SPECIFICATIONS FOR MORE INFO.)

- MH — MOP HOLDER- B-223 SURFACE MOUNTED STAINLESS STEEL MOP HOLDER (PROVIDE AT EACH CUSTODIAL CLOSET) 36" LONG UNLESS OTHERWISE NOTED
- VF-1 — 86"W X 72"H POWERED- VIDEO FORMAT SCREEN W/ BLACK MASKING BORDERS- ELECT. OPER. PROJECTOR 14'-0" AWAY
- CLK — CLOCK- GPS CLOCK SYSTEM VERIFY QUANTITY & LOCATION WITH PLANS.GPS WIRELESS CLOCK SYSTEM SHALL BE MANUFACTURED BY PRIMEX WIRELESS, INC.(800) 837-0464 FAX (352) 248-2061 WWW.PRIMEXWIRELESS.COM. OR EQUAL.
- VP — PROVIDE & INSTALL VIDEO PROJECTOR MNT, PLATE & ALL OF THE SYSTEMS WIRING & CABLING REQUIRED .
- SCB — SATELLITE CONTROL STATION- AUDIO, DATA CABLE, VIDEO POWER, CONNECTIONS SEE ELECTRICAL DWGS.
- FJDE — FLOOR JUNCTION BOX W/ DATA & POWER- PROVIDE A FLOOR J-BOX DATA & POWER FOR (2) COMPUTERS AT EA LOCATION SHOWN. FOR CONNECTIONS SEE ELECTRICAL DWGS.
- DF — ELECTRIC WATER COOLER SEE PLUMBING DWGS.
- REF — FULL SIZE REFRIGERATOR - FRIGIDAIRE - 8 CU. FT. FGHT 1848 KP TOP FREEZER REFRIGERATOR OR EQUAL.
- MC — MICROWAVE - GE PROFILE SPACEMAKER® 1.0 CU FT UNDER CABINET MNT, OR EQUAL.
- SINK — REFER TO PLUMBING DWGS.
- TD1 — SURFACE MOUNTED ROLL PAPER TOWEL DISPENSER-RENOWN HANDS FREE SYSTEM RENO05137-WB OR EQUAL.
- SD1 — WALL MOUNTED SOAP DISPENSER- RENOWN REN85129 CLEAR VIEW BULK SOAP DISP 48OZ WHT LIQUID SOAP DISPENSER OR EQUAL.
- MB — MARKER BOARD- 4'X4'- PORCELAIN ENAMEL MARKER BOARDS BASIS OF DESIGN: POLYVISION, ED ENVIRONMENTAL CERAMICSTEEL SURFACE,PROVIDE BALANCED HIGH_PRESSURE LAMINATED PORCELAIN ENAMEL MARKER BOARDS OF 3-PLY CONSTRUCTION CONSISTING OF FACE SHEET, CORE MATERIAL AND BACKING.
- TB — TACK BOARD- 4'X4' FABRIC FACED OR NATURAL CORK TACK BOARDS AS SELECTED BY THE ARCHITECT. PROVIDE MILDEW RESISTANT, WASHABLE, TWO-PLY 100 PERCENT RECYCLED POLYESTER FABRIC WITH A PLAIN WEAVE PATTERN COMPLYING WITH FS CCC_W_404, TYPE II, MILDEW RESISTANT, LAMINATED TO 1/4" THICK CORK BACKING SHEET.PROVIDE ONLY FABRIC THAT HAS A FLAME SPREAD RATING OF 25 OR LESS WHEN TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM E 84.
- SB — SMART BOARD- INSTALL AUDIO, DATA CABLE, VIDEO, POWER, CONNECTIONS SEE ELECTRICAL DWGS. (PANASONIC UB-T880 IS A MULTI-TOUCH INTERACTIVE ELITE PANABOARD DIAGONAL 77-INCH (48.3" X 81.7") ANTI-GLARE PANEL 4:3 ASPECT RATIO MULTI-USER (UP TO 3 USERS) AND MULTI-TOUCH SENSITIVE COMES WITH MULTIFUNCTION ELECTRONIC PEN BUILT-IN SPEAKERS 2 BUILT-IN USB PORTS & VIDEO PROJECTOR W/. SUPPORT ARM BY OWNER).
- GB1 — BOBRICK 36" GRAB BAR - B-6106.99 X 36" 1"1/2" DIAMETER PEENED GRIP HORIZONTAL GRAB BAR WITH CONCEALED MOUNTING, STAINLESS STEEL OR EQUAL.
- GB2 — BOBRICK 42" GRAB BAR - B-6106.99 X 42" 1/2" DIAMETER PEENED GRIP HORIZONTAL GRAB BAR WITH CONCEALED MOUNTING, STAINLESS STEEL OR EQUAL.
- MS — BOBRICK B-2806 1824 STAINLESS STEEL MIRROR 18" X 24" OR EQUAL.
- MSF — FULL HGT. x 48" S.S. MIRROR
- ND — BOBRICK B-254 SURFACE MOUNTED FEMININE NAPKIN DISPOSAL OR EQUAL.
- TD1 — SURFACE MOUNTED ROLL PAPER TOWEL DISPENSER-RENOWN HANDS FREE SYSTTEM RENO05157-WB OR EQUAL.
- RH — BOBRICK B-2888 SURFACE MNT. MULTI-ROLL TOILET TISSUE DISPENSER OR EQUAL.
- WF — (4) COMPARTMENT WASHFOUNTAIN W/ SOAP DISPENSERS-TERREON BRADLEY QUADRA-FOUNT MODEL MF2944 OR EQUAL.
- DF — ELECTRICAL WATER COOLERS SEE A8.1 FOR MNT. HGHTS.
- FS — FLOOR SINK- REFER TO PLUMBING DWGS. INSTALL FRP PANELS & TRIM 30" H. ON WALLS AROUND SINK TYP.
- PART — RESTROOM STALL PARTITION SOLID COLOR PHEN_DIC FLOOR ANCHORED/ OVERHEAD BRACED BY ACCURATE PARTITIONS W/ S.S. HARWARE & STILES OR EQUAL.
- WC — WATER CLOSET REFER TO PLUMBING DWGS.
- URN — URINAL REFER TO PLUMBING DWGS.
- FD — FLOOR DRAIN SEE PLUMBING DWGS.
- HD — ELECT. HAND DRYER -HAND DRYER FROM ONE OF THESE MANUFACTURERS AMERICAN DRYER, INC. BOBRICK, PINNACLE DRYER CORP, EXCEL DRYER, INC. OR WORLD DRYER.
- HW — ELECT. WATER HEATER- REFER TO ELECTRICAL & PLUMBING DWGS. TYP.
- HANDICAPPED CLEAR FLOOR SPACE.
- INDICATES TALL CASEWORK
- FE — FIRE EXTINGUISHER
- FEC — FIRE EXTINGUISHER CABINET. (PROVIDE FIRE BLANKETS AS REQ.)



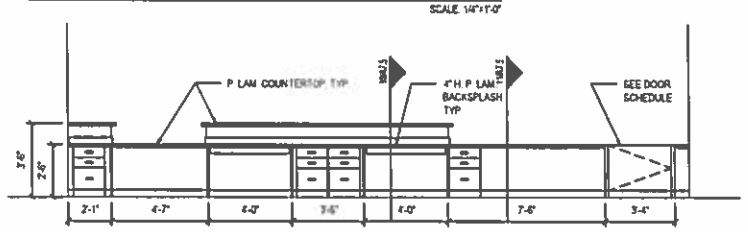
07 INTERIOR ELEVATION

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



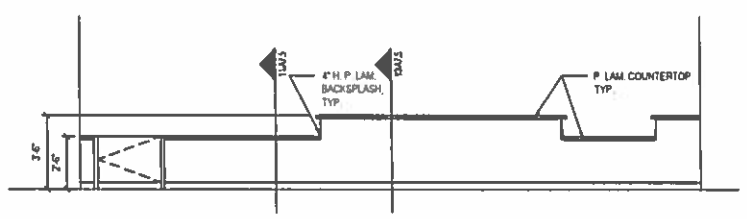
08 INTERIOR ELEVATION

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



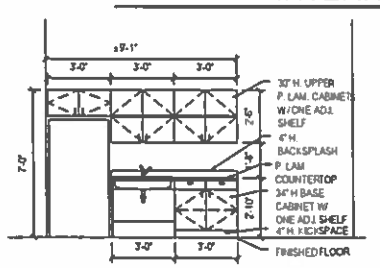
05 INTERIOR ELEVATION

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



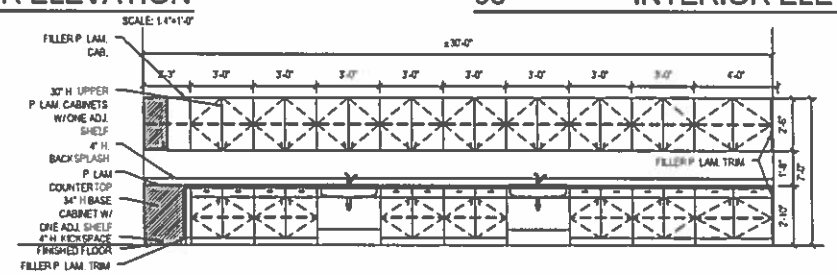
06 INTERIOR ELEVATION

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



09 INTERIOR ELEVATION

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

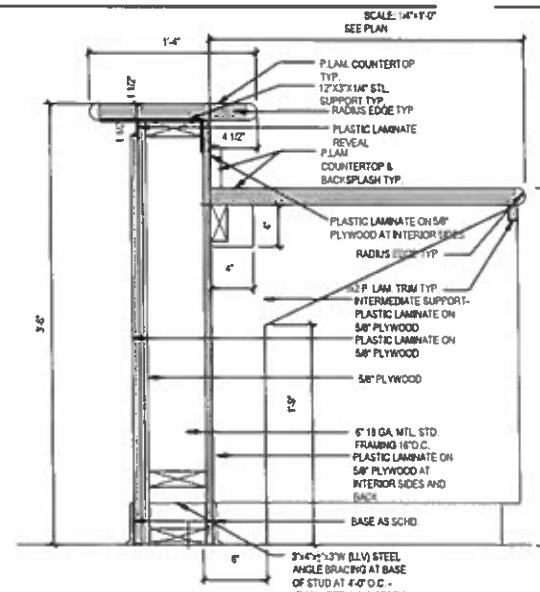


10 INTERIOR ELEVATION

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

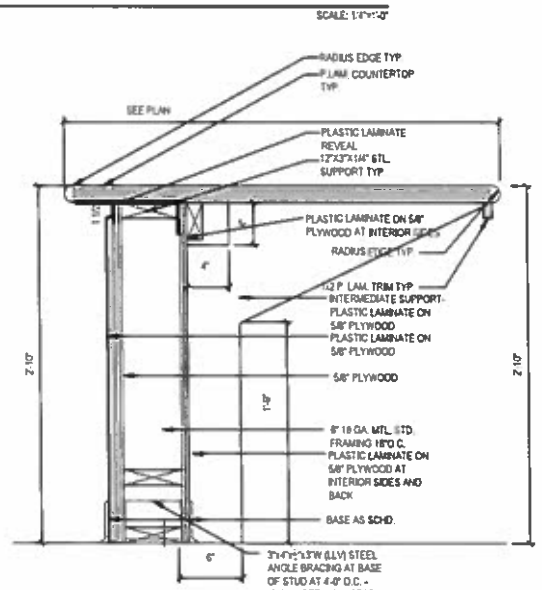
11 NOT USED

SCALE: N.T.S.



12 INTERIOR ELEVATION

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



13 INTERIOR ELEVATION

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

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Const. No 214031.00
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Revised:

Rene Tercilla AIA, REFP

A7.5

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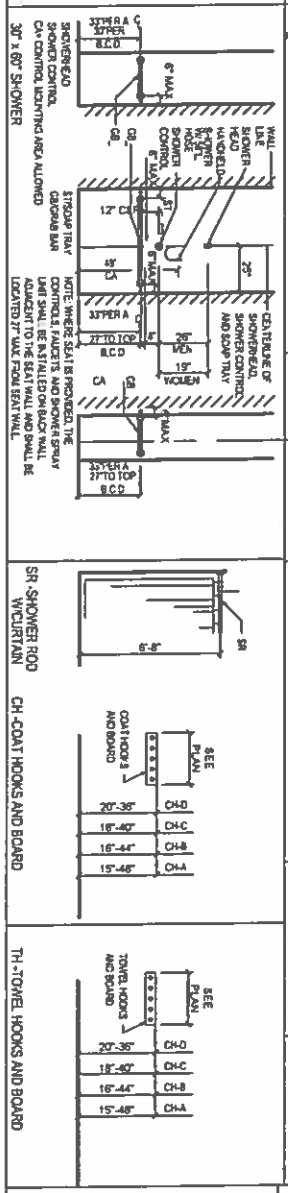
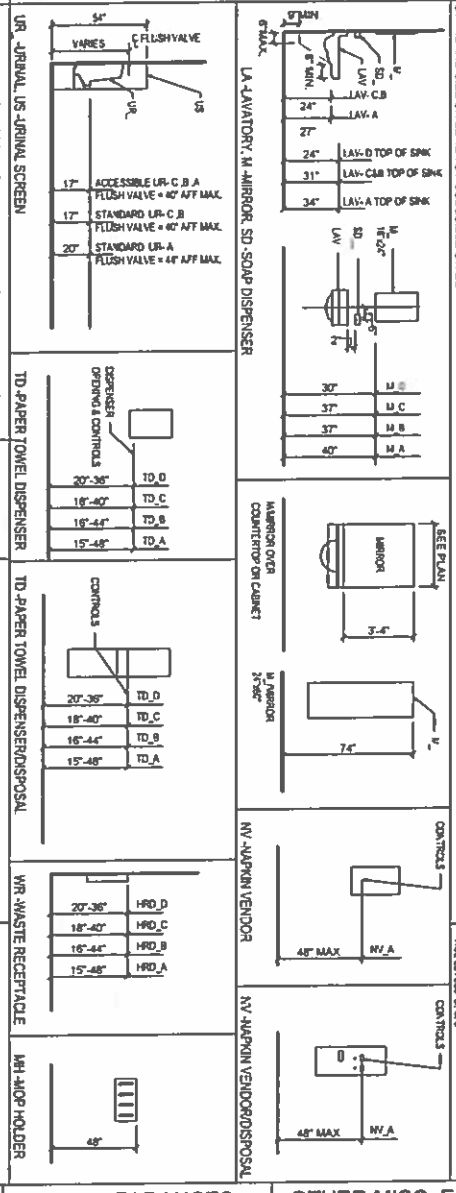
P:\T0042.00\plot\A8.1 dwg, 9/25/2014 2:28:36 PM

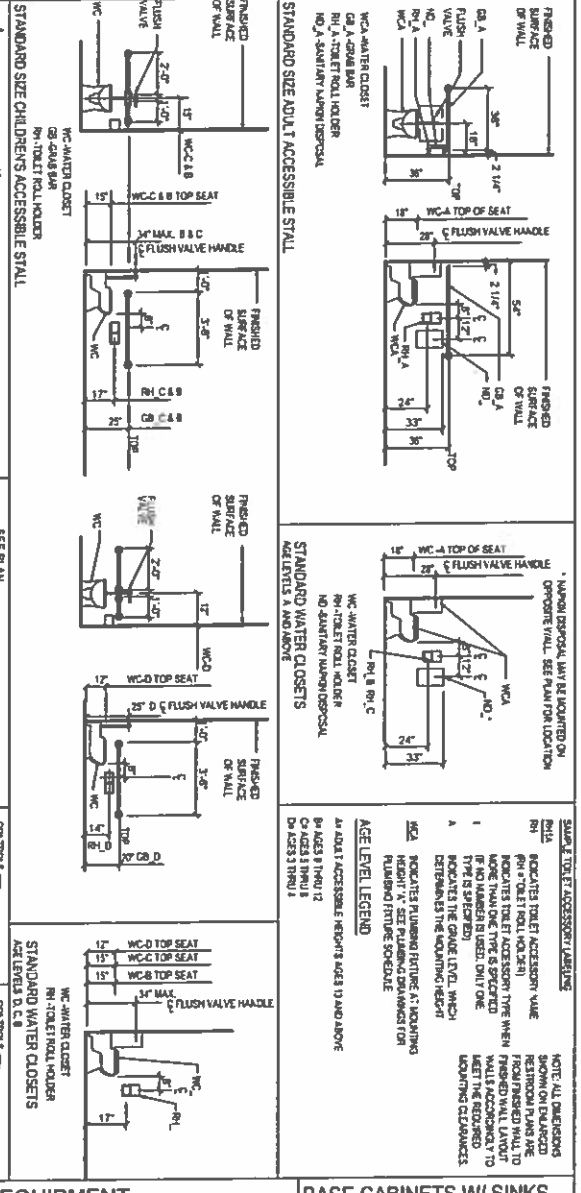
SHOWERS



RESTROOM FIXTURES & ACCESSORIES

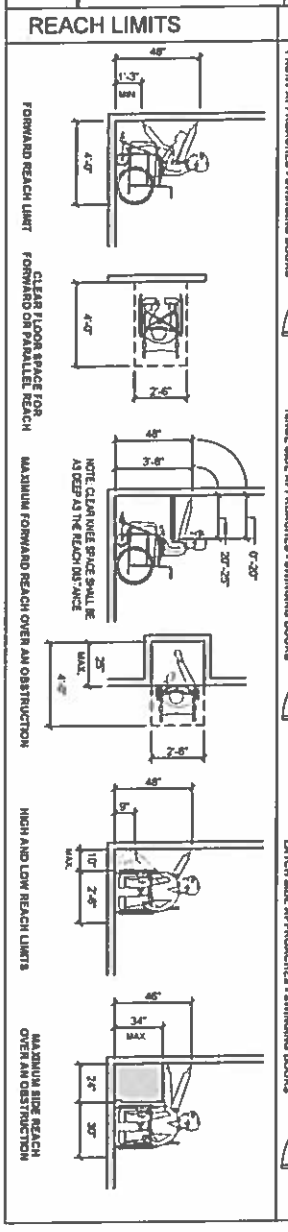


WATER CLOSETS AND ACCESSORIES

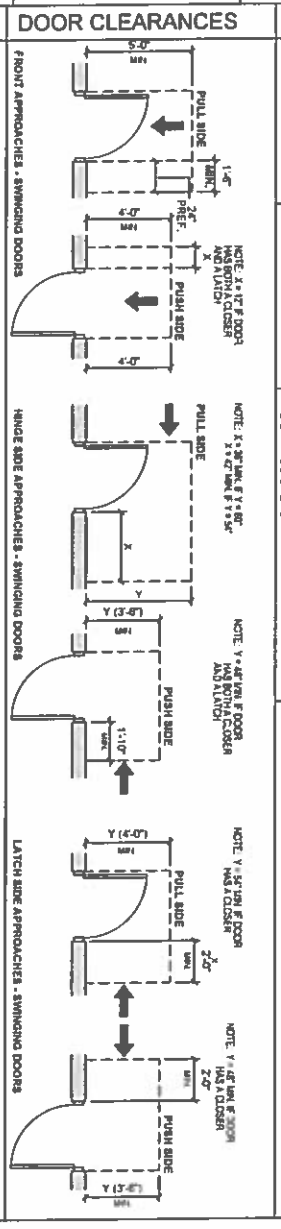


BASE CABINETS W/ SINKS

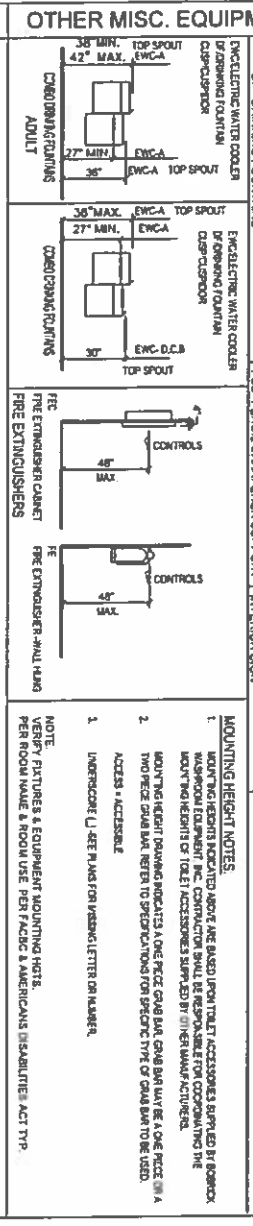
REACH LIMITS



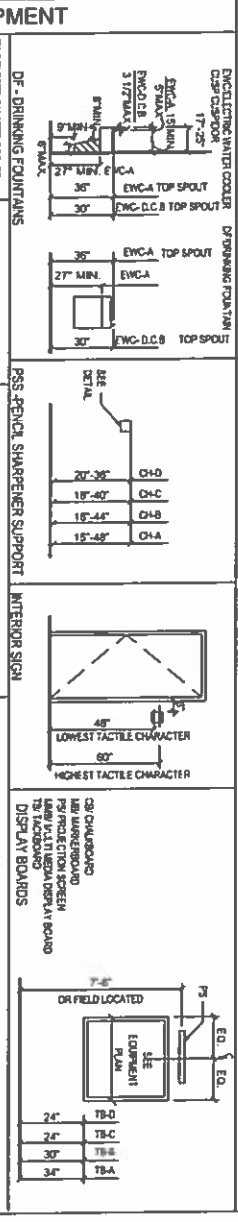
DOOR CLEARANCES



OTHER MISC. EQUIPMENT



PS-PENCIL SHARPENER SUPPORT



INTERIOR SIGN

DISPLAY BOARDS

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ARCHITECTURE

Corner No: 21403100
Date: 09-24-14
Drawn:
Checked:

Rand Torcello AIA, REEP

A8.1

2.1 SIGNS- MANUFACTURERS

A. Manufacturer shall be one of the following however products of other manufacturers will be considered for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product.
   1. ASI Sign Systems, Indianapolis, Indiana; Cincinnati, Ohio; Cleveland, Ohio
   2. Andco Industries Corp., Greensboro, North Carolina
   3. Baron Signs, Lake Park, Florida
   4. Mult-Graphics, Inc., Pelham, Georgia

2.2 FLORIDA AMERICANS WITH DISABILITIES ACT REQUIREMENTS

A. Manufacturer shall conform to tactile, Braille, letter size, and other requirements as required by Florida Accessibility Code for Building Construction and ANSI A117.1.
B. ADA requirements supersede technical specifications in this Section.

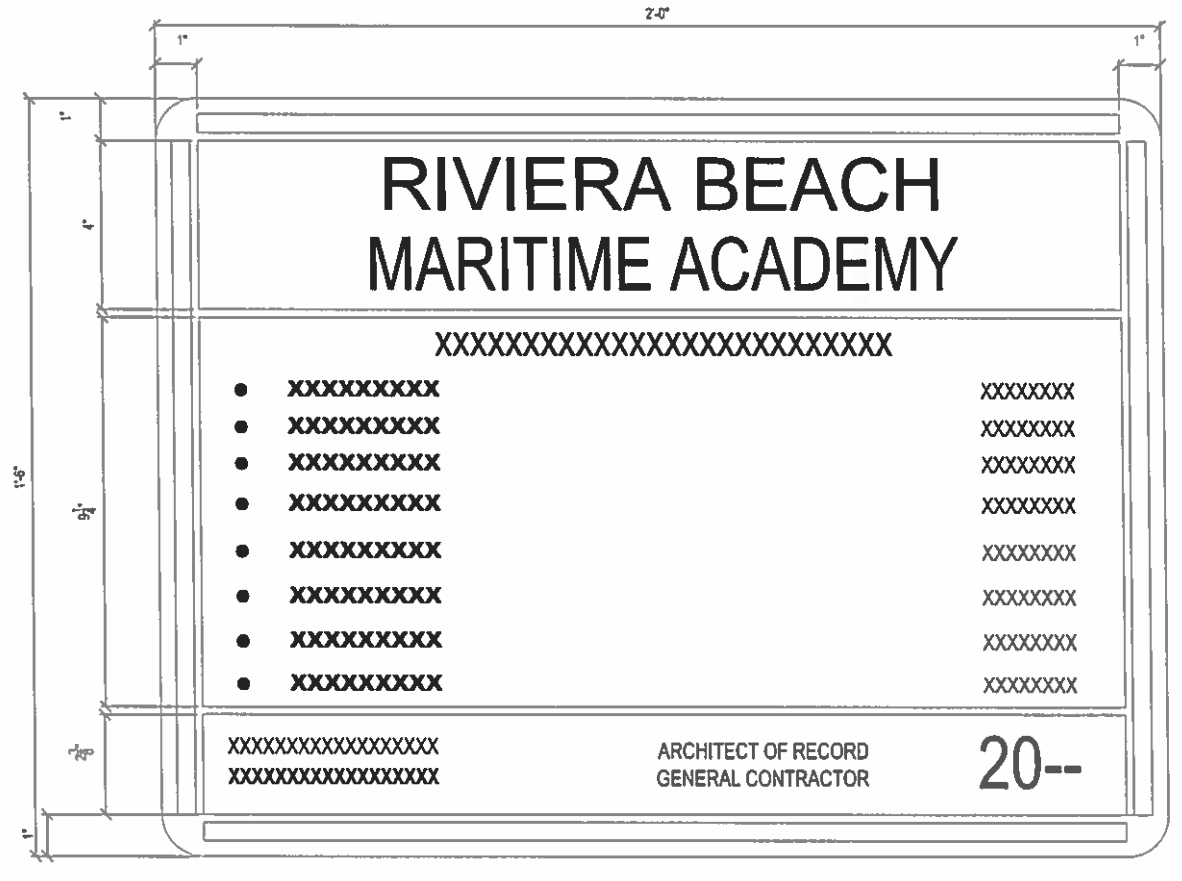
2.3 BUILDING SIGNAGE - GENERAL

A. General; applies to all signs except as noted:
   1. Material shall be minimum 1/8" clear matte acrylic stock with 3/8" radius corners.
      a. Exterior signs - Shall be UV stable material of non-petroleum base phenolic resin using sand carving process to create the raised lettering, which is an integral part of the sign.
      b. Interior signs - Shall be material of non-petroleum base phenolic resin using sand carving process to create the raised lettering, which is an integral part of the sign.
      c. Interior signs exposed to direct sun, shall be of same material as exterior signs.
      d. Paint shall be Matthews Acrylic Polyurethane system or equal.
         i) Shall be low VOC
         ii) Shall be UV Stable
         iii) Shall be lead and chromate free
         iv) Minimum life expectancy of 10-years
   2. Applied lettering not allowed.
   3. Letters and background colors selected by Architect from manufacturer's standard colors
   4. Mounting:
      a. Shall be with adhesives and non-removable oval head screws
      b. Mount at locations as directed by Architect
      c. Mount at 60" above finished floor to the center of the sign
   5. Graphic Process with Braille in one of the following, but no spilled lettering method allowed:
      a. Provide raised (photopolymer process)
      b. Engraved letters
      c. Sand craved process
   6. Letters:
      a. Letters and numbers shall have width to height ratio between 3:5 and 1:1 and stroke width to height ratio between 1:5 and 1:10.
      b. Letters and numbers to be raised 1/32" upper case sans serif font with Grade 2 Braille
      c. Raised characers shall be 5/8" high minimum and 2" high maximum.
      d. Pictograms shall have the equivalent verbal description directly below the pictogram.
   7. Characters and backgrounds must be matte or other non-glaze surface and of castrating colors.
   8. All signs shall comply with chapter 11 FBC.
B. Capacity signs:
   1. For all rooms with a capacity of 50 persons or more as shown on the drawings or other rooms as indicated on the plans.
   2. Furnish and install signage, 3" high by length required, reading "MAXIMUM CAPACITY".
   3. Allow for 3-digits maximum after "maximum capacity", copy as shown on the drawings.
C. Toilet Room Handicapped Signs
   1. Furnish and install one sign depicting National Handicapped Symbol (wheelchair) at each toilet room, equipped with facilities for the handicapped.
      a. Size shall be 6" by 6".
D. Room Name and Number Signs
   1. Provide a sign for each room or space to include name and room number.
      a. Classroom and administrative office signs shall have a slot providing the owner the ability to add a teacher's name and change the name as necessary.
      b. Minimum size of 3" high by 6" wide for signs, longer where nomenclature demands
   2. Mount number as directed by Architect.
   3. All spaces listed in Finish Schedule plus if more than one door is to a space, additional signs will be required one by number of doors to space.
E. Storage Signs
   1. Provide and install at mechanical and electrical rooms a sign mounted on the door to read as follows: " STORAGE NOT ALLOWED"
   2. Signs shall be matte acrylic plastic, red background with white letters 3 " high by width needed for copy and Braille, with 3/8" radius corners.
   3. Mount on doors with non-removable oval head screws verify number signs required.
F. Fire Extinguisher, No Exit and Pull Station Sign
   1. Copy to read: "No Exit", "Fire Pull Station Inside", And "Fire Extinguisher Inside"
   2. Red letters, same material, size and mounting as in A. General.
   3. NO EXIT sign shall have letter size as per NFPA 101 section 7.10.8.3.
   4. Braille sign not required for fire extinguisher.
   5. See plans for locations.
G. Stair Signs
   1. Provide tactile signs at each doorway leading to exit stairway.
   2. Wording on sign: "EXIT"
H. Evacuation Plan
   1. Provide frame for a graphic floor plan in each student occupied room.
      a. Size to be nominal 9" high by 12" width
      b. Provide a clear removable plastic cover over each sign.
      c. Sign cover will only be removable using a tool.
   2. Mounting:
      a. Non-removable oval head screws, using rawl plugs where mounted on masonry.
      b. Architect shall supply the plans to the Contractor.
   3. Frame Material: Matte acrylic plastic with all edges eased and tempered glass or clear plastic cover.
I. Fire Rated/Smoke Partition Labeling
   1. Field label all fire rated walls above ceiling level, with fire rating shown on the construction plans.
      a. Provide minimum 1½" high block lettering stenciled on wall above finished ceiling, if in a storage, mechanical, electrical, or similar unfinished room install at approximately 84 inches above floor.
      b. *(Contractor to use rating from permit plans)* HOUR FIRE RATED WALL, PROTECT ALL OPENING AND THROUGH WALL PENETRATION PER CODE REQUIREMENTS.
   2. Field label all smoke partitions above ceiling level.
      a. Provide minimum 1½" high block lettering stenciled on wall above finished ceiling, if storage, mechanical, electrical, or unfinished room, install at 84" above floor.
      b. SMOKE PARTITION, PROTECT ALL OPENING AND THROUGH WALL PENETRATION PER CODE REQUIREMENTS.
J. Mechanical, Electrical, Data, and Similar Rooms
   1. Provide a sign saying "NO STORAGE" meeting the General requirements.
   2. If these rooms have pair of doors, provide sign saying "THIS DOOR TO REMAIN CLOSED AND LATCHED TOP AND BOTTOM, EXCEPT DURING THE TRANSFER OF EQUIPMENT"
      a. Sign shall have 1" high block letters and be permanently attached (Attached in way as to maintain the rating of the door) to the inactive door near the latch side 60 inches from finished floor to center of sign.
      b. Braille not required for this sign.
K. "No Smoking" - "Smoke Free Campus" Sign
   1. Copy to read: "No Smoking" or "Smoke Free Campus" with universal graphic.
   2. Mounting: Non-removable oval head screws, using rawl plugs where mounted on masonry.
   3. Verify exact location with Architect. Schedule is provided for verbiage and quantity for pricing purposes. Locations and final graphics/verbiage to be determined by Architect.
   4. Material: 1/8" thick matte acrylic plastic with all edges eased.
   5. Graphic Process: Raised letters, and graphic. Braille shall be formed as an integral part of the sign face or surface applied to the sign face.
   6. Colors: Letters and background colors as selected by Architect from manufacturer's standard colors.
   7. Letters: Letters and numbers shall have width to height ratio between 3:5 and 1:1 and a stoke width to height ratio between 1:5 and 1:10. Letters and numbers shall be raised 1/32" upper case sans serif font type with Grade 2 Braille.
   8. Raised characters shall be 2" high. Pictograms shall be accompanied by the equivalent verbal description placed directly below the pictogram.
   9. Characters and backgrounds must be eggshell, matte or other non-glare surface.

L. PLAQUE Sign
a. Provide shop drawing of plaque size, border type, background finish, letter styles, and sizes, and mounting method.
   1. Verify names, titles and exact wording required for plaque prior to fabrication.
b. Provide rubbing of actual pattern for architect's approval prior to casting.
c. manufacturer: Company specializing in manufacturing the product specified in this section with minimum 5-years documented experience.
d. Aluminum Alloy F-214, size 18" x 24" beveled edges, square corners.
e. Provide concealed anchors suitable for securing attached to intended wall.
f. Casting shall be free of pits, gas holes and all letters shall be sharp, and hand tooled.
g. Clean, etch, and treat plaque with Alcline.
h. Spray two coats of clear acrylic lacquer on completed plaque.

INTERIOR SIGNAGE CHART

TYPE	MOUNTING	LOCATION	QUANTITY	BRAILLE
A	-	NOT USED		
B	A	ALL SPACES LISTED ON THE FINISH SCHEDULE EXCEPT CORRIDORS, STAIRS, IT, MECHANICAL, ELECTRICAL, STORAGE, RESTROOMS, ELEVATOR MACHINE, RESTROOMS	AS REQUIRED	1/4" ADA GRADE II BRAILLE
C	A	ALL SPACES THAT ARE NOT SIGN TYPE "B" LISTED ON THE FINISH SCHEDULE	AS REQUIRED	1/4" ADA GRADE II BRAILLE
D	A	PROVIDE 1 AT EACH END OF EVERY CORRIDOR AND HALLWAY	AS REQUIRED	1/4" ADA GRADE II BRAILLE
E	A	AT EVERY RESTROOM / TOILET / SHOWER PER SEX	AS REQUIRED	1/4" ADA GRADE II BRAILLE
F	A	AT EVERY DOOR WITH AN EXIT LIGHT	AS REQUIRED	1/4" ADA GRADE II BRAILLE
G	A	TO BE DETERMINED	AS REQUIRED	1/4" ADA GRADE II BRAILLE
H	A	AT EVERY LABELED MECHANICAL, ELECTRICAL, DATA ROOM, MACHINE ROOM AND EMERGENCY GENERATOR	AS REQUIRED	1/4" ADA GRADE II BRAILLE
J	A	TO BE DETERMINED	AS REQUIRED	
K	A	AT EVERY ELEVATOR LANDING	AS REQUIRED	1/4" ADA GRADE II BRAILLE
L	A	AT EVERY SPACE WITH AN OCCUPANT CAPACITY OF 50 OR MORE	SEE LIFE SAFETY PLANS	
L2	A	SPACES WITH ROOF HATCHES	SEE ROOF PLANS	
L3	A	TO BE DETERMINED	AS REQUIRED	



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Const. No: 214031.00
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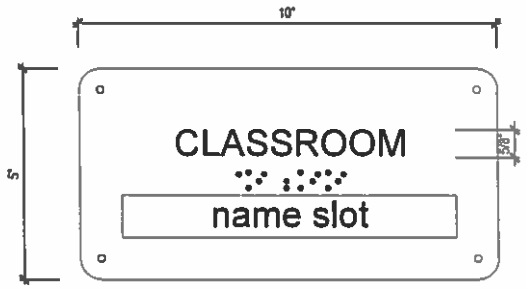
Drawn: .
Revised:

René Tercilla AIA, REFP

A8.2

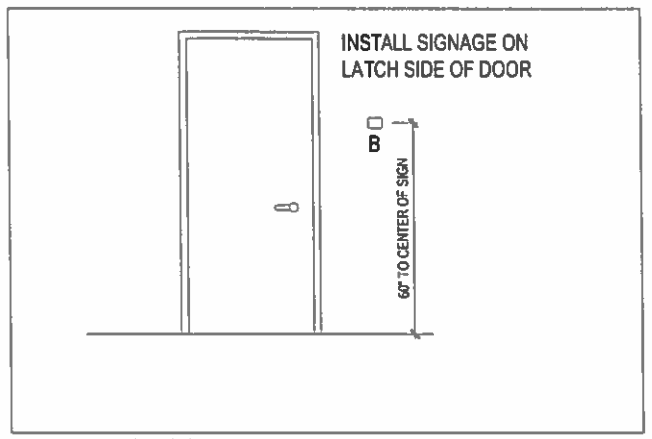


OFFICE

A NOT USED

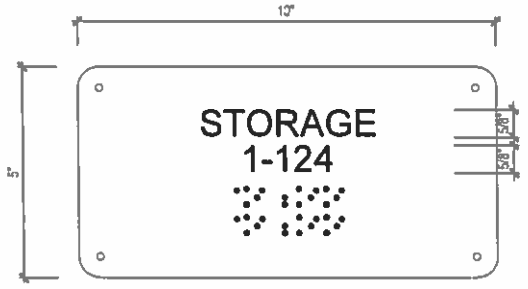
B SIGN TYPE

SCALE: 6"=1'-0"



MOUNTING DETAIL

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



C SIGN TYPE

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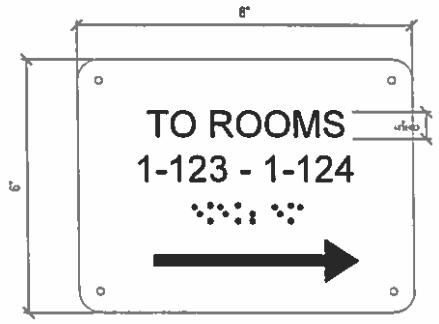

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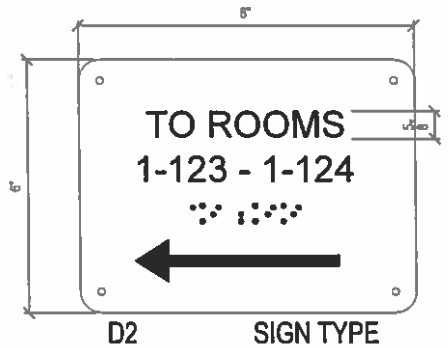
SCALE: 6"=1'-0"



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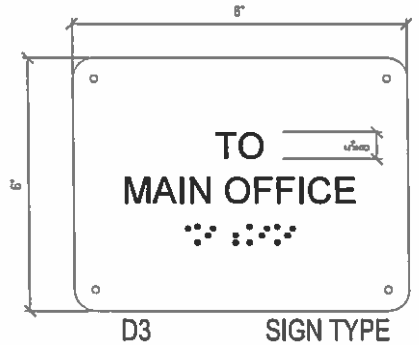

D3 SIGN TYPE

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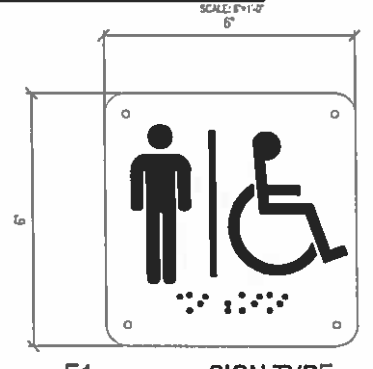
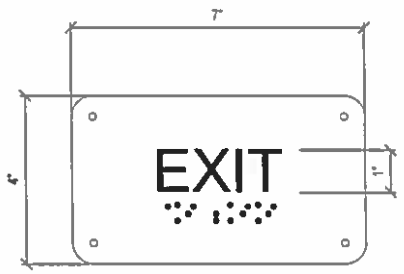


E1 SIGN TYPE

SCALE: 6"=1'-0"

E2 SIGN TYPE

SCALE: 6"=1'-0"



F SIGN TYPE

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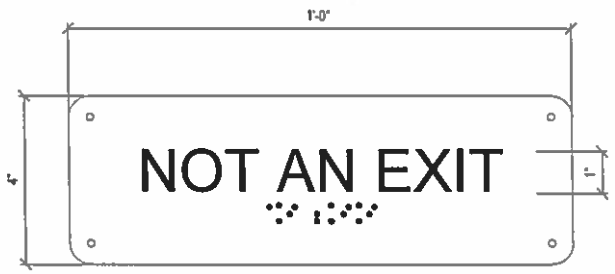
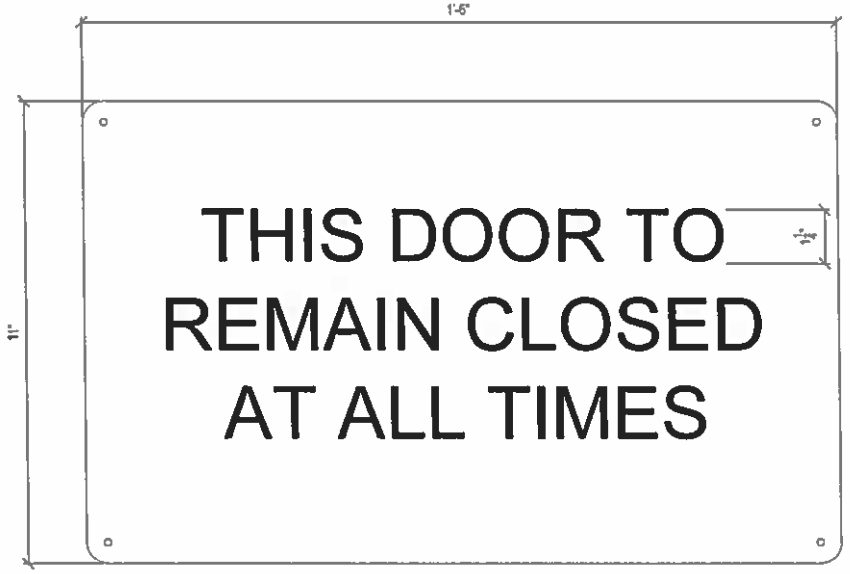


G SIGN TYPE

SCALE: 6"=1'-0"

H SIGN TYPE

SCALE: 6"=1'-0"



J SIGN TYPE

SCALE: 6"=1'-0"

K SIGN TYPE

SCALE: 6"=1'-0"

L2 - ROOF ACCESS

L3 - FIRE EXTINGUISHER INSIDE

L SIGN TYPE

SCALE: 6"=1'-0"

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NEW CLASSROOM BUILDING
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CONTRUCTION DOCUEMENTS

Comm. No 214031.00
Date 09-24-14
Drawn
Revised:

René Tercilla AIA, REFP

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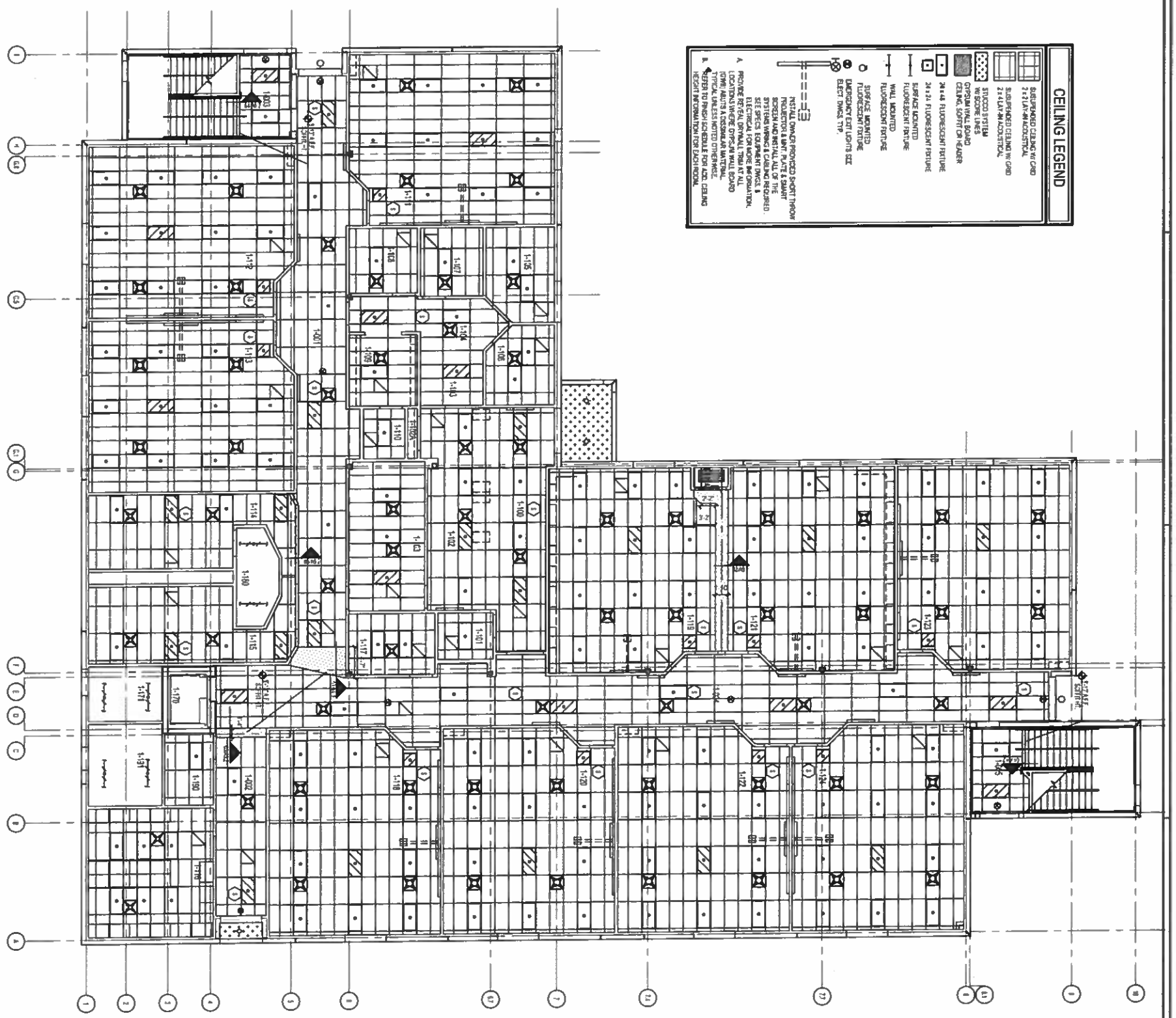
CEILING LEGEND

	SUSPENDED CEILING W/ GRID 2'x2' LAY-IN ACOUSTICAL
	SUSPENDED CEILING W/ GRID 2'x4' LAY-IN ACOUSTICAL
	STUCCO SYSTEM W/ SCORE LINES
	GYPSUM WALL BOARD CEILING, SOFFIT OR HEADER
	2'x4' FLUORESCENT FIXTURE
	2'x2' FLUORESCENT FIXTURE
	SURFACE MOUNTED FLUORESCENT FIXTURE
	WALL MOUNTED FLUORESCENT FIXTURE
	SURFACE MOUNTED FLUORESCENT FIXTURE
	EMERGENCY EXIT LIGHTS SEE ELECT. DWGS. TYP.
	INSTALL OWNER PROVIDED SHORT THROW PROJECTORS & WHT. PLATE & SMART SCREEN AND INSTALL ALL OF THE SYSTEMS WIRING & CABLING REQUIRED. SEE SPECS. EQUIPMENT DWGS. & ELECTRICAL FOR MORE INFORMATION.

A. PROVIDE REVEAL DRYWALL TRIM AT ALL LOCATIONS WHERE GYPSUM WALL BOARD (GWB) ABUTS A DISSIMILAR MATERIAL. TYPICAL UNLESS NOTED OTHERWISE.

B. REFER TO FINISH SCHEDULE FOR A2D. CEILING HEIGHT INFORMATION FOR EACH ROOM.



01 1st FLOOR CLG. PLAN- BLDG. 1

ROOM CHART

ROOM NO	ROOM NAME	SF	ROOM NO	ROOM NAME	SF
1-001	CORRIDOR	6184	1-204	CLASSROOM	736
1-002	CORRIDOR	291	1-205	F.A.P.	636
1-003	ST. A.P.	299	1-207	CLASSROOM	736
1-004	CORRIDOR	1575	1-215	F.A.P.	625
1-005	ST. A.P.	296	1-216	CLASSROOM	711
1-006	CORRIDOR	723	1-2164	STORAGE	83
1-007	CORRIDOR	1898	1-218	RESTROOM-GIRLS	294
			1-219	RESTROOM-BOYS	356
1-100	RECEPTION	299	1-301	CLASSROOM	749
1-101	RESTROOM	63	1-301E	TEACHER PLANNING	126
1-102A	STORAGE	191	1-3064	RESTROOM	64
1-102	ADMINISTRATION	1101	1-307	CLASSROOM	736
1-103	ADMINISTRATION	191	1-310	CONFERENCE	213
1-104	CORRIDOR	1111	1-311	CLASSROOM	736
1-105	PRINCIPAL	122	1-312	CLASSROOM	736
1-106	GUIDANCE	189	1-313	CLASSROOM	736
1-107	BOOKKEEPER	63	1-314	CLASSROOM	736
1-108	CORRIDOR	1111	1-315	CLASSROOM	736
1-109	RESTROOM	44	1-316	RESTROOM	736
1-110	RESTROOM	44	1-317	CLASSROOM	736
1-111	CLASSROOM	736	1-318	CLASSROOM	736
1-112	CLASSROOM	736	1-319	CLASSROOM	736
1-113	CLASSROOM	736	1-320	CLASSROOM	736
1-114	RESTROOM-BOYS	294	1-321	CLASSROOM	736
1-115	RESTROOM-GIRLS	356	1-322	CLASSROOM	736
1-116	STORAGE	118	1-323	CLASSROOM	736
1-117	ASSISTANT PRINCIPAL	119	1-324	CLASSROOM	736
1-118	STORAGE	344	1-325	CLASSROOM	736
1-119	RESTROOM-BOYS	356	1-326	CLASSROOM	736
1-120	RESTROOM-GIRLS	294	1-327	CLASSROOM	736
1-121	CLASSROOM	736	1-328	CLASSROOM	736
1-122	CLASSROOM	736	1-329	CLASSROOM	736
1-123	CLASSROOM	736	1-330	CLASSROOM	736
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1-125	CLASSROOM	736	1-332	CLASSROOM	736
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1-127	CLASSROOM	736	1-334	CLASSROOM	736
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1-142	CLASSROOM	736	1-349	CLASSROOM	736
1-143	CLASSROOM	736	1-350	CLASSROOM	736
1-144	CLASSROOM	736	1-351	CLASSROOM	736
1-145	CLASSROOM	736	1-352	CLASSROOM	736
1-146	CLASSROOM	736	1-353	CLASSROOM	736
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1-154	CLASSROOM	736	1-361	CLASSROOM	736
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1-157	CLASSROOM	736	1-364	CLASSROOM	736
1-158	CLASSROOM	736	1-365	CLASSROOM	736
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1-160	CLASSROOM	736	1-367	CLASSROOM	736
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1-182	CLASSROOM	736	1-389	CLASSROOM	736
1-183	CLASSROOM	736	1-390	CLASSROOM	736
1-184	CLASSROOM	736	1-391	CLASSROOM	736
1-185	CLASSROOM	736	1-392	CLASSROOM	736
1-186	CLASSROOM	736	1-393	CLASSROOM	736
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1-190	CLASSROOM	736	1-397	CLASSROOM	736
1-191	CLASSROOM	736	1-398	CLASSROOM	736
1-192	CLASSROOM	736	1-399	CLASSROOM	736
1-193	CLASSROOM	736	1-400	CLASSROOM	736
1-194	CLASSROOM	736	1-401	CLASSROOM	736
1-195	CLASSROOM	736	1-402	CLASSROOM	736
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1-202	CLASSROOM	736	1-409	CLASSROOM	736
1-203	CLASSROOM	736	1-410	CLASSROOM	736

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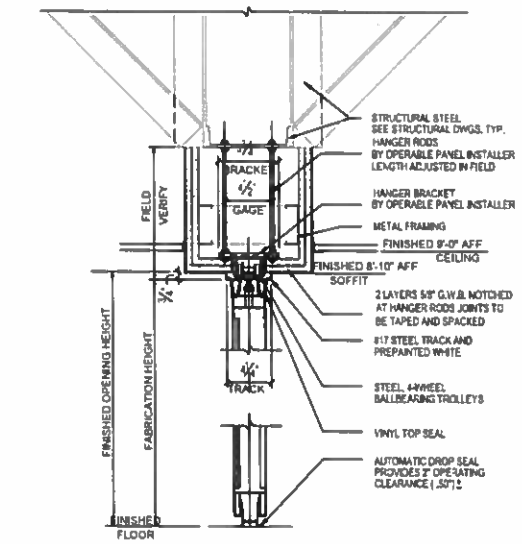
Reviewed: -

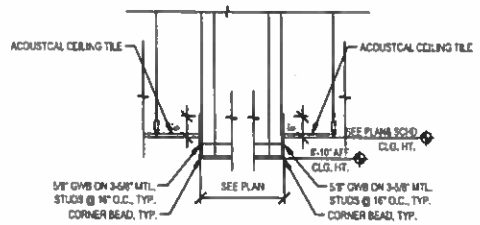
Randi Terrell AIA, REFP

A9.1



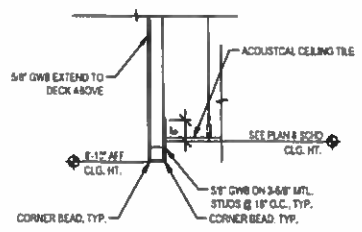
02 OPERABLE WALL DETAIL

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



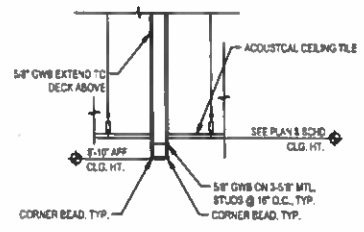
03 CEILING DETAIL

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



04 CEILING DETAIL

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



05 CEILING DETAIL

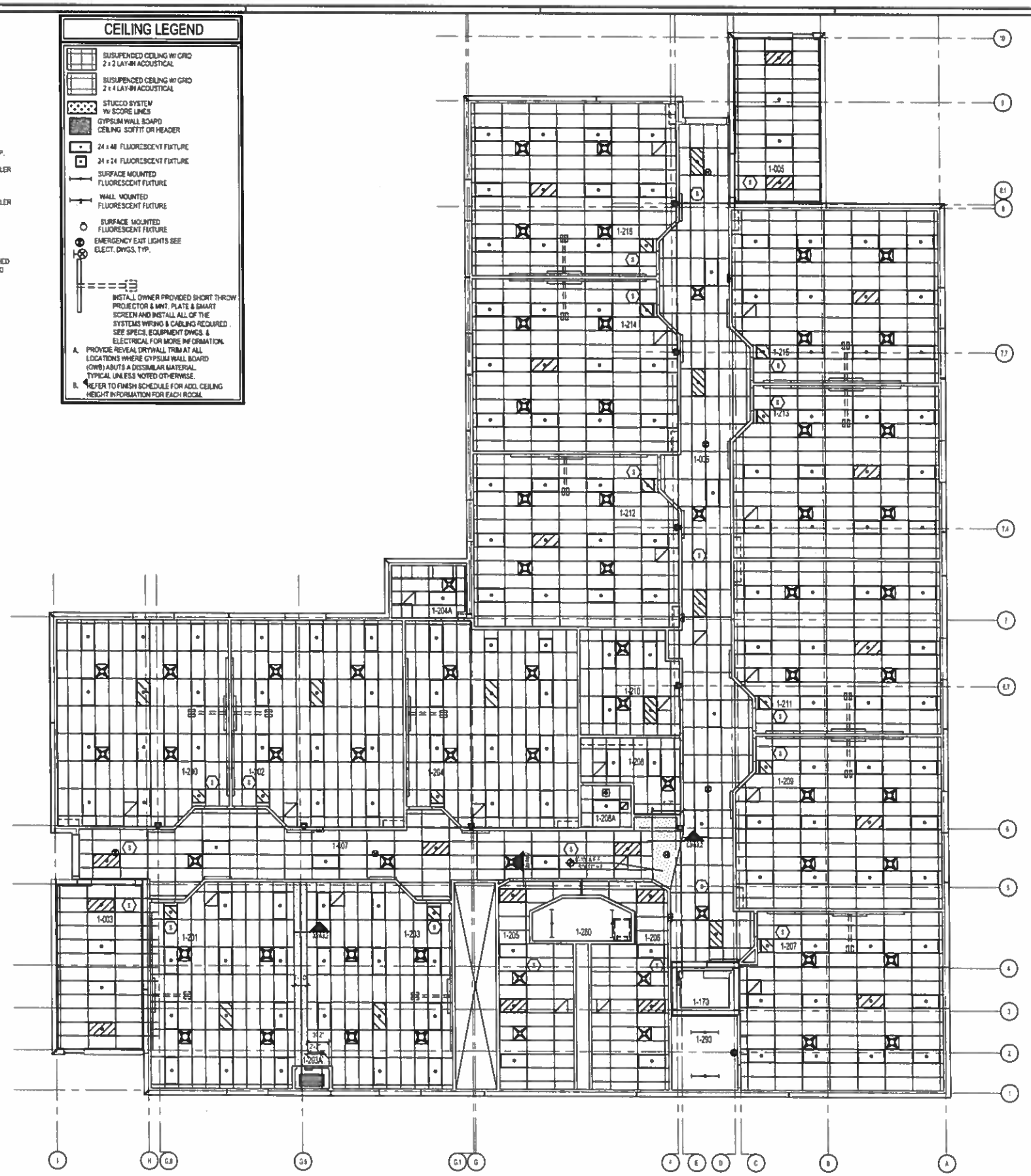
SCALE: 1/2"=1'-0"

CEILING LEGEND

- SUSUPENDED CEILING W/ GRID 2 x 2 LAY-IN ACOUSTICAL
- SUSUPENDED CEILING W/ GRID 2 x 4 LAY-IN ACOUSTICAL
- STUCCO SYSTEM W/ SCORE LINES
- GYPSUM WALL BOARD CEILING SOFFIT OR HEADER
- 24 x 48 FLUORESCENT FIXTURE
- 24 x 24 FLUORESCENT FIXTURE
- SURFACE MOUNTED FLUORESCENT FIXTURE
- WALL MOUNTED FLUORESCENT FIXTURE
- SURFACE MOUNTED FLUORESCENT FIXTURE
- EMERGENCY EXIT LIGHTS SEE ELECT. DWGS, TYP.
- INSTALL OWNER PROVIDED SHORT THROW PROJECTOR & MNT. PLATE & SMART SCREEN AND INSTALL ALL OF THE SYSTEMS WIRING & CABLING REQUIRED. SEE SPECS, EQUIPMENT DWGS, & ELECTRICAL FOR MORE INFORMATION.

A. PROVIDE REVEAL DRYWALL TRIM AT ALL LOCATIONS WHERE GYPSUM WALL BOARD (GWB) ABUTS A DISSIMILAR MATERIAL. TYPICAL UNLESS NOTED OTHERWISE.

B. REFER TO FINISH SCHEDULE FOR ADD. CEILING HEIGHT INFORMATION FOR EACH ROOM.



01 2nd FLOOR CLG. PLAN- BLDG. 1

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

ROOM CHART

ROOM NO	ROOM NAME	SF	ROOM NO	ROOM NAME	SF
1-001	CORRIDOR	698	1-209	CLASSROOM	739
1-002	CORRIDOR	291	1-210	IT LAB	636
1-003	STAIR	299	1-202	CLASSROOM	730
1-004	CORRIDOR	1675	1-203	IT LAB	625
1-005	STAIR	288	1-204	CLASSROOM	711
1-006	CORRIDOR	729	1-204A	STORAGE	87
1-007	CORRIDOR	1086	1-205	RESTROOM-BOYS	294
			1-206	RESTROOM-GIRLS	309
1-100	RECEPTION	253	1-207	CLASSROOM	746
1-101	RESTROOM	82	1-208	TEACHER PLANNING	179
1-102	ADMINISTRATION	381	1-208A	RESTROOM	44
1-102A	STORAGE	70	1-209	CLASSROOM	730
1-103	ADMINISTRATION	191	1-210	CONFERENCE	213
1-104	CORRIDOR	111	1-211	CLASSROOM	730
1-105	PRINCIPAL	132	1-212	CLASSROOM	730
1-106	GUIDANCE	189	1-213	CLASSROOM	730
1-107	BUSINESS MANAGER	92	1-214	CLASSROOM	730
1-108	GUIDANCE	86	1-215	CLASSROOM	730
1-109	WORK ROOM	186	1-216	CLASSROOM	730
1-110	RESTROOM	44			
1-111	CLASSROOM	730	1-299	CUSTODIAL	60
1-112	CLASSROOM	730	1-299	DATA	150
1-113	CLASSROOM	730			
1-114	RESTROOM-BOYS	294			
1-115	RESTROOM-GIRLS	335			
1-116	STORAGE	344			
1-117	ASSISTANT PRINCIPAL	113			
1-118	CLASSROOM	730			
1-119	CLASSROOM-SCIENCE	721			
1-120	CLASSROOM	730			
1-121	CLASSROOM-SCIENCE	731			
1-122	CLASSROOM	730			
1-123	CLASSROOM	730			
1-124	CLASSROOM	730			
1-170	ELEVATOR	82			
1-171	ELEVATOR EQUIPMENT	86			
1-180	CUSTODIAL	88			
1-190	DATA	72			
1-191	ELECTRICAL	120			

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CONTRUCTION DOCUEMENTS

Comm. No: 214031.00
Date: 09-24-14
Drawn: -
Revised:

René Tercilla AIA, REFP

A9.2

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DEMOLITION PLAN GENERAL NOTES

- CONTRACTOR(S) ARE RESPONSIBLE FOR FIELD VERIFYING THE EXTENT OF DEMOLITION WORK PRIOR TO BIDDING AND FOR COORDINATING THE EXTENT OF DEMOLITION WITH THE INSTALLATION OF NEW SYSTEMS AND FINISHES INDICATED IN THE CONTRACT DOCUMENTS. REFER TO THE NEW CONSTRUCTION DRAWINGS FOR DEMOLITION REQUIRED, BUT NOT SHOWN ON DEMOLITION PLANS.
- REFER TO THE CIVIL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DOCUMENTS FOR ADDITIONAL DEMOLITION ITEMS.
- MECHANICAL AND ELECTRICAL ITEMS REMOVED SHOULD BE CAPPED AND ABANDONED SHALL BE LOCATED BEHIND FINAL FINISH SYSTEMS.
- WALLS TO BE REMOVED SHALL BE REMOVED TO A POINT 2" MINIMUM BELOW THE EXISTING FLOOR SLAB UNLESS SETTING ON THE SLAB DRAWINGS SPECIFICALLY NOTED. MATCH WITH NEW CONCRETE TO BE FLUSH WITH THE EXISTING FLOOR SLAB.
- WHEN OPENINGS ARE CUT INTO AN EXISTING WALL, THE OPENING SHALL BE 4 MINIMUM OF 1'-4" LONGER THAN THE FINISHED OPENING REQUIRED TO ALLOW FOR 8" MINIMUM OF NEW CMU TOOTHED IN AT EDGES.
- TEMPORARY DEMOLITION OF EXISTING MATERIALS INCLUDING SUSPENSION SYSTEMS, ACME SYS. INCLUDES, MECHANICAL, TO BUILT EXCLUSIVE OF STRUCTURAL SYSTEMS.
- REMOVE EACH ITEM SHOWN WITH DASHED LINES ON THIS DRAWING WHETHER OR NOT EACH ITEM IS SPECIFICALLY NOTED TO BE REMOVED.
- AFTER THE DEMOLITION OF MATERIALS, THE RESULTING EXPOSED SURFACE SHALL BE SMOOTH AND FLUSH WITH EXISTING CONDITIONS.
- MATERIALS OF DEMOLITION SHALL BE DISPOSED OF OFF SITE UNLESS DIRECTED OTHERWISE BY OWNER.
- OWNER SHALL HAVE FIRST RIGHTS OF REFUSAL PRIOR TO DEMOLITION OPERATIONS.
- WHERE WALLS ARE SHOWN TO BE REMOVED, REMOVE ALL ITEMS IN THE WALLS ELECTRICAL, PLUMBING, ETC PER ALL APPLICABLE CODES AND STANDARDS.
- MAINTAIN THE EGRESS REQUIRED IN ALL AREAS PER ALL APPLICABLE CODES AND STANDARDS DURING CONSTRUCTION.
- COORDINATE REMOVAL OF UNDERGROUND UTILITIES WITH CIVIL DRAWINGS.

SITE PLAN DEMOLITION NOTES

DEMOTES EXISTING TO BE REMOVED, TYPICAL

(1) DEMOTES AREA OF DEMOLITION & AREA OF WORK FOR THE PROJECT. REMOVE EXISTING PAVE, CURB, PAVING, ETC. PREPARE AREA FOR NEW WORK. THE NEW BLDG.#1, PARKING AREAS & NEW DRIVE FOR THIS PROJECT.

(2) CONTRACTOR IS TO REMOVE BLDG. IN ITS ENTIRETY AND REMOVE ALL SERVICES. CONNECTING MECHANICAL SYSTEMS. UTILITIES TO & IN THE BLDG. (SEE ETC.) COORDINATE ALL NEW SERVICES, SYSTEMS, UTILITIES TO THE NEW BLDG. WITH THE CONSTRUCTION DOCUMENTS FOR THIS PROJECT.

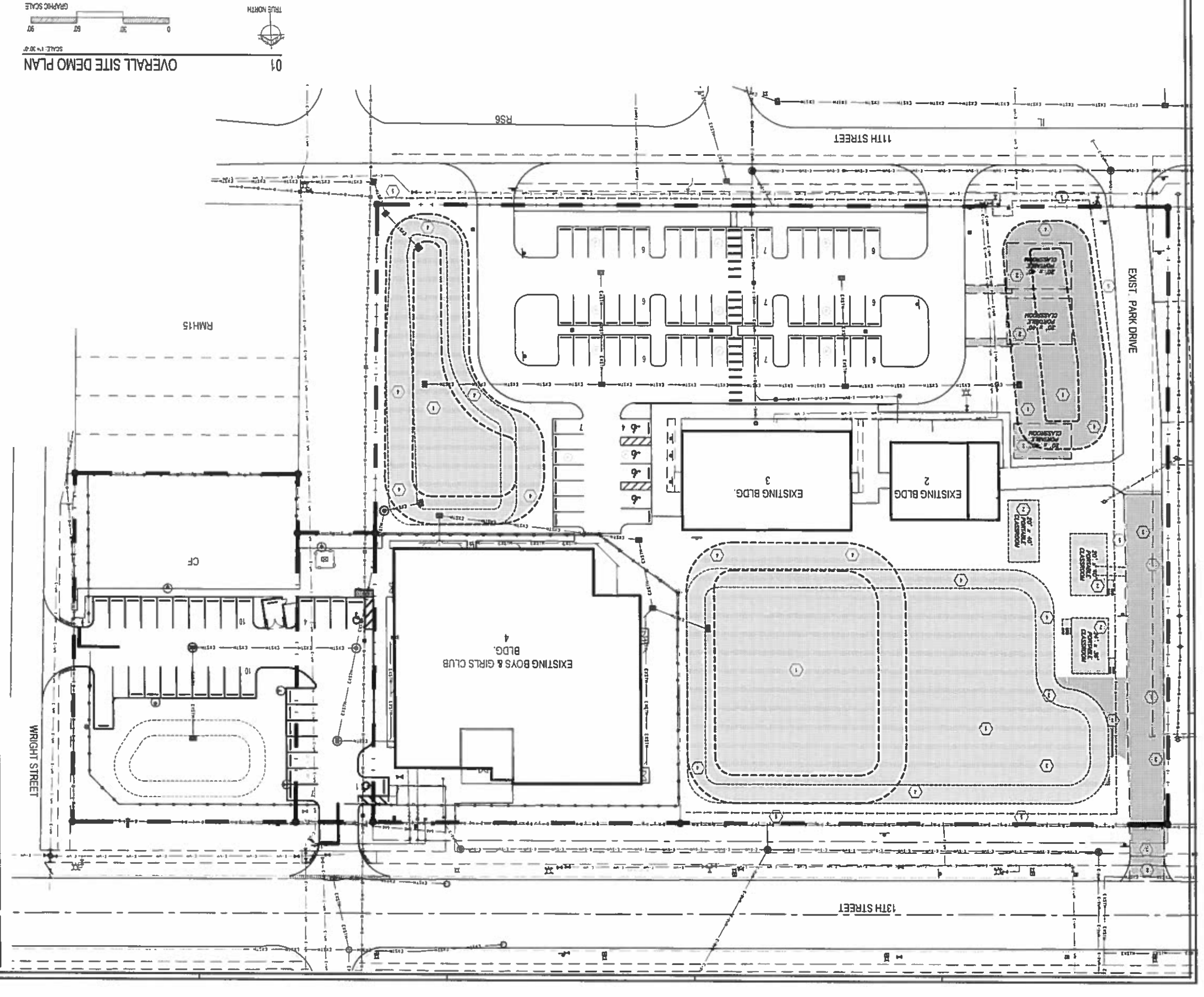
(3) REMOVE EXISTING PAVE, CURB, PAVING, ETC. PREPARE AREA FOR NEW WORK & THE NEW PARKING AREAS FOR THIS PROJECT REFER TO LANDSCAPE PLANS & CIVIL DWGS. FOR MORE INFORMATION.

(4) REMOVE EXISTING LANDSCAPE (GRASS, TREES, SHRUBS, ETC.) AND PREPARE AREA FOR NEW WORK. REFER TO LANDSCAPE PLANS & CIVIL DWGS. FOR MORE INFORMATION.

(5) REMOVE EXISTING FENCE SYSTEM (POSTS, FOOTINGS, FENCE, ETC.) REFER TO G1.1 FOR MORE INFORMATION ON NEW FENCE.

GENERAL NOTE: TERMINATE ALL SYSTEMS TO CONFORM TO ALL APPLICABLE CODES AND STANDARDS THAT ARE TO BE REMOVED. ONCE A SYSTEM IS TERMINATED FROM A STRUCTURE REMOVE IS BACK TO THE MAIN POINT OF ENTRY ON THE SITE OR IT IS TO REMAIN ON SITE REMOVE IT BACK TO THE POINT OF ENTRY TO THE SITE.

NOTE: GENERAL CONTRACTOR IS REQUIRED TO INSTALL ALL CONSTRUCTION FENCING TO REMAIN IN PLACE THRU THE DURATION OF THE PROJECT. ALL CONSTRUCTION ACTIVITIES SHALL BE SEPARATED FROM THE OCCUPIED SITE BY LEAST ONE SECURE BARRIER. PROVIDE GATES FOR ACCESS REQUIRED TO AREAS ON THE SITE.



01 OVERALL SITE DEMO PLAN
SCALE: 1" = 30'-0"

GENERAL NOTES

1. COORDINATION OF DRAWINGS AND DISCIPLINES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR COMPLETENESS AND ACCURACY. FURTHER CONTRACTOR IS COORDINATE ALL TRADES AND DISCIPLINES PROPERLY. ANY DISCREPANCIES IN PLANS OR SPECIFICATIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING.
2. BUILDINGS. CONTRACTOR IS ADVISED THAT THERE MAY BE MODIFICATIONS TO SERVICE LINES (MATERIALS, SIZES, LOCATIONS, DEPTHS, ETC.) AS THE BUILDING DOCUMENTS ARE FINALIZED AND PERMITTED.
3. SAFETY. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO TAKE THE NECESSARY PRECAUTIONS TO ENSURE PROPER SAFETY AND WORKMANSHIP WHEN WORKING IN THE VICINITY OF EXISTING UTILITY LINES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE RESPECTIVE UTILITY PROVIDER IN ANY WORK IN THE VICINITY OF OVERHEAD OVERHEAD LINES. CONTRACTOR SHALL VERIFY PRIOR TO WORKING WITHIN THE VICINITY OF THE LINES.
4. FAMILIARITY WITH SITE CONDITIONS. THE CONTRACTOR SHALL VISIT THE SITE AND ACQUAINT HIMSELF WITH ALL EXISTING CONDITIONS, MAKE HIS OWN SUBSURFACE INVESTIGATION TO SATISFY HIMSELF AS TO THE SITE AND SUBSURFACE CONDITIONS, BUT SUCH SUBSURFACE INVESTIGATIONS SHALL BE PERFORMED ONLY UNDER THE SCHEDULES AND REPRESENTATION IS MADE AS TO THEIR ACCURACY OR CONSISTENCY. THE EXISTING GRADES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY AND NO ARRANGEMENTS APPROVED IN ADVANCE BY THE OWNERS REPRESENTATIVE BY THE OWNER, ENGINEER OR JURISDICTIONAL AGENCY. SHOP DRAWINGS MUST BE NEWLY PREPARED INFORMATION, DRAWN TO ACCURATE SCALE. DO NOT REPRODUCE CONTRACT DOCUMENTS OR COPY STANDARD INFORMATION AS THE BASIS OF SHOP DRAWINGS. STANDARD INFORMATION PREPARED WITHOUT SPECIFIC REFERENCE TO THE PROJECT WILL NOT BE CONSIDERED A SHOP DRAWING.
5. WORKMANSHIP. ALL WORK SHALL BE PERFORMED IN A WORKMANSHIP-LIKE MANNER AND SHALL CONFORM WITH APPLICABLE CITY, COUNTY, STATE AND FEDERAL REGULATIONS AND/OR CODES, INCLUDING OSHA.
6. ELEVATIONS. ALL ELEVATIONS REFER TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
7. SITE PLAN. REFER TO ARCHITECTURAL SITE PLAN FOR ADDITIONAL INFORMATION.
8. SURVEY. REFER TO SURVEY FOR ADDITIONAL INFORMATION.
9. BENCHMARK. REFER TO SURVEY FOR BENCHMARK LOCATIONS AND ELEVATIONS.
10. GEOTECHNICAL INFORMATION REFER TO GEOTECHNICAL REPORTS AND BORING LOGS FOR ADDITIONAL INFORMATION & PAVEMENT/EMBANKMENT/SITE PREPARATION REQUIREMENTS.
11. FIELD LOCATIONS. THE CONTRACTOR SHALL CONTACT "SUNSHINE STATE ONE CALL OF FLORIDA, INC. (1-800-432-4770) AT LEAST 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION.
12. PROTECTION OF UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF ALL EXISTING AND NEWLY INSTALLED ABOVE GROUND, UNDERGROUND AND ON THE SURFACE STRUCTURES AND UTILITIES FROM DAMAGE OR SERVICE DISRUPTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
13. EXISTING UTILITIES. EXISTING UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH ACCURATE AND COMPLETE INFORMATION AND UTILITIES SHOWN ON THESE PLANS AND SHALL BE RESPONSIBLE FOR FIELD LOCATING OR EXISTING UTILITIES. ANY RELOCATIONS OF THE VARIOUS EXISTING UTILITIES SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY PROVIDER IN A TIMELY MANNER TO MINIMIZE IMPACT OF THE CONSTRUCTION SCHEDULE. ANY DELAY CAUSED DUE TO THE RELOCATION OF EXISTING UTILITIES OR INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED. ALL COSTS ASSOCIATED WITH VERIFICATION, PROTECTION OF EXISTING SYSTEMS OR CONNECTION TO THOSE SYSTEMS SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
14. EXISTING UTILITIES. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES WITHIN THE AREA OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL EXISTING UTILITIES AND SOILS CONDITIONS AND SHALL NOTIFY THE ENGINEER IN THE EVENT OF ANY DISCREPANCIES WITH THE PLANS.
15. FIELD REVIEWS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS PRIOR TO ANY REQUIRED FIELD REVIEWS OR INSPECTIONS WHICH SHALL SUPPLY ALL EQUIPMENT NECESSARY, LABOR AND MATERIALS FOR INSPECTION AND/OR TEST. ALL WORK SHALL BE OPEN AND SUBJECT TO REVIEW AND/OR INSPECTION BY AUTHORIZED PERSONNEL OTHER THAN THE OWNERS SHALL BE REPORTED TO THE ENGINEER PRIOR TO IMPLEMENTATION. COMPENSATION WILL NOT BE ALLOWED FOR WORK WHICH IS NOT AUTHORIZED BY THE ENGINEER OR OWNER.
16. DIFFERING SITE CONDITIONS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND THE CONDITIONS PRIOR TO CONSTRUCTION IN THE AREA OF CONFLICT. ANY DIFFERING SITE CONDITIONS FROM THAT WHICH ARE REPRESENTED ON THE PLANS, WHETHER ABOVE OR BELOW THE SURFACE OF THE GROUND, ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND THE OWNER IN WRITING.
17. REQUIRED PERMITS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR(S) TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AT THE JOB SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL ABIDE BY ALL PERMIT CONDITIONS.
18. DEMOLISHING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ANY DEMOLISHING PERMITS AND/OR APPROVALS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED FACILITIES AND SYSTEMS.
19. PERMITS. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND/OR LICENSES TO COMMENCE CONSTRUCTION.
20. USE OF EXISTING MATERIALS. NO EXISTING MATERIAL SHALL BE USED IN NEW CONSTRUCTION UNLESS APPROVED DURING THE SHOP DRAWING APPROVAL PROCESS.
21. EXISTING LANDSCAPE. CONTRACTOR SHALL BE EXTREMELY CAUTIOUS WHEN WORKING NEAR TREES WHICH ARE TO BE SAVED, WHETHER SHOWN ON THE PLAN OR DESIGNATED IN THE FIELD.
22. SHOP DRAWINGS. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF SEVEN (7) COPIES (OR MORE IF SPECIFIED IN THE CONTRACT) OF SHOP DRAWING, PRODUCT DATA, MATERIAL SPECIFICATIONS AND OTHER INFORMATION REGARDING CONSTRUCTION MATERIALS AND STRUCTURES AS REQUIRED BY THE OWNER, ENGINEER OR JURISDICTIONAL AGENCY. SHOP DRAWINGS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER AND OTHER AGENCIES AS REQUIRED PRIOR TO THE START OF CONSTRUCTION.
A. BY SUBMITTAL OF ANY SHOP DRAWING OR CATALOG DATA, BEARING AN APPROVAL STAMP THAT IT HAS DETERMINED AND VERIFIED ALL FIELD MEASUREMENTS, FIELD CONSTRUCTION CRITERIA, MATERIALS, DESIGNING AND SIMILAR DATA, OR WILL DO SO, AND THAT IT HAS CHECKED AND COORDINATED EACH ITEM WITH OTHER APPLICABLE APPROVED SHOP DRAWINGS AND THE CONTRACT REQUIREMENTS.
B. SHOP DRAWINGS AND CATALOG DATA SUBMITTED WITHOUT THE CONTRACTOR'S STAMP OF APPROVAL WILL BE RETURNED TO THE CONTRACTOR WITHOUT REVIEW. APPROVAL OF SHOP DRAWINGS, SAMPLES, OR CATALOG DATA BY THE ENGINEER SHALL NOT AUTHORIZE ANY DEVIATION FROM THE REQUIREMENT OF THE CONTRACT DOCUMENTS.
C. ANY PROPOSED SUBSTITUTE OR EQUAL TO THAT SHOWN ON THE CONTRACT DOCUMENTS SHALL BE ACCOMPANIED BY CALCULATIONS SUBSTANTIATING EQUIVALENCY. SHOP DRAWINGS WITH SUBSTITUTE MATERIALS NOT ACCOMPANIED BY CALCULATIONS WILL BE RETURNED WITHOUT REVIEW.
D. THE CONTRACTOR SHALL CONFIRM COMPATIBILITY OF PIPE SLOPES AND INVERTS DURING SHOP DRAWING AND MATERIALS ORDERING PHASE OF THE PROJECT AND ADVISE THE ENGINEER IN WRITING OF ANY DISCREPANCIES.
E. INDIVIDUAL SHOP DRAWINGS FOR ALL PRECAST STRUCTURES ARE REQUIRED. CATALOG LITERATURE WILL NOT BE ACCEPTED FOR PRECAST STRUCTURES.
23. TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED TESTING TO BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY APPROVED BY THE ENGINEER. THE CONTRACTOR UNDERSTANDS THAT ANY AND ALL TESTS, INSPECTIONS, PROCEDURES INCLUDING ALL LABOR, MATERIALS, TIME AND EFFORT IN ORDER BY THE ENGINEER, DESIGNATED AS FINAL BY THE RESPECTIVE JURISDICTIONAL AUTHORITIES AND THAT SUCH TESTS, INSPECTIONS AND PROCEDURES ARE INCLUDED IN THE BID.
24. RECORD DRAWINGS. RECORD DRAWINGS SHALL BE SUBMITTED IN SUFFICIENT QUANTITIES AS REQUIRED BY THE OWNER, SUBSTITUTIONAL AGENCIES TO COMPLETE THE CLOSE-OUT OF THE PROJECT. THE CONTRACTOR SHALL PROVIDE THE ENGINEER OF RECORD WITH ACCURATE RECORD DRAWING INFORMATION, WHICH HAS BEEN PREPARED BY A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA. THE INFORMATION SHALL BE PROVIDED ON A 24"x36" REPRODUCIBLE MYLAR. THE FOLLOWING SHALL BE THE MINIMUM REQUIREMENTS FOR RECORD DRAWING INFORMATION
A. IF ROLLED BY THE RESPECTIVE AGENCY. THE MYLARS SHALL BE 24"x36" 3 MIL SEPIA MYLAR.
B. THE WORDS "RECORD DRAWINGS" SHALL BE WRITTEN IN BOLD LETTERS IN A CONSPICUOUS PLACE. NO RUBBER STAMP ON PLANS OR MYLARS SHALL BE ACCEPTED.
C. ANY SIGNIFICANT CHANGES IN ALIGNMENT, PIPE CONFLICTS, LOCATION OF STORM MANHOLES, CATCH BASINS, ETC. SHALL BE SHOWN TO SCALE ON RECORD DRAWINGS. THE "PROPOSED" ALIGNMENT ETC. SHALL BE CROSSED OUT
D. THE DRAWINGS SHALL BE LEGIBLE WITH THE AS-BUILT DIMENSIONS EASY TO IDENTIFY
E. DATA FOR STORM MANHOLES AND CATCH BASINS (RIM, INVERTS), PIPE LENGTHS AS CONSTRUCTED SHALL BE SHOWN ON THE PLAN SHEET NEXT TO "PROPOSED" DIMENSIONS. THE "PROPOSED" NUMBERS RECORD DRAWING INFORMATION SHALL BE PROVIDED FOR THE CONTROL STRUCTURE, INCLUDING ALL PIPE INVERTS AND PIPE SIZES. BOTTOM ELEVATION OF STRUCTURE AND ELEVATIONS AND DIMENSIONS OF ANY SLOTS OR ORIFICES IN THE INLET WALLS SHALL BE PROVIDED.
G. CROSS SECTIONS OF DRY DETENTION AREAS AND SECTIONS SHALL BE TAKEN EVERY 200 LINEAR FEET MINIMUM. CROSS SECTIONS SHALL DEPICT THE PROPOSED AND ASBUILT DATA INCLUDING ALL GRADE BREAKS.
25. FINAL UTILITY ADJUSTMENTS. ALL UTILITIES SHALL BE ADJUSTED TO NEW FINISH GRADES AND PROPERLY SET TO PAVEMENT CROSS SLOPE AS REQUIRED.

SITE DEMOLITION AND EROSION CONTROL NOTES:

1. SITE ACCESS. SUITABLE STABILIZED ROADS ARE TO BE PROVIDED DURING CONSTRUCTION FOR FIRE AND PARAMEDICAL ACCESS.
2. SITE CONTRACTOR ACCEPTS THE SITE AS IS. NO REPAIRS TO EXISTING SITE ELEMENTS INCLUDING PAVEMENT, SIDEWALKS, CURBING, DRAINAGE, SANITARY SEWER, WATER, SIGNAGE & STRIPING SHALL BE INCLUDED IN THE BID PRICE.
3. EROSION CONTROL. THE CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION AND TURBIDITY BARRIERS PRIOR TO AND DURING CONSTRUCTION TO PREVENT VIOLATION OF STATE WATER QUALITY STANDARDS FOR OFFSITE DISCHARGES. THESE BARRIERS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED. SOILS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED. REFERENCE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS INDICES 102, 103 AND 106 FOR TYPICAL INSTALLATION DETAILS.
4. FILTER FABRIC. FILTER FABRIC SHALL BE INSTALLED ON ALL CATCH BASIN GRATES AND MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
5. DEPARTMENT IMPACTS. CONTRACTOR SHALL PROTECT ADJACENT WATER BODIES, WETLANDS AND PROPERTIES FROM DAMAGE BY SEDIMENTATION OR OTHER POTENTIAL CONSTRUCTION RELATED CAUSES.
6. SILT FENCES. SILT FENCES SHALL BE INSTALLED AND MAINTAINED AROUND ALL CLEARING PERIMETERS.
7. SITE CLEARING. CLEAR AREAS INDICATED SHALL BE COMPLETELY CLEAR OF ALL STUMPS, BRUSH, STUMPS, ROOTS, GRASS, WEEDS, RUBBISH AND ALL OTHER DEBRIS AND OBSTRUCTIONS RESTING ON OR PROTRUDING THROUGH SURFACE OF THE GROUND. THIS DEBRIS SHALL BE DISPOSED OF IN A LEGAL MANNER. BURNING OF THIS MATERIAL IS NOT PERMITTED UNLESS THE CONTRACTOR OBTAINS SPECIFIC PERMITS ALLOWING SUCH ACTIVITY.

GEOMETRIC, SIGNING, AND STRIPING NOTES:

1. DIMENSIONS. ALL DIMENSIONS TO EDGE OF PAVEMENT OR FACE OF CURB UNLESS OTHERWISE NOTED
2. REFERENCES. WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), FDOT TRAFFIC DESIGN STANDARDS (LATEST EDITION), MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (LATEST EDITION) AND THE PALM BEACH COUNTY TYPICALS FOR PAVEMENT MARKINGS, SIGNING & GEOMETRICS (T-213). ALL REFERENCES ARE INCORPORATED INTO THIS PLAN DOCUMENT. CONTRACTOR IS RESPONSIBLE FOR OBTAINING COMPLETE COPIES OF THE LATEST EDITION OF THE REFERENCES.
3. PAVEMENT/LOT STRIPING. ALL PARKING STALL STRIPING SHALL BE TRAFFIC PAINT AND CONFORM TO STATE AND LOCAL AUTHORITY REQUIREMENTS.
4. ROADWAY STRIPING. ALL ROADWAY STRIPING SHALL BE THERMOPLASTIC IN ACCORDANCE WITH THE RESPECTIVE JURISDICTIONAL AUTHORITY REQUIREMENTS.
5. BUILDING TIES AND DIMENSIONS. BUILDING TIES SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY WITH ARCHITECTURAL PLANS. BUILDINGS SHOWN ON THESE DRAWINGS MAY NOT REFLECT ARCHITECTURAL REVISIONS AND SHOULD NOT BE RELIED UPON FOR STAKING OR BUILDING. CONTRACTOR SHOULD OBTAIN LATEST ARCHITECTURAL INFORMATION AND ESTABLISH GEOMETRIC DATA FOR STAKING. SHOULD THE CONTRACTOR IDENTIFY A CONFLICT BETWEEN THE ARCHITECTURAL INFORMATION AND THESE GENERIC NOTES, NOTIFY THE ENGINEER IN WRITING.
6. MAINTENANCE OF TRAFFIC. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING A PROPER TRAFFIC MAINTENANCE AND CONTROL PLAN IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD. INCLUDED SHALL BE THE LABOR, EQUIPMENT AND MATERIALS REQUIRED TO IMPLEMENT THAT PLAN. ALL WORK MUST BE DONE IN ACCORDANCE WITH AGENCY REQUIREMENTS AND ANY REQUIRED PERMITS OR APPROVALS MUST BE APPLIED FOR AND OBTAINED BY THE CONTRACTOR.

PAVING, GRADING, AND DRAINAGE NOTES:

1. REFERENCES. WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, AND FDOT ROADWAY TRAFFIC DESIGN STANDARDS, LATEST EDITION. ALL FDOT INDICES ARE INCORPORATED AS PLAN REFERENCES. CONTRACTOR IS RESPONSIBLE FOR OBTAINING COMPLETE COPIES OF THE LATEST EDITION OF THE FDOT INDICES.
2. SITE FAMILIARIZATION. PRIOR TO BID PREPARATION, THE CONTRACTOR MUST BECOME FAMILIAR WITH THE OVERALL SITE CONDITIONS AND PERFORM ADDITIONAL INVESTIGATIONS AS DETERMINED NECESSARY TO UNDERSTAND THE LIMIT AND DEPTH OF EXPECTED ORGANIC MATERIAL. ADJOINT OF EXISTING MATERIALS AS FILL DEWATERING REQUIREMENTS. CLEAR FILL REQUIRED FROM OFFSITE AND MATERIALS TO BE DISPOSED OF OFFSITE. ANY DELAY (INCONVENIENCE OR EXPENSE CAUSED TO THE CONTRACTOR DUE TO INADEQUATE INVESTIGATION OF EXISTING CONDITIONS SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED. THE MATERIALS ANTICIPATED TO BE ENCOUNTERED DURING CONSTRUCTION MAY REQUIRE DRYING PRIOR TO USE AS BACKFILL AND THE CONTRACTOR MAY HAVE TO IMPORT MATERIALS, AT NO EXTRA COST FROM OFFSITE IF NOT THE REQUIREMENTS FOR COMPACTION MAY PROPER FILL.
3. SITE FILL BALANCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXISTING SITE CONDITIONS OF SOIL DURING THE BID PREPARATION TO DETERMINE IF ANY OFF SITE MATERIALS WILL NEED TO BE IMPORTED TO ACHIEVE THE GRADES SPECIFIED ON THE PLANS.
4. REGISTRATION. ALL DISTURBED AREAS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION OR BETTER AS DETERMINED BY THE ENGINEER, OWNER AND RESPECTIVE JURISDICTIONAL AUTHORITY.
5. HORIZONTAL CONTROL AND LAYOUT. CONTRACTOR/OWNER SHALL COORDINATE WITH A REGISTERED SURVEYOR TO LAY OUT LINE, GRADES, STRUCTURES, LOT CORNERS, ETC. AS NECESSARY TO CONSTRUCT THE PROPOSED FACILITIES IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. BENCH MARKS SHALL BE ESTABLISHED BY A REGISTERED SURVEYOR. BENCH MARKS SHALL BE PERMANENT AND EASILY ACCESSIBLE AND MAINTAINED AND REPLACED IF DISTURBED OR DESTROYED. HORIZONTAL CONTROL SHALL SIMILARLY BE ESTABLISHED AND MAINTAINED.
6. CLEARING, GRADING AND DISPOSAL. CLEARING AND GRADING SHALL CONFORM TO SECTION 110 OF THE 2010 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. CLEARING SHALL BE CONTAINED TO THE CONSTRUCTION AREA UNDER HIS REPRESENTATIVE. ALL ROOTS, STUMPS, OR OTHER OBSTRUCTIONS SHALL BE REMOVED TO A DEPTH OF 18" BELOW NATURAL GRADE OR DESIGN GRADE WHICHEVER IS LOWER. ALL DEBRIS SHALL BE REMOVED FROM THE AREA AND BE DISPOSED OF LEGALLY.
7. EXCAVATION AND EMBANKMENT. ALL EXCAVATION AND EMBANKMENT SHALL CONFORM TO THE 2010 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
8. EARTHWORK. NO SEPARATE PAYMENT SHALL BE PROVIDED TO THE CONTRACTOR FOR EARTHWORK ASSOCIATED WITH THIS CONTRACT. ALL COSTS ASSOCIATED WITH SITE PREPARATION NECESSARY TO EXECUTE THE WORK SET FORTH IN THE CONTRACT SHALL BE INCLUDED IN THE BID.
9. EXCESS MATERIAL. ANY EXCESS MATERIAL REMAINING UPON COMPLETION OF CONSTRUCTION SHALL BE REMOVED TO AN ACCEPTABLE LOCATION AT THE EXPENSE OF THE CONTRACTOR. AT THE OWNERS OPTION, A LOCATION MAY BE IDENTIFIED FOR MATERIAL STOCK PILING ON THE OWNERS WAY INSTRUCT THE CONTRACTOR TO REMOVE THE EXCESS MATERIAL IN WHICH CASE THE CONTRACTOR IS TO LEGALLY DISPOSE OF ALL MATERIALS OFFSITE.
10. FINISHED SITE GRADING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL GRADING TO WITHIN ±0.1 FOOT OF ALL THE PROPOSED FINISHED GRADE ELEVATIONS THROUGHOUT THE PROJECT SITE AS DEPICTED ON THE PLANS. ELEVATIONS OF CONSTRUCTED FACILITIES, I.E. ROADWAYS, DRAINAGE, ETC. ARE TO BE AS INDICATED ON THE PLANS UNLESS APPROVED DIFFERENTLY IN WRITING.
11. BUILDING AREAS. ALL ORGANIC AND OTHER UNSUITABLE MATERIAL IN BUILDING OR PAVEMENT AREAS SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS AND SOUND CONSTRUCTION PRACTICES.
12. LANDSCAPE AREAS. ALL LANDSCAPE ISLANDS SHALL CONTAIN SUITABLE LANDSCAPE MATERIAL FOR LANDSCAPE INSTALLATION. ALL LANDSCAPE AREAS SHALL BE SUITABLY SLOPED TO PROVIDE POSITIVE DRAINAGE.
13. SOD AREAS. ELEVATIONS OF GRASSED AREAS ARE GIVEN AT FINISHED SOD/SEED GRADE. CONTRACTOR TO GRADE AREAS RECEIVING SOD LOWER TO ACCOMMODATE SOD THICKNESS.
14. UNSUITABLE MATERIALS. WHERE ENCOUNTERED, UNSUITABLE MATERIAL SHALL BE REMOVED TO A DEPTH AND AREA DETERMINED BY THE ENGINEER. BACKFILLING UNDER SOIL SHALL BE REPLACED BY MATERIAL ACCEPTABLE TO THE ENGINEER. IF ANY ROCK, HARDPAN ETC. IS ENCOUNTERED DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO MUCK, SILT, SLUDGE, AND MARL SHALL BE ADVISED AND SHALL BE REPLACED BY MATERIAL ACCEPTABLE TO THE ENGINEER. IF ANY ROCK, HARDPAN ETC. IS ENCOUNTERED DURING CONSTRUCTION OF ANY ITEMS, OR EXCAVATION IS NOT GREATER THAN 0' THICKNESS AND COMPACTED TO 98 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. WHEN UNSUITABLE SOIL SHALL BE IN LAYERS NOT GREATER THAN 0' THICKNESS AND COMPACTED TO 98 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. WHEN UNSUITABLE SOIL ADVISE SOIL DRYING ORGANIC MATERIAL ENCOUNTERED DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO MUCK, SILT, SLUDGE, AND MARL SHALL BE ITEMS, OR EXCAVATION IS NOT GREATER THAN 0' THICKNESS AND COMPACTED TO 98 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. WHEN UNSUITABLE SOIL SHALL BE IN LAYERS NOT GREATER THAN 0' THICKNESS AND COMPACTED TO 98 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. WHEN UNSUITABLE SOIL
15. GRADING. GRADING FROM PROPOSED TO EXISTING CONDITIONS SHALL NOT BE STEEPER THAN 3H :1V NOR FLATTER THAN 20H :1V. ALL SWALES AND SLOPES SHALL BE SODDED AFTER GRADING.
16. ELEVATIONS. ELEVATIONS GIVEN ADJACENT TO CURB OR FRONT OF SIDEWALK ARE CONSIDERED EDGE OF PAVEMENT GRADES UNLESS OTHERWISE NOTED.
17. POSITIVE DRAINAGE. CONTRACTOR IS RESPONSIBLE FOR GRADING ALL PAVEMENT SO DRAIN POSITIVELY. INTERSECTIONS SHALL BE TRANSITIONED TO PROVIDE A SMOOTH DRIVING SURFACE WHILE MAINTAINING POSITIVE DRAINAGE. SHOULD AREAS OF POOR DRAINAGE BE OBSERVED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PLACEMENT OF CURBS OR PAVEMENT COURSES, SO THAT RECOMMENDATIONS FOR CORRECTION CAN BE MADE.
18. SITE FILL BALANCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXISTING SITE CONDITIONS OF SOIL DURING THE BID PREPARATION TO DETERMINE IF ANY

DOCUMENTS PREPARED BY

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PAVING, GRADING & DRAINAGE NOTES CONTINUED:

18. ADA AREAS. PAVEMENT GRADES AT HANDICAP PARKING SPACES SHALL NOT EXCEED 2% IN ANY DIRECTION. PROPOSED AND EXISTING SIDEWALKS SHALL BE RAMPED FLUSH WITH PAVEMENT. RAMPS SHALL NOT EXCEED A 12H:1V SLOPE. SIDEWALK RAMPS SHALL BE TEXTURED IN CONFORMANCE WITH FDOT STANDARDS EXCEPT WHERE LOCAL CODES DICTATE OTHERWISE OR IF INDICATED OTHERWISE ON THE PLANS. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND THE JURISDICTIONAL AUTHORITY FOR FORM BOARD AND PREPOUR INSPECTIONS PRIOR TO ANY CONCRETE INSTALLATION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT ALL RAMP TEXTURED SURFACES AND SIDEWALK LONGITUDINAL AND CROSS SLOPES ARE IN CONFORMANCE WITH LOCAL, STATE AND FEDERAL ADA AND BUILDING CODE STANDARDS.

19. ASPHALT MIX DESIGN. BEFORE CONSTRUCTION OF ASPHALT SURFACE, A JOB MIX FORMULA SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER.

20. ROADWAY CONSTRUCTION. ALL ROADWAY CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE APPLICABLE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. ALL SUBBASE, BASE COURSE, PRIME COAT, TACK COAT AND ASPHALT MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS (LATEST EDITION).

21. DRAINAGE STRUCTURES. ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED AS PER THE PLANS AND IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION). ALL GRATES SHALL BE SECURED TO THE DRAINAGE STRUCTURE WITH A CHAIN AND EYEBOLT.

22. PIPE LENGTHS. PIPE LENGTHS SHOWN ON THE PLANS REPRESENT SCALED DISTANCES BETWEEN CENTERLINES OF DRAINAGE STRUCTURES AND FROM INVERTS OF ENDWALLS AND/OR MITERED END SECTIONS.

23. PIPE INSTALLATION. PIPE TRENCH SHALL BE DRY WHILE PIPE IS BEING LAID AND TO BE BEDDED PER DETAIL AND IN CONFORMANCE WITH THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION). ALL CORRUGATED PIES SHALL BE INSTALLED WITH MAXIMUM LENGTHS IN ORDER TO MINIMIZE JOINTS.

24. PIPE TRENCHES. PIPE TRENCHES TO BE EXCAVATED AND BACKFILLED IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).

25. DRAINAGE PIPING. ALL DRAINAGE PIPES TO BE REINFORCED CONCRETE PIPE (RCP) UNLESS NOTED OTHERWISE ON THE PLANS.

26. REINFORCED CONCRETE PIPE (RCP). REINFORCED CONCRETE PIPE (RCP) SHALL BE PER ASTM C-76 CLASS III, UNLESS OTHERWISE SPECIFIED. INSTALLATION OF RCP SHALL BE IN ACCORDANCE WITH FDOT SPECIFICATIONS (LATEST EDITION).

27. CORRUGATED ALUMINUM PIPE (CAP). CAP SHALL CONFORM WITH THE REQUIREMENTS OF AASHTO M-196 AND WITH THE FDOT SPECIFICATIONS (LATEST EDITION). CAP TO BE HELICAL (SPIRAL FLOW). ALL CONNECTION BANDS, FOR CORRUGATED PIPES, SHALL BE CORRUGATED, LAP-TYPE, IN CONFORMANCE WITH AASHTO M-196 AND TO BE WATERTIGHT BY USING A GASKET AT LEAST SIX (6) INCHES WIDE. ALL JOINTS ON STORM SEWER PIPE SHALL BE MADE UP WITH A MINIMUM OF TWO (2) RIVETS PER BAND. ALL BANDS SHALL HAVE THE SAME CORRUGATION AS THE PIPE. THE WIDTH OF EACH BANDS SHALL BE AS FOLLOWS: 12 INCH WIDE UP TO 48 INCH DIAMETER PIPE AND 24 INCH WIDE OVER 48 INCH DIAMETER PIPE. THE REQUIREMENTS OF FDOT D#09030 WILL BE ADHERED TO WITH ANNULAR BANDING OF JOINTS REQUIRED.

28. ROOF DRAIN PIPING. ALL ROOF DRAIN PIPING (OUTSIDE THE BUILDING) TO BE PVC SCHEDULE 40 UNLESS OTHERWISE NOTED. ALL FITTING REQUIRED TO MAKE A FULLY OPERATIONAL DRAINAGE SYSTEM MAY NOT BE SHOWN ON THE PLANS. ALL FITTINGS AND MATERIALS REQUIRED TO COMPLETE THE PROJECT ARE TO BE INCLUDED IN THE CONTRACTOR'S BID.

29. DRAINAGE CONNECTIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF DEBRIS AND SILT WHERE CONNECTIONS TO EXISTING DRAINAGE STRUCTURES OR SWALES ARE TO BE PERFORMED. SWALES, DITCHES, LAKES, ETC. SHALL BE RESTORED TO THEIR ORIGINAL DESIGN CROSS SECTION AND SODDED. SUCH REMOVAL AND RESTORATION SHALL BE TO THE POINT OF LEGAL POSITIVE OUTFALL.

30. DRAINAGE JOINT WRAPPING. ALL DRAINAGE PIPE JOINTS TO BE WRAPPED IN FILTER FABRIC PER FDOT INDEX 280. THE FIRST JOINT OF PIPE ENTERING OR LEAVING A DRAINAGE STRUCTURE SHALL BE WRAPPED WITH FILTER FABRIC PER FDOT SPECIFICATIONS.

31. DRAINAGE LAPPING. ALL DRAINAGE SYSTEMS SHALL BE PUMPED DOWN BELOW ONE-THIRD OF THE DIAMETER OF THE PIPE (FROM THE INVERT) AND LAPPED AS A REQUIREMENT OF THE FINAL DRAINAGE INSPECTION.

32. SUBGRADE. SUBBASE SHALL BE FREE OF MUCK, STUMPS, ROOTS, UNDERBRUSH, VEGETATIVE MATTER, GARBAGE, TRASH OR ANY MATERIAL THAT WILL NOT PROVIDE A SUITABLE STABLE, CLEAN SUBGRADE. SUBGRADE SHALL BE AS SHOWN ON THE PLANS AND TO BE COMPACTED TO 98 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY ASSHTO T-180 UNLESS OTHERWISE NOTED ON THE PLANS.

33. UNDER PAVEMENT UTILITIES AND CONDUITS. THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF ANY KIND, INCLUDING IRRIGATION AND ELECTRICAL CONDUITS, THAT WILL REMAIN UNDER ANY PAVEMENT OR WITHIN 10 FEET OF ITS EDGES SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF THE BASE.

34. SOIL STABILIZATION. THE SOILS MAY REQUIRE PROPER SOIL STABILIZATION MIX DESIGNS OF SIGNIFICANT QUALITY CONTROL OF FIELD MIXING APPLICATION ON THE DESIGN MIX IN ORDER TO OBTAIN AN EFFECTIVE STABILIZED SOIL. CONSTRUCTION SPECIFICATIONS SHOULD REQUIRE THAT THE SOIL BE SAMPLED AND MIX DESIGN(S) PREPARED BY A CERTIFIED TESTING LAB. THE MIX DESIGN SHOULD BE SPECIFIED OR OTHERWISE PREPARED AND TESTED BY A TESTING LAB. THE MIX DESIGN SHOULD BE SPECIFIC OR OTHERWISE ADMINISTERED CLOSELY DURING FIELD INSTALLATIONS OR CONSTRUCTION, INCLUDING OPTIMUM MOISTURE CONTENT, DENSITY AND PERFORMANCE OF PRODUCT LBR TESTS. STABILIZED SUBGRADE SHALL AT A MINIMUM BE TESTED TO VALUE OR AS STATED ON THE PLANS.

35. BASE. BASE SHALL BE AS SHOWN ON SECTION AND SHALL BE COMPACTED TO 98 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 UNLESS OTHERWISE NOTED ON THE PLANS.

36. ASPHALT TACK AND PRIME COATS. PRIME COAT SHALL BE APPLIED AT THE RATE OF 0.15 GALLONS PER SQUARE YARD. WHERE REQUIRED, TACK SHALL BE APPLIED AT THE RATE OF 0.08 GALLONS PER SQUARE YARD.

37. UTILITIES BY OTHERS. AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR SHALL PROVIDE ACCESS AND ALLOW FOR COORDINATION SERVICES TO ACCOMMODATE UTILITIES, CONDUIT AND/OR SLEEVE CONSTRUCTION BY OTHERS. ANY UTILITIES, CONDUITS AND/OR SLEEVES INSTALLED BY OTHERS AND DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

38. CURB TRANSITIONS. ALL EXPOSED ENDS OF CURB SHALL TRANSITION TO FINISHED GRADE PER FDOT INDEX 300.

39. CONCRETE. ALL CONCRETE (CURBS, SIDEWALKS, STRUCTURES, ETC.) SHALL BE 3,000 PSI CONCRETE (MINIMUM 28 DAY COMPRESSIVE STRENGTH) UNLESS OTHERWISE SPECIFIED.

40. REINFORCING STEEL. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615 AND HAVE A TENSILE STRENGTH OF 60,000 PSI OR AS OTHERWISE NOTED.

41. FIELD REVIEWS. FIELD REVIEWS OF CONSTRUCTED FACILITIES WILL BE REQUIRED DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR IS TO NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS PRIOR TO THE REQUESTED TIME FOR REVIEW OF THE COMPLETED ITEMS. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO ACCOMMODATE THE FIELD REVIEW. THESE REVIEWS INCLUDE BUT ARE NOT LIMITED TO:

A. DRAINAGE PIPE AND STRUCTURE REVIEW
B. SUBGRADE REVIEW
C. CURB REVIEWS
D. BASE REVIEWS
E. PUMP OUT AND LAMPING OF DRAINAGE SYSTEM
F. ASPHALT REVIEWS
G. SEMI-FINAL AND FINAL REVIEWS

42. COMPLETENESS FOR REVIEW. FACILITIES MUST BE COMPLETED PRIOR TO SCHEDULING THE FIELD REVIEW. IF A FIELD REVIEW FAILS TO MEET THE AGENCY REQUIREMENTS AND AN ADDITIONAL REVIEW IS REQUIRED, THE CONTRACTOR WILL BE RESPONSIBLE TO PAY NEW FEES ASSOCIATED WITH THE ADDITIONAL REVIEW.

43. TESTING. TESTING OF CONSTRUCTION MATERIALS AND/OR CONSTRUCTED FACILITIES WILL BE REQUIRED AS OUTLINED IN THE COVERING SPECIFICATIONS AS NECESSARY TO MEET THE REQUIREMENTS OF THE JURISDICTIONAL AGENCIES. ALL TESTING TO BE DONE BY A FLORIDA LICENSED TESTING LABORATORY. THE CONTRACTOR IS TO SUBMIT ALL REQUIRED TESTS ON UTILITY EMBANKMENT, BACKFILL, SUBGRADE, BASE AND SURFACE COURSE MATERIAL TO THE ENGINEER PRIOR TO ANY REQUEST FOR PAYMENT. IF ANY TESTS FAIL TO MEET THE SPECIFICATIONS, THE CONTRACTOR, AT ITS EXPENSE, SHALL CORRECT ALL DEFICIENT WORK AND SUBMIT TEST RESULTS INDICATING COMPLIANCE WITH THESE SPECIFICATIONS PRIOR TO ANY REQUEST FOR PAYMENT.

44. DENSITY TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY TESTING TO ASSURE THAT THE PROPER COMPACTION HAS BEEN ACHIEVED ON THE SUBGRADE, BASE MATERIAL, PIPE BASE MATERIAL AND ALL OTHER PERTINENT AREAS THAT HAVE BEEN COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH TESTING AND RETESTING THE AREAS AND SHALL PROVIDE THE OWNER AND THE ENGINEER COPIES OF ALL TEST RESULTS. ALL REPORTS ARE TO BE SIGNED AND SEALED BY A REGISTERED GEOTECHNICAL ENGINEER IN THE STATE OF FLORIDA.

45. VERTICAL DISTRIBUTION OF DENSITY TESTING. NUCLEAR DENSITY COMPACTION TESTS ARE TO BE TAKEN ON EVERY LIFT PLACED (12" MAXIMUM THICKNESS). STARTING WITH THE SOIL AT THE BRINOUNE OF THE UTILITY OR AT THE BASE OF ANY STRUCTURE AND PROCEEDING UPWARD TO GRADE AT THE LOCATIONS DEFINED BY THE HORIZONTAL DISTRIBUTION OF DENSITY TESTING NOTE. IF THICKER LIFTS ARE APPROVED AND IMPLEMENTED, DENSITY TESTING SHALL BE PERFORMED VIA DIG DOWNS TO SUFFICIENT DEPTH TO TEST EACH 12 INCHES FOR THE FULL THICKNESS OF LIFT.

46. HORIZONTAL DISTRIBUTION OF DENSITY TESTING. DENSITY TESTING SHALL BE PERFORMED AT THE FOLLOWING MINIMUM LOCATIONS WITH HORIZONTAL SPACING PER THE VERTICAL DISTRIBUTION OF DENSITY TAKING NOTE. MORE SPECIFICALLY:

A. PIPE TRENCHES - TESTS SHALL BE PERFORMED AT RANDOMLY SELECTED LOCATIONS WITHIN EACH 150 FOOT INTERVAL (MAXIMUM) ALONG THE LENGTH OF A PIPE INSTALLATION, AND BETWEEN EACH SET OF STRUCTURES SEPARATED BY LESS THAN 150 FEET. HOWEVER, NO FEWER THAN TWO TESTS TO BE TAKEN. AT LEAST ONE TEST SHALL BE PERFORMED FOR EVERY 12 INCH BACKFILL LAYER, STARTING WITH THE FIRST TEST PERFORMED AT THE PIPE BEDDING (COVERING THE 12" LAYER BELOW SPRINGLINE ELEVATION).

B. STRUCTURES - TESTS SHALL BE PERFORMED AT EACH MANHOLE OR DRAINAGE STRUCTURE. AT LEAST ONE TEST SHALL BE PERFORMED FOR EVERY 12 INCH BACKFILL LIFT, STARTING WITH THE FIRST TEST PERFORMED AT THE BASE OF THE STRUCTURE (COVERING THE 12" LAYER BELOW BASE ELEVATION).

C. SUBGRADE - TESTS SHALL BE PERFORMED AT RANDOMLY SELECTED LOCATIONS WITHIN EACH 300 FOOT INTERVAL (MAXIMUM) ALONG THE LENGTH OF THE ROADWAY, SIDEWALK, OR PATHWAY AND EVERY 2,000 SQUARE FEET OR LESS OF PARKING AREA. NO LESS THAN THREE (3) TESTS MINIMUM.

D. BASE ROCK - TESTS SHALL BE PERFORMED AT RANDOMLY SELECTED LOCATIONS WITHIN EACH 300 FOOT INTERVAL (MAXIMUM) ALONG THE LENGTH OF THE ROADWAY, SIDEWALK, OR PATHWAY AND EVERY 2,000 SQUARE FEET OR LESS OF PARKING AREA, NO LESS THAN THREE (3) TESTS MINIMUM.

E. ROAD CROSSINGS - TESTS SHALL BE PERFORMED FOR EACH 12 INCH LIFT WITHIN ANY OPEN CUT ROAD CROSSING LOCATION WITHIN EACH 150 FOOT INTERVAL, NO LESS THAN TWO (2) TESTS MINIMUM.

47. TACTILE SURFACES - ALL TACTILE SURFACES SHALL COMPLY WITH ALL APPLICABLE CODES AND REQUIREMENTS INCLUDING BUT NOT LIMITED TO, THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) INDEX 304 AND THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION.

WATER AND SANITARY SEWER NOTES:

1. AVAILABILITY OF SYSTEMS FOR ABSOLUTE MEASUREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL WATER MAIN BENDS, VALVES, HYDRANTS, TEES AND WATER SERVICE TAPS AVAILABLE TO FACILITATE DIRECT PHYSICAL MEASUREMENT OF RECORD DRAWING INFORMATION. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER, ENGINEER, AND SURVEYOR TO OBTAIN RECORD DRAWING MEASUREMENTS SO AS NOT TO ENDANGER THE GENERAL PUBLIC OR CREATE DELAY IN THE PROGRESS OF THE PROJECT. CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM WRITTEN NOTICE.

2. SYSTEM CLEANING. CONTRACTOR SHALL THOROUGHLY CLEAN ALL SANITARY AND DRAINAGE SYSTEMS TO FACILITATE MEASUREMENT OF RECORD DRAWING INFORMATION. CLEANING SHALL BE PERFORMED PRIOR TO "PRE-LAMPING" INSPECTIONS BY ENGINEER. CONTRACTOR SHALL ALSO HAVE ALL RIMS INSTALLED PRIOR TO PRE-LAMPING.

3. WATER MAINS. ALL WATER MAINS TO BE DUCTILE IRON PIPE (DIP). ALL LINES FROM THE WATER MAIN TO A FIRE HYDRANT TO BE DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED ON THE PLANS. ALL LINES FROM THE WATER MAIN TO A FIRE LINE BACKFLOW TO BE DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED ON THE PLANS.

4. WATER SERVICE LINES. ALL WATER SERVICE LINES TO BE PVC SCHEDULE 40 UNLESS NOTED OTHERWISE ON THE PLANS.

5. SANITARY SEWER LINES. ALL SANITARY SEWER GRAVITY MAINS LESS THAN 12" IN DEPTH TO BE PVC SDR 26 UNLESS NOTED OTHERWISE ON PLANS.

6. MINIMUM PIPE DEPTHS. ALL PRESSURE PIPE TO BE INSTALLED AT MIN. 36" COVER FROM FINISHED GRADE.

7. VALVES. ALL VALVES ARE TO BE CONSTRUCTED COMPLETELY IN GRASSED AREAS UNLESS SHOWN OTHERWISE ON THE PLANS. NO VALVES SHALL BE CONSTRUCTED WITHIN THE SIDEWALK, CURB OR PARKING STALLS.

8. EXISTING UTILITIES IMPACTED. ALL EXISTING VALVES AND MANHOLES IMPACTED BY CONSTRUCTION OF THIS PROJECT SHALL BE ADJUSTED IN ACCORDANCE WITH THE UTILITY SPECIFICATIONS.

9. PIPE COLORS. ALL WATER MAIN PIPE, INCLUDING FITTINGS, INSTALLED ON OR AFTER AUGUST 28, 2003, EXCEPT PIPE INSTALLED UNDER A CONSTRUCTION PERMIT FOR WHICH THE DEPARTMENT RECEIVED A COMPLETE APPLICATION BEFORE AUGUST 28, 2003, SHALL BE COLOR CODED OR MARKED USING BLUE AS A PREDOMINANT COLOR TO DIFFERENTIATE DRINKING WATER FROM RECLAIMED OR OTHER WATER. BLACK WITH BLUE STRIPES INCORPORATED INTO OR APPLIED TO THE PIPE WALL, AND UNDERGROUND METAL OR CONCRETE PIPE SHALL HAVE UNDERGROUND PLASTIC PIPE SHALL BE SOLID-WALL BLUE PIPE, SHALL HAVE A CONTINUOUS BLUE EXTERNAL SKIN, OR SHALL BE WHITE OR BLUE STRIPES APPLIED TO THE PIPE WALL PIPE STRIPED DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVEGROUND PIPE AT DRINKING WATER TREATMENT PLANTS SHALL BE COLOR CODED AND LABELED IN ACCORDANCE WITH SUBSECTION 62-555.320(19), F.A.C., AND ALL OTHER ABOVEGROUND PIPE SHALL BE PAINTED BLUE OR COLOR CODED OR MARKED LIKE UNDERGROUND PIPE.

10. FIELD VERIFICATION. PRIOR TO CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ELEVATION & LOCATION(S) OF EXISTING UTILITIES. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONTINUATION OF WORK.

11. PIPE COLOR INFUSION. ALL WATER MAINS (BLUE) FORCE MAINS (GREEN), AND RECLAIM WATER MAINS (PURPLE) SHALL BE P.V.C. (C-900) COLORED DURING INFUSION PROCESS, UNLESS A DIFFERENT MATERIAL IS OTHERWISE NOTED.

12. SANITARY SEWER SEPARATION FROM DRAINAGE. ALL WATER AND SANITARY SERVICES SHALL BE CONSTRUCTED A MINIMUM OF 5' FROM DRAINAGE STRUCTURES.

13. MAGNETIC TAPE. MAGNETIC TAPE IS REQUIRED FOR PVC WATER MAINS, FORCE MAINS, AND RECLAIM WATER MAINS AND SHALL BE 6" WIDE IMPRINTED WITH 2" HIGH LETTERING READING: "CAUTION - WATER MAIN BURIED BELOW", "CAUTION - FORCE MAIN BURIED BELOW", OR "CAUTION - RECLAIM WATER MAIN BURIED BELOW", AS REQUIRED.

14. TESTING. PRESSURE TESTING AND CERTIFICATION SHALL FOLLOW RIVIERA BEACH UTILITY DISTRICT & PALM BEACH COUNTY HEALTH DEPARTMENT STANDARDS, LATEST EDITIONS.

15. VERTICAL SEPARATIONS. ALL WATER MAINS TO CROSS OVER SANITARY SEWER SERVICES, WHERE 12" MINIMUM CLEARANCE CANNOT BE MAINTAINED, 20 LINEAR FEET OF DUCTILE IRON WATER MAIN SHALL BE CENTERED ON THE CROSSING AND THE SEWER SERVICE SHALL BE C-900, AS-BUILT, IN NO CASE SHALL THERE BE LESS THAN 6" CLEARANCE.

16. RECORD DRAWING NOTE. RECORD DRAWINGS SHALL INCLUDE ALL INFORMATION AS REQUIRED BY THE UTILITY DISTRICT AND SHOWN IN THE STATE PLANE COORDINATES ARE REQUIRED FOR ALL AS-BUILT UTILITY OBJECTS.

17. STATE PLANE COORDINATES FOR RECORD DRAWINGS. ALL RECORD DRAWINGS SHALL BE DRAWN IN THE STATE PLANE COORDINATE SYSTEM.

18. WATER MAIN DUCTILE IRON PIPE (DIP). ALL WATER MAIN DUCTILE IRON PIPE AND PIPE FITTINGS SHALL BE PAINTED WITH A 4" WIDE CONTINUOUS BLUE LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE. APPROVED PAINT INDURON, ADUNAMAT 3042 ALASKAN BLUE (ONE COAT 3 MILS DRY FILM THICKNESS APPLIED WITH 12" NAP MEDIUM ROLLER).

19. PIPE COLORS. ALL WATER MAIN PIPE, INCLUDING FITTINGS, INSTALLED ON OR AFTER AUGUST 28, 2003, EXCEPT PIPE INSTALLED UNDER A CONSTRUCTION PERMIT FOR WHICH THE DEPARTMENT RECEIVED A COMPLETE APPLICATION BEFORE AUGUST 28, 2003, SHALL BE COLOR CODED OR MARKED USING BLUE AS A PREDOMINANT COLOR TO DIFFERENTIATE DRINKING WATER FROM RECLAIMED OR OTHER WATER. BLACK WITH BLUE STRIPES INCORPORATED INTO OR APPLIED TO THE PIPE WALL, AND UNDERGROUND METAL OR CONCRETE PIPE SHALL HAVE UNDERGROUND PLASTIC PIPE SHALL BE SOLID-WALL BLUE PIPE, SHALL HAVE A CONTINUOUS BLUE EXTERNAL SKIN, OR SHALL BE WHITE OR BLUE STRIPES APPLIED TO THE PIPE WALL PIPE STRIPED DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF PIPE. FOR PIPES WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS STRIPES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVEGROUND PIPE AT DRINKING WATER TREATMENT PLANTS SHALL BE COLOR CODED AND LABELED IN ACCORDANCE WITH SUBSECTION 62-555.320(19), F.A.C., AND ALL OTHER ABOVEGROUND PIPE SHALL BE PAINTED BLUE OR COLOR CODED OR MARKED LIKE UNDERGROUND PIPE.

CDI PROJECT No. 1413

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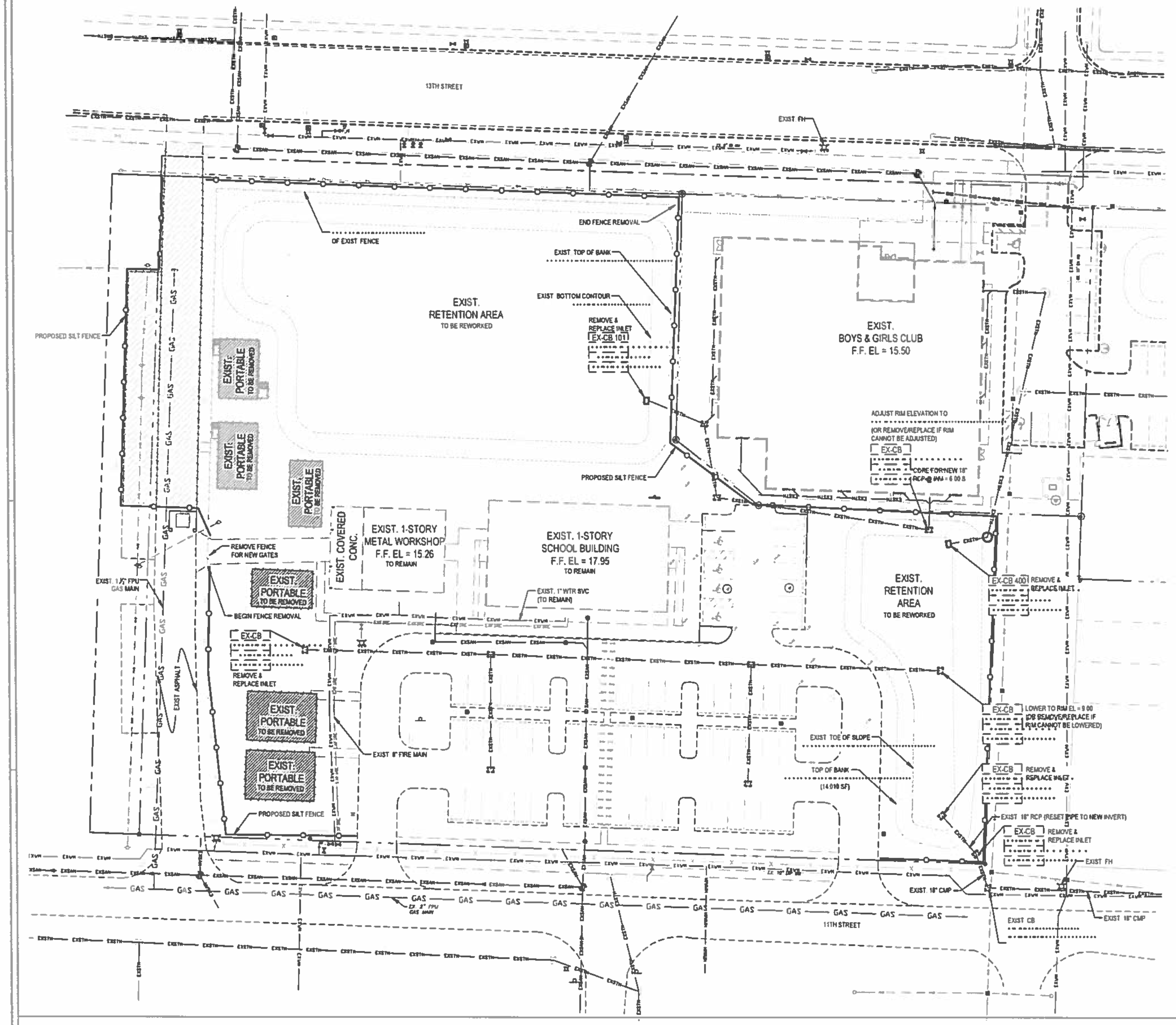
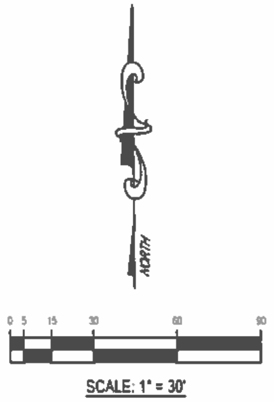
GENERAL NOTES

C0.2





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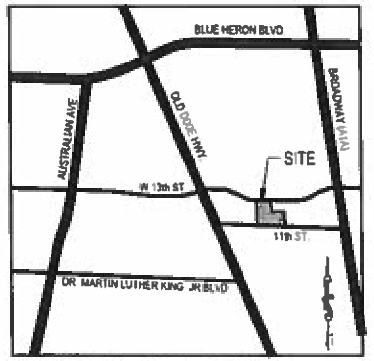

SEC. - TWP. S - RGE. E

LOCATION MAP

N.T.S.

LEGEND

EXISTING WATERMAIN	—— EXWM —— EXWM ——
EXISTING SANITARY SEWER	—— EXSAN —— EXSAN ——
EXISTING STORM DRAINAGE	—— EXSTM —— EXSTM ——
EXISTING UTILITY (TO BE REMOVED)	
SILT FENCE	——o——o——
EXISTING ASPHALT & CURBING (TO BE REMOVED)	▨
EXISTING BUILDING (TO BE REMOVED)	▨

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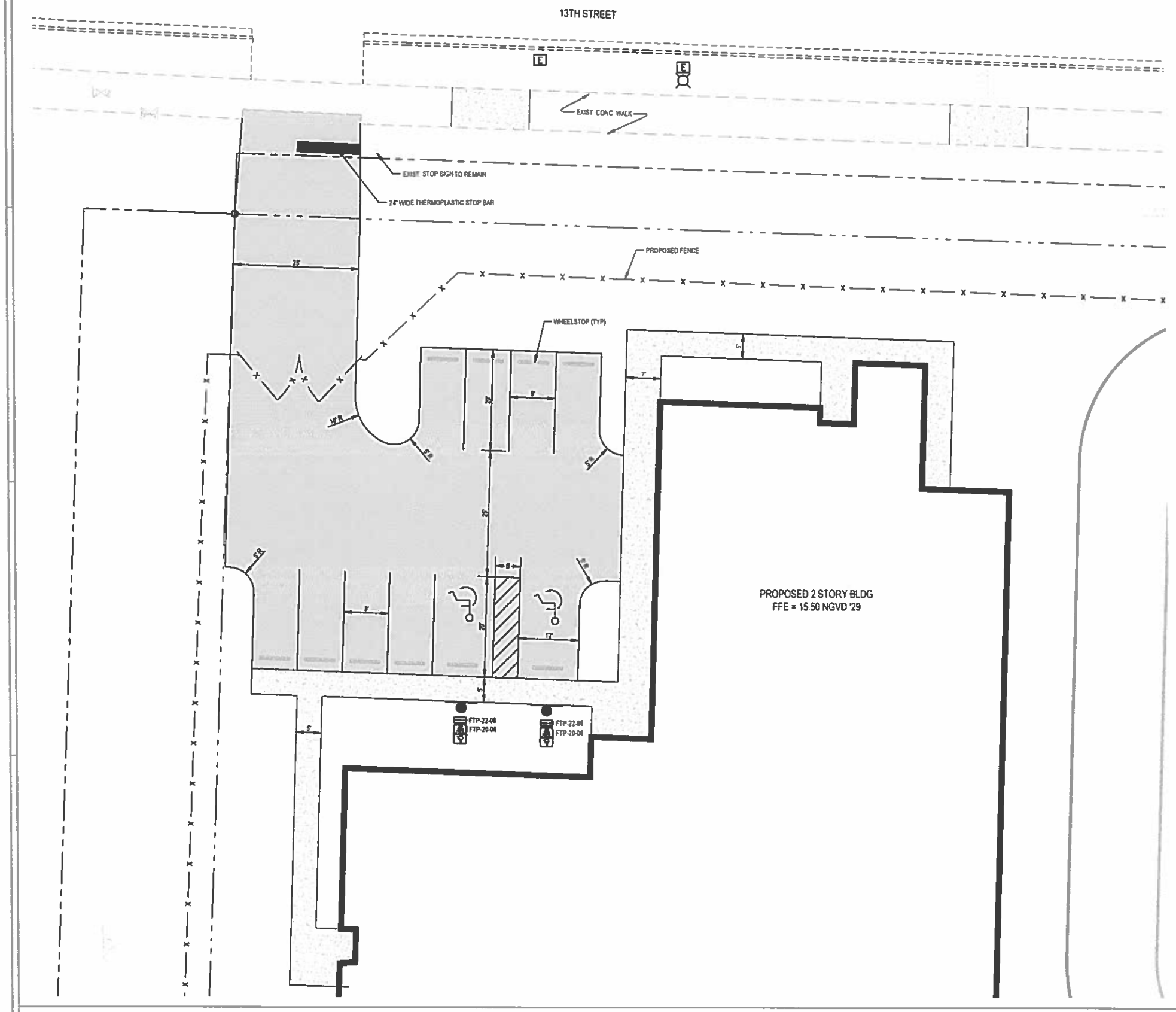
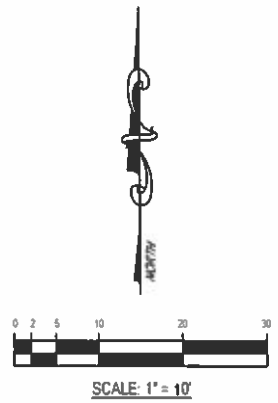
PROFESSIONAL ENGINEER
9/29/2014

SITE DEMOLITION & EROSION CONTROL PLAN

C1.1





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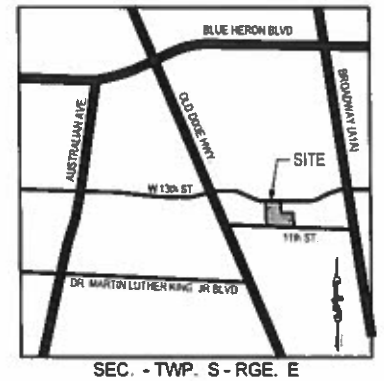

SEC. - TWP. S - RGE. E

LOCATION MAP

N.T.S.

LEGEND

PROPOSED PAVEMENT

PROPOSED CONCRETE

PROPOSED BUILDING

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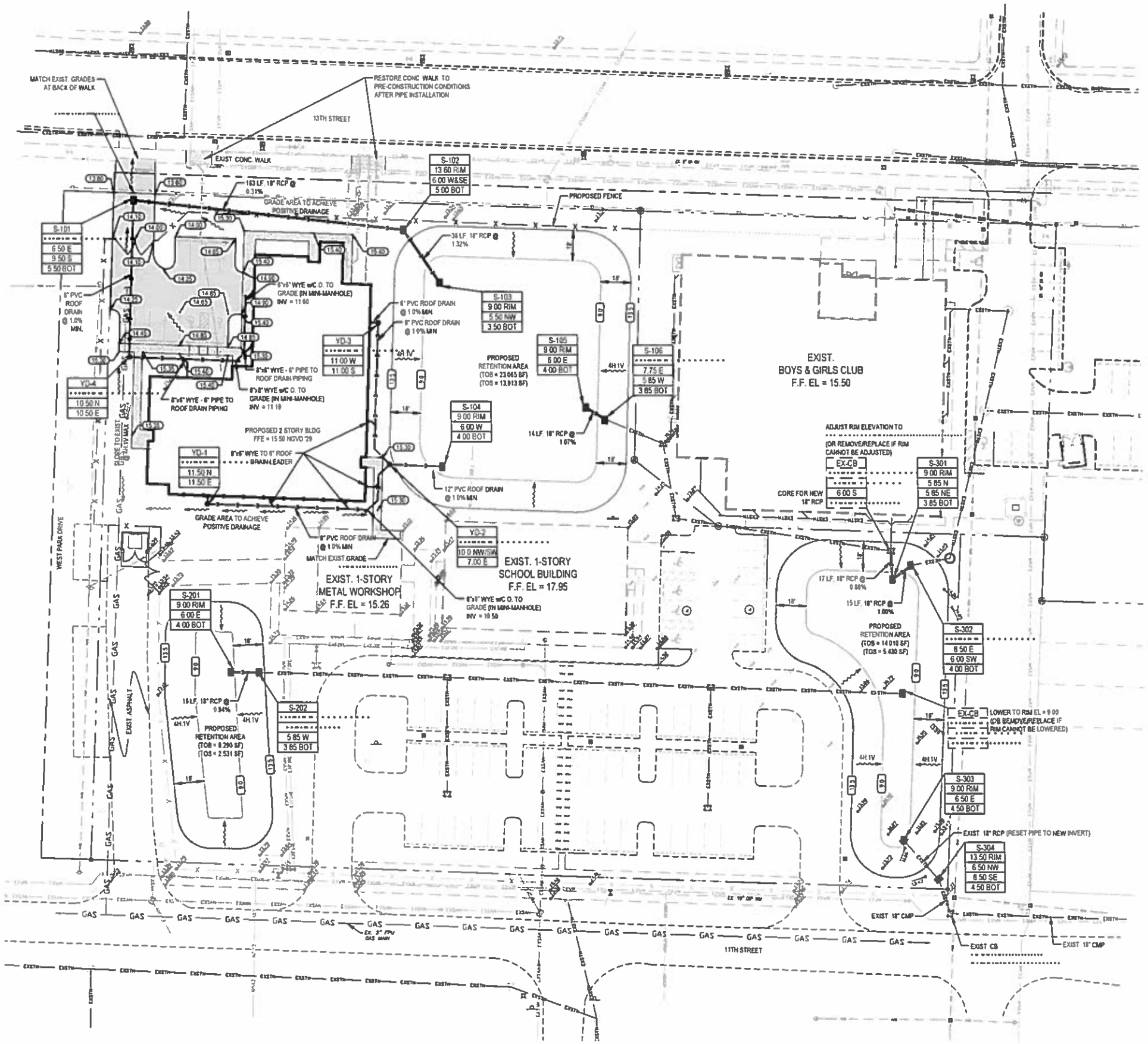
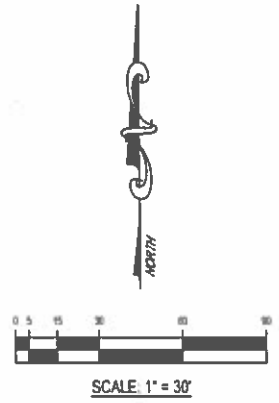
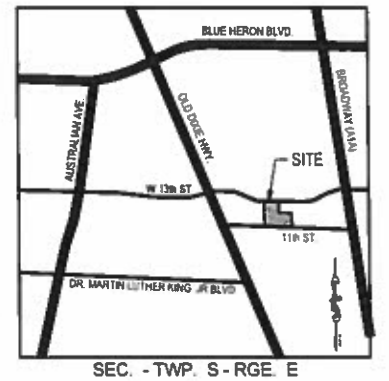
Drawn:	.
Revised:	

SIGNING, STRIPING, & GEOMETRIC PLAN

C2.1







SEC. - TWP. S - RGE. E
LOCATION MAP
N.T.S.

LEGEND

- EXISTING WATERMAIN
- EXISTING SANITARY SEWER
- EXISTING STORM DRAINAGE — EXSTM
  - STRUCTURE NUMBER — S-100
  - RIM ELEVATION — 00.00 RIM
  - INVERT — 0.00
  - STRUCTURE BOTTOM — 0.00 BOT
- PROPOSED STORM DRAINAGE LINE W/ STORM STRUCTURE
- PROPOSED SANITARY SEWER SERVICE LINE
- PROPOSED WATER SERVICE LINE
- PROPOSED PAVEMENT
- PROPOSED BUILDING
- PROPOSED CONCRETE
- EXISTING ELEVATIONS
- PROPOSED ELEVATIONS — 0.00

NOTES:
1. STRUCTURES BASED ON LISF PRECAST CONTRACTOR TO FIELD VERIFY
2. YD = YARD DRAIN (ADS DRAIN BASIN)

DRAINAGE STRUCTURE CHART

STRUCT. NUMBER	STRUCT. TYPE	GRATE TYPE
S-101	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209
S-102	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209
S-103	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209
S-104	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209
S-105	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209

(W/ SEATED GRATE)

DRAINAGE STRUCTURE CHART

STRUCT. NUMBER	STRUCT. TYPE	GRATE TYPE
S-201	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209
S-202	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209

DRAINAGE STRUCTURE CHART

STRUCT. NUMBER	STRUCT. TYPE	GRATE TYPE
S-101	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209
S-102	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209
S-103	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209
S-104	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209
S-105	▪▪▪▪▪▪▪▪	12"S.F. 4155-6209

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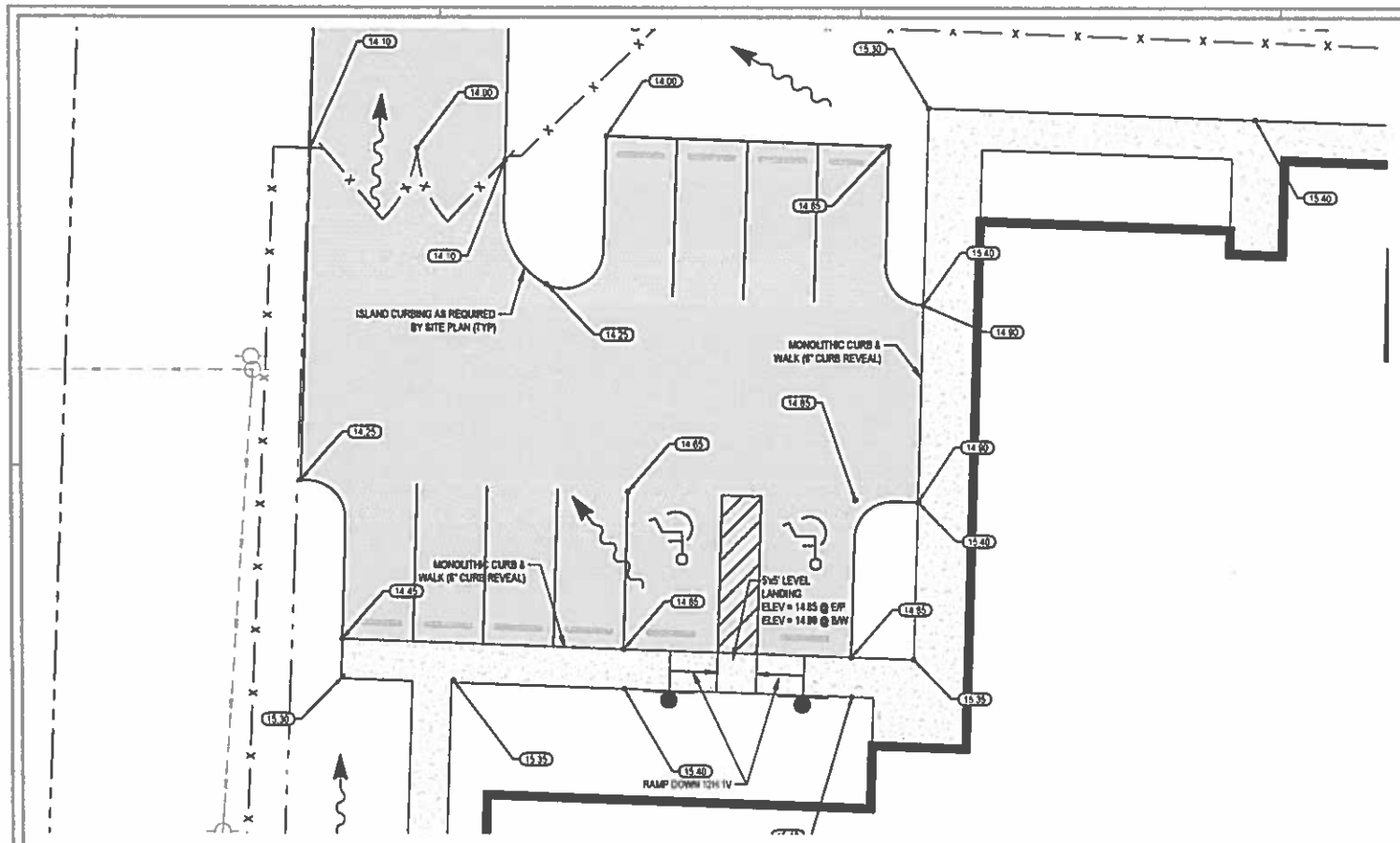
NEW CLASSROOM BUILDING
RIVIERA BEACH MARITIME ACADEMY
RIVIERA BEACH, FLORIDA
CONTRUCTION DOCUEMENTS

Comm. No 214031.00
Date 09-24-14
Drawn
Revised:

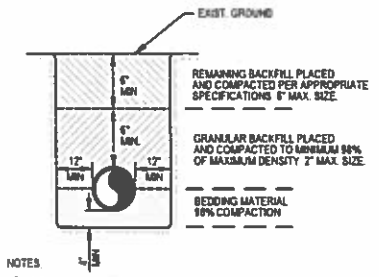
JEFF TROMBLEY LICENSE NO. 69849 STATE OF FLORIDA PROFESSIONAL ENGINEER
9/29/2014

PAVING, GRADING, & DRAINAGE PLAN

C3.1

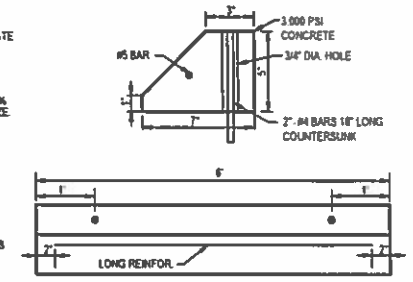


ENLARGED DETAIL
SCALE: 1" = 10'

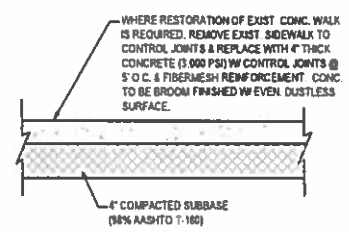


NOTES:
1. BEDDING SHALL CONSIST OF IN-SITU GRANULAR MATERIAL OR WASHED AND GRADED LIMEROCK 3/8" - 7/8" SIZING. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGER ROCK SHALL BE REMOVED
2. THE PIPE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
3. THE PIPE SHALL BE PLACED IN A DRY TRENCH
4. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIALS SUCH AS LARGER ROCK, MUCK AND DEBRIS
5. SEE GENERAL NOTES FOR PIPE BACKFILL BENEATH PROPOSED PAVEMENT

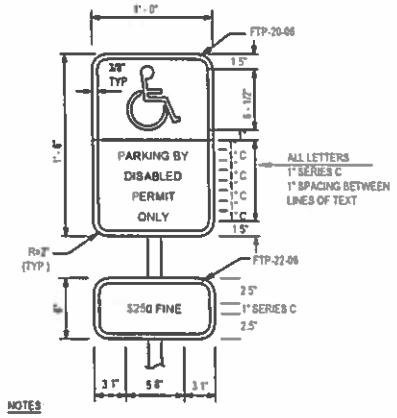
TRENCH DETAIL
N.T.S.



CONCRETE WHEEL STOP DETAIL
N.T.S.



CONCRETE SIDEWALK RESTORATION DETAIL
N.T.S.



NOTES

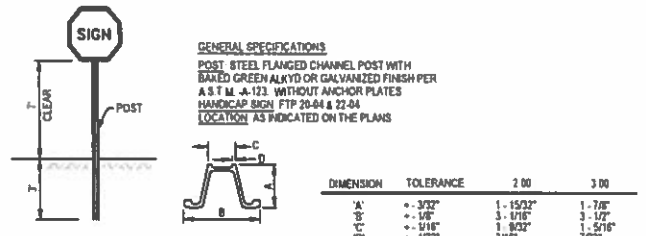
SIGN FTP-20-06

1. ALL LETTERS ARE 1" SERIES "C"
2. TOP PORTION OF SIGN SHALL HAVE A REFLECTORIZED BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND & BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED WHITE BACKGROUND WITH BLACK OPAQUE LEGEND & BORDER.

SIGN FTP-22-06

1. ALL LETTERS ARE 1" SERIES "C"
2. BACKGROUND WHITE, LEGEND AND BORDER BLACK.

HANDICAP SIGN DETAILS
REFERENCE FDOT INDEX 17355

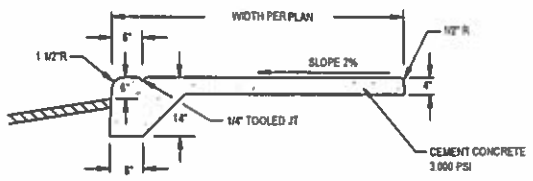


GENERAL SPECIFICATIONS
POST: STEEL FLANGED CHANNEL POST WITH BAKED GREEN ALKYD OR GALVANIZED FINISH PER A.S.T.M. A-123. WITHOUT ANCHOR PLATES
HANDICAP SIGN: FTP-20-06 & 22-04
LOCATION: AS INDICATED ON THE PLANS

DIMENSION	TOLERANCE	2.00	3.00
'A'	+- 3/32"	1 - 15/32"	1 - 7/8"
'B'	+- 1/8"	3 - 1/16"	3 - 1/2"
'C'	+- 1/16"	1 - 9/32"	1 - 5/16"
'D'	+- 1/32"	3/16"	7/32"

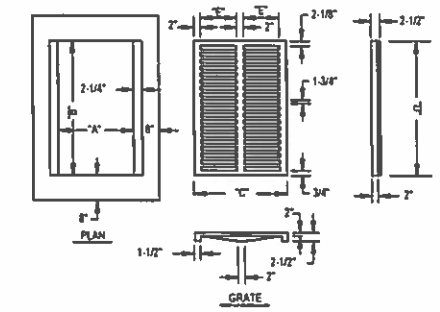
CHANNEL POST

TYPICAL SIGN & POST DETAILS
N.T.S.



MONOLITHIC CURB AND SIDEWALK DETAIL
TO BE USED WHERE SIDEWALK ABUTS PAVEMENT UNLESS OTHERWISE NOTED ON PLANS.
N.T.S.

PAVING & CONCRETE SPECIFICATIONS				
TYPE	WEARING SURFACE	BASE	SUB-GRADE	CONCRETE (ONSITE & OFFSITE)
ONSITE ASPHALT PAVEMENT	1 3/4" THICK, TYPE S-III A.C.S.C. - TWO LIFTS (FIRST LIFT TO BE 1/2" AND 2ND LIFT TO BE 1")	8" THICK, BASEROCK COMPACTED IN TWO EQUAL LIFTS TO 98% MAXIMUM DRY DENSITY A.A.S.H.T.O. T-180 (LBR 100)	12" THICK, COMPACTED TO 98% MAXIMUM DRY DENSITY A.A.S.H.T.O. T-180	4" THICK CONCRETE (3,000 PSI) TO BE PLACED AT TIME OF CONSTRUCTION WITH 4" COMPACTED BASE (SIDEWALKS SHALL BE 6" THICK AT DRIVEWAYS). SIDEWALKS TO BE BROOM FINISHED WITH EVEN, DUSTLESS SURFACE. CONTROL JOINTS TO BE SPACED 5' ON CENTER. EXPANSION JOINTS REQUIRED EVERY 120 FEET AT EACH CHANGE OF DIRECTION, AND WHEN SIDEWALK ABUTS BUILDING
ONSITE - CONCRETE ALTERNATE	5" THICK, 3,500 PSI CONCRETE w/JOINTS EVERY 12' MAX. SUBMIT JOINT SHOP DRAWING FOR REVIEW	N/A	12" THICK, COMPACTED TO 98% MAXIMUM DRY DENSITY A.A.S.H.T.O. T-180	



TYPE INLET	"A"	"B"	"C"	"D"	"E"	MAX. SIZE R.C.P.
"C"	2'-6"	3'-1"	2'-4"	3'-0"	11"	18"
"E"	2'-6"	4'-6"	3'-4"	4'-4"	1'-5"	30"
"E MOD"*	3'-6"	4'-6"	3'-4"	4'-4"	1'-5"	48"

GENERAL NOTES

BEVELED EDGES: ALL EXPOSED CORNERS AND EDGES TO BE CHAMFERED 3/4"

FOUNDATION MATERIAL: WHERE MATERIAL UNSATISFACTORY FOR FOUNDATION IS ENCOUNTERED AT FLOW LINE OMIT FLOOR AND CARRY WALLS DOWN TO SATISFACTORY FOUNDATION BACKFILL TO FLOW LINE WITH CLEAN SAND

GRATES: CAST IRON GRATES IN ACCORDANCE WITH FLA D.O.T. SPECS

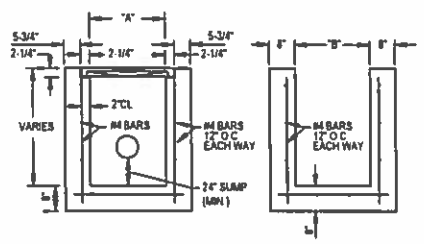
*INLET TYPES: INLETS ARE TO BE AS SHOWN HEREON: TYPE "E MOD"

48" DIA. INLETS RECEIVING R.C.P. LARGER THAN 48" DIA. SHALL BE IN ACCORDANCE WITH FLA. D.O.T. STANDARDS.

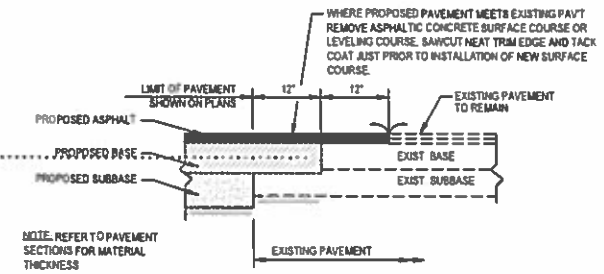
MATERIAL: INLET WALLS AND FOOTING MAY EITHER POURED-IN-PLACE 2500 LB. CONC., OR PRECAST CLASS "A" 3000 LB. CONC.

ALL INLET CONSTRUCTION IS IN ACCORDANCE WITH THE CURRENT F.D.O.T. STANDARDS INDEX NO. 201 & 232.

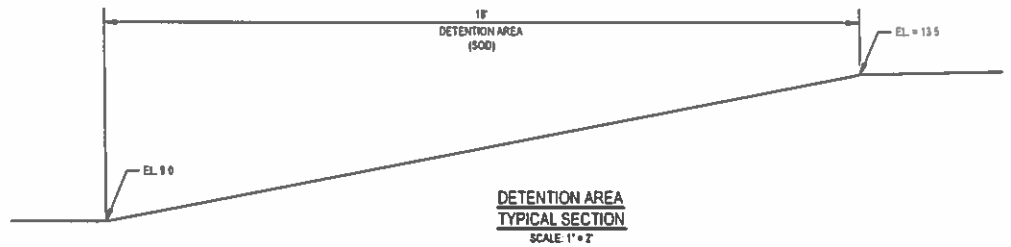
ALL INLET GRATES TO BE SECURED WITH A LOCKING CHAIN PER F.D.O.T. INDEX 291



INLET DETAIL
N.T.S.



PAVEMENT MATCHING DETAIL
N.T.S.



DETENTION AREA
TYPICAL SECTION
SCALE: 1" = 2'

DOCUMENTS PREPARED BY

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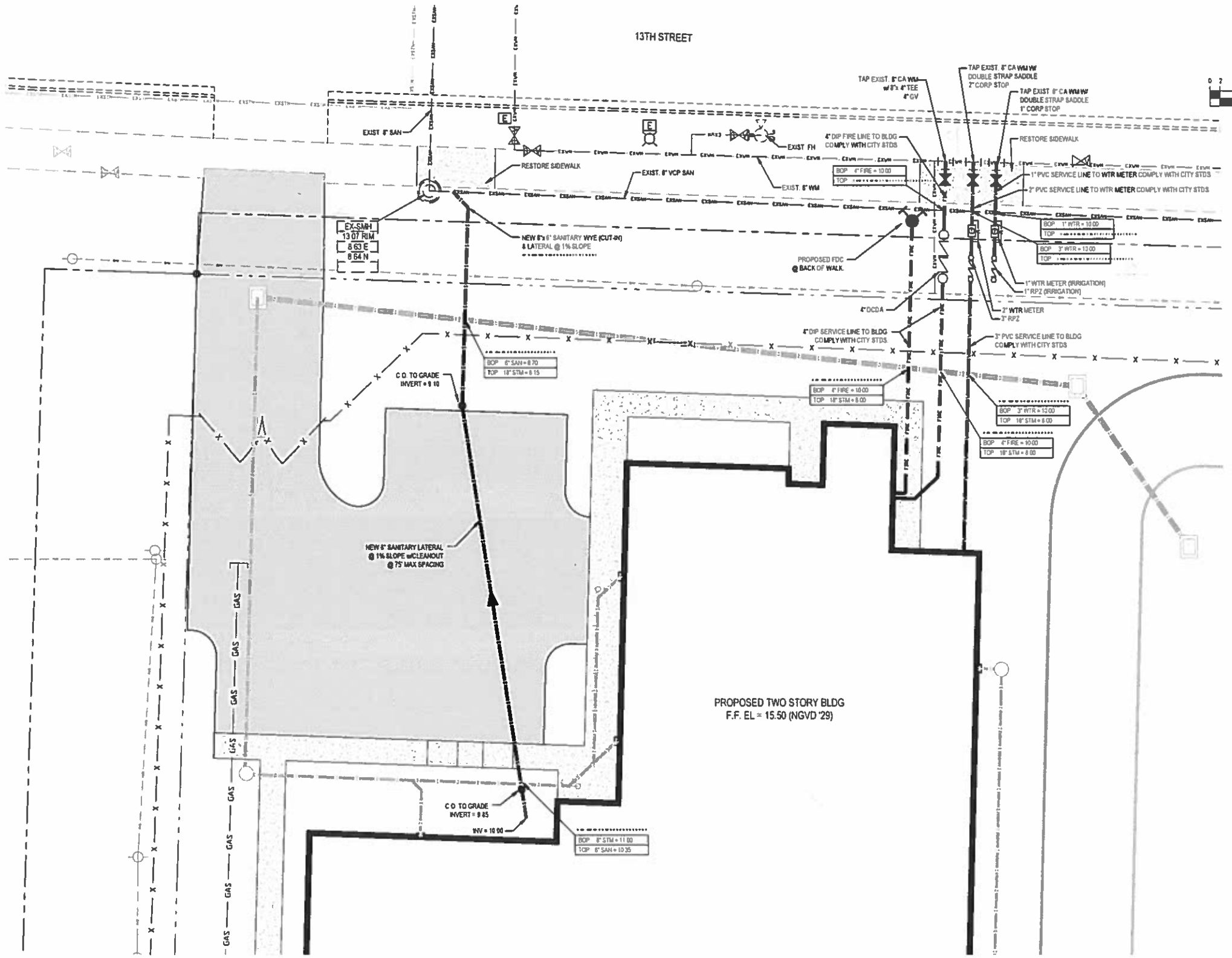
NEW CLASSROOM BUILDING
RIVIERA BEACH MARITIME ACADEMY
RIVIERA BEACH, FLORIDA
CONTRUCTION DOCUEMENTS

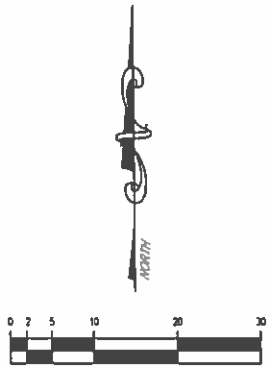
Comm. No: 214031.00
Date: 09-24-14
Drawn: -
Revised:

JEFF TROMBETTA LICENSE NO. 69845 STATE OF FLORIDA PROFESSIONAL ENGINEER
9/29/2014

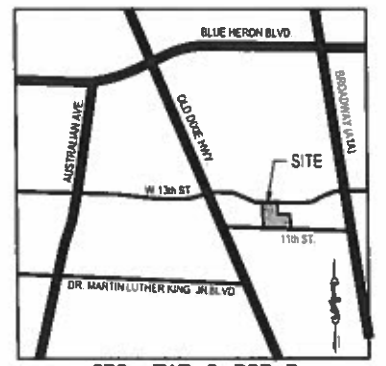
PAVING, GRADING, & DRAINAGE DETAILS

C4.1





SCALE: 1" = 10'



SEC. - TWP. S - RGE E
LOCATION MAP
N.T.S.

LEGEND

- EXISTING WATERMAIN — EXWM —
- EXISTING SANITARY SEWER — EXSAN —
- EXISTING STORM DRAINAGE — EXSTM —
- PROPOSED STORM DRAINAGE LINE W/ STORM STRUCTURE
- PROPOSED SANITARY SEWER SERVICE LINE — S —
- PROPOSED WATER SERVICE LINE — W —
- PROPOSED FIRE — FIRE —
- PROPOSED PAVEMENT
- PROPOSED BUILDING
- PROPOSED CONCRETE

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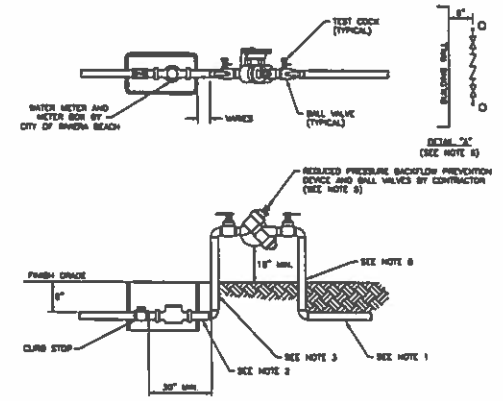
CONTRUCTION DOCUEMENTS

Comm. No.	214031.00
Date.	09-24-14
Drawn.	
Revisions	

STATE OF FLORIDA
JEFFREY T. WORTHINGTON
No. 69648
REGISTERED PROFESSIONAL ENGINEER
9/29/2014

POTABLE WATER & SANITARY SEWER PLAN

C5.1



NOTES:

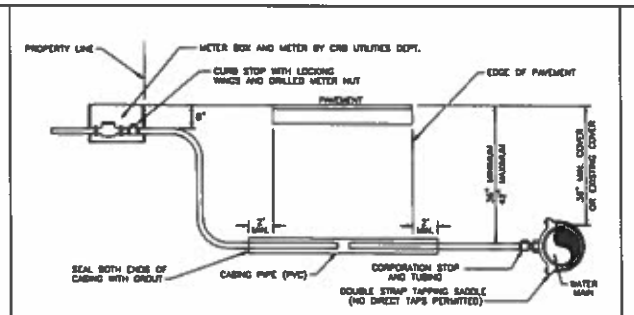
1. TYPE "K" COPPER TUBING (SOFT DRAWN) OR POLYETHYLENE TUBING SDR 9 COPPER TUBE SIZE.
2. IF THIS DISTANCE IS LESS THAN 3 FEET ONLY COPPER TUBING SHALL BE PERMITTED.
3. 3/4"-2" BOTH RISERS SHALL BE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS SOLDER FITTINGS AND ADAPTERS. ONLY LEAD FREE SOLDER AND FLUX SHALL BE PERMITTED.
4. BOTH 1 1/2" AND 2" ANGLE METER STOPS SHALL BE EQUIPPED WITH LOCKING CAPS AND METER FLANGES.
5. ALL BACKFLOW PREVENTION DEVICES ASSEMBLY MUST BE USC APPROVED.
6. WHEN THE DEVICE IS INSTALLED PARALLEL TO A BUILDING WALL THERE SHALL BE A MIN. OF 6" BETWEEN THE EDGE OF THE DEVICE AND THE BUILDING WALL.
7. 2 1/2 "-10" THE RPZ BACKFLOW PREVENTION ASSEMBLY MUST BE INSTALLED DOWNSTREAM OF THE WATER SERVICE METER 18"-24" ABOVE FINISHED GRADE ON NON-GALVANIZED METAL PIPE. WORK DONE ON THIS DEVICE MUST BE PERFORMED BY A CERTIFIED BACKFLOW TECHNICIAN AND TEST REPORTS MUST BE SUBMITTED TO THE CITY OF RIVIERA BEACH - UTILITY DISTRICT.

RPZ BACKFLOW PREVENTION DEVICE

05/27/05

Water & Sewer Details

City of Riviera Beach Utility District



NOTES:

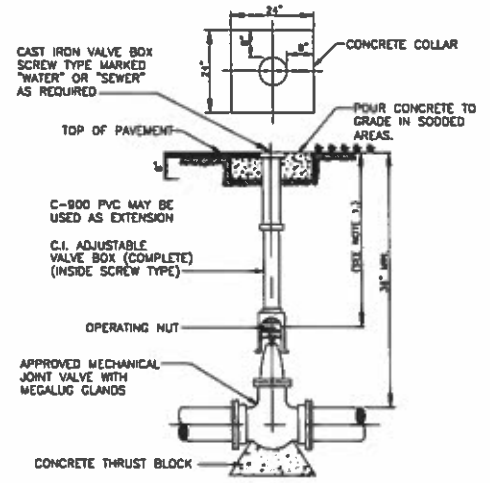
1. CASINGS SHALL BE REQUIRED FOR ALL LONG SIDE SERVICES.
2. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" OFFSET.
3. WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISH GRADE.
4. COPPER TUBING SHALL BE TYPE "K" WITH COMPRESSION FITTINGS.
5. USE EMS MARKER #1253 COLOR BLUE DIRECTLY OVER THE CORPORATION STOP.
6. ALL SERVICE LINES SHALL BE EQUIPED WITH A CORPORATION STOP AT THE MAIN AND A CURB STOP (LOCKING CONNECTION TYPE) AT THE METER.
7. THE COPPER SERVICE LINE SHALL BE CONTINOUS FROM CORPORATION STOP TO CURB STOP WITH NO FITTINGS IN BETWEEN.
8. TAPPING SADDLES AND CORPORATION STOPS SHALL HAVE AWWA INLET THREADS.
9. ALL EXPOSED FITTINGS TO BE COATED WITH COLA TAR EPOXY.
10. GALVANIZED CASING REQUIRED FOR ANY INSTALLATION REQUIRING A JACK AND BORE. SCH. 40 PVC MAY BE USED FOR AN OPEN CUT INSTALLATION WITH THE APPROVAL OF THE CRB UTILITIES DEPT. CASING SHOULD EXTEND TWO (2) FEET BEYOND EDGE OF PAVEMENT AND SIZED AS FOLLOWS:
   A.) 1" SERVICE USE 2" CASING
   B.) 1 1/2" SERVICE USE 3" CASING
   C.) 2" SERVICE USE 4" CASING

3/4" - 2" TYPICAL WATER SERVICE INSTALLATION

N.T.S. 05/27/05

Water & Sewer Details

City of Riviera Beach Utility District



NOTES:

1. WHEN OPERATING NUT IS DEEPER THAN 36" AN EXTENSION WILL BE REQUIRED TO BRING OPERATING NUT 24"-30" BELOW FINISHED GRADE. EXTENSION BOLTS & NUTS ARE TO BE STAINLESS STEEL. A STAINLESS STEEL CENTERING PLATE, WELDED TO THE EXTENSION, IS ALSO REQUIRED.
2. VALVE BOXES SHALL HAVE LOCKING COVERS IN HIGH TRAFFIC ROADWAY AREAS.

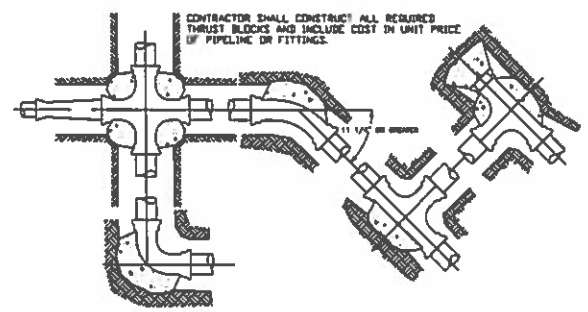
TYPICAL GATE VALVE SETTINGS

N.T.S. 05/31/05

Water & Sewer Details

City of Riviera Beach Utility District

TYPICAL LOCATIONS WHICH REQUIRE CONCRETE REACTION (THRUST) BLOCKS. FOR PRESSURE MAINS 4"SIZE AND GREATER CONCRETE SHALL HAVE 2500 PSI MINIMUM STRENGTH AT 28 DAYS AND BEAR AGAINST UNDISTURBED STABLE SOILS. AREA OF CONTACT SHALL BE GOVERNED BY PIPE SIZE, MAX. PRESSURE IN PIPE AND BEARING CAPACITY OF SOIL.



PIPE	THRUST BLOCK AREA REQ'D	PIPE	THRUST BLOCK AREA REQ'D	REMARKS
4"	2.0 SQ. FT.	18"	30.0 SQ. FT.	VALUES ARE FOR 90° BEND, BASED ON 2000 PSF SAFE BEARING LOAD AND PIPE PRESSURE OF 200 PSI PLUS 200 SAFETY FACTOR FOR DIRECT SOIL'S. INCREASES THE AREA REQUIRED IS IN DIRECT PROPORTION
6"	4.0 SQ. FT.	20"	37.0 SQ. FT.	
8"	5.5 SQ. FT.	24"	53.0 SQ. FT.	
10"	10.0 SQ. FT.	27"	80.0 SQ. FT.	
12"	14.0 SQ. FT.	30"	98.0 SQ. FT.	
14"	18.6 SQ. FT.	36"	127.0 SQ. FT.	
16"	24.0 SQ. FT.			

NOTE: FOR OTHER FITTINGS USE FOLLOWING FACTORS

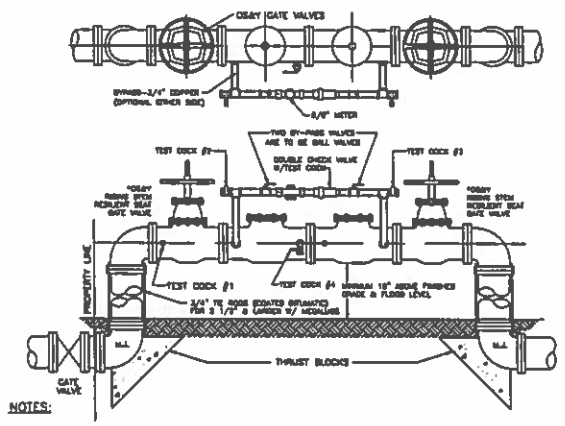
TEE 100%
45° BEND 76%
22 1/2° BEND 39%
11 1/4° BEND 20%
DEAD END 100%

CONCRETE THRUST BLOCKS

N.T.S. 05/27/05

Water & Sewer Details

City of Riviera Beach Utility District



NOTES:

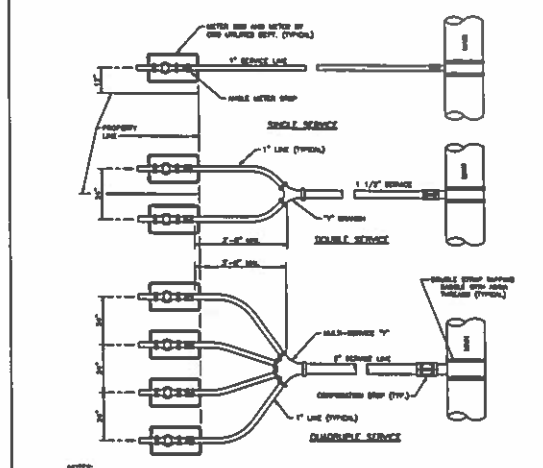
1. ABOVE GROUND INSTALLATION OF 3" & ABOVE REQUIRE RISING STEM O.S. & Y. RESILIENT SEAT GATE VALVES WITH TEST COCKS.
2. INSTALLATION AND CERTIFICATION REQUIRED BY A CERTIFIED BACKFLOW TECHNICIAN PRIOR TO ACCEPTANCE.
3. AN RPZ BACKFLOW PREVENTION ASSEMBLY MUST BE INSTALLED DOWNSTREAM OF THE DOMESTIC AND IRRIGATION METER, 18" - 24" ABOVE FINSHED GRADE ON NON-GALVANIZED METALLIC PIPE. WORK DONE ON THIS DEVICE IS TO BE PERFORMED BY A CERTIFIED BACKFLOW TECHNICIAN AND TEST REPORTS MUST BE SUBMITTED TO THE CITY OF RIVIERA BEACH - UTILITY DISTRICT.

DOUBLE DETECTOR CHECK ASSEMBLY & METER INSTALLATION SIZES:3",4",6",8",10"

N.T.S. 05/27/05

Water & Sewer Details

City of Riviera Beach Utility District



NOTES:

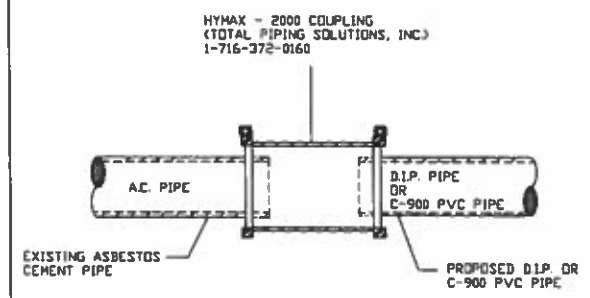
1. AUTHORIZED SERVICE LINE MATERIAL:
   a) TYPE "K" COPPER TUBING WITH COMPRESSION FITTINGS.
   b) POLYETHYLENE TUBING SDR 9, COPPER TUBE SIZE.
2. ANGLE METER STOP SHALL BE 1" MINIMUM.
3. 1" ANGLE METER STOPS WITH 3/4" VALVES SHALL NOT BE PERMITTED.
4. MULTIPLE SERVICE/METER INSTALLATIONS OF MORE THAN 4 METERS PER SERVICE AND SERVICE LINES LARGER THAN 2" DIAMETER SHALL BE HANDLED ON AN INDIVIDUAL BASIS.
5. ANGLE METER STOPS 1 1/2" AND 2" IN SIZE SHALL BE PROVIDED WITH BOTH A LOCKING CAP AND METER FLANGE.
6. NO FITTINGS BETWEEN CORP STOP AND ANGLE METER STOP ALLOWED WHEN USING POLYETHYLENE TUBING.

TYPICAL WATER SERVICES

N.T.S 05/27/05

Water & Sewer Details

City of Riviera Beach Utility District



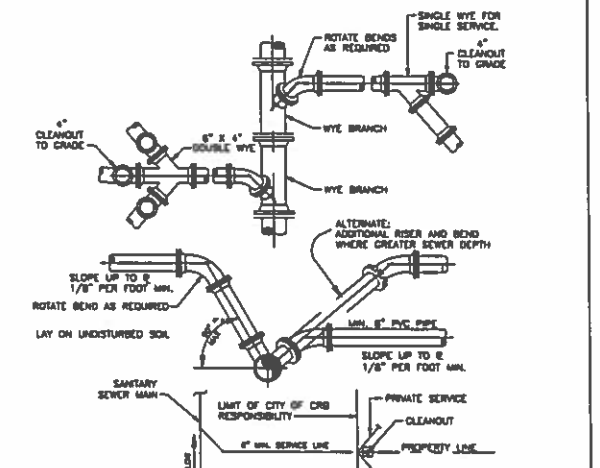
PIPE TRANSITION DETAIL

5/19/05

COUPLING

Water & Sewer Details

City of Riviera Beach Utilities Department



NOTES

1. SERVICE LATERALS SHALL TERMINATE AT PROPERTY LINE AT A DEPTH OF 3 FEET.
2. CLEANOUT CONNECTION TO BE EXTENDED 3 FEET ABOVE GRADE PRIOR TO WATER METER INSTALLATION.
3. CLEANOUTS ARE TO BE SET TO GRADE PRIOR TO WATER METER ACTIVATION.
4. NO 90° BENDS SHALL BE PERMITTED FOR SEWER SERVICE AND CLEANOUT INSTALLATION.

TYPICAL LATERAL CONNECTIONS

N.T.S. 5/27/05

Water & Sewer Details

City of Riviera Beach Utility District

DOCUMENTS PREPARED BY

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NEW CLASSROOM BUILDING
RIVIERA BEACH MARITIME ACADEMY
RIVIERA BEACH, FLORIDA
CONTRUCTION DOCUEMENTS

Comm. No 214031.00
Date: 09-24-14
Drawn:
Revised:

POTABLE WATER & SANITARY SEWER STANDARD DETAILS

C6.1

ELECTRICAL NOTES

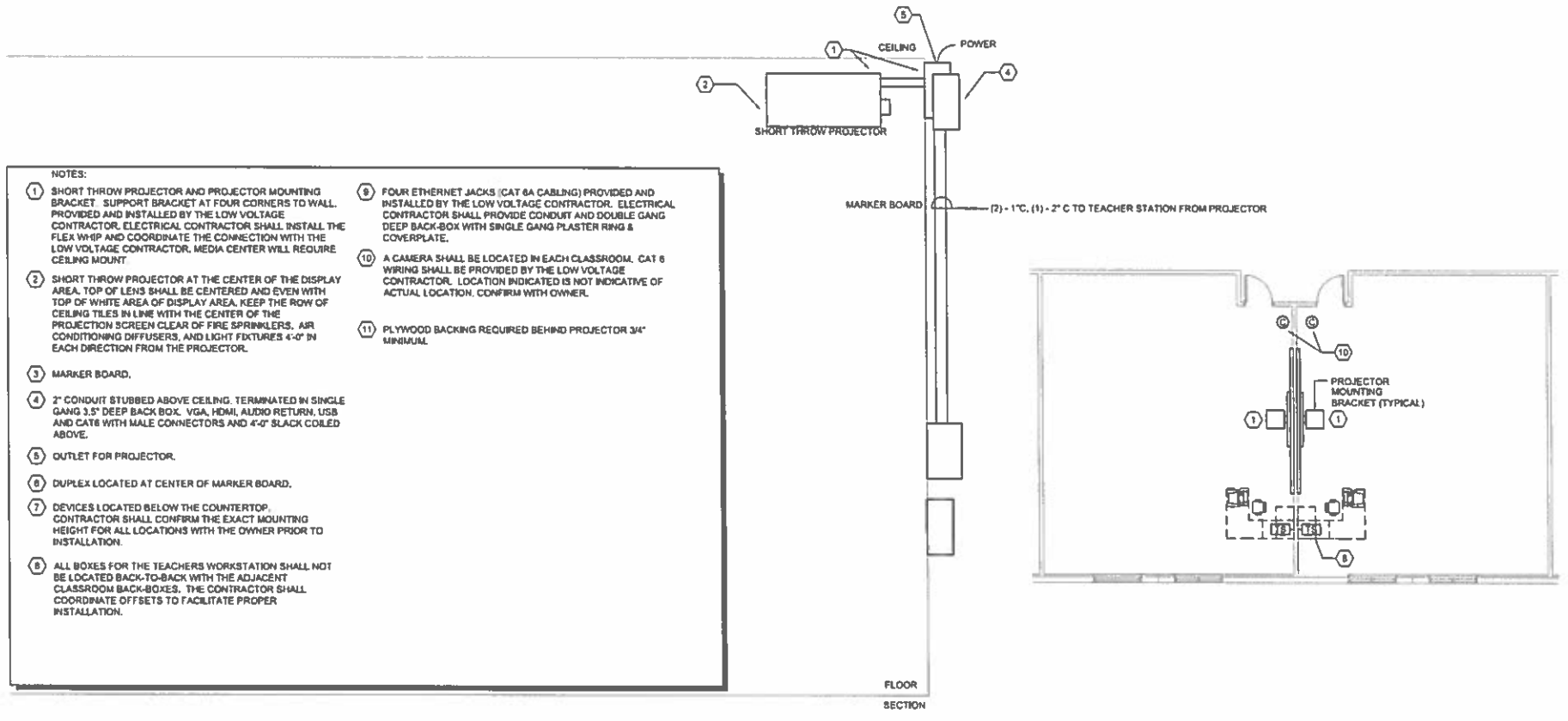
1. THE CONTRACT DOCUMENTS CONSIST OF DRAWINGS, SPECIFICATIONS AND DESIGN INFORMATION PREPARED BY MULTIPLE DISCIPLINES AND MUST BE USED AS A WHOLE AND IN COORDINATION WITH EACH OTHER. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY APPARENT DISCREPANCIES OR OMISSION OF INFORMATION NOT SHOWN ON THE ELECTRICAL DRAWINGS. SHOP DRAWINGS SHALL BE PROVIDED WHERE NECESSARY FOR COORDINATION. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTING ERRORS RESULTING FROM LACK OF COORDINATION OF DOCUMENTS.
2. REFER TO THE ARCHITECTURAL DOCUMENTS FOR ALL APPLICABLE CODES. THE WORK SHALL BE IN ACCORDANCE WITH THE 2008 NATIONAL ELECTRICAL CODE (NFPA 70), THE 2010 FLORIDA BUILDING CODE, 2007 NFPA 72, NFPA-101 2009 FLORIDA SPECIFIC EDITION, FAC. AND ANY OTHER LOCAL JURISDICTIONAL REQUIREMENTS. IN ADDITION, ANY BASE BUILDING OR TENANT GENERAL CONDITIONS SHALL GOVERN ACCEPTABLE MATERIALS AND WORK.
3. THE CONTRACTOR SHALL BRING ANY CONFLICTS OR DISCREPANCIES TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO PROCEEDING WITH WORK.
4. THE CONTRACTOR SHALL FIELD VISIT THE SITE PRIOR TO BID TO FAMILIARIZE HIMSELF WITH THE SCOPE OF WORK.
5. ALL WORK SHALL BE DONE IN A FIRST CLASS WORKMANLIKE MANNER BY A LICENSED ELECTRICAL CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A SAFE, CLEANLY, AND UNOBSTRUCTIVE JOB SITE THAT DOES NOT IMPEDE EGRESS PATHS OR OTHER TENANTS. DISRUPTIONS TO POWER AFFECTING OTHER TENANTS OR AREAS OUTSIDE THE SCOPE OF WORK SHALL BE COORDINATED WITH THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF HIS WORK. WHEN THE WORK IS COMPLETE, ALL ELECTRICAL DEVICES SHALL BE VACUUMED CLEAN. THE FINAL PRODUCT SHALL BE A FULLY FUNCTIONAL SYSTEM MEETING THE INTENT OF THE DRAWINGS/DOCUMENTS. WORKMANSHIP AND ALL MATERIALS AND EQUIPMENT SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR IN WRITING COMMENCING UPON ACCEPTANCE OF INSTALLATION BY OWNER.
6. WITHIN 30 DAYS AFTER THE DATE OF THE SYSTEM ACCEPTANCE, RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER, INCLUDING A SINGLE-LINE DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM AND FLOOR PLANS INDICATING LOCATION AND AREA SERVED FOR ALL DISTRIBUTION. ADDITIONALLY, AN OPERATING MANUAL AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OWNER INCLUDING THE FOLLOWING: SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE INCLUDING CLEARLY IDENTIFIED ROUTINE MAINTENANCE ACTIONS, AND NAMES AND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE AGENCY.
7. UNLESS PROVIDED WITH DIMENSIONS OR NOTED OTHERWISE, ELECTRICAL PLANS ARE STRICTLY DIAGRAMMATIC ONLY. REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, MOUNTING HEIGHTS, ETC. EFFORT HAS BEEN MADE TO PROPERLY ACCOUNT FOR ALL SPACE REQUIREMENTS, CLEARANCES, ETC. BUT SITE CONDITIONS AND PRODUCTS SELECTED MAY VARY AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN PROPER ARRANGEMENTS AND CLEARANCES. DRAWINGS SHALL NOT BE SCALED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PAYING ALL ASSOCIATED FEES, AND DOCUMENTING AND FILING ALL PAPERWORK ASSOCIATED WITH THIS SCOPE OF WORK. WHEN THE WORK IS COMPLETE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CERTIFICATES OF INSPECTION.
9. THE CONTRACTOR IS EXPECTED TO HAVE A FULL FUNCTIONAL KNOWLEDGE OF ELECTRICAL SYSTEMS AND WHETHER INDICATED ON THE DRAWINGS OR NOT SHALL PROVIDE THE CORRECT NUMBER OF WIRES AT NO ADDITIONAL CHARGE, TO FACILITATE PROPER OPERATION OF ALL EQUIPMENT. QUANTITY OF WIRES WILL ONLY BE INDICATED WHERE NECESSARY FOR CLARIFICATION.
10. THE INSTALLATION SHALL BE IN COMPLIANCE WITH THE AMERICAN WITH DISABILITIES ACT (ADA), UNLESS INSTALLED FOR SPECIFIC USES EXEMPT FROM ADA OR IN AREAS NOT NORMALLY ACCESSED BY BUILDING OCCUPANTS.
11. THE ELECTRICAL CONTRACTOR SHALL REFER TO THE MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT. PRIOR TO ORDERING ELECTRICAL EQUIPMENT SERVING MECHANICAL & PLUMBING EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL CONFIRM THE EQUIPMENT BEING ORDERED BY THE HVAC OR PLUMBING CONTRACTORS AND PROVIDE WIRING, CONDUIT, AND OVERCURRENT PROTECTION MEETING THE REQUIREMENTS AT NO ADDITIONAL COST. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING AND COORDINATING WITH THE HVAC CONTRACTOR PROVIDING ANY NECESSARY LINE AND LOW VOLTAGE WIRING. FINAL TERMINATION TO BE MADE BY THE HVAC CONTRACTOR. ALL BREAKERS SUPPLYING HVAC LOADS SHALL BE HACR TYPE.
12. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW (UNLESS NOTED OTHERWISE) AND BEAR THE U.L. LISTING FOR THEIR INTENDED USE. MATCH BUILDING STANDARDS FOR MANUFACTURER AND TYPE OF EQUIPMENT FOR LIGHTS, EXIT SIGNS, FIRE ALARM DEVICES, WIRING DEVICES, AND ELECTRICAL DISTRIBUTION EQUIPMENT. WHERE NO BUILDING STANDARD EXISTS FOR ELECTRICAL EQUIPMENT, EQUIPMENT SHALL BE MANUFACTURED BY G.E., SQUARE-D, EATON CUTLER-HAMMER OR SIEMENS. INSTALL A PLASTIC-LAMINATE SIGN ON EACH NEW UNIT OF ELECTRICAL EQUIPMENT WITH 1/2" ENGRAVED LETTERING FOR IDENTIFICATION. IDENTIFICATION SHALL MATCH CONTRACT DOCUMENTS AND/OR INDICATE SOURCE FED (FOR DISCONNECTS, ETC.).
13. THE FAULT CURRENT RATING OF ALL EQUIPMENT ADDED TO THE ELECTRICAL DISTRIBUTION SHALL MEET THE AVAILABLE FAULT CURRENT. EQUIPMENT ADDED TO THE EMERGENCY SYSTEM SHALL BE SELECTIVELY COORDINATED. EQUIPMENT SHALL BE FULLY RATED UNLESS NOTED OTHERWISE.
14. THE CONTRACTOR SHALL GIVE PERMISSION FOR THE AHJ, ENGINEER, ARCHITECT, INSPECTOR, ETC. TO PERFORM TESTS OF THE ELECTRICAL SYSTEM AS REQUIRED.
15. SWITCH OUTLETS SHALL NOT BE OBSTRUCTED BY DOORSWINGS AND OCCUPANCY SENSORS SHALL HAVE FULL VIEW OF THE INTENDED SPACE.
16. SWITCH AND RECEPTACLES INDICATED IN THE SAME LOCATION SHALL BE MOUNTED UNDER A COMMON COVERPLATE UNLESS OTHERWISE NOTED.
17. EVEN IF THE PLANS INDICATE, OUTLETS SHALL NOT BE INSTALLED PRECISELY BACK TO BACK ON COMMON WALLS. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING METHODS AND LOCATIONS.
18. JUNCTION AND PULL BOXES ARE ONLY INDICATED WHERE REQUIRED FOR LARGE SCALE COORDINATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING JUNCTION AND PULL BOXES AS REQUIRED BY THE CODE AND PER A STANDARD INSTALLATION, AND SHALL INCLUDE THIS IN THEIR BID. BOXES SHALL BE STEEL AND INCLUDE EARS INSIDE TO ATTACH DEVICE COVERS. OUTLET BOXES SHALL BE FOUR INCH SQUARE DEEP TYPE. OUTLET BOXES FOR 120V OR HIGHER CIRCUITS SHALL INCLUDE A #12 AWG SOLID COPPER PIGTAIL. OUTLET BOXES LOCATED OUTDOOR OR EXPOSED TO WET CONDITIONS SHALL INCLUDE GASKETED COVERS. THE MAXIMUM GAP AROUND BOXES SHALL BE 1/8" OR SMALLER ON ALL EDGES. JUNCTION BOXES SHALL BE COLOR CODED WITH PAINT TO INDICATE THEIR USE AS FOLLOWS: NORMAL POWER - BLACK, STANDBY POWER - ORANGE, FIRE ALARM - RED, TELEPHONE/DATA - YELLOW, HVAC CONTROLS - BLUE.
19. CONDUCTORS SHALL BE LOOPED AROUND SCREW POSTS SO THAT ROTATION OF THE SCREW TENDS TO FURTHER WRAP THE CONNECTION. SCREW TERMINALS SHALL BE WRAPPED IN ELECTRICAL TAPE, AT LEAST 8" OF FREE CONDUCTOR SHALL BE LEFT AT EACH J-BOX, OUTLET AND SWITCH BACK-BOX, ETC FOR FUTURE SPLICING.
20. THE CONTRACTOR SHALL MAINTAIN THE FIRE RATING OF ALL FIRE-RATED PARTITIONS. IF A DEVICE WILL VOID THE FIRE RATING OF A WALL, IT SHALL BE INSTALLED IN AN ALTERNATE LOCATION PER THE ARCHITECT OR ENGINEER'S DIRECTION. ALL VOIDS AROUND CONDUITS AND/OR CORE DRILLS PENETRATING FIRE RATED PARTITIONS SHALL BE FILLED WITH FIRE-SAFING MATERIAL OR UL APPROVED FIRE RATING DEVICE. THE FIRE RATING OF A PARTITION SHALL NEVER BE COMPROMISED.
21. THE CONTRACTOR SHALL MAINTAIN THE INSULATION RATING AND VAPOR BARRIERS ON ALL PERIMETER WALLS. IF A DEVICE WILL DAMAGE OR COMPROMISE THE VAPOR BARRIER OR INSULATION, IT SHALL BE INSTALLED IN AN ALTERNATE LOCATION PER THE ARCHITECT OR ENGINEER'S DIRECTION.
22. ALL EQUIPMENT REQUIRING ACCESS SUCH AS J-BOXES, PULL BOXES, TRANSFORMERS, DRIVERS, ETC. SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS. EXISTING ELECTRICAL DEVICES WHICH ARE LOCATED BEHIND INACCESSIBLE LOCATIONS DUE TO THE RENOVATION SHALL BE REROUTED AND MADE ACCESSIBLE.
23. CONDUITS AND/OR MATERIALS LOCATED IN ENVIRONMENTAL AIR PLENUMS SHALL BE PROPERLY LISTED FOR THE APPLICATION. INTERIOR CONCEALED RACEWAYS MAY BE AC OR MC CABLE IF ALLOWED BY THE AHJ. EXPOSED RACEWAYS, INCLUDING RACEWAYS EXPOSED IN THE BACK OF HOUSE SHALL BE GALVANIZED STEEL OR ALUMINUM EMT MOTOR CONNECTIONS SHALL BE FLEXIBLE METAL CONDUIT FOR INTERIOR APPLICATIONS AND LIQUID TIGHT FLEX FOR EXTERIOR APPLICATIONS. ALL OTHER EXTERIOR CONDUITS SHALL BE GALVANIZED STEEL, ALUMINUM EMT OR RIGID STEEL IF EXPOSED TO STRIKING. EXTERIOR CONDUITS SHALL UTILIZE COMPRESSION CONNECTORS. ACMC CABLE SHALL NOT TERMINATE AT PANELBOARDS. A GUTTER OUTSIDE THE ELECTRICAL CLOSET SHALL BE PROVIDED WITH CONDUIT FROM THE GUTTER TO THE PANELBOARD.
24. CABLE AND CONDUIT ROUTING SHALL BE DONE IN A NEAT AND ORDERLY FASHION. LINES SHALL BE RUN PARALLEL TO ALL BUILDING FEATURES, AND SHALL BE GROUPED TOGETHER TO CREATE AN AESTHETICALLY PLEASING AND EASY TO FOLLOW ROUTE. CABLES SHALL BE PERMITTED TO BE BUNDLED BUT SHALL NOT EXCEED TEN IN QUANTITY. ROUTING SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICT.
25. CONDUITS SHALL BE RIGIDLY SUPPORTED TO THE BUILDING STRUCTURE. AC AND MC CABLES SHALL BE SUPPORTED WITHIN 12" OF EVERY BOX, FITTING, ETC. AND SUPPORT SPACINGS SHALL NOT EXCEED 6' INTERVALS. RIGID CONDUIT SUPPORT SPACINGS SHALL NOT EXCEED 10'-0" FOR VERTICAL RUNS AND 8'-0" FOR HORIZONTAL RUNS, HOWEVER ALL SUPPORT SPACINGS FOR ALL CONDUIT TYPES SHALL BE IN ACCORDANCE WITH THE NEC REGARDLESS OF WHAT IS STATED HERE. COUPLINGS AND FITTINGS SHALL BE STEEL WITH COMPRESSION OR SET STEEL SCREW CONNECTIONS. THERE SHALL NOT BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL) BETWEEN PULL POINTS FOR POWER (120V OR HIGHER) CIRCUITS AND NOT MORE THAN THE EQUIVALENT OF TWO QUARTER BENDS (180 DEGREES TOTAL) BETWEEN PULL FOR LOW VOLTAGE (TELEPHONE, DATA, ETC) CIRCUITS. LOW VOLTAGE CONDUIT RUNS SHALL ALSO NOT EXCEED 100' BETWEEN PULL POINTS. ALL CONDUITS SHALL BE TERMINATED WITH INSULATED THROAT CONNECTORS FOR CONDUITS 1" AND SMALLER, AND WITH INSULATED BUSHINGS AND LOCKNUTS FOR CONDUITS OVER 1". EMPTY CONDUIT RUNS EXCEEDING 10' SHALL BE PROVIDED WITH PULL WIRES SECURELY FASTENED AT BOTH ENDS. EXPANSION FITTINGS SHALL BE PROVIDED AT ALL BUILDING EXPANSION JOINTS OR WHERE NEEDED TO ALLOW FOR THERMAL EXPANSION.
26. CONDUIT SIZES INDICATED IN PANEL SCHEDULES AND ON THE SINGLE LINE ARE BASED ON TYPE THWN IN EMT. AS OTHER TYPES OF CONDUIT AND CONDUCTORS ARE PERMISSIBLE IN THIS PROJECT, THE CONTRACTOR SHALL ADJUST THE DIMENSION OF THE CONDUIT TO COMPLY WITH CHAPTER 9, TABLE 1 IN THE NEC. ADJUSTMENTS TO THE CONDUIT SIZE SHALL BE PART OF THE BID AND SHALL BE AT NO ADDITIONAL EXPENSE TO THE OWNER.
27. PROVIDE A 3/4" CONDUIT WITH PULLSTRING FOR ALL TELEPHONE AND DATA OUTLETS LOCATED IN INSULATED AND LOW HEIGHT WALLS, TERMINATED ABOVE THE ACCESSIBLE CEILING. GROMMETS SHALL BE PROVIDED AT THE END OF THE CONDUIT AT THE CEILING SPACE. OUTLETS LOCATED IN NON-INSULATED WALLS WILL REQUIRE PULLSTRING ONLY

ELECTRICAL NOTES

25. WIRE SIZES INDICATED ARE BASED UPON DIRECT ORTHOGONAL PATHS TO THE PANELBOARD. FEEDERS ARE SIZED FOR A MAXIMUM OF 2% VOLTAGE DROP, AND BRANCH CIRCUITS ARE DESIGNED FOR A MAXIMUM OF 3% VOLTAGE DROP. IF FIELD CONDITIONS DO NOT ALLOW THESE PATHS OR IF THE CONTRACTOR RUNS ADDITIONAL LENGTHS, THEY SHALL BE RESPONSIBLE FOR INCREASING WIRE SIZE TO ACCOUNT FOR VOLTAGE DROP AT NO ADDITIONAL COST. 20 AMP 120 VOLT HOMERUNS EXCEEDING 87' SHALL BE A MINIMUM OF #10 AWG. 20 AMP 277 VOLT HOMERUNS EXCEEDING 151' SHALL BE A MINIMUM OF #10 AWG. WIRING SMALLER THAN #12 AWG SHALL NOT BE USED.
26. THE CONTRACTOR SHALL CIRCUIT PANELBOARDS EXACTLY AS INDICATED IN THE PANEL SCHEDULES. IF ANY DEVIATIONS ARE NECESSARY, THE ENGINEER SHALL BE NOTIFIED. TYPED DIRECTORY CARDS SHALL BE PROVIDED AT EACH PANELBOARD INDICATING LOAD SERVED AND FINAL ROOM NUMBERS PER THE NEC. WHEN EXISTING DIRECTORIES ARE REPLACED FOR RENOVATION WORK, EXISTING LOAD INFORMATION SHALL BE DIRECTLY TRANSFERRED TO THE NEW DIRECTORY CARDS.
27. NEUTRAL CONDUCTORS SHALL ONLY BE SHARED WHEN INDICATED ON THE DRAWINGS. WHERE NEUTRALS ARE INDICATED TO BE SHARED, THE NEUTRAL SHALL BE A MINIMUM OF #10 AWG.
28. THE CONTRACTOR SHALL REMOVE ALL UNUSED AND ABANDONED WIRING AND CABLING FROM THE CEILING PLENUM THAT ISN'T LABELED FOR FUTURE USE, AS REQUIRED BY THE NEC. THIS SHALL INCLUDE BUT IS NOT LIMITED TO FIRE ALARM, POWER, SECURITY, CONTROLS, DATA, TELEPHONE, A/V, ETC.
29. ALL BRANCH CIRCUIT CONDUCTORS AND FEEDER CIRCUITS 100A OR SMALLER SHALL BE COPPER. FEEDER CIRCUITS SERVING LOADS LARGER THAN 100A MAY BE EITHER COPPER OR ALUMINUM, HOWEVER THE DESIGN IS BASED AROUND COPPER AND THE CONTRACTOR WILL BE RESPONSIBLE FOR ACCOUNTING FOR INCREASED WIRE SIZE, CONDUIT SIZE, AND SPACE TAKEN BY THE LARGER CONDUIT IF ALUMINUM IS USED. HOWEVER, BRANCH CIRCUITS FEEDING MOTORS SHALL ALWAYS BE COPPER REGARDLESS. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID, AND CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED. CONDUCTORS SHALL BE CODE TYPE THW, THHN, THWN, OR XHHW UNLESS OTHERWISE REQUIRED BY THE NEC. CONDUCTORS SHALL BE MARKED WITH INSULATION CODE, VOLTAGE RATING, AWG SIZE, AND MANUFACTURER AND INCLUDE A CONTINUOUS COLOR CODING FOR ALL CONDUCTORS. WHERE CONTINUOUS MARKINGS ARE NOT AVAILABLE, USE COLOR CODED TAPE AT EACH TERMINATION. #8 AWG AND SMALLER CONDUCTORS SHALL BE SPLICED WITH SPRING CONNECTORS. #6 AWG AND LARGER SHALL BE SPLICED WITH BARREL CONNECTORS REQUIRING COMPRESSION ON EACH END.
30. ALL EMERGENCY EGRESS, STANDBY LIGHTING, AND EXIT LIGHTING SHALL HAVE A BATTERY BALLAST WITH RUN TIME MEETING OR EXCEEDING 90 MINUTES. THE BATTERY BALLAST SHALL NOT BE CAPABLE OF BEING DISCONNECTED, REGARDLESS OF MODEL NUMBER SPECIFIED. LIGHT FIXTURES SPECIFIED WITH BACKUP BATTERY BALLASTS SHALL HAVE THE TEST BUTTON INTEGRALLY MOUNTED WHERE POSSIBLE. WHERE FIXTURES ARE NOT AVAILABLE WITH INTEGRALLY MOUNTED TEST BUTTONS, THE TEST BUTTONS SHALL BE LOCATED IN A DISCRETE LOCATION AS DETERMINED BY THE ARCHITECT, UP TO 50' AWAY FROM THE FIXTURE.
31. THE CONTRACTOR SHALL PROVIDE THE PROPER FIXTURE TYPE FOR THE CEILING OR WALL TYPE WHICH THE FIXTURE IS TO BE INSTALLED IN INCLUDING TRIM, MOUNTING ACCESSORIES ETC. REGARDLESS OF THE MODEL NUMBERS IN THE LIGHT FIXTURE SCHEDULE. THE CORRECT MOUNTING TYPE SHALL BE PROVIDED. THE CONTRACTOR SHALL REFER TO INTERIOR DESIGNER, ARCHITECTURAL, LANDSCAPE, OR OTHER CONSULTANT PLANS FOR ADDITIONAL INFORMATION AND REQUIREMENTS; WHERE THERE IS A DISCREPANCY BETWEEN ELECTRICAL PLANS AND OTHER CONSULTANT PLANS, THE OTHER CONSULTANT PLANS SHALL TAKE PRIORITY EXCEPT FOR VOLTAGE AND WATTAGE OF FIXTURES. FIXTURE TYPES IN THE LIGHT FIXTURE SCHEDULE ARE TO ESTABLISH A TYPE, NOT A METHOD OF MOUNTING. FLUORESCENT FIXTURES THAT UTILIZE DOUBLE-ENDED LAMPS AND CONTAIN BALLASTS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS, UNLESS THE FIXTURE IS USED FOR EMERGENCY LIGHTING. ALL BALLASTS SHALL BE ELECTRONIC, LESS THAN 20% THD, CREST FACTOR OF 1.7 FOR FLUORESCENTS AND 1.8 FOR METAL HALIDE, HIGH POWER FACTOR, AND RATED FOR THE TYPE OF LAMP IT OPERATES. MANUFACTURERS SHALL BE GE, ADVANCE, MAGNETEK, MOTOROLA, LUTRON OR OTHER APPROVED EQUAL. LIGHT FIXTURES, BALLASTS, TRANSFORMERS, DRIVERS, ETC. LOCATED IN A WET OR DAMP LOCATION SHALL BE LISTED FOR SAID USE. LIGHT FIXTURES INSTALLED IN AREAS HAVING EXPOSED FOOD OR FOOD PREPARATION AREAS OR KITCHENS SHALL BE PROPERLY LENSED AND HAVE SHATTER PROOF LAMPS.
32. ALL LIGHT FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURAL SYSTEM BY SUPPORT WIRES, INDEPENDENT OF CEILING GRID SYSTEMS. TROFFER TYPE FIXTURES SHALL BE SUPPORTED BY WIRES AT ALL FOUR CORNERS. RECESSED DOWNLIGHTS SHALL BE SUPPORTED VIA HANGER BARS SUPPORTED BY WIRES AT ALL FOUR CORNERS. SUPPORT MEANS SHALL BE IN ACCORDANCE WITH LOCAL SEISMIC REQUIREMENTS.
33. THE EQUIPMENT GROUNDING SYSTEM SHALL CONSIST OF AN ELECTRICALLY CONTINUOUS METALLIC CONDUIT SYSTEM TOGETHER WITH INSULATED EQUIPMENT GROUNDING CONDUCTORS. EVERY ITEM SERVED BY THE ELECTRICAL SYSTEM SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250. THIS SHALL INCLUDE RACEWAYS, JUNCTION/OUTLET BOXES, MACHINE FRAMES, ETC. ALL BRANCH CIRCUITS AND FEEDERS SHALL HAVE A CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR OR GROUND ELECTRODE SIZED IN ACCORDANCE WITH THE NEC. PROVIDE BONDING JUMPERS FOR ALL NON-CURRENT CARRYING CONDUCTORS OF DIFFERENT SYSTEMS TO ENSURE NO VOLTAGE POTENTIAL. METAL GAS PIPING SHALL ONLY BE GROUNDED AT EQUIPMENT HOUSING BOTH ELECTRICAL CIRCUITS AND UTILIZING GAS VIA THE EQUIPMENT GROUND ROUTED WITH THE CIRCUIT. ALL GROUND WIRES SHALL BE COPPER.
34. SUBMITTALS SHALL BE SUBMITTED ELECTRONICALLY IN PDF FORMAT. THE CONTRACTOR SHALL ALLOW FOR A TOTAL OF 10 BUSINESS DAYS FOR REVIEW BY THE ENGINEER. SUBMITTALS SHALL INCLUDE PANELBOARDS, TRANSFORMERS, DISCONNECTS, WIRING DEVICES, UPS'S, LIGHT FIXTURES, TVSS, AND FIRE ALARM SYSTEM. SUBMITTALS SHALL ONLY INCLUDE DATA RELEVANT TO THIS PROJECT. DATA SHEETS INDICATING SEVERAL PRODUCTS SHALL HAVE THE RELEVANT PRODUCTS HIGHLITED OR CLEARLY IDENTIFIED. SIMILAR EQUIPMENT SHALL BE SUBMITTED IN ONE COMPLETE SUBMITTAL PACKAGE (I.E. ALL PANELBOARDS, ALL LIGHTING FIXTURES, ETC.).
35. PROVIDE PAD LOCKING HARDWARE ON CIRCUIT BREAKERS FOR EQUIPMENT WHICH IS HARDWIRED WITHOUT A LOCAL DISCONNECTING MEANS THAT ARE NOT WITHIN SIGHT OF THE PANELBOARD.
36. PROVIDE RECEPTACLES SIMILAR TO PASS & SEYMOUR #CR20 SERIES AND LIGHT SWITCHES SIMILAR TO PASS & SEYMOUR #20AC1 SERIES. COVER PLATES SHALL BE AS SPECIFIED BY THE ARCHITECT OR BRUSHED STAINLESS STEEL. CONFIRM ALL DEVICE COLORS WITH THE ARCHITECT.
37. DUPLEX OUTLETS SHALL BE NEMA 5-20R WHEN THEY ARE THE ONLY LOAD ON A CIRCUIT.
38. WALL MOUNTED OCCUPANCY SENSORS SHALL BE PASSIVE INFRARED, MANUAL-ON, AUTO-OFF SIMILAR TO WATT STOPPER PW-100-W. CEILING MOUNTED OCCUPANCY SENSORS FOR CORRIDORS SHALL BE LONG RANGE PASSIVE INFRARED SIMILAR TO WATT STOPPER CX-100-1. CEILING MOUNTED OCCUPANCY SENSORS FOR CONFERENCE ROOMS, LOBBIES, AND OTHER SIMILAR AREAS SHALL BE DUAL TECHNOLOGY PASSIVE INFRARED AND ULTRASONIC SIMILAR TO WATT STOPPER DT-300. DEVICES SHALL BE MOUNTED SUCH THAT THE SENSORS HAVE FULL COVERAGE OF THE INTENDED AREAS AND PER THE MANUFACTURERS RECOMMENDATIONS. PROVIDE ALL ACCESSORIES NECESSARY FOR A FULLY FUNCTIONING SYSTEM, INCLUDING POWER PACKS, CONTROL AND POWER WIRING, BACKBOXES, ETC. POWER PACKS FOR CEILING MOUNTED SENSORS SHALL BE PROVIDED, SIMILAR TO WATT STOPPER BZ-150. SENSORS SHALL BE WATT STOPPER, HUBBELL, COOPER, OR LUTRON OR APPROVED EQUAL PROVIDED IT IS EQUIVALENT OR EXCEEDS THE REQUIREMENTS LISTED HEREIN. THE CONTRACTOR SHALL FULLY COMMISSION THE OCCUPANCY SENSORS SYSTEM TO CONFIRM IT IS FUNCTIONING AS INTENDED.
39. TRANSFORMERS SHALL BE DRY TYPE, 60 HERTZ, 480V 3 PHASE DELTA TO 120/208V 3 PHASE, 4 WIRE GROUNDED WYE. TEMPERATURE CLASSIFICATION SYSTEM SHALL BE A MINIMUM OF 155°C INSULATION SYSTEM, WINDING TEMPERATURE RISE SHALL NOT EXCEED 150°C IN A 40°C AMBIENT. TRANSFORMERS SHALL HAVE FOUR 2-1/2% FULL LOAD TAPS BELOW RATED VOLTAGE AND TWO 2-1/2% FULL LOAD TAPS ABOVE RATED VOLTAGE. INTERNAL VIBRATION ISOLATION MOUNTS SHALL BE PROVIDED.
40. PANELBOARDS SHALL HAVE COPPER FULL SIZE PHASE BUSSES, NEUTRAL BUSSES, AND BOLTED ON COPPER GROUNDING BUS WITH MAIN LUGS. BUS BAR CONNECTIONS SHALL BE COLUMN CONSECUTIVE PHASE-SEQUENCE TYPE. BUS BARS SHALL BE DRILLED AND EQUIPPED FOR BOLT-ON MOLDED CASE CIRCUIT BREAKERS. SHORT CIRCUIT BRACING AND BREAKER INTERRUPTING CAPACITY SHALL BE AS INDICATED ON THE PANEL SCHEDULES, BUT SHALL NOT BE BELOW 10,000 A.I.C. FOR 120/208V PANELS AND 14,000 A.I.C. FOR 277/480V PANELS. PANEL CONSTRUCTION SHALL BE HINGED DOOR IN DOOR COVERS WITH MASTER-KEYED DOOR LOCKS. GALVANIZED SHEET STEEL CABINETS WITH MULTIPLE KNOCKOUTS, WIRING GUTTERS, AND SPACE FOR A TYPED CIRCUIT DIRECTORY. MAIN BREAKERS OR MAIN LUGS ONLY SHALL BE PROVIDED AS INDICATED IN THE PANEL SCHEDULES. PANELS SHALL BE PROVIDED WITH FEED THRU LUGS UNLESS OTHERWISE NOTED.
41. TVSS SHALL BE INSTALLED IN EACH MAIN DISTRIBUTION PANEL. EACH MODE SHALL BE INDIVIDUALLY FUSED. PROVIDE A LOAD SIDE CIRCUIT BREAKER TO DISCONNECT THE TVSS IN THE EVENT OF FAILURE. THE TVSS SHALL PROVIDE 500 kA PER PHASE; THE PEAK SURGE CURRENT RATING SHALL BE THE ARITHMETIC SUM OF THE RATINGS OF THE INDIVIDUAL MOVS IN A GIVEN MODE. PHYSICAL WIRING LENGTH SHALL NOT EXCEED 6" FROM THE PROTECTED BUS TO THE TVSS.
42. MOLDED CASE CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC AND AMBIENT COMPENSATED INVERSE TIME-DELAY OVERLOAD AND INSTANTANEOUS SHORT CIRCUIT PROTECTED, FULL SIZE, BOLT-ON, WITH A QUICK-MAKE, QUICK-BREAK OVER-CENTER SWITCHING MECHANISM THAT IS MECHANICALLY TRIP-FREE FROM THE HANDLE SUCH THAT THE CONTACTS CAN NOT BE CLOSED AGAINST SHORT CIRCUITS. CONTACTS SHALL BE NON-WELDING SILVER ALLOY. TRIPPING DUE TO OVERLOAD OR SHORT CIRCUIT SHALL BE INDICATED BY THE BREAKER RESTING AT A MID POINT BETWEEN THE ON AND OFF POSITIONS. AMPERE AND FAULT CURRENT RATINGS SHALL BE CLEARLY VISIBLE. BREAKERS SHALL BE LISTED FOR USE WITH 75°C AND 90°C CONDUCTORS. MULTI-POLE BREAKERS SHALL BE OF THE COMMON TRIP TYPE HAVING A SINGLE HANDLE. WHERE NEUTRALS ARE SHARED AMONG CIRCUITS, THE CONTRACTOR SHALL PROVIDE MULTI-POLE BREAKERS TO SIMULTANEOUSLY DISCONNECT ALL CIRCUITS IN THE EVENT OF ONE TRIPPING; IN THIS CASE SINGLE POLE BREAKERS MAY BE CONNECTED BY A COMMON TRIP HANDLE.
43. MOLDED CASE CIRCUIT BREAKERS INDICATED FOR SHUNT TRIP SHALL BE 60 HERTZ, FACTORY INSTALLED, AND HAVE A 120 VOLT COIL CIRCUITED FROM A 120/208V PANEL PROVIDED BY THE CONTRACTOR. SHUNT TRIP BREAKERS SHALL TAKE ONE POLE SPACE IN PANELBOARDS AND MAY BE EITHER LEFT OR RIGHT MOUNTED. THE SHUNT TRIP ACTIVATION DEVICE SHALL BE A MOMENTARY CLOSE CONTACT TYPE.
44. ALL FUSES SHALL BE DUAL-ELEMENT LOW PEAK CLASS RK1 AS MANUFACTURED BY BUSSMAN OR LITTLE FUSE. FUSE VOLTAGE RATING SHALL BE 250 VOLT FOR 120/208 VOLT SYSTEM AND 600 VOLT FOR 277/480 VOLT SYSTEM.
45. DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, HIGH IST RATED, APPROVED FOR SERVICE ENTRANCE APPLICATIONS. DISCONNECT SWITCHES SPECIFIED FOR 208 VOLT CIRCUITS SHALL BE RATED AT 240 VOLT AND DISCONNECT SWITCHES SPECIFIED AT 480 VOLT SHALL BE RATED AT 600 VOLT. ALL DISCONNECTS SHALL BE QUICK-MAKE, QUICK-BREAK TYPE AND HAVE PROVISIONS FOR ACCOMMODATING R TYPE FUSES. SWITCHES IN EXTERIOR LOCATIONS SHALL BE NEMA TYPE 4X, AND INDOOR SWITCHES EXPOSED TO WET OR DAMP CONDITIONS SHALL BE NEMA TYPE 3R. SWITCHES SHALL HAVE PROVISIONS FOR PADLOCKING. SWITCHES SHALL BE PREVENTED FROM OPENING WHILE SWITCH IS ON. FUSED DISCONNECTS SHALL BE PROVIDED WHEN REQUIRED BY THE MANUFACTURER OR BY THE LOCAL INSPECTING AUTHORITY.
46. PROVIDE A 15A 120 VOLT CIRCUITS FOR ALL SMOKE AND COMBINATION FIRE/SMOKE DAMPERS AND ASSOCIATED SMOKE DETECTOR FOR ALL SMOKE DAMPERS AS SHOWN AND REQUIRED ON THE MECHANICAL DRAWINGS, UPON ACTIVATION, SMOKE DETECTOR SHALL SIGNAL FOR DAMPER TO CLOSE. SYSTEM SHALL BE TIED INTO THE BUILDING FIRE ALARM SYSTEM.

ELECTRICAL NOTES

43. SMOKE DETECTORS IN COMPUTER ROOM AC UNITS SHALL BE TIED INTO THE BUILDING FIRE ALARM SYSTEM.
44. PROVIDE PHOTOELECTRIC TWIST IN TYPE SMOKE DETECTORS WITH ACCESS DOORS IN ALL FANS AND AHU'S SERVING A COMMON PLENUM OF 2000 CFM OR ABOVE. ALL SMOKE DETECTORS SHALL BE BY ONE MANUFACTURER, AND SHALL COMPLY WITH UL 268A. LOCATE THE SMOKE DETECTORS IN THE SUPPLY AIR DUCT FOR INSTALLATIONS IN COMPLIANCE WITH THE FLORIDA BUILDING CODE. THE DETECTORS SHALL BE PROVI



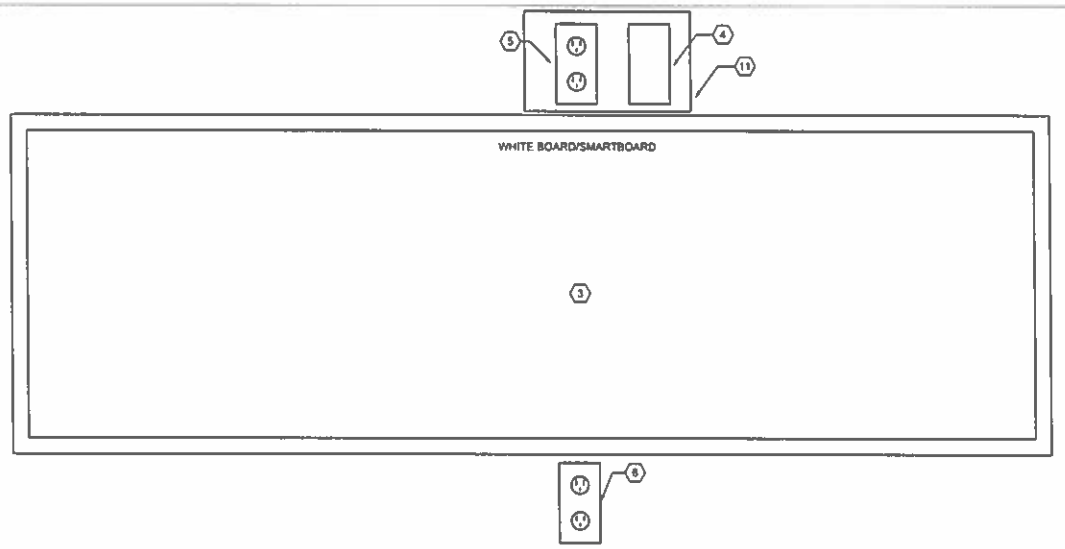
NOTES:

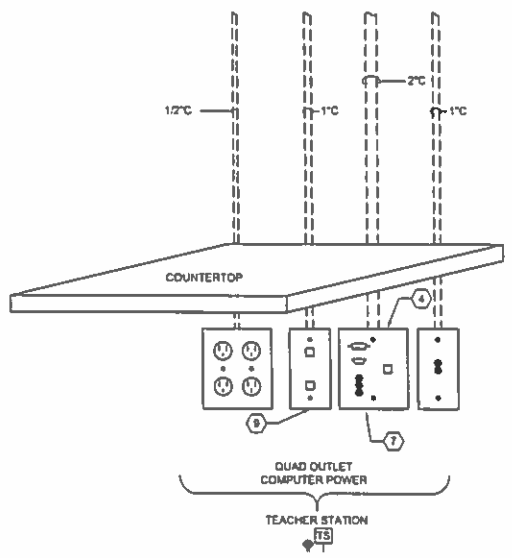
1. SHORT THROW PROJECTOR AND PROJECTOR MOUNTING BRACKET. SUPPORT BRACKET AT FOUR CORNERS TO WALL. PROVIDED AND INSTALLED BY THE LOW VOLTAGE CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL THE FLEX WHIP AND COORDINATE THE CONNECTION WITH THE LOW VOLTAGE CONTRACTOR. MEDIA CENTER WILL REQUIRE CEILING MOUNT.
2. SHORT THROW PROJECTOR AT THE CENTER OF THE DISPLAY AREA. TOP OF LENS SHALL BE CENTERED AND EVEN WITH TOP OF WHITE AREA OF DISPLAY AREA. KEEP THE ROW OF CEILING TILES IN LINE WITH THE CENTER OF THE PROJECTION SCREEN CLEAR OF FIRE SPRINKLERS. AIR CONDITIONING DIFFUSERS, AND LIGHT FIXTURES 4'-0" IN EACH DIRECTION FROM THE PROJECTOR.
3. MARKER BOARD.
4. 2" CONDUIT STUBBED ABOVE CEILING. TERMINATED IN SINGLE GANG 3.5" DEEP BACK BOX. VGA, HDMI, AUDIO RETURN, USB AND CAT6 WITH MALE CONNECTORS AND 4'-0" SLACK COILED ABOVE.
5. OUTLET FOR PROJECTOR.
6. DUPLEX LOCATED AT CENTER OF MARKER BOARD.
7. DEVICES LOCATED BELOW THE COUNTERTOP. CONTRACTOR SHALL CONFIRM THE EXACT MOUNTING HEIGHT FOR ALL LOCATIONS WITH THE OWNER PRIOR TO INSTALLATION.
8. ALL BOXES FOR THE TEACHERS WORKSTATION SHALL NOT BE LOCATED BACK-TO-BACK WITH THE ADJACENT CLASSROOM BACK-BOXES. THE CONTRACTOR SHALL COORDINATE OFFSETS TO FACILITATE PROPER INSTALLATION.
9. FOUR ETHERNET JACKS (CAT 6A CABLING) PROVIDED AND INSTALLED BY THE LOW VOLTAGE CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT AND DOUBLE GANG DEEP BACK-BOX WITH SINGLE GANG PLASTER RING & COVERPLATE.
10. A CAMERA SHALL BE LOCATED IN EACH CLASSROOM. CAT 6 WIRING SHALL BE PROVIDED BY THE LOW VOLTAGE CONTRACTOR. LOCATION INDICATED IS NOT INDICATIVE OF ACTUAL LOCATION. CONFIRM WITH OWNER.
11. PLYWOOD BACKING REQUIRED BEHIND PROJECTOR 3/4" MINIMUM.

1 TYPICAL CLASSROOM WIRING PLAN

THE COMPONENTS OF THIS DETAIL APPLY TO ALL LOCATIONS WHERE AN AV STATION IS INDICATED. CONDITIONS MAY VARY SLIGHTLY IN ROOMS THAT ARE NOT TYPICAL CLASSROOMS. SEE PLANS FOR NOTES REQUIRING MODIFICATIONS.

SCALE: NONE





ELEVATION

SYSTEMS GENERAL NOTES

1. SMART BOARD:
   - 1.1. EVERY CLASSROOM, SPECIALTY ROOM, CONFERENCE ROOM, AND MULTIPURPOSE ROOM WILL RECEIVE A SMART BOARD FURNISHED BY OWNER.
   - 1.2. EACH LOCATION WILL REQUIRE A CAT 6 CABLE, TERMINATED IN A FACE PLATE, LOCATED AS INDICATED ON THE DRAWINGS. CABLE AND FACE PLATES SHALL BE LABELED WITH ROOM NUMBER.
   - 1.3. PATCH PANELS AND CABLES SHALL BE ELECTRONICALLY LABELED WITH ROOM NUMBER FOR FUTURE USE.
   - 1.4. DOCUMENT PACKAGE WILL BE REQUIRED AND SHALL INCLUDE FLOOR PLANS, CABLE SCHEDULE, LABELED LOCATIONS AND TEST RESULTS.
2. SECURITY SYSTEM.
   - 2.1. PROVIDE (1) CONTROL PANEL WITH KEYPAD THAT HAS CAPACITY FOR EXTENDED ZONE MODULES AND CAPABILITY TO BYPASS ZONES OR UTILIZE TIME DELAY.
   - 2.2. PROVIDE DOOR CONTACTS AT EXTERIOR DOORS.
   - 2.3. PROVIDE MOTION DETECTORS IN FIRST FLOOR CORRIDORS TO MONITOR WINDOW ACCESS.
   - 2.4. PROVIDE COMPLETE ALARM SYSTEM PACKAGE WITH TRAINING, SUPPORT AND MONTHLY MONITORING PROPOSAL.
   - 2.5. DETEX EAX-500 ALARM SYSTEM TO BE INSTALLED ON ALL EXTERIOR DOORS WITH THE EXCEPTION OF MAIN FRONT DOORS.
   - 2.6. MAIN EXTERIOR DOOR TO HAVE CAMERA/SPEAKER TALK SYSTEM THAT ALLOWS ADMINISTRATION TO COMMUNICATE WITH VISITORS.
3. CCTV.
   - 3.1. PROVIDE A COMPLETE SYSTEM WITH CAMERA HARDWARE, WIRING, MONITOR AND INSTALLED SOFTWARE. TRAINING WILL BE REQUIRED. EQUAL TO HONEYWELL FUSION DVR SERIES.
   - 3.2. CAMERAS SHALL BE COLOR, MOTION ACTIVATED WITH REMOTE VIEWING AND A MONITOR PROVIDED IN THE LT. AREA. CAMERA SHALL ALSO HAVE ZOOM AND PAN FEATURES WITH A MODERATE TO HIGH RESOLUTION TO BE ABLE TO VIEW FACIAL FEATURES ON VIDEO.
   - 3.3. PROVIDE (14) DAY STORAGE CAPABILITY WITH AUTOMATIC ROLLOVER.
   - 3.4. CAMERAS SHALL BE CEILING MOUNTED AND SHALL COVER ALL EXIT/ENTRANCES, STAIRWELLS, CORRIDORS, MULTIPURPOSE ROOM AND EXTERIOR PLAY/GATHERING AREAS.
   - 3.5. DEDICATED MONITOR TO BE PROVIDED AND LOCATED IN ADMINISTRATION AREA. COORDINATE WITH OWNER.
4. PAGING SYSTEM.
   - 4.1. PAGING SYSTEM SHALL CONNECT THE ADMINISTRATION AREA WITH ALL STUDENT OCCUPIED AREAS.
   - 4.2. ALL CALL PAGING MAY UTILIZE A SEPARATE SYSTEM WITH INDIVIDUALLY WIRED CEILING SPEAKERS.
   - 4.3. SPEAKERS ARE REQUIRED IN ALL CLASSROOMS, GROUPED RESTROOMS, CORRIDORS, MULTIPURPOSE ROOMS AND EXTERIOR PLAY AREAS.
   - 4.4. SPEAKERS SHALL BE WIRED TO AMPLIFIERS IN THE IT ROOM AND TO THE ALL CALL MICROPHONE OR THRU PHONE HANDSET IN THE ADMINISTRATION AREA.
   - 4.5. (2) WIRELESS MICROPHONES WILL BE REQUIRED FOR DISMISSALS.
   - 4.6. PA SYSTEM SHALL BE MULTI-ZONED, ONE FOR MULTIPURPOSE ROOM AND ONE OR MORE FOR THE BALANCE OF THE FACILITY.
   - 4.7. ALL CLASSROOMS, MINI CLASSROOMS, TEACHER ROOMS, RESOURCE ROOMS, SPECIALTY CLASSROOMS, AND MULTI-PURPOSE ROOMS SHALL RECEIVE PA SYSTEM COMMUNICATION CAPABILITY
   - 4.8. PA SYSTEM SHALL INTEGRATE THROUGH THE SCHOOL'S PHONE SYSTEM THROUGH "STATION PORT."
5. BELL SYSTEM.
   - 5.1. BELL SYSTEM IS THROUGH THE SPEAKERS PROVIDED ABOVE AND REQUIRES A MINIMUM OF (6) PROGRAMMABLE ZONES.
   - 5.2. CLOCKS SHALL BE PROVIDED IN EVERY CLASSROOM, SPECIALTY ROOM, CAFETERIA GYM, ADMIN AREA, AND CONTROLLED BY A MASTER CLOCK. A WIRELESS CLOCK SYSTEM CONTROLLED BY A MASTER CLOCK MAY BE UTILIZED.
   - 5.3. CLOCK/BELL SYSTEM SHALL BE INTERCONNECTED.

VOICE/DATA GENERAL NOTES

1. IT ROOM:
   - 1.1. IT ROOM WILL BE DESIGNED BY OWNER TO INCLUDE CABLE TRAYS AND FLOOR MOUNTED EQUIPMENT RACKS.
   - 1.2. PROVIDE TWO POST RACKS FOR PATCH PANELS AS NEEDED.
   - 1.3. (1) TWO POST OR FOUR POST RACK WILL BE NEEDED TO MOUNT EQUIPMENT. A TWO POST RACK WILL REQUIRE (8) SHELVES.
   - 1.4. CAT 6 CABLE TO BE STANDARD.
2. GENERAL.
   - 2.1. PROVIDE ALL STRUCTURED CABLING.
   - 2.2. (3) COPIES OF LOW VOLTAGE SYSTEMS DOCUMENTATION PACKAGE WILL BE REQUIRED.
   - 2.3. T1 OR ISDN PRI LINE SPLIT BETWEEN VOICE AND DATA FUNCTIONS AS NEEDED.
   - 2.4. TWO WAY VOICE/COMMUNICATION CAPABILITY SHALL BE PROVIDED FOR ALL CLASSROOMS, TEACHER ROOMS, RESOURCE ROOMS, SPECIALTY CLASSROOMS, MULTIPURPOSE ROOMS AND SERVING KITCHEN. THRU PHONE HANDSETS SHALL BE UTILIZED IN CLASSROOMS.
   - 2.5. VOICE ACCESS IN THE CLASSROOMS WILL BE LIMITED TO THE SMART BOARD.
   - 2.6. TEACHER WORK ROOMS AND OFFICES WILL REQUIRE OUTSIDE VOICE ACCESS.
   - 2.7. PROVIDE AND INSTALL 3-PORT DATA IN THE PRINCIPAL, AP, BA, AND REGISTRAR LOCATIONS.

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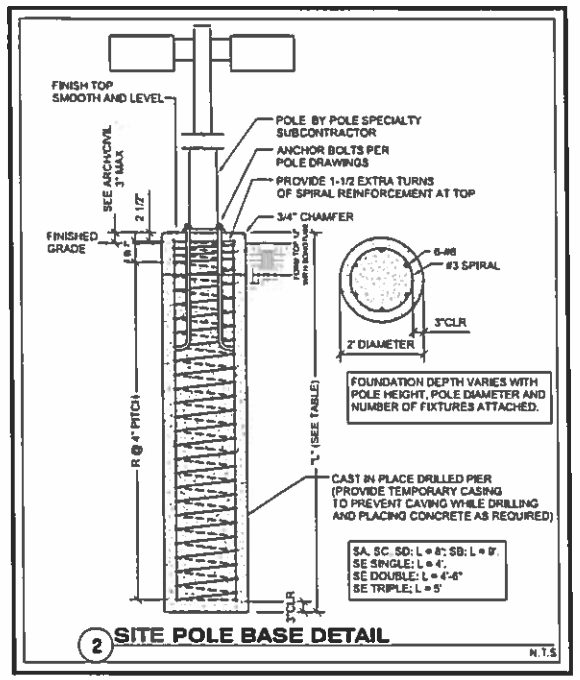
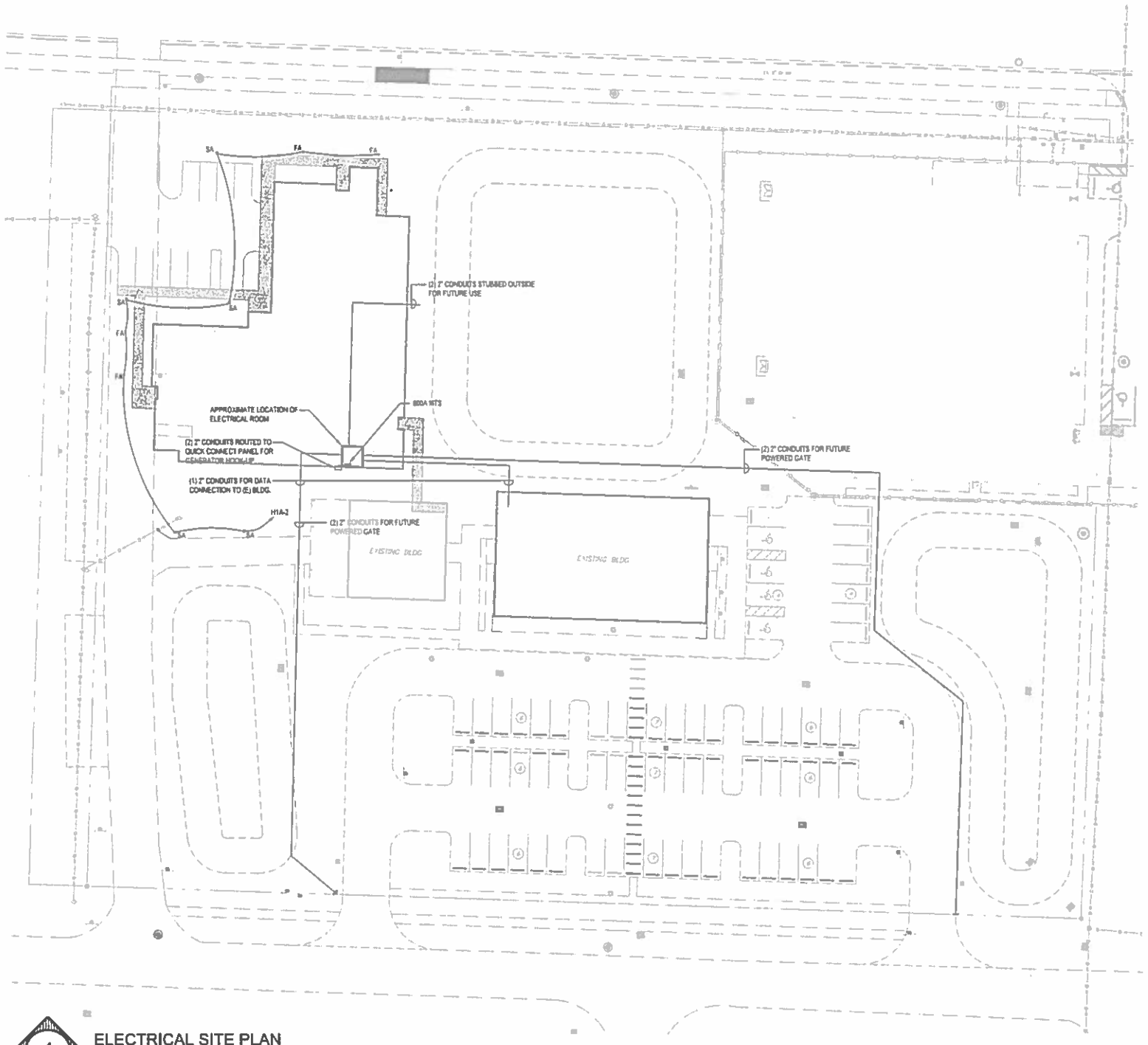


2 SITE POLE BASE DETAIL

LIGHT FIXTURE SCHEDULE

FIXTURE DESIGNATION	MANUFACTURER	CATALOG NO.	MOUNTING	LAMPS NO.	LAMPS WATTS	LAMPS TYPE	VOLTS	REMARKS
FA	COOPER	MSA-150-MP-MT-4S-FG	POLE	1	150	MH	277	
SA	COOPER	VXM-400-MP-MT-SS/ MOUNTED AT 25' AFG	POLE	1	400	MH	277	



1 ELECTRICAL SITE PLAN

SCALE: 1/32" = 1'-0"

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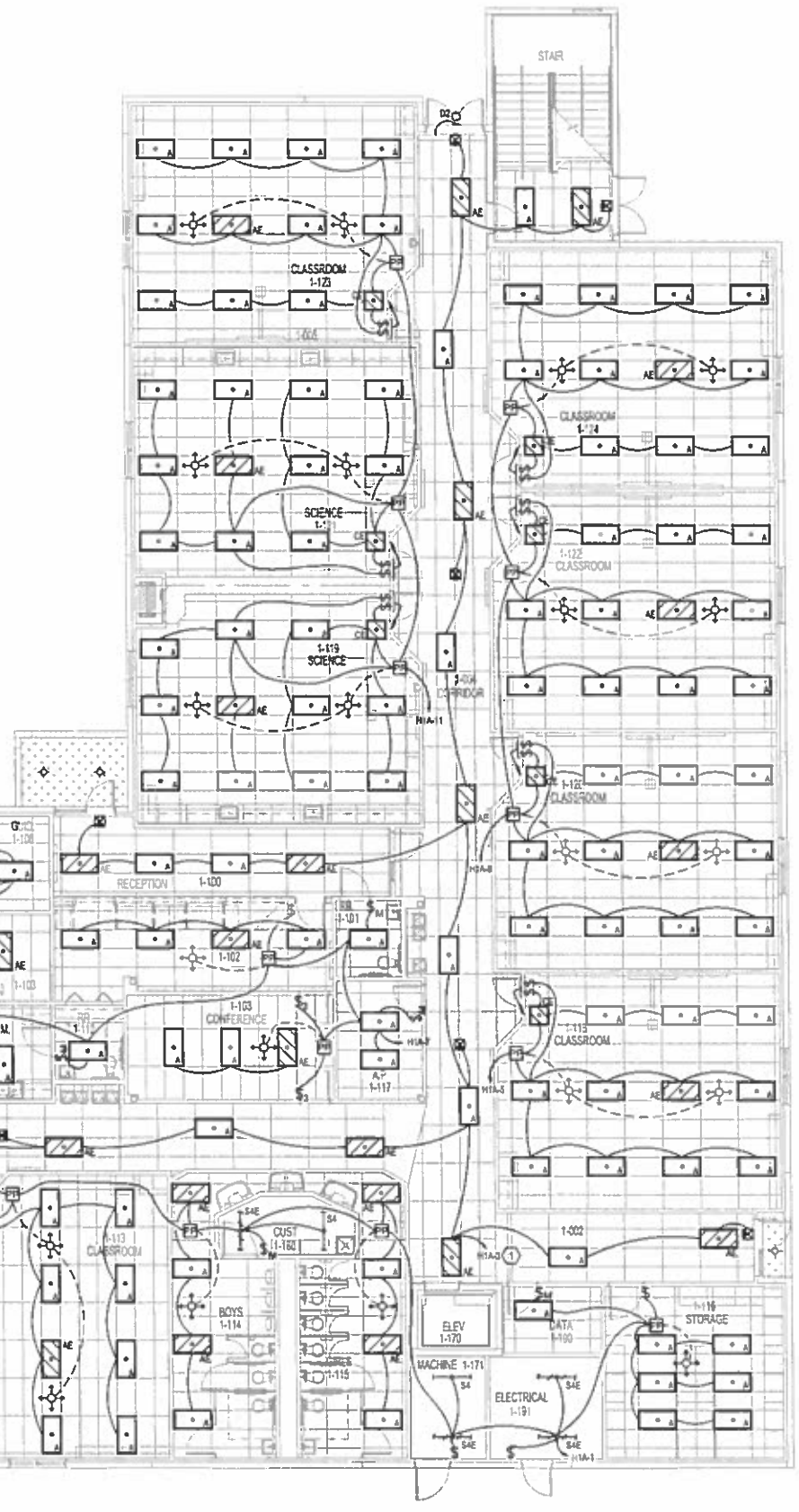
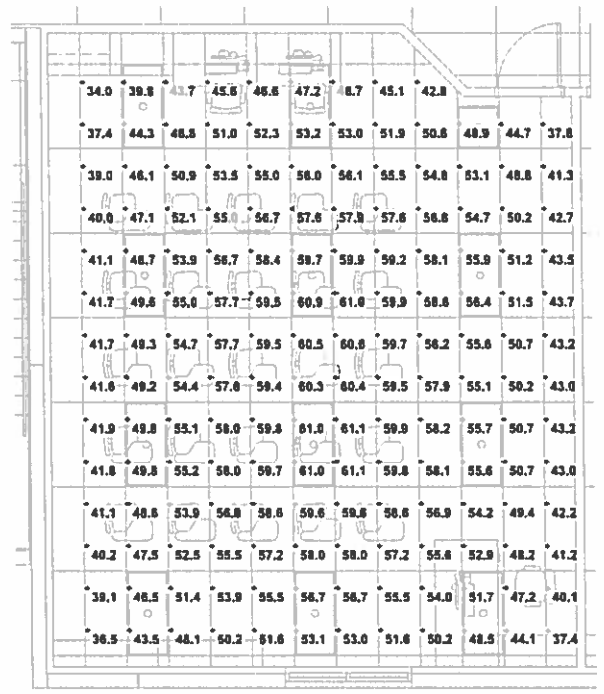


1 ELECTRICAL 1ST FLOOR LIGHTING PLAN

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



2 TYPICAL CLASSROOM PHOTOMETRIC PLAN

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

LIGHT FIXTURE SCHEDULE

FIXTURE DESIGNATION	MANUFACTURER	CATALOG NO.	MOUNTING	LAMPS NO.	LAMPS WATTS	LAMPS TYPE	VOLTS	REMARKS
A	METALUX	2GR8-232A125-UNV-EB81-U	RECESSED	2	32	T8	120/277	
AE	METALUX	2GR8-232A125-UNV-EL-EB81-U	RECESSED	2	32	T8	120/277	INCLUDES EM BACKUP BATTERY BALLAST
C	METALUX	2GR8-2UET8A125-UNV-EB81-U	RECESSED	2	32	UETB	120/277	
CE	METALUX	2GR8-2UET8A125-UNV-EL-EB81-U	RECESSED	2	32	UETB	120/277	INCLUDES EM BACKUP BATTERY BALLAST
S4	METALUX	8SF-232-UNV-EB81-U	SURFACE	2	32	T8	120/277	
S4E	METALUX	8SF-232-UNV-ELA-EB81-U	SURFACE	2	32	T8	120/277	INCLUDES EM BACKUP BATTERY BALLAST
⊗	SURELITE	AP7GR	WALL/ CEILING/ END	1	3.6	LED	120/277	EXIT SIGN: FACES/CHEVRONS AS REQUIRED.

ELECTRICAL KEY NOTES

1. CIRCUIT CONTROLLED BY LIGHTING CONTACTOR. PROVIDE UNSWITCHED HOT FOR EXIT SIGNS AND EMERGENCY LIGHT FIXTURES.
2. SWITCH FOR OVERRIDE CONTROL. EXTEND TO FIRST FLOOR LIGHTING CONTACTOR IN MAIN ELECTRIC ROOM.
3. INTERLOCK EXHAUST FAN WITH CORRESPONDING LIGHTING CIRCUIT VIA RELAY.

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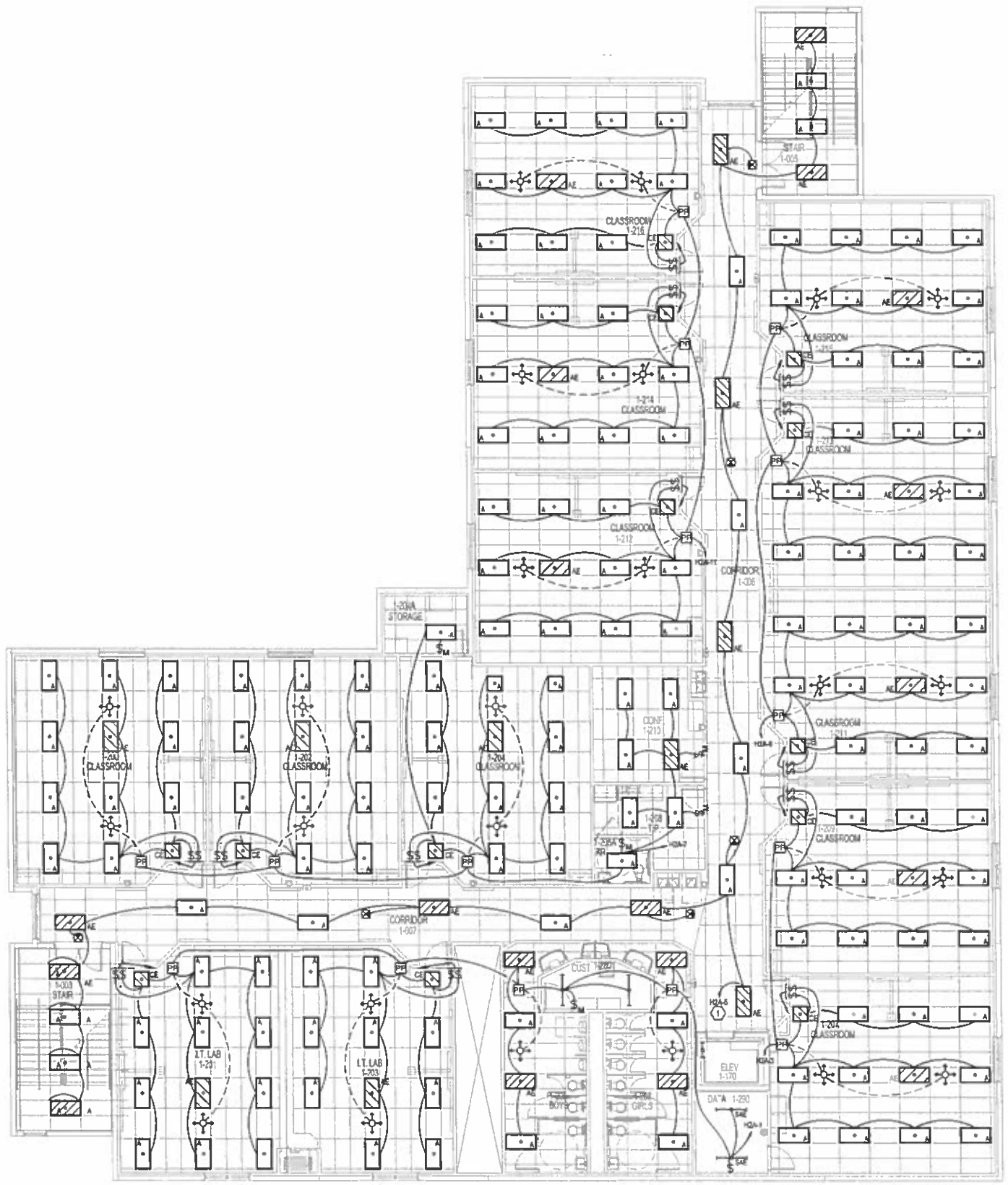

1 ELECTRICAL 2ND FLOOR LIGHTING PLAN

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

ELECTRICAL KEY NOTES

1. CIRCUIT CONTROLLED BY LIGHTING CONTACTOR. PROVIDE UNSWITCHED HOT FOR EXIT SIGNS AND EMERGENCY LIGHT FIXTURES.
2. INTERLOCK EXHAUST FAN WITH CORRESPONDING LIGHTING CIRCUIT VIA RELAY.

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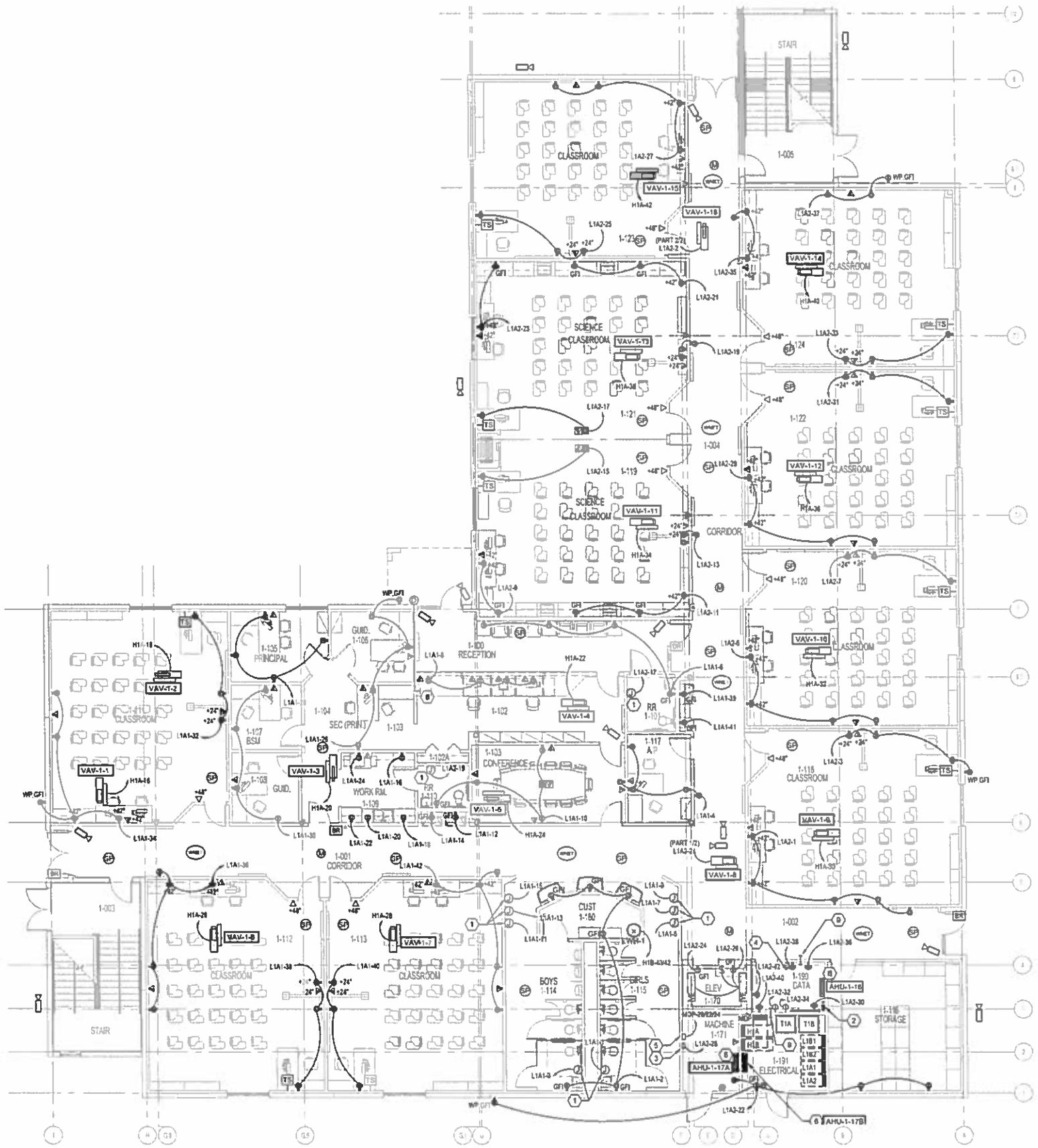
ELECTRICAL KEY NOTES

1. CIRCUIT FOR HAND DRYERS.
2. (2) 4" CONDUITS FOR TELEPHONE PRIMARY CABLES AND (1) 2" CONDUIT FOR DATA CABLES. PROVIDE 3/4" FIRE RETARDANT PLYWOOD BACKBOARD ON 3 WALLS (FLOOR TO CEILING) WITH GROUND BUSBAR AND #6 GROUND TO BUILDING GROUND SYSTEM.
3. 2P-30/F20SS FOR ELEVATOR CAB LIGHT CIRCUIT.
4. COORDINATE RECEPTACLE PLACEMENT IN THE I.T. ROOM WITH EQUIPMENT TO BE SERVED.
5. 3P-60/F60SS FOR ELEVATOR MOTOR. COORDINATE EXACT REQUIREMENTS WITH ELEVATOR PROVIDED. INCLUDING OVERCURRENT PROTECTIVE DEVICES, DISCONNECTS, WIRING, AND CONDUIT TO MEET MANUFACTURER SPECIFICATIONS.
6. PROVIDE 1/2" CONDUIT WITH PULL STRING, ROUTED TO CORRESPONDING CONDENSING UNIT FOR LOW VOLTAGE CONTROL WIRE.
8. AIPHONE: PROVIDE 1/2" CONDUIT WITH PULL STRING FROM EXTERIOR DOOR TO RECEPTION. COORDINATE BOTH LOCATIONS WITH OWNER.
9. (4) - 4" SLEEVES FOR VOICE/DATA AND SYSTEMS CABLING.



1 ELECTRICAL 1ST FLOOR POWER PLAN

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

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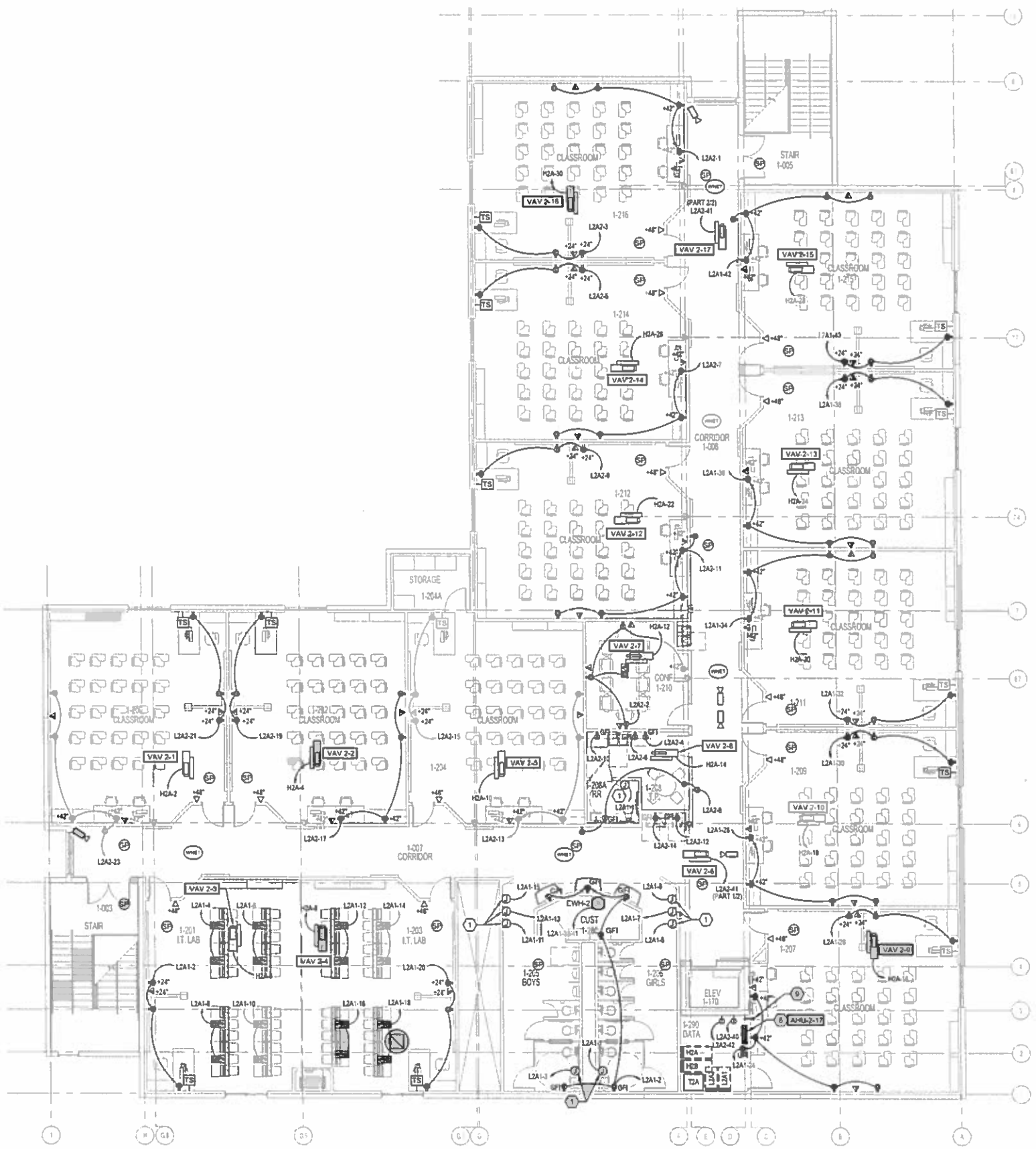
FLORIDA P.E. NO. 75458
ELECTRICAL ENGINEER
CERT OF AUTH 5454
DATE 9.19.2014

E2.1

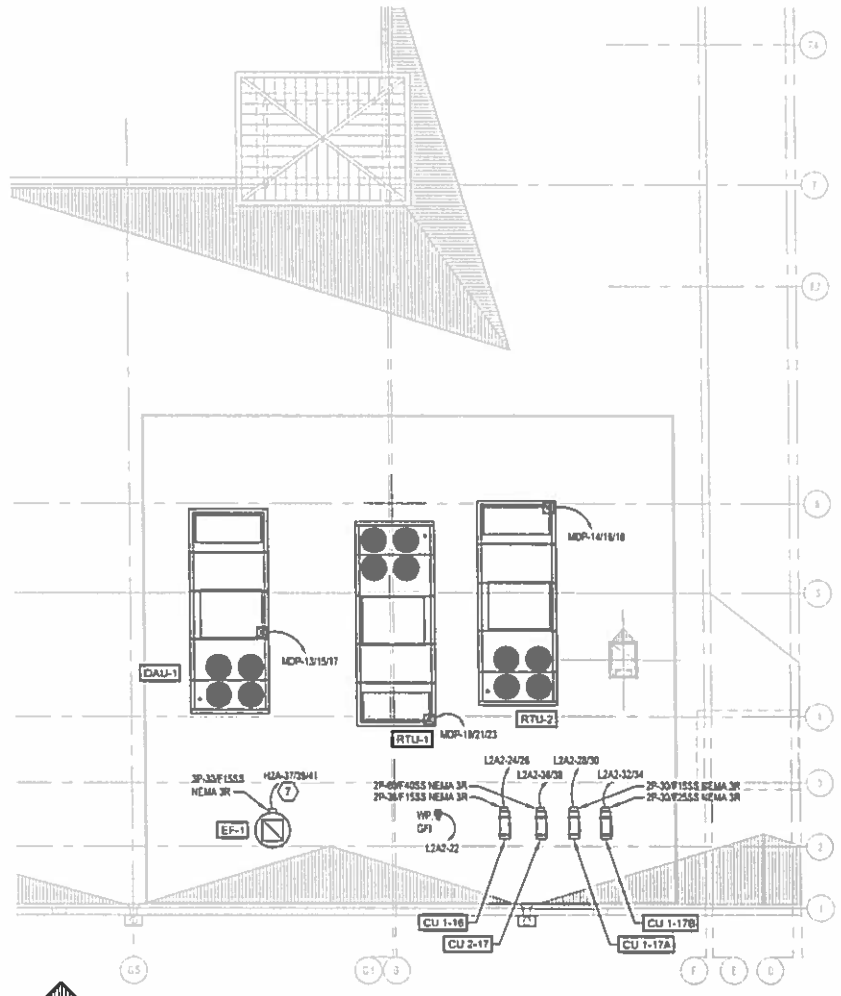
ELECTRICAL KEY NOTES

1. CIRCUIT FOR HAND DRYERS.
6. PROVIDE AND INSTALL 1/2" CONDUIT WITH PULL STRING, ROUTED TO CORRESPONDING CONDENSING UNIT FOR LOW VOLTAGE CONTROL WIRE.
7. FAN TO BE CONTROLLED BY THE BUILDING MANAGEMENT SYSTEM, REFERENCE MECHANICAL PLANS.
9. (4) - 4" SLEEVES FOR VOICE/DATA AND SYSTEMS CABLING.



1 ELECTRICAL 2ND FLOOR & ROOF POWER PLAN

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



2 ELECTRICAL 2ND FLOOR & ROOF POWER PLAN

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

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E2.2

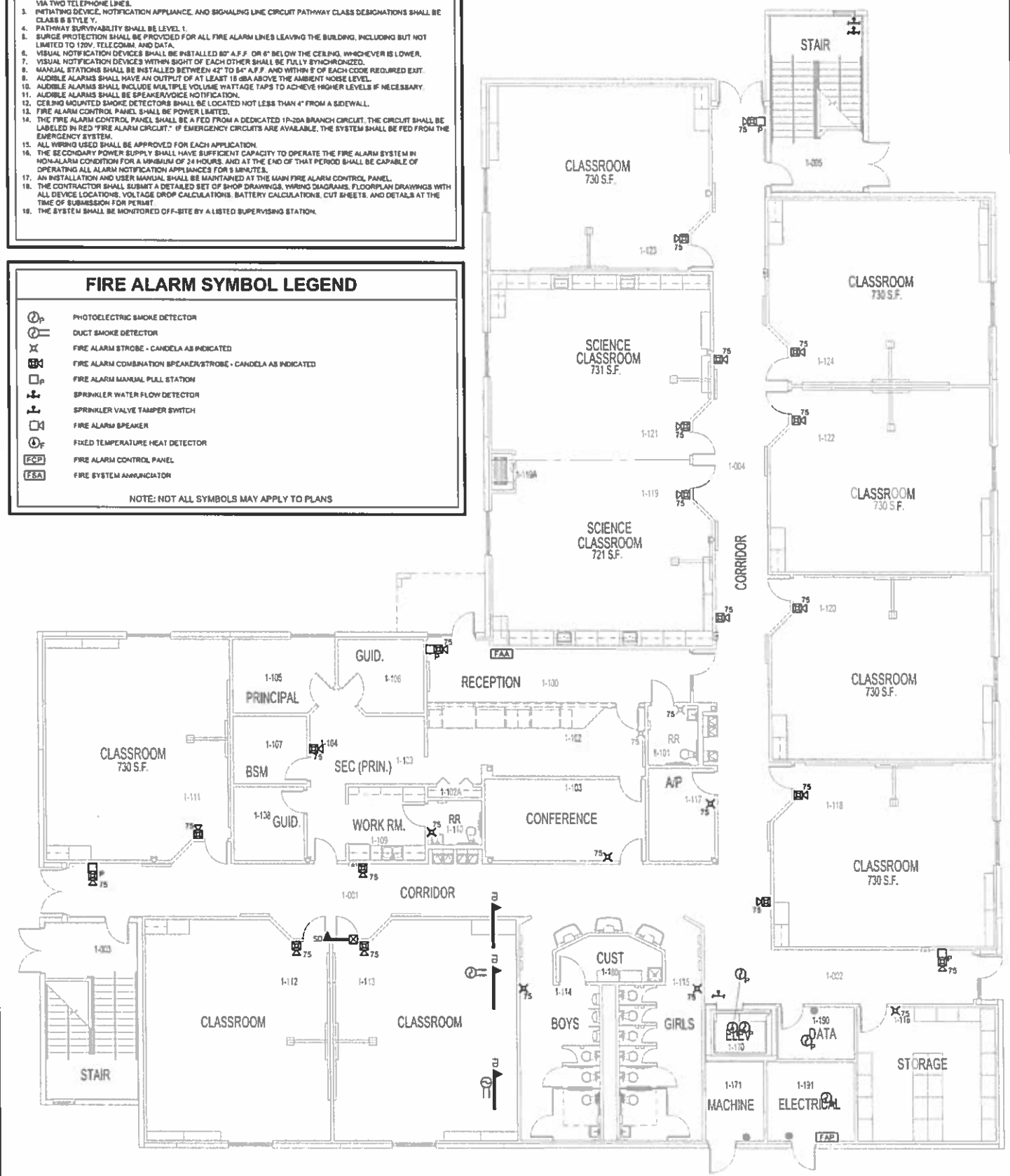
FIRE ALARM NOTES

1. THE SYSTEM SHALL BE AN ADDRESSABLE SYSTEM.
2. A DIGITAL ALARM COMMUNICATOR TRANSMITTER SHALL TRANSMIT ALL SIGNALS TO THE REMOTE SUPERVISING STATION VIA TWO TELEPHONE LINES.
3. INITIATING DEVICE, NOTIFICATION APPLIANCE, AND SIGNALING LINE CIRCUIT PATHWAY CLASS DESIGNATIONS SHALL BE CLASS B STYLE Y.
4. PATHWAY SURVIVABILITY SHALL BE LEVEL 1.
5. SURGE PROTECTION SHALL BE PROVIDED FOR ALL FIRE ALARM LINES LEAVING THE BUILDING, INCLUDING BUT NOT LIMITED TO 120V, TELECOMM, AND DATA.
6. VISUAL NOTIFICATION DEVICES SHALL BE INSTALLED 80" A.F.F. OR 6" BELOW THE CEILING, WHICHEVER IS LOWER.
7. VISUAL NOTIFICATION DEVICES WITHIN SIGHT OF EACH OTHER SHALL BE FULLY SYNCHRONIZED.
8. MANUAL STATIONS SHALL BE INSTALLED BETWEEN 42" TO 54" A.F.F. AND WITHIN 5' OF EACH CODE REQUIRED EXIT.
9. AUDIBLE ALARMS SHALL HAVE AN OUTPUT OF AT LEAST 15 dBA ABOVE THE AMBIENT NOISE LEVEL.
10. AUDIBLE ALARMS SHALL INCLUDE MULTIPLE VOLUME WATTAGE TAPS TO ACHIEVE HIGHER LEVELS IF NECESSARY.
11. AUDIBLE ALARMS SHALL BE SPEAKER/VOICE NOTIFICATION.
12. CEILING MOUNTED SMOKE DETECTORS SHALL BE LOCATED NOT LESS THAN 4" FROM A SIDEWALL.
13. FIRE ALARM CONTROL PANEL SHALL BE POWER LIMITED.
14. THE FIRE ALARM CONTROL PANEL SHALL BE A FED FROM A DEDICATED 1P-20A BRANCH CIRCUIT. THE CIRCUIT SHALL BE LABELED IN RED "FIRE ALARM CIRCUIT." IF EMERGENCY CIRCUITS ARE AVAILABLE, THE SYSTEM SHALL BE FED FROM THE EMERGENCY SYSTEM.
15. ALL WIRING USED SHALL BE APPROVED FOR EACH APPLICATION.
16. THE SECONDARY POWER SUPPLY SHALL HAVE SUFFICIENT CAPACITY TO OPERATE THE FIRE ALARM SYSTEM IN NON-ALARM CONDITION FOR A MINIMUM OF 24 HOURS, AND AT THE END OF THAT PERIOD SHALL BE CAPABLE OF OPERATING ALL ALARM NOTIFICATION APPLIANCES FOR 5 MINUTES.
17. AN INSTALLATION AND USER MANUAL SHALL BE MAINTAINED AT THE MAIN FIRE ALARM CONTROL PANEL.
18. THE CONTRACTOR SHALL SUBMIT A DETAILED SET OF SHOP DRAWINGS, WIRING DIAGRAMS, FLOORPLAN DRAWINGS WITH ALL DEVICE LOCATIONS, VOLTAGE DROP CALCULATIONS, BATTERY CALCULATIONS, CUT SHEETS, AND DETAILS AT THE TIME OF SUBMISSION FOR PERMIT.
19. THE SYSTEM SHALL BE MONITORED OFF-SITE BY A LISTED SUPERVISING STATION.

FIRE ALARM SYMBOL LEGEND

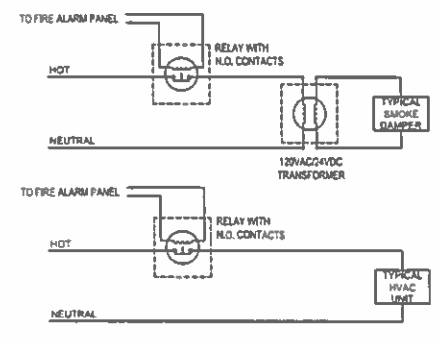
S_P	PHOTOELECTRIC SMOKE DETECTOR
S	DUCT SMOKE DETECTOR
	FIRE ALARM STROBE - CANDELA AS INDICATED
	FIRE ALARM COMBINATION SPEAKER/STROBE - CANDELA AS INDICATED
M_P	FIRE ALARM MANUAL PULL STATION
	SPRINKLER WATER FLOW DETECTOR
	SPRINKLER VALVE TAMPER SWITCH
	FIRE ALARM SPEAKER
H_F	FIXED TEMPERATURE HEAT DETECTOR
FCP	FIRE ALARM CONTROL PANEL
FSA	FIRE SYSTEM ANNUNCIATOR

NOTE: NOT ALL SYMBOLS MAY APPLY TO PLANS



1 ELECTRICAL 1ST FLOOR FIRE ALARM PLAN

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



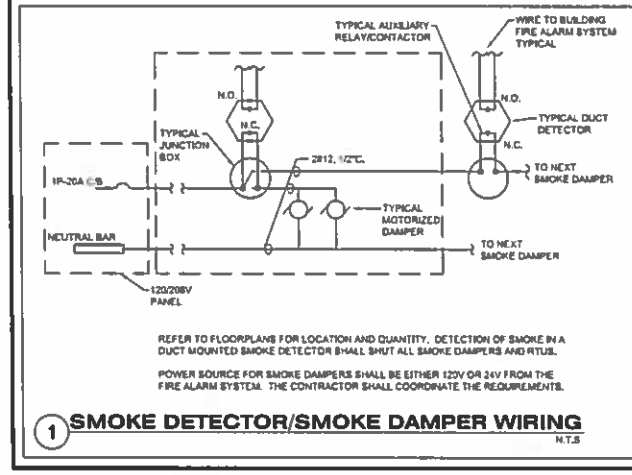
ALL RELAYS SHALL BE FIRE ALARM U/L LISTED EQUIPMENT

2 SMOKE DAMPER & HVAC SHUTDOWN DETAIL

N.T.S

FIRE ALARM SEQUENCE OF OPERATION

1. AN ALARM CONDITION SHALL BE INITIATED BY THE FOLLOWING DEVICES:
   - 1.1. SMOKE DETECTORS
   - 1.2. MANUAL PULL STATIONS
   - 1.3. HEAT DETECTORS
   - 1.4. AUTOMATIC SPRINKLER SYSTEM WATER FLOW
2. AN ALARM CONDITION SHALL INITIATE THE FOLLOWING ACTIONS:
   - 2.1. THE LOCATION OF THE INITIATING DEVICE SHALL BE INDICATED ON THE CONTROL PANEL AND REMOTE ANNUNCIATOR.
   - 2.2. ACTIVATE AUDIBLE ALARMS ON THE CONTROL PANEL AND REMOTE ANNUNCIATOR.
   - 2.3. VISUAL AND AUDIBLE ALARMS SHALL BE ACTIVATED ON ALL FLOORS.
   - 2.4. TRANSMIT AN ALARM SIGNAL TO THE REMOTE ALARM RECEIVING STATION.
   - 2.5. UNLOCK ELECTRIC DOOR LOCKS IN DESIGNATED EGRESS PATHS.
   - 2.6. RELEASE FIRE AND SMOKE DOORS HELD OPEN BY MAGNETIC DOOR HOLDERS.
3. A SUPERVISORY CONDITION SHALL BE INITIATED BY THE FOLLOWING DEVICES AND ACTIONS:
   - 3.1. TAMPER SWITCHES
   - 3.2. DUCT MOUNTED SMOKE DETECTORS
   - 3.3. USER DISABLING OF ZONES OR INDIVIDUAL DEVICES
   - 3.4. LOSS OF COMMUNICATION WITH ANY PANEL ON THE NETWORK
4. A SUPERVISORY CONDITION SHALL INITIATE THE FOLLOWING ACTIONS:
   - 4.1. THE LOCATION OF THE INITIATING DEVICE SHALL BE INDICATED ON THE CONTROL PANEL AND REMOTE ANNUNCIATOR.
   - 4.2. ACTIVATE AUDIBLE ALARMS ON THE CONTROL PANEL AND REMOTE ANNUNCIATOR.
   - 4.3. IF THE SIGNAL IS DUE TO A DUCT MOUNTED SMOKE DETECTOR, THE SIGNAL SHALL SHUT DOWN ALL HVAC EQUIPMENT ASSOCIATED WITH A COMMON PLENUM SHARED BY THE DEVICE.
   - 4.4. TRANSMIT A TROUBLE OR SUPERVISORY SIGNAL TO THE REMOTE ALARM RECEIVING STATION.
   - 4.5. TRANSMIT SYSTEM STATUS TO THE BUILDING MANAGEMENT SYSTEM.
5. A TROUBLE CONDITION SHALL BE INITIATED BY THE FOLLOWING DEVICES AND ACTIONS:
   - 5.1. OPEN CIRCUITS, SHORTS, AND GROUNDS IN DESIGNATED CIRCUITS.
   - 5.2. OPENING, TAMPERING WITH, OR REMOVING ALARM-INITIATING AND SUPERVISORY SIGNAL-INITIATING DEVICES.
   - 5.3. LOSS OF COMMUNICATION WITH ANY ADDRESSABLE SENSOR, INPUT MODULE, RELAY CONTROL MODULE, REMOTE ANNUNCIATOR, PRINTER INTERFACE, OR ETHERNET MODULE.
   - 5.4. LOSS OF PRIMARY POWER AT FIRE ALARM CONTROL UNIT.
   - 5.5. GROUND OR A SINGLE BREAK IN INTERNAL CIRCUITS OF FIRE ALARM CONTROL UNIT.
   - 5.6. BREAK IN STANDBY BATTERY CIRCUITRY OR FAILURE OF BATTERY CHARGING.
   - 5.7. ABNORMAL POSITION OF ANY SWITCH AT FIRE ALARM CONTROL UNIT OR ANNUNCIATOR.
   - 5.8. VOICE SIGNAL AMPLIFIER FAILURE.
6. A TROUBLE CONDITION SHALL INITIATE THE FOLLOWING ACTIONS:
   - 6.1. THE LOCATION OF THE TROUBLE CONDITION SHALL BE INDICATED ON THE CONTROL PANEL AND REMOTE ANNUNCIATOR.
   - 6.2. ACTIVATE AUDIBLE ALARMS ON THE CONTROL PANEL AND REMOTE ANNUNCIATOR.

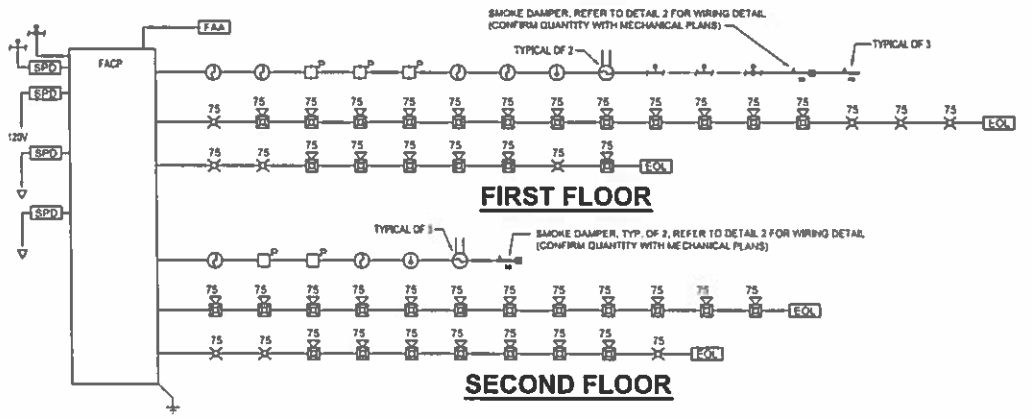


REFER TO FLOORPLANS FOR LOCATION AND QUANTITY. DETECTION OF SMOKE IN A DUCT MOUNTED SMOKE DETECTOR SHALL SHUT ALL SMOKE DAMPERS AND RTUS.

POWER SOURCE FOR SMOKE DAMPERS SHALL BE EITHER 120V OR 24V FROM THE FIRE ALARM SYSTEM. THE CONTRACTOR SHALL COORDINATE THE REQUIREMENTS.

1 SMOKE DETECTOR/SMOKE DAMPER WIRING

N.T.S



FIRE ALARM SINGLE LINE NOTES

1. THE CONTRACTOR SHALL REFER TO THE FLOORPLAN FOR EXACT QUANTITIES. THE SHOP DRAWINGS SHALL DICTATE THE MAXIMUM QUANTITY OF DEVICES PER CIRCUIT. MAC PANELS SHALL BE ADDED AS REQUIRED AND BE PART OF THE BID.

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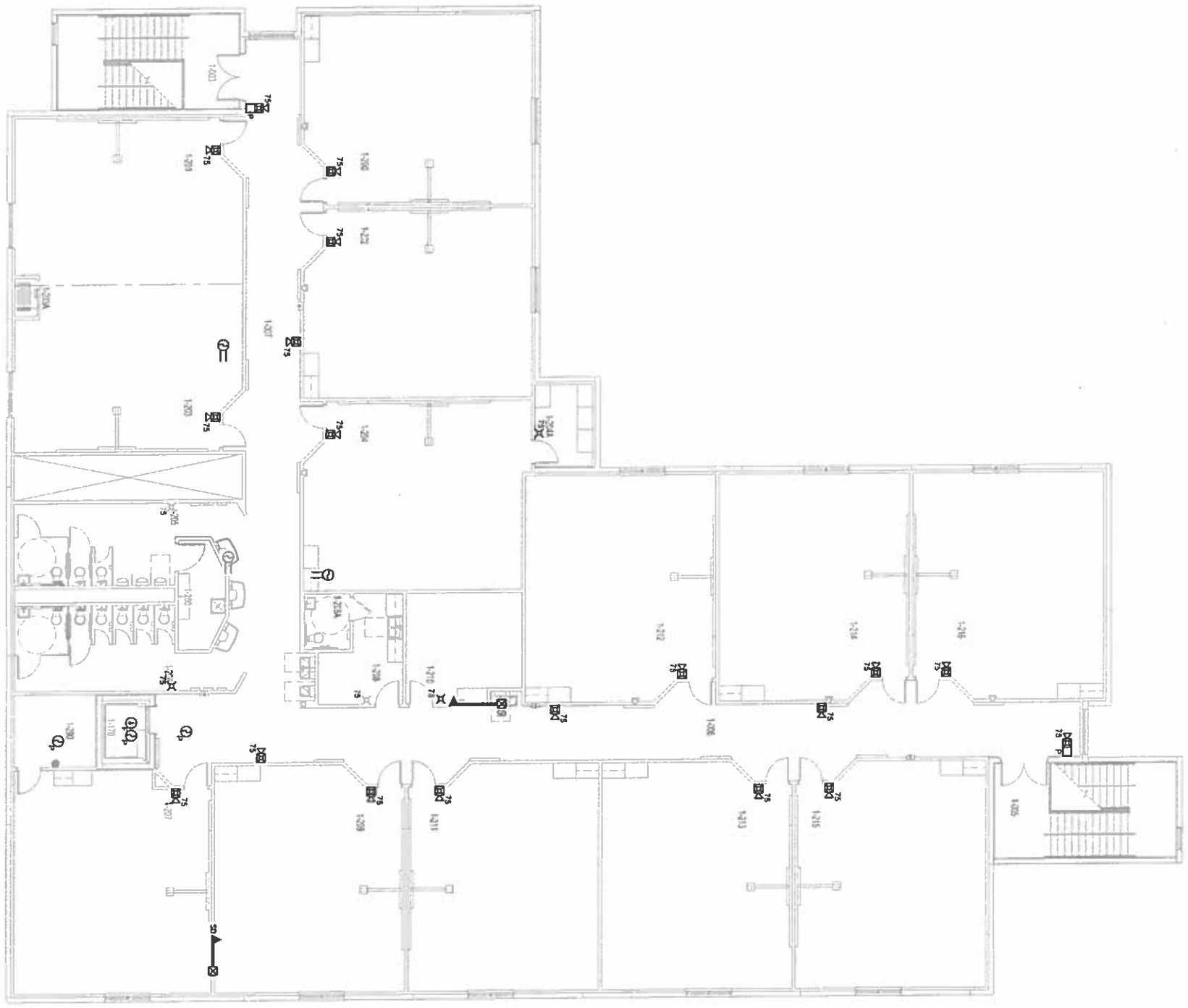
E3.1

1 ELECTRICAL 2ND FLOOR FIRE ALARM PLAN



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

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E3.2

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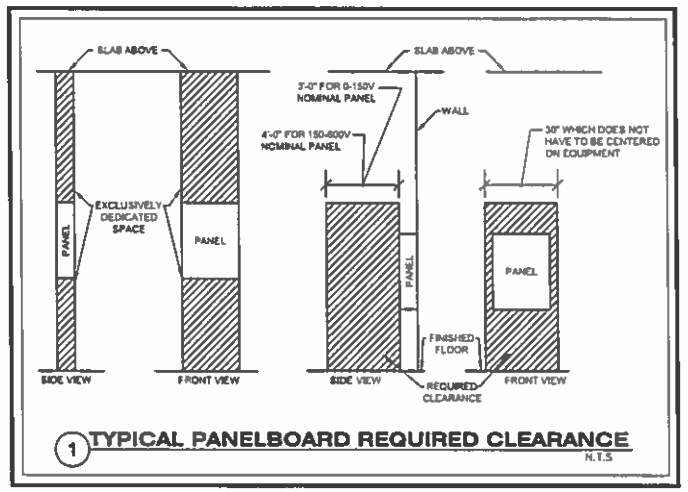
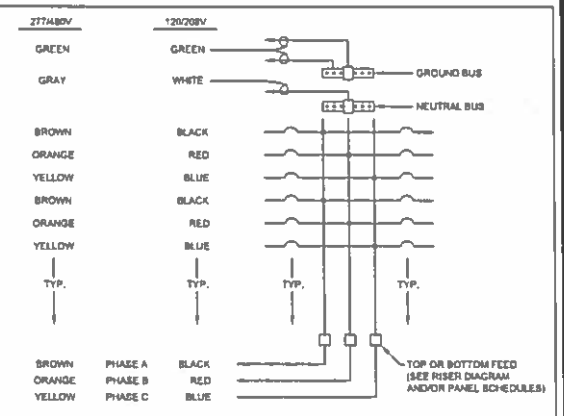
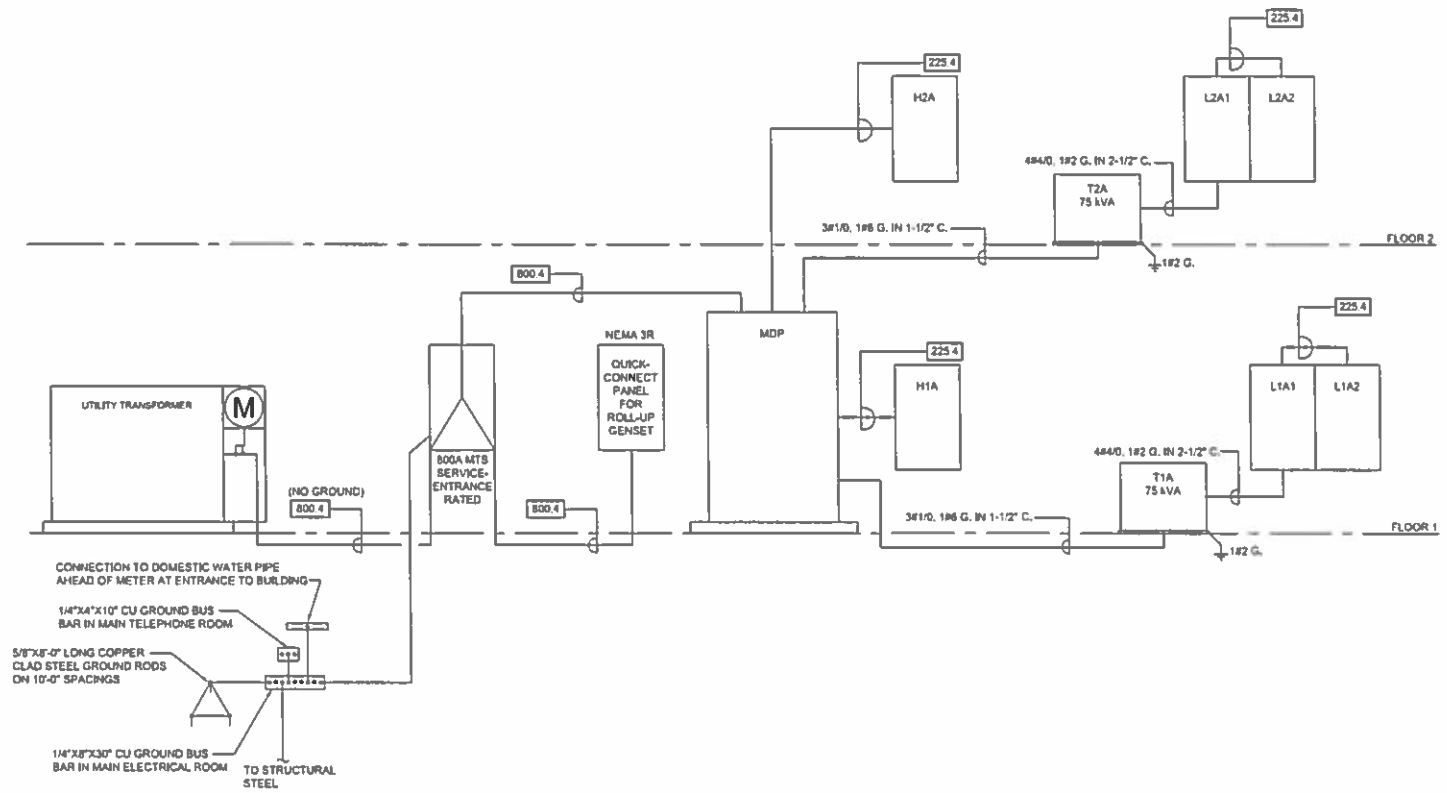


1 TYPICAL PANELBOARD REQUIRED CLEARANCE
N.T.S



2 TYPICAL PANEL COLOR CODE DETAIL
N.T.S



MSB LOAD ANALYSIS

CONNECTED LOAD CALCS	CONNECTED LOAD:		= 553.55 kVA
	AMPERES (480V, 3Ø):		= 665.8 A
	BUILDING SQUARE FOOTAGE:		= 24,290 SQFT
	VA/SQFT:		= 22.79 VA/SQFT
SQUARE FOOT LOAD CALCS	FIRST 3 VA/SQFT @ 100%	(3*24,290)	= 72.87 kVA
	NEXT 17 VA/SQFT @ 75%	(17*24,290*0.75)	= 308.70 kVA
	REMAINDER @ 25%	(2.79*24,290*0.25)	= 16.94 kVA
TOTAL DEMAND CALCS PER NEC 220.86	TOTAL DEMAND:		= 398.51 kVA
	AMPERES (480V, 3Ø):		= 480.5 A

FEEDER SIZING SCHEDULE

NUMBER	CONDUCTOR - CU	CONDUIT	CONDUCTOR - AL	CONDUIT	GROUND
225 4	484/0	2-1/2"	4#300 KCMIL	2-1/2"	1#4
800 4	TWO SETS 4#600 KCMIL	(2) 3-1/2"	THREE SETS 4#400 KCMIL	(3) 3"	1#1/0

ELECTRICAL NOTES

1. ALL CONNECTIONS OF THE GROUND ELECTRODE SYSTEM SHALL BE VIA #3/0 COPPER WIRES INCLUDING THE CONNECTION FROM THE MAIN DISTRIBUTION BOARD TO THE MAIN BUS GROUND BAR, COLD WATER PIPE, SUPPLEMENTAL GROUND SYSTEM, STRUCTURAL STEEL AND TELECOMM GROUND BUS BAR.
2. THE CONTRACTOR MAY SUBSTITUTE 2 SETS OF 4#3/0 WITH 1#3 G. IN 2" CONDUIT EACH FOR ALL WIRING INDICATED AS 4#600KCMIL, 1#3G. IN 4" CONDUIT.
3. WHERE POSSIBLE, THE CONTRACTOR SHALL TWIN MOUNT CIRCUIT BREAKERS WITHIN THE MAIN BOARD DISTRIBUTION SECTIONS TO MAXIMIZE SPACE FOR FUTURE EXPANSION.
4. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IS COORDINATED WITH THE MANUFACTURER'S SHORT CIRCUIT AND FAULT CURRENT COORDINATION STUDY. THIS SHALL INCLUDE PANELBOARDS, DISTRIBUTION BOARDS, DISCONNECTS, ETC.

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PANEL L2A1

3P-225A M.C.B. — 3 Ø 4 W — 120/208 VOLT — 225 AMP BUS — BREAKER INTERRUPT RATING 10,000 A.I.C.

A Ø	22.64	kVA
B Ø	20.34	kVA
C Ø	23.87	kVA
TOTAL	66.85	kVA

195 AMPS

COND SIZE	WIRE SIZE	LOAD DESCRIPTION	kVA A Ø	kVA B Ø	kVA C Ø	C/B	CKT NO.	CKT NO.	C/B	kVA A Ø	kVA B Ø	kVA C Ø	LOAD DESCRIPTION	WIRE SIZE	COND SIZE
1/2"	2#12	HAND DRYER	1.40			1P-20	1	2	1P-20	0.90			LT. LAB RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER		1.40		1P-20	3	4	1P-20		0.72		LT. LAB RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER			1.40	1P-20	5	6	1P-20			0.72	LT. LAB RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER	1.40			1P-20	7	8	1P-20	0.72			LT. LAB RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER		1.40		1P-20	9	10	1P-20		0.72		LT. LAB RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER			1.40	1P-20	11	12	1P-20			0.72	LT. LAB RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER	1.40			1P-20	13	14	1P-20	0.72			LT. LAB RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER		1.40		1P-20	15	16	1P-20		0.72		LT. LAB RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER			1.40	1P-20	17	18	1P-20			0.72	LT. LAB RECEPTS	2#12	1/2"
		SPARE				1P-20	19	20	1P-20	0.90			LT. LAB RECEPTS	2#12	1/2"
		SPARE				1P-20	21	22	1P-20		0.84		RECEPTS / AUTOSINKS	2#12	1/2"
		SPARE				1P-20	23	24	1P-20			1.44	RECEPTS (1-207)	2#12	1/2"
		SPARE				1P-20	25	26	1P-20	0.90			RECEPTS (1-207)	2#12	1/2"
		SPARE				1P-20	27	28	1P-20		1.26		RECEPTS (1-209)	2#12	1/2"
		SPARE				1P-20	29	30	1P-20			0.90	RECEPTS (1-209)	2#12	1/2"
		SPARE				1P-20	31	32	1P-20	0.90			RECEPTS (1-211)	2#12	1/2"
		SPARE				1P-20	33	34	1P-20		1.26		RECEPTS (1-211)	2#12	1/2"
		SPARE				1P-20	35	36	1P-20			1.26	RECEPTS (1-213)	2#12	1/2"
		SPARE				1P-20	37	38	1P-20	0.90			RECEPTS (1-213)	2#12	1/2"
3/4"	2#10	EWH-1 [1]		2.25		2P-30	39	40	1P-20		0.90		RECEPTS (1-215)	2#12	1/2"
					2.25		41	42	1P-20			1.44	RECEPTS (1-215)	2#12	1/2"

F.T.L. (PANEL L2A2)

PANEL L1A1

3P-225A M.C.B. — 3 Ø 4 W — 120/208 VOLT — 225 AMP BUS — BREAKER INTERRUPT RATING 10,000 A.I.C.

A Ø	20.04	kVA
B Ø	18.70	kVA
C Ø	20.27	kVA
TOTAL	59.01	kVA

164 AMPS

COND SIZE	WIRE SIZE	LOAD DESCRIPTION	kVA A Ø	kVA B Ø	kVA C Ø	C/B	CKT NO.	CKT NO.	C/B	kVA A Ø	kVA B Ø	kVA C Ø	LOAD DESCRIPTION	WIRE SIZE	COND SIZE
1/2"	2#12	HAND DRYER	1.40			1P-20	1	2	1P-20	0.84			RECEPTS / AUTOSINKS	2#12	1/2"
1/2"	2#12	HAND DRYER		1.40		1P-20	3	4	1P-20		0.90		A/P RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER			1.40	1P-20	5	6	1P-20			0.54	RECEPTION RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER	1.40			1P-20	7	8	1P-20	0.72			RECEPTION RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER		1.40		1P-20	9	10	1P-20		1.08		CONF. RECEPTS	2#12	1/2"
1/2"	2#12	HAND DRYER			1.40	1P-20	11	12	1P-20			0.40	EWC	2#12	1/2"
1/2"	2#12	HAND DRYER	1.40			1P-20	13	14	1P-20	0.40			EWC	2#12	1/2"
1/2"	2#12	HAND DRYER		1.40		1P-20	15	16	1P-20		0.18		WORK RM RECEPT	2#12	1/2"
1/2"	2#12	HAND DRYER			1.40	1P-20	17	18	1P-20			0.18	WORK RM RECEPT	2#12	1/2"
1/2"	2#12	HAND DRYER	1.40			1P-20	19	20	1P-20	0.18			WORK RM RECEPT	2#12	1/2"
		SPARE				1P-20	21	22	1P-20		1.00		REFRIGERATOR	2#12	1/2"
		SPARE				1P-20	23	24	1P-20			1.50	COPIER	2#12	1/2"
		SPARE				1P-20	25	26	1P-20	0.90			OFFICE RECEPTS	2#12	1/2"
		SPARE				1P-20	27	28	1P-20		0.72		OFFICE RECEPTS	2#12	1/2"
		SPARE				1P-20	29	30	1P-20			0.72	OFFICE RECEPTS	2#12	1/2"
		SPARE				1P-20	31	32	1P-20	0.90			RECEPTS (1-111)	2#12	1/2"
		SPARE				1P-20	33	34	1P-20		1.44		RECEPTS (1-111)	2#12	1/2"
3/4"	2#10	EWH-1 [1]			2.25	2P-30	35	36	1P-20			1.44	RECEPTS (1-112)	2#12	1/2"
			2.25				37	38	1P-20	0.90			RECEPTS (1-112)	2#12	1/2"
1/2"	2#12	EWC		0.40		1P-20	39	40	1P-20		0.90		RECEPTS (1-113)	2#12	1/2"
1/2"	2#12	EWC			0.40	1P-20	41	42	1P-20			1.44	RECEPTS (1-113)	2#12	1/2"

F.T.L. (PANEL L1A2)

PANEL MDP

3P-800A M.C.B. — 3 Ø 4 W — 277/480 VOLT — 800 AMP BUS — BREAKER INTERRUPT RATING 65,000 A.I.C.

A Ø	184.87	kVA
B Ø	183.77	kVA
C Ø	184.91	kVA
TOTAL	553.55	kVA

666 AMPS

COND SIZE	WIRE SIZE	LOAD DESCRIPTION	kVA A Ø	kVA B Ø	kVA C Ø	C/B	CKT NO.	CKT NO.	C/B	kVA A Ø	kVA B Ø	kVA C Ø	LOAD DESCRIPTION	WIRE SIZE	COND SIZE
SEE	SEE	PANEL H1A	25.42			3P-225	1	2	3P-225	30.14			PANEL H2A	SEE	SEE
RISER	RISER			28.58			3	4			29.52			RISER	RISER
					22.96		5	6				31.08			
SEE	SEE	75 kVA XFMR T1A	20.04			3P-125	7	8	3P-125	22.64			75 kVA XFMR T2A	SEE	SEE
RISER	RISER			18.70			9	10			20.34			RISER	RISER
					20.27		11	12				23.97			
SEE	SEE	CAU-1	27.11			3P-125	13	14	3P-125	24.91			RTU-2	SEE	SEE
RISER	RISER			27.11			15	16			24.91			RISER	RISER
					27.11		17	18				24.91			
SEE	SEE	RTU-1	24.91			3P-125	19	20	3P-60	9.70			ELEVATOR	3#4	1"
RISER	RISER			24.91			21	22			9.70		(SHUNT TRIP)		
					24.91		23	24				9.70			
		SPACE					25	26					SPACE		
		SPACE					27	28					SPACE		
		SPACE					29	30					SPACE		
		SPACE					31	32					SPACE		
		SPACE					33	34					SPACE		
		SPACE					35	36					SPACE		
3/4"	4#10	TVSS	-			3P-30	37	38					SPACE		
				-			39	40					SPACE		
					-		41	42					SPACE		

PANEL L2A2

M.L.O. — 3 Ø 4 W — 120/208 VOLT — 225 AMP BUS — BREAKER INTERRUPT RATING 10,000 A.I.C.

A Ø	12.50	kVA
B Ø	7.47	kVA
C Ø	10.32	kVA
TOTAL	30.29	kVA

84 AMPS

COND SIZE	WIRE SIZE	LOAD DESCRIPTION	kVA A Ø	kVA B Ø	kVA C Ø	C/B	CKT NO.	CKT NO.	C/B	kVA A Ø	kVA B Ø	kVA C Ø	LOAD DESCRIPTION	WIRE SIZE	COND SIZE
1/2"	2#12	RECEPTS (1-216)	1.26			1P-20	1	2	1P-20	1.08			CONF. RECEPTS	2#12	1/2"
1/2"	2#12	RECEPTS (1-216)		0.90		1P-20	3	4	1P-20		0.18		T.P. RECEPT	2#12	1/2"
1/2"	2#12	RECEPTS (1-214)			0.90	1P-20	5	6	1P-20			0.18	T.P. RECEPT	2#12	1/2"
1/2"	2#12	RECEPTS (1-214)	1.26			1P-20	7	8	1P-20	0.72			T.P. RECEPT	2#12	1/2"
1/2"	2#12	RECEPTS (1-212)		0.90		1P-20	9	10	1P-20		1.00		REFRIGERATOR	2#12	1/2"
1/2"	2#12	RECEPTS (1-212)			1.44	1P-20	11	12	1P-20			0.40	EWC	2#12	1/2"
1/2"	2#12	RECEPTS (1-204)	1.26			1P-20	13	14	1P-20	0.40			EWC	2#12	1/2"
1/2"	2#12	RECEPTS (1-204)		0.90		1P-20	15	16					SPACE		
1/2"	2#12	RECEPTS (1-202)			1.26	1P-20	17	18					SPACE		
1/2"	2#12	RECEPTS (1-202)	0.90			1P-20	19	20					SPACE		
1/2"	2#12	RECEPTS (1-200)		0.90		1P-20	21	22	1P-20		0.18		ROOFTOP RECEPT	2#12	1/2"
1/2"	2#12	RECEPTS (1-200)			1.44	1P-20	23	24	2P-15			1.26	CU 1-18	2#12	1/2"
		SPARE				1P-20	25	26			1.26				
		SPARE				1P-20	27	28	2P-15		0.59		CU 1-17A	2#12	1/2"
		SPARE				1P-20	29	30				0.59			
		SPARE				1P-20	31	32	2P-25		1.74		CU 1-17B	2#10	3/4"
		SPARE				1P-20	33	34				1.74			
		SPARE				1P-20	35	36	2P-40			2.60	CU 2-17	2#8	3/4"
		SPARE				1P-20	37	38			2.60				
		SPARE				1P-20	39	40	1P-20			0.18	IDF RECEPTACLES	2#12	1/2"
1/2"	2#12	VAV-2-8.17			0.05	1P-20	41	42	1P-20			0.18	IDF RECEPTACLES	2#12	1/2"

F.T.L.

PANEL L1A2

M.L.O. — 3 Ø 4 W — 120/208 VOLT — 225 AMP BUS — BREAKER INTERRUPT RATING 10,000 A.I.C.

A Ø	7.35	kVA
B Ø	7.68	kVA
C Ø	7.20	kVA
TOTAL	22.43	kVA

62 AMPS

COND SIZE	WIRE SIZE	LOAD DESCRIPTION	kVA A Ø	kVA B Ø	kVA C Ø	C/B	CKT NO.	CKT NO.	C/B	kVA A Ø	kVA B Ø	kVA C Ø	LOAD DESCRIPTION	WIRE SIZE	COND SIZE
1/2"	2#12	RECEPTS (1-118)	1.44			1P-20	1	2	1P-20	0.05			VAV-1-6.18	2#12	1/2"
1/2"	2#12	RECEPTS (1-118)		1.08		1P-20	3	4	1P-20				SPARE		
1/2"	2#12	RECEPTS (1-120)			1.26	1P-20	5	6	1P-20				SPARE		
1/2"	2#12	RECEPTS (1-120)	0.90			1P-20	7	8	1P-20				SPARE		
1/2"	2#12	RECEPTS (1-119)		0.72		1P-20	9	10	1P-20				SPARE		
1/2"	2#12	RECEPTS (1-119)			1.08	1P-20	11	12	1P-20				SPARE		
1/2"	2#12	RECEPTS (1-119)	0.72			1P-20	13	14	1P-20				SPARE		
1/2"	2#12	RECEPTS (1-119)		0.72		1P-20	15	16	1P-20				SPARE		
1/2"	2#12	RECEPTS (1-121)			0.72	1P-20	17	18	1P-20				SPARE		
1/2"	2#12	RECEPTS (1-121)	0.72			1P-20	19	20	1P-20				SPARE		
1/2"	2#12	RECEPTS (1-121)		1.08		1P-20	21	22	1P-20		0.90		G.P. RECEPTS	2#12	1/2"
1/2"	2#12	RECEPTS (1-121)			0.72	1P-20	23	24	1P-20			0.18	SUMP PUMP	2#12	1/2"
1/2"	2#12	RECEPTS (1-123)	0.90			1P-20	25	26	1P-20	0.28			ELEVATOR PIT OUTLETS	2#12	1/2"
1/2"	2#12	RECEPTS (1-123)		1.26		1P-20	27	28	1P-20		0.50		ELEVATOR CAB LIGHTS	2#12	1/2"
1/2"	2#12	RECEPTS (1-122)			1.26	1P-20	29	30	1P-20			0.36	PHONE BOARD	2#12	1/2"
1/2"	2#12	RECEPTS (1-122)	0.90			1P-20	31	32	1P-20	0.36			DATA ROOM OUTLET	2#12	1/2"
1/2"	2#12	RECEPTS (1-124)		0.90		1P-20	33	34	1P-20		0.36		DATA ROOM OUTLET	2#12	1/2"
1/2"	2#12	RECEPTS (1-124)			0.90	1P-20	35	36	1P-20			0.36	DATA ROOM OUTLET	2#12	1/2"
1/2"	2#12	RECEPTS (1-124)	0.72			1P-20	37	38	1P-20	0.36			DATA ROOM OUTLET	2#12	1/2"
		SPARE				1P-20	39	40	1P-20		0.36		DATA ROOM OUTLET	2#12	1/2"
		SPARE				1P-20	41	42	1P-20			0.36	DATA ROOM OUTLET	2#12	1/2"

F.T.L.

PANEL H1A

M.L.O. — 3 Ø 4 W — 277/480 VOLT — 225 AMP BUS — BREAKER INTERRUPT RATING 22,000 A.I.C.

A Ø	25.42	kVA
B Ø	28.58	kVA
C Ø	22.96	kVA
TOTAL	76.96	kVA

93 AMPS

COND SIZE	WIRE SIZE	LOAD DESCRIPTION	kVA A Ø	kVA B Ø	kVA C Ø	C/B	CKT NO.	CKT NO.	C/B	kVA A Ø	kVA B Ø	kVA C Ø	LOAD DESCRIPTION	WIRE SIZE	COND SIZE
1/2"	2#12	LIGHTING	3.68			1P-20	1	2	1P-20	2.80			SITE LIGHTING	2#10	3/4"
1/2"	2#12	LIGHTING		2.23		1P-20	3	4	1P-20				SPARE		
1/2"	2#12	LIGHTING			1.11	1P-20	5	6	1P-20						
1/2"	2#12	LIGHTING	3.44			1P-20	7	8	1P-20						
1/2"	2#12	LIGHTING		3.35		1P-20	9	10	1P-20						
1/2"	2#12	LIGHTING			3.35	1P-20	11	12	1P-20						
		SPACE					13	14	1P-20				V		
		I					15	16	1P-20	4.00			VAV-1-1	2#12	1/2"
		I					17	18	1P-15		1.50		VAV-1-2	2#12	1/2"
		I					19	20	1P-15	1.00			VAV-1-3	2#12	1/2"
		I					21	22	1P-25		4.50		VAV-1-4	2#10	3/4"
		I					23	24	1P-15			2.00	VAV-1-5	2#12	1/2"
		I					25	26	1P-25	5.00			VAV-1-6	2#10	3/4"
		I					27	28	1P-25		5.00		VAV-1-7	2#10	3/4"
		I					29	30	1P-25			5.50	VAV-1-9	2#10	3/4"
		I					31	32	1P-25	4.50			VAV-1-10	2#10	3/4"
		I					33	34	1P-25		5.00		VAV-1-11	2#10	3/4"
		I					35	36	1P-25			4.50	VAV-1-12	2#10	3/4"
		I					37	38	1P-25	5.00			VAV-1-13	2#10	3/4"
		I					39	40	1P-25		4.50		VAV-1-14	2#10	3/4"
		V					41	42	1P-25			5.00	VAV-1-15	2#10	3/4"

F.T.L.

PANEL H2A

M.L.O. — 3 Ø 4 W — 277/480 VOLT — 225 AMP BUS — BREAKER INTERRUPT RATING 22,000 A.I.C.

A Ø	30.14	kVA
B Ø	29.52	kVA
C Ø	31.08	kVA
TOTAL	90.75	kVA

108 AMPS

COND SIZE	WIRE SIZE	LOAD DESCRIPTION	kVA A Ø	kVA B Ø	kVA C Ø	C/B	CKT NO.	CKT NO.	C/B	kVA A Ø	kVA B Ø	kVA C Ø	LOAD DESCRIPTION	WIRE SIZE	COND SIZE
1/2"	2#12	LIGHTING	2.11			1P-20	1	2	1P-20	4.00			VAV-2-1	2#12	1/2"
1/2"	2#12	LIGHTING		2.23		1P-20	3	4	1P-20		4.00		VAV-2-2	2#12	1/2"
1/2"	2#12	LIGHTING			2.79	1P-20	5	6	1P-35			7.50	VAV-2-3	2#8	3/4"
1/2"	2#12	LIGHTING	4.09			1P-20	7	8	1P-35	7.50			VAV-2-4	2#8	3/4"
1/2"	2#12	LIGHTING		3.35		1P-20	9	10	1P-20		4.00		VAV-2-5	2#12	1/2"
1/2"	2#12	LIGHTING			3.35	1P-20	11	12	1P-15			1.50	VAV-2-7	2#12	1/2"
		SPARE				1P-20	13	14	1P-15	1.50			VAV-2-8	2#12	1/2"
		SPARE				1P-20	15	16	1P-25		5.00		VAV-2-9	2#10	3/4"
		SPARE				1P-20	17	18	1P-25			5.00	VAV-2-10	2#10	3/4"
		SPARE				1P-20	19	20	1P-25	5.00			VAV-2-11	2#10	3/4"
		SPARE				1P-20	21	22	1P-25		5.00		VAV-2-12	2#10	3/4"
		SPACE					23	24	1P-25			5.00	VAV-2-13	2#10	3/4"
		SPACE					25	26	1P-25	5.00			VAV-2-14	2#10	3/4"
		SPACE					27	28	1P-25		5.00		VAV-2-15	2#10	3/4"
		SPACE					29	30	1P-25			5.00	VAV-2-16	2#10	3/4"
		SPACE					31	32					SPACE		
		SPACE					33	34					SPACE		
		SPACE					35	36					SPACE		
3/4"	3#12	EF-1	0.94			3P-15	37	38					SPACE		
				0.94			39	40					SPACE		
					0.94		41	42					SPACE		

F.T.L.

ELECTRICAL PANELBOARD NOTES

[1] PROVIDE BREAKER LOCK-OFF DEVICE (MAINTENANCE).

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GENERAL FIRE SPRINKLER NOTES

1. ALL FIRE SPRINKLER WORK TO BE INSTALLED BY A FIRE SPRINKLER CONTRACTOR CERTIFIED IN THE STATE OF FLORIDA.
2. DETAILED DESIGN OF THE SPRINKLER SYSTEM SHALL BE COMPLETED BY A DELEGATED ENGINEER REGISTERED IN THE STATE OF FLORIDA AND SHALL COMPLY WITH NFPA 13-2010, THESE DOCUMENTS AND THE LOCAL AUTHORITY HAVING JURISDICTION.
3. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD SIGNED AND SEALED BY THE DELEGATED ENGINEER AND SHALL INCLUDE BUT NOT BE LIMITED TO THE FLOW TEST DATA, BACK FLOW AND FLOW SWITCHES, RISER ASSEMBLY, DRAIN AND TEST ASSEMBLY, HEAD LOCATIONS, CUT LENGTHS AND HYDRAULIC CALCULATIONS.
4. COVERAGE FOR THE OCCUPANCIES SHALL BE AS FOLLOWS: LIGHT HAZARD 0.1GPM/SF, ORDINARY HAZARD GRP 1 0.2GPM/SF
5. ALL SPRINKLER PIPE TO BE TESTED TO 200PSI FOR 2 HOURS
6. MAXIMUM FLOOR AREA FOR A SINGLE FIRE SPRINKLER RISER IS 52,000 SF FOR LIGHT AND ORDINARY HAZARD AREAS.
7. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH NFPA 13 AND THE APPLICABLE LOCAL CODES, RULES AND ORDINANCES
8. ENGINEER OF RECORD RECOGNIZES THE SPRINKLER CONTRACTOR TO BE LICENSE IN THE STATE OF FLORIDA. THE SPRINKLER CONTRACTOR SHALL CONSIDER THE PROJECT AS ONE SET OF DOCUMENTS. THE GENERAL CONTRACTOR SHALL PROVIDE THE SPRINKLER CONTRACTOR A COMPLETE SET OF DOCUMENTS INCLUDING ALL TRADES PRIOR TO BIDDING AND CONSTRUCTION. THE SPRINKLER CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS AS REQUIRED AND WILL INFORM THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR POSSIBLE CONFLICTS ON THE DOCUMENTS PRIOR TO SUBMITTING FINAL BID AND COMMENCING ANY WORK. THE SPRINKLER CONTRACTOR SHALL MAKE HIMSELF AVAILABLE FOR REVIEWING DOCUMENTS WITH ARCHITECT/ENGINEER UPON REQUEST.
9. THE FIRE SPRINKLER CONTRACTOR SHALL BE HELD TO HAVE VERIFIED ALL EXISTING CONDITIONS, INCLUDING SITE VISITATION, AND REVIEW OF AS BUILT DOCUMENTATION AS APPLICABLE PRIOR TO BIDDING, ORDERING, FABRICATION OR INSTALLATION OF ANY MATERIALS OR EQUIPMENT ON THIS PROJECT.
10. UNLESS OTHERWISE SPECIFIED ALL MATERIALS SHALL BE NEW, ALL WORK SHALL BE PERFORMED BY A LICENSED FIRE SPRINKLER CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE. ALL EXCAVATION AND BACK FILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
11. REQUIRED INSURANCE SHALL BE PROVIDED BY THE FIRE SPRINKLER CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
12. FIRE SPRINKLER CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTION AND TESTS. FIRE SPRINKLER CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. FIRE SPRINKLER CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
13. THE SPRINKLER CONTRACTOR SHALL PROVIDE IN WRITING AND ON COMPANY LETTER HEAD, ALL ITEMS VALUE ENGINEERED OR OMITTED FROM PROJECT BIDS. THE INFORMATION SHALL BE PROVIDED TO ARCHITECT AND ENGINEER FOR REVIEW PRIOR TO SUBMITTING FINAL BID. CONTRACTOR SHALL MAKE HIMSELF AVAILABLE FOR REVIEWING DOCUMENTS WITH ARCHITECT ENGINEER/OWNER UPON REQUEST.
14. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND STRUCTURAL DRAWINGS AND ARE CONSIDERED TO BE ONE SET OF DOCUMENTS. BENDS OFFSETS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE AND FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE FIRE SPRINKLER CONTRACTOR AT NO ADDITIONAL COST. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
15. FIRE SPRINKLER CONTRACTOR SHALL SUBMIT, FOR APPROVAL, FIVE (5) COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT INCLUDED IN CONTRACT. ALL MATERIAL SHALL BE NEW OF U.S. MANUFACTURER OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED TRADESMEN.
16. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ENGINEER/ARCHITECT PRIOR TO BEGINNING CONSTRUCTION.
17. VERIFY LOCATION, SIZE, AND DIRECTION OF FLOW OF ALL EXISTING FIRE PIPE PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
18. FIRE SPRINKLER DRAWINGS ARE TO BE SUBMITTED TO THE ARCHITECT/ENGINEER/OWNER FOR REVIEW PRIOR TO ANY FABRICATION OR INSTALLATION.

ENGINEERED SPRINKLER SHOP DRAWING NOTE

1. THE CONTRACTOR SHALL PROVIDE (REGARDLESS OF THE NUMBER OF SPRINKLER HEADS) LAYOUT DRAWINGS, HYDRAULIC CALCULATIONS, CATALOG INFORMATION ON STANDARD PRODUCTS, AND OTHER CONSTRUCTION DATA PREPARED BY AN ENGINEER LICENSED IN THE STATE OF FLORIDA THAT PROVIDES DETAIL ON THE LOCATION OF RISERS, CROSS MAINS, BRANCH LINES, SPRINKLER HEADS, SIZING OF PIPE, HANGER LOCATIONS, AND HYDRAULIC CALCULATIONS AND ALSO SERVES AS A GUIDE FOR FABRICATION AND INSTALLATION OF A FIRE PROTECTION SYSTEM. SIGNED AND SEALED DRAWINGS SHALL BE PREPARED BY AN ENGINEER REGISTERED UNDER CHAPTER 471, FLORIDA STATUTES.
2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND INSTALL A COMPLETE WORKING SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES, THE NFPA 13 AND THE LOCAL AUTHORITY HAVING JURISDICTION.
3. IT IS THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR TO COORDINATE THE LOCATIONS OF PENDANT SPRINKLER HEADS WITH REGARD TO THE WOOD BEAMS AND OTHER SIMILAR OBSTRUCTIONS. SPRINKLER LOCATIONS SHOWN ARE FOR GENERAL GUIDANCE ONLY. ARCHITECTURAL/STRUCTURAL PLANS SHALL BE OBTAINED TO PROPERLY SPACE THE SPRINKLER HEADS AND PIPE ROUTING.

SPRINKLER HEAD LOCATION NOTES

1. ALL SPRINKLER HEADS, UNLESS OTHERWISE NOTED, MUST BE OF THE CONCEALED (POP-DOWN) TYPE.
2. RELOCATE EXISTING (RE) SPRINKLER HEADS AS NEEDED. MATCH STYLE OF NEW HEADS TO EXISTING FOR UNIFORMITY.
3. SPRINKLERS LOCATED IN STORAGE, MECHANICAL AND MAINTENANCE AREAS OR ANYWHERE THAT ARCHITECTUAL FINISH IS UNECESSARY SHALL BE UPTURNED TYPE HEADS.
4. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL SUPPLEMENTAL ENGINEERING REQUIRED FOR RELOCATIONS OF EXISTING AND INSTALLATIONS OF NEW SPRINKLER HEADS.
5. CONTRACTOR IS RESPONSIBLE FOR ALL ENGINEERING NECESSARY FOR ACCOMODATING, MAINTAINING AND SUPPORTING FUNCTIONALITY OF FIRE SPRINKLER SYSTEMS IN UNREMODELED AREAS DURING CONSTRUCTION AND INSTALLATION.
6. CONTRACTOR SHALL PROVIDE FIRE SPRINKLER HEADS IN ATTIC AREAS OR SPACES THAT ARE COMBUSTIBLE. CONTRACTOR SHALL FIELD VERIFY AND PROVIDE HEAD LOCATIONS ON FIRE SPRINKLER SHOP DRAWINGS.
7. INSTALLATION OF ALL FIRE PROTECTION SYSTEMS MUST BE IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODE REQUIREMENTS. CONTRACTOR RESPONSIBLE FOR CODE COMPLIANCE AND ANY ADJUSTMENTS TO PLAN AND SUPPLEMENTAL ENGINEERING AS REQUIRED.

FIRE SPRINKLER SPECIFICATIONS

1. ALL MATERIALS USED SHALL BE IN ACCORDANCE WITH NFPA 13-2010 EDITION AND THE LOCAL AUTHORITY HAVING JURISDICTION.

SPRINKLERS - NFPA 13 - 6.2:

6.2.1 ONLY NEW SPRINKLERS SHALL BE INSTALLED
6.2.2 ALL SPRINKLERS SHALL BE PERMANENTLY MARKED WITH ONE OR TWO ENGLISH UPPERCASE ALPHABETIC CHARACTERS TO IDENTIFY THE MANUFACTURER, IMMEDIATELY FOLLOWED BY THREE OR FOUR NUMBERS, TO UNIQUELY IDENTIFY THE SPRINKLER AS TO K-FACTOR (ORIFICE SIZE) OR ORIFICE SHAPE, DEFLECTOR CHARACTERISTIC PRESSURE RATING, AND THERMAL SENSITIVITY.

STOCK OF SPARE SPRINKLERS - NFPA 13 - 6.2.9:

6.2.9.1 A SUPPLY OF AT LEAST SIX SPARE SPRINKLERS (NEVER FEWER THAN SIX) SHALL BE MAINTAINED ON THE PREMISES SO THAT ANY SPRINKLERS THAT HAVE OPERATED OR BEEN DAMAGED IN ANY WAY CAN BE PROMPTLY REPLACED.
6.2.9.2 THE SPRINKLERS SHALL CORRESPOND TO THE TYPES AND TEMPERATURE RATINGS OF THE SPRINKLERS IN THE PROPERTY.
6.2.9.3 THE SPRINKLERS SHALL BE KEPT IN A CABINET LOCATED WHERE THE TEMPERATURE TO WHICH THEY ARE SUBJECTED WILL AT NO TIME EXCEED 100°F (38°C).
6.2.9.4 WHERE DRY SPRINKLERS OF DIFFERENT LENGTHS ARE INSTALLED, SPARE DRY SPRINKLERS SHALL NOT BE REQUIRED PROVIDED THAT A MEANS OF RETURNING THE SYSTEM TO SERVICE IS FURNISHED.
6.2.9.5 THE STOCK OF SPARE SPRINKLERS SHALL INCLUDE ALL TYPES AND RATINGS INSTALLED AND SHALL BE AS FOLLOWS:
(1) FOR PROTECTED FACILITIES HAVING UNDER 300 SPRINKLERS - NO FEWER THAN SIX SPRINKLERS
(2) FOR PROTECTED FACILITIES HAVING 300 TO 1000 SPRINKLERS - NO FEWER THAN 12 SPRINKLERS
(3) FOR PROTECTED FACILITIES HAVING OVER 1000 SPRINKLERS - NO FEWER THAN 24 SPRINKLERS
6.2.9.6 ONE SPRINKLER WRENCH AS SPECIFIED BY THE SPRINKLER MANUFACTURER SHALL BE PROVIDED IN THE CABINET FOR EACH TYPE OF SPRINKLER INSTALLED TO BE USED FOR THE REMOVAL AND INSTALLATION OF SPRINKLERS IN THE SYSTEM.

ABOVEGROUND PIPE AND TUBE - NFPA 13 - 6.3:

6.3.1.1 PIPE OR TUBE SHALL MEET OR EXCEED ONE OF THE STANDARDS IN TABLE 6.3.1.1 OR BE IN ACCORDANCE WITH 6.3.E.
A. PIPING 1" - 2" IN DIAMETER STEEL THREADED PIPE TO BE THINWALL ALLIED XL PIPE OR APPROVED EQUIVALENT.
B. PIPING 2½" - 6" IN DIAMETER WELDED PIPE TO BE BLACK SCHEDULE 10 OR APPROVED EQUIVALENT

FITTINGS - NFPA 13 - 6.4:

6.4.1 FITTINGS USED IN SPRINKLER SYSTEMS SHALL MEET OR EXCEED THE STANDARDS IN TABLE 6.4.1 OR BE IN ACCORDANCE WITH 6.4.2 OR 6.4.3.
A. THREADED FITTINGS TO BE CAST IRON
B. GROOVED FITTINGS SHALL BE GRINNELL OR EQUIVALENT

VALVES - NFPA 13 - 6.7:

6.7.1.1 WHEN WATER PRESSURES EXCEED 175 PSI (12.1 BAR), VALVES SHALL BE USED IN ACCORDANCE WITH THEIR PRESSURE RATINGS.
6.7.1.2 LISTED INDICATING VALVES SHALL NOT CLOSE IN LESS THAN 5 SECONDS WHEN OPERATED AT MAXIMUM POSSIBLE SPEED FROM THE FULLY OPEN POSITION.
6.7.1.3 UNLESS THE REQUIREMENTS OF 6.7.1.3.1, 6.7.1.3.2, OR 6.7.1.3.3 ARE MET, ALL VALVES CONTROLLING CONNECTIONS TO WATER SUPPLIES AND TO SUPPLY PIPES TO SPRINKLERS SHALL BE LISTED INDICATING VALVES.
6.7.1.3.1 A LISTED UNDERGROUND GATE VALVE EQUIPPED WITH A LISTED INDICATOR POST SHALL BE PERMITTED.
6.7.1.3.2 A LISTED WATER CONTROL VALVE ASSEMBLY WITH A RELIABLE POSITION INDICATION CONNECTED TO A REMOTE SUPERVISORY STATION SHALL BE PERMITTED.
6.7.1.3.3 A NON-INDICATING VALVE, SUCH AS AN UNDERGROUND GATE VALVE WITH APPROVED ROADWAY BOX, COMPLETE WITH T-WRENCH, AND WHERE ACCEPTED BY THE AUTHORITY HAVING JURISDICTION, SHALL BE PERMITTED.
6.7.2 WAFER-TYPE VALVES WITH COMPONENTS THAT EXTEND BEYOND THE VALVE BODY SHALL BE INSTALLED IN A MANNER THAT DOES NOT INTERFERE WITH THE OPERATION OF ANY SYSTEM COMPONENTS.
6.7.3 DRAIN VALVES AND TEST VALVES SHALL BE APPROVED.

FIRE DEPARTMENT CONNECTIONS - NFPA 13 - 8.8:

8.8.1 UNLESS THE REQUIREMENTS OF 8.8.1.1, 8.8.1.2, OR 8.8.1.3 ARE MET, THE FIRE DEPARTMENT CONNECTION(S) SHALL CONSIST OF TWO 2½ IN. (65mm) CONNECTIONS USING NH INTERNAL THREADED SWIVEL FITTINGS WITH "2.5-7.5 NH STANDARD THREAD," AS SPECIFIED IN NFPA 1963, STANDARD FOR FIRE HOSE CONNECTIONS.
8.8.1.1 WHERE LOCAL FIRE DEPARTMENT CONNECTIONS DO NOT CONFORM TO NFPA 1963, STANDARD FOR FIRE HOSE CONNECTIONS, THE AUTHORITY HAVING JURISDICTION SHALL BE PERMITTED TO DESIGNATE THE CONNECTION TO BE USED.
8.8.1.2 THE USE OF THREADLESS COUPLINGS SHALL BE PERMITTED WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND WHERE LISTED FOR SUCH USE.
8.8.1.3 A SINGLE-OUTLET FIRE DEPARTMENT CONNECTION SHALL BE ACCEPTABLE WHERE PIPED TO A 3 IN. (80mm) OR SMALLER RISER.
8.8.2 FIRE DEPARTMENT CONNECTIONS SHALL BE EQUIPPED WITH APPROVED PLUGS OR CAPS, PROPERLY SECURED AND ARRANGED FOR EASY REMOVAL BY FIRE DEPARTMENTS.
8.8.3 FIRE DEPARTMENT CONNECTIONS SHALL BE OF AN APPROVED TYPE.
A. FIRE DEPARTMENT CONNECTION TO BE LOCATED 18" TO 48" ABOVE GRADE

9.1 HANGERS:

9.1.1.1 UNLESS THE REQUIREMENTS OF 9.1.1.2 ARE MET, TYPES OF HANGERS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 9.1.
A. HANGER SPACING TO BE PER NFPA 13 (HANGER LEGEND SHOWN ON DRAWING)
B. HANGERS TO BE PER DETAIL SHOWN ON DRAWING.

10 UNDERGROUND PIPING:

10.1.1 PIPING SHALL BE LISTED FOR FIRE PROTECTION SERVICE AND SHALL COMPLY WITH THE STANDARDS IN TABLE 10.1.1.
10.1.2 STEEL PIPING SHALL NOT BE USED FOR GENERAL UNDERGROUND SERVICE UNLESS SPECIFICALLY LISTED FOR SUCH SERVICE.
10.1.3 WHERE EXTERNALLY COATED AND WRAPPED AND INTERNALLY GALVANIZED STEEL PIPE SHALL BE PERMITTED TO BE USED BETWEEN THE CHECK VALVE AND THE OUTSIDE HOSE COUPLING FOR THE FIRE DEPARTMENT CONNECTION.
A. UNDERGROUND PIPE TO BE DR-14 C-900, U.N.O.
B. ALL PIPE TO BE INSTALLED A MIN. OF 30" BELOW GRADE OR 36" BELOW DRIVEWAYS (GRADE TO BE VERIFIED IN FIELD).
C. ALL PIPING INSTALLATION TO MEET REQUIREMENTS OF NFPA 24 & LOCAL CODES.
D. ALL UNDERGROUND PIPE TO FLUSHED AND TESTED AT 200PSI FOR 2 HOURS BEFORE CONNECTING TO THE BUILDING SYSTEM.
E. ALL UNDERGROUND FIRE SERVICE PIPE TO BE INSTALLED BY A CERTIFIED CONTRACTOR.
F. UNDERGROUND PIPING TO USE MECHANICAL JOINTS AND BE RESTRAINED WITH MEGA-LUGS.

FIRE SPRINKLER SHEET INDEX

FIRE SPRINKLER SCOPE OF WORK

1. SCOPE OF WORK IS TO PROVIDE ENTIRE NEW SCHOOL BUILDING WITH A COMPLETE FIRE SPRINKLER WET SYSTEM (LIGHT HAZARD WITH INCIDENTAL ORDINARY GROUP 1 HAZARD AREAS).
2. CONTRACTOR SHALL ORDER A FLOW TEST AND REPORT RESULTS BACK TO ENGINEER PRIOR TO HYDRAULIC CALCULATIONS.
3. COORDINATE HEAD STYLE, COLOR, AND FINAL LOCATIONS WITH ARCHITECT.
4. COORDINATE WITH FIRE ALARM SYSTEM.

APPLICABLE BUILDING CODES

FLORIDA BUILDING CODE, 2010
FLORIDA FIRE PROTECTION CODE 2010
NFPA 1, 2009 FLORIDA EDITION
NFPA 13, 2010 EDITION
NFPA 101, 2009 FLORIDA EDITION

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FLORIDA P.E. NO. 73999
MECHANICAL ENGINEER
CERT. OF AUTH. 3434
DATE 9.19.2014

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RIVIERA BEACH MARITIME ACADEMY
RIVIERA BEACH, FLORIDA
CONTRUCTION DOCUEMENTS

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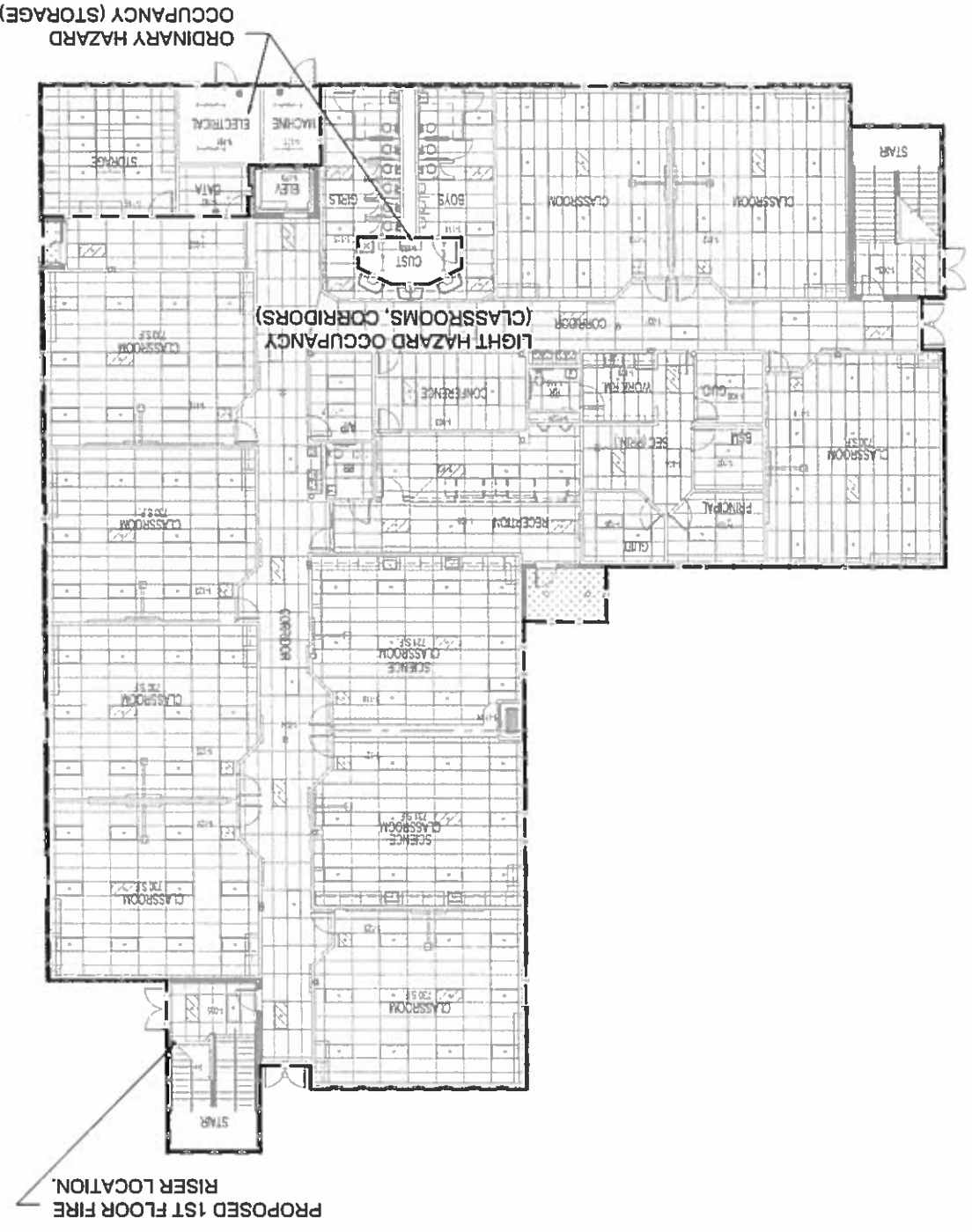
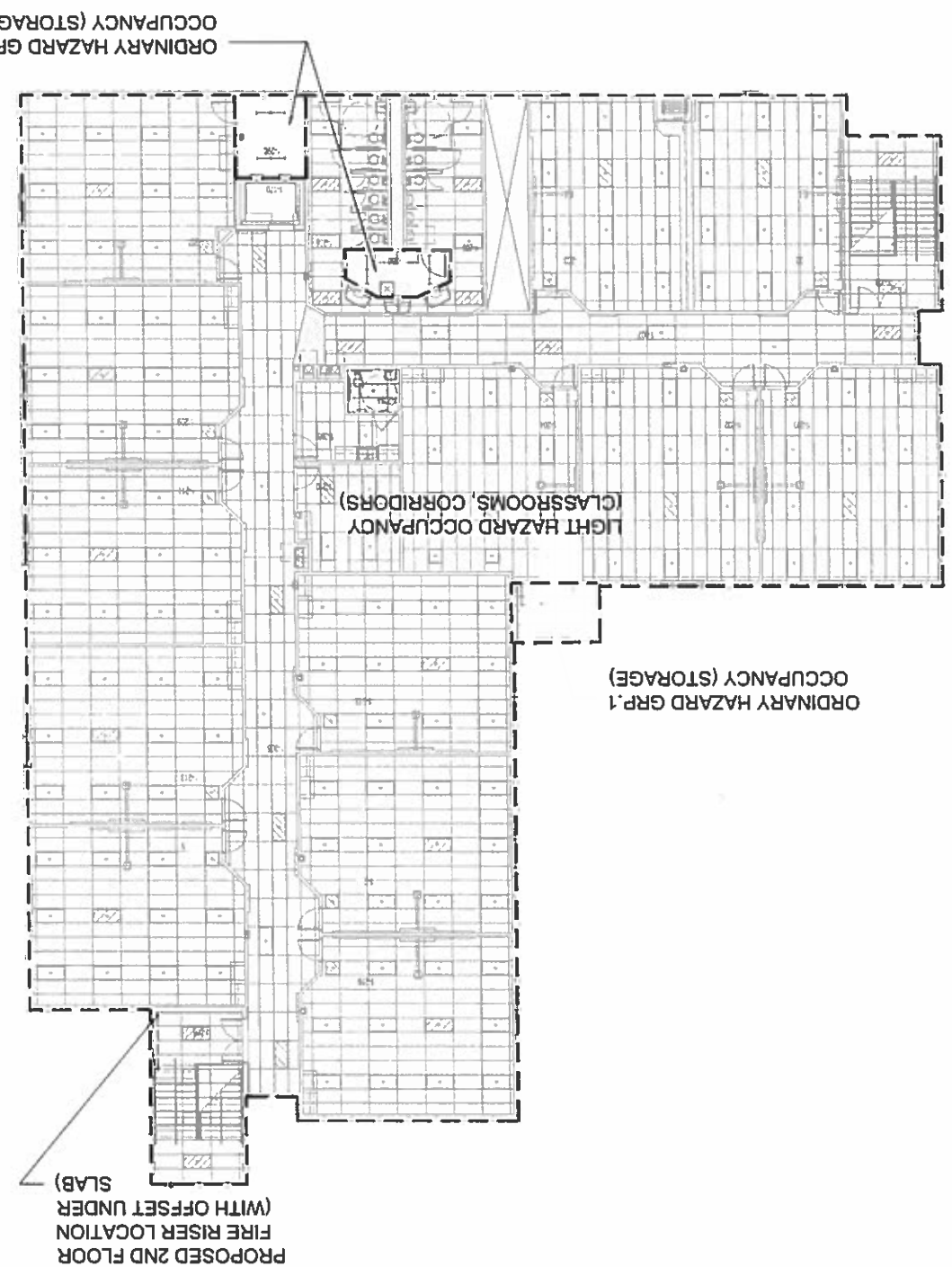
1 FIRE SPRINKLER OCCUPANCY HAZARD ZONE MAPS - 1st FLOOR
SCALE: 3/32" = 1'-0"



2 FIRE SPRINKLER OCCUPANCY HAZARD ZONE MAPS - 2nd FLOOR
SCALE: 3/32" = 1'-0"



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MICHAEL J. BISHOP
FLORIDA P.E. NO. 7999
MECHANICAL ENGINEER
DATE 8.19.2014

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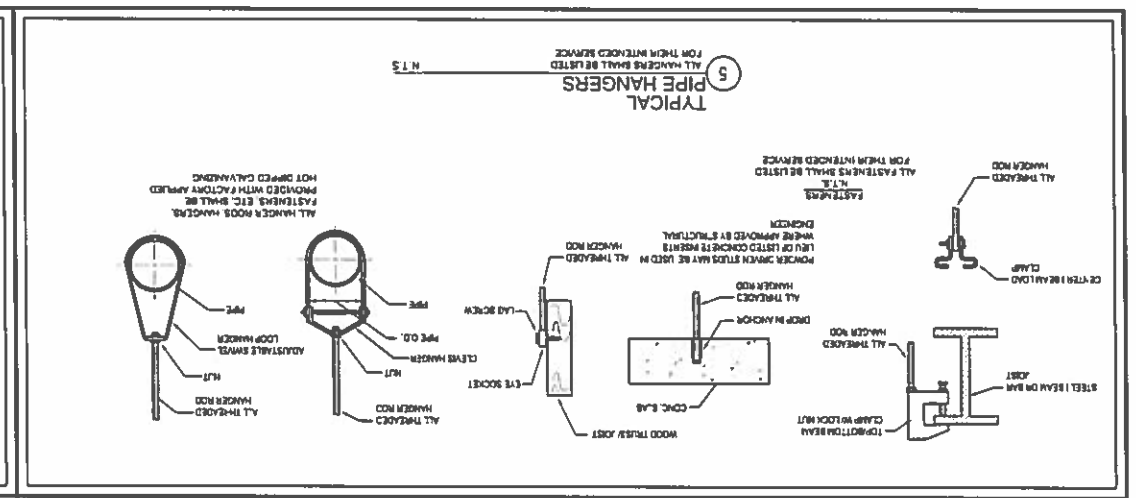

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Rene Tercilla AIA REFP

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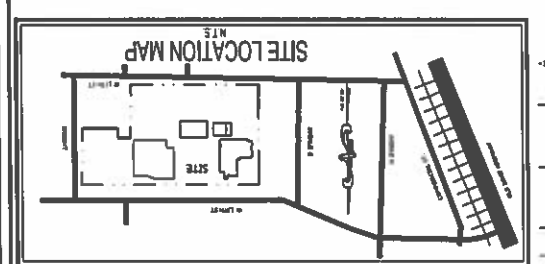
SITE PLAN DATA

PARCEL CONTROL NUMBER:	72-43-43-04-03-178
NAME OF PROJECT:	NEW CLASSROOM BUILDING RIVIERA BEACH MARITIME ACADEMY
ADDRESS:	2311 W 11TH ST RIVIERA BEACH, FL. 33404
LEGAL DESCRIPTION:	
ZONING DESIGNATION:	C (formerly F-Indus.)
FUTURE LAND USE DESIGNATION:	C (formerly F-Indus.)
PROPOSED USE:	C (formerly F-Indus.)
TOTAL SITE AREA:	4.7 ACRES/ 201,912 SF
PARKING PROVIDED:	
EXISTING SPACES (W/ 4 ADA SPACES) =	89 SPACES
NEW SPACES (W/ 2 ADA SPACES) =	16 SPACES
TOTAL =	105 SPACES
BUILDING AREA CALCULATIONS:	
NEW GROSS ENCLOSED BUILDING:	
1ST NEW EDUCATION BUILDING 1ST FLOOR =	13,359 SF
2ND NEW EDUCATION BUILDING 1ST FLOOR =	14,140 SF
SUB TOTAL 1ST:	27,499 SF
EXIST. IMP. BLDGS.:	
1ST EXIST. EDUCATION BUILDING =	3492 SF
2ND EXIST. EDUCATION BUILDING =	7023 SF
3RD EXIST. BOYS & GIRLS CLUB =	22,774 SF
GRAND TOTAL SF=	60,997 SF
SUB-TOTAL SF=	23,299 SF
NEW 27,499 SF / EXISTING SF 23,299 SF=	8.3%
BASE AREA CALCULATIONS:	
TOTAL SITE AREA:	4.7 ACRES/ 201,912SF
LANDSCAPE AREA	92,999 SF
EXISTING SIDE WALKS	7779 SF
NEW SIDEWALKS	7991 SF
EXISTING PAVED AREA	49,304 SF
DEDUCTION AREAS	49,304 SF
NEW PAVED AREA	7149 SF
TOTAL BUILDING COVERAGE (DOES NOT INCLUDED 2ND FLR.)	27,499 SF = 13%
TOTAL IMPERVIOUS AREA	107,303 SF = 53.1%
BUILDING AND PAVED AREAS (27,499 SF BLDG. + 89,516 SF HARDSCAPE)	
TOTAL PERVIOUS AREA	97,597 SF = 47.9%

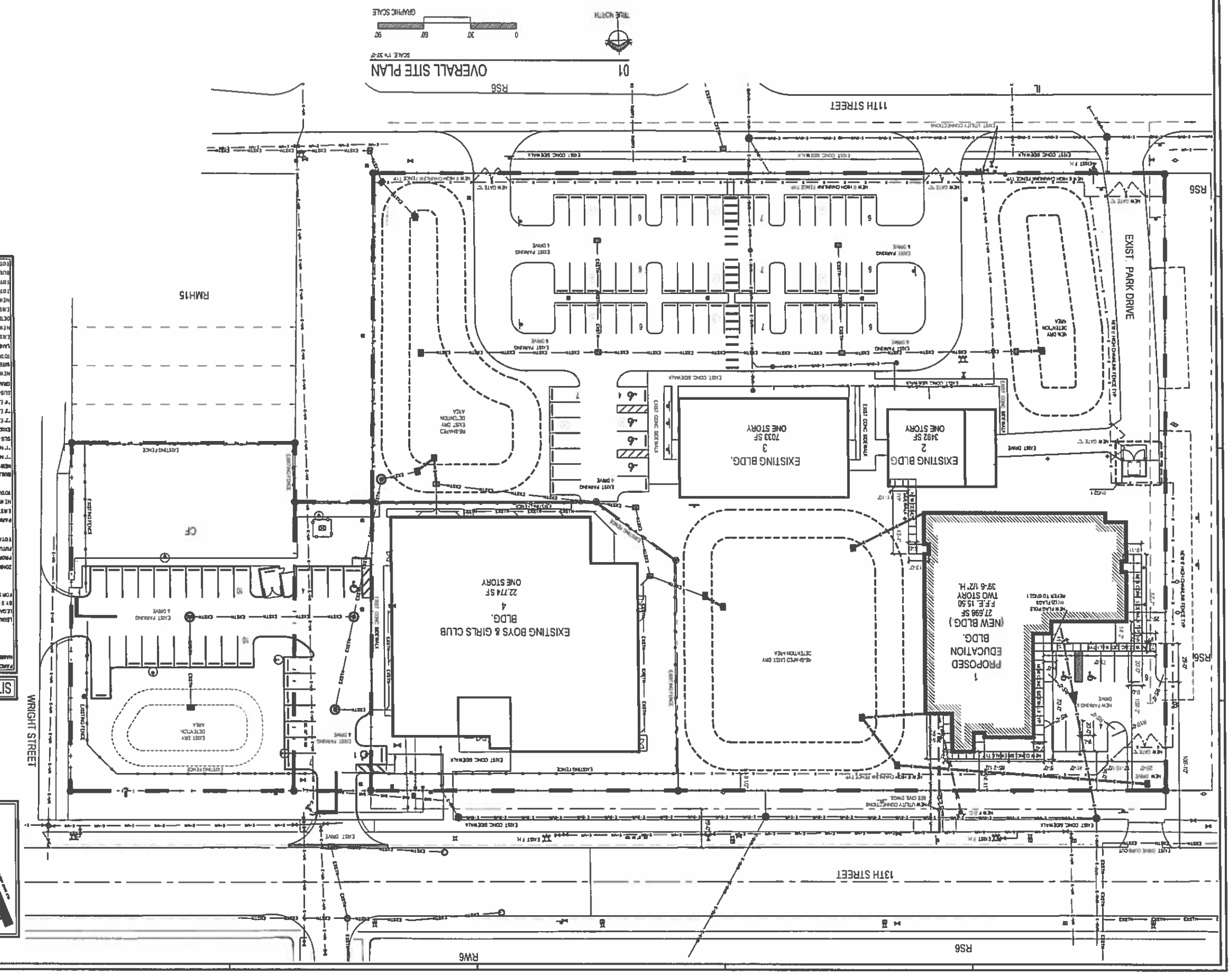
SITE LOCATION MAP

N.T.S.



01 OVERALL SITE PLAN

SCALE: 1"= 30'-0"



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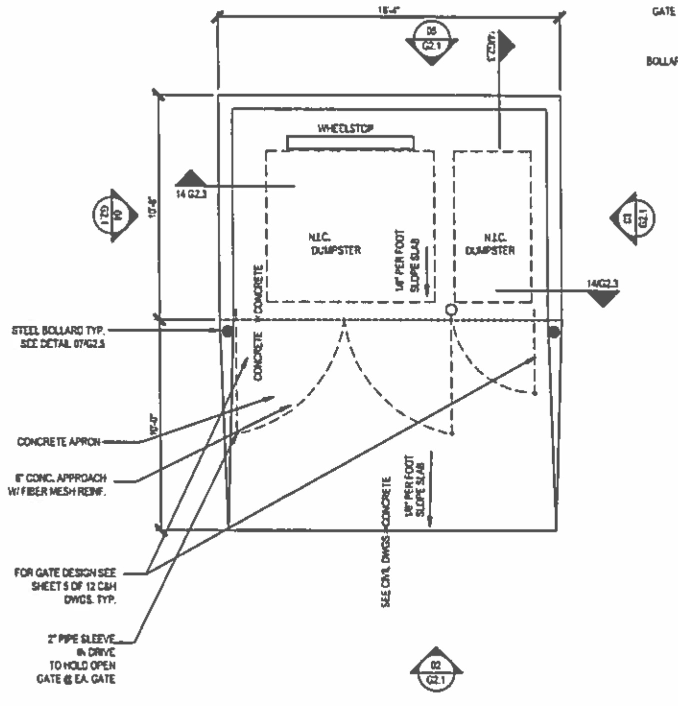
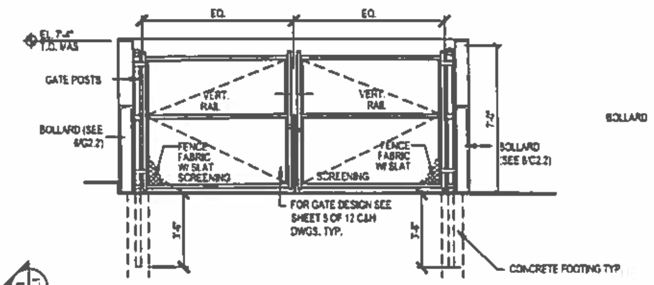


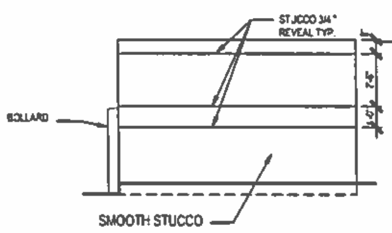
01 DUMPSTER ENCLOSURE PLAN

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



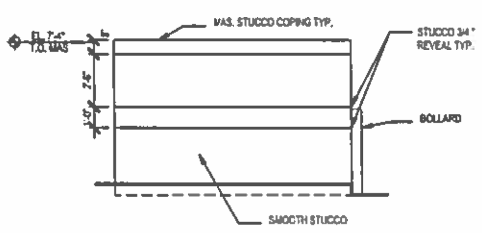
02 DUMPSTER ENCLOSURE ELEVATION

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



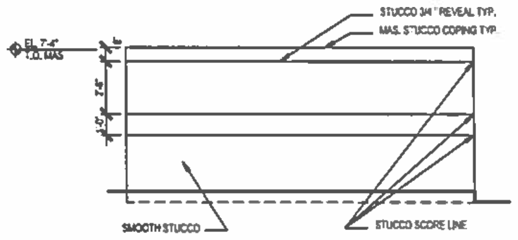
03 DUMPSTER ENCLOSURE ELEVATION

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



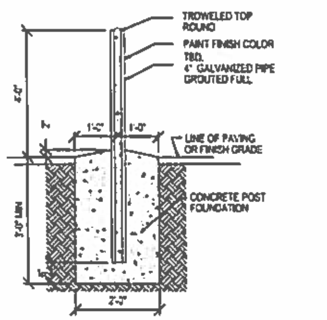
04 DUMPSTER ENCLOSURE ELEVATION

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



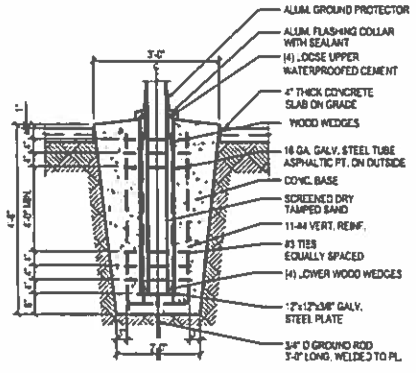
05 DUMPSTER ENCLOSURE ELEVATION

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



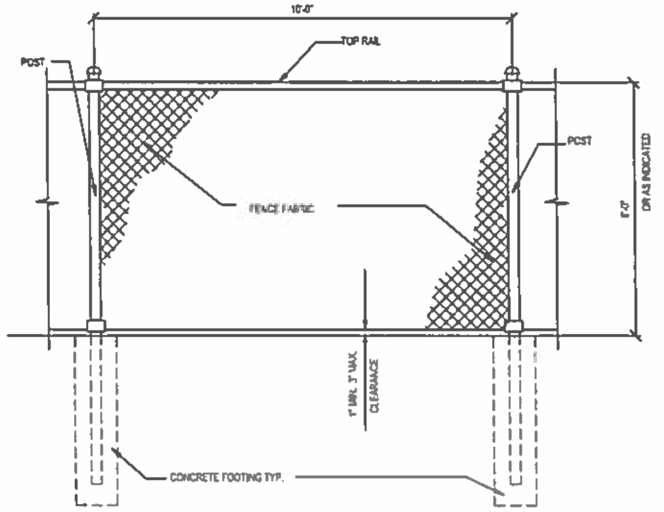
06 BOLLARD DETAIL

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



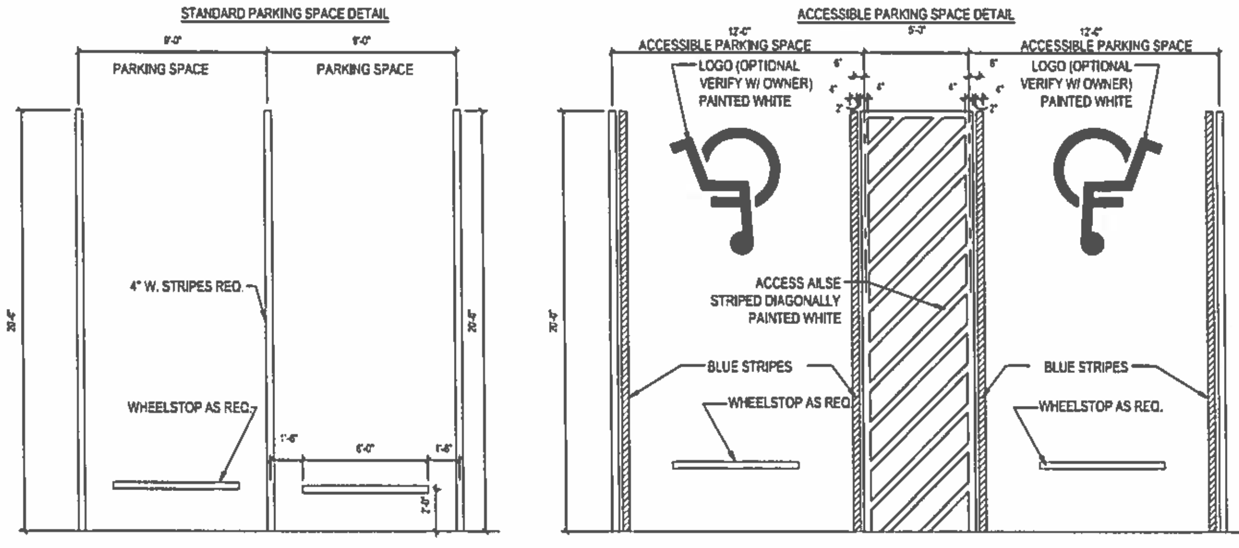
07 FLAG POLE DETAIL

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



08 TYPICAL FENCE DETAIL

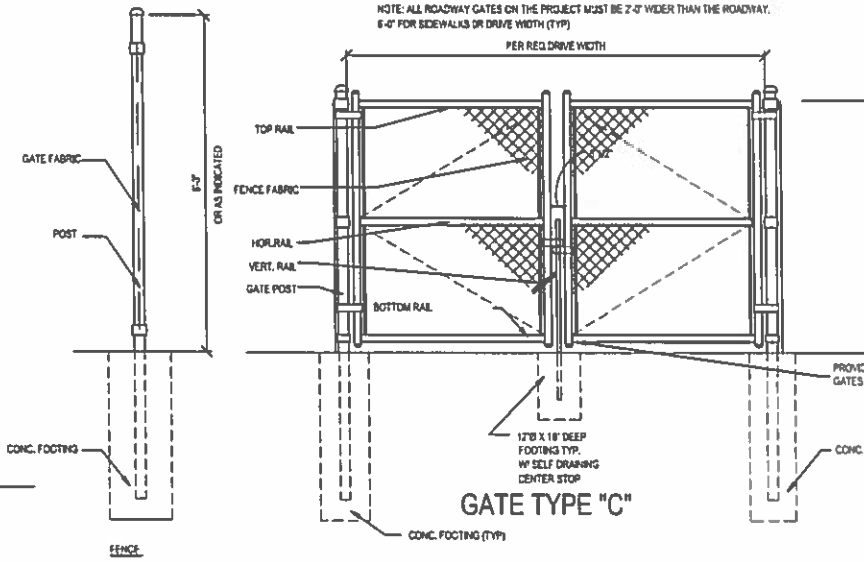
SCALE: 1/2" = 1'-0"



84" TO BOTT. OF SIGN SIGNAGE MUST BEAR THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND CAPTION "PARKING BY DISABLED PERMIT ONLY" AND INDICATE THE PENALTY FOR ILLEGAL USE OF THE SPACE.

10 TYPICAL PARKING SPACE DETAILS

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

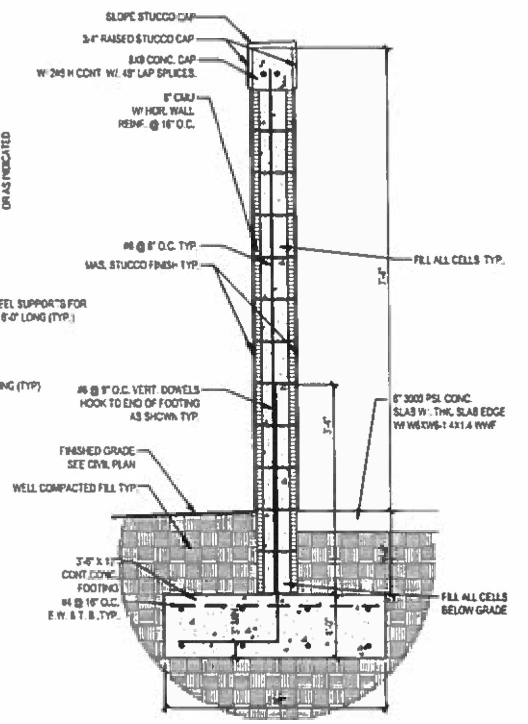


11 TYPICAL FENCE DETAILS

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

09 SIGN DETAIL

SCALE: 1" = 1'-0"



12 WALL SECTION @ DUMPSTER

SCALE: 3/4" = 1'-0"

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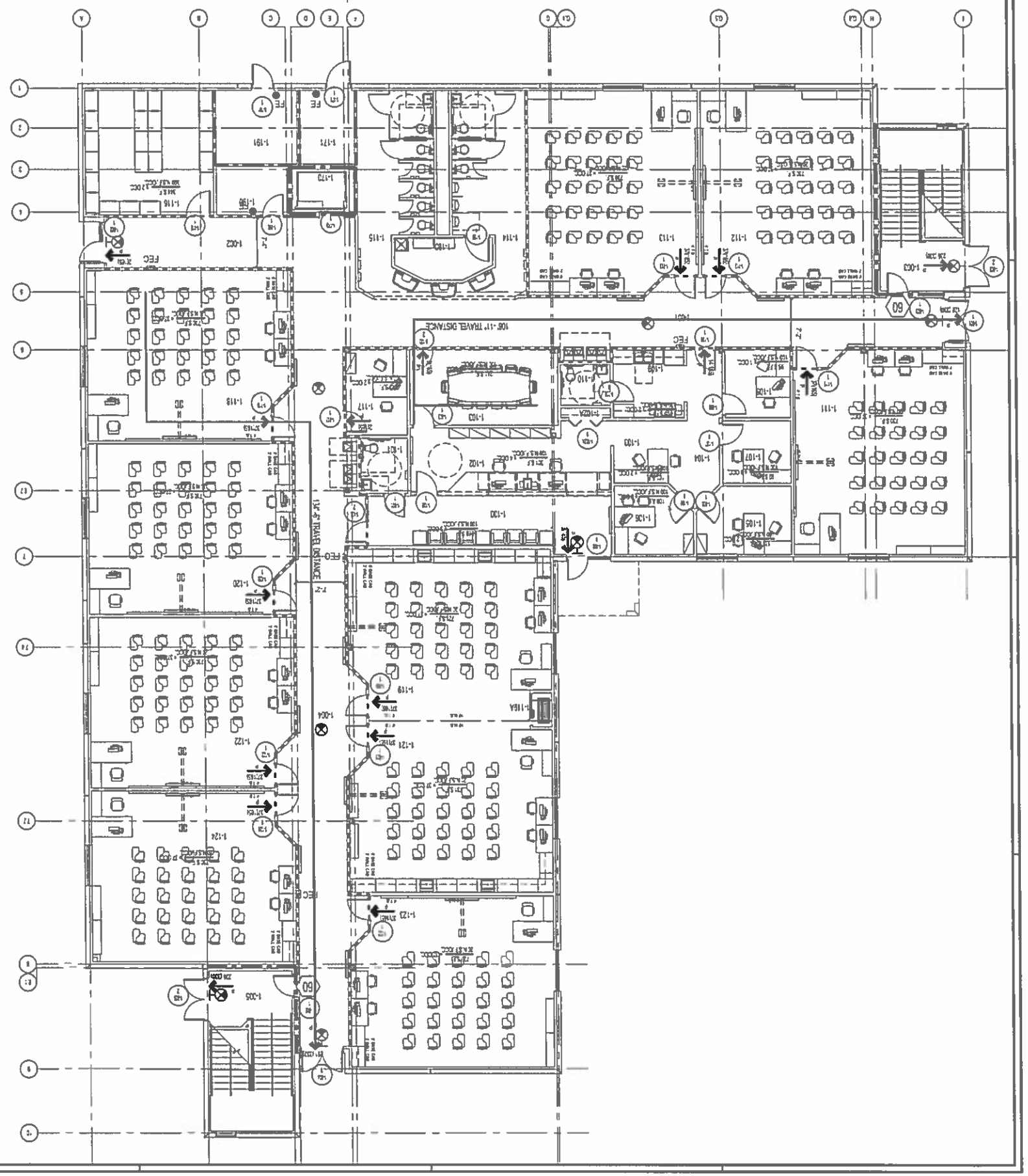
01 1st FLOOR LIFE SAFETY PLAN

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



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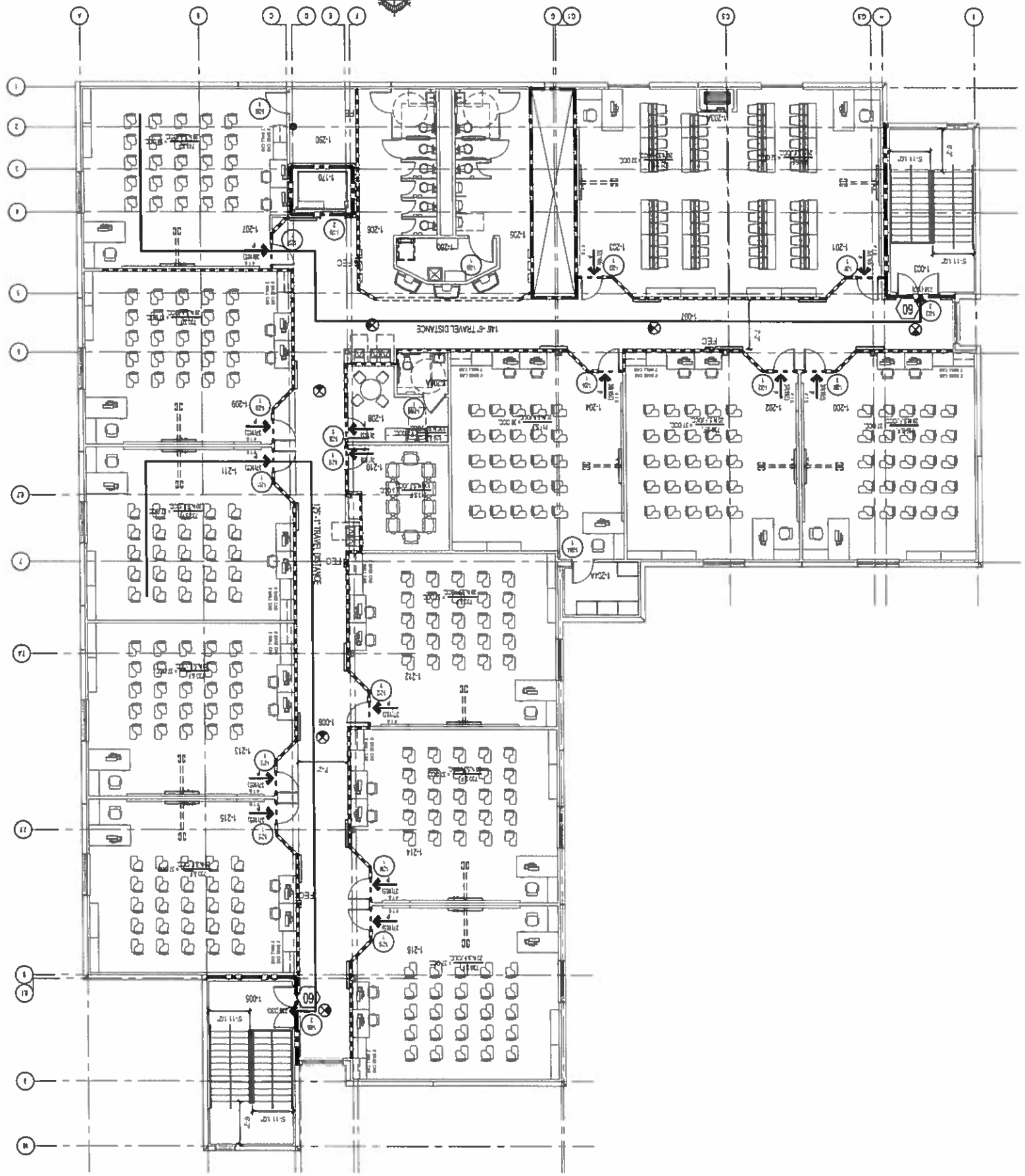
01 2ND FLOOR LIFE SAFETY PLAN

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



GENERAL MECHANICAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE AND OPERABLE SYSTEM IN ACCORDANCE WITH THESE DOCUMENTS, THE APPLICABLE BUILDING CODES AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST EDITION OF THE FOLLOWING PUBLICATIONS, FLORIDA BUILDING CODE-MECHANICAL, SMACNA, ASHRAE, NFPA 90A, 90B, 91 & ANSI B-9.1 MECHANICAL REFRIGERATION.
2. THE MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, PLUMBING, ELECTRICAL AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CHANGES IN DUCTWORK SIZE AND ROUTE WILL BE REQUIRED TO AVOID STRUCTURAL, PLUMBING, FIRE SPRINKLER AND ARCHITECTURAL BUILDING FEATURES. DUCTWORK CHANGES MAY BE MADE BY CONTRACTOR USING EQUIVALENT SIZED DUCT. CONTACT ENGINEER IN WRITING IF MECHANICAL SYSTEMS WILL NOT FIT IN AREA ALLOTTED.
3. ALL INSTALLATIONS LOCATED WITHIN 3,000 FT FROM THE OCEAN SHALL UTILIZE NON-FERROUS MATERIALS FOR ALL OUTDOOR EXPOSED SUPPORTS, STANDS, FASTENERS, STRAPS, TIE DOWNS, CABLES, ANCHORS, SCREWS, ETC.
4. THE CONTRACTOR SHALL BE HELD TO HAVE VERIFIED ALL EXISTING CONDITIONS, INCLUDING REVIEW OF AS BUILT DOCUMENTATION IF APPLICABLE, PRIOR TO BIDDING, ORDERING, FABRICATION OR INSTALLATION OF MATERIALS OR EQUIPMENT ON THIS PROJECT.
5. THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.
6. ENGINEER OF RECORD RECOGNIZES THE GENERAL CONTRACTOR AND ALL OTHER SUB-CONTRACTORS TO BE LICENSED IN THE STATE OF FLORIDA. GENERAL CONTRACTOR SHALL CONSIDER THE PROJECT AS ONE SET OF DOCUMENTS. GENERAL CONTRACTOR SHALL PROVIDE AN ENTIRE SET OF DOCUMENTS SHOWING ALL TRADES TO EACH SUBCONTRACTOR PRIOR TO BIDDING AND CONSTRUCTION. GENERAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS TO INFORM ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR POSSIBLE CONFLICTS ON THE DOCUMENTS PRIOR TO SUBMITTING FINAL BID AND COMMENCING ANY WORK. CONTRACTOR SHALL MAKE HIMSELF AVAILABLE FOR REVIEWING DOCUMENTS WITH ARCHITECT/ENGINEER UPON REQUEST.
7. THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES.
8. THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH "AS-BUILT" REDLINE DRAWINGS, UPON COMPLETION OF THE PROJECT AND AUTOCAD SHOP DRAWING FILES (IF APPLICABLE).
9. CONTRACTOR SHALL SUBMIT, FOR APPROVAL ELECTRONIC PDF COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT. ALL MATERIAL SHALL BE NEW OF U.S. MANUFACTURER OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED TRADESMEN.
10. THE GENERAL CONTRACTOR SHALL PROVIDE IN WRITING AND ON COMPANY LETTER HEAD, ALL ITEMS VALUE ENGINEERED OR OMITTED FROM PROJECT BIDS. THIS DOCUMENT SHALL HAVE DETAILED DESCRIPTION AND TRANSPARENCY OF ALL ITEMS IN EACH DISCIPLINE AND FOR EACH TRADE. INFORMATION SHALL BE PROVIDED TO ARCHITECT AND ENGINEER FOR REVIEW PRIOR TO SUBMITTING FINAL BID. CONTRACTOR SHALL MAKE HIMSELF AVAILABLE FOR REVIEWING DOCUMENTS WITH ARCHITECT/ENGINEER/OWNER UPON REQUEST.

DUCTWORK:

11. ALL LOW PRESSURE SUPPLY DUCTS DOWNSTREAM OF THE VAV'S & RETURN DUCT WORK SHALL BE CONSTRUCTED OF RIGID GLASS-FIBER BOARDS WITH EDGE TREATMENT. FACTORY MOLDED AND FACED ON ONE SIDE WITH FIRE RETARDING, REINFORCED, FOIL-SCRIM-KRAFT BARRIER EQUAL TO CERTAINTEED ULTRA-DUCT™ BLACK DUCT BOARD. THE BOARD SHALL BE UL LISTED AND LABELED AS COMPLYING WITH UL 181 CLASS 1. THE FLEXURAL RIGIDITY (Eb) SHALL BE 475, STANDARD DUTY. 1" (R-4.3) FOR USE IN CONDITIONED SPACE AND 800 1-1/2" (R-6) FOR USE IN UNCONDITIONED SPACE. INSTALL DUCTS AND FITTINGS IN ACCORDANCE NAIMA'S "FIBROUS GLASS DUCT CONSTRUCTION STANDARDS" OR SMACNA'S "FIBROUS GLASS DUCT CONSTRUCTION STANDARDS".
12. ALL MEDIUM PRESSURE SUPPLY DUCTS SHALL BE CONSTRUCTED OF SINGLE WALL SPIRAL GALVANIZED SHEET STEEL FABRICATED FOR 4" WG ESP WITH EXTERNAL R-6 DUCT WRAP INSULATION. CONFORMING TO ASTM A90, A568, A653, A924. FABRICATE DUCTS, ELBOWS, TRANSITIONS, OFFSETS, BRANCH CONNECTIONS AND OTHER CONSTRUCTIONS ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE". COMPLY WITH REQUIREMENTS FOR METAL THICKNESS, REINFORCING TYPES AND INTERVALS, TIE-ROD APPLICATIONS, AND JOINT TYPES AND INTERVALS.
13. FLEXIBLE DUCT SHALL COMPLY UL 181 CLASS 1, FACTORY FABRICATED, INSULATED, ROUND DUCT, WITH A POLYETHYLENE FILM OUTER JACKET ENCLOSING GLASS FIBER INSULATION (R-8) AROUND A CONTINUOUS POLYETHYLENE INNER LINER. THE INNER LINER SHALL HAVE AN ENCAPSULATED STEEL WIRE HELIX. FLEXIBLE DUCT SHALL BE INSTALLED IN ACCORDANCE WITH NAIMA'S "FIBROUS GLASS DUCT CONSTRUCTION STANDARDS". INSULATION SHALL BE 1" (R-4.3) FOR USE IN CONDITIONED SPACE AND 1 1/2" (R-6) FOR USE IN UNCONDITIONED SPACE. LIMIT FLEXIBLE DUCT RUNS TO 15 FEET. PROVIDE TRANSITION BOXES AS NEEDED.
14. ALL OUTSIDE AIR AND EXHAUST DUCTS AND FITTINGS SHALL BE SHALL BE CONSTRUCTED OF GALVANIZED SHEET STEEL, LOCK- FORMING QUALITY: ASTM A653/A 653M, COATING DESIGNATION, MIL-PHOSPHATIZED FINISH FOR SURFACES OF DUCT EXPOSED TO VIEW. FABRICATE DUCTS, ELBOWS, TRANSITIONS, OFFSETS, BRANCH CONNECTIONS AND OTHER CONSTRUCTIONS ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE". COMPLY WITH REQUIREMENTS FOR METAL THICKNESS, REINFORCING TYPES AND INTERVALS, TIE-ROD APPLICATIONS, AND JOINT TYPES AND INTERVALS.
15. EXTERNAL DUCT INSULATION SHALL BE A FLEXIBLE GLASS FIBER BLANKET EQUAL TO JOHNS MANVILLE MICROLITE XG FORMALDEHYDE-FREE FIBER GLASS DUCT WRAP. INSULATION SHALL BE FURNISHED WITH A FACTORY-APPLIED FACING WITH A COMPOSITE UL FHC RATING OF 25/50. WRAP INSULATION AROUND DUCT WITH FACING TO THE OUTSIDE SO THE 2" (51 MM) FLAP COMPLETELY OVERLAPS FACING AND INSULATION AT THE OTHER END OF STRETCH-OUT. INSULATION SHALL BE SNUGLY BUTTED, SECURE SEAMS WITH OUTWARD CLINCHING STAPLES PLACED APPROXIMATELY 6" (152 MM) ON CENTER. IF REQUIRED, SEAL SEAM WITH PRESSURE-SENSITIVE TAPE DESIGNED FOR USE WITH DUCT INSULATION. INSULATION ON THE UNDERSIDE OF DUCTS SPANNING 24" (610 MM) OR GREATER SHALL BE SECURED WITH MECHANICAL FASTENERS AND SPEED CLIPS SPACED APPROXIMATELY 18" (457 MM) ON CENTER. INSULATION SHALL BE 1" (R-4.3) FOR USE IN CONDITIONED SPACE AND 1 1/2" (R-6) FOR USE IN UNCONDITIONED SPACE, SHALL COMPLY WITH ASTM E84.
16. ALL INSULATION WILL HAVE FIRE/SMOKE RATING LESS THAN 25/50.
17. LAVATORY EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS. ALL OUTSIDE AIR AND EXHAUST AIR DUCTS LOCATED IN AREAS WERE DEWPOINT CONDITIONS COULD OCCUR SHALL BE INSULATED WITH EXTERNAL BLANKET INSULATIONS WITH A MINIMUM OF R-6.
18. ALL OUTSIDE AIR DUCT INTAKES SHALL BE LOCATED BEYOND 10'-0" OF ANY VENTILATION OUTLET OR SANITARY VENT PIPE AND SHALL BE SCREENED WITH A CORROSION RESISTANT MATERIAL NOT LARGER THAN 1/2" MESH. ALL OUTSIDE AIR INTAKES SHALL BE MARKED WITH A PERMANENT PLATE TITLED "INTAKE FOR UNIT NUMBER(S)" PER FMC 2010, 401.3.1. (E.G. "INTAKE FOR AHU-1" "INTAKE FOR FCU-1-1" ETC.)
19. ALL EXHAUST AIR FANS AND VENTS SHALL BE LOCATED BEYOND 10'0" OF ANY OUTSIDE AIR INTAKE OR FAN. ALL EXHAUST AIR FANS SHALL BE MARKED WITH A PERMANENT PLATE TITLED "EXHAUST FAN FOR UNIT NUMBER(S) OR AREA" (E.G. "EF-1 FOR LOCKER ROOM", "EF-1-1 FOR GRD FL TOILET". ETC.)
20. ALL DUCT DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS.
21. ALL AIR DEVICES (E.G., DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE OFF WHITE BAKED ENAMEL FINISH OR AS SPECIFIED BY ARCHITECT. PROVIDE STEEL GRILLES FOR FIRE RATED DIFFUSERS IN FIRE RATED CEILINGS. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS. PROVIDE MANUAL VOLUME DAMPERS WITH EXTRACTOR AT ALL FLEX TAKE-OFFS. PROVIDE REMOTE, CABLE OPERATED VOLUME DAMPERS IN INACCESSIBLE AND HARD CEILING AREAS. "YOUNG REGULATOR" OR EQUAL. COMPLY WITH FMC 2010, 601.4 AND 603.17 FOR BALANCED AIR FLOW.
22. ALL BRANCH TAKE-OFFS TO BE PROVIDED W/ MANUAL VOLUME DAMPERS. ALL ELBOWS AND TEE'S MUST BE FURNISHED W/TURNING VANES. PROVIDE MANUAL VOLUME DAMPERS WITH EXTRACTOR AT ALL FLEX TAKE-OFFS.

THERMOSTATS/CONTROLS:

23. CONTRACTOR SHALL PROVIDE A FULLY INTEGRATED BUILDING CONTROL SYSTEM TO CONTROL HVAC SYSTEM AND ALL OTHER SYSTEMS SHOWN ON CONTROL PLANS. PROVIDE BMS/EMS SYSTEMS AND/OR INTERFACES/GATEWAYS FOR ALL HVAC EQUIPMENT (WHERE APPLICABLE) TO BE CONNECTED TO CONTROL SYSTEMS. SYSTEM SHALL BE SIZED TO PROVIDE FUTURE EXPANSION AND ADDITIONAL CONTROL POINTS. MECHANICAL CONTRACTOR SHALL COORDINATE WITH CONTROL CONTRACTOR AND ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL CONTROL REQUIREMENTS FOR SYSTEM. (E.G. POWER SERVICE, PANELS, POWER WIRING, CONTROL WIRING, CONDUITS, TESTING, ETC.) CONTRACTOR SHALL SUBMIT CONTROL DRAWINGS AND SPECIFICATIONS FOR ENGINEERS APPROVAL PRIOR TO INSTALLATION. PROVIDE FINALIZED CONTROL PLANS AND SYSTEM TRAINING TO OWNER/OPERATOR PRIOR TO OWNER ACCEPTANCE.
24. CONTRACTOR SHALL PROVIDE OWNER/BUILDING MANAGER/BUILDING ENGINEER WITH 40 HOURS OF ONSITE AND/OR OFF SITE TRAINING IN THE CONTROL AND OPERATION OF THE HVAC SYSTEM. TIME AND LOCATION TO BE DETERMINED BY CLIENT.
25. THERMOSTATS FOR VAV BOXES SHALL BE DDC. PROVIDE ROOM THERMOSTAT/SENSOR WITH OVERRIDE.
26. REFRIGERANT LINES SHALL BE COPPER, TYPE "L" HARD DRAWN WITH WROUGHT COPPER SOLDER-JOINT TYPE FITTINGS. USE 95/5 SOLDER. REFRIGERANT LINES SHALL BE SIZED AS PER MANUFACTURER RECOMMENDATIONS. ALL EXPOSED INSULATION SHALL BE PROTECTED FROM U.V. LIGHT WITH U.V. RESISTANT PAINT OR ALUMINUM SHIELDING.
27. SUCTION AND LIQUID LINES SHALL BE INSULATED WITH 3/4" CLOSED CELL NEOPRENE INSULATION ARMSTRONG "ARMAFLEX OR ARMACELL" OR EQUAL ENSURE THAT LIQUID LINE IS INSULATED IN ALL MINI SPLIT INSTALLATIONS.
28. FILTER/DRYER AND SITE GLASS SHALL BE PROVIDED ON LIQUID LINES.
29. PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE STARTING THEM. REPLACE THEM PRIOR TO FINAL ACCEPTANCE BY OWNER.
30. PROVIDE PHOTO ELECTRIC TWIST IN TYPE SMOKE DETECTORS WITH ACCESS DOORS IN ALL FANS AND AHU'S SERVING A COMMON PLENUM OF 2000 CFM OR ABOVE. ALL SMOKE DETECTORS SHALL BE BY ONE MANUFACTURER, AND SHALL COMPLY WITH UL 268A LOCATE THE SMOKE DETECTORS IN THE SUPPLY AIR DUCT FOR INSTALLATIONS IN COMPLIANCE WITH THE THE FLORIDA BUILDING CODE. THE DETECTORS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR & INSTALL IN THE DUCT BY THE MECHANICAL CONTRACTOR, PROVIDE REMOTE TEST STATION. ELECTRICAL CONNECTION SHALL BE BY ELECTRICAL CONTRACTOR. UPON SMOKE DETECTION ALL ASSOCIATED AIR MOVING EQUIPMENT SERVING A COMMON PLENUM WILL BE SHUT DOWN. TIE FIRE ALARM DEVICES INTO EXISTING FIRE ALARM SYSTEM (IF APPLICABLE).
31. PROVIDE TYPE "B" DYNAMIC FIRE DAMPERS IN ALL DUCTS OR OPENINGS PENETRATING FIRE RATED ASSEMBLIES. PROVIDE RADIATION DAMPERS IN DIFFUSERS OF RATED CEILINGS.
32. ALL CONDENSATE DRAIN PIPING SHALL BE TYPE "L" HARD COPPER WITH 3/4" THICK ARMAFLEX INSULATION. PVC PIPING SHALL NOT BE ALLOWED. SEE PLUMBING SHEETS FOR SIZE AND LOCATION OF PIPING. FINAL CONNECTION AND P-TRAP BY MECHANICAL CONTRACTOR - ALL OTHER CONDENSATE PIPING BY PLUMBING CONTRACTOR.
33. PROVIDE INSULATED PRIMARY CONDENSATE DRAIN FROM ALL AIR HANDLERS. PROVIDE SECONDARY PAN DRAIN FROM ALL AIR HANDLERS DISCHARGING OVER NEAREST WINDOW OR DOOR. A FLOAT SWITCH MAY BE USED IN LIEU OF THE SECONDARY DRAIN. SEE PLANS FOR DESIGN.
34. PROVIDE HARD-WIRED CONDENSATE PUMP FOR AIR HANDLING UNITS WHERE FIELD CONDITIONS DO NOT ALLOW FOR LINES TO GRAVITY DRAIN. CONDENSATE PUMP SHALL BE EQUAL TO LITTLE GIANT VCMA-20ULS-C CONDENSATE PUMP (115V, 1.3A) WITH ANTI-SWEAT SLEEVE AND OVERFLOW SAFETY SWITCH OPTIONS. EXCEPT IN RETURN AIR PLENUMS. CONDENSATE PUMPS IN RETURN AIR PLENUMS SHALL BE EQUAL TO HARTELL A2-X-1965 PLENUM-RATED CONDENSATE PUMP (115/230V, 3.5/1.7A). CONTRACTOR SHALL CONFIRM SIZE OF PUMP WITH MANUFACTURES RECOMMENDATIONS, PLUG-IN PUMPS ARE NOT ACCEPTED.
35. FOR ELECTRICAL OR CONTROL PANELS PROVIDE A MINIMUM OF 30" CLEARANCE IN FRONT OF ALL 120-240 VOLT PANELS AND 40" CLEARANCE IN FRONT OF ANY 480 VOLT PANEL. PROVIDE ADEQUATE SIDE CLEARANCE PER NEC. DUCTS, PIPES, AND OTHER EQUIPMENT ARE NOT ALLOWED TO RUN OVER PANELS PER NEC.
36. THE GENERAL CONTRACTOR SHALL TEST AND BALANCE THE AIR SIDE SYSTEM UPON COMPLETION. THE FINAL TEST AND BALANCE MUST BE PERFORMED BY AN INDEPENDENT FIRM CONTRACTED BY THE GENERAL CONTRACTOR AND NOT THE MECHANICAL CONTRACTOR. THE TEST AND BALANCE FIRM SHALL HOLD A CURRENT CERTIFICATION FROM A RECOGNIZED TEST AND BALANCE ORGANIZATION. THE TEST AND BALANCE OPERATION SHALL INCLUDE ALL AIR SIDE SYSTEMS REGARDLESS OF SIZE OF EQUIPMENT AND A TEST TO CONFIRM BUILDING IS NEUTRAL OR POSITIVELY PRESSURIZED. THE T & B FIRM SHALL PROVIDE A WRITTEN REPORT TO THE ARCHITECT AND THE ENGINEER UPON COMPLETION. FBC 2010.
37. THE MECHANICAL CONTRACTOR SHALL VERIFY THAT THE AIR CONDITIONED SPACE IS SEALED WITH AN APPROVED AIR BARRIER IN ACCORDANCE WITH CHAPTER 13 OF THE FLORIDA BUILDING CODE-MECHANICAL. (REF SECTIONS 202 AND 406.1 ABCD.1.4 BUILDING CAVITIES). THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND ARCHITECT IN WRITING OF ANY DISCREPANCIES PRIOR TO INSTALLATION OF ANY EQUIPMENT.
38. ALL OPERATIONS / MAINTENANCE MANUALS FOR EQUIPMENT SPECIFIED SHALL BE PROVIDED TO OWNER UPON COMPLETION OF PROJECT.
39. ALL WIND LOAD CALCULATIONS AND OTHER COMPLIANCE CALCULATIONS AND/OR INSTALLATION DETAILS FOR ROOF MOUNTED EQUIPMENT SHALL BE PROVIDED BY STRUCTURAL ENGINEER/ARCHITECT AS REQUIRED BY FBC 2010. SEC. 1509, 1522 AND CHAPTER 16.
40. UNLESS OTHERWISE SPECIFIED, THE ELECTRICAL CONTRACTOR SHALL PROVIDE BAS MOTOR STARTERS WITH H.O.A. (HANDOFF/AUTOMATIC) SWITCH AS REQUIRED FOR ALL MECHANICAL HVAC EQUIPMENT THAT REQUIRES MOTOR STARTERS. THE STARTERS SHALL BE MATCHED TO THE EQUIPMENT AND THE SERVICE VOLTAGE. PHASE LOSS MONITOR/PROTECTION SHALL BE REQUIRED ON ALL THREE PHASE EQUIPMENT PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
41. ALL VFD'S SHALL BE PROVIDED BY MECHANICAL CONTRACTOR WITH CROSS LINE BYPASS FEATURE WHERE THE SERVICE IS 3 PHASE. MECHANICAL CONTRACTOR TO COORDINATE ON SITE AND WITH ELECTRICAL CONTRACTOR. ABB OR YASKAWA ARE ACCEPTABLE MANUFACTURES. PROVIDE NEMA 3R ENCLOSURE FOR OUTDOOR INSTALLATIONS AND NEMA 1 FOR INDOOR INSTALLATIONS.

MECHANICAL NOTES & LEGENDS

MECHANICAL ABBREVIATIONS

ACCH	AIR-COOLED CHILLER	HV	HEATING & VENTILATION UNIT
AFF	ABOVE FINISHED FLOOR	HOA	HAND OFF AUTOMATIC
AFG	ABOVE FINISHED GRADE	MAU	MAKE UP AIR UNIT
AHU	AIR HANDLING UNIT	NEW	NEW
BDD	BACK DRAFT DAMPER	NTS	NOT TO SCALE
CC	COOLING COIL	OA	OUTSIDE AIR
CHP	CHILLED WATER PUMP	PHX	PUMP/HEAT EXCHANGER
CH	CHILLER	RA	RETURN AIR
CT	COOLING TOWER	RD	RELIEF DAMPER
CWP	CONDENSER WATER PUMP	RE	RELOCATE EXISTING
DHC	DUCT RE-HEAT COIL	REF	REFERENCE
EDH	ELECTRIC DUCT HEATER	REF	REFRIGERANT
E	EXISTING	RHC	REHEAT COIL
EA	EXHAUST AIR	SA	SUPPLY AIR
EF	EXHAUST FAN	SF	SUPPLY FAN
ERV	ENERGY RECOVERY O/A PRECONDITIONER UNIT	VAV	VARIABLE AIR VOLUME TERMINAL
		VIF	VERIFY IN FIELD
EX	EXISTING	VFD	VARIABLE FREQUENCY DRIVE
EXH	EXHAUST	WCCH	WATER-COOLED CHILLER
FCU	FAN COIL UNIT		
HC	HEATING COIL		

HVAC DESIGN CONDITIONS

	DB °F	WB °F	GR/#	COMMENTS
OUTDOOR	93	80	134	
INDOOR	73	62	65	
OUTSIDE AIR	SEE OA CALCULATION SCHEDULE			
GLASS TYPE	U=0.49, SHGC=0.5			
GLASS HEIGHT	6'-0"			
ROOF TYPE	METAL BAR JOIST WITH INSUL.			
TOTAL ROOF "R" VALUE	R-20			
CEILING HEIGHT	9'-0"			
CEILING CAVITY	2'-4"			
WALL TYPE	CMU WITH INSUL.			
TOTAL WALL "R" VALUE	R-6			
AIR CONDITIONED SQ.FT.	24 290/ FROM COOLING LOADS			
FLOOR LEVEL(S)	2			

NOTES

1. THIS SPACE SHALL NOT OPERATE BELOW 73°F.
2. ALL CONSTRUCTION METHODS AND R-VALUES PROVIDED BY ARCHITECT. SEE ARCHITECT PLANS FOR DETAILS.

MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES IN THEIR LATEST REVISIONS.

CONTRACTOR TO COORDINATE SPECIFIC REQUIREMENTS OF EQUIPMENT WITH MANUFACTURERS' SHOP DRAWINGS.

ALL EQUIPMENT SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.

CEILING CAVITY IS A RETURN AIR PLENUM. NO PVC OR COMBUSTIBLE MATERIALS ALLOWED PER FBC 2010 MECHANICAL, SEC. 602.2.1

APPLICABLE BUILDING CODES

FLORIDA BUILDING CODE, 2010 EDITION
FLORIDA BUILDING CODE MECHANICAL, 2010 EDITION
FLORIDA FIRE PREVENTION CODE, 2010 EDITION
NFPA 90A, 2009 EDITION
NFPA 91 2004 EDITION
NFPA 96, 2008 EDITION
NFPA 99, 2005 EDITION
ANSI/ASHRAE 15 MECHANICAL REFRIGERATION
ASHRAE 62.1. 2004 EDITION

MECHANICAL SHEET INDEX

MECHANICAL SYMBOL LEGEND

- NEW RIGID DUCT METAL OR FIBER (REF. KEY NOTES)
- SUPPLY DUCT VERTICAL TAPS
- NEW RETURN DUCT
- NEW FLEXIBLE DUCT
- —REF— REFRIGERANT LINE - COPPER
- FD FIRE DAMPER
- SD SMOKE DAMPER
- —C— CONDENSATE LINE
- SUPPLY DIFFUSER, SEE GRILL REGISTER AND DIFFUSER SCHEDULE FOR DESCRIPTION.
- T-BAR DROP IN SUPPLY DIFFUSER, SEE GRILL REGISTER AND DIFFUSER SCHEDULE FOR DESCRIPTION.
- RETURN GRILLE, SEE GRILLE REGISTER AND DIFFUSER SCHEDULE FOR DESCRIPTION.
- T THERMOSTAT
- EXHAUST FAN
- ACCESS: AHUS AIR HANDLER UNIT
- SD SMOKE DETECTOR/ CUTOFF
- SD-1 / 500 DIFFUSER/GRILLE SYMBOL
- AHU-X-X EQUIPMENT TAG
  - EQUIPMENT NUMBER
  - EQUIPMENT FLOOR/LOCATION
- ACCESS PANEL
- SUPPLY AIR
- RETURN AIR

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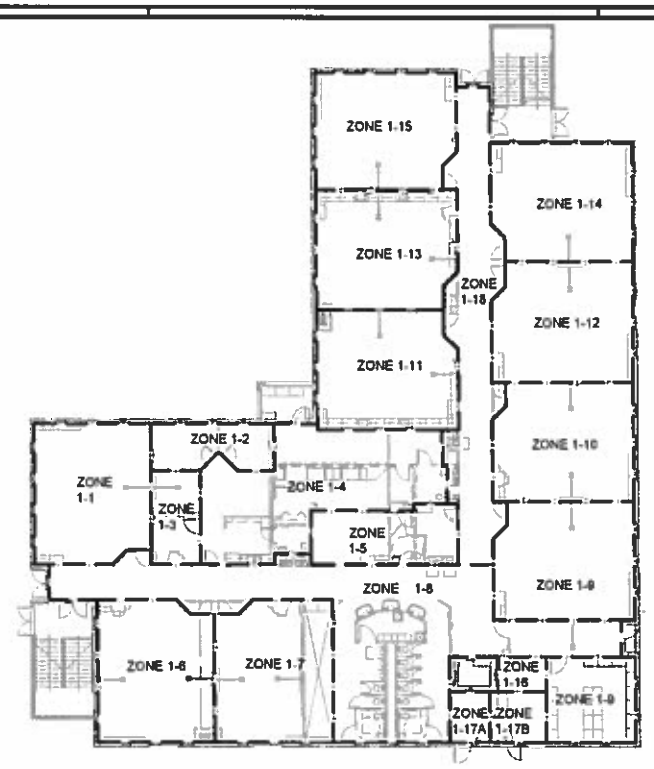
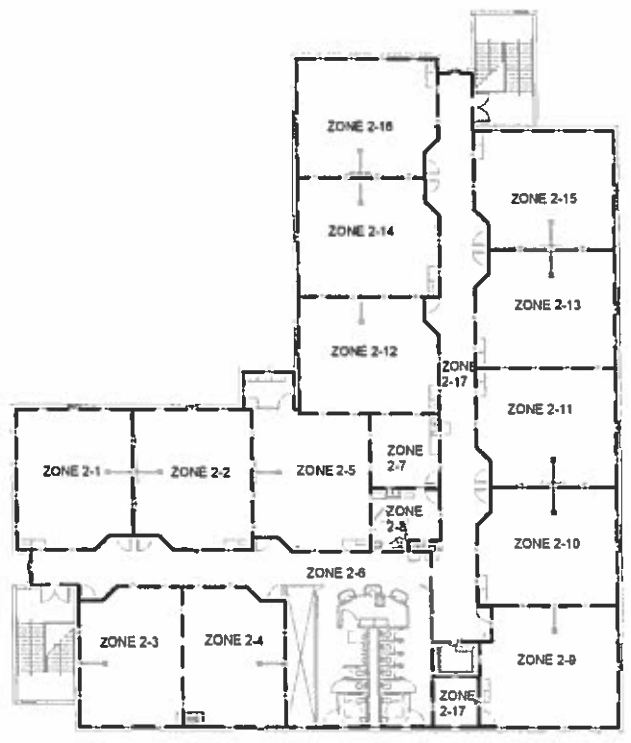
MECHANICAL NOTES & LEGENDS

M0.1



1 MECHANICAL ZONE MAP-FIRST FLOOR



2 MECHANICAL ZONE MAP-SECOND FLOOR

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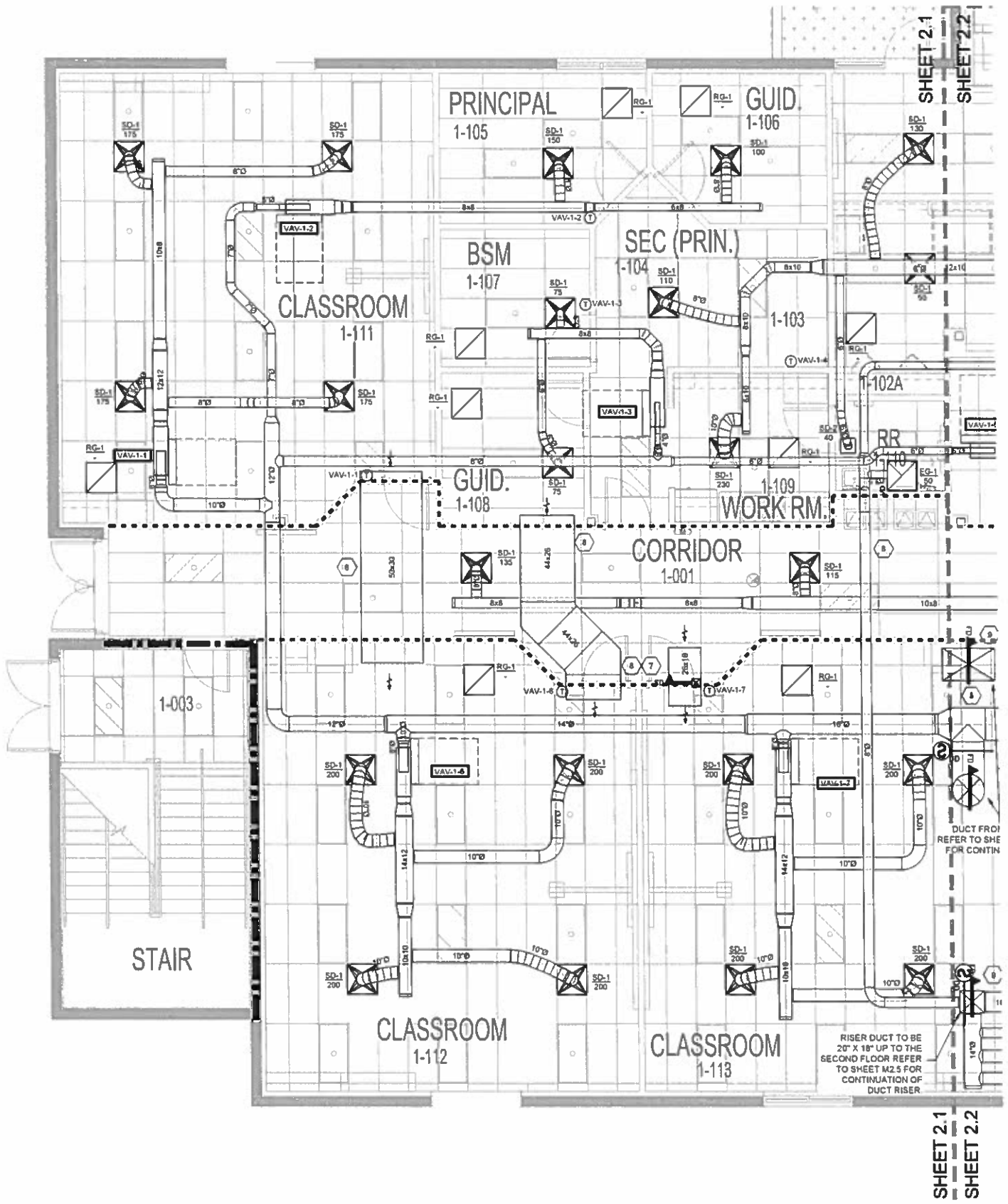
M1.1



MECHANICAL KEY NOTES

1. ROUTE EXHAUST DUCT UP INTO THE BAR JOIST.
2. INSTALL EXHAUST DUCTS AS HIGH AS POSSIBLE.
3. TAP INTO EXHAUST DUCT FROM THE BOTTOM.
4. COORDINATE EXHAUST DUCT TO BE RUN IN BETWEEN JOIST. PROVIDE OFFSET PRIOR TO MEDIUM PRESSURE DUCT. LIMITED CEILING CAVITY IN THIS AREA.
5. PROVIDE A 36"X30" RETURN DUCT UP TO RTU. REFERENCE SHEET M2.7 FOR CONTINUATION OF DUCT WORK.
6. PROVIDE DRYWELL FOR CONDENSATE LINES.
7. PROVIDE SMOKE DAMPER REFERENCE DETAIL 2 ON SHEET M5.2. PROVIDE DUCT MOUNTED ACCESS DOOR.
8. DUCT PASSES THROUGH A SMOKE-RATED BARRIER. THE DUCT SHALL TRANSITION FROM DUCTBOARD TO 26 GA GALVANIZE METAL CONSTRUCTION WHERE LOCATED IN SMOKE-RATED SPACES. DUCT PENETRATION THROUGH SMOKE-RATED BARRIER SHALL BE PROPERLY SEALED WITH AN APPROVED SEALANT.
9. PROVIDE FIRE DAMPERS FOR PENETRATION ONTO FIRST FLOOR CEILING AS SHOWN IN FLOOR PLAN. DAMPERS ARE TO BE ACCESSED FROM UNDERNEATH.
10. ALL REFRIGERANT PIPE SIZING BY EQUIP. MANUFACTURE.
11. MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCT REQUIRED OPENINGS THROUGH STRUCTURAL STEEL THAT SUPPORT REMOVABLE PARTITIONS WITH THE GENERAL CONTRACTOR.

1 PARTIAL FIRST FLOOR MECHANICAL PLAN- SOUTH-WEST

SCALE 1/4" = 1'-0"

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MICHAEL J. BISHOP
FLORIDA P.E. NO. 73008
MECHANICAL ENGINEER
DEPT. OF AUTH. 5454
DATE 9.19.2014

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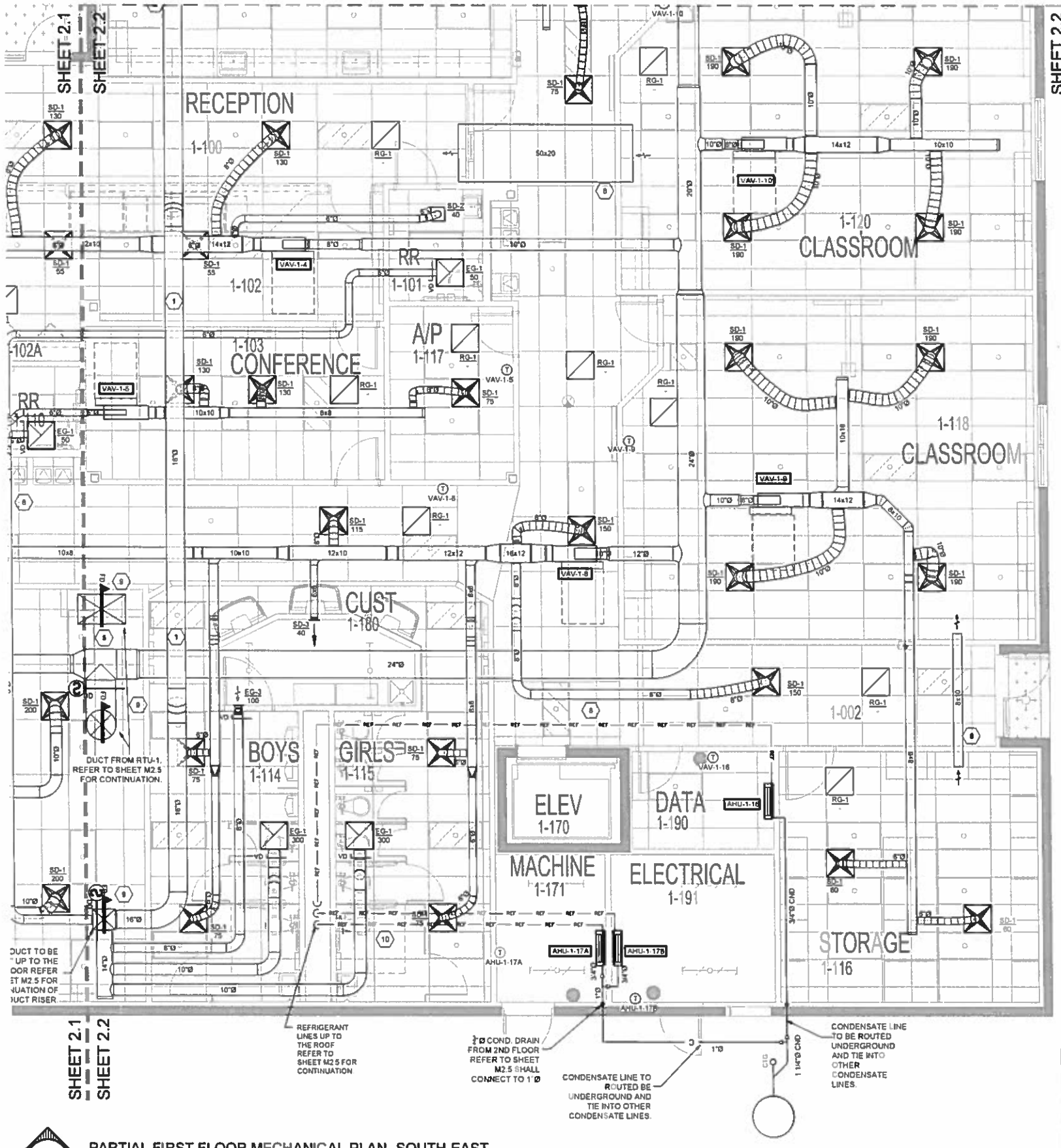
Comm. No: 214031.00
Date: 09-24-14
Drawn: RGD
Reissued:

PARTIAL FIRST FLOOR MECHANICAL PLAN- SOUTH-WEST

M2.1



1 PARTIAL FIRST FLOOR MECHANICAL PLAN- SOUTH-EAST

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

MECHANICAL KEY NOTES

1. ROUTE EXHAUST DUCT UP INTO THE BAR JOIST.
2. INSTALL EXHAUST DUCTS AS HIGH AS POSSIBLE.
3. TAP INTO EXHAUST DUCT FROM THE BOTTOM.
4. COORDINATE EXHAUST DUCT TO BE RUN IN BETWEEN JOIST. PROVIDE OFFSET PRIOR TO MEDIUM PRESSURE DUCT. LIMITED CEILING CAVITY IN THIS AREA.
5. PROVIDE A 36"X30" RETURN DUCT UP TO RTU. REFERENCE SHEET M2.7 FOR CONTINUATION OF DUCT WORK.
6. PROVIDE DRYWELL FOR CONDENSATE LINES.
7. PROVIDE SMOKE DAMPER REFERENCE DETAIL 2 ON SHEET M5.2. PROVIDE DUCT MOUNTED ACCESS DOOR.
8. DUCT PASSES THROUGH A SMOKE-RATED BARRIER. THE DUCT SHALL TRANSITION FROM DUCTBOARD TO 26 GA GALVANIZE METAL CONSTRUCTION WHERE LOCATED IN SMOKE-RATED SPACES. DUCT PENETRATION THROUGH SMOKE-RATED BARRIER SHALL BE PROPERLY SEALED WITH AN APPROVED SEALANT.
9. PROVIDE FIRE DAMPERS FOR PENETRATION ONTO FIRST FLOOR CEILING AS SHOWN IN FLOOR PLAN. DAMPERS ARE TO BE ACCESSED FROM UNDERNEATH.
10. ALL REFRIGERANT PIPE SIZING BY EQUIP. MANUFACTURE.
11. MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCT REQUIRED OPENINGS THROUGH STRUCTURAL STEEL THAT SUPPORT REMOVABLE PARTITIONS WITH THE GENERAL CONTRACTOR.

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MECHANICAL ENGINEER
CERT. OF AUTH. 5464
DATE 9.19.2014

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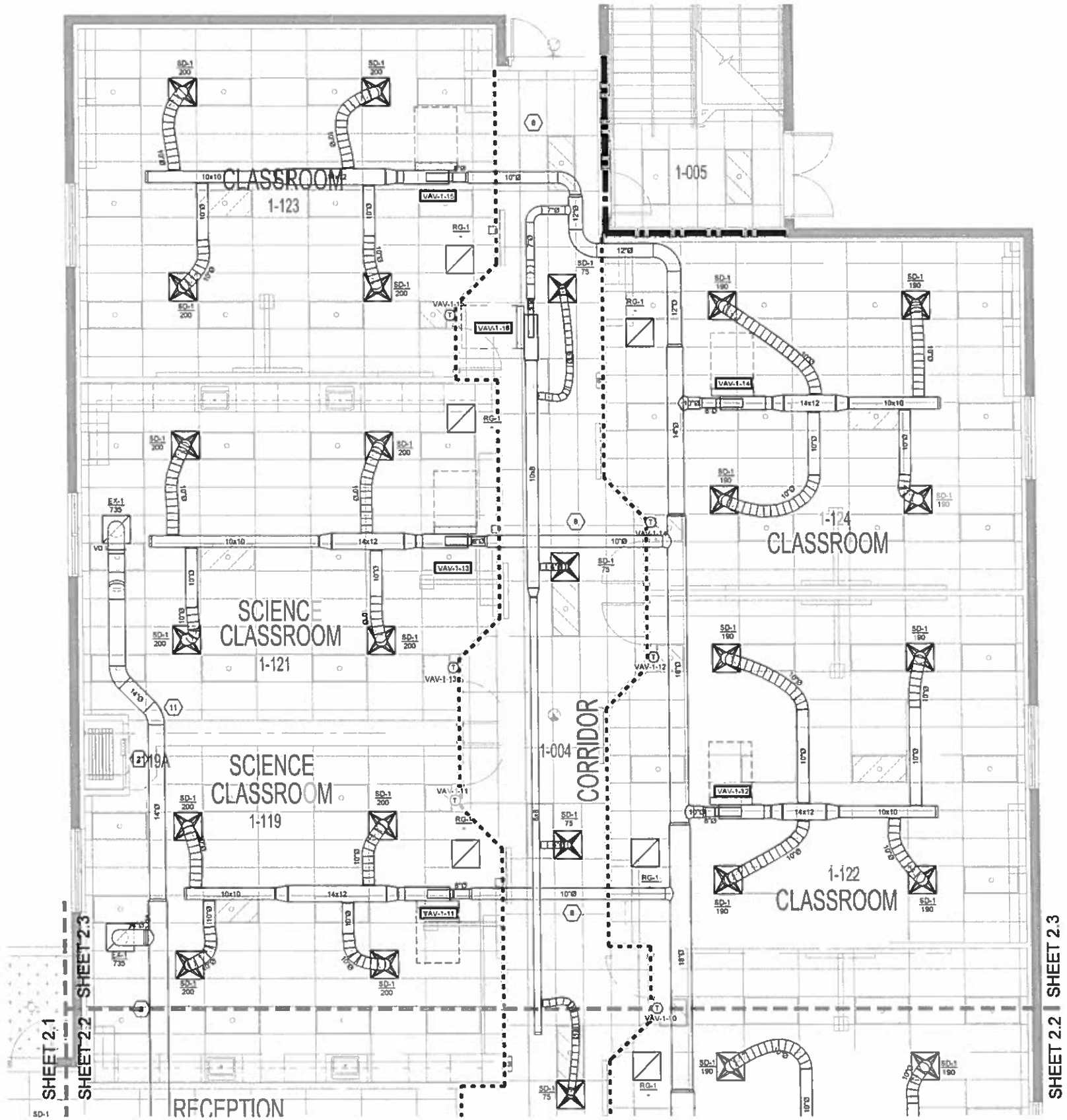
PARTIAL FIRST FLOOR MECHANICAL PLAN- SOUTH-EAST

M2.2



MECHANICAL KEY NOTES

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6. PROVIDE DRYWELL FOR CONDENSATE LINES.
7. PROVIDE SMOKE DAMPER REFERENCE DETAIL 2 ON SHEET M5.2, PROVIDE DUCT MOUNTED ACCESS DOOR.
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11. MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCT REQUIRED OPENINGS THROUGH STRUCTURAL STEEL THAT SUPPORT REMOVABLE PARTITIONS WITH THE GENERAL CONTRACTOR.

1 PARTIAL FIRST FLOOR MECHANICAL PLAN- NORTH-EAST

SCALE 1/4" = 1'-0"

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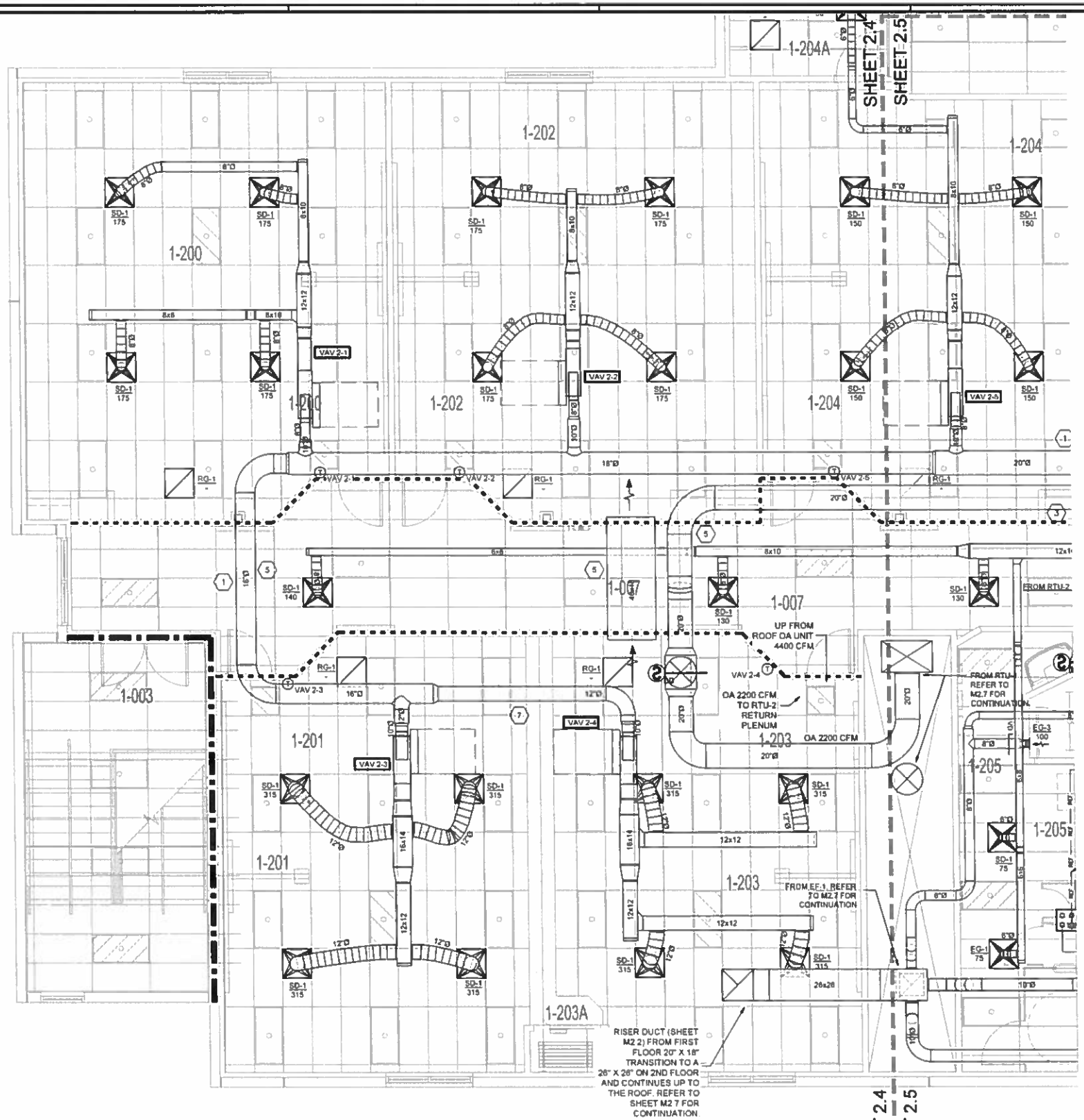
PARTIAL FIRST FLOOR MECHANICAL PLAN- NORTH-EAST

M2.3



MECHANICAL KEY NOTES

1. RUN MEDIUM PRESSURE DUCT AS HIGH AS POSSIBLE .
2. COORDINATE LOW PRESSURE DUCT TO RUN BELOW MEDIUM PRESSURE DUCT. PROVIDE OFFSET PRIOR TO MEDIUM PRESSURE DUCT. LIMITED CEILING CAVITY IN THIS AREA.
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1 PARTIAL SECOND FLOOR MECHANICAL PLAN- SOUTH-WEST

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

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CONTRUCTION DOCUEMENTS

Comm. No:	214031.00
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PARTIAL SECOND FLOOR MECHANICAL PLAN- SOUTH-WEST

M2.4

MECHANICAL KEY NOTES

1. RUN MEDIUM PRESSURE DUCT AS HIGH AS POSSIBLE.
2. COORDINATE LOW PRESSURE DUCT TO RUN BELOW MEDIUM PRESSURE DUCT. PROVIDE OFFSET PRIOR TO MEDIUM PRESSURE DUCT. LIMITED CEILING CAVITY IN THIS AREA.
3. PROVIDE A 36"X24" DUCT RISE UP TO RTU. REFER SHEET M2.7 FOR CONTINUATION.
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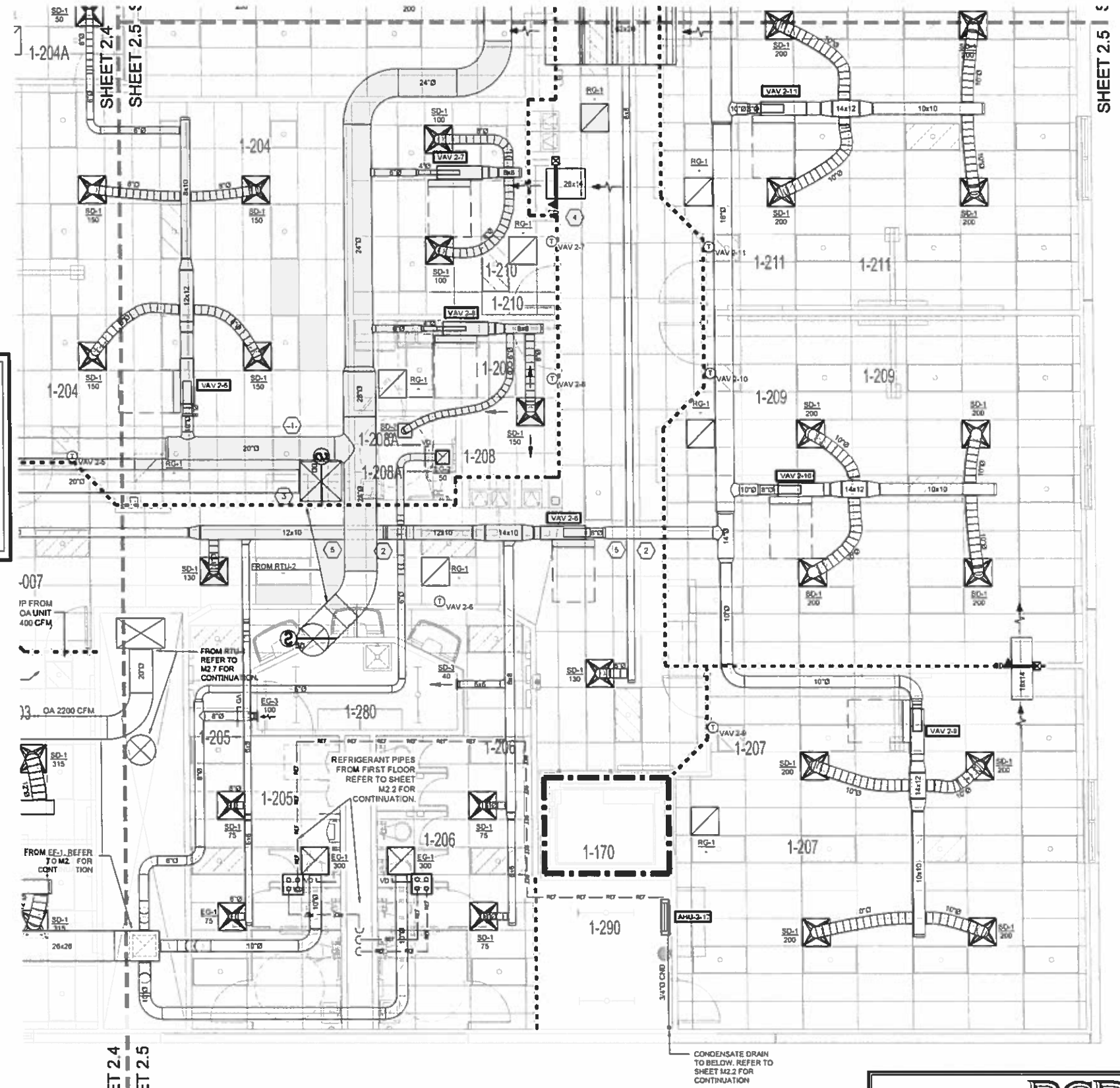

1 PARTIAL SECOND FLOOR MECHANICAL PLAN- SOUTH-EAST

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

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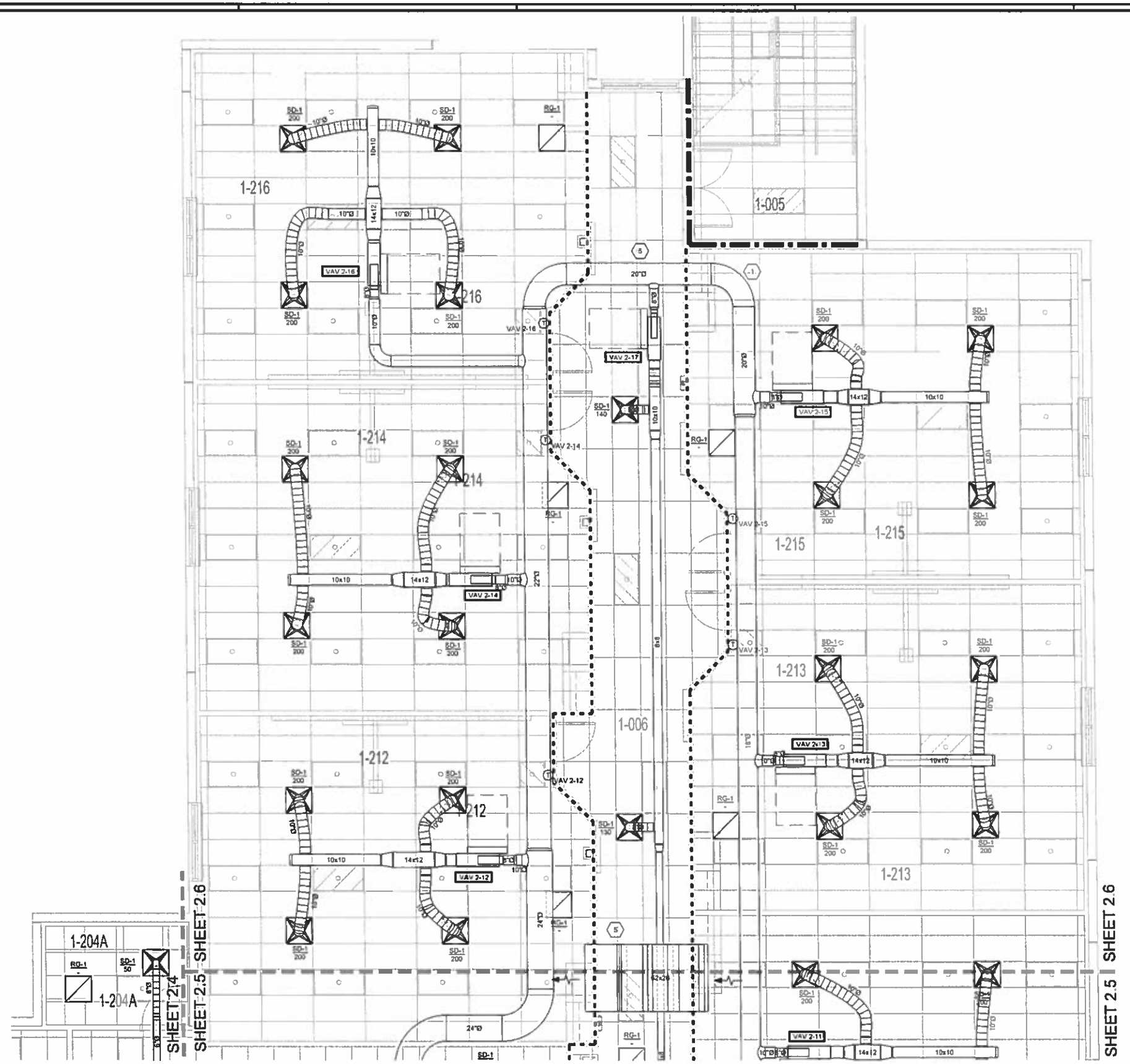
PARTIAL SECOND FLOOR MECHANICAL PLAN- SOUTH-EAST

M2.5



1 PARTIAL SECOND FLOOR MECHANICAL PLAN- NORTH-EAST

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

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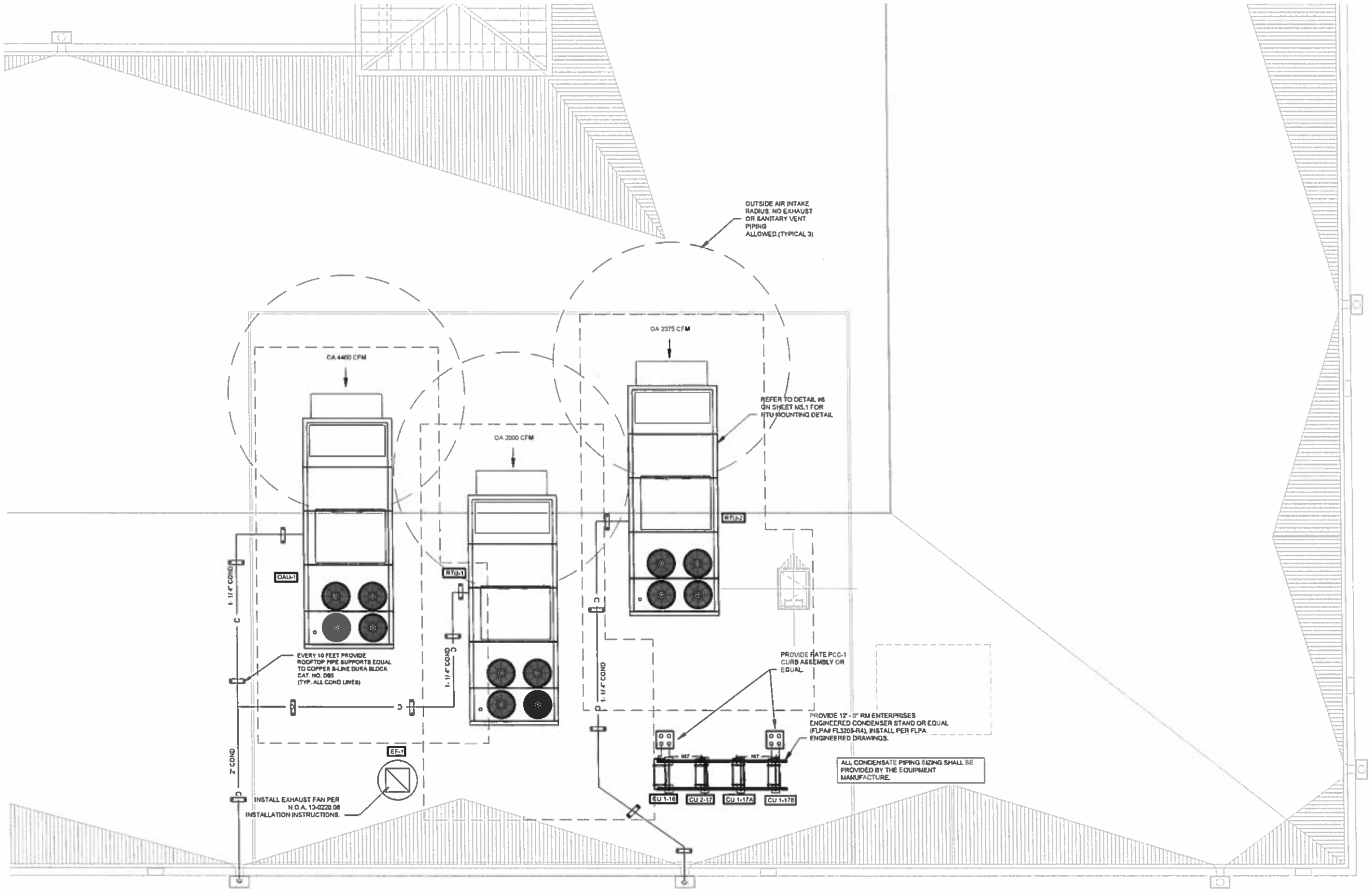
PARTIAL SECOND FLOOR MECHANICAL PLAN- NORTH-EAST

M2.6



1 MECHANICAL ROOF PLAN

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

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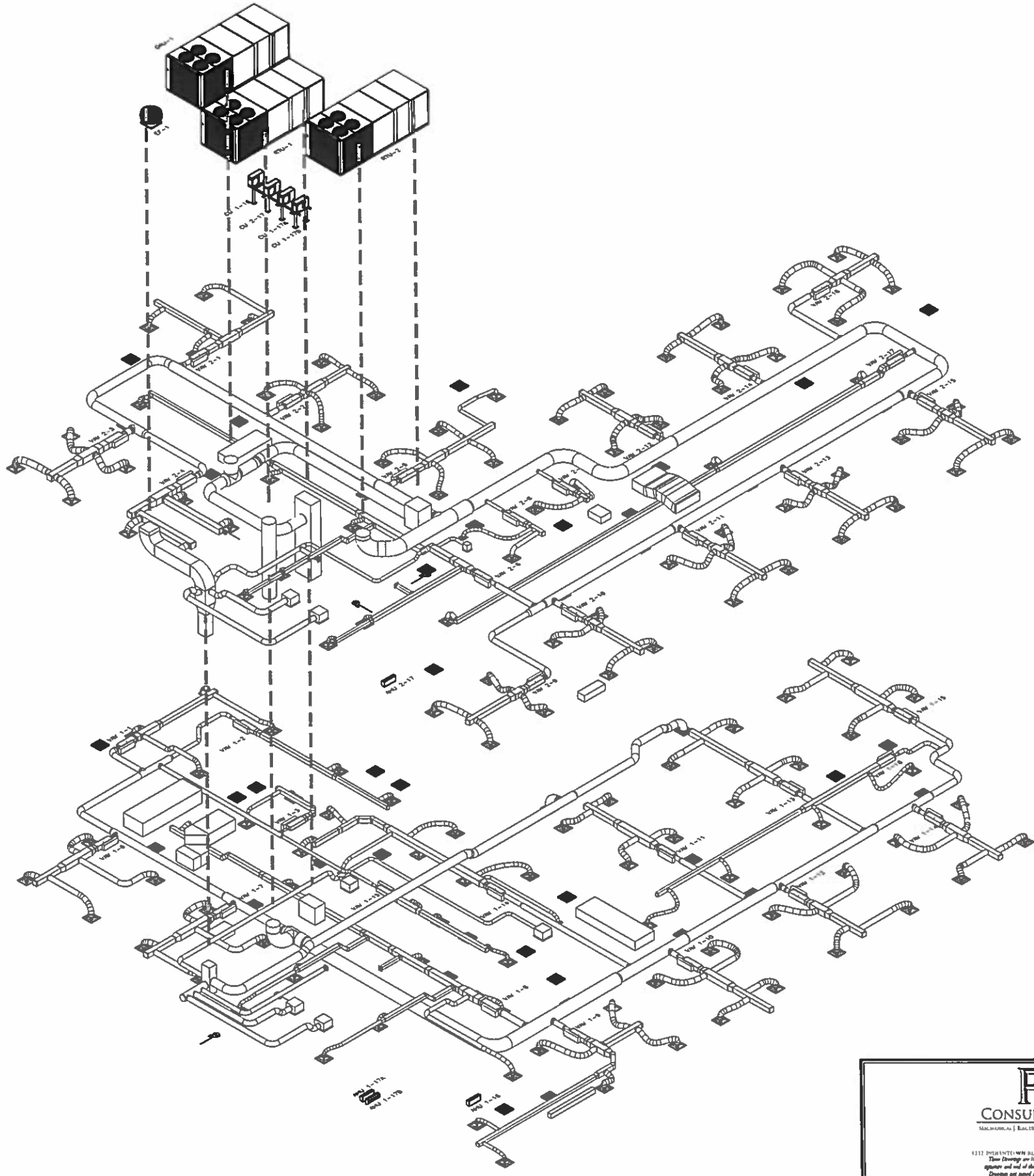
MECHANICAL ROOF PLAN

M2.7



MECHANICAL ISOMETRICS

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MECHANICAL ISOMETRICS

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CERT. OF AUTH. 5454
DATE 9.19.2014

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MECHANICAL SCHEDULES

M4.1

1 MECHANICAL SCHEDULES

GRILLE, REGISTER, & DIFFUSER SCHEDULE

MARK	MANUF.	MODEL NO.	FACE SIZE	NECK SIZE / LENGTH	THROW / SLOTS	FRAME TYPE	FINISH	VOLUME DAMPER	FIRE DAMPER	NOTES
SD-1	TMUS	OMNI-AA	24" X 24"	PER PLANS	PER PLANS	LAY-IN	NOTE 1	NOTE 2	N/A	1,2,3
SD-2	TMUS	OMNI-AA	12" X 12"	PER PLANS	PER PLANS	LAY-IN	NOTE 1	NOTE 2	N/A	1,2,3
SD-3	TMUS	272FL	7.5" X 7.5"	6" X 6"	SIDEWALL	SURFACE	NOTE 1	NOTE 2	N/A	1,2
RG-1	TMUS	350FL	24" X 24"	22" X 22"	FIXED	LAY-IN	NOTE 1	NOTE 2	N/A	1,2,3
EG-1	TMUS	350FL	24" X 24"	22" X 22"	FIXED	LAY-IN	NOTE 1	NOTE 2	N/A	1,2,3
EG-2	TMUS	350FL	12" X 12"	10" X 10"	FIXED	LAY-IN	NOTE 1	NOTE 2	N/A	1,2,3
EG-3	TMUS	350FL	7.5" X 7.5"	6" X 6"	SIDEWALL	SURFACE	NOTE 1	NOTE 2	N/A	1,2,3

SPECIAL NOTES: ** ALL DIFFUSERS SELECTED WITH NC RATING < 20 **
1 COORDINATE COLOR WITH ARCHITECT
2 PROVIDE VOLUME DAMPER AT THE FLEX TAP. PROVIDE OPPOSED BLADE DAMPER FOR VOLUME DAMPERS IN INACCESSIBLE AREAS.
3 PROVIDE TMUS RAPID MOUNT FRAME FOR MOUNTING IN HARD CEILINGS.

APPROVED ALTERNATES: PRICE, MAJOR, TUTTLE & BAILEY

FAN SCHEDULE

MARK		EF-1
LOCATION		ROOFTOP
DUCT SIZE		28" X 28"
MOUNTING		ROOF
MANUFACTURER		GREENHECK
MODEL NUMBER		G-200-B
STATIC PRESSURE	IN. WG.	1.25
AIRFLOW	CFM	3020
MOTOR RPM		1140
MOTOR INFORMATION	HP	2
	CURRENT (A)	3.4
	PH	3
	HZ	60
		460
NOTES:		1,3,4

NOTES:
1 PROVIDE WITH BACKDRAFT DAMPER.
2 FAN SHALL BE CONTROLLED BY THE BUILDING MANAGEMENT SYSTEM TO SCHEDULED TO ALWAYS ON DURING OCCUPIED PERIODS.

APPROVED ALTERNATES: LOREN COOK, S&P, PENN

VAV TERMINAL BOX SCHEDULE

Mark		VAV-1.1	VAV-1.2	VAV-1.3	VAV-1.4	VAV-1.5	VAV-1.6	VAV-1.7	VAV-1.8	VAV-1.9	VAV-1.10	VAV-1.11	VAV-1.12	VAV-1.13	VAV-1.14	VAV-1.15	VAV-1.16	VAV-1.17
Manufacturer		TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
Unit model		VCEF	VCEF	VCEF	VCEF	VCEF	VCEF	VCEF	VCEF	VCEF	VCEF	VCEF	VCEF	VCEF	VCEF	VCEF	VCEF	VCEF
Primary Inlet	Inches	8	8	10	10	8	8	8	8	8	8	8	8	8	8	8	8	8
Design cooling airflow	cfm	700	700	1260	1260	690	690	740	740	600	800	800	800	600	800	800	800	400
Min cooling airflow	cfm	105	105	165	165	105	105	30	30	105	105	105	105	105	105	105	105	90
Cooling inlet velocity	ft/min	2005	2005	2309	2309	1861	2119	2178	2291	2291	2291	2291	2291	2291	2291	2291	2291	2522
Heating airflow	cfm	420	420	756	756	444	444	480	480	480	480	480	480	480	480	480	480	240
Electric heater voltage		277/1/60	277/1/60	277/1/60	277/1/60	277/1/60	24V	277/1/60	277/1/60	277/1/60	277/1/60	277/1/60	277/1/60	277/1/60	277/1/60	277/1/60	277/1/60	24V
Electric heater kilowatt		4.0	4.0	7.5	7.5	4.0	NONE	1.5	1.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	NONE
Electric heater amps		1	1	2	1	1	24 V	6.25	6.25	1	1	1	1	1	1	1	1	
Full load amps	A	14.44	14.44	27.08	27.08	14.44	24V	6.25	6.25	18.05	18.05	18.05	18.05	18.05	18.05	18.05	18.05	24V
Min circuit ampacity	A	18.05	18.05	33.84	33.84	18.05	24 V	6.77	6.77	22.56	22.56	22.56	22.56	22.56	22.56	22.56	22.56	24 V
Max fuse size	A	20	20	35	35	20	24 V	15	15	25	25	25	25	25	25	25	25	24 V

APPROVED ALTERNATES: TMUS & ENVIRO-TEC

SPECIAL NOTES:
1 ALL EQUIPMENT SHALL BE ECUAL TO TRANE EQUIPMENT LISTED IN ALL RESPECTS.
2 ELECTRICAL SPECIFICATIONS LISTED ARE CONSISTENT WITH TRANE EQUIPMENT. ALTERNATE EQUIPMENT MAY VARY. COORDINATE VARIANCES WITH THE ELECTRICAL CONTRACTOR.
3. PROVIDE DOOR INTERLOCKING DISCONNECT SWITCH.
4. PROVIDE 24V CONTROL TRANSFORMER.
5. PROVIDE ELECTRIC HEAT AS SCHEDULED WITH MAGNETIC CONTACTOR.

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MICHAEL J. BISHOP
FLORIDA P.E. NO. 72509
RCD MECHANICAL ENGINEERS
DEPT OF ASTM 5454

DATE 8.19.2014

PACKAGED ROOF TOP SCHEDULE

UNIT NO. / ZONE		RTU-1	RTU-2
LOCATION		ROOFTOP	ROOFTOP
NOM. TONS		40.0	40.0
EER / IEER		10.3	10.3
MANUFACTURER		TRANE	TRANE
MODEL		TCD480B40	TCD480B41
CFM		10,700	12500
OA CFM		2000	2375
REFRIGERANT		R-410A	R-410A
M.B.T.U.H. UNIT PERFORMANCE	T.C.	456.3	458.2
	S.C.	257.9	144.8
ENTERING TEMPERATURE	DB (°F)	78.1	79.5
	WB (°F)	67.3	67.1
LEAVING TEMPERATURE	DB (°F)	55.6	58.2
	WB (°F)	54.9	55.1
COMPRESSOR	QTY	1 / 1	1 / 1
	RLA	23 / 34	23 / 34
	LRA	158 / 215	158 / 215
COND. FAN	QTY	4	4
	FLA	3.5	3.5
EVAPORATOR	HP	15.0	15.0
	FLA	18.9	18.9
	ESP	2.9	2.9
UNIT POWER	V	460	460
	PH	3	3
	HZ	60	60
ELECTRIC HEAT	kW	NONE	NONE
BR. CIR. AMPACITY	MCA	98	98
	MOCP	125	125
WEIGHT	LBS	6520	6520
NOTES:		1 - 13	1 - 13

APPROVED ALTERNATES: DAIKIN, JCI / YORK

SPECIAL NOTES:
1. ALL EQUIPMENT SHALL BE EQUAL TO THE TRANE EQUIPMENT LISTED IN ALL RESPECTS.
2. ELECTRICAL SPECIFICATIONS LISTED ARE CONSISTENT WITH TRANE EQUIPMENT. ALTERNATE EQUIPMENT MAY VARY. COORDINATE VARIANCES WITH THE ELECTRICAL CONTRACTOR.
3. PROVIDE BAC-NET COMPATIBLE UNITARY CONTROLLER. REF CONTROL SHEETS.
4. CONSULT TRANE DOCUMENTATION TO SET EQUIPMENT TO MEET AIRFLOW REQUIREMENTS AS SHOWN.
5. A PORTION OF THE OUTSIDE AIR PROCESSED BY 100% OUTSIDE AIR UNIT. THE REMAINDER IS PROCESSED BY THE RTU(CO2 CONTROLLED).
6. PROVIDE SEACOAST CURB WITH WIND ANALYSIS CALCULATIONS.
7. SPECIFY WITH FACTORY INSTALLED POWERED CONVENIENCE OUTLET. SUPPLY AIR SMOKE DETECTOR (IF DESIGN AIRFLOW IS GREATER THAN 2000 CFM), THROUGH THE BASE ELECTRICAL AND NON-FUSED DISCONNECT.
8. PROVIDE FACTORY CORROSION PROTECTIVE COATING ON CONDENSING COILS.
9. PROVIDE DUCT MOUNTED CO2 SENSOR KIT(FIELD INSTALLED).
10. PROVIDE HINGED ACCESS PANELS.
11. PROVIDE SST DRAIN PAN W/ CONDENSATE OVERFLOW SWITCH.
12. PROVIDE INTERNAL TO RTU BAROMETRIC RELIEF DAMPER.
13. PROVIDE 5 YEAR PARTS WARRENTY ON ENTIRE UNIT INCLUDING COMPRESSORS.

100 % OUTSIDE AIR UNIT SCHEDULE

SYSTEM		OAU-1
MANUFACTURER		TRANE
MODEL		OEH480B4EH
CFM		4400
ENTERING TEMPERATURE	DB (°F)	93.0
	WB (°F)	80.0
LEAVING COIL TEMPERATURE	DB (°F)	54.0
	WB (°F)	51.6
REHEAT	DB (°F)	72.0
TEMPERATURE	WB (°F)	62.7
M.B.U.T.H. (@ 93°F AMBIENT TEMP.)	T.C.	432.4
	S.C.	183.9
COMPRESSOR	QTY	1 / 1 (TOTAL 2)
	RLA	23 / 34
COMPRESSOR POWER	V	460
	PH	3
	HZ	60
COND. FAN	QTY	4
	FLA	3.5 (EA)
EVAPORATOR	QTY	1
	HP / FLA	15 / 18.9
	ESP	0.5
EVAPORATOR POWER	V	460
	PH	3
	HZ	60
ELECTRIC HEAT	kW	54.0
SINGLE POINT ELEC. WITH HEAT	MCA	98.4
	MOCP	125
WEIGHT	LBS	6520
NOTES:		1 - 11

APPROVED ALTERNATES: DAIKIN, JCI/ REZNOR

SPECIAL NOTES:
1. THIS UNIT SHALL BE DESIGNED FOR 100% OUTDOOR AIR APPLICATIONS AND SHALL BE SUPPLIED WITH A FULLY NON ENERGY CONSUMING REHEAT. THE UNIT SHALL BE COMPLETELY COMPLIANT WITH THE WRITTEN SPECIFICATIONS CONTAINED IN THE CONSTRUCTION DOCUMENTS.
2. THE UNIT SHALL BE FULLY CONTROLLED BY THE MANUFACTURER SUPPLYING THE UNIT.
3. THE ELECTRICAL SPECIFICATIONS ARE BASED ON TRANE. ALTERNATE EQUIPMENT ELECTRICAL SPECIFICATIONS AND WT MAY VARY AND SHALL BE COORDINATED AS REQUIRED BY THE CONTRACTOR.
4. THE UNIT SHALL BE CONFIGURED FOR DISCHARGE AIR TEMPERATURE CONTROL.
5. SPECIFY UNIT WITH FOLLOWING OPTIONS:
   A. DOUBLE-WALL UNIT CASING (IN EXPOSED AIR STREAMS ONLY).
   B. HERESITE CORROSION COATING (OR EQUAL) FOR MAIN COOLING COIL, REHEAT COIL, AND CONDENSER COIL.
   C. 4 STAGES MINIMUM FOR ELECTRIC HEAT STRIP.
   D. PROVIDE FACTORY MOUNTED DISCONNECT.
6. MOTORIZED OUTSIDE AIR DAMPER. DAMPER SHOULD BE CONFIGURED TO CLOSE WHEN UNIT IS NOT IN OPERATION.
7. PROVIDE VIBRATION ISOLATION FOR EVAPORATOR FAN & COMPRESSORS.
8. PROVIDE SEACOAST ROOF CURB WITH WIND RATING CALCULATIONS .
9. PROVIDE 5-YEAR PARTS WARRANTY.
10. PROVIDE BACNET COMPATIBLE UNITARY CONTROLLER.
11. PROVIDE 115V GFI OUTLET

AIR BALANCE SCHEDULE

UNIT	EXHAUST / RELIEF	OUTSIDE AIR / MAKEUP AIR	TOTAL
OA-1		4400	
RTU-1	1800	2000	
RTU-2	2100	2375	
EF-1	3020		
BUILDING TOTALS:	6920	8775	1855

VENTILATION CALCULATIONS

(BASED ON ASHRAE 62.1-2004)

OCCUPANCY CATEGORY	SQ FT	S/F/P	P	CFM/P	CFM/SF	CFM (P)	CFM (AREA)	TOTAL CFM	EXH/SF	TOTAL EXH	NOTES
Education											
Corridors (See Public Spaces)	3384	-	-	-	-	-	-	-	-	-	
Classrooms (Age 9+)	13673	29	466	10	0.12	4658	1665	6520	-	-	
Science Laboratories	1472	40	37	10	0.18	368	265	633	1	1470	
Computer Lab	1261	40	32	10	0.12	315	151	467	-	-	
Offices											
Conference Rooms	458	20	23	5	0.06	115	27	142	-	-	
Office Spaces	1280	200	6	5	0.06	32	77	109	-	-	
Reception Areas	291	33	9	5	0.06	40	17	57	-	-	
Public Spaces											
Toilet Rooms (Public)	1502	0	0	0	0	0	0	0	50/70	1350	
Retail Stores, Sales Floors, and Showroom Floors											
Storage Rooms	507	0	0	0	0.12	0	61		-	200	
Misc											
Electrical Equipment Rooms	390	-	-	-	0.06	-	23		-	-	
								TOTAL CFM REQUIRED:		7928	
								TOTAL CFM PROVIDED:		8775	
										3020	

NOTES:
FOR ALL CATEGORIES: OCCUPANCY CATEGORY AND DENSITY FROM ASHRAE 62.1-2004, TABLE 6.1 UNLESS OTHERWISE NOTED.

MINI SPLIT SYSTEM SCHEDULE

UNIT NUMBER		AHU 1-16	AHU 1-17A	AHU 2-17	AHU 1-17B
LOCATION		DATA ROOM 1ST FL	MACHINE ROOM	DATA ROOM 2ND FL	ELECTRICAL ROOM 1ST FL
NOMINAL TONS		1.0	1.0	2.5	3.0
SEER		20.5	20.5	18.0	15.1
MANUFACTURER		MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI
MODEL # CONDENSER		PUY-A12NHA4	MUY-GE12NA	PUY-A30NHA4	MUY-D36NA-1
MODEL # INDOOR UNIT		PKA-A12HA4	MSY-GE12NA-8	PKA-A30KA4	MSY-D36NA-8
DESIGN AIRFLOW (CFM)		320 - 370 - 425	145-270-237-321-399	635 - 705 - 775	369-639-848-887
MBTUH @75/63° F	T.C.	12.0	12.0	30.0	36.0
	S.C.	8.4	8.4	21.0	25.2
ENTERING TEMPERATURE	DB (°F)	75.0	75.0	75.0	75.0
	WB (°F)	63.0	63.0	63.0	63.0
LEAVING TEMPERATURE	DB (°F)	55.0	55.0	55.0	55.0
	WB (°F)	53.0	53.0	53.0	53.0
COMPRESSOR	RLA / LRA	12 / 14	4.9/6.1	12 / 17.5	16/20
CONDENSER FAN	FLA	0.35	0.78	0.75	0.76
CIRCUIT BREAKER AMPACITY	MCA	13	12	25	21
	MOCP	15	15	40	25
OD DIMENSIONS (IN / LBS)	W X D X H / #	31.5x12x23.6/82	31.5X11.3X21.6 / 77	37.4x14.2x37.1/163	33.1X13X33.4/126
CONDENSER POWER	V	208	208	208	208
	PH	1	1	1	1
	HZ	60	60	60	60
REF. LINE SIZE O.D.	SUCT.	1/2	3/8	5/8	5/8
	LIQ.	1/4	1/4	3/8	3/8
AIR HANDLER FAN MOTOR	FLA	0.33	0.5	0.35	0.93
	V	DC 24	DC 24	DC 24	DC 24
ID DIMENSIONS (IN / LBS)	W X D X H / #	35.4x9.8x11.6/29	31.5X9.1X11.6/22	46.1 X 11.8 X 14.4 / 40	46X11.6X14.4 /40
HEAT		COOLING ONLY	COOLING ONLY	COOLING ONLY	COOLING ONLY
NOTES:		1 - 6	1 - 6	1 - 6	1 - 6

NOTES:
1. ALTERNATE EQUIPMENT SHALL BE EQUAL TO THE EQUIPMENT LISTED IN ALL RESPECTS.
2. ELECTRICAL SPECIFICATIONS LISTED ARE CONSISTENT WITH THE EQUIPMENT LISTED. ALTERNATE EQUIPMENT MAY VARY. COORDINATE VARIANCES WITH THE ELECTRICAL CONTRACTOR.
3. CONSULT MANUFACTURER DOCUMENTATION TO SET EQUIPMENT TO MEET AIRFLOW REQUIREMENTS LISTED.
4. ADDITIONAL REFRIGERANT MAY BE REQUIRED WHERE PIPE LENGTHS EXCEED 70 FT. REFER TO MANUFACTURER DOCUMENTATION FOR PROPER INSTALLATION.
5. REFRIGERANT PIPING SHALL BE INSTALLED FROM BACK OF UNIT CONCEALED IN WALL BEHIND UNIT. THERE SHALL BE NO EXPOSED PIPING.
6. PROVIDE PAR-31MAA BACKLIT MA REMOTE CONTROLLER.

APPROVED ALTERNATES: LG, PANASONIC, DAIKIN

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SCALE: 1/4" = 1'-0"
MICHAEL J. BISHOP, FLORIDA P.E. NO. 73008, MECHANICAL ENGINEER, CERT. OF AUTH. 9454, DATE 8.19.2014

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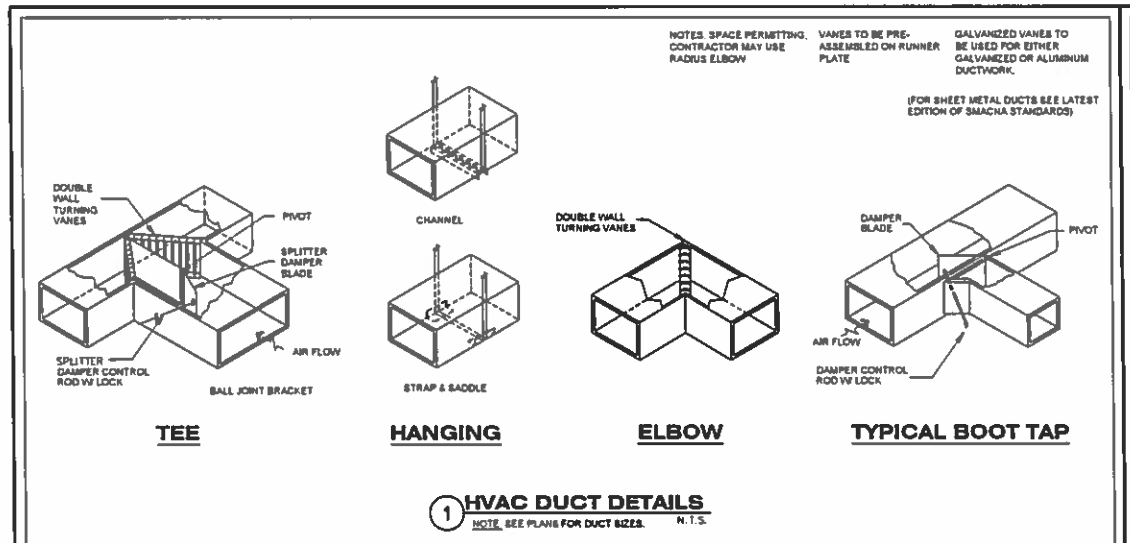
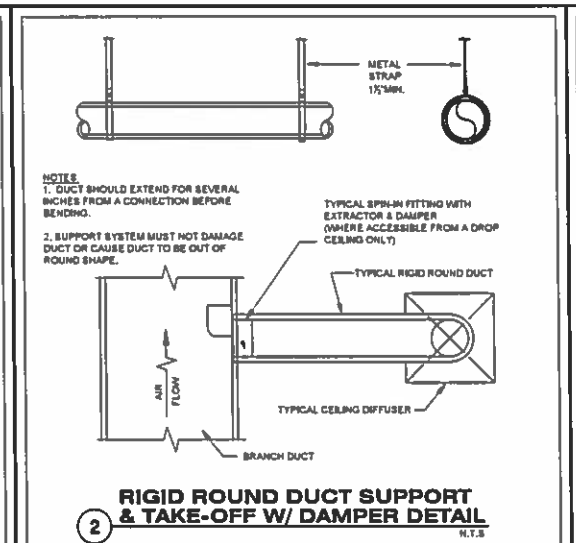
Revised:

MECHANICAL SCHEDULES

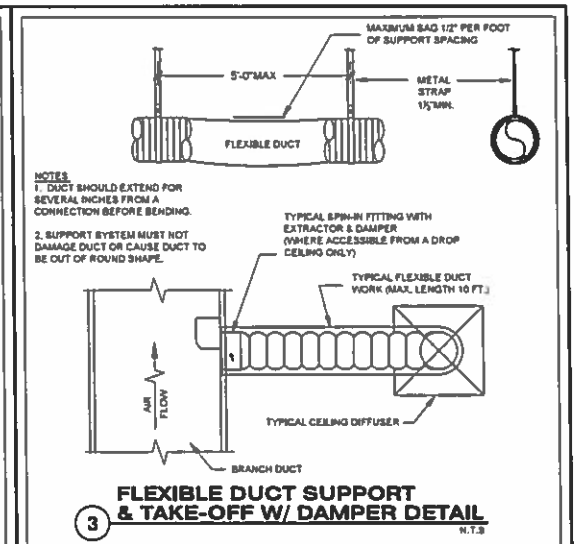
M4.2



1 HVAC DUCT DETAILS
NOTE: SEE PLANS FOR DUCT SIZES. N.T.S.

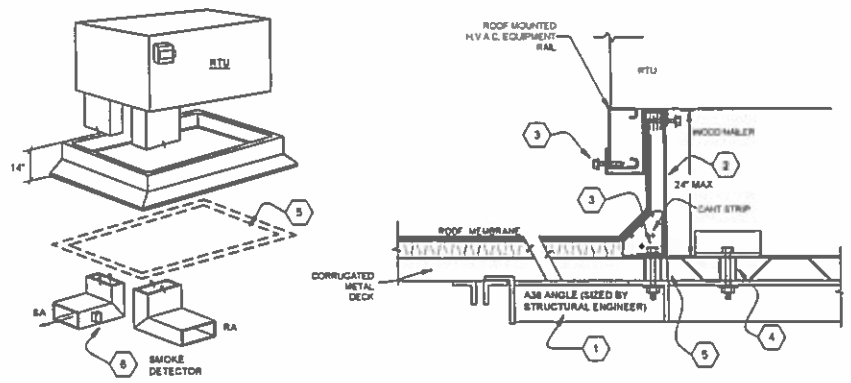


2 RIGID ROUND DUCT SUPPORT & TAKE-OFF W/ DAMPER DETAIL
N.T.S



3 FLEXIBLE DUCT SUPPORT & TAKE-OFF W/ DAMPER DETAIL
N.T.S

REFERENCE INSTALLATION DETAILS



KEYNOTES

1. PROVIDE (A-36) STEEL ANGLE BRIDGING BETWEEN JOISTS AND AS REQUIRED TO SUPPORT THE CURB CONTINUOUS AROUND THE PERIMETER. ALL STRUCTURAL STEEL FABRICATION REQUIRED FOR THE SUPPORT STRUCTURE SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH THE SPECIFICATIONS PROVIDED BY THE SHELL STRUCTURAL ENGINEER. THE CONTRACTOR SHALL REFER TO STRUCTURAL DETAILS.

2. ROOF CURB SHALL BE PROVIDED BY THE HVAC EQUIPMENT MANUFACTURER AND MATCHED TO THE RTU. INSTALLED CURB SHALL EXTEND 8" MIN ABOVE THE ROOF MEMBRANE.

3. APPLY SIX #10 TEK SCREWS PER RESTRAINT BRACKET, 2" O.C. SPACING, HOLDING HVAC UNIT TO RESTRAINT BRACKET.

4. PROVIDE 1½" SCHEDULE 40 PIPE SLEEVE SPACERS TO SUPPORT THE CURB FLANGE. ADJUST LENGTH OF SLEEVE AS REQUIRED TO MATCH THE RECESS IN THE ROOF SHEETING. DO NOT WARP THE CURB FLANGE OR CRUSH THE CORRUGATED ROOFING.

5. CUT THE ROOF SHEETING BACK AS REQUIRED TO ACCESS THE BOTTOM RAIL OF THE RTU FROM THE INSIDE OF THE CURB.

6. PROVIDE SMOKE DETECTORS IN ACCORDANCE WITH FBC-M 2007 SECTION 606. PROVIDE SA DETECTORS ON UNITS SERVING EGRESS, OR UNITS GREATER THAN 2000 CFM OR AS AGGREGATE SYSTEMS GREATER THAN 2000 CFM. THE DETECTORS SHALL BE UL268A W/REMOTE TEST STATION. THE DETECTORS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR (IF BUILDING EQUIPPED WITH A FIRE ALARM SYSTEM) AND INSTALLED BY THE MECHANICAL CONTRACTOR. ELECTRICAL INTERCONNECTION BY THE ELECTRICAL CONTRACTOR. IF FIRE ALARM SYSTEM IS PRESENT, SMOKE CUT OFF MUST BE INTERLOCKED WITH ALARM SYSTEM.

7. THE DUCT SIZES SHOWN ON THE PLAN MAY BE LARGER THAT THE OPENING PROVIDED ON THE RTU. THE CONTRACTOR SHALL PROVIDE TRANSITIONS AS REQUIRED AS SOON AS POSSIBLE AFTER LEAVING THE RTU.

8. "IMPORTANT" RTU MUST BE LEVEL TO INSURE PROPER CONDENSATE REMOVAL.

4 RTU MOUNTING DETAIL

1 MECHANICAL DETAILS

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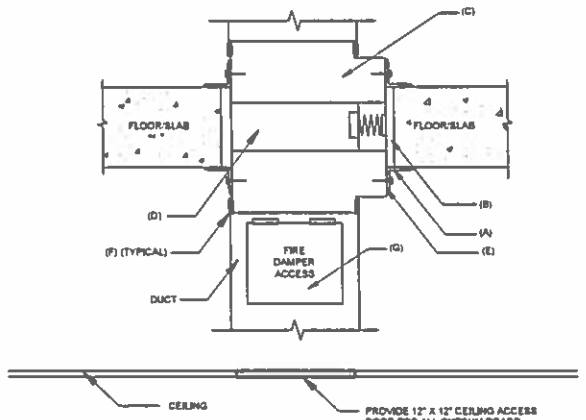
MECHANICAL DETAILS

M5.1

TYPICAL INSTALLATION DETAILS

(A) RETAINING ANGLES SUPPLIED BY THE MANUFACTURER MINIMUM 1-1/2" X 1-1/2" X 0.054 (18 GA.) RETAINING ANGLES MUST OVERLAP STRUCTURE OPENING 1" MINIMUM AND COVER CORNERS OF OPENINGS AS SHOWN.
(B) CLEARANCE: 1/4" PER LINEAR FOOT OF DAMPER WIDTH AND HEIGHT WITH A MINIMUM CLEARANCE OF 1/4"
(C) STEEL SLEEVE - FACTORY INSTALLED - DAMPER SLEEVE SHALL EXTEND A MAX OF 8" ON EITHER SIDE OF FLOOR OR WALL ON EACH SIDE.
(D) GREENHECK MODEL DFD-150 FIRE DAMPER
(E) SECURE RETAINING ANGLES TO SLEEVE NO. 10 STEEL SCREWS 6" O.C. AND 2" FROM EACH END. RIVETS, BOLTS & NUTS, AND WELDS CAN BE USED ALTERNATIVLY REFERENCE INSTALLATION INSTRUCTIONS.
(F) CONNECT DUCT TO SLEEVE WITH BREAKAWAY CONNECTION WITH A MAXIMUM OF (2) #10 SHEET METAL SCREWS ON EACH SIDE AND ON THE BOTTOM LOCATED IN ON EACH SIDE AND ON THE BOTTOM LOCATED IN THE CENTER OF THE SLIP POCKET.
(G) FULLY GASKETED HINGED CAM LOCK FIRE DAMPER ACCESS DOOR. LABEL "FIRE DAMPER ACCESS".

NOTE: IF DIFFERENT MANUFACTURE IS INSTALLED. INSTALL PER MANUFACTURES INSTALLATION INSTRUCTIONS.



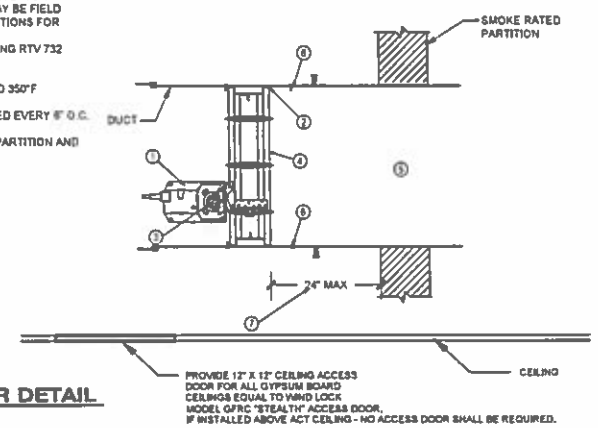
1 **FLOOR/SLAB MOUNTED FIRE DAMPER DETAIL**

ITEM DESCRIPTION

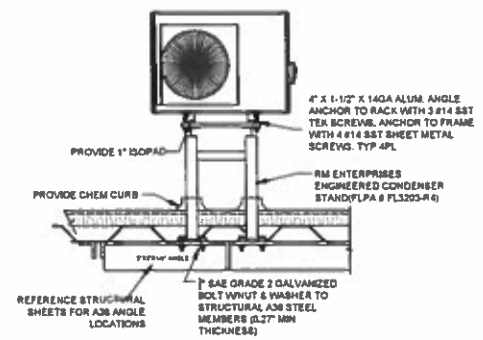
1. ACTUATOR (LOCATION MAY VARY). DAMPER MAY BE SUPPLIED WITHOUT ACTUATOR INSTALLED. GREENHECK'S UL LISTED FIRE/SMOKE DAMPER ACTUATORS MAY BE FIELD INSTALLED IF PROPERLY LABELED. SEE ACTUATOR INSTALLATION INSTRUCTIONS FOR FIELD MOUNTING OF DAMPER ACTUATORS.
2. SEAL THE JOINT BETWEEN THE DAMPER AND THE DUCT USING DOW CORNING RTV 732 SEALANT OR GE1200 SERIES SILICONE CONSTRUCTION ADHESIVE
3. DAMPER OPERATING JACK SHAFT
4. GREENHECK MODEL SMD - 202 UL555S-APPROVED CLASS II DAMPER RATED 350°F
5. DUCT WORK
6. ATTACH DAMPER TO DUCT WORK USING #10 SHEET METAL SCREWS SPACED EVERY 6" O.C. AND AT LEAST 2" FROM CORNERS.
7. THE PLANE OF THE CLOSED DAMPER MUST BE WITHIN 24" OF THE SMOKE PARTITION AND BEFORE ANY DUCT INLETS OR OUTLETS.

NOTES

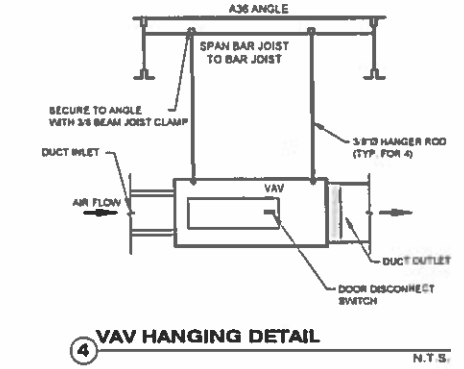
1. SMOKE DAMPER SHALL BE OPEN WITH POWER ON, AND CLOSED WITH POWER OFF.
2. INSTALL PER MANUFACTURER'S INSTRUCTIONS WHERE INSTRUCTIONS DIFFER THAN THIS DETAIL.
3. THE PLANE OF THE DAMPER BLADES MUST BE INSTALLED WITHIN 24" OF THE RATED SMOKE BARRIER.



2 **SMOKE DAMPER DETAIL**



3 **MITSUBISHI MINISPLIT CU TIEDOWN DETAIL**



4 **VAV HANGING DETAIL**
N.T.S.

KEYNOTES

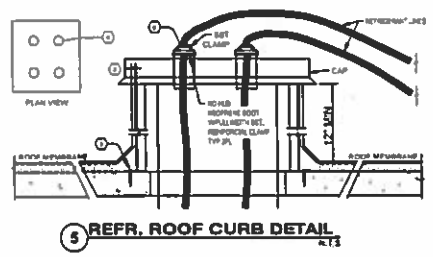
1 PROVIDE A PATE CURB ASSEMBLY. CONTRACTOR SHALL INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS

2 MOUNT CURB TO PIPE EXTENSION WITH #12 TEK SCREWS 3" FROM EACH CORNER AND 6" O.C. IN BETWEEN

3 SECURE THE CURB TO THE ROOF STRUCTURE WITH 4"X 3" LONG TAPCONS. LOCATE 2" FROM THE CORNERS AND 6" O.C. ON ALL SIDES

4 PROVIDE PIPE SLEEVES AS SHOWN FOR REFRIGERANT BUNDLES. CONTRACTOR ADJUST SIZE AND NUMBER OF PIPE PENETRATIONS AS REQUIRED

5 SEAL PENETRATION WITH FOAM AFTER INSTALLATION OF REFRIGERANT BUNDLES



5 **REFR. ROOF CURB DETAIL**
N.T.S.

1 **MECHANICAL DETAILS**

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MECHANICAL ENGINEER
CERT OF AUTH. 5454
DATE 9.19.2014

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NEW CLASSROOM BUILDING
RIVIERA BEACH MARITIME ACADEMY
RIVIERA BEACH, FLORIDA
CONTRUCTION DOCUEMENTS

Comm. No: 214031.00
Date: 09-24-14
Drawn: RGD
Revised:

MECHANICAL DETAILS

M5.2

VAV RTU CONTROLLER SHALL FOLLOW THE FOLLOWING SEQUENCE OF OPERATION
BUILDING AUTOMATION SYSTEM INTERFACE: THE CONTROL SYSTEM SHALL SEND THE CONTROLLER OCCUPIED BYPASS, OCCUPIED / UNOCCUPIED MODES IF COMMUNICATION IS LOST WITH THE CONTROL SYSTEM THE CONTROLLER SHALL OPERATE USING DEFAULT MODES AND SETPOINTS.

OCCUPIED MODE SUPPLY FAN SHALL RUN CONTINUOUSLY OA DAMPER SHALL OPEN COOLING COIL SHALL STAGE TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT AND SUPPLY FAN VFD SHALL MODULATE TO MAINTAIN 0A STATIC PRESSURE SETPOINT.

UNOCCUPIED MODE: SUPPLY FAN SHALL BE OFF OA DAMPER SHALL CLOSE.

OCCUPIED BYPASS THE BAS SHALL MONITOR THE STATUS OF THE "ON" AND "CANCEL" BUTTONS OF THE SPACE TEMPERATURE SENSORS. WHEN AN OCCUPIED BYPASS REQUEST IS RECEIVED FROM A SPACE SENSOR THE UNIT SHALL TRANSITION FROM ITS CURRENT OCCUPANCY MODE TO OCCUPIED BYPASS MODE AND THE UNIT SHALL FOLLOW THE SEQUENCE OF OPERATIONS DESCRIBED ON OCCUPIED MODE.

COOLING MODE THE UNIT CONTROLLER SHALL USE THE DISCHARGE AIR TEMPERATURE SENSOR AND DISCHARGE AIR TEMPERATURE COOLING SETPOINT (55 F.) TO DETERMINE WHEN TO INITIATE REQUESTS FOR COOLING. DISCHARGE AIR SETPOINT SHALL BE MAINTAINED BY STAGING THE DX COOLING AS REQUIRED TO MAINTAIN THE DISCHARGE AIR SETPOINT.

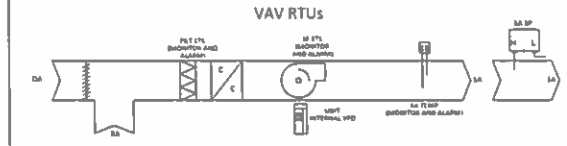
SUPPLY FAN DURING OCCUPIED MODE THE SUPPLY FAN SHALL RUN CONTINUOUSLY. A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FAN, IF THE SWITCH DOES NOT OPEN WITHIN 40 SECONDS AFTER A REQUEST FOR FAN OPERATION A FAN FAILURE ALARM SHALL BE ANNUNCIATED AT THE BAS. THE UNIT SHALL STOP. REQUIRING A MANUAL RESET.

SUPPLY DUCT STATIC PRESSURE CONTROL THE UNIT CONTROLLER SHALL MODULATE THE OUTPUT TO THE VFD AS REQUIRED TO MAINTAIN THE DUCT STATIC PRESSURE SETPOINT OF 1.5 INCHES OF W.C. (ADJ.). IF THE DUCT STATIC PRESSURE FALLS BELOW 1.2 INCHES OF W.C. (ADJ.) THE UNIT CONTROLLER SHALL INCREASE THE OUTPUT TO THE VFD TO MAINTAIN SETPOINT. IF THE DUCT STATIC PRESSURE RISES ABOVE 1.7 INCHES OF W.C. (ADJ.) THE UNIT CONTROLLER SHALL DECREASE THE OUTPUT TO THE VFD TO MAINTAIN SETPOINT. THE SUPPLY DUCT STATIC PRESSURE SENSOR SHALL ALSO ACT AS A HIGH DUCT STATIC PRESSURE SAFETY AND SHALL SHUT DOWN THE UNIT IN THE EVENT THAT THE DUCT STATIC PRESSURE REACHES 3.00 INCHES OF W.C. (ADJ.). A RESET SHALL BE REQUIRED TO RESET THE UNIT.

FILTER STATUS A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER WHEN THE FAN IS RUNNING. IF THE SWITCH CLOSES FOR 2 MINUTES AFTER A REQUEST FOR FAN OPERATION A DIRTY FILTER ALARM SHALL BE ANNUNCIATED.

RA CO2 CONTROL THE CONTROLLER SHALL MONITOR THE RETURN AIR CO2 CONCENTRATION LEVEL AND MODULATE THE OA DAMPER OPEN TO MAINTAIN RA CO2 CONCENTRATION SETPOINT. AN ALARM SHALL BE SENT TO THE BAS WHEN THE RETURN AIR CO2 CONCENTRATION LEVEL IS HIGHER THAN SETPOINT (788 PPM ADJ.)

VAV RTUs

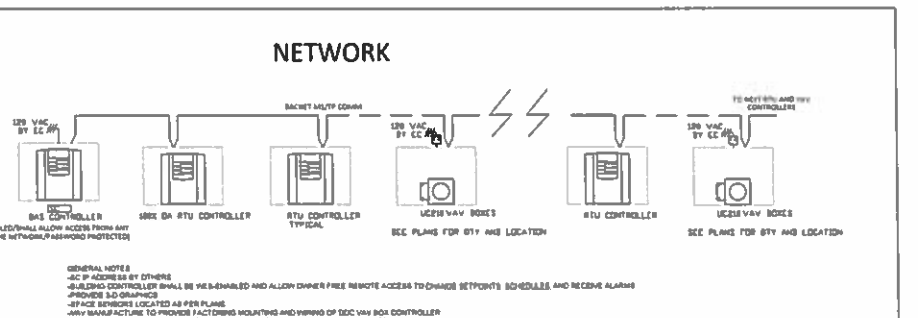


RTUs SEQUENCE OF OPERATIONS (TYPICAL OF 2)
THE UNIT SHALL BE CONTROLLED THROUGH ITS OWN DEDICATED CONTROL PANEL. THE BAS BY STEM SHALL MONITOR USING A BACNET COMMUNICATION THE FOLLOWING POINTS ON THE UNIT
1. SUPPLY FAN RUN STATUS
2. SUPPLY AIR TEMPERATURE
3. FILTER STATUS.

THE CONTROL SYSTEM SHALL SEND AN ALARM WHEN
- SUPPLY FAN FAILURE.
- HIGH/LOW SUPPLY AIR TEMP
- FILTER DIRTY

MANUFACTURER'S FIELD INSTALLED DEVICES INSTALLED BY CONTROL CONTRACTOR.
CONTROL OF UNIT DURING EMERGENCY MODE BY DN 16

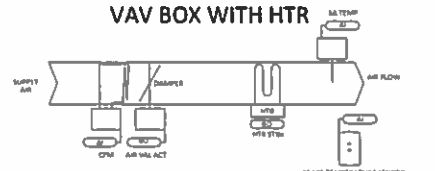
NETWORK



GENERAL NOTES
-DC IP ADDRESS BY OTHERS
-BUILDING CONTROLLER SHALL BE WEB-ENABLED AND ALLOW OWNER FREE REMOTE ACCESS TO CHANGE SETPOINTS, SCHEDULES, AND RECEIVE ALARMS
-PROVIDE 3-D GRAPHICS
-87 FACE SENSORS LOCATED AS PER PLANS
-ANY MANUFACTURE TO PROVIDE FACTORING MOUNTING AND WIRING OF DDC VAV BOX CONTROLLER
-ON 16 ELECTRICAL CONTRACTOR TO PROVIDE 120/277 VAV POWER TO ALL VAV BOXES
-MOTORIZED DAMPERS BY OTHERS
-HVAC EQUIPMENT SEQUENCE OF OPERATIONS DURING EMERGENCY MODE BY EA.
-ANY ROOFTOP UNITS WILL BE SCHEDULED FOR ALL OCCUPIED PERIOD OF TIMES (REGULAR CLASSES, AFTER-HOUR FUNCTIONS TEACHERS WORK DAYS ETC.) AND THE 100% OA UNIT WILL BE SCHEDULED FOR HIGHER OCCUPANCY OCCUPIED PERIOD OF TIMES (REGULAR CLASSES & LARGE AFTER-HOUR FUNCTIONS ONLY).

BASIS OF DESIGN TRANE (954) 488-6999

VAV BOX WITH HTR



VAV BOXES WITH HTR SEQUENCE OF OPERATION

BUILDING AUTOMATION SYSTEM INTERFACE: THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE CONTROLLER OCCUPIED BYPASS, OCCUPIED AND UNOCCUPIED COMMANDS. THE BAS MAY ALSO SEND A HEAT/COOL MODE, PRIORITY SHUTDOWN COMMANDS, SPACE TEMPERATURE AND/OR SPACE TEMPERATURE SETPOINT. IF COMMUNICATION IS LOST WITH THE BAS, THE VAV CONTROLLER SHALL OPERATE USING ITS LOCAL SETPOINTS.

OCCUPANCY MODES: THE OCCUPANCY MODE SHALL BE COMMUNICATED OR HARDWIRED TO THE VAV BOX A BINARY INPUT. VALID OCCUPANCY MODES FOR THE VAV BOX SHALL BE OCCUPIED: NORMAL OPERATING MODE FOR OCCUPIED SPACES ON DAYTIME OPERATION. WHEN THE UNIT IS IN THE OCCUPIED MODE THE VAV BOX SHALL MAINTAIN THE SPACE TEMPERATURE AT THE ACTIVE OCCUPIED HEATING OR COOLING SETPOINT. APPLICABLE VENTILATION AND AIRFLOW SETPOINTS SHALL BE ENFORCED. THE OCCUPIED MODE SHALL BE THE DEFAULT MODE OF THE VAV.
UNOCCUPIED: NORMAL OPERATING MODE FOR UNOCCUPIED SPACES OR NIGHTTIME OPERATION. WHEN THE UNIT IS IN UNOCCUPIED MODE THE VAV CONTROLLER SHALL CLOSE TO ITS MINIMUM POSITION.
OCCUPIED BYPASS MODE USED TO TEMPORARILY PLACE THE UNIT INTO THE OCCUPIED OPERATION. TENANTS SHALL BE ABLE TO OVERRIDE THE UNOCCUPIED MODE FROM THE SPACE SENSOR. THE OVERRIDE SHALL LAST FOR A MAXIMUM OF 2 HOURS (ADJ.) THE TENANTS SHALL BE ABLE TO CANCEL THE OVERRIDE FROM THE SPACE SENSOR AT ANY TIME, DURING THE OVERRIDE THE UNIT SHALL OPERATE IN OCCUPIED MODE.

HEAT/COOL MODE: THE HEAT/COOL MODE SHALL BE SET BY A COMMUNICATED VALUE OR AUTOMATICALLY BY THE VAV IN STANDALONE OR AUTO MODE THE VAV SHALL COMPARE THE PRIMARY AIR TEMPERATURE WITH THE CONFIGURED AUTO CHANGEOVER SETPOINT TO DETERMINE IF THE AIR IS 'HOT' OR 'COLD'. HEATING MODE SHALL COMMAND THE VAV TO HEAT ONLY IT SUPPLIES THE PRIMARY AIR TEMPERATURE IS HOT. COOLING MODE SHALL COMMAND THE VAV TO COOL ONLY IT SUPPLIES THE PRIMARY AIR TEMPERATURE IS COLD.
HEAT/COOL SETPOINT: THE SPACE TEMPERATURE SETPOINT SHALL BE DETERMINED EITHER BY A LOCAL (E.G. THUMBWHEEL) SETPOINT. THE VAV DEFAULT SETPOINT OR A COMMUNICATED VALUE. THE VAV SHALL USE THE LOCALLY STORED DEFAULT SETPOINTS WHEN NEITHER A LOCAL SETPOINT NOR COMMUNICATED SETPOINT IS PRESENT. IF BOTH A LOCAL SETPOINT AND COMMUNICATED SETPOINT EXIST THE VAV SHALL USE THE COMMUNICATED VALUE.

COOLING MODE: WHEN THE UNIT IS IN COOLING MODE THE VAV CONTROLLER SHALL MAINTAIN THE SPACE TEMPERATURE AT THE ACTIVE COOLING SETPOINT BY MODULATING THE AIRFLOW BETWEEN THE ACTIVE COOLING MINIMUM AIRFLOW SETPOINT TO THE MAXIMUM COOLING AIRFLOW SETPOINT.
THE VAV SHALL USE THE MEASURED SPACE TEMPERATURE AND THE ACTIVE COOLING SETPOINT TO DETERMINE THE REQUESTED COOLING CAPACITY OF THE UNIT. THE OUTPUTS WILL BE CONTROLLED BASED ON THE UNIT CONFIGURATION AND THE REQUESTED COOLING CAPACITY

HEATING MODE: WHEN THE UNIT IS IN HEATING MODE, THE VAV CONTROLLER SHALL MAINTAIN THE SPACE TEMPERATURE AT THE ACTIVE HEATING SETPOINT BY MODULATING THE AIRFLOW BETWEEN THE ACTIVE HEATING MINIMUM AIRFLOW SETPOINT TO THE MAXIMUM HEATING AIRFLOW SETPOINT.
THE VAV CONTROLLER SHALL USE THE MEASURED SPACE TEMPERATURE AND THE ACTIVE HEATING SETPOINT TO DETERMINE THE REQUESTED HEATING CAPACITY OF THE UNIT. THE OUTPUTS WILL BE CONTROLLED BASED ON THE UNIT CONFIGURATION AND THE REQUESTED HEATING CAPACITY.

HEATING STAGING: REHEAT WILL ONLY BE ALLOWED WHEN THE PRIMARY AIR TEMPERATURE IS 5.0 DEG. F BELOW THE COMPRISHED REHEAT ENABLE SETPOINT OR 75.0 DEG. F (ADJ.), THE REHEAT SHALL BE ENABLED WHEN THE SPACE TEMPERATURE DROPS BELOW THE ACTIVE COOLING SETPOINT AND THE AIRFLOW AT THE MINIMUM COOLING AIRFLOW SETPOINT DURING REHEAT THE VAV SHALL OPERATE AT ITS MINIMUM HEATING AIRFLOW SETPOINT AND ENERGIZE THE HEAT AS FOLLOWS

PULSE WIDTH MODULATED HEAT (PWM): IF THE SPACE TEMPERATURE IS AT THE HEATING SETPOINT ENERGIZE FIRST STAGE OF HEAT. THE SECOND STAGE OF HEATING SHALL BE ENERGIZED BASED ON TIME AND TEMPERATURE DEVIATION FROM SETPOINT. DUTY CYCLE THESE STAGES ON A THREE-MINUTE WINDOW. STAGE 1 SHALL MODULATE FROM 0-49% DEVIATION AND BE ON CONTINUOUSLY ABOVE 49%. STAGE 2 SHALL MODULATE FROM 50-99% DEVIATION.

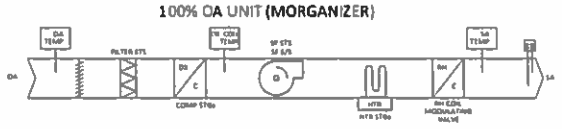
SPACE SENSOR FAILURE: IF THERE IS A FAULT WITH THE OPERATION OF THE ZONE SENSOR AN ALARM SHALL BE ANNUNCIATED AT THE BAS. SPACE SENSOR FAILURE SHALL CAUSE THE VAV TO DRIVE THE DAMPER TO MINIMUM AIR FLOW IF THE VAV IS IN THE OCCUPIED MODE, OR DRIVE IT CLOSED IF THE VAV IS IN THE UNOCCUPIED MODE.

VAV BOXES WITH HTR POINT LIST

SYSTEM POINT DESCRIPTION	GRAPHIC	HARDWARE INPUT	HARDWARE OUTPUT	SOFTWARE POINT	HARDWARE POINT	DEFAULT VALUE	POINT TYPE: ALARMS: HIGH ANALOG LIMIT	LOW ANALOG LIMIT	BINARY	LATCH DIAGNOSTIC	SENSOR FAIL	COMMUNICATION FAIL	DIAGNOSTICS	NOTES
DISCHARGE AIR TEMP	X	AI					X	X			X		SENSOR FAILURE	
SPACE AIR TEMP	X	AI					X	X			X		SENSOR FAILURE	NOTE 3
SUPPLY AIR FLOW	X	AI												
VAV DAMPER	X		AO											
HEATING OUTPUT	X		BO											
OCCUPIED COOLING SP				X		74°F	X	X						
OCCUPIED HEATING SP				X		68°F	X	X						
Min COOLING AIR FLOW SP				X										NOTE 1
MAX COOLING AIR FLOW SP				X										NOTE 2
MIN HEATING AIR FLOW SP				X										NOTE 2
MAX HEATING AIR FLOW SP				X										NOTE 1
OCCUP BYPASS TIMER				X		2 HRS								
BAS COMM STATE	X			X							X			NOTE 2

GENERAL NOTES
1- SEE VAV SCHEDULE FOR VALUES
2- DISPLAY AT BAS USER INTERFACE
3- SEE PLANS FOR LOCATION

100% OA UNIT (MORGANIZER)



SEQUENCE OF OPERATION MODULATING VALVE HOT GAS REHEAT IN SYTEM
DISCHARGE AIR CONFIGURATION

A. DISCHARGE AIR OCCUPIED CONTROL

CONTROL OF THE TRANE HOT GAS REHEAT OR ROOFTOP UNIT IS ACCOMPLISHED THROUGH A DEDICATED STANDALONE CONTROL MODULE (UC400). THIS CONTROLLER UTILIZES FOUR TEMPERATURE SENSORS. THE FUNCTION OF THIS CONTROLLER IS TO MAINTAIN A PROGRAMMED DISCHARGE AIR TEMPERATURE.

A TEMPERATURE SENSOR IS MOUNTED AFTER THE DX EVAPORATOR COIL. THIS TEMPERATURE SENSOR WILL BE USED BY THE CONTROLLER TO CONTROL THE COMPRESSORS TO CYCLE ON THE STAGE ONE COMPRESSOR ABOVE A 54 DEGREE DRY BULB TEMPERATURE SETPOINT IN THE COOLING MODE. THE SECOND STAGE COMPRESSOR WILL BE CYCLED ON ABOVE 56 DEGREES DRY BULB AND OFF ONCE THE TEMPERATURE FALLS BELOW 54 DEGREES.

A TEMPERATURE SENSOR IS FIELD MOUNTED IN THE DUCT AFTER THE HOT GAS REHEAT COIL AT LEAST 14 FEET DOWN FROM THE DISCHARGE OF THE UNIT. ONCE DISCHARGE TEMPERATURE SETPOINT 74 (ADJUSTABLE) IS REACHED AN ANALOG SIGNAL IS SENT TO THE HOT GAS REHEAT AND CONDENSER MODULATING VALVES TO MODULATE FREE CONDENSER HEAT INTO THE AIRSTREAM TO MAINTAIN THE DISCHARGE TEMPERATURE SETPOINT.

A JUCTION LINE TEMPERATURE WILL BE LOCATED ON THE SUCTION LINE OF CIRCUIT #1. THIS TEMPERATURE SENSOR WILL DISABLE BOTH COOLING CIRCUITS WHEN THE TEMPERATURE GOES BELOW 28 DEGREES (ADJUSTABLE) AND ENABLE THEM ABOVE 38 (ADJUSTABLE)

AN OUTSIDE AIR TEMPERATURE SENSOR IS MOUNTED IN THE OUTSIDE AIR INTAKE SECTION AND MONITORS THE OUTDOOR AIR INTAKE TEMPERATURE. THE CONTROLLER IS PROGRAMMED TO LOCK THE UNIT COOLING OUT IF THE OUTSIDE AIR INTAKE IS 65 DEGREES (ADJUSTABLE). THE COOLING WILL BE REENABLED AFTER THE OUTSIDE AIR TEMPERATURE RISES ABOVE 70 DEGREES (ADJUSTABLE).

THE HEAT WILL BE ENABLED WHEN THE OUTSIDE AIR INTAKE TEMPERATURE IS BELOW 65 DEGREES (ADJUSTABLE) WHEN HEATING IS CALLED FOR THE CONTROLLER WILL GO INTO HEATING MODE AND THE HEAT WILL BE CONTROLLED AS REQUIRED TO MAINTAIN THE DISCHARGE AIR HEATING SETPOINT (ADJUSTABLE)
THE ACTUAL OUTPUT SIGNAL FOR THE HEAT CONTROL WILL OPERATE BASED ON THE TYPE OF HEAT THE UNIT HAS.

IF THE UNIT HAS ELECTRIC HEAT THEN THE FOLLOWING WILL OCCUR
THE 1ST STAGE WILL COME ON WHEN THE DISCHARGE AIR TEMPERATURE IS BELOW THE HEAT SETPOINT (ADJUSTABLE) AND OFF ABOVE THE HEAT SETPOINT PLUS A DEADBAND (ADJUSTABLE). THE 2ND STAGE WILL BE ON BELOW THE HEAT SETPOINT (ADJUSTABLE) MINUS 2 DEGREES AND OFF ABOVE THE HEAT SETPOINT MINUS 2 DEGREES PLUS A DEADBAND (ADJUSTABLE)

THE CONTROLLER IS PROGRAMMED TO MAINTAIN DISCHARGE AIR SETPOINT (FOR HEATING AND COOLING). THE CONTROLLER HAS ALL OF THESE FUNCTIONS PRE-PROGRAMMED, HOWEVER, SINCE IT IS FULLY PROGRAMMABLE, THE SETPOINTS AND SEQUENCE CAN BE MODIFIED IF REQUIRED.

B. FAN PROVING DEVICE

A CONTACT CLOSURE INTO THE CONTROLLER WILL INDICATE TO THE CONTROLLER PROOF OF AIRFLOW FROM A DIFFERENTIAL PRESSURE SWITCH THAT WILL ALLOW EITHER COOLING OR HEATING TO OPERATE.

C. OCCUPIED/UNOCCUPIED CONTROL

A CONTACT CLOSURE INTO THE CONTROLLER WILL INDICATE AN OCCUPIED MODE OF OPERATION. THE CONTROLLER WILL OPERATE IN THE UNOCCUPIED MODE WHILE THE CONTACTS ARE OPEN. THE DRY CONTACT INPUT WILL BE WIRED FROM EITHER A TIME CLOCK OR THE BUILDING ENERGY MANAGEMENT SYSTEM. THE SYSTEM CAN ALSO BE SCHEDULED LOCALLY IF EQUIPPED WITH A DISPLAY CONTROLLER BY A TRANE BUILDING AUTOMATION SYSTEM OR BY A COMMAND FROM A BACNET NETWORK DEPENDING ON CONTROLLER TYPE.

D. UNOCCUPIED MODE

WHEN THE CONTROLLER IS INDEXED TO THE UNOCCUPIED MODE, THE SYSTEM WILL BE OFF.

DIRECT DIGITAL CONTROL SYSTEMS
PART 1 - GENERAL
1.1 DESCRIPTION
A. THE BUILDING AUTOMATION SYSTEM SHALL BE AS INDICATED ON THE DRAWINGS AND DESCRIBED IN THESE SPECIFICATIONS. SYSTEM MUST BE FULLY INTEGRATED AND COORDINATED WITH MECHANICAL EQUIPMENT DDC CONTROLLERS FURNISHED AND INSTALLED BY THE EQUIPMENT MANUFACTURER'S FACTORY AS SPECIFIED IN THOSE SECTIONS. THE INTENT OF THE BAS IS TO INTEGRATE ALL MECHANICAL EQUIPMENT INTO ONE SYSTEM FOR GLOBAL MONITORING, CONTROL AND ALARMING ASSOCIATED WITH THE BUILDING. IT IS THE BAS MANUFACTURER'S RESPONSIBILITY TO PROVIDE ALL THE DESIGN, ENGINEERING, AND FIELD COORDINATION REQUIRED TO ENSURE ALL EQUIPMENT BE QUENCE OF OPERATIONS ARE MET AS SPECIFIED AND THE DESIGNATED BAS OPERATIONS HAVE THE CAPABILITY OF MANAGING THE BUILDING MECHANICAL SYSTEM TO ENSURE OCCUPANT COMFORT WHILE MAINTAINING ENERGY EFFICIENCY.
B. THE BAS SHALL MEET BACNET COMMUNICATION STANDARDS TO ENSURE THE SYSTEM MAINTAINS INTEROPERABILITY TO AVOID PROPRIETARY ARRANGEMENTS THAT WILL MAKE IT DIFFICULT FOR THE OWNER TO CONNECTOR OTHER BAS MANUFACTURERS IN FUTURE PROJECTS.
C. THE MECHANICAL SYSTEMS AND TERMINAL DEVICES SHALL BE PROVIDED WITH FACTORY MOUNTED DDC CONTROLS THAT WILL PERMIT EACH SYSTEM TO OPERATE IN A STANDALONE FASHION AS SUCH IN THE EVENT OF A BAS NETWORK COMMUNICATION FAILURE OR THE LOSS OF AN INDIVIDUAL CONTROLLER. THE OTHER DDC CONTROLLERS SHALL CONTINUE TO INDEPENDENTLY OPERATE AND COMMUNICATE TO THE BAS.
D. COMMUNICATION BETWEEN DDC CONTROLLERS AND ALL WORKSTATIONS SHALL BE OVER A HIGH-SPEED ETHERNET NETWORK. ALL NODES ON THIS NETWORK SHALL BE PEER. THE OPERATOR SHALL NOT HAVE TO KNOW THE CONTROLLER IDENTIFIER OR LOCATION TO VIEW OR CONTROL A POINT (OBJECT). APPLICATION SPECIFIC CONTROLLERS SHALL BE CONSTANTLY SCANNED BY THE BUILDING CONTROLLERS TO UPDATE POINT INFORMATION AND ALARM INFORMATION GLOBALLY.
E. THE BAS MANUFACTURER SHALL PROVIDE ALL HARDWARE AND SOFTWARE NECESSARY TO IMPLEMENT THE FUNCTIONS AND SEQUENCE OF OPERATIONS SPECIFIED.
1.2 APPROVED BAS MANUFACTURERS
A. MANUFACTURERS
1. BASIS OF DESIGN: TRANE
1.3 QUALITY ASSURANCE
A. BAS MANUFACTURER QUALIFICATIONS
1. THE BAS MANUFACTURER SHALL HAVE AN ESTABLISHED BUSINESS OFFICE WITHIN 35 MILES OF THE PROJECT SITE AND MUST PROVIDE 24 HOUR/DAY 7 DAY/WEEK RESPONSE IN THE EVENT OF A CUSTOMER WARRANTY OR SERVICE CALL.
2. THE BAS MANUFACTURER SHALL HAVE FACTORY TRAINED AND CERTIFIED PERSONNEL PROVIDING ALL ENGINEERING, SERVICE, STARTUP AND COMMISSIONING FIELD LABOR FOR THE PROJECT FROM THEIR LOCAL OFFICE LOCATION. BAS MANUFACTURER SHALL BE ABLE TO PROVIDE TRAINING CERTIFICATIONS FOR ALL LOCAL OFFICE PERSONNEL UPON REQUEST.
3. THE BAS SHALL BE PROVIDED BY A SINGLE MANUFACTURER AND THE MANUFACTURER'S EQUIPMENT MUST CONSIST OF OPERATOR WORKSTATION SOFTWARE, WEB-BASED HARDWARE/SOFTWARE, OPEN STANDARD PROTOCOL HARDWARE/SOFTWARE, CUSTOM APPLICATION PROGRAMMING LANGUAGE, GRAPHICAL PROGRAMMING LANGUAGE, BUILDING CONTROLLERS, CUSTOM APPLICATION CONTROLLERS, AND APPLICATION SPECIFIC CONTROLLERS. ALL OTHER PRODUCTS SPECIFIED HEREIN (I.E., SENSORS, VALVES, DAMPERS, ACTUATORS, ETC.) NEED NOT BE MANUFACTURED BY THE BAS MANUFACTURER LISTED IN SECTION 2.01 OF THIS SPECIFICATION.
4. INDEPENDENT REPRESENTATIVES OF BAS MANUFACTURERS ARE NOT ACCEPTABLE. BAS VENDOR MUST BE CORPORATE OWNED ENTITY OF BAS MANUFACTURER.
1.4 SUBMITTALS
A. BAS MANUFACTURER SHALL PROVIDE SHOP DRAWINGS AND MANUFACTURERS' STANDARD SPECIFICATION DATA SHEETS ON ALL HARDWARE AND SOFTWARE BEING PROVIDED FOR THIS PROJECT. NO WORK MAY BEGIN ON ANY ELEMENT OF THIS PROJECT UNTIL THE ENGINEER AND OWNER HAVE REVIEWED SUBMITTALS FOR CONFORMITY WITH THE PLAN AND SPECIFICATIONS. FIVE (5) COPIES ARE REQUIRED. ALL SHOP DRAWINGS SHALL BE PROVIDED TO THE OWNER ELECTRONICALLY AS .DWG OR .DXF FILE FORMATS ONCE THEY HAVE BEEN APPROVED AND AS-BUILT DRAWINGS HAVE BEEN COMPLETED.
B. QUANTITIES OF ITEMS SUBMITTED SHALL BE REVIEWED BY THE ENGINEER AND OWNER. SUCH REVIEW SHALL NOT RELIEVE THE BAS MANUFACTURER OF FURNISHING QUANTITIES REQUIRED BASED UPON CONTRACT DOCUMENTS.
C. PROVIDE THE ENGINEER AND OWNER ANY ADDITIONAL INFORMATION OR DATA WHICH IS DEEMED NECESSARY TO DETERMINE COMPLIANCE WITH THE SPECIFICATIONS OR WHICH IS DEEMED VALUABLE IN DOCUMENTING AND UNDERSTANDING THE SYSTEM TO BE INSTALLED.
1.5 WARRANTY
A. WARRANT ALL WORK AS FOLLOWS
1. BAS SYSTEM LABOR AND MATERIALS SHALL BE WARRANTED FREE FROM DEFECTS FOR A PERIOD OF TWELVE (12) MONTHS AFTER FINAL COMPLETION ACCEPTANCE BY THE OWNER. BAS FAILURES DURING THE WARRANTY PERIOD SHALL BE ADJUSTED, REPAIRED, OR REPLACED AT NO CHARGE TO THE OWNER. THE BAS MANUFACTURER SHALL RESPOND TO THE OWNER'S REQUEST FOR WARRANTY SERVICE WITHIN 24 HOURS OF THE INITIATED CALL AND WILL OCCUR DURING NORMAL BUSINESS HOURS (MON-FRI).
2. AT THE END OF THE FINAL STARTUP/TESTING OF EQUIPMENT AND SYSTEMS ARE OPERATING SATISFACTORILY TO THE OWNER AND ENGINEER. THE OWNER SHALL SIGN CERTIFICATES CERTIFYING THAT THE BAS IS OPERATIONAL AND HAS BEEN TESTED AND ACCEPTED IN ACCORDANCE WITH THE TERMS OF THIS SPECIFICATION. THE DATE OF OWNER'S ACCEPTANCE SHALL BE THE START OF THE WARRANTY PERIOD.
3. OPERATOR WORKSTATION SOFTWARE, PROJECT SPECIFIC SOFTWARE, GRAPHICS, DATABASE, AND FIRMWARE UPDATES SHALL BE PROVIDED TO THE OWNER AT NO CHARGE DURING THE WARRANTY PERIOD. WRITTEN AUTHORIZATION BY THE OWNER MUST BE GRANTED PRIOR TO THE INSTALLATION OF THESE UPDATES.
4. THE BAS MANUFACTURER SHALL PROVIDE A WEB-ACCESSIBLE USERS NETWORK FOR THE PROPOSED SYSTEM AND GIVE THE OWNER PEER ACCESS TO QUESTIONNAIRE FORUM GRAPHICS LIBRARY USER TIPS, UPGRADES AND TRAINING SCHEDULES FOR A ONE YEAR PERIOD OF TIME COMMENCING WITH THE WARRANTY PERIOD.
1.6 TRAINING
A. PROVIDE MINIMUM OF (2) CLASSROOM TRAINING SESSIONS AND (4) HOURS FOR EACH SESSION THROUGHOUT THE CONTRACT PERIOD. THE TRAINING WILL BE PROVIDED FOR PERSONNEL DESIGNATED BY THE OWNER.
B. THE OWNER TRAINING SHALL ENABLE PERSONNEL TO PROFICIENTLY OPERATE THE BAS BY BEING ABLE TO CREATE, MODIFY AND DELETE PROGRAMMING, ADD, REMOVE AND MODIFY PHYSICAL POINTS FOR INDIVIDUAL CONTROLLERS AND ADD ADDITIONAL CONTROLLERS WHEN REQUIRED.
1.9 FIELD QUALITY CONTROL
A. ALL WORK, MATERIALS AND EQUIPMENT SHALL COMPLY WITH THE RULES AND REGULATIONS OF APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES AS IDENTIFIED IN CONTRACT DOCUMENTS.
B. BAS MANUFACTURER SHALL CONTINUALLY MONITOR THE FIELD INSTALLATION FOR BUILDING CODE COMPLIANCE AND QUALITY OF WORKMANSHIP. ALL VISIBLE PIPING AND OR WIRING RUNS SHALL BE INSTALLED PARALLEL TO BUILDING LINES AND PROPERLY SUPPORTED.
C. BAS INSTALLING CONTRACTOR(S) SHALL ARRANGE FOR FIELD INSPECTIONS BY LOCAL AND/OR STATE AUTHORITIES HAVING JURISDICTION OVER THE WORK.

MECHANICAL CONTROLS

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Drawings not signed and sealed by the engineer shall not be submitted to any authority or used for any purpose where signed and sealed documents are required.
MICHAEL J. BISHOP
FLORIDA P.E. NO. 73998
MECHANICAL ENGINEER
CERT. OF AUTH. 5464
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Comm. No: 214031.00
Date: 09-24-14
Drawn: RGD
Revised:

MECHANICAL CONTROLS

M6.1

GENERAL PLUMBING NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE CODES AS SHOWN.
2. THE PLUMBING CONTRACTOR SHALL BE HELD TO HAVE VERIFIED ALL EXISTING CONDITIONS, INCLUDING SITE VISITATION, AND REVIEW OF AS BUILT DOCUMENTATION AS APPLICABLE PRIOR TO BIDDING, ORDERING FABRICATION OR INSTALLATION OF ANY MATERIALS OR EQUIPMENT ON THIS PROJECT.
3. UNLESS OTHERWISE SPECIFIED ALL MATERIALS SHALL BE NEW. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE. ALL EXCAVATION AND BACK FILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
4. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
5. PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTION AND TESTS. PLUMBING CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
6. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS AND ARE CONSIDERED TO BE ONE SET OF DOCUMENTS. BENDS OFFSETS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE AND FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR AT NO ADDITIONAL COST. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT ETC.
7. CONTRACTOR SHALL SUBMIT FOR APPROVAL FIVE (5) COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND PLUMBING FIXTURES INCLUDED IN CONTRACT. ALL MATERIAL SHALL BE NEW OF U.S. MANUFACTURER OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED TRADESMEN.
8. THE GENERAL CONTRACTOR AND ALL OTHER CONTRACTORS SHALL BE LICENSED IN THE STATE OF FLORIDA. GENERAL CONTRACTOR SHALL CONSIDER THE PROJECT AS ONE SET OF DOCUMENTS. GENERAL CONTRACTOR SHALL PROVIDE AN ENTIRE SET OF DOCUMENTS SHOWING ALL TRADES TO EACH SUBCONTRACTOR PRIOR TO BIDDING AND CONSTRUCTION. GENERAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS TO INFORM ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR CONFLICTS ON THE DOCUMENTS PRIOR TO SUBMITTING FINAL BID AND COMMENCING ANY WORK. CONTRACTOR SHALL MAKE HIMSELF AVAILABLE FOR REVIEWING DOCUMENTS WITH ARCHITECT/ENGINEER UPON REQUEST.
9. THE GENERAL CONTRACTOR SHALL PROVIDE IN WRITING ON COMPANY LETTER HEAD ALL ITEMS VALUE ENGINEERED OR OMITTED FROM ENTIRE PROJECT. THIS DOCUMENT SHALL HAVE DETAILED DESCRIPTION AND TRANSPARENCY OF ALL ITEMS IN EACH DISCIPLINE AND TRADE. INFORMATION SHALL BE PROVIDED TO ARCHITECT AND ENGINEER FOR REVIEW PRIOR TO SUBMITTING FINAL BID. CONTRACTOR SHALL MAKE HIMSELF AVAILABLE FOR REVIEWING DOCUMENTS WITH ARCHITECT/ENGINEER/OWNER UPON REQUEST.
10. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ENGINEER/ARCHITECT PRIOR TO BEGINNING CONSTRUCTION.
11. VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
12. THE INVERT ELEVATIONS OF DRAINAGE PIPING LEAVING THE BUILDING ARE APPROXIMATE AND MAY VARY DEPENDING ON FIELD CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING CIVIL AS REQUIRED TO ASSURE THAT A CONNECTION TO THE SANITARY SEWER SYSTEM CAN BE COMPLETED. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IN WRITING PRIOR TO COMMENCEMENT OF THE GROUND ROUGH.
13. WATER DISTRIBUTION PIPING SHALL BE TYPE "L" COPPER.
14. ALL PVC SHALL BE SOLID CORE NO CELLULAR CORE.
15. UNLESS OTHERWISE INDICATED ON THE PLAN, THE SOIL, WASTE, AND VENT PIPING SHALL BE PVC. PVC MAY NOT BE USED THROUGH RATED ASSEMBLIES OR IN RETURN AIR PLENUMS.
16. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS. ISOLATION VALVES LOCATED IN CEILING CAVITIES ABOVE HARD CEILINGS SHALL BE SUPPLIED WITH APPROVED ACCESS PANELS. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
17. FURNISH AND INSTALL APPROVED, ENGINEERED PISTON TYPE MECHANICAL WATER HAMMER ARRESTORS AT EACH PLUMBING FIXTURE OR FIXTURE GROUP WITH QUICK CLOSING VALVES. INSTALLATION OF THE ARRESTOR SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, AND SHALL BE IN COMPLIANCE WITH PDI-F 604.9 AND ASSE 1010. THE ARRESTOR SHALL BE LOCATED WITHIN THE EFFECTIVE RANGE OF THE QUICK CLOSING VALVE, WITH ACCESS UNLESS THE ARRESTOR IS DESIGNED FOR CONCEALED APPLICATION AND IS APPROVED BY THE BUILDING DEPARTMENT. PRECISION PLUMBING PRODUCTS, JOSAM OR SOLIX CHIEF ARE ACCEPTABLE SUPPLIERS.
18. DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING AND EQUIPMENT CONNECTIONS.
19. ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD.
20. ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING VOIDS BETWEEN PIPE AND WALL/FLOOR SLEEVES WITH FIRE RATED FOAM TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS AS PART OF THE PLUMBER'S WORK.
21. PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE BY OWNER. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
22. PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES AND ALL WATER HAMMER ARRESTERS. ACCESS PANELS IN RATED WALLS MUST MAINTAIN THE SAME RATING AND MUST MATCH THE FINISH OF THE WALL IN WHICH IT IS INSTALLED.
23. PROVIDE CHROME PLATED COMBINATION COVER PLATE AND CLEAN OUT PLUG OR ACCESS PANEL FOR ALL WALL CLEAN OUTS
24. NO COMBUSTIBLE MATERIAL TO BE USED IN MECHANICAL ROOMS OR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
25. NO WATER, SANITARY OR DRAINAGE PIPING PERMITTED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.
26. ALL CONTROL VALVES SHALL BE TAGGED AND MARKED. A REPRODUCIBLE DIAGRAM LOCATING ALL VALVES SHALL BE PROVIDED FOR OWNER/OPERATOR.
27. PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
28. WATER PIPING INSULATION SHALL BE 1/2" THICK ARMAFLEX INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR ALL HOT WATER PIPING UP TO 1-1/4"Ø. HOT WATER PIPING 1-1/2"Ø OR LARGER SHALL HAVE 1" THICK ARMAFLEX. WHERE DOMESTIC WATER TEMPERATURES CAN CAUSE SWEATING ALL COLD WATER PIPING SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX INSULATION. ALL INSULATION SHALL BE PLENUMRATED.
29. STUDOR MINI/MAXI AIR ADMITTANCE VALVES OR AN APPROVED EQUAL MAY BE USED AS AN ALTERNATE TO VENT PIPING THROUGH ROOF WHERE ACCEPTABLE BY THE PLUMBING OFFICIAL. THE INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 917 OF THE FLORIDA BUILDING CODE-PLUMBING AND THE MANUFACTURER'S WRITTEN INSTRUCTIONS. AIR ADMITTANCE VALVES MAY NOT BE USED IN A RETURN AIR PLENUM.
30. ALL FLOOR DRAINS NOT OTHERWISE PRIMED WITH INDIRECT WASTE SHALL BE PRIMED FROM THE NEAREST DOMESTIC WATER FIXTURE. REF. FLOOR DRAIN PRIMING DETAIL.
31. PLUMBING CONTRACTOR SHALL PROVIDE ENGINEER WITH AS-BUILT DRAWINGS UPON COMPLETION
32. ALL PUBLIC HANDWASHING SINKS SHALL RECEIVE TEMPERED WATER THROUGH AN APPROVED TEMPERATURE LIMITING DEVICE THAT CONFORMS WITH ASSE 1070.
33. TEMPERATURE-ACTUATED MIXING VALVES, WHICH ARE INSTALLED TO REDUCE WATER TEMPERATURES TO DEFINED LIMITS, SHALL COMPLY WITH ASSE 1017.

PLUMBING SYMBOL LEGEND

SAN	SANITARY PIPE
VNT	SANITARY VENT
CW	DOMESTIC COLD WATER LINE
HW	DOMESTIC HOT WATER LINE
	DOMESTIC WATER DOWN
	DOMESTIC WATER UP
	BALL VALVE
	CONNECT TO EXISTING AT THIS LOCATION
	POINT OF DEMO
	HOSE BIBB / WALL HYDRANT

NOTE: NOT ALL SYMBOLS MAY APPLY TO PLANS

PLUMBING ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE	HW	HOT WATER
ACW	AUTOMATIC CLOTHES WASHER	HWH	HOT WATER HEATER
AFF	ABOVE FINISHED FLOOR	IE	INVERT ELEVATION
CI	CAST IRON	LAV	LAVATORY
CO	CLEANOUT	NTS	NOT TO SCALE
COND	CONDENSATE	OD	OVERFLOW DRAIN
CTC	CLEANOUT TO GRADE	RD	ROOF DRAIN
CW	COLD WATER	RE	RELOCATE EXISTING
EFD	EMERGENCY FLOOR DRAIN	REF	REFERENCE
EWC	ELECTRICAL WATER COOLER	RO	REVERSE OSMOSIS
EWH	ELECTRIC WATER HEATER	SK	SINK
EX	EXISTING	SH	SHOWER
FCO	FLOOR CLEAN OUT	SST	STAINLESS STEEL
FD	FLOOR DRAIN	TUB/SH	BATH TUB W/ SHOWER HEAD
FF	FINISHED FLOOR	UR	URINAL
GWH	GAS WATER HEATER	VTR	VENT TO ROOF
HB	HOSE BIBB	WC	WATER CLOSET
HC	HANDICAP	WCO	WALL CLEANOUT

NOTE: NOT ALL ABBREVIATIONS MAY APPLY TO PLANS

SHOP DRAWINGS

1. PRIOR TO COMMENCING ANY WORK, FABRICATING PIPING, OR ORDERING EQUIPMENT THE PLUMBING CONTRACTOR SHALL PRODUCE AND PROVIDE TO THE ARCHITECT AND ENGINEER A FULLY COORDINATED SET OF SHOP DRAWINGS FOR ALL PLUMBING WORK. THESE PLANS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND SHALL INCLUDE FIELD VERIFIED STRUCTURAL INFORMATION AND COORDINATION WITH ALL OTHER ENGINEERING AND ARCHITECTURAL TRADES AND CONTRACTORS.
2. PLUMBING CONTRACTOR SHALL PROVIDE SHOP DRAWINGS IN AUTOCAD 2009 FORMAT WITH A DATED CONTRACTOR OF RECORD TITLE BLOCK. SEPARATE PLANS SHALL SHOW PIPE ROUTING, PIPE SIZES, OFFSETS, FLOWS, TRANSITIONS, RISERS, CONNECTIONS, ACCESS AREAS, MOUNTING/INSTALLATION METHODS AND SUPPORTS, ETC.

SITE / CIVIL NOTE:

1. ALL STORM DRAIN CONNECTIONS ARE SHOWN ON THE SITE / CIVIL DRAWINGS. ALL LOCATIONS OF NEW & EXISTING PIPE ARE APPROXIMATE. COORDINATE UNDER GROUND UTILITIES WITH CIVIL'S DRAWINGS AND UTILITY COMPANY.
2. THE INVERT ELEVATIONS OF DRAINAGE PIPING LEAVING THE BUILDING ARE APPROXIMATE AND MAY VARY DEPENDING ON FIELD CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH CIVIL AS REQUIRED TO ASSURE THAT A CONNECTION TO THE SANITARY SEWER SYSTEM CAN BE COMPLETED. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IN WRITING PRIOR TO COMMENCEMENT OF THE GROUND ROUGH.

PLUMBING SHEET INDEX

APPLICABLE BUILDING CODES

FLORIDA BUILDING CODE, 2010 EDITION
FLORIDA BUILDING CODE PLUMBING, 2010 EDITION
NFPA 1, FLORIDA 2009 EDITION
NFPA 101, FLORIDA 2009 EDITION

MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES IN THEIR LATEST REVISIONS.

CONTRACTOR SHALL COORDINATE SPECIFIC REQUIREMENTS OF EQUIPMENT WITH MANUFACTURER SHOP DRAWINGS.

ALL EQUIPMENT SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.

CEILING CAVITY IS A RETURN AIR PLENUM. NO PVC OR COMBUSTIBLE MATERIALS ALLOWED PER FBC/M 602.2.1

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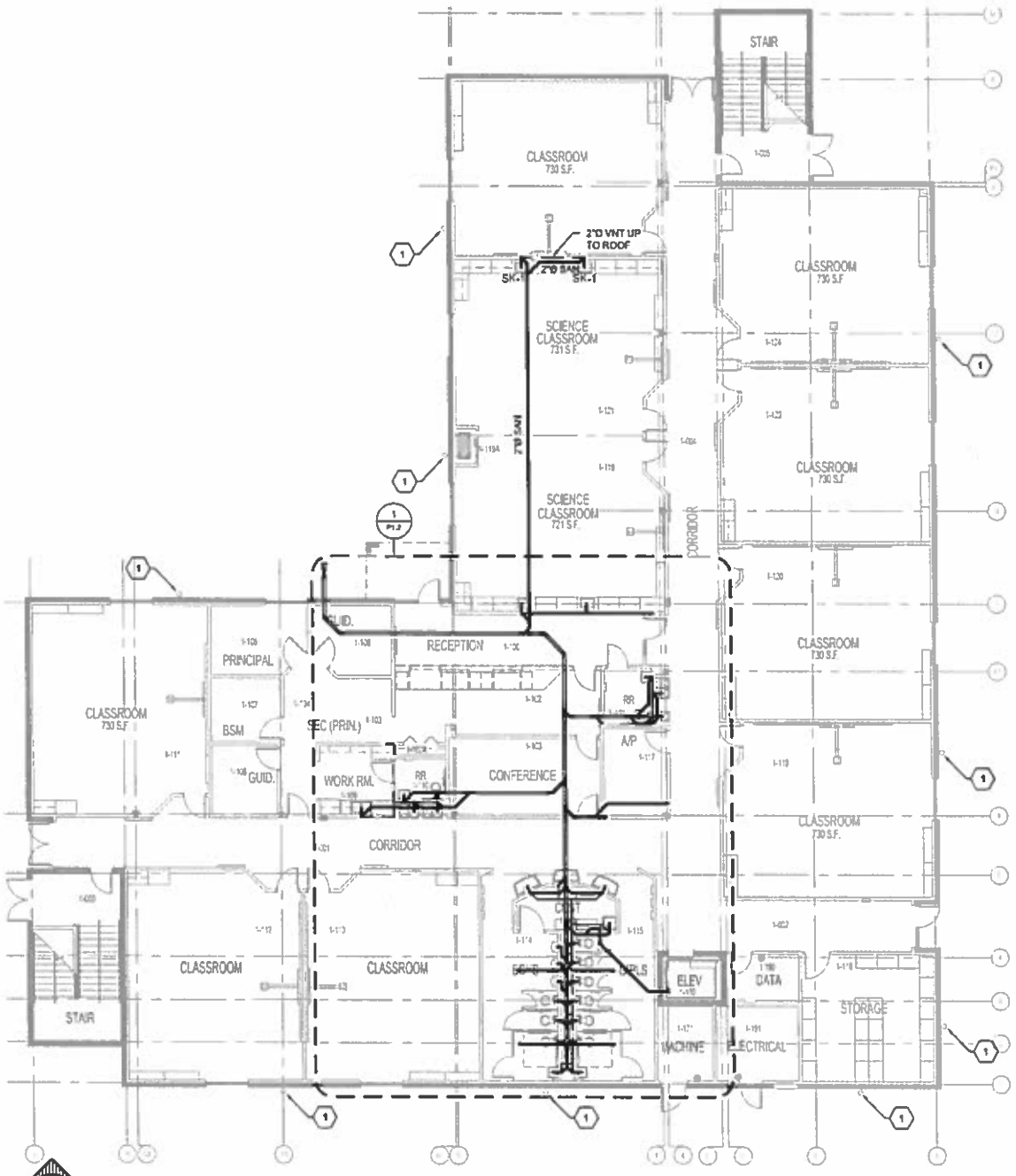
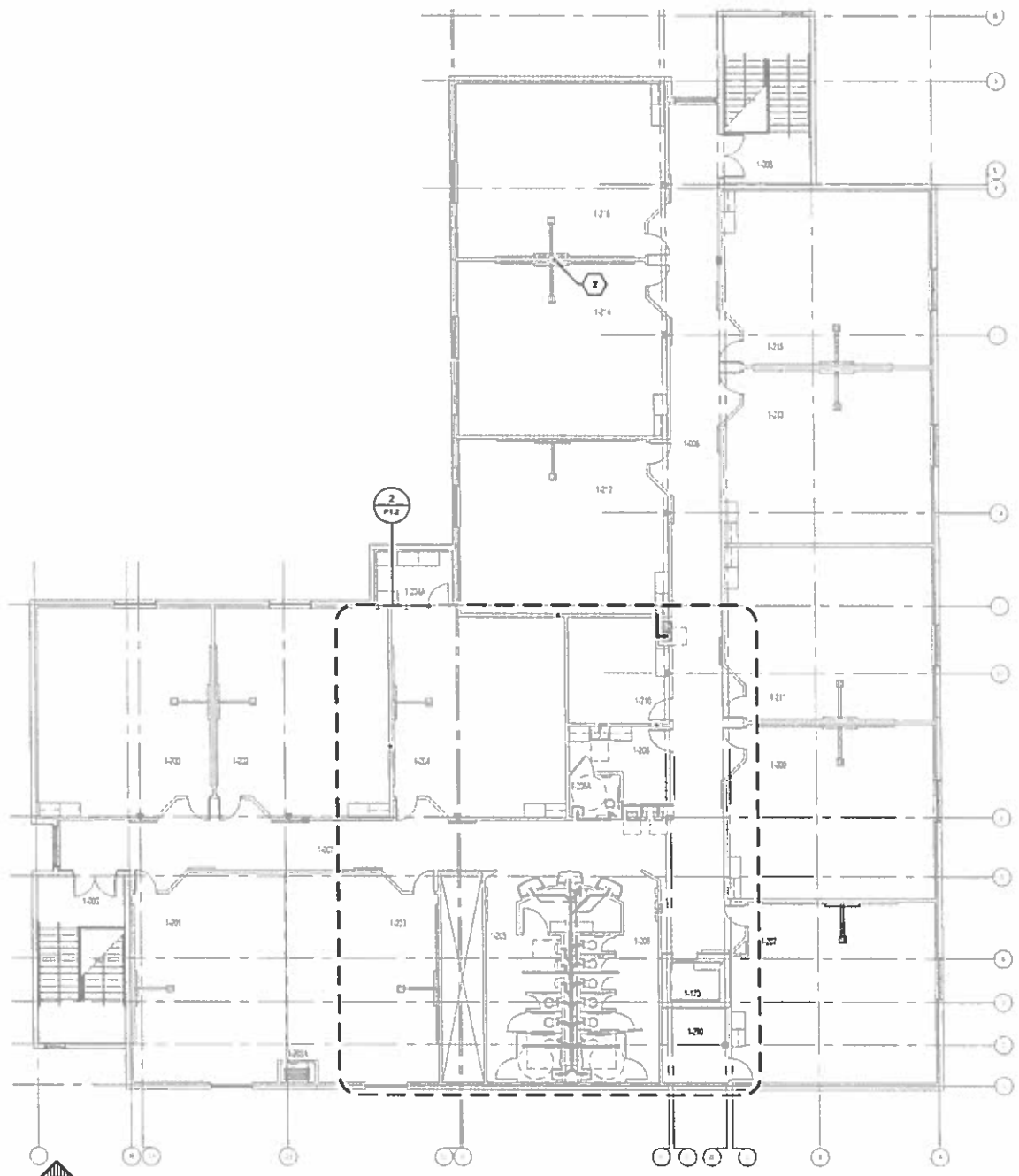


1 OVERALL SANITARY FLOOR PLAN - 1ST FLOOR

SCALE: 3/32" = 1'-0"



2 OVERALL SANITARY FLOOR PLAN - 2ND FLOOR

SCALE: 3/32" = 1'-0"

SANITARY KEY NOTES:

1. PROVIDE 6"D STORM WATER DRAIN AT GRADE TO DRAIN DISCHARGE FROM STORM WATER LEADER AND ROUTE DRAIN 5' FROM EXTERIOR OF BUILDING TO DRAIN TO STORM SEWER. REFERENCE CIVIL SITE PLAN.
2. 2"D VENT LINE FROM FIRST FLOOR UP TO ROOF. VENT LINES SHALL BE ROUTED ENTIRELY WITHIN WALL CAVITY AND SHALL NOT ROUTE THROUGH RETURN AIR PLENUMS.

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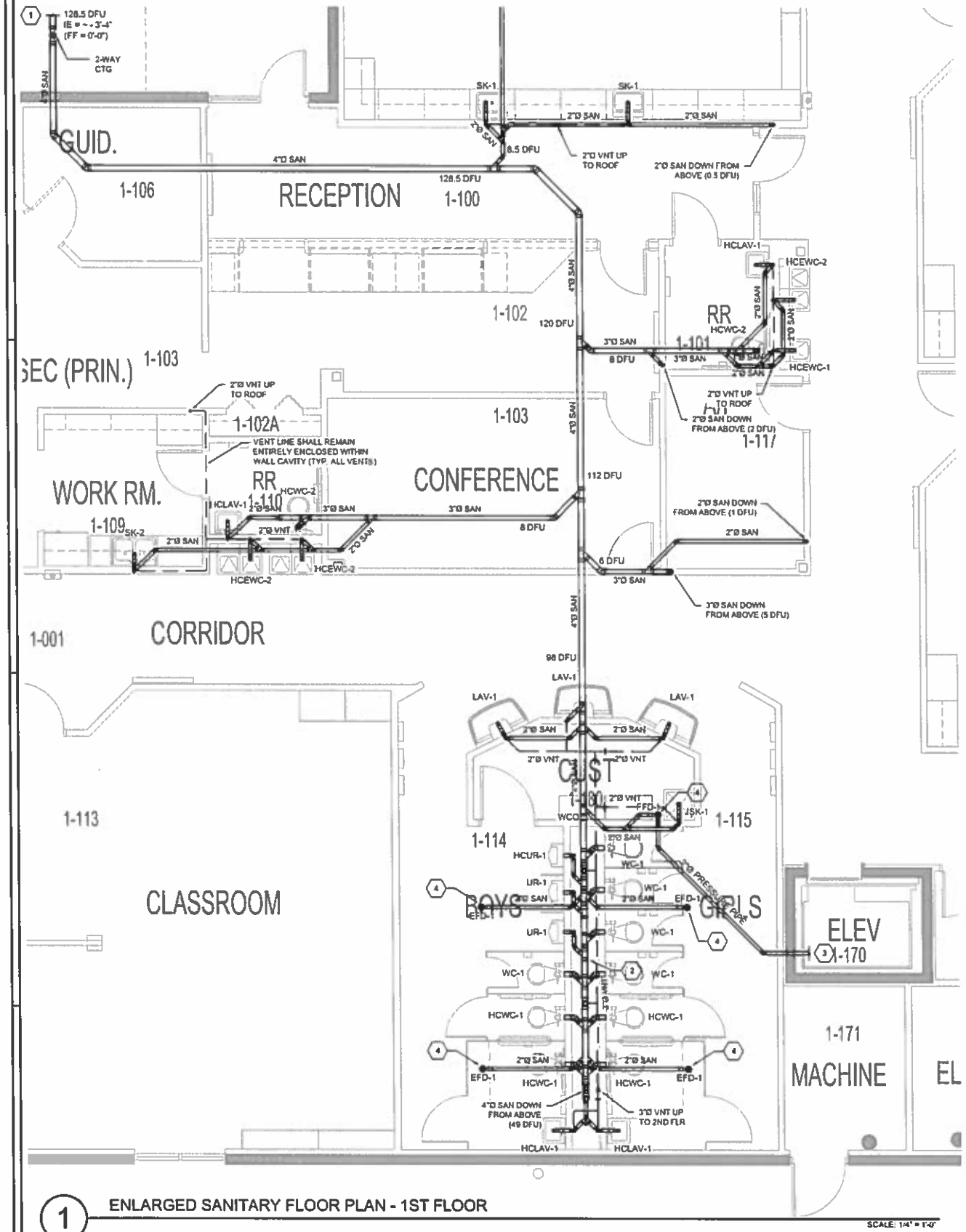
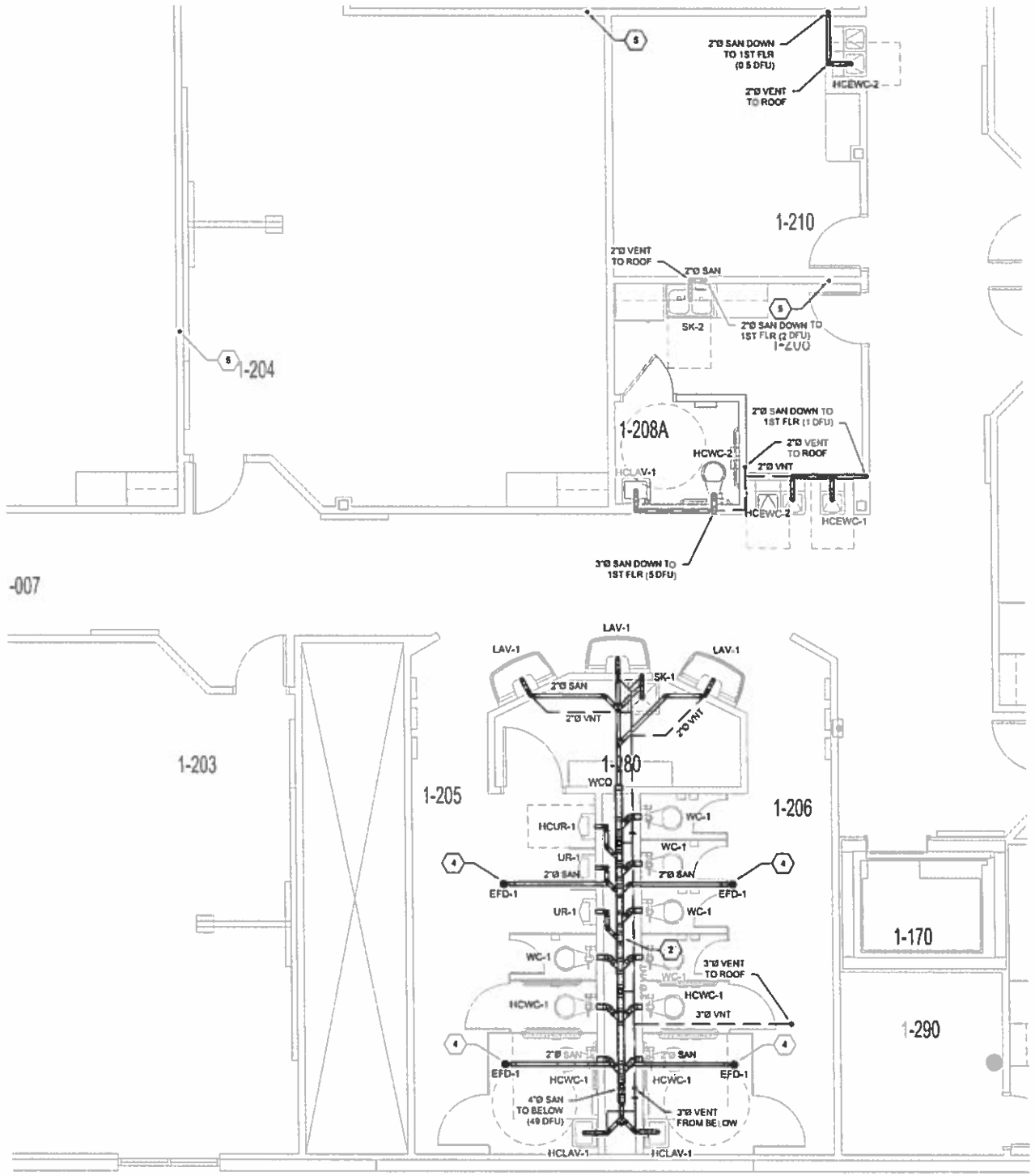


1 ENLARGED SANITARY FLOOR PLAN - 1ST FLOOR

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



2 ENLARGED SANITARY FLOOR PLAN - 2ND FLOOR

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

SANITARY KEY NOTES:

1. BUILDING DRAIN TO BUILDING SEWER. REFERENCE CIVIL SITE PLAN.
2. 4"Ø SANITARY DRAIN RECEIVING DISCHARGE FROM WALL-MOUNTED WATER CLOSETS AND URINALS IS LOCATED IN WALL CAVITY ABOVE FLOOR SLAB. REFERENCE ISOMETRIC PLAN.
3. 2"Ø PRESSURE PIPE FROM ELEVATOR SUMP PUMP. REFERENCE ELEVATOR SUMP PUMP DETAIL FOR INSTALLATION.
4. PRIME TRAP OF FLOOR DRAIN FROM NEAREST SINK OR COLD WATER SUPPLY LINE.
5. 2"Ø VENT LINE FROM FIRST FLOOR UP TO ROOF. VENT LINES SHALL BE ROUTED ENTIRELY WITHIN WALL CAVITY AND SHALL NOT ROUTE THROUGH RETURN AIR PLENUMS.

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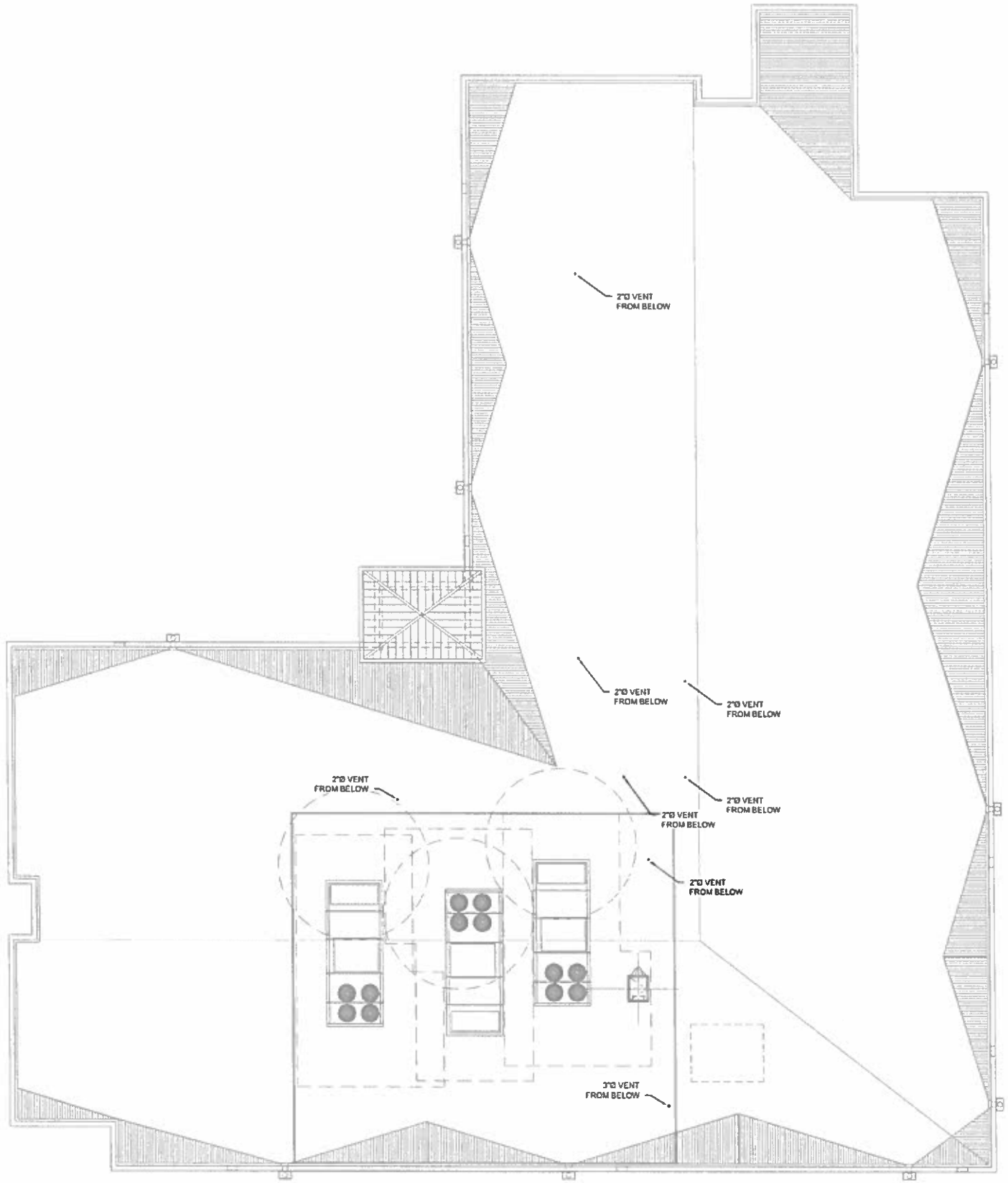

1 SANITARY ROOF PLAN

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

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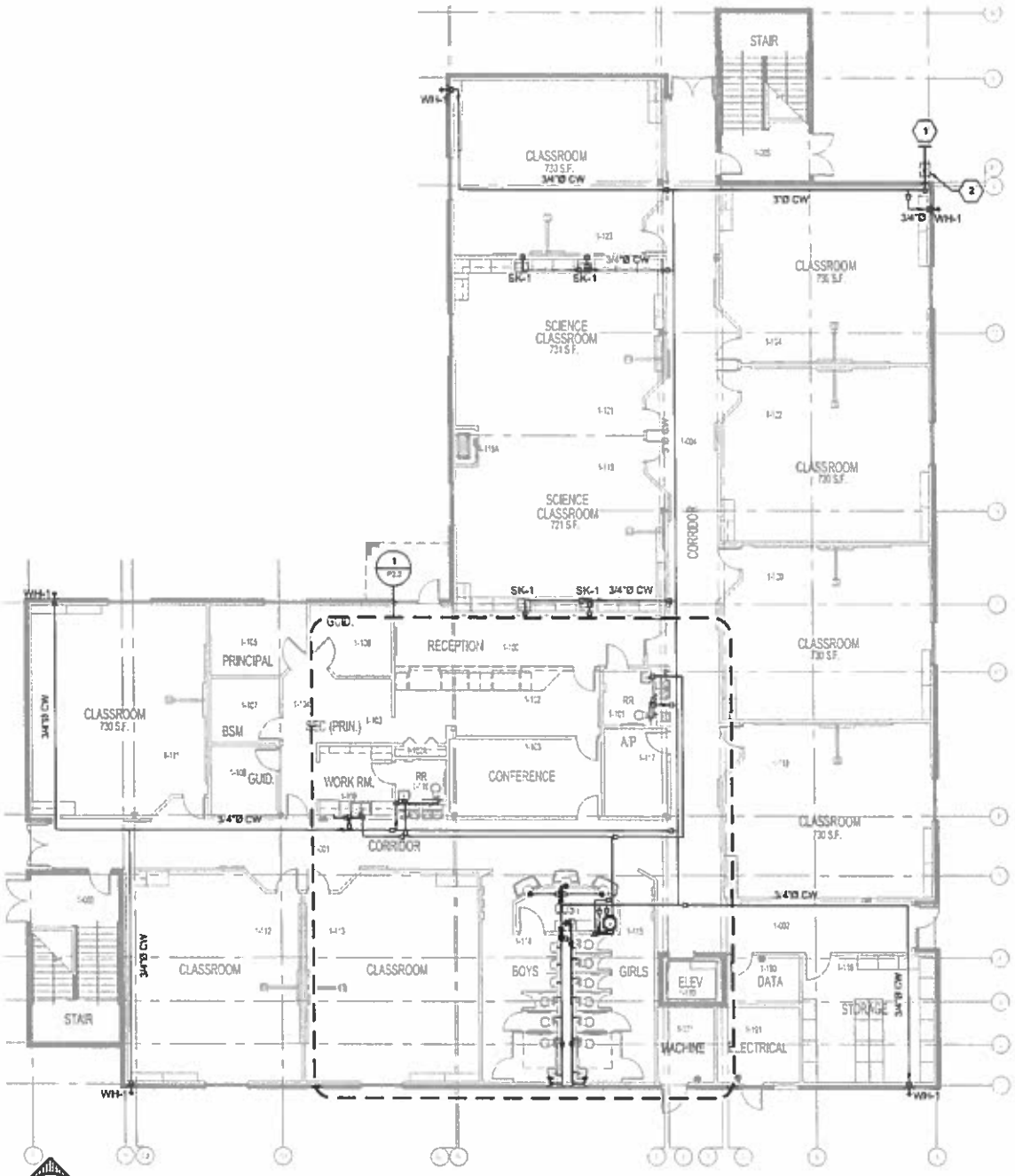
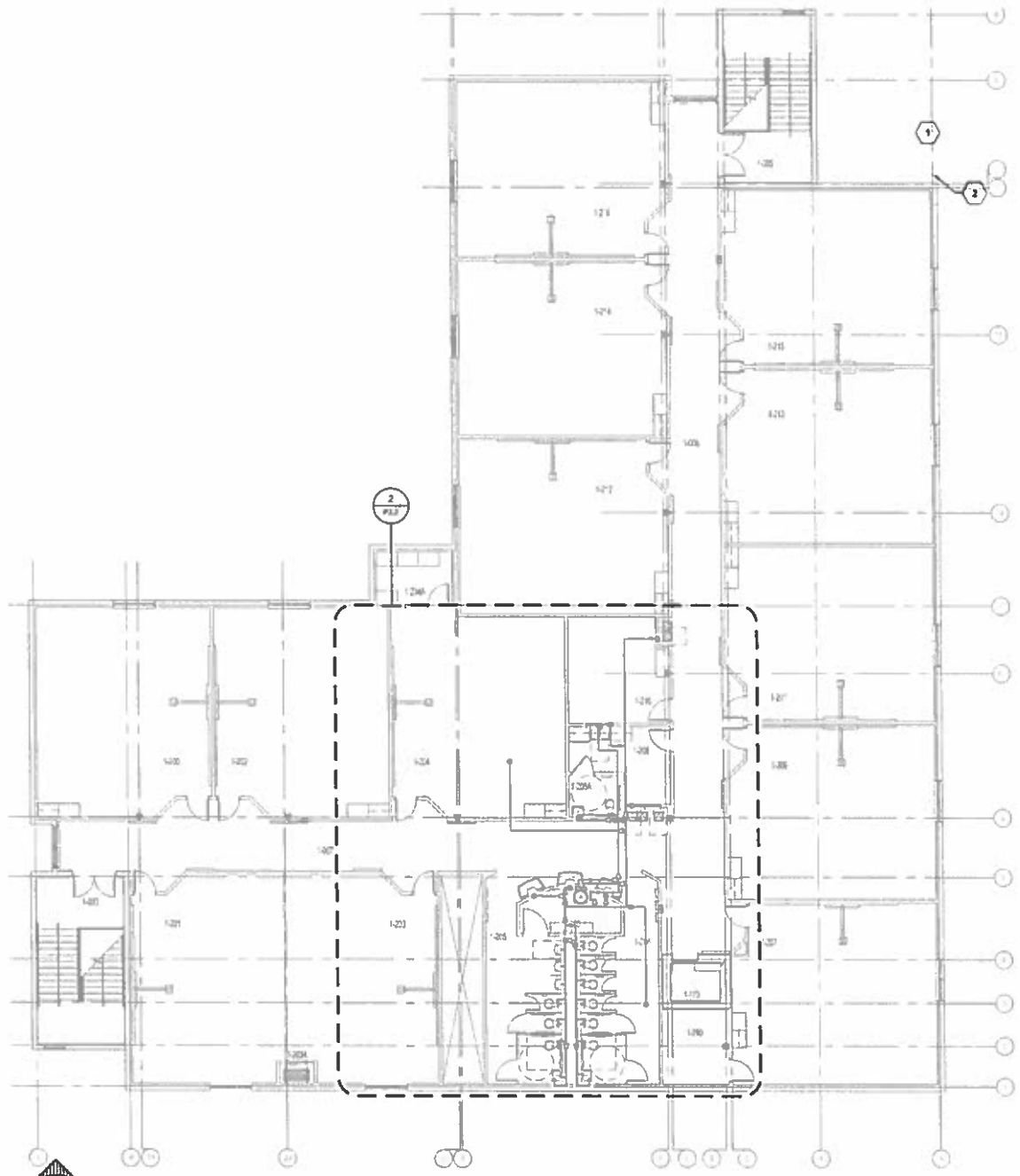


1 OVERALL DOMESTIC WATER FLOOR PLAN - 1ST FLOOR

SCALE: 3/32" = 1'-0"



2 OVERALL DOMESTIC WATER FLOOR PLAN - 2ND FLOOR

SCALE: 3/32" = 1'-0"

DOMESTIC WATER KEY NOTES:

1. DOMESTIC WATER SUPPLY CONNECTION FROM METER. REFERENCE CIVIL SITE PLAN
2. PROVIDE PEDESTRIAN-TRAFFIC-RATED IN-GROUND VALVE BOX FOR MAIN SHUTOFF VALVE.
3. ELECTRIC WATER HEATER SHALL BE CEILING/WALL-MOUNTED AND INSTALLED ABOVE JSK-1. PAN DRAIN SHALL DRAIN TO JSK-1 BELOW. REFERENCE WATER HEATER INSTALLATION DETAIL.
4. WATER SUPPLY LINE SERVING RESTROOM FIXTURES SHALL TURN DOWN IN WALL CAVITY AND ROUTE ALONG WALL AT FIXTURE ELEVATION TO SERVE FIXTURES.
5. 3/4"Ø CW SUPPLY UP TO HOSE BIB ON ROOF.

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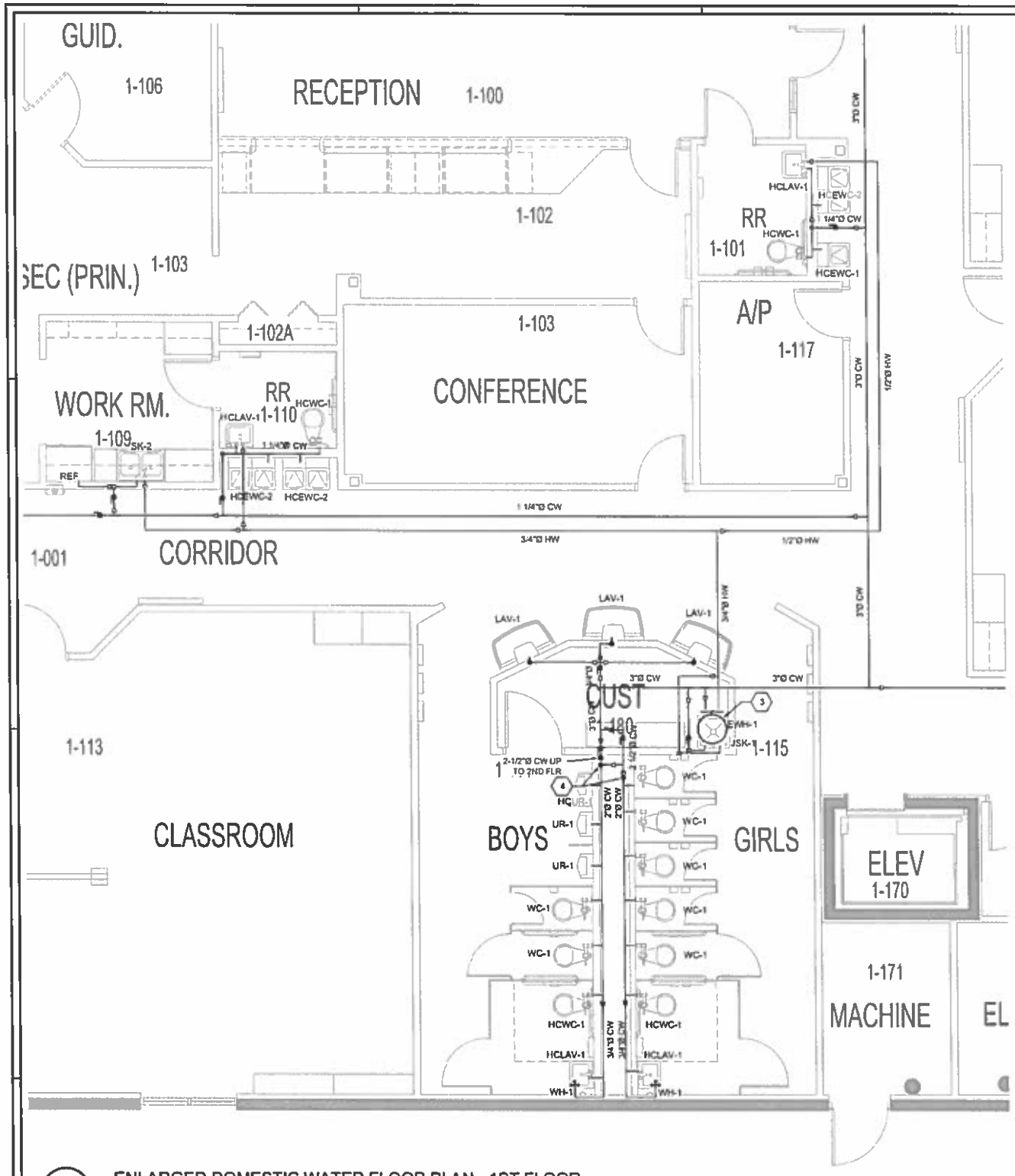
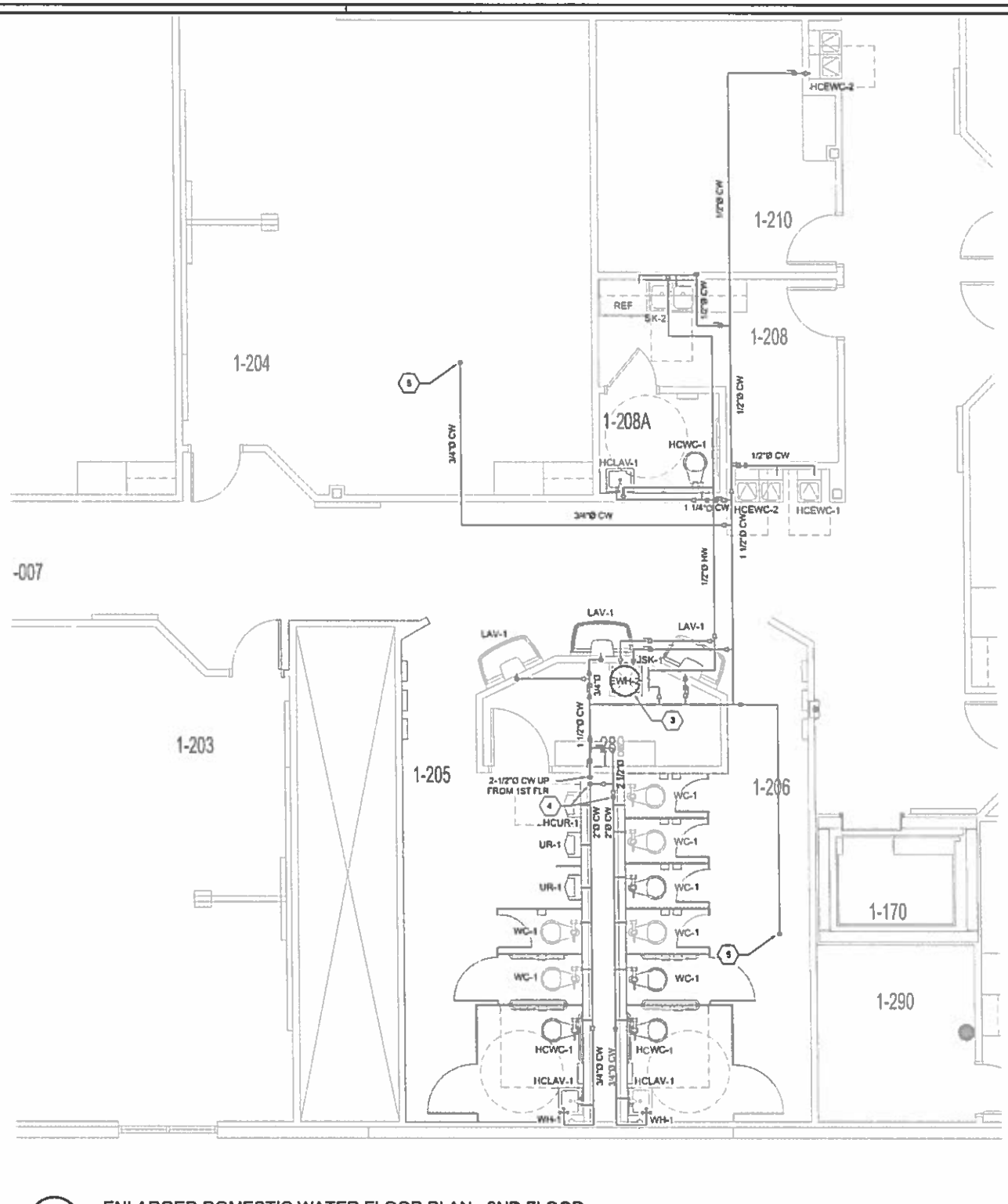


1 ENLARGED DOMESTIC WATER FLOOR PLAN - 1ST FLOOR

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



2 ENLARGED DOMESTIC WATER FLOOR PLAN - 2ND FLOOR

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

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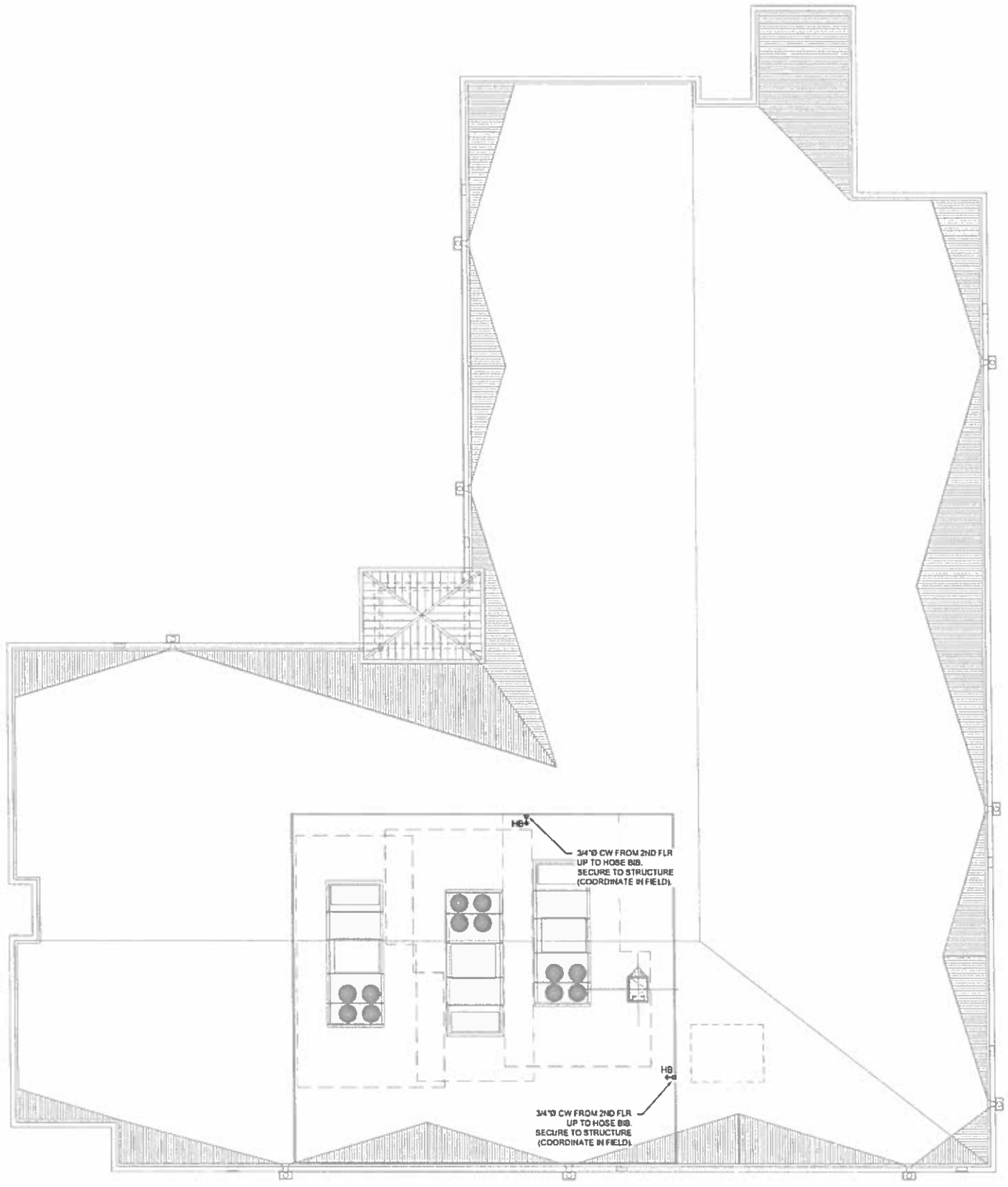

1 DOMESTIC WATER ROOF PLAN

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

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CONTRUCTION DOCUEMENTS

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MECHANICAL ENGINEER
CERT OF AUTH. 9494
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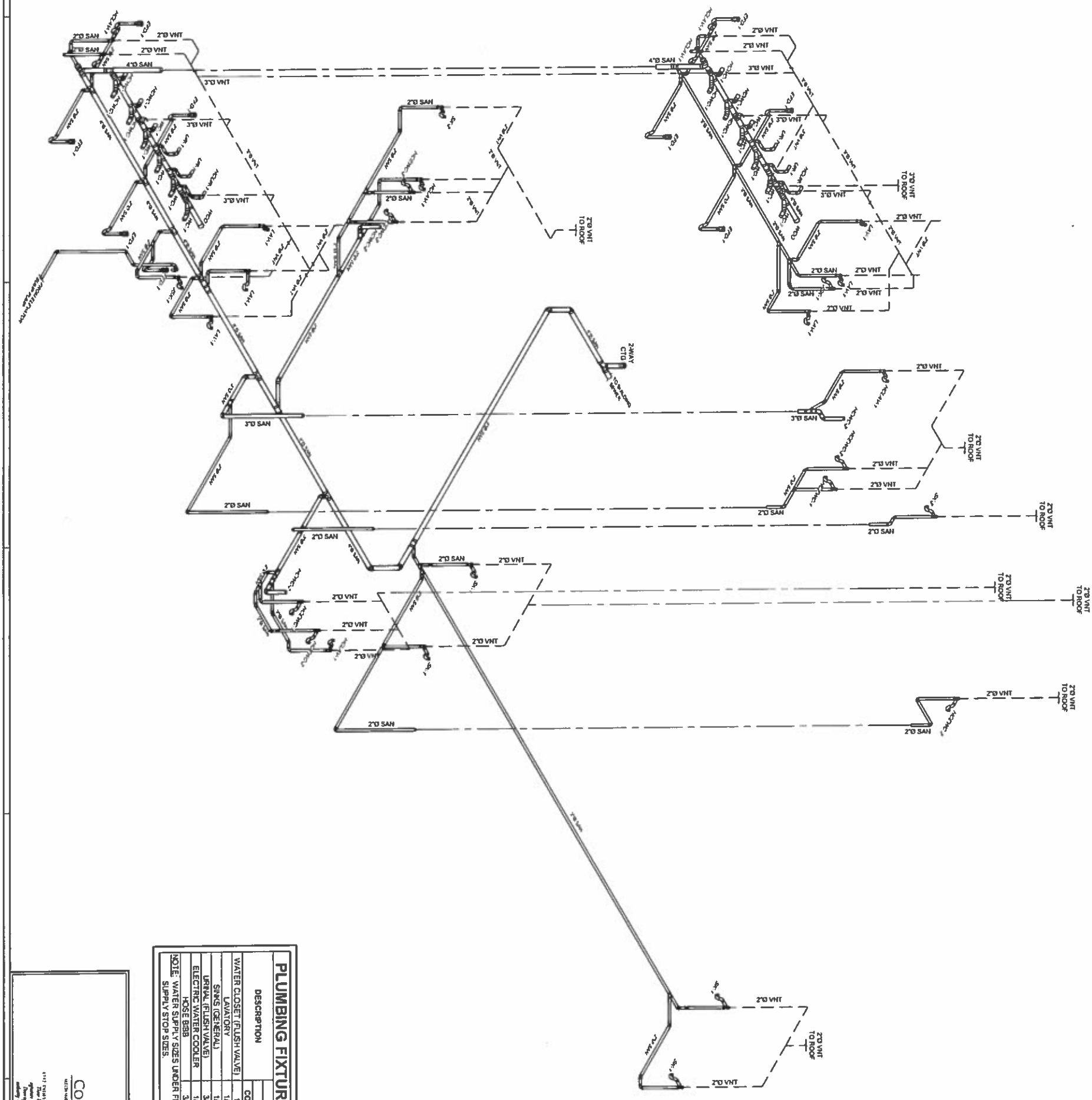
P2.3



PLUMBING FIXTURE CONNECTION SCHEDULE

DESCRIPTION	WATER SUPPLY BRANCH COLD	WATER SUPPLY BRANCH HOT	WATER SUPPLY FIXTURE COLD	WATER SUPPLY FIXTURE HOT	TRAP	VENT
WATER CLOSET (FLUSH VALVE)	1"	-	1"	-	3"	2"
LAVATORY	1/2"	1/2"	3/8"	3/8"	1 1/4"	2"
SINKS (GENERAL)	1/2"	1/2"	3/8"	3/8"	1 1/4"	2"
URINAL (FLUSH VALVE)	3/4"	-	3/4"	-	2"	2"
ELECTRIC WATER COOLER	1/2"	-	3/8"	-	1 1/4"	2"
HOSE BIBB	3/4"	-	3/4"	-	-	-

NOTE: WATER SUPPLY SIZES UNDER FIXTURE COLUMN ARE CONNECTION TO FIXTURE OR SUPPLY STOP SIZES.

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FLORIDA REGISTERED
MECHANICAL ENGINEER
CERT. OF AUTH. 5434
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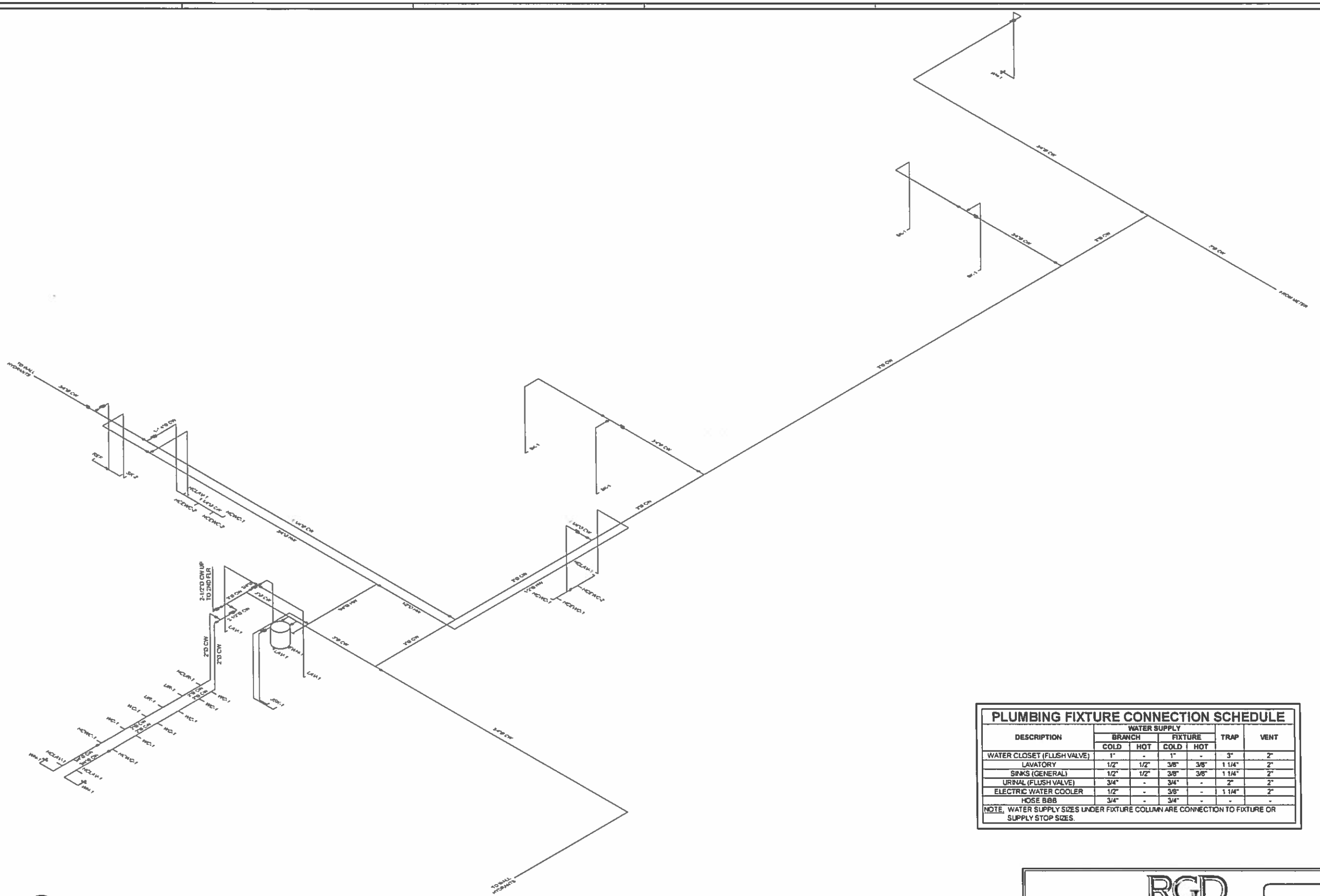

1 DOMESTIC WATER ISOMETRIC PLAN - 1ST FLOOR

N.T.S.

PLUMBING FIXTURE CONNECTION SCHEDULE

DESCRIPTION	WATER SUPPLY BRANCH COLD	WATER SUPPLY BRANCH HOT	WATER SUPPLY FIXTURE COLD	WATER SUPPLY FIXTURE HOT	TRAP	VENT
WATER CLOSET (FLUSH VALVE)	1"	-	1"	-	3"	2"
LAVATORY	1/2"	1/2"	3/8"	3/8"	1 1/4"	2"
SINKS (GENERAL)	1/2"	1/2"	3/8"	3/8"	1 1/4"	2"
URINAL (FLUSH VALVE)	3/4"	-	3/4"	-	2"	2"
ELECTRIC WATER COOLER	1/2"	-	3/8"	-	1 1/4"	2"
HOSE BIBB	3/4"	-	3/4"	-	-	-

NOTE, WATER SUPPLY SIZES UNDER FIXTURE COLUMN ARE CONNECTION TO FIXTURE OR SUPPLY STOP SIZES.

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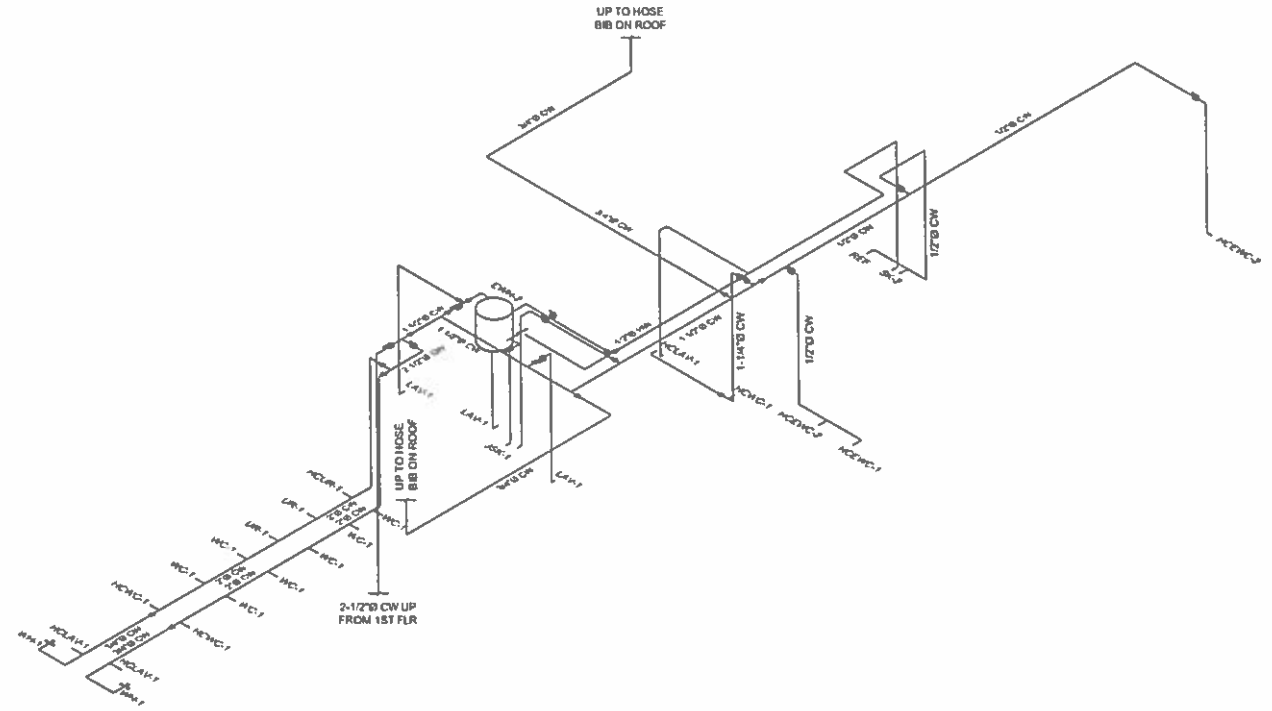

1 DOMESTIC WATER ISOMETRIC PLAN - 2ND FLOOR

N.T.S.

PLUMBING FIXTURE CONNECTION SCHEDULE

DESCRIPTION	WATER SUPPLY				TRAP	VENT
	BRANCH		FIXTURE			
	COLD	HOT	COLD	HOT		
WATER CLOSET (FLUSH VALVE)	1"	-	1"	-	3"	2"
LAVATORY	1/2"	1/2"	3/8"	3/8"	1 1/4"	2"
SINKS (GENERAL)	1/2"	1/2"	3/8"	3/8"	1 1/4"	2"
URINAL (FLUSH VALVE)	3/4"	-	3/4"	-	2"	2"
ELECTRIC WATER COOLER	1/2"	-	3/8"	-	1 1/4"	2"
HOSE BIBB	3/4"	-	3/4"	-	-	-

NOTE, WATER SUPPLY SIZES UNDER FIXTURE COLUMN ARE CONNECTION TO FIXTURE OR SUPPLY STOP SIZES.

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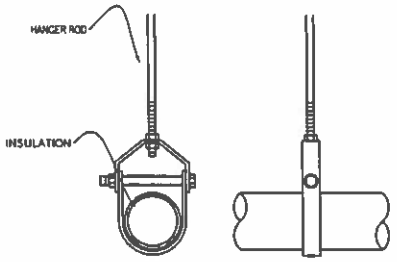
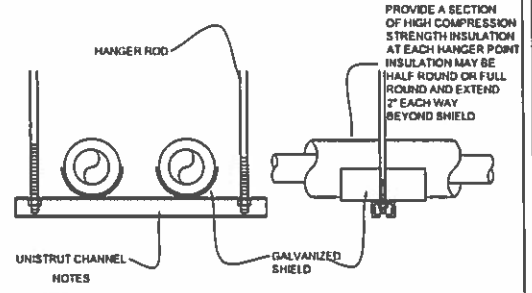
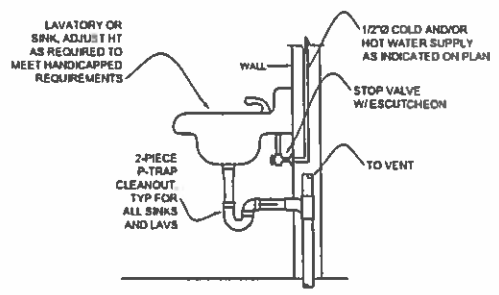


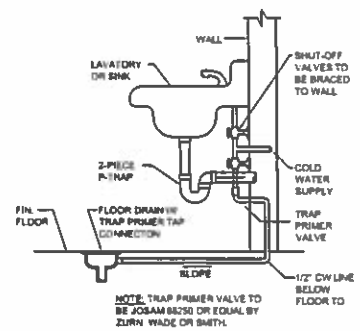
1 PIPE HANGER DETAIL N.T.S



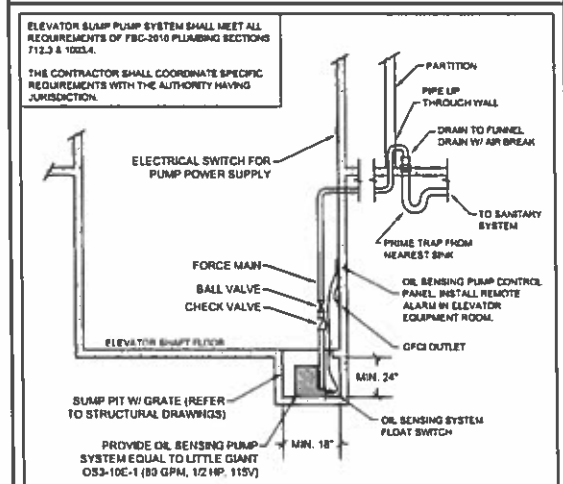
2 INSULATED MULTIPLE PIPE HANGER DETAIL N.T.S



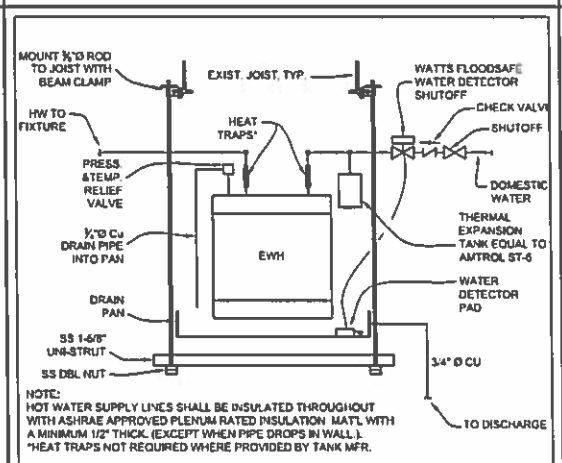
3 TYPICAL SINK/LAV INSTALLATION N.T.S



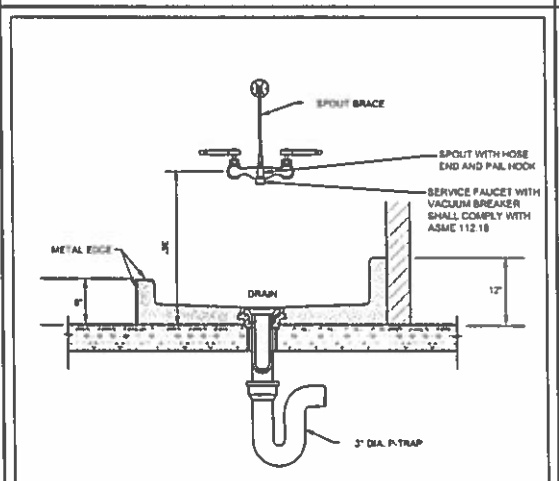
4 TRAP PRIME DETAIL N.T.S



5 ELEVATOR SUMP PUMP DETAIL N.T.S.



6 EWH MOUNTING & PIPING DETAIL N.T.S



7 MOP SINK DETAIL N.T.S

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CERT. OF AUTH. 5434
DATE 9.10.2014

P5.1

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MANUFACTURER	DESCRIPTION	MOUNTING HEIGHT	MOUNTING	FAUCET/VALVE	TRIM/ACCESSORIES	NOTES
WC-1	WATER CLOSET	AMERICAN STANDARD	AFWALL MODEL 2859 016 ELONGATED 1 6GPF, W/ WALL CARRIER	15"	WALL HUNG	SLOAN ROYAL MODEL OPTIMA 111-1 6 ES-S TMO EXPOSED, SENSOR ACTIVATED WATER CLOSET FLUSHOMETER WITH TRUE MECHANICAL OVERRIDE BUTTON FOR TOP SPUD BOWLS	BEMIS MODEL 1955C000 ELONGATED OFLC SEAT	1, 2, 4
HCWC-1	ADA WATER CLOSET (CHILDREN)	AMERICAN STANDARD	AFWALL MODEL 2258 016 ELONGATED 1 6GPF, W/ WALL CARRIER, ADA COMPLIANT	15"	WALL HUNG	SLOAN ROYAL MODEL OPTIMA 111-1 6 ES-S TMO EXPOSED, SENSOR ACTIVATED WATER CLOSET FLUSHOMETER WITH TRUE MECHANICAL OVERRIDE BUTTON FOR TOP SPUD BOWLS	BEMIS MODEL 1955C000 ELONGATED OFLC SEAT	1, 2, 3, 4
HCWC-2	ADA WATER CLOSET (ADULT)	AMERICAN STANDARD	MADERA MODEL 3043 718 BOTTOM OUTLET ELONGATED 1 6 GPF FLUSHOMETER TOILET VITREOUS CHINA WITH EVERCLEAN	18 5	FLOOR MOUNT	SLOAN ROYAL MODEL OPTIMA 111-1 6 ES-S TMO EXPOSED, SENSOR ACTIVATED WATER CLOSET FLUSHOMETER WITH TRUE MECHANICAL OVERRIDE BUTTON FOR TOP SPUD BOWLS	BEMIS MODEL 1955C000 ELONGATED OFLC SEAT	1, 2, 3
UR-1	URINAL	AMERICAN STANDARD	WASHBROOK MODEL 6590 001 FLOWISE 0 5 GPF WITH WALL CARRIER, TOP SUPUD, SS STRAINER,	24"	WALL HUNG	SLOAN ROYAL MODEL OPTIMA 180 ES-S, EXPOSED, SENSOR ACTIVATED URINAL FLUSHOMETER, FOR 1 1/4" TOP SPUD URINALS	N/A	1, 2, 4
HCUR-1	ADA URINAL	AMERICAN STANDARD	WASHBROOK MODEL 6590 001 FLOWISE 0 5 GPF WITH WALL CARRIER, TOP SUPUD, SS STRAINER,	15.25"	WALL HUNG	SLOAN ROYAL MODEL OPTIMA 180 ES-S, EXPOSED, SENSOR ACTIVATED URINAL FLUSHOMETER, FOR 1 1/4" TOP SPUD URINALS	N/A	1, 2, 3, 4
HCLAV-1	HC LAVATORY	AMERICAN STANDARD	LUCERNE 355 012-020	34"	WALL HUNG	AMERICAN STANDARD ELECTRONIC SENSOR FAUCET WITH ELECTRIC POWER SUPPLY, GRID STRAINER, ADD OFFSET P-TRAP AND INSULATION KIT FOR ADA INSTALLATION	N/A	1, 2, 3, 4
LAV-1	MULTI-USE LAVATORY	BRADLEY	BRADLEY MF2944 TERREON QUADRA-FRONT WASHFOUNTAIN	34"	WALL HUNG	BATTERY INFRARED CONTROL	GRID STRAINER AND OFFSET P-TRAP	1, 2
SK-1	CLASS ROOM SINK	ELKAY	CDKAK251765 6 1/2" DEEP 2LM (LEFT MIDDLE) HOLE FAUCET DRILLING, SS SINGLE BOWL SELF-RIMMING CLASS ROOM SINK WITH (1) BUBBLER SLOTTED HOLE, COLD WATER ONLY	34"	SELF-RIMMING	ELKAY LKD20851 3LC SINGLE HANDLE GOOSENECK FAUCET LK114A BUBBLER, LKVR18 STRAINER		1, 2
SK-2	DOUBLE BOWL SINK	ELKAY	GECR3321 5 3/8" DEEP, 4" CENTERS FAUCET HOLE DRILLING, 20 GAUGE, TYPE 304 SS SELF	34"	SELF-RIMMING	LK408A1 10TB DECK MOUNT 4" CENTER FAUCET, 10" SPOUT, 8" WRIST BLADE HANDLES	STRAINER, OFFSET P-TRAP	1, 2
HCEWC-1	ADA ELECTRIC WATER FOUNTAIN	ELKAY	MODEL EZS8 ADA WALL HUNG WATER COOLER	31-5/16" ADA REQ.	WALL HUNG	N/A	N/A	1, 2, 3, 4
HCEWC-2	LOW-HI ELECTRIC WATER FOUTAIN	ELKAY	MODEL EZSTLRSLC 370 WATTS AT 115/1/60	N/A	WALL HUNG	N/A	N/A	1, 2, 3, 4
JNSK-1	JANITOR'S SINK	FIAT	MODEL MSB3624 JANITOR'S SINK	N/A	FLOOR MOUNT	830 AA WALL MOUNT FAUCET	PAIL HOOK, SS STRAINER, AND TREADED HOSE CONNECTION.	1, 2
WH-1	WALL HYDRANT	ZURN	Z1300 ECOLOTROL WALL HYDRANT, ENCASED, ANTI-SIPHON, AUTOMATIC DRAINING	N/A	WALL HUNG	N/A		1, 2

NOTES:
1. MAKE, MODEL, AND COLOR OF FIXTURE AND TRIM SHALL BE SPECIFIED BY THE ARCHITECT.
2. VERIFY FIXTURE MOUNTING HEIGHTS WITH ARCHITECTS PLANS & INTERIOR ELEVATIONS.
3. FIXTURE SHALL BE ADA COMPLIANT. VERIFY REQUIRED MOUNTING HEIGHT & ACCESSIBILITY CLEARANCES WITH LOCAL CODES BEFORE INSTALLING FIXTURE.
4. CONTRACTOR SHALL VERIFY THAT WALL-MOUNTED FIXTURE AND CARRIER HAS ADEQUATE WALL CLEARANCE. COORDINATE WITH ARCHITECTURAL WALL SECTIONS.

ELECTRIC WATER HEATER SCHEDULE

SELECTION				PIPING		HEATER		ELECTRICAL		GENERAL	
MARK	MANUFACTURER	MODEL	CAPACITY (GAL)	INLET (IN)	OUTLET (IN)	kW	FLOW / TEMP. RISE (°F)	VOLTAGE / PHASE	AMPS	WEIGHT (LBS)	DIMENSIONS (IN)
EWH-1	LOCHINVAR	EJU020KB	20	3/4"	3/4"	4 5	27 GPH @ 70°F	208V / 1 Ø	-	73	21 75 Ø X 22 25 H
EWH-2	LOCHINVAR	EJU020KB	20	3/4"	3/4"	4 5	27 GPH @ 70°F	208V / 1 Ø	-	73	21 75 Ø X 22 25 H

ACCEPTED ALTERNATE MANUFACTURERS: AO SMITH

PLUMBING DRAIN SCHEDULE

MARK	ITEM	MANUFACTURER	MODEL	STRAINER HEAD (IN)	NOTES
EFD-1	FLOOR DRAIN	ZURN	ZN415SZ	5"	1, 2, 3
FFD-1	FUNNEL FLOOR DRAIN	ZURN	ZN415E	7"	1, 2, 3

NOTES:
1. COORDINATE FINISH WITH THE ARCHITECT AND/OR OWNER.
2. PROVIDE A TRAP PRIMER CONNECTION FROM THE FACTORY.
3. COORDINATE SPECIFIC DRIAN OUTLET SIZE WITH CONNECTED PIPE DIMENSIONS. REFERENCE PLANS FOR DRAIN PIPE DIMENSIONS. PROVIDE TRANSITIONS AS REQUIRED.

DOMESTIC WATER DEMAND

1ST FLOOR

DESCRIPTION	#	FU EA.	TOT. FU
DRINKING FOUNTAIN	4	0.3	1.0
KITCHEN SINK (PRIVATE)	1	1.4	1.4
URINAL (3/4" FLUSH VALVE)	3	5.0	15.0
SERVICE SINK	5	3.0	15.0
LAVATORY (PUBLIC)	7	2.0	14.0
WATER CLOSET (FLUSH VALVE)	11	10.0	110.0
			156.4

2ND FLOOR

DESCRIPTION	#	FU EA.	TOT. FU
KITCHEN SINK (PRIVATE)	1	1.4	1.4
DRINKING FOUNTAIN	3	0.3	0.75
URINAL (3/4" FLUSH VALVE)	3	5.0	15.0
SERVICE SINK	1	3.0	3.0
LAVATORY (PUBLIC)	6	2.0	12.0
WATER CLOSET (FLUSH VALVE)	10	10.0	100.0
			132.15
FBC-P TABLE E103.3(3). TABLE E103.2(2)		TOTAL =	288.55

TABLE E103.3(3)
VELOCITY 6FT / SEC MAX

TOTAL BUILDING FU = 288.6
DEMAND FLOW = 108 GPM
SERVICE LINE SIZE = 3"Ø

WATER SERVICE CALCULATION

TOTAL FIXTURE UNITS	288.6
TOTAL DEMAND FLOW	108 GPM
SERVICE PIPE SIZE	3"Ø
WATER VELOCITY	8.0 FT/SEC
PP PIPE LOSS	5 PSIG/100
LEQ	420 FT

(25) + (5) + [(420/100) x 3] + (10/2.3) + (5) = 56 PSIG @ FLOW

(PF) + (PV) + ((LEQ /100) x PP) + (H/2.3) + (PV) = PS

PS = REQUIRED SERVICE PRESSURE (AT BLDG ENTRANCE, AT FLOW AFTER METER)

PF = PRESSURE REQUIRED AT THE FIXTURE OR FLUSH VALVE, MOST FIXTURES 10-15 PSIG FLUSH VALVES 20-25 PSIG.

PV = PRESSURE LOSS ACROSS THE MAIN ISOLATION VALVE AND THE LOCAL ISOLATION VALVE (PSIG)

PP = PRESSURE LOSS IN PIPE AT FLOW PSIG-100 ft OF PIPE REF FBC-P FIGURES E103.3(3) TYPE L COPPER PIPE

LEQ = TOTAL EQUIVALENT PIPE LENGTH INCLUDING FITTINGS. THIS IS APPROXIMATELY EQUAL TO 1 5 TIMES THE DEVELOPED PIPE LENGTH FROM THE MAIN ISOLATION VALVE TO THE FARTHEST FIXTURE, (FEET)

H = HEIGHT OF THE HIGHEST FIXTURE ABOVE GROUND LEVEL, (FEET)

SANITARY DEMAND

(BASED ON 2010 FBC - PLUMBING, TABLE 709 1)

1ST FLOOR

DESCRIPTION	#	DFU EA.	TOTAL DFU
DRINKING FOUNTAIN	4	0.5	2.0
EMERGENCY FLOOR DRAIN	5	0	0.0
JANITOR SINK	1	2	2.0
KITCHEN SINK, DOMESTIC	1	2	2.0
LAVATORY	7	1	7.0
SINK	4	2	8.0
URINAL (≤ 1 GAL/FLUSH)	3	2	6.0
WATER CLOSET, PUBLIC (1 6 GPF)	11	4	44.0
			71.0

2ND FLOOR

DESCRIPTION	#	DFU EA.	TOTAL DFU
DRINKING FOUNTAIN	3	0 5	1 5
EMERGENCY FLOOR DRAIN	4	0	0.0
JANITOR SINK	1	2	2.0
KITCHEN SINK, DOMESTIC	1	2	2.0
LAVATORY	6	1	6.0
URINAL (≤ 1 GAL/FLUSH)	3	2	6.0
WATER CLOSET, PUBLIC (1 6 GPF)	10	4	40.0
			57.5
		TOTAL =	128.5

MAXIMUM ALLOWABLE BUILDING DRAIN SIZE @ 1/8" / FT
(2010 FLORIDA BUILDING CODE - PLUMBING, TABLE 710.1(1))
3" = 36 FU
4" = 180 FU
6" = 700 FU

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MICHAEL J. BISHOP
FLORIDA P.E. NO. 73669
MECHANICAL ENGINEER
CERT. OF AUTH. 8494
DATE 9.19.2014

P6.1

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

D1 ALL WORK SHALL CONFORM TO AT LEAST THE MINIMUM STANDARDS OF THE FLORIDA BUILDING CODE, 2010 EDITION.

D2 DESIGN LOADS PER FLORIDA BLDG. CODE,
WIND DESIGN PER ASCE 7-10
V(ult.)=180 MPH
RISK CATEGORY= III
a=12'-0" EXPOSURE C
qh(ult.)=41.6 PSF ENCLOSED BUILDING
Kd=0.85

D3 FOUNDATION DESIGN VALUES: 3000 PSF
BY: ECS FLORIDA, LLC
DATED: SEPTEMBER 8, 2014

D4 TO THE BEST OF THE ENGINEER'S KNOWLEDGE. THE STRUCTURAL PLANS AND SPECIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE LATEST EDITION.

GENERAL

G1 PREPARATION OF THE STRUCTURAL DOCUMENTS ASSUMES THE GENERAL CONTRACTOR HAS A MINIMUM OF 5 YEARS EXPERIENCE IN SIMILAR TYPE METHOD OF CONSTRUCTION. PRIOR TO START OF CONSTRUCTION, ANY NOTES OR DETAILS THAT ARE NOT FULLY UNDERSTOOD SHALL BE BROUGHT TO THE A/E FIRM IN WRITING FOR CLARIFICATION.

G2 THE GENERAL CONTRACTOR SHALL REVIEW AND DETERMINE THAT DIMENSIONS ARE COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION OR START OF CONSTRUCTION.

G3 THE GENERAL CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, THE WORK PERSONS, AND OTHER PEOPLE DURING CONSTRUCTION. HE SHALL SUPERVISE AND DIRECT THE WORK AND BE RESPONSIBLE FOR ALL CONSTRUCTION.

G4 NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE REDUCED IN STRENGTH.

G5 THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ANCHORED EMBEDDED, SUPPORTED ITEMS WHICH AFFECT THE STRUCTURAL DRAWINGS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

G6 ATTACHMENT OF GLAZING AND DOORS TO BE PER DADE COUNTY NOA

G7 NO PAPER SHOP DRAWINGS WILL BE REVIEWED BY THIS OFFICE. ALL SUBMITTALS MUST BE IN ELECTRONIC FORM. SIGNED AND SEALED PAPER SHOP DRAWINGS WILL BE STAMPED BY THIS OFFICE AFTER ALL COMMENTS HAVE BEEN INCORPORATED INTO THE DRAWINGS AND CALCULATIONS.

SLAB ON GRADE

SG1 UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT REFERENCED ABOVE. COMPACT INTERIOR FILL TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557). SOIL COMPACTION SHALL BE FIELD CONTROLLED BY REPRESENTATIVE TECHNICIAN OF QUALIFIED LABORATORY. EACH LAYER OF FILL SHALL NOT EXCEED 12" THICK AND SHALL BE COMPACTED PRIOR TO PLACEMENT OF NEXT LAYER.

SG2 MINIMUM PLACEMENT OF CONTROL JOINTS SHALL BE AS SET IN THE TABLE BELOW. JOINTS OCCUR IN EACH DIRECTION.

SLAB THK IN.	COLUMN SPACING (FT.)			
	15'-1" OR LESS	15'-1" TO 32'-0"	32'-1" TO 48'-0"	48'-1" TO 80'-0"
4"	AT COL. GRID	AT COL. GRID & 1/2 WAY BTWN (2 EQ)	AT COL. GRID & @ 1/3 POINTS (3 EQ.)	AT COL. GRID & @ 1/4 POINTS (4 EQ.)
5"	AT COL. GRID	AT COL. GRID & 1/2 WAY BTWN (2 EQ)	AT COL. GRID & 1/2 WAY BTWN (2 EQ)	AT COL. GRID & @ 1/3 POINTS (3 EQ.)
6"	AT COL. GRID	AT COL. GRID & 1/2 WAY BTWN (2 EQ)	AT COL. GRID & 1/2 WAY BTWN (2 EQ)	AT COL. GRID & @ 1/3 POINTS (3 EQ.)

CONCRETE AND REINFORCING

C1 CONCRETE WORK SHALL CONFORM TO ACI CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-05)

C2 ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH & PROPERTIES AS FOLLOWS:

		SLUMP	MAX. WATER/CMT
FOUNDATIONS SLAB ON GRADE	3000 PSI	6±1"	0.58
TILT PANELS	4000 PSI	5±1"	0.54
ELEVATED SLAB	3500 PSI	5±1"	0.54

C3 CONCRETE MIX DESIGN SUBMITTALS MUST INCLUDE THE AREA IN WHICH THE CONCRETE IS TO BE PLACED (e.g. FOUNDATIONS, SLAB-ON-GRADE, FILLED CELLS, COLUMNS, etc.). FAILURE TO DO SO WILL CAUSE DELAY AND/OR REJECTION OF SUBMITTALS.

C4 REBARS SHALL CONFORM TO ASTM-615 GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

C5 MIMIMUM COVER FOR REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED.

FOOTINGS	3"
SLABS ON GRADE	1 1/2" FROM TOP
BEAMS	1 1/2" (ON TIES)
COLUMNS	1 1/2" (ON TIES)

C6 SPLICES AND ANCHORAGE OF REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED.
WELDED WIRE FABRIC 6"
ALL OTHER 36 DIA. (12" MIN)

C7 REINFORCEMENT IN WALLS, FOOTINGS AND BEAMS SHALL BE CONTINUOUS AND LAPPED AS SHOWN ON NOTE M1. HOOK AND LAP ALL CORNER AND INTERSECTING BARS. (SEE TYPICAL DETAILS)

C8 TERMINATE ALL DISCONTINUED ELEVATED SLAB TOP BARS WITH A 180 DEGREE STANDARD HOOK UNLESS OTHERWISE NOTED.

C9 CONTINUOUS TOP BARS SHALL BE SPLICED AT MIDSPAN. CONTINUOUS BOTTOM BARS SHALL BE SPLICED AT CENTER-LINE OF SUPPORTS (OR AS SHOWN ON TYPICAL DETAILS).

C10 AT CHANGES IN DIRECTION OF CONCRETE WALLS, STRIP FOOTINGS AND GRADE BEAMS PROVIDE CORNER BARS AT SAME SIZE AND SPACING AS HORTIZONTAL BARS. (REFER TO B/S4.0)

EXPANSION ANCHORS

EA1. CARBON STEEL EXPANSION ANCHORS SHALL HAVE A ONE PIECE ANCHOR BODY WITH A LENGTH IDENTIFICATION CODE. THE ANCHORS SHALL HAVE AN EXPANSION MECHANISM WHICH CONSISTS OF A PAIR OF INTERLOCKING INDEPENDENT WEDGES. CARBON STEEL COMPONENTS SHALL BE PLATED ACCORDING TO ASTM SPECIFICATION B 633. EXPANSION ANCHORS MUST MEET THE DESCRIPTION IN FEDERAL SPECIFICATION FF-S-325 FOR CONCRETE EXPANSION ANCHORS.

EA2. EXPANSION ANCHORS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

EA3. EXPANSION ANCHORS SHALL HAVE A MINIMUM ULTIMATE TENSILE AND SHEAR LOADS (LBS) AS SHOWN IN SCHEDULE BELOW:

DIA.	EMBEDMENT (in)	f'c=3,000 psi TENSILE	f'c=3,000 psi SHEAR	f'c=4,000 psi TENSILE	f'c=4,000 psi SHEAR	INSTALLATION TORQUE (ft/lbs)
1/2"	2 1/4"	4925	7360	5450	7360	65
	3 1/2"	8000	9200	9000	9200	
	6"	8650	9200	9500	9200	
5/8"	2 3/4"	7000	11500	8000	11500	110
	4"	10670	14200	12350	14200	
	7"	13000	14200	14000	14200	
3/4"	3 1/4"	8700	15500	10000	15500	235
	4 3/4"	15500	19200	18000	19200	
	8"	18500	19200	22000	19200	
1"	4 1/2"	15200	28500	17500	30500	450
	6"	22500	34500	26500	34500	
	9"	28750	34500	32500	34500	

STRUCTURAL STEEL

SS1 GENERAL CONTRACTOR SHALL ENGAGE A CERTIFIED TESTING AGENCY TO PERFORM INDUSTRY STANDARD INSPECTIONS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER.

SS2 STEEL WORK SHALL CONFORM TO THE AISC "SPECIFICATIONS" FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS", LATEST EDITION.

SS3 STEEL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

SS4 STRUCTURAL WF SHAPES SHALL BE TO ASTM A572 Fy=50KSI, UNLESS NOTED OTHERWISE. ALL OTHER SHAPES SHALL BE A36. ALL STRUCTURAL STEEL SHALL BE DOMESTICALLY PRODUCED.

SS5 BRACE AND MAINTAIN ALL STEEL IN ALIGNMENT UNTIL OTHER PARTS OF CONSTRUCTION NECESSARY FOR PERMANENT SUPPORT ARE COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING TEMPORARY SHORING AS REQUIRED FOR THE STABILITY OF THE STEEL FRAME UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN COMPLETED AND BUILDING IS ENCLOSED.

SS6 ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF "THE STANDARD CODE FOR WELDING IN BUILDING CONSTRUCTION" OF THE AMERICAN WELDING SOCIETY. WELDING ELECTRODES SHALL BE E70XX-LOW HYDROGEN FOR SHIELD AND METAL ARC WELDING.

SS7 GROUT FOR COLUMN BASE PLATES AND PRESET BEARING PLATES SHALL BE NON-SHRINK, NON-METALLIC GROUT. (5000 PSI MIN)

SS8 SUBMIT SHOP DRAWINGS INDICATING ALL SHOP AND ERECTION DETAILS INCLUDING PROFILES, SIZES, SPACING AND LOCATIONS OF STRUCTURAL MEMBERS, CONNECTION ATTACHMENTS, FASTENERS, LOADS AND TOLERANCES.

SS9 ALL WELDED CONN. SHALL BE 1/4" FILLET ALL AROUND, UNO. ALL BOLTED CONN. SHALL BE 3/4"ø A325 BOLTS, UNO.

SS10 STEEL PAN STAIRS SHALL BE DESIGNED BY THE FABRICATOR AND SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE SAME STATE AS PROJECT LOCATION. DESIGN FOR 100 PSF LIVE LOAD.

SS11 ALL STEEL EXPOSED TO WEATHER SHALL HAVE ZINC RICH PRIMER

TILT UP PANELS

TU1 ALL PANELS ARE VIEWED FROM THE INSIDE.

TU2 PANEL THICKNESS SHALL BE AS INDICATED ON PLANS. SPECIAL ATTENTION MUST BE GIVEN THE LOCATION AND PLACEMENT OF THE REINFORCING.

TU3 REFER TO THE ARCHITECTURAL DRAWINGS FOR FINISH REQUIREMENTS, CHAMFERS, REVEALS, ETC.

TU4 PANELS SHALL NOT BE LIFTED UNTIL CONCRETE HAS ATTAINED THE MINIMUM MODULUS OF RUPTURE AND COMPRESSIVE STRENGTH AS REQ'D BY LIFTING ENGINEER.

TU5 THE CONTRACTOR SHALL PROVIDE DESIGN FOR THE LIFT INSERTS AND ANY ADDITIONAL REINFORCING STEEL REQUIRED FOR THE LIFTING OPERATION. HOWEVER NO ADDITIONAL REINFORCING SHALL BE ADDED WITHOUT THE EXPRESSED APPROVAL OF THE ENGINEER. THE DESIGNERS OF THE LIFTING INSERTS MUST CONSIDER THE REINFORCING ALREADY PRESENT IN THE PANELS AS INDICATED IN THIS SET OF CONSTRUCTION DWGS.

TU6 THE CONTRACTOR SHALL CHECK ALL PANEL DIMENSIONS, PLATE LOCATIONS AND DETERMINE THE LOCATIONS OF ALL OPENINGS REQUIRED. NO PANEL WORK SHALL BE PERFORMED WITHOUT CONTRACTORS APPROVAL OF ALL OF THE ABOVE. THE CONTRACTOR IS INDICATING THAT HE HAS REVIEWED THE ABOVE AND APPROVES THE PANEL DRAWINGS FOR ACCURACY BY THE COMMENCEMENT OF PANEL CONSTRUCTION EVEN IF FORMAL STAMPED APPROVAL HAS NOT BEEN INDICATED ON THOSE DRAWINGS.

TU7 MISCELLANEOUS OPENINGS MAY BE REQUIRED FOR FIRE LINES, PLUMBING, SANITARY LINES, ELECTRICAL CONDUITS, ETC. CORE DRILLING AFTER ERECTION OF THE PANELS MUST HAVE THE APPROVAL OF THE ARCHITECT AND ENGINEER PRIOR TO PERFORMANCE OF THE WORK.

TU8 THE REINFORCING STEEL SUPPLIER SHALL PROVIDE SHOP DWGS INDICATING ALL THE NECESSARY INFORMATION REQUIRED TO ACCURATELY POSITION THE REBAR AS INDICATED. ENSURE CHAIRS, BOLSTERS OR OTHER MEANS OF SUPPORTING REBARS ARE PROVIDED AND ACCURATELY DETAILED.

STEEL JOISTS

SJ1 GENERAL CONTRACTOR SHALL ENGAGE A CERTIFIED TESTING AGENCY TO PERFORM INDUSTRY STANDARD INSPECTIONS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER.

SJ2 ALL DESIGN, FABRICATION AND ERECTION OF STEEL JOISTS AND BRIDGING SHALL BE IN STRICT ACCORDANCE WITH THE CURRENT SPECIFICATIONS OF STEEL JOIST INSTITUTE AND RECOMMENDED CODE OF STANDARD PRACTICE.

SJ3 THE ENDS OF ALL BRIDGING LINES TERMINATING AT WALLS OR BEAMS SHALL BE ANCHORED TO THE WALL OR BEAM.

SJ4 ALL STEEL JOISTS ARE TO BE CAMBERED AS SPECIFIED BY SJI.

SJ5 PROVIDE BOTTOM AND/OR TOP CHORD EXTENSIONS AS SHOWN ON DRAWINGS.

SJ6 UNLESS NOTED OTHERWISE, MINIMUM JOIST BEARING SHALL BE 2 1/2" ON A STEEL MEMBER OR EMBED PLATE.

SJ7 BRIDGING SHALL BE FURNISHED AND INSTALLED TO MEET THE SIZE AND SPACING REQUIREMENTS OF THE SJI STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS. ALL BRIDGING AND BRIDGING ANCHORS SHALL BE COMPLETELY INSTALLED BEFORE CONSTRUCTION LOADS ARE PLACED ON THE JOISTS. THE LAST TWO JOIST SPACES IN A LINE OF BRIDGING SHALL BE "K" TYPE. ALL JOISTS 40'-0" OR LONGER REQUIRE A ROW OF BOLTED BRIDGING TO BE IN PLACE BEFORE SLACKENING OF HOISTING LINES. OTHER JOISTS REQUIRE SIMILAR BRIDGING CONSULT LATEST SJI SPECIFICATIONS.

SJ8 ALL HANGERS TO SUPPORT MECHANICAL EQUIPMENT, ETC. TO BE SUPPORTED BY THE BOTTOM CHORD OF JOISTS SHALL BE LOCATED AT THE PANEL POINT OF THE JOIST IF HANGERS MUST BE LOCATED BETWEEN PANEL POINTS, PROVIDE JOIST STIFFENERS. L1 1/2 x 1 1/2 x 3/16 JOIST STIFFENERS MUST BE INSTALLED FROM HANGER TO OPPOSITE CHORD PANEL POINT BEFORE LOAD IS APPLIED.

SJ9 CONTRACTOR TO FURNISH BAR JOIST CERTIFICATIONS SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION.

SJ10 FOR NET UPLIFT SEE NET UPLIFT PLAN ON SHEET S2.2
PROVIDE UPLIFT BRIDGING.

SJ11 ALL SPRINKLER AND ROOF DRAIN PIPES MUST BE SUPPORTED NO FURTHER THAN 3" FROM THE JOIST TOP CHORD PANEL POINTS. THIS WILL BE STRICTLY ENFORCED. WHEN PIPES ARE PERPENDICULAR TO JOISTS, HANGERS SHALL BE PROVIDED EVERY OTHER JOIST (APPROX 10'-0" OC). WHEN PIPES ARE PARALLEL TO JOISTS, TWO CASES EXIST. FIRST, PIPES THAT ARE 4" AND LESS MAY BE SUPPORTED BY A SINGLE JOIST WITH HANGERS NOT TO EXCEED 10'-0" OC. SECOND, PIPES THAT ARE LARGER THAN 4" MUST BE CENTERED BETWEEN TWO JOISTS AND SUPPORTED FROM L4x4x5/16 ANGLE BEARING ON JOIST TOP CHORD PANEL POINTS WITH SPACING NOT TO EXCEED 10'-0" OC. GENERAL CONTRACTOR SHALL COORDINATE THESE REQUIREMENTS WITH THE APPROPRIATE TRADES.

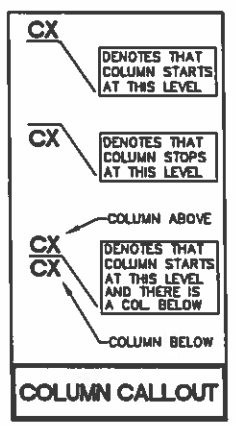
SJ12 ALL ITEMS SUSPENDED FROM JOISTS (i.e. CATWALKS, BALCONIES, OPERABLE PARTITIONS, etc...) SHALL BE INSTALLED AFTER DEAD LOAD HAS BEEN APPLIED.

METAL DECKING

MD1 ROOF DECKING SHALL CONFORM TO THE REFQUIREMENTS OF THE STEEL DECK INSTITUTE AND SHALL BE 1.5" TYPE "B" GALV. G90, METAL ROOF DECK. REFER TO ROOF PLAN FOR DECK GAGE.

MD2 UNLESS OTHERWISE NOTED ON ROOF FRAMIN PLAN, ATTACH METAL ROOF DECK USING 5/8"ø PUDDLE WELDS IN ACCORDANCE WITH SDI PATTERN 36/5 AT ALL SUPPORTS. USE (4) #10 TEKS SIDELAP SCREW FASTENERS, EQUALLY SPACED BETWEEN SUPPORTS.

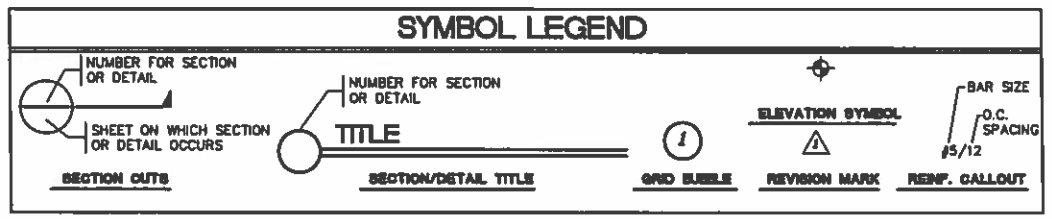
MD3 FRAME ALL ROOF OPENINGS LARGER THAN 12 SQUARE INCHES WITH STEEL FRAMING. (L 2 1/2"x2 1/2"x1/4" TYPICAL)



STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT	JST	JOIST
ABV	ABOVE	K	KIP
A.C.I.	AMERICAN CONCRETE INSTITUTE	KO	KNOCK OUT
		LG	LONG
ADD'L	ADDITIONAL	LL	LIVE LOAD
AFF	ABOVE FINISH FLOOR	LLH	LONG LEG HORIZONTAL
AGGR	AGGREGATE	LLV	LONG LEG VERTICAL
A.I.S.C.	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	LNTL	LINTEL
		LSL	LONG SLOTTED HOLES
A.I.S.I.	AMERICAN IRON AND STEEL INSTITUTE	LONG	LONGITUDINAL
		LP	LOW POINT
AL	ALUMINUM	MAS	MASONRY
ALT	ALTERNATE	MAX	MAXIMUM
ARCH	ARCHITECT(URAL)	MBM	METAL BUILDING MFR
A.S.T.M.	AMERICAN SOCIETY OF TESTING MATERIALS	MC	MOMENT CONNECTION
		MCJ	MASONRY CONTROL JT
A.W.S.	AMERICAN WELDING SOCIETY	MECH	MECHANICAL
		MEZZ	MEZZANINE
B/	BOTTOM OF	MFR	MANUFACTURE(ER)
BB	BOND BEAM	MIN	MINIMUM
BLDG	BUILDING	MO	MASONRY OPENING
BLW	BELOW	MS	METAL STUD
BM	BEAM	MTL	METAL
BOT	BOTTOM	NS	NEAR SIDE
BP	BASE PLATE	NTS	NOT TO SCALE
BRDG	BRIDGING	OA	OVERALL
BRG	BEARING	OC	ON CENTER
BRK	BRICK	OD	OUTSIDE DIA.
BS	BOTH SIDES	OF	OUTSIDE FACE
BTJ	BOLTED TIE JOIST	OPNG	OPENING
BTWN	BETWEEN	OPP	OPPOSITE
C/C	CENTER TO CENTER	PAF	POWDER ACTUATED FASTENERS
CANT	CANTILEVER	PERP	PERPENDICULAR
CB	CONCRETE BEAM	PC	PRECAST
CC	CONCRETE COL	PL	PLATE
CIP	CAST IN PLACE	PLYWD	PLYWOOD
C.J	CONSTRUCTION JOINT OR CONTROL JOINT	PNL	PANEL
		PSF	POUNDS PER SQUARE FOOT
CL	CENTERLINE	PSI	POUNDS PER SQUARE INCH
CLR	CLEAR(ANCE)		
CM	CONCRETE MASONRY	PTN	PARTITION
CMU	CONCRETE MASONRY UNIT	R	RADIUS
COL	COLUMN	REF	REFERENCE
CONC	CONCRETE	REINF	REINFORCE(D) (ING)
CONN	CONNECTION	REQ	REQUIRE
CONT	CONTINUOUS	REQ'D	REQUIRED
CONTR	CONTRACTOR	RF	ROOF
CSK	COUNTER SINK	RTN	RETURN
CTR	CENTER	RW	RETAINING WALL
CTR'D	CENTERED	SCH	SCHEDULE
DIA	DIAMETER	SE	SLAB EDGE
DL	DEAD LOAD	SECT	SECTION
DN	DOWN	SHT	SHEET
DTL	DETAIL	SIM	SIMILAR
DWG	DRAWING	SJ	SAWCUT JOINT
DWL	DOWEL	SJI	STEEL JOIST INSTITUTE
EA	EACH	SL	SLOPE
EE	EACH END	SP	SPACE(S)
EF	EACH FACE	SPECS	SPECIFICATIONS
EJ	EXPANSION JOINT	SQ	SQUARE
ENG	ENGINEER	SS	STAINLESS STEEL
EL	ELEVATION	STD	STANDARD
EQ	EQUAL	STL	STEEL
EQ SP	EQUAL SPACE(S) (ING)	STR	STRENGTH
ES	EACH SIDE	STRL	STRUCTURAL
EW	EACH WAY	SW	SHEAR WALL
EXT	EXTERIOR	SYMM	SYMMETRICAL
F/	FACE OF	SYP	SOUTHERN YELLOW PINE
FD	FLOOR DRAIN	TB	TIE BEAM
FDN	FOUNDATION	T&B	TOP & BOTTOM
FIN	FINISH	TC	TIE COLUMN
FL	FLOOR	TDS	TURN DOWN SLAB
FLG	FLANGE	TEMP	TEMPERATURE
FS	FAR SIDE	THK	THICK
FT	FOOT	TS	THICKEN SLAB
FTG	FOOTING	TOP'G	TOPPING
GA	GAGE, GAUGE	TYP	TYPICAL
GALV	GALVANIZE	T/	TOP OF
GB	GRADE BEAM	UNO	UNLESS NOTED OTHERWISE
GC	GENERAL CONTRACTOR		
GLB	GLU-LAM BEAM	VERT	VERTICAL
GR	GRADE	WF	WALL FOOTING
HC	HOLLOW CORE	WO	WINDOW OPENING (MASONRY)
HK	HOOK		
HORIZ	HORIZONTAL	WP	WORKING POINT
HP	HIGH POINT	WS	WATERSTOP
HS	HEADED STUD	WWF	WELDED WIRE FABRIC
ID	INSIDE DIAMETER	W/	WITH
IF	INSIDE FACE		
INT	INTERIOR		

SYMBOL LEGEND



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Comm. No: JSG# 14101
Date: 09-24-2014
Drawn: E.B. / S.G.
Revised:

Title: STRUCTURAL NOTES
Scale: AS NOTED

S1.0

GENERAL STRUCTURAL NOTES

JOIST BRIDGING NOTES:

JB1 BRIDGING STANDARD WITH THE MANUFACTURER AND COMPLYING WITH THE STEEL JOIST INSTITUTE STANDARD SPECIFICATIONS LOAD TABLES & WEIGHT TABLES OF THE LATEST ADOPTION SHALL BE USED FOR BRIDGING ALL JOISTS FURNISHED BY THE MANUFACTURER. POSITIVE ANCHORAGE SHALL BE PROVIDED AT THE ENDS OF EACH BRIDGING ROW AT BOTH TOP AND BOTTOM CHORDS.

JB2 FOR "K" AND "LH" SERIES JOISTS HORIZONTAL BRIDGING IS RECOMMENDED FOR SPANS UP TO AND INCLUDING 60 FEET EXCEPT WHERE THE STEEL JOIST INSTITUTE STANDARD SPEC LOAD TABLES & WEIGHT TABLES REQUIRE BOLTED DIAGONAL BRIDGING FOR ERECTION STABILITY.

JB3 "LH" AND "DLH" SERIES JOISTS EXCEEDING 60 FEET IN LENGTH SHALL HAVE BOLTED DIAGONAL BRIDGING FOR ALL ROWS.

JB4 REFER TO SJI SECTION 6 IN THE "K" SERIES SPECIFICATIONS AND SECTION 105 IN THE "LH" AND "DLH" SERIES SPECIFICATIONS FOR ERECTION STABILITY REQUIREMENTS

JB5 REFER TO APPENDIX E FOR OSHA STEEL JOIST ERECTION STABILITY REQUIREMENTS.

JB6 HORIZONTAL BRIDGING SHALL CONSISTS OF CONTINUOUS HORIZONTAL STEEL MEMBERS. THE l/r RATIO FOR HORIZONTAL BRIDGING SHALL NOT EXCEED 300.

JB7 DIAGONAL CROSS BRIDGING CONSISTING OF ANGLES OR OTHER SHAPES CONNECTED TO THE TOP AND BOTTOM CHORDS, OF "K", "LH", AND "DLH" SERIES JOISTS SHALL BE USED WHEN REQUIRED BY THE APPLICABLE STEEL JOIST INSTITUTE STANDARD SPECIFCATIONS LOAD TABLES AND WEIGHT TABLES OF LATEST ADOPTION.

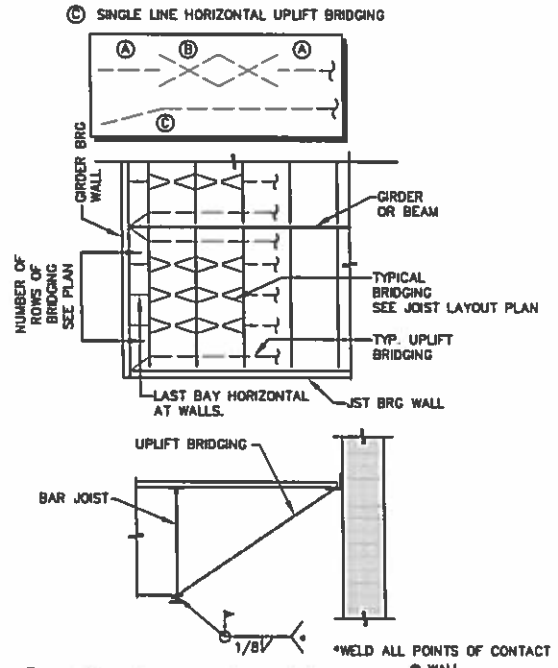
JB8 DIAGONAL BRIDGING, WHEN USED, SHALL HAVE AN l/r RATIO < 200.

JB9 WHEN BOLTED DIAGONAL ERECTION BRIDGING IS REQUIRED, THE FOLLOWING SHALL APPLY:
- A. THE BRIDGING SHALL BE INDICATED ON THE JOIST LAYOUT PLAN
- B. THE JOIST LAYOUT PLAN SHALL BE THE EXCLUSIVE INDICATOR FOR THE PROPER PLACEMENT OF THIS BRIDGING.
- C. SHOP INSTALLED BRIDGING CLIPS, OR FUNCTIONAL EQUIVALENT SHALL BE PROVIDED WHERE THE BRIDGING BOLTS TO THE STEEL JOISTS.
- D. WHEN TWO PIECES OF BRIDGING ARE ATTACHED TO THE STEEL JOIST BY A COMMON BOLT, THE NUT THAT SECURES THE FIRST PIECE OF BRIDGING SHALL NOT BE REMOVED FROM THE BOLT FOR THE ATTACHMENT OF THE SECOND PIECE.
- E. BRIDGING ATTACHMENTS SHALL NOT PROTRUDE ABOVE THE TOP CHORD OF THE STEEL JOISTS.

JB10 PROVIDE UPLIFT BRIDGING AT FIRST BOTTOM CHORD PANEL POINT EACH END OF JOIST. REFER TO THIS SHEET FOR UPLIFT BRIDGING CONNECTION DETAILS

JB11 DO NOT WELD BRIDGING TO JOIST WEB MEMBERS. DO NOT HANG ANY MECHANICAL, ELECTRICAL, PLUMBING, ETC FROM BRIDGING

JB12 BRIDGING LEGEND FOR PLAN BELOW:
- (A) HORIZONTAL BRIDGING ATTACHED TO TOP AND BOTTOM CHORD
- (B) BOLTED OR WELDED CROSS BRIDGING AS SHOWN
- (C) SINGLE LINE HORIZONTAL UPLIFT BRIDGING



A BRIDGING DETAILS AND PLAN
SCALE: N.T.S.

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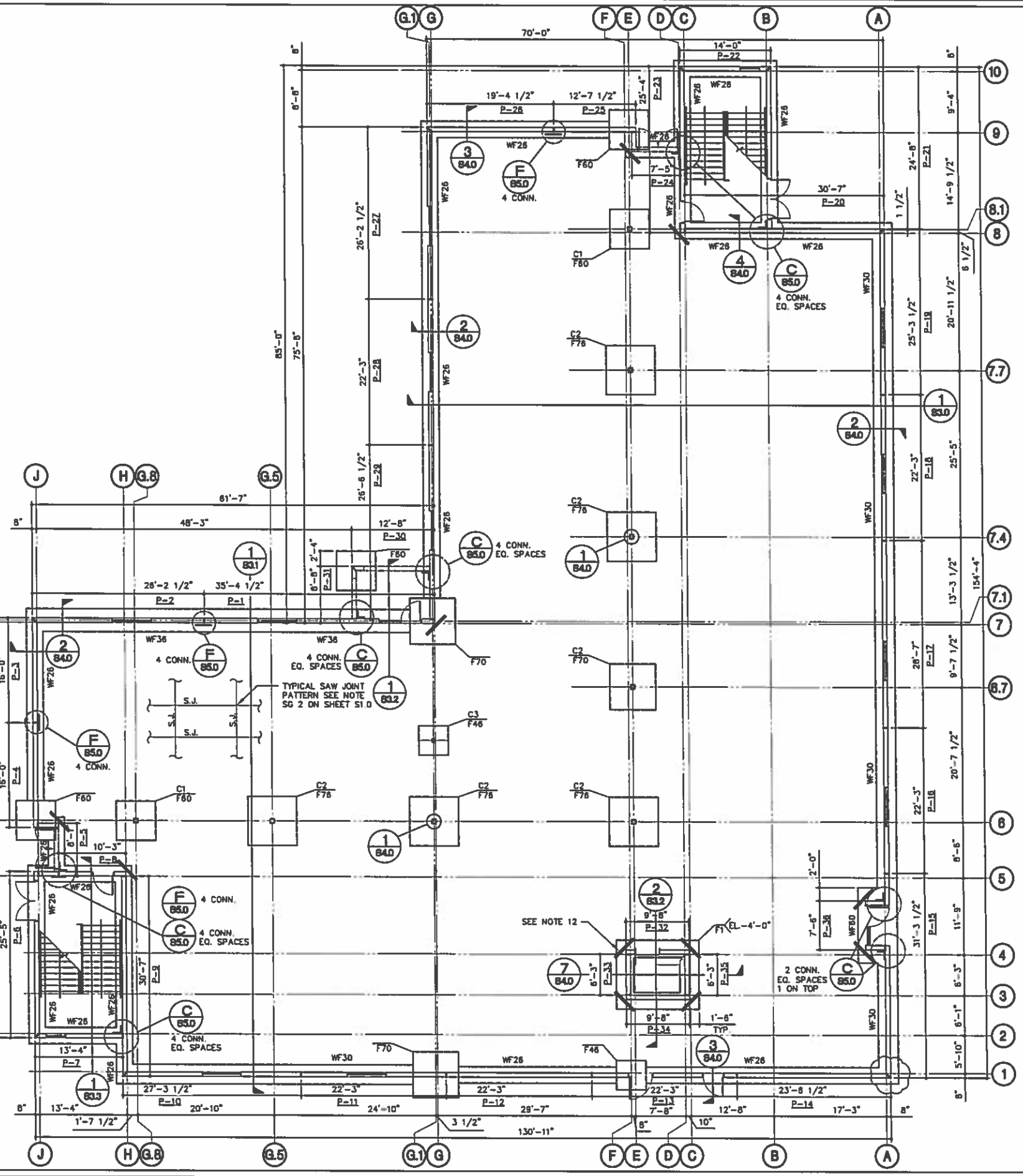


FOUNDATION SCHEDULE

MARK	SIZE (L. x W x D)	REINFORCING		REMARKS
		LONGITUDINAL	TRANSV.	
F78	7'-6"x7'-6"x1'-6"	(10) #6 BOTT	(10) #6 BOTT	PAD FTG.
F70	7'-0"x7'-0"x1'-6"	(8) #6 BOTT	(8) #6 BOTT	PAD FTG.
F60	6'-0"x6'-0"x1'-3"	(6) #6 BOTT	(6) #6 BOTT	PAD FTG.
F46	4'-6"x4'-6"x1'-3"	(5) #5 BOTT	(5) #5 BOTT	PAD FTG.
F1	12'-8"x10'-7"x1'-6"	(12) #6 BOTT	(14) #6 BOTT	PAD FTG.
WF60	CONT.x6'-0"x1'-0"	(6) #5 BOTT	#5/8" BOTT	WALL FTG.
WF36	CONT.x3'-6"x1'-0"	(4) #5 BOTT	#5/14" BOTT	WALL FTG.
WF30	CONT.x3'-0"x1'-0"	(4) #5 BOTT	#5/14" BOTT	WALL FTG.
WF28	CONT.x2'-6"x1'-0"	(3) #5 BOTT	#5/16" BOTT	WALL FTG.

DESIGN INFORMATION:

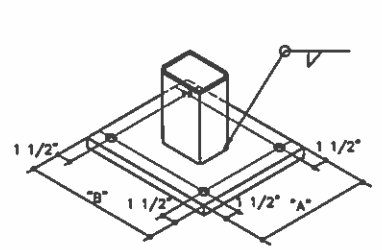
NET ALLOWABLE SOIL BEARING PRESSURE = 3000 PSF

COLUMN / BASE PLATE SCHEDULE

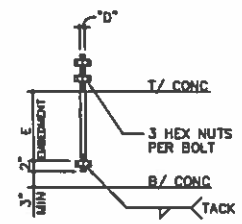
COLUMN MARK	COLUMN SIZE	BASE PLATE A	BASE PLATE B	BASE PLATE T	ANCHOR BOLT E	ANCHOR BOLT D	CAP PLATE	REMARKS
C1	HSS 8x8x3/8"	14"	14"	1"	10"	3/4"		
C2	HSS 8x8x3/8"	14"	14"	1"	13"	3/4"		
C3	HSS 8x8x3/8"	12"	12"	3/4"	10"	3/4"		
C3	HSS 8x8x3/8"	12"	12"	3/4"	10"	3/4"		

NOTE:
ANCHOR BOLTS SHALL BE ASTM A36 (UNO) THREADED EACH END WITH NUT AT BOTTOM, TACK WELDED SECURE. PLATE WASHER AT BOTTOM NUT SHALL NOT BE REQUIRED. CONFORM TO CHART @ RIGHT FOR EMBEDMENT, UNLESS NOTED OTHERWISE IN SCHEDULE ABOVE.

BOLT TYPE, TYPE MATERIAL	MINIMUM EMBEDDED LENGTH	MINIMUM EMBEDDED EDGE DISTANCE
A307, A36	12d	5d > 4 in.
A325, A449	17d	7d > 4 in.



BASE PL DETAIL
NTS



FOUNDATION PLAN NOTES:

1. FLOOR SLAB SHALL BE 5" THICK CONCRETE REINF W/6x6 W2xW2 WWF OVER 15 MIL VAPOR BARRIER ON COMPACTED TERMITE TREATED SUBGRADE. (SEE SLAB ON GRADE DETAILS FOR PLACEMENT OF REINFORCEMENT)
2. T/ SLAB EL =+0'-0", UNO (REFERENCE ONLY) SEE CIVIL FOR ACTUAL ELEVATION
3. T/ WALL FTG. EL = -1'-3" TYP. U.N.O.
4. T/ STL COL FTG = -2'-0", TYP UNO.
5. ALL TILT UP PANELS ALLOW FOR 3/4" DEEP RECESS. (ie. THICKNESS=STRUCTURAL THICKNESS + 3/4") U.N.O. SEE PANEL REINFORCEMENT SHEETS FOR INDIVIDUAL PANEL THICKNESS.
6. ALL TILT-UP PANELS ARE VIEWED FROM THE INSIDE OF THE BUILDING.
7. STEP FTG WHERE SHOWN AND AS REQUIRED TO AVOID INTERFERENCE W/ OTHER TRADES. SEE STEPPED FOOTING SECTION C/S4.0
8. ALL FTGS ARE CENTERED BENEATH BRG WALLS AND COLS, TYP UNO.
9. SEE SHT S5.0 FOR PANEL REINF., EMBEDDED ITEMS AND JOINT DETAILS.
10. SEE SHT S1.0 FOR GENERAL NOTES.
11. SIDEWALK SLAB = 4" CONCRETE SLAB ON COMPACTED FILL REINFORCED WITH 6x6 W1.4xW1.4 W.W.F., TYP.
12. (2) #4x4'-0" LONG @ 3" O.C. PLACED 2" CLEAR FROM CORNER CENTERED IN SLAB, TYP. AT RE-ENTRANT CORNERS.

FOUNDATION PLAN

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

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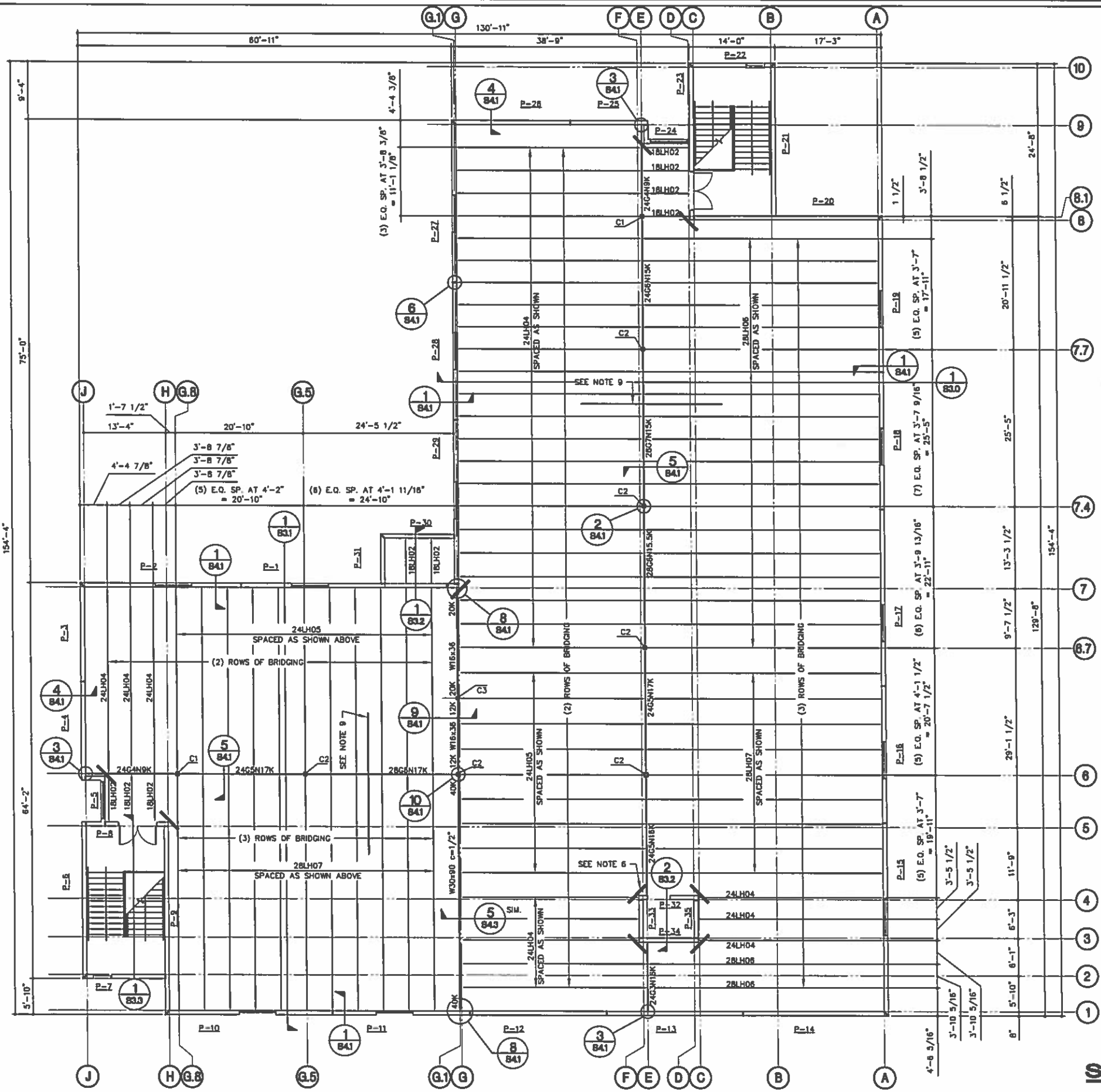
Scale: 1/8"=1'-0"

S2.0



BEAM REACTION — 63.8K — STEEL BEAM SHAPE AND SIZE — W24x76 (0.6") (+12'-2") — BEAM CAMBER (LESS THAN 1/2" IF NOT SHOW) — 63.8K — BEAM REACTION

T/BEAM ELEVATION

STEEL BEAM LEGEND

FLOOR DESIGN LOADS	
LIVE LOAD	
CLASS ROOM	40 PSF
PARTITIONS	20 PSF
ELEVATOR/CORRIDOR	100 PSF
DEAD LOAD	
SYSTEM WEIGHT	45 PSF
MECH & MISC.	10 PSF

FLOOR FRAMING NOTES:

1. FLOOR SYSTEM SHALL BE 1.0 C. 24GA GALV. CONFORM DECK WITH 3" CONCRETE TOPPING (4" TOTAL THICKNESS) CONTINUOUS OVER (3) OR MORE SPANS. CONCRETE TOPPING SHALL HAVE A MINIMUM OF 3500 PSI COMPRESSIVE STRENGTH.
2. FLOOR SLAB MIX SHALL HAVE 100% VIRGIN POLYPROPYLENE FIBERS AT 1lb. PER CUBIC YARD. FIBERS SHALL BE MANUFACTURED BY FIBER MESH OR W.R. GRADE. (2ND FLOOR ONLY)
3. FLOOR SLAB SHALL BE REINFORCED WITH 4x4 W2.9xW2.9 W.W.F..
4. T/FINISH FLOOR = +14'-0"
   T/STEEL GIRDER BEAMS = +13'-3"
   T/STEEL JOISTS = +13'-8"
5. ATTACH DECK TO ALL SUPPORTS USING WASHER USING SDI 33/4 WELD PATTERN AND (2) #10 SIDE LAP SCREW.
6. (2) #4x4'-0" LONG @ 3" O.C. PLACED 2" CLEAR FROM CORNER CENTERED IN SLAB, TYP. AT RE-ENTRANT CORNERS.
7. ALL STEEL STAIRS TO BE DESIGNED FOR 100 PSF LIVE LOAD. ALL LANDINGS MUST BRACE PANELS. MINIMUM 4" CONCRETE & SEE 4/S4.1.
9. #4 x22'-0" AT 16" O.C. CHAIRED AT SLAB MID DEPTH. TYPICAL AT GIRDER LOCATIONS.
10. BRACE STEEL BEAM BOTTOM FLANGE AT BEAM QUARTER POINTS, SEE SIMILAR 5/S4.3.

SECOND FLOOR PLAN

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

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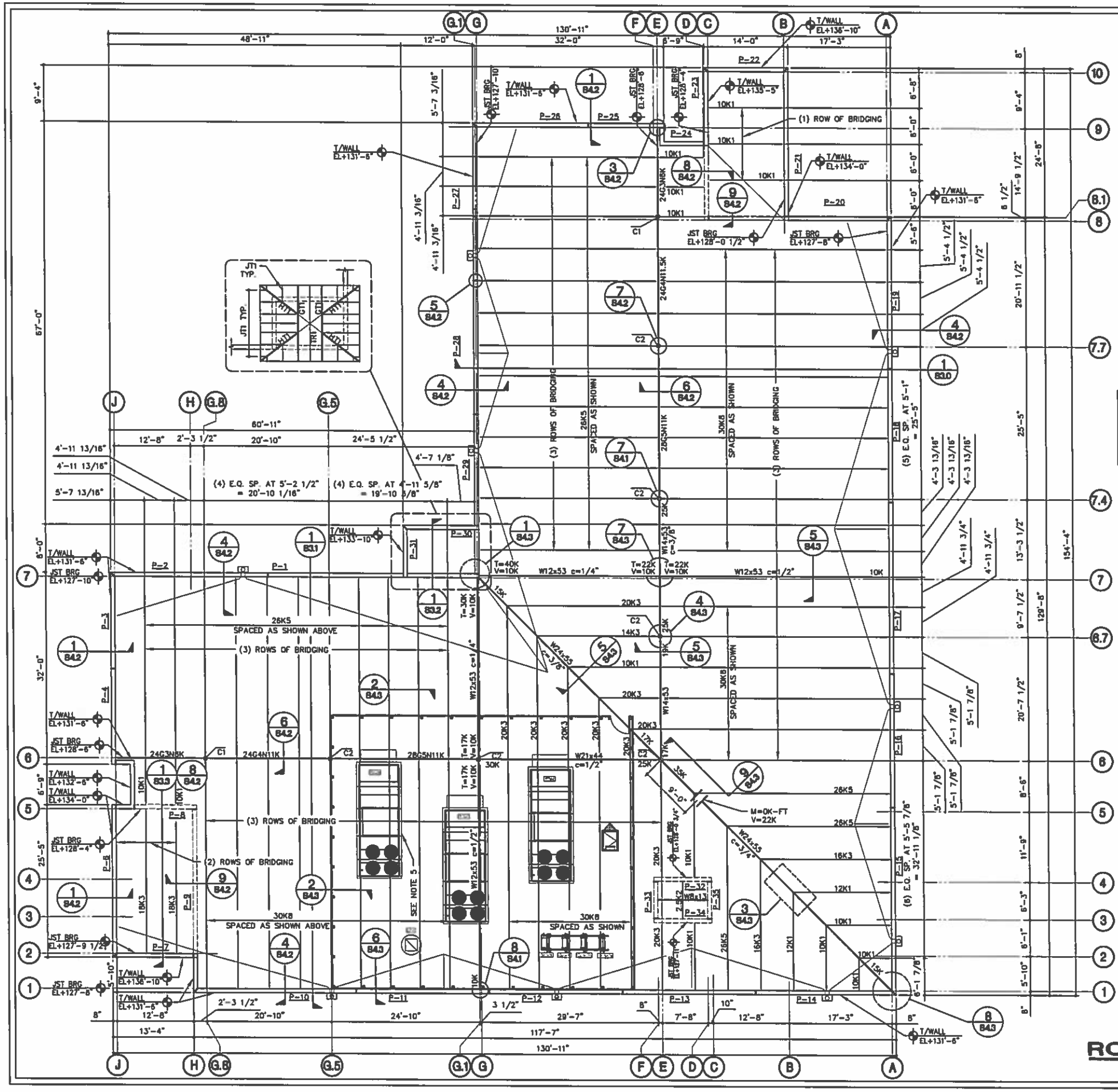
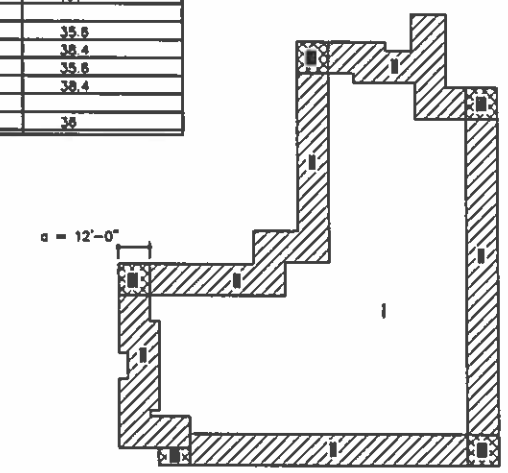
Scale: 1/8"=1'-0"

S2.1



RTU SCHEDULE

UNIT	WEIGHT (LBS)	HEIGHT - (INCH) (INCLUDING CURB/RACK)
RTU-1	6520	101
RTU-2	6520	101
OAU-1	6520	101
CU 1-16	29	35.6
CU 2-17	45	38.4
CU 1-17A	22	35.6
CU 1-17B	40	38.4
EF-1	138	36



ROOF DESIGN LOADS

TOP CHORD LIVE LOAD	TOP CHORD DEAD LOAD	BOTTOM CHORD DEAD LOAD
30 PSF	25 PSF	5 PSF

ROOF UPLIFT PLAN

ZONE	JOISTS & GIRDERS *	ROOFING
I	-34.9 PSF	-49.1 PSF
II	-43.2 PSF	-82.3 PSF
III	-43.2 PSF	-123.9 PSF

*NET UPLIFT BASED ON 18 PSF DL. ALL LOADS SERVICE.

ROOF TRUSS CONNECTION SCHEDULE

MARK	SIMPSON CONNECTOR	FASTENERS	REACTION (#)	NET UPLIFT REQUIRED (#)	UPLIFT PROVIDED (#)
TR1	HTSM 20	(4) 1/4"x2 1/4" TITEN SCREWS, (8) #10 TEKS	633	-855	-1175
JT1	HTSM 20	(4) 1/4"x2 1/4" TITEN SCREWS, (8) #10 TEKS	483	-740	-1175
HT1	LGT2	(7) 1/4"x2 1/4" TITEN SCREWS, (16) #10 TEKS	976	-1800	-2150
GT1	(2) HTSM 20	(8) 1/4"x2 1/4" TITEN SCREWS, (14) #10 TEKS	1350	-1300	-1340

*ALL LOADS SERVICE

HIGH ROOF FRAMING NOTES:

R1. ALL TRUSSES SHALL BE DESIGNED AND CERTIFIED BY TRUSS MANUFACTURER'S REGISTERED ENGINEER. ALL HANGERS AND ANCHORS SHALL BE SPECIFIED BY A REGISTERED ENGINEER.

R2. TRUSS MANUFACTURER SHALL VERIFY ALL DIMENSIONS AND SUBMIT SHOP DRAWINGS TO ARCHITECT FOR APPROVAL.

R3. SEE PLAN AND SCHEDULE FOR TRUSS HURRICANE CONNECTORS.

R4. METAL TRUSS SPACING SHALL BE AT 24" O.C. (U.N.O.) HAND FRAMING SHALL BE AT 16" O.C. (U.N.O.)

R5. PROVIDE PERMINANT BOTTOM CHORD BRACING AS PER TRUSS MFR. REQUIREMENTS.

R6. ROOF SHEATHING TO BE 1/2", 22ga METAL DECK ON PRE-ENGINEERED METAL ROOF TRUSSES. ATTACH METAL DECK TO TRUSSES WITH #12-14x1 1/4" TEK SCREWS AT 8" O.C. WITH (1) #12 TEK SIDELAP FASTENER BETWEEN EA. TRUSS AT THE SIDELAP, TYP. THROUGHOUT.

R7. PROVIDE 5/8" DENS-DECK BOARD ON TOP OF THE METAL DECK. ATTACH BOARD W/#12-24x2.25" PFH TEK SCREWS @ 16" O.C. AT PANEL EDGES AND @ 24" O.C. AT ALL INTERIOR SUPPORTS. ATTACH PLYWOOD DIRECTLY TO TRUSS TOP CHORD THROUGH METAL DECKING.

ROOF FRAMING NOTES:

1. ROOF ASSEMBLY TO BE BUILT-UP ROOF WITH INSULATION OVER 1.5" TYPE "B" GALV. G60 METAL ROOF DECK CONTINUOUS OVER 3 OR MORE SPANS. ROOF DECK TO BE 22 GAGE. ATTACH DECK TO JOISTS W/ 5/8"ø PUDDLE WELDS AT SDI 36/7 WELD PATTERN. USE (7) #10 TEK SIDELAP FASTENERS. PROVIDE 5/8"ø PUDDLE WELDS @ 6" O.C. AROUND PERIMETER.
2. TOP OF ELEVATOR PANELS IS TOP OF JOIST ALL AROUND. SEE 8 AND 9/S4.2.
3. TOP OF PARAPET EL. VARIES SEE PLAN.
4. SEE STRUCTURAL NOTE SHEET FOR BRIDGING REQUIREMENTS FOR JOIST & JOIST GIRDERS.
5. JOIST MANUFACTURER TO DESIGN ALL JOISTS AND GIRDERS FOR ALL ROOF TOP A/C UNITS. REFER TO MECHANICAL HVAC PLAN FOR LOCATION AND WEIGHTS OF EACH UNIT. LOADS AND LOCATIONS PROVIDED HERE ARE A GUIDE AND SHOULD BE VERIFIED WITH MOST RECENT MECHANICAL PLANS.
6. SEE PLAN FOR JOIST BEARING ELEVATIONS.
7. "BTJ" INDICATES BOLTED TIE JOIST PER OSHA REQUIREMENTS.
8. DENOTES ADDITIONAL CONCENTRATED LOAD AT GIRDER PANEL POINT.
9. SEE A/S1.1 FOR UPLIFT BRIDGING DETAILS. SEE ROOF UPLIFT PLAN THIS SHEET FOR WIND UPLIFT LOADS
10. BRACE STEEL BEAM BOTTOM FLANGE AT BEAM QUARTER POINTS, SEE SIMILAR 5/S4.3.

ROOF FRAMING PLAN

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

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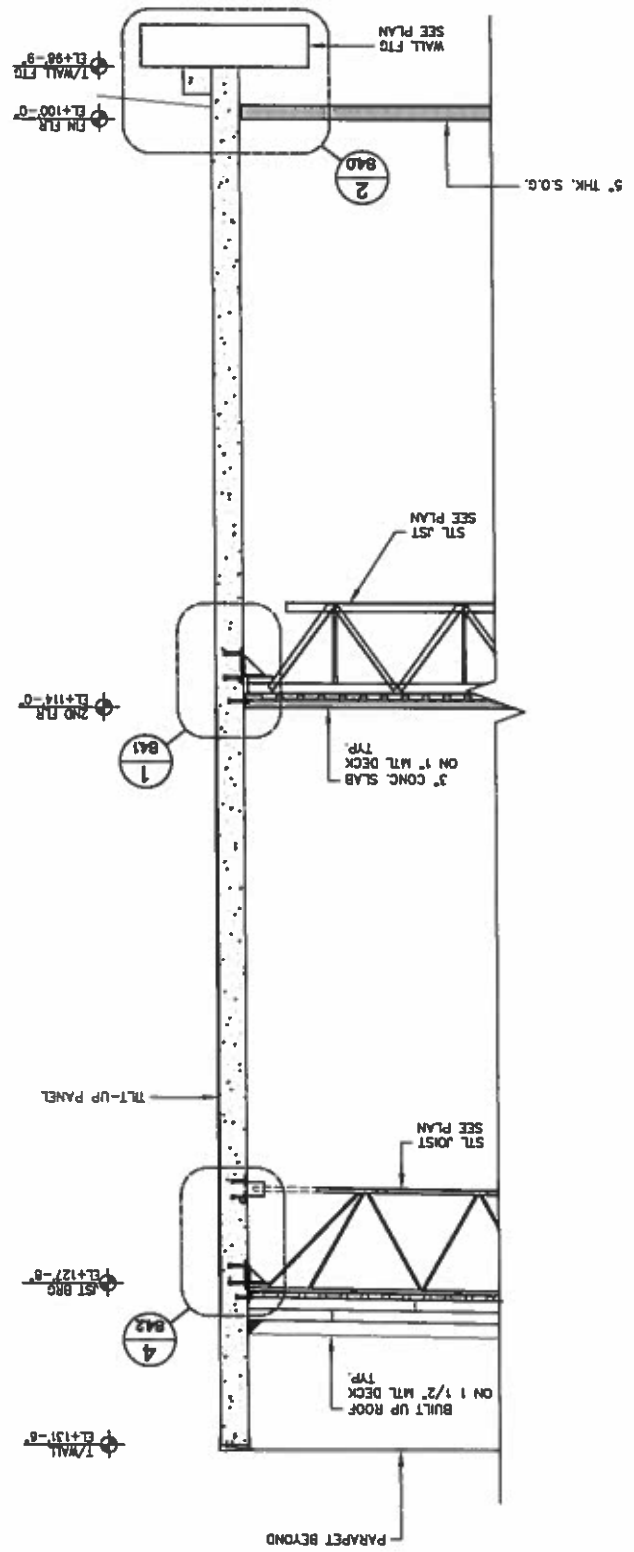
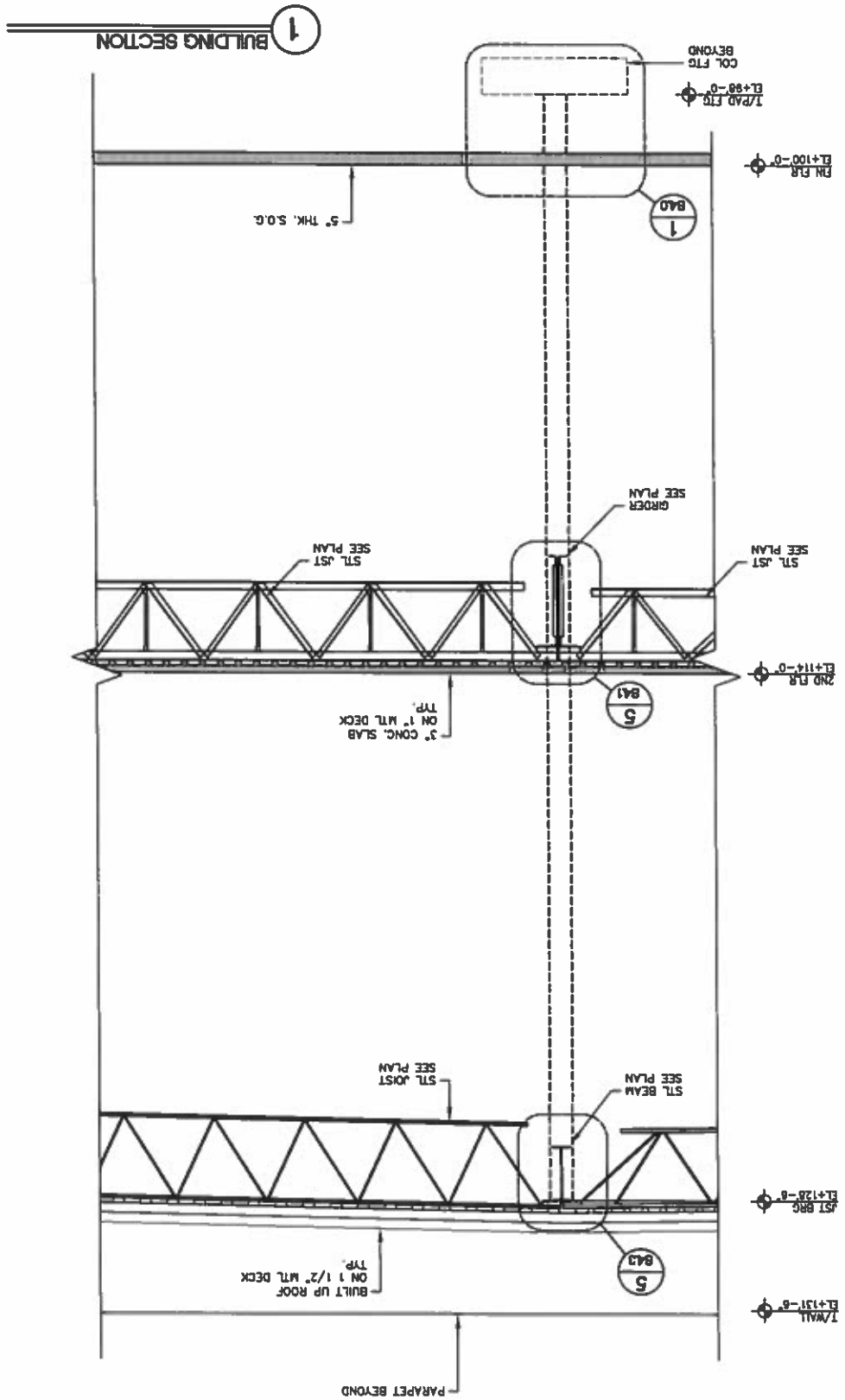
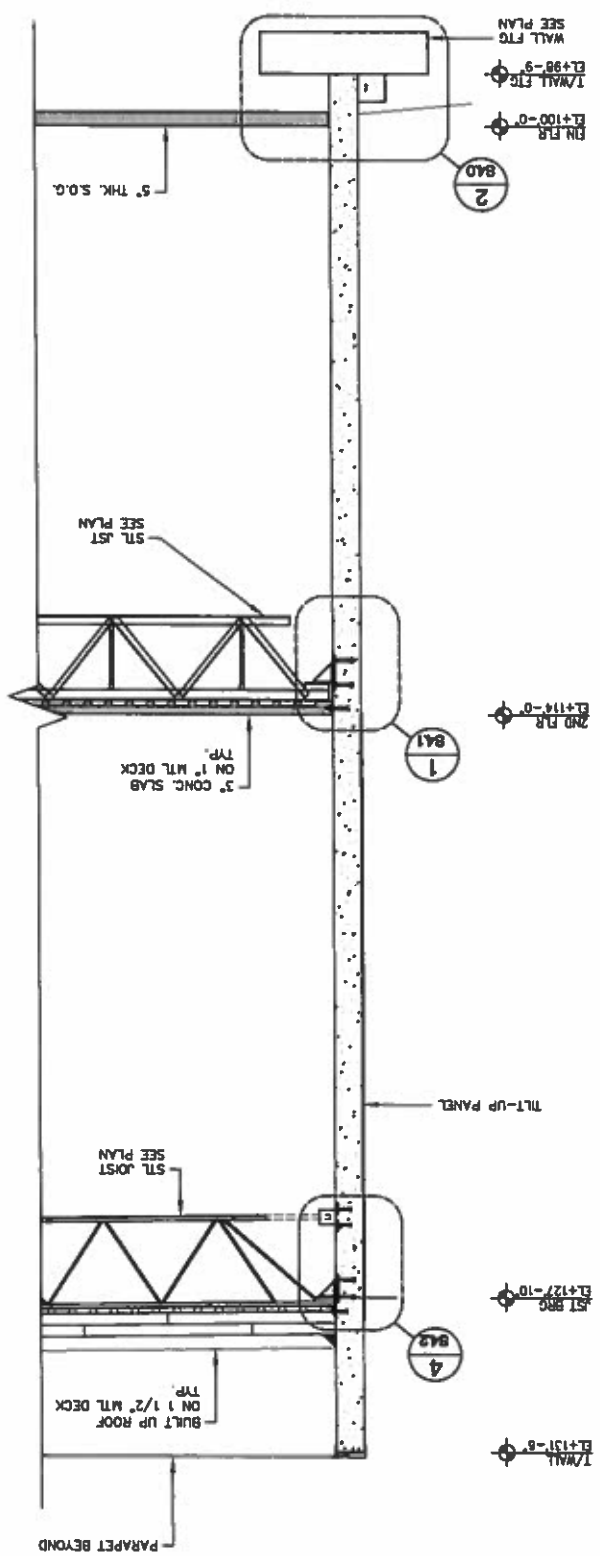
Title: ROOF FRAMING PLAN
Scale: 1/8"-1'-0"

S2.2







S3.0

BUILDING DETAILS

Date: 12"=1'-0"

Revisions:

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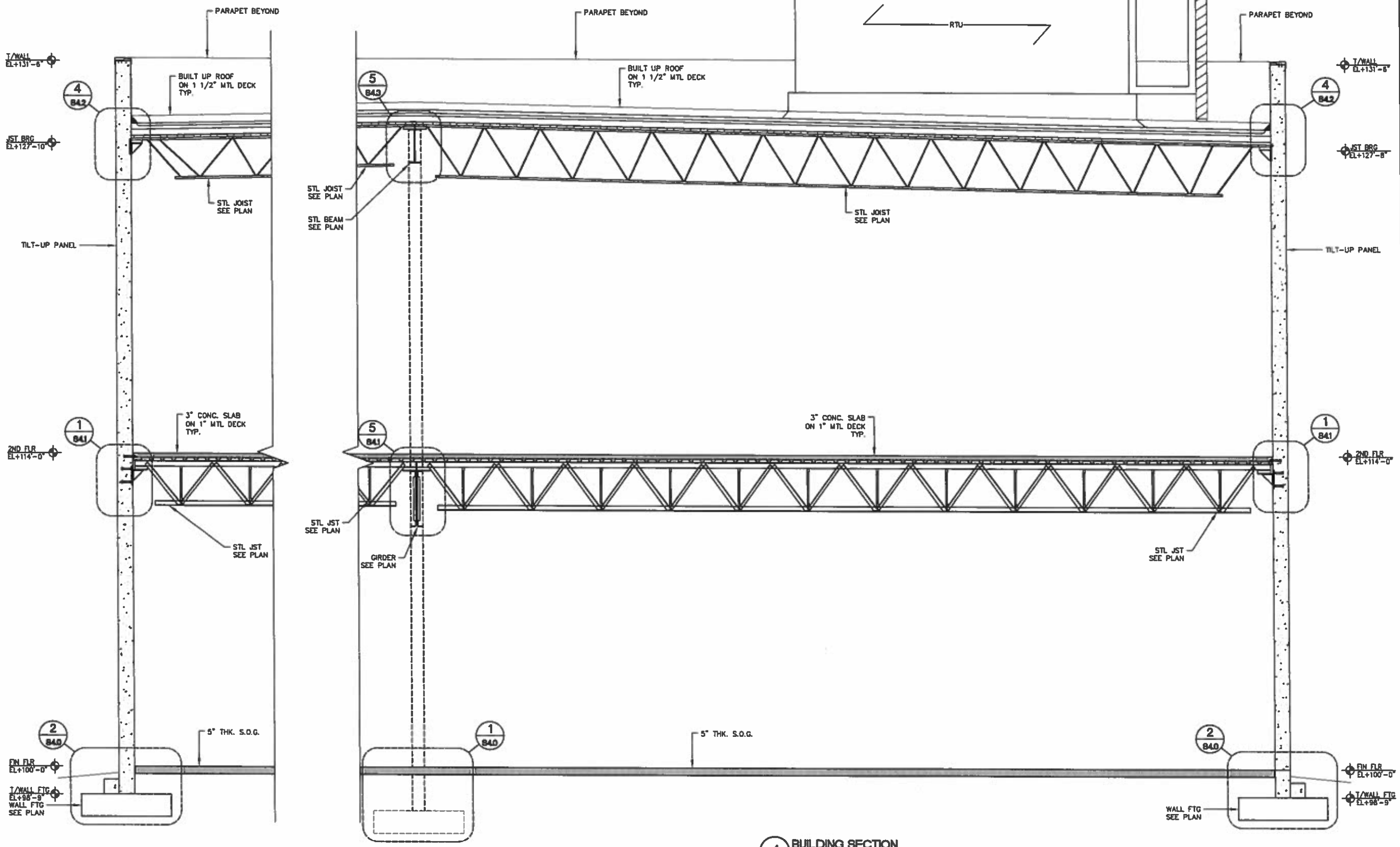

1 BUILDING SECTION

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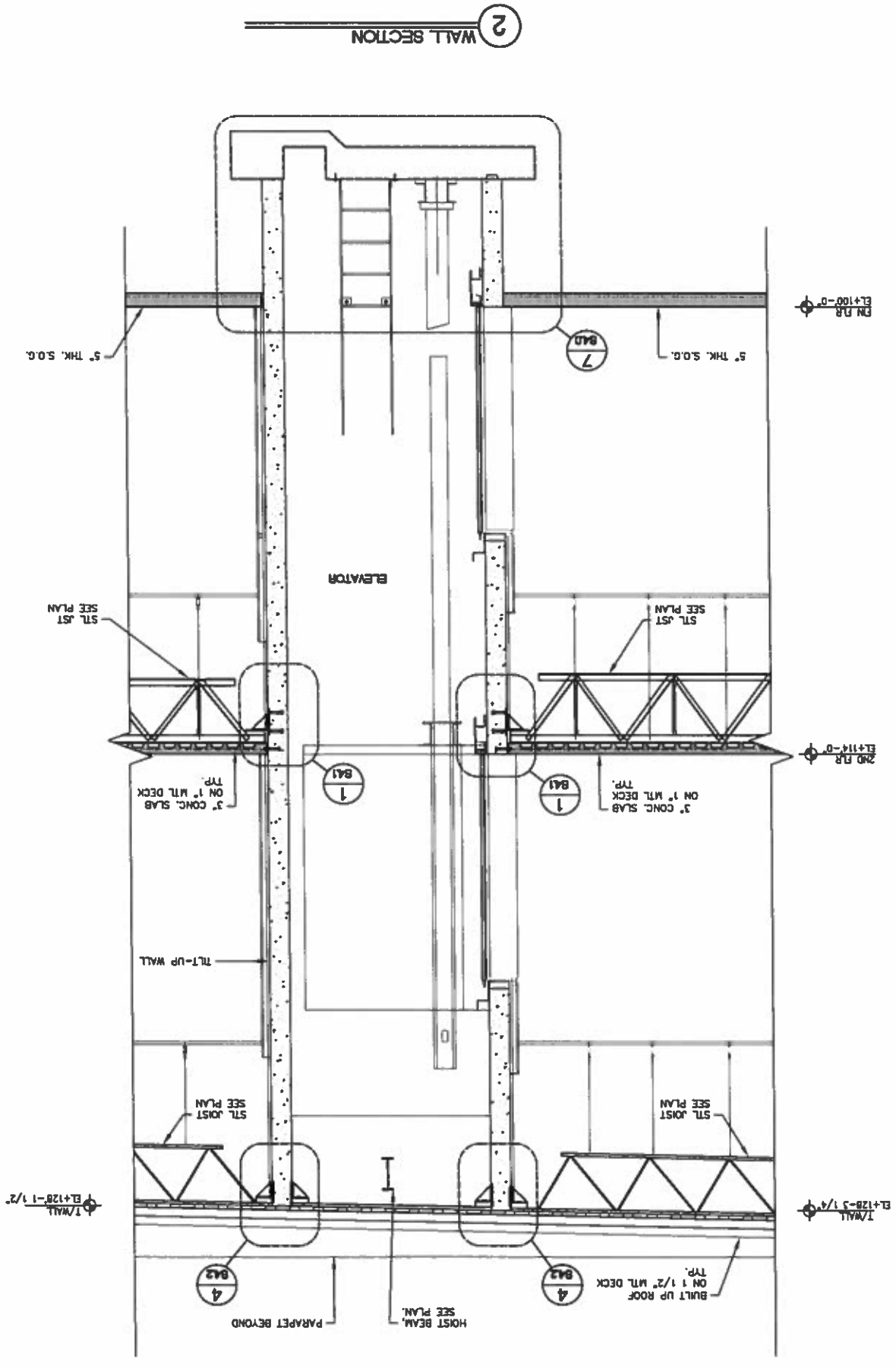
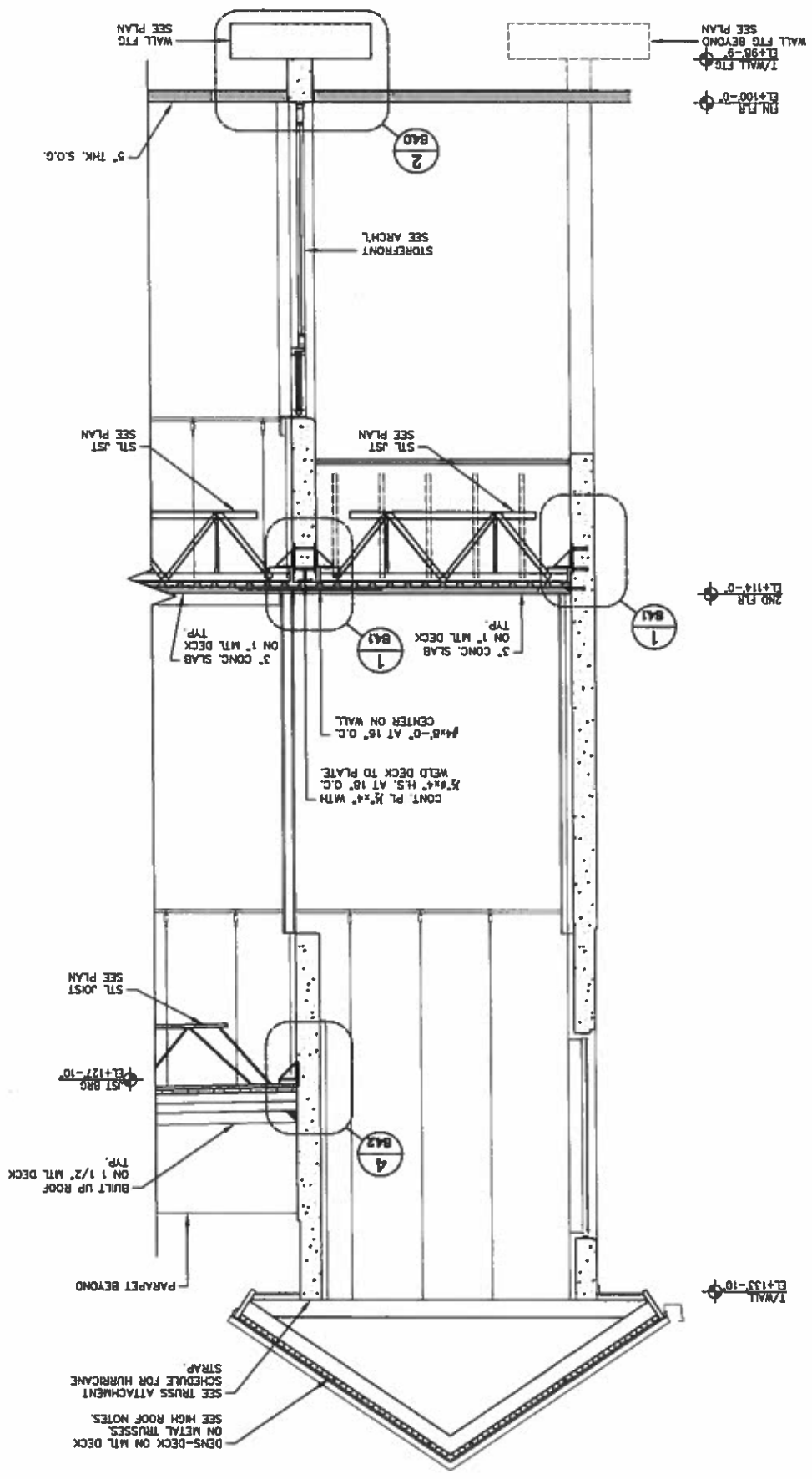
S3.1





S3.2

STRUCTURAL DETAILS

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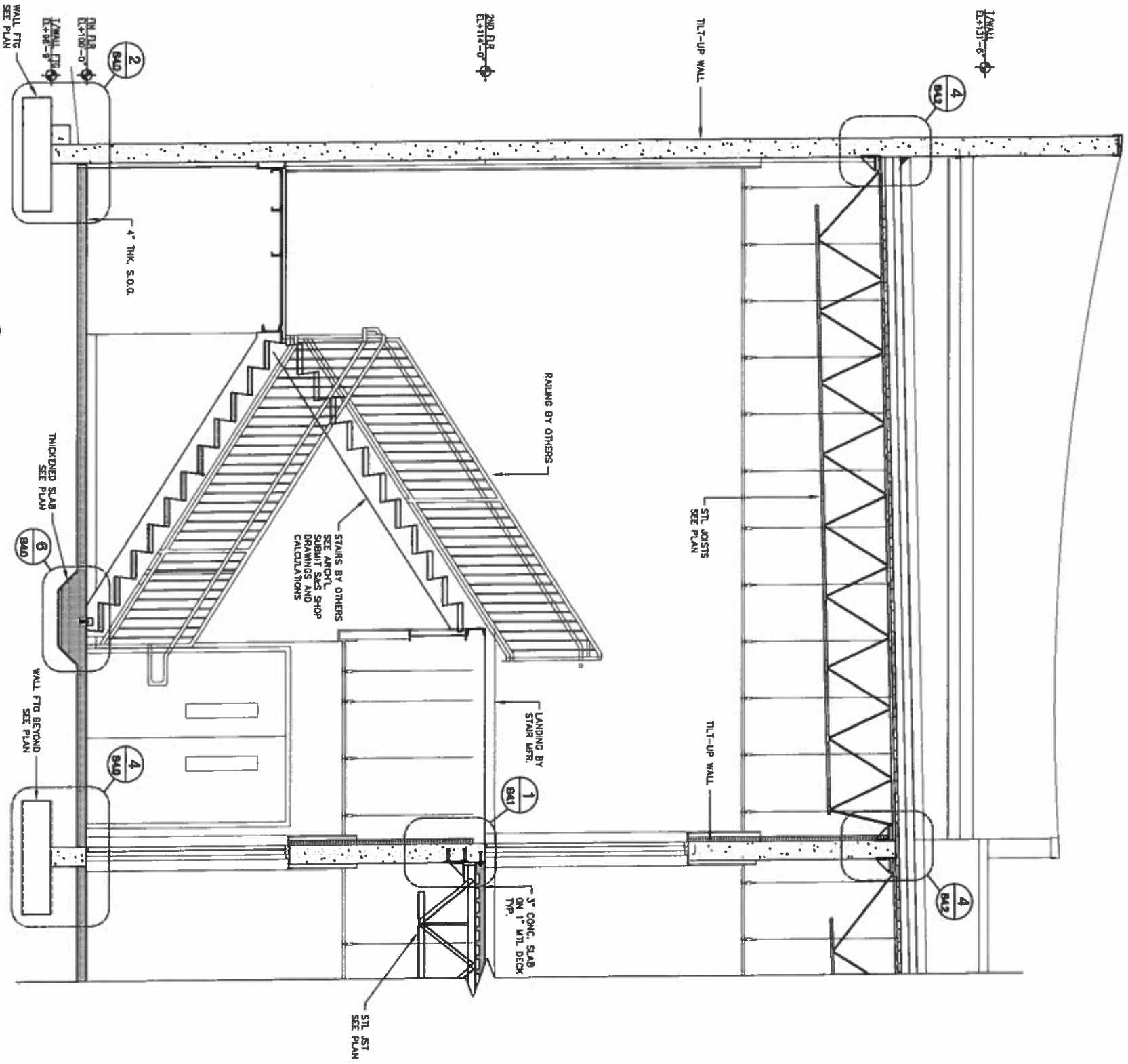

1 WALL SECTION

S3.3

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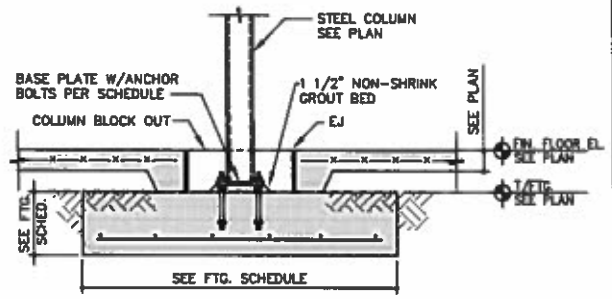
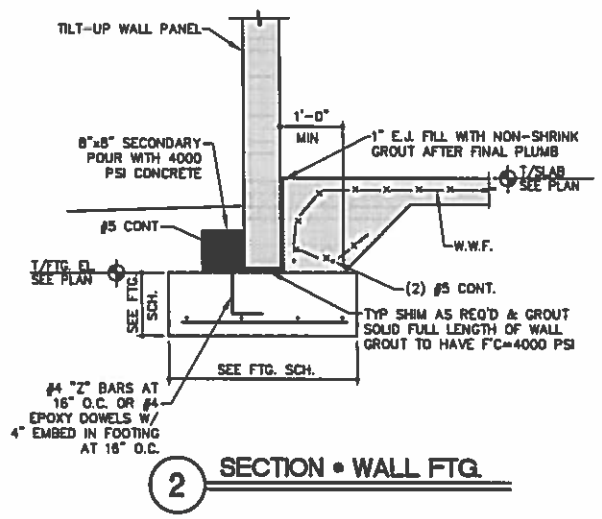


1 INTERIOR COLUMN FOOTING

SCALE: 3/4"=1'-0" TYP. U.N.O.



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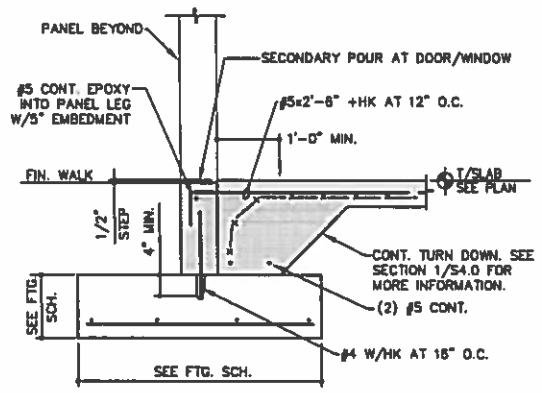
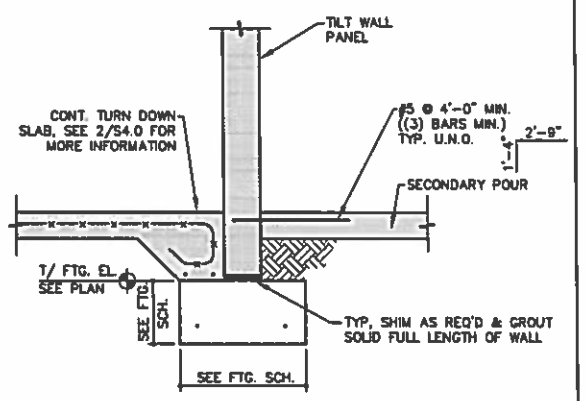
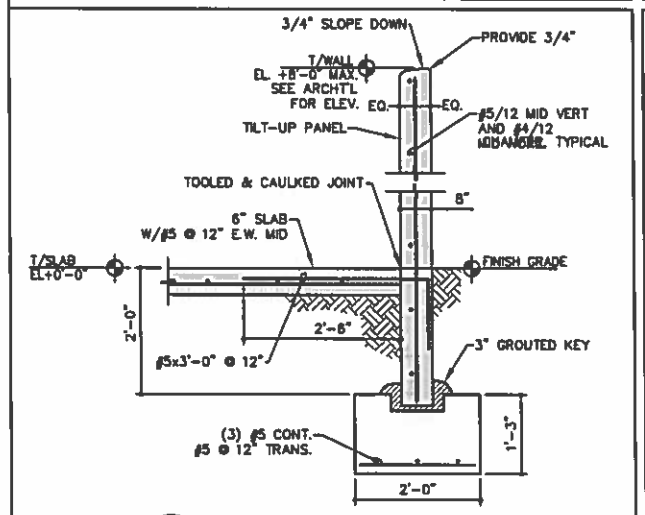


3 SECTION • EXT. DOOR W/TDS



4 INT. TILT WALL DETAIL



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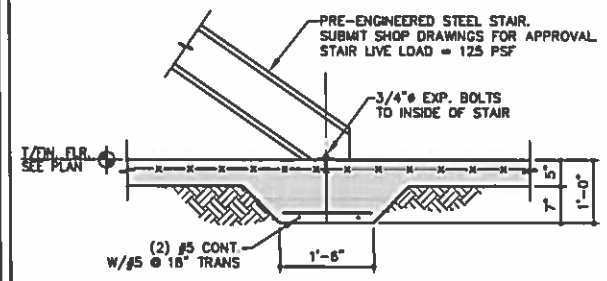
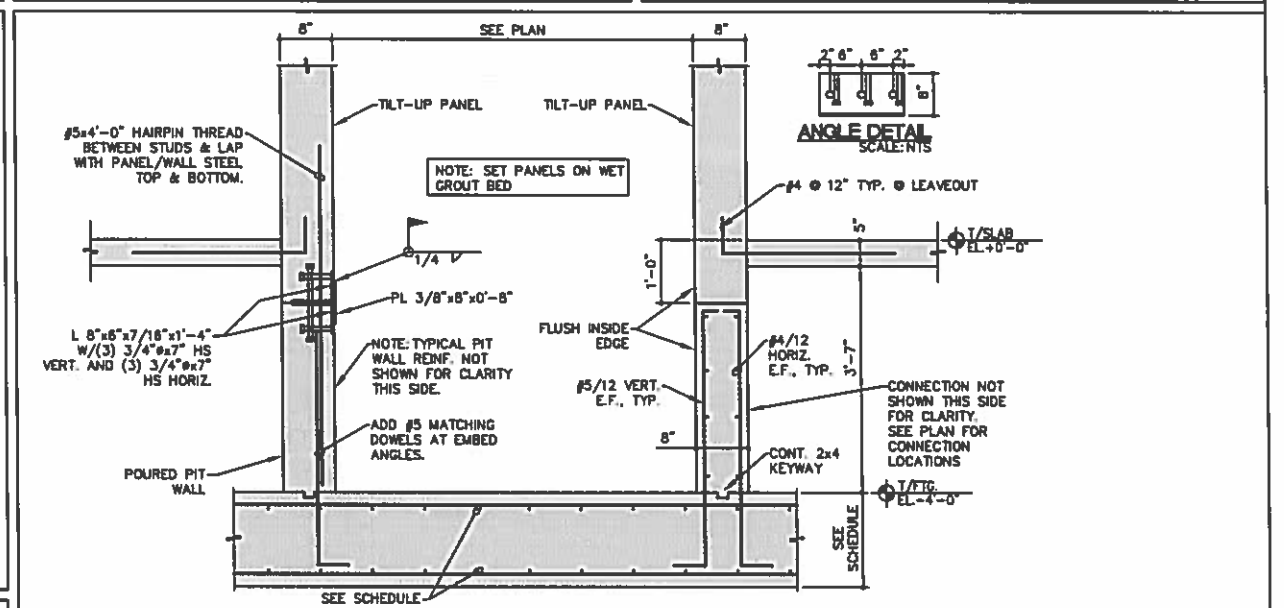
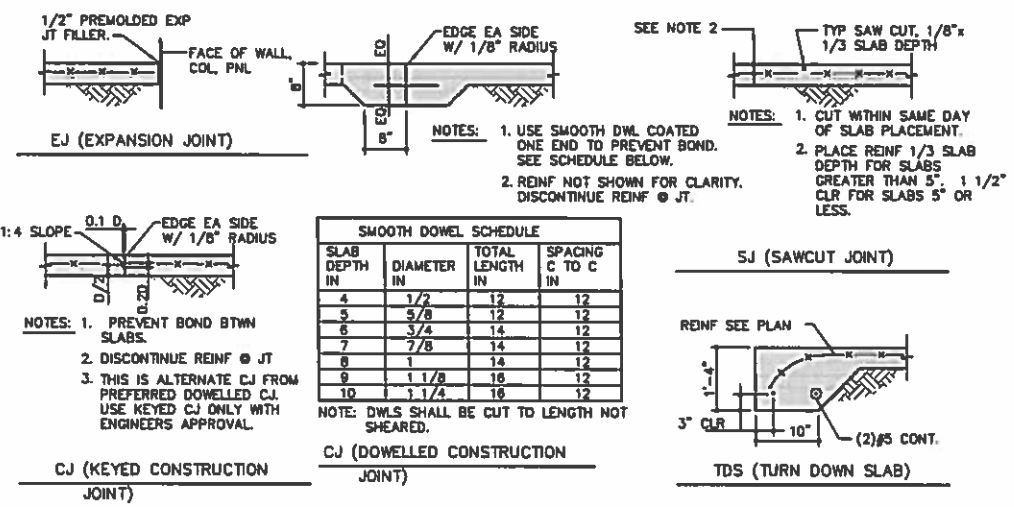


6 SECTION AT STAIR LANDING



7 SECTION • ELEVATOR PIT

N.T.S.

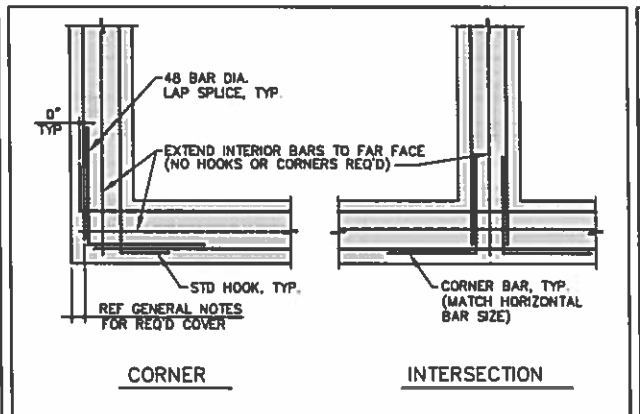


SMOOTH DOWEL SCHEDULE			
SLAB DEPTH IN	DIAMETER IN	TOTAL LENGTH IN	SPACING C TO C IN
4	1/2	12	12
5	5/8	12	12
6	3/4	14	12
7	7/8	14	12
8	1	14	12
9	1 1/8	16	12
10	1 1/4	16	12

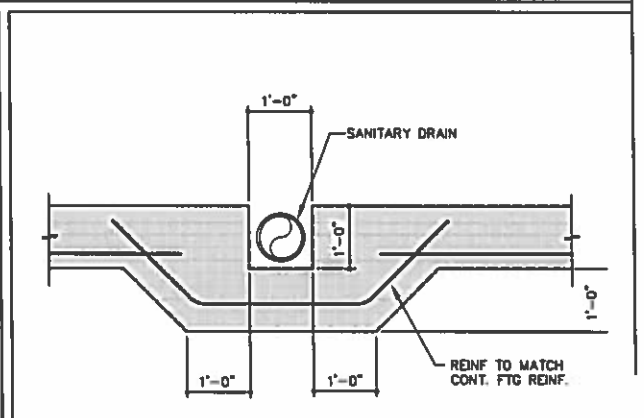
NOTE: DWLS SHALL BE CUT TO LENGTH NOT SHEARED.

CJ (DOWELLED CONSTRUCTION JOINT)

A SLAB ON GRADE DEAILS



B CORNER BAR DETAIL



C SECTION • BLOCK OUT AS REQ.

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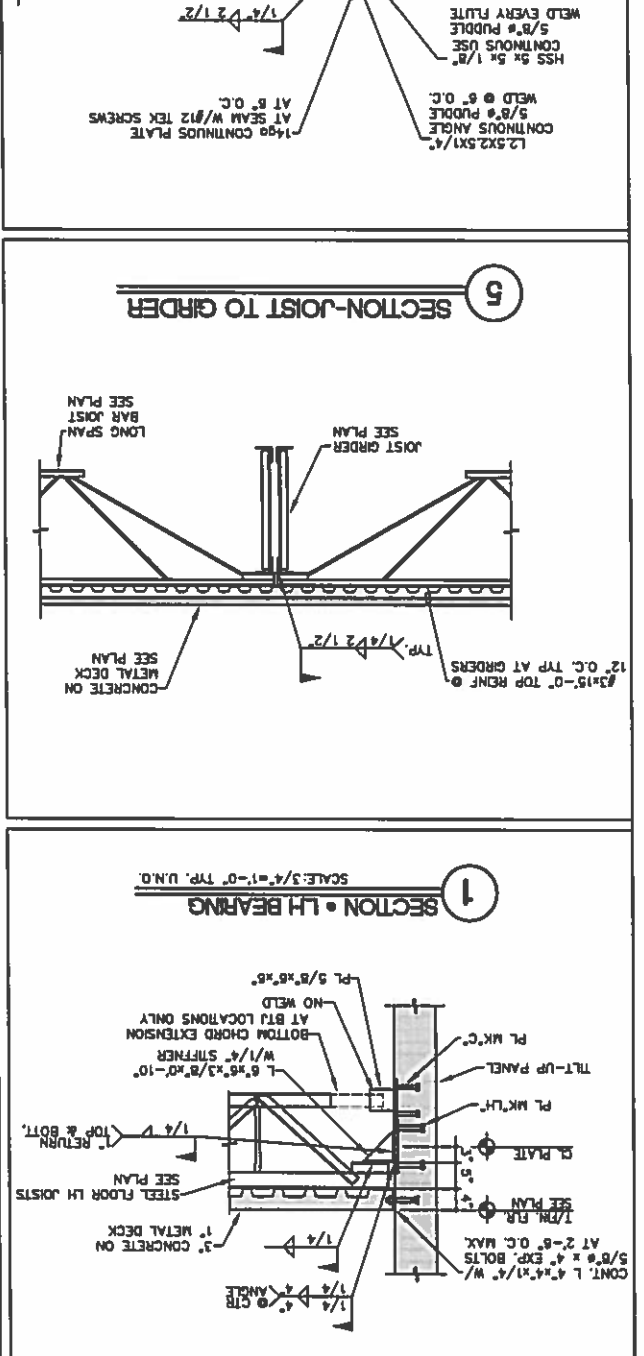
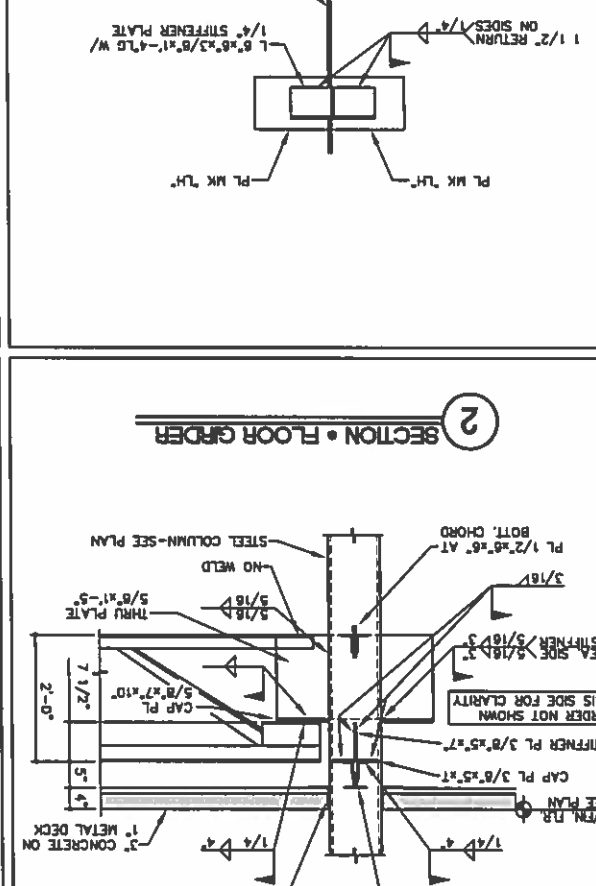
S4.1

1 SECTION • L.H BEARING

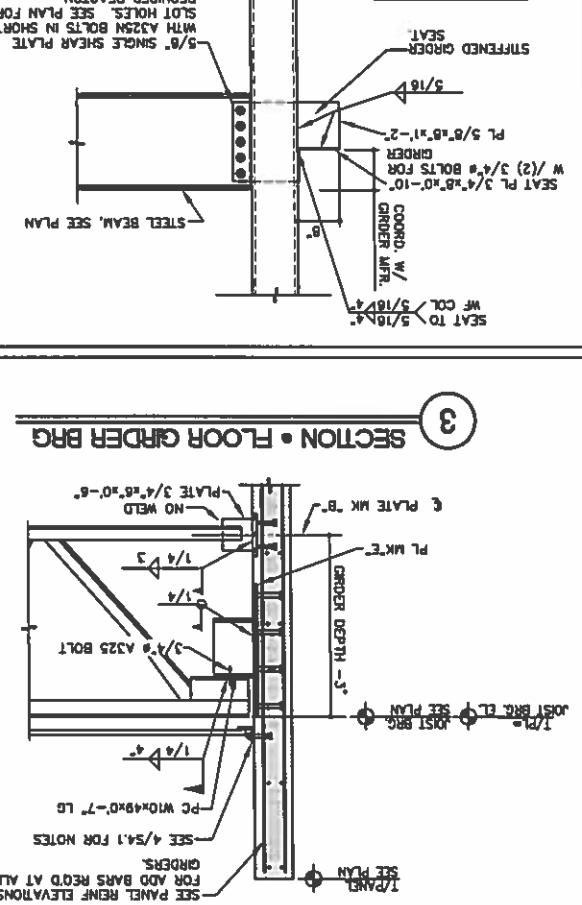
SCALE: 3/4"=1'-0" TYP. U.N.O.



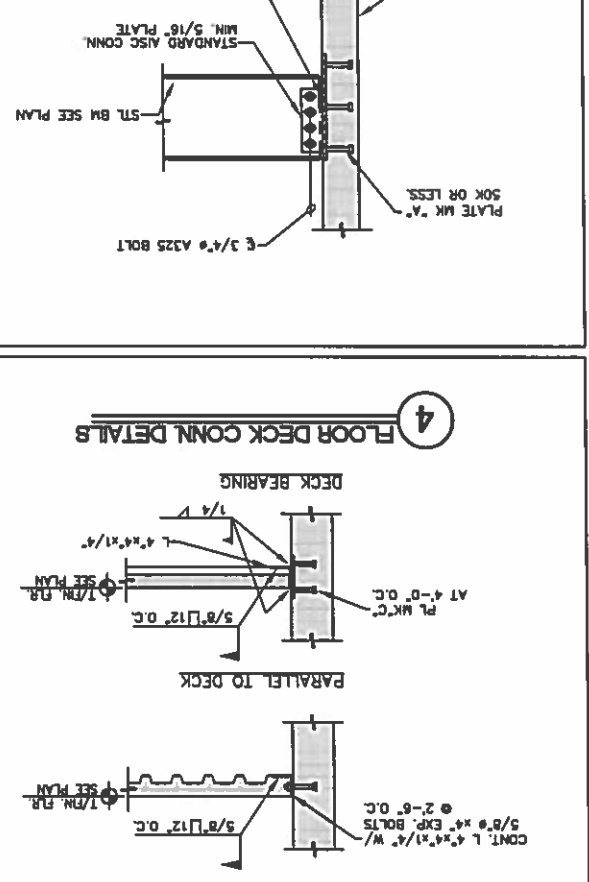
2 SECTION • FLOOR GIRDER



3 SECTION • FLOOR GIRDER BRG

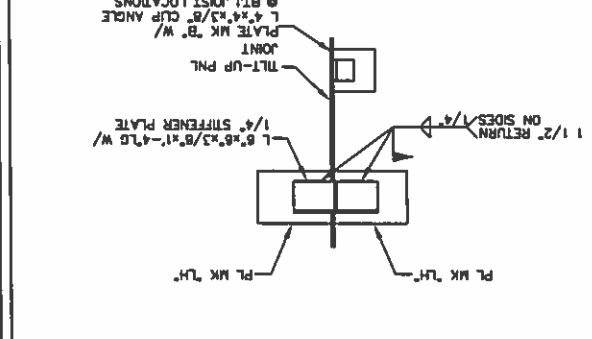


4 FLOOR DECK CONN DETAILS

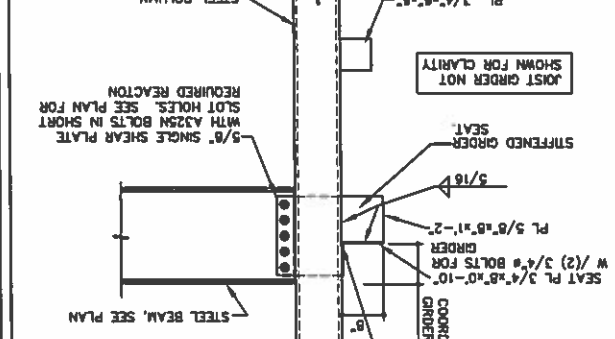


5 SECTION-JOIST TO GIRDER

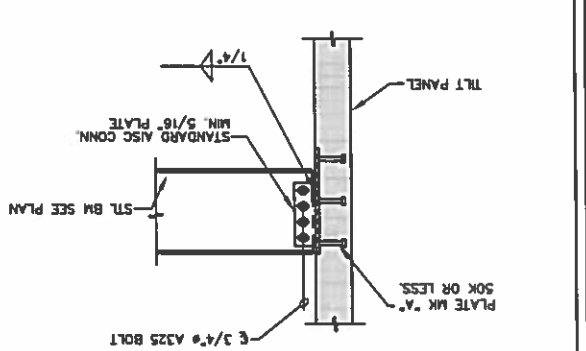
6 LH JOIST BRG. • PANEL JT



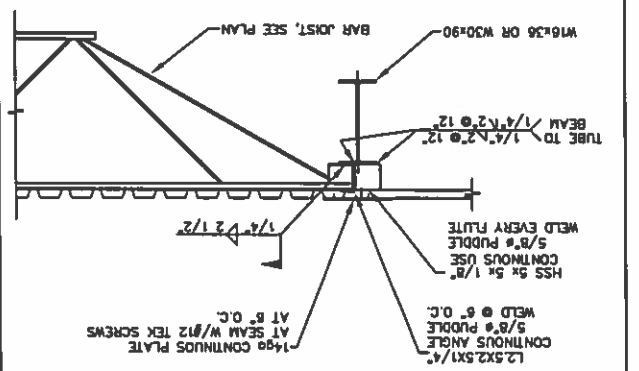
7 JOIST GIRDER AND BEAM • HSS COLUMN



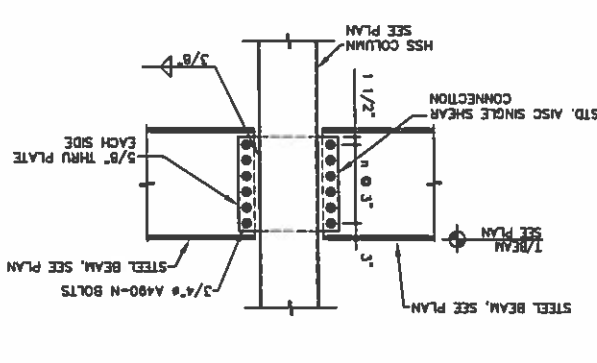
8 BEAM CONN TO WALL



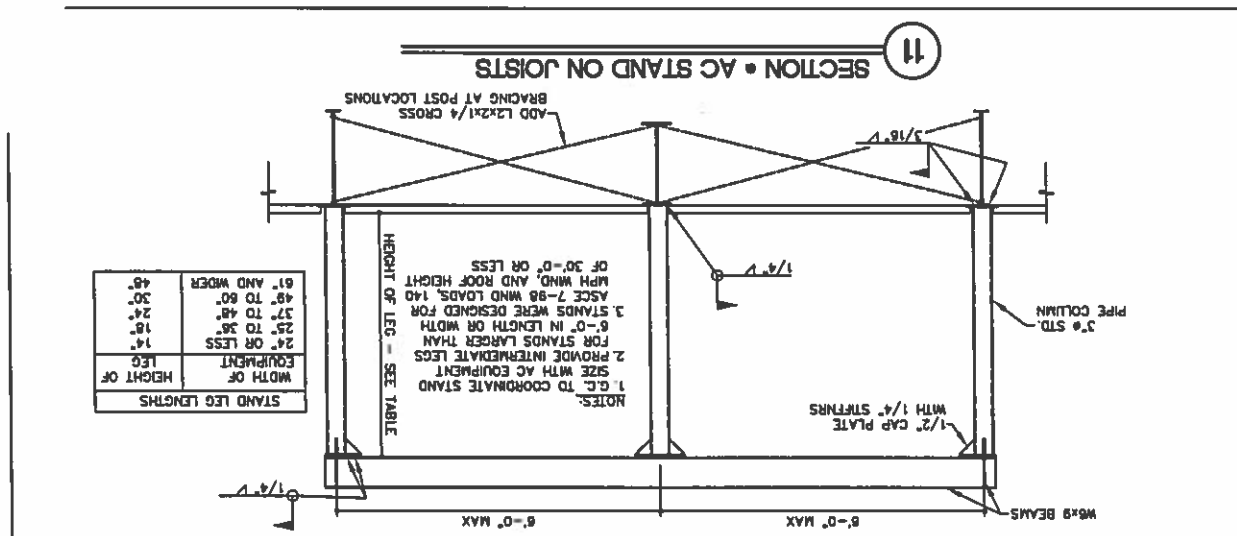
9 SECTION • W12X58



10 SECTION • CONT. HSS COLUMN

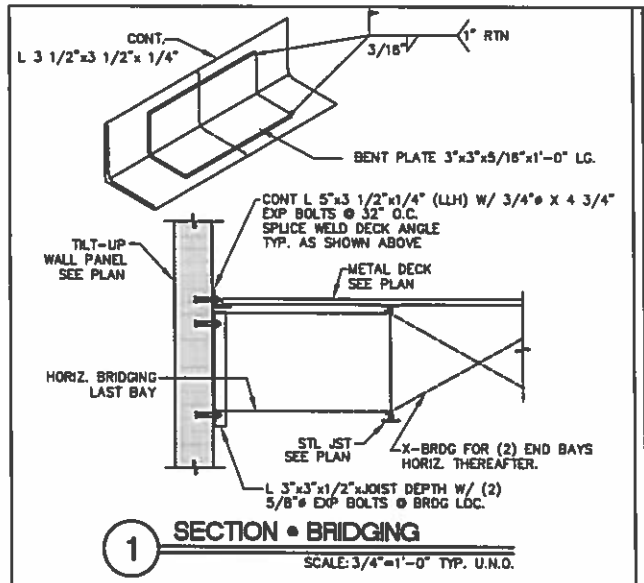


11 SECTION • AC STAND ON JOISTS



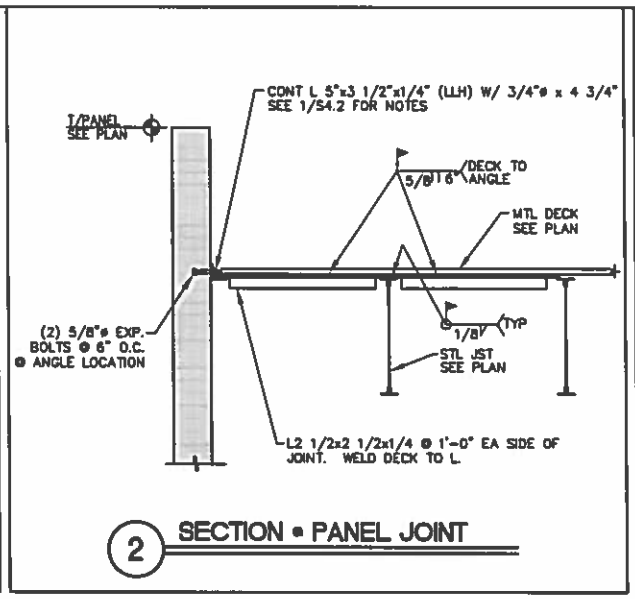
NOTES.
1. G.C. TO COORDINATE STAND SIZE WITH AC EQUIPMENT
2. PROVIDE INTERMEDIATE LEGS FOR STANDS LARGER THAN 6'-0" IN LENGTH OR WIDTH
3. STANDS WERE DESIGNED FOR ASCE 7-98 WIND LOADS, 140 MPH WIND, AND ROOF HEIGHT OF 30'-0" OR LESS

STAND LEG LENGTHS	
WIDTH OF EQUIPMENT	HEIGHT OF LEG
24" OR LESS	14"
25" TO 36"	18"
37" TO 48"	24"
49" TO 60"	30"
61" AND WIDER	48"

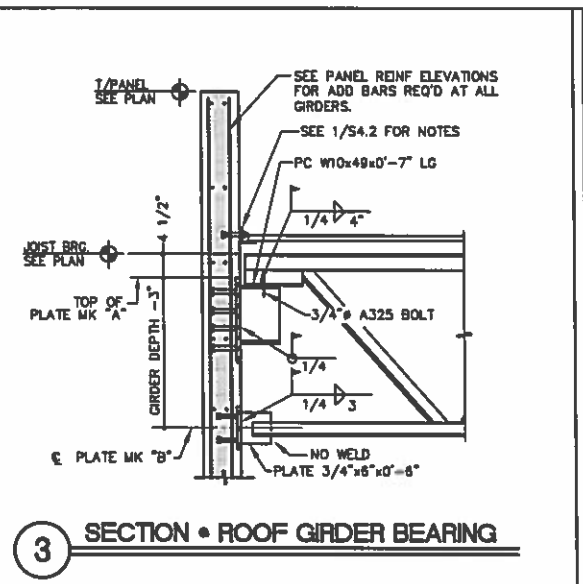


1 SECTION • BRIDGING

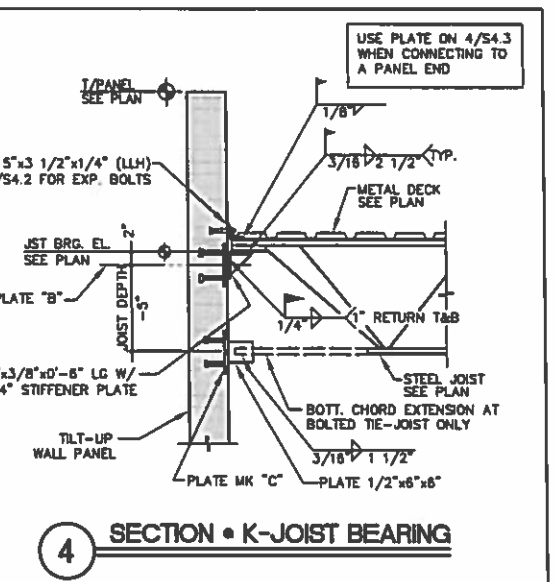
SCALE: 3/4"=1'-0" TYP. U.N.O.



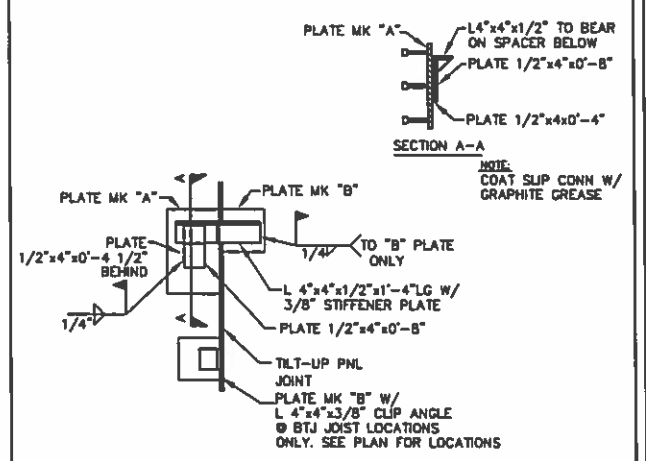
2 SECTION • PANEL JOINT



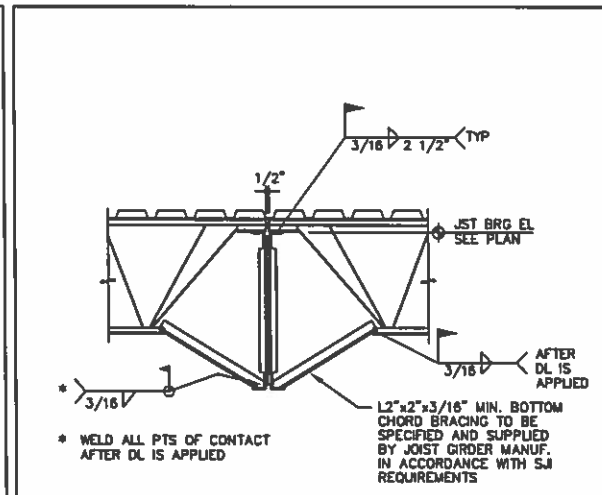
3 SECTION • ROOF GIRDER BEARING



4 SECTION • K-JOIST BEARING

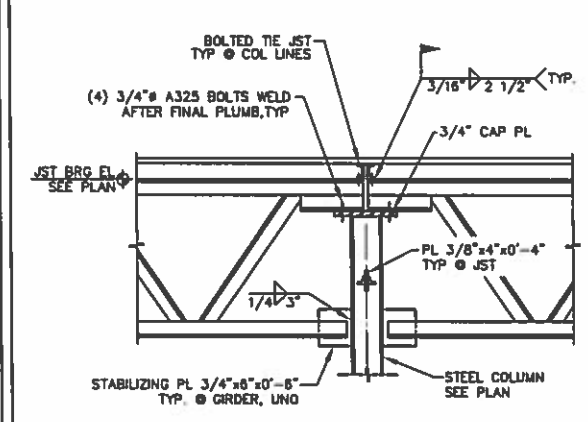


5 JOIST BRG • PANEL JOINT

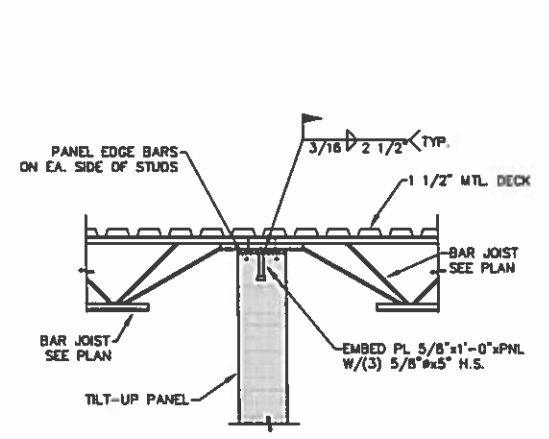


* WELD ALL PTS OF CONTACT AFTER DL IS APPLIED

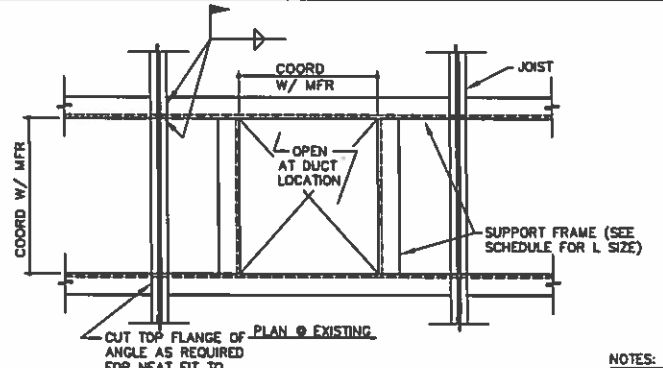
6 SECTION • JOIST TO GIRDER

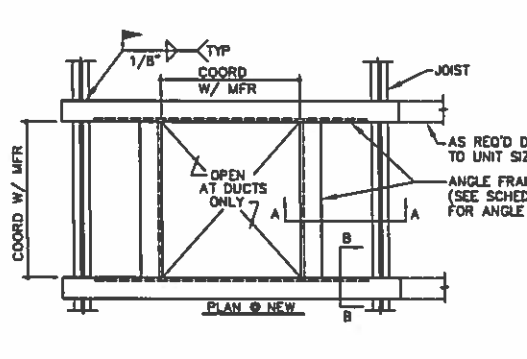


7 SECTION • GIRDER TO COL



8 SECTION • COMMON BEARING



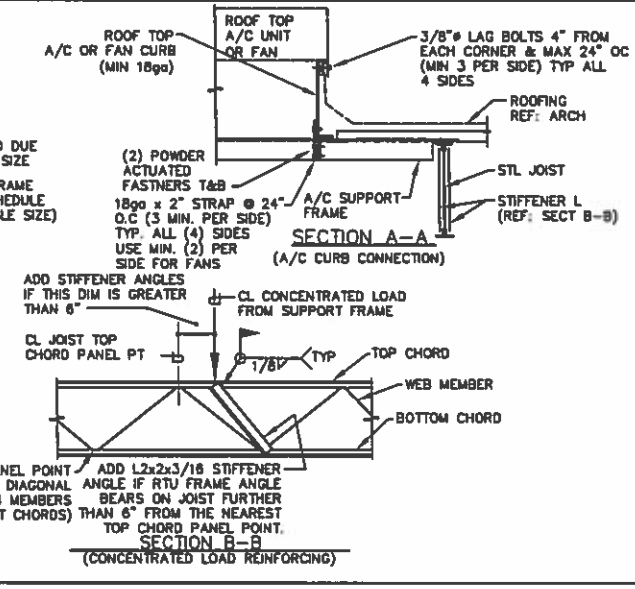


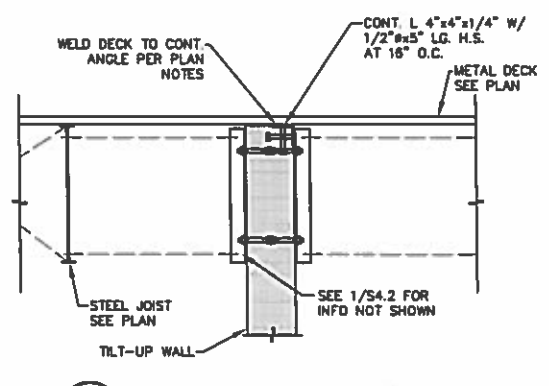
NOTES:
1. VERIFY ALL DIM'S & DETAILS W/ MECH CONTR BEFORE FABRICATION.
2. A/C UNIT TOTAL WEIGHT-SEE PLAN FOR WEIGHT AND FRAME SCHEDULE FOR ANGLE FRAME SIZE.
3. PROVIDE L3x3x1/4 FRAME AT ALL OPNGS GREATER THAN 12" ON ANY SIDE.
4. THE ANGLE FRAME SHALL BE PROVIDED SO THAT THE ENTIRE PERIMETER OF THE RTU CURB IS SUPPORTED.

ROOF TOP UNIT FRAME SCHEDULE	
UNIT WEIGHT	ANGLE SIZE
0 – 675 lbs	L4x3x1/4 LLH
676 – 1500 lbs	L4x3 1/2x5/16 LLH
1501 – 3000 lbs	L6x4x3/8 LLH
3001 – 6000 lbs	L6x6x3/8

A DET. MECH ROOF SUPPORT

SCALE: N.T.S.





9 SECTION • DECK TO PANEL

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NEW CLASSROOM BUILDING
RIVIERA BEACH, FLORIDA
RIVIERA BEACH, FLORIDA
CONTRUCTION DOCUEMENTS

Comm. No: JSG# 14101
Date: 09-24-2014
Drawn: E.B. / S.G.
Revised:

Title: STRUCTURAL DETAILS
Scale: 3/4"=1'-0"

S4.2

NEW CLASSROOM BUILDING
RIVIERA BEACH, FLORIDA
RIVIERA BEACH, FLORIDA
CONTRUCTION DOCUEMENTS

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ARCHITECTURE

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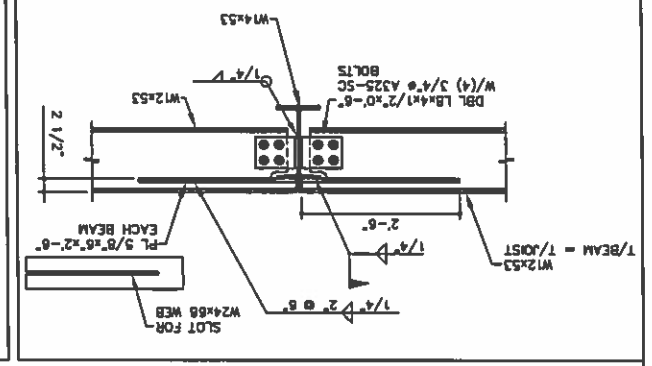
Title: STRUCTURAL DETAILS
Scale: 3/4"=1'-0"

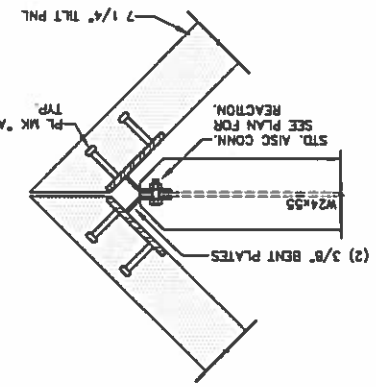
S4.3

7 SECTION • COLLECTOR CONN.

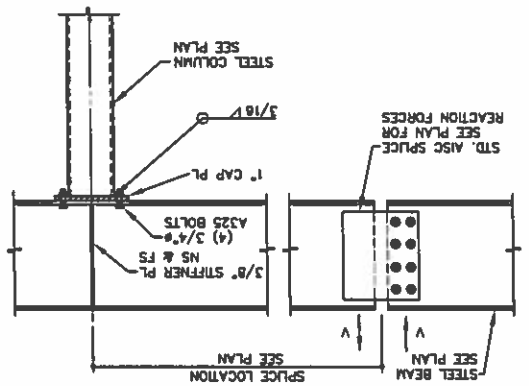


8 PLAN • CORNER CONN.

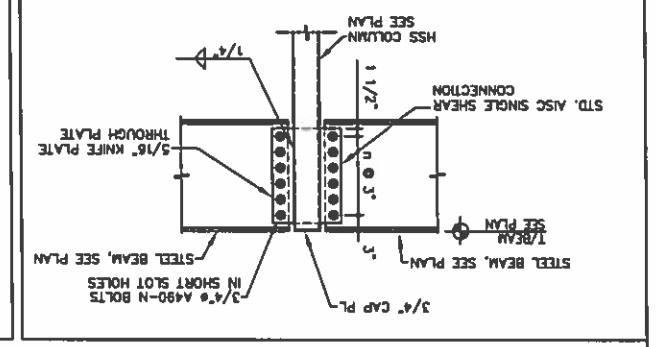
N.T.S.



9 SECTION • CONT. BEAM

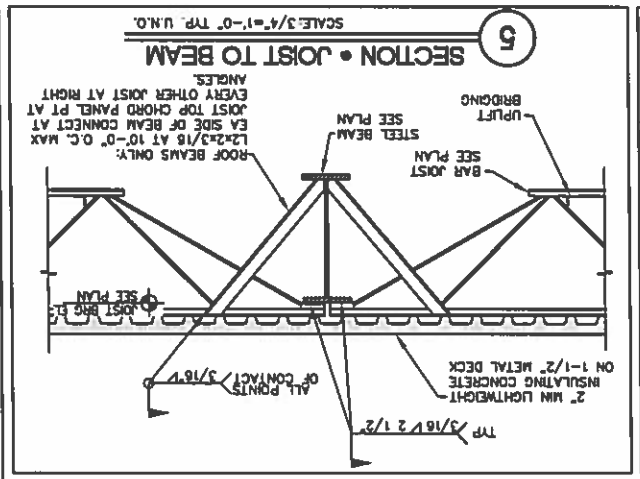


4 SECTION • BEAM TO STL. COLUMN

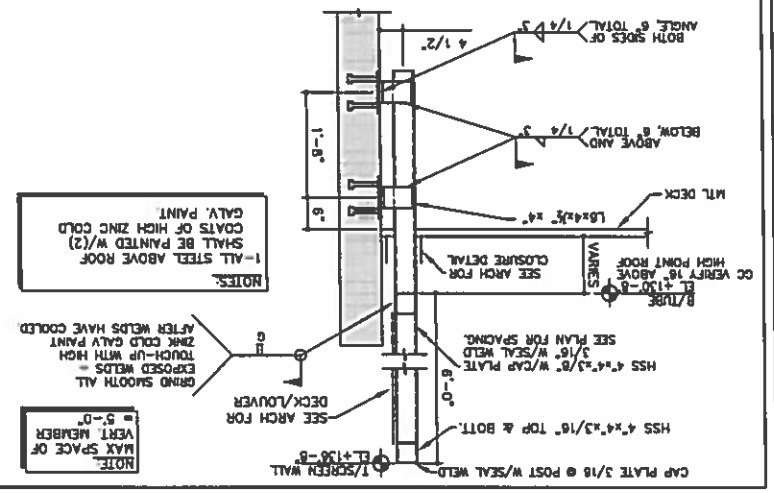


5 SECTION • JOIST TO BEAM

SCALE: 3/4"=1'-0" TYP. U.N.O.

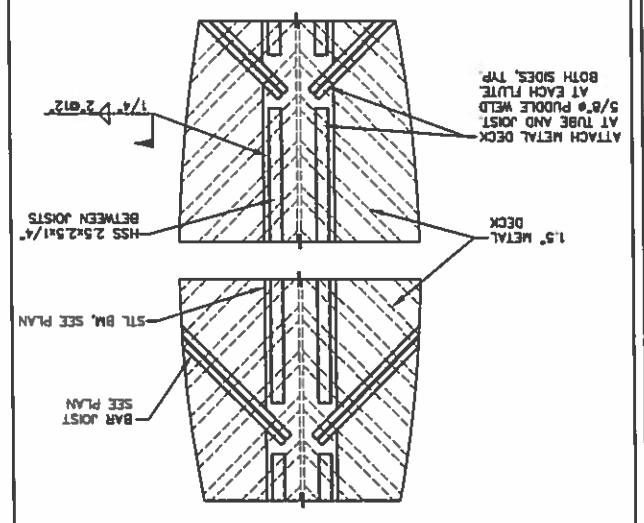


6 SECTION • SCREEN AT WALL

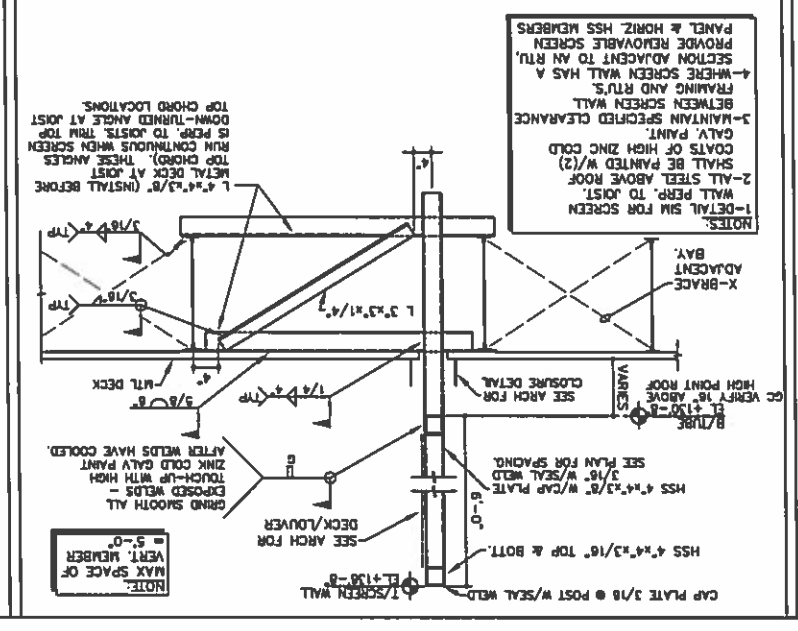


3 PLAN • ROOF DECK TRANSITION

N.T.S.

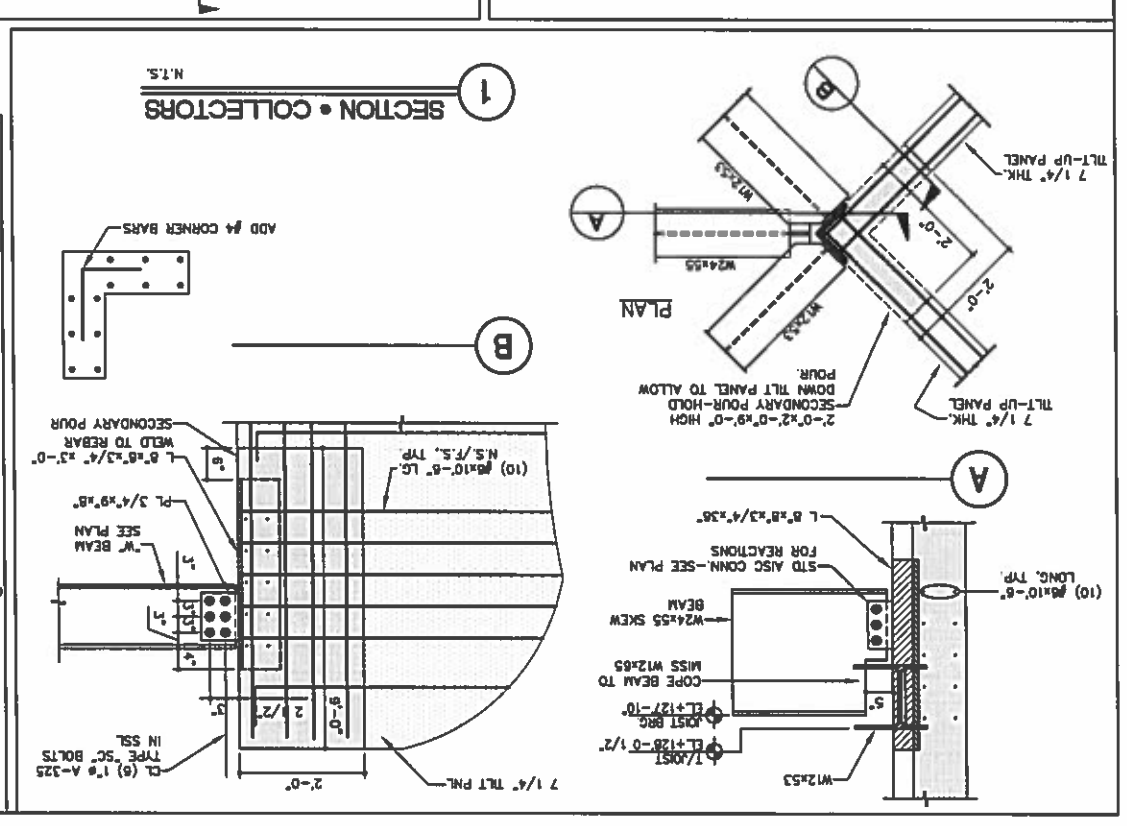


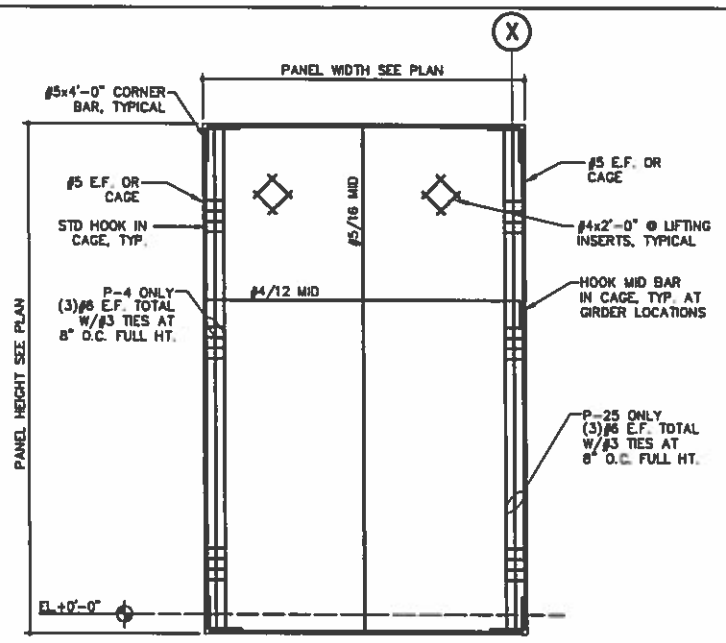
2 SECTION • SCREEN WALL



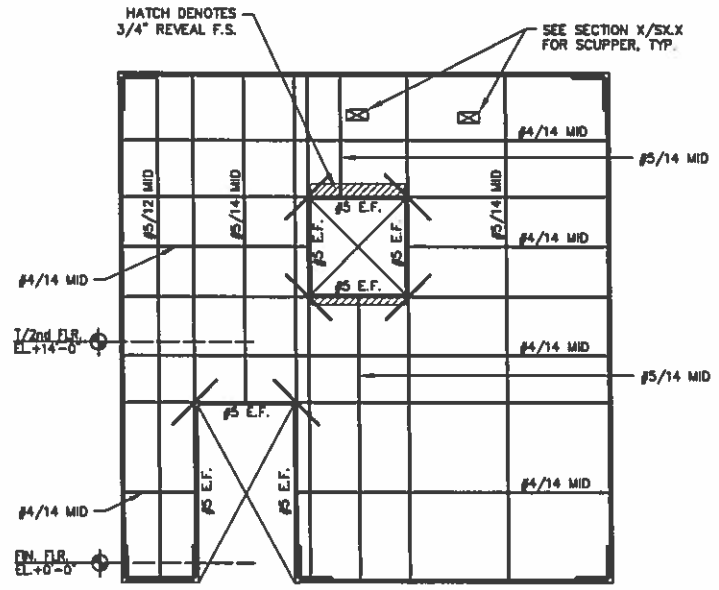
1 SECTION • COLLECTORS

N.T.S.

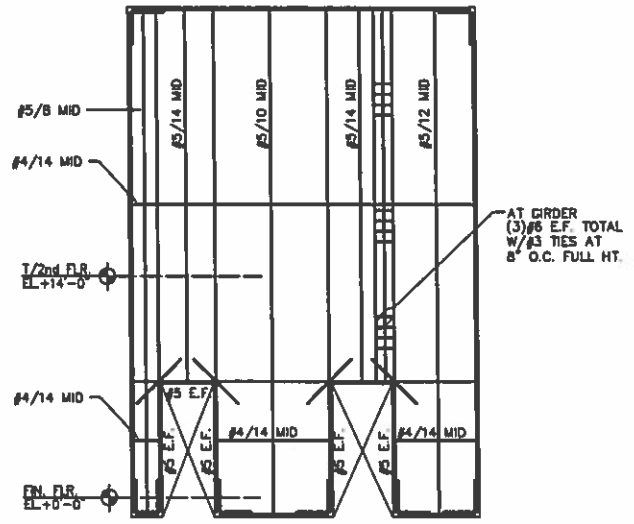




TYPE A-SOLID PANEL
7 1/4" THICK
PANELS: P-3, P-4, P-12, P-14, P-33, P-34, P-35



TYPE B-PANEL W/OPENINGS
8" THICK
PANELS: P-15



TYPE C-PANEL W/OPENINGS
8" THICK
PANELS: P-13

PROVIDE MINIMUM 3 CONNECTIONS BETWEEN PANELS AT INSIDE BUTT, OUTSIDE BUTT AND MITTERED CORNERS ONLY, U.N.O. ON PLAN. LOCATE CONNECTIONS AT 2'-0" ABOVE GROUND FLOOR, AND 1'-6" BELOW JST BRG (ROOF) OR T/BEAM (FLOORS) ELEVATIONS TYP. UND. RECESS & PATCH ALL PLATES 3/4" AT STAIR, ELEVATOR AND EXTERIOR CONNECTIONS ONLY U.N.O.

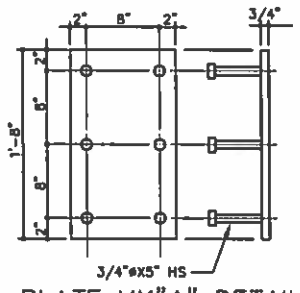


PLATE MK"A" DETAIL
SCALE: N.T.S.

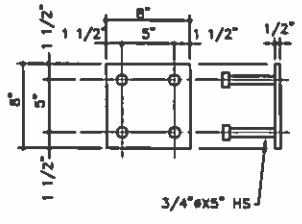


PLATE MK"B" DETAIL
SCALE: N.T.S.

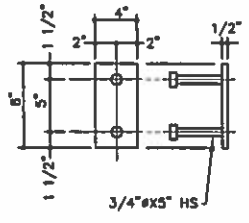


PLATE MK"C" DETAIL
SCALE: N.T.S.

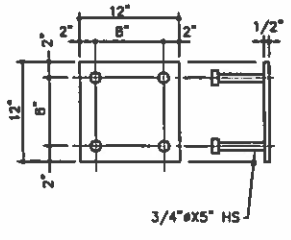


PLATE MK"D" DETAIL
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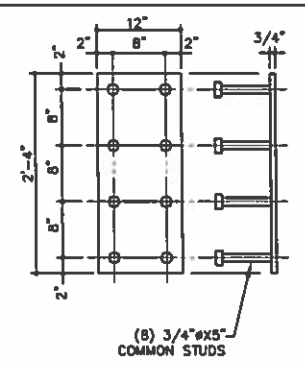


PLATE MK"G" DETAIL
SCALE: N.T.S.

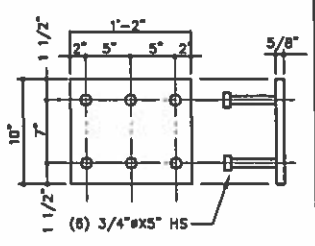
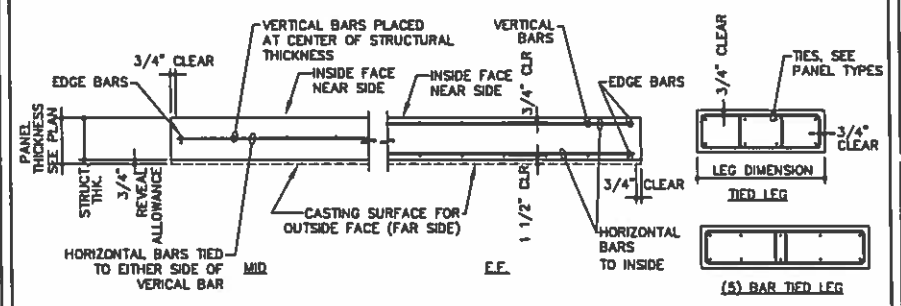
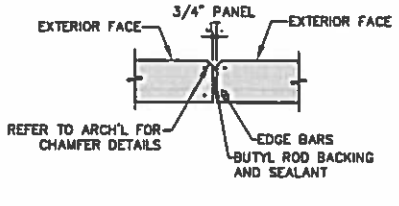


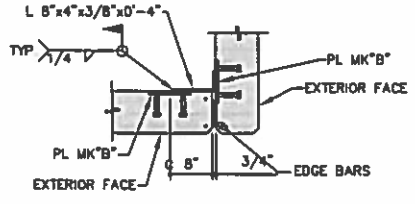
PLATE MK"LH" DETAIL
SCALE: N.T.S.



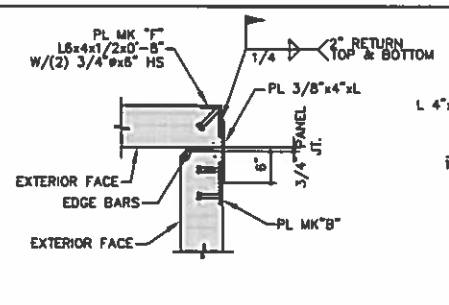
A REINFORCEMENT PLACEMENT DIAGRAMS
SCALE: N.T.S.



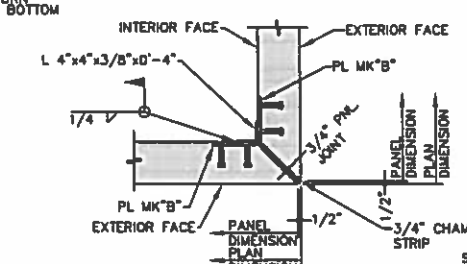
B TYPICAL PANEL JOINT
SCALE: N.T.S.



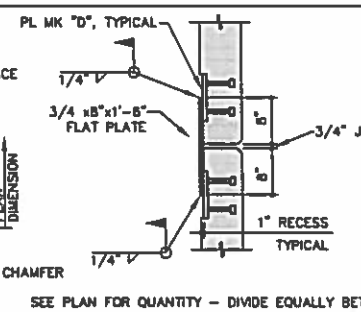
C OUTSIDE BUTT JOINT
SCALE: N.T.S.



D INSIDE BUTT JOINT
SCALE: N.T.S.

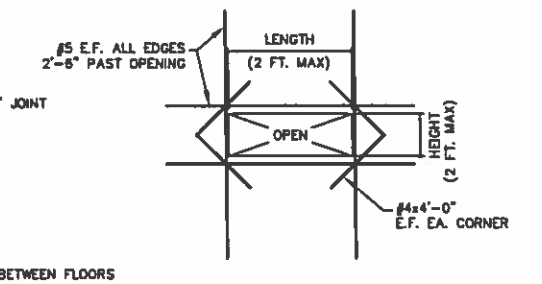


E MITER CORNER
SCALE: N.T.S.



SEE PLAN FOR QUANTITY – DIVIDE EQUALLY BETWEEN FLOORS

F PANEL - PANEL CONN.
SCALE: N.T.S.



G TYP. SCUPPER/SMALL MECH. DETAIL
SCALE: N.T.S.

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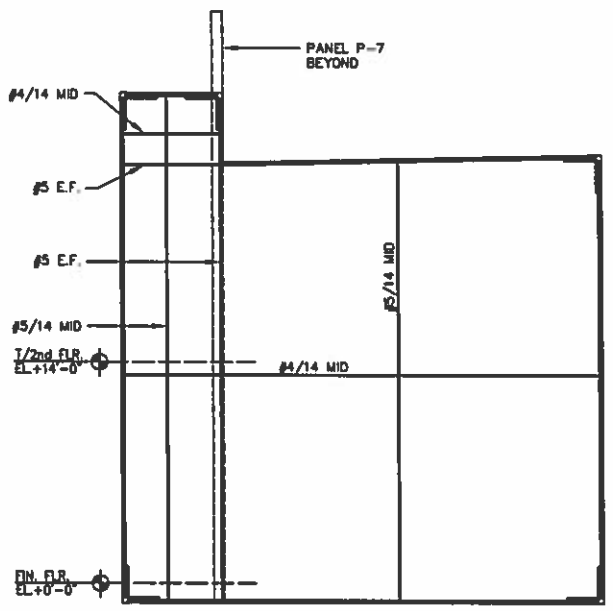
NEW CLASSROOM BUILDING
RIVIERA BEACH, FLORIDA
RIVIERA BEACH, FLORIDA
CONTRUCTION DOCUEMENTS

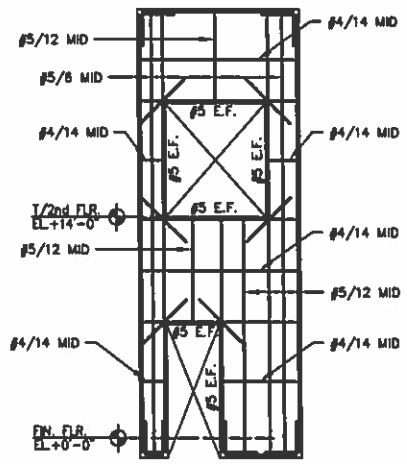
Comm. No.: JSG# 14101
Date: 09-24-2014
Drawn: E.B. / S.G.
Revised:

Title: PANEL REINFORCEMENT
Scale: 3/8"=1'-0"

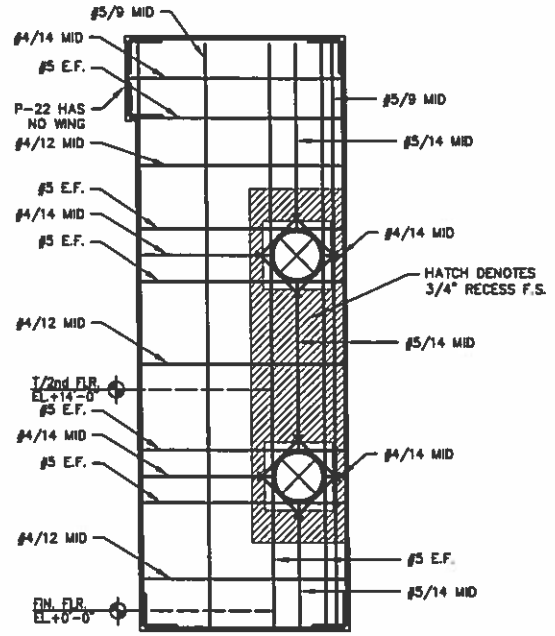
S5.0



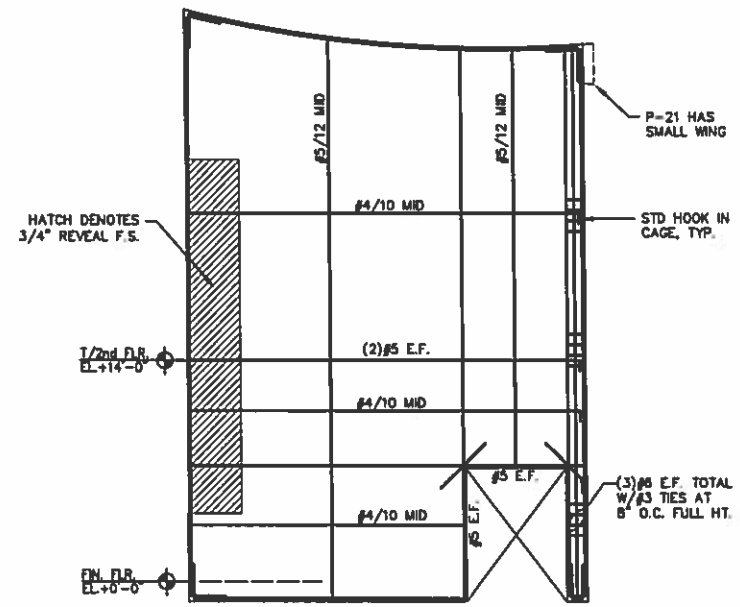
TYPE D-SOLID PANEL
8" THICK
PANELS: P-9



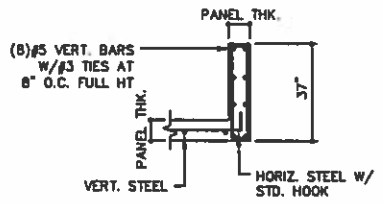
TYPE E-PANEL W/OPENINGS
8" THICK
PANELS: P-8



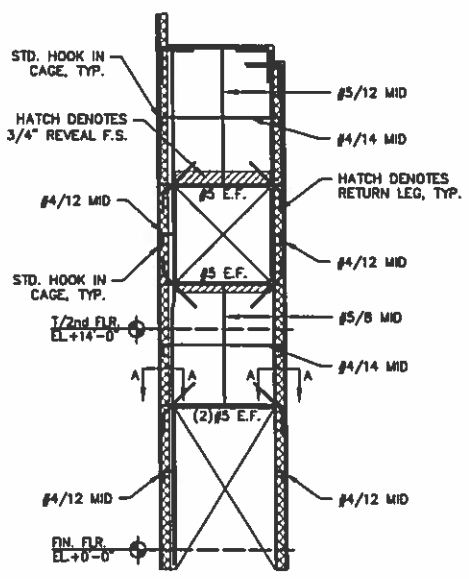
TYPE F-PANEL W/OPENINGS
8" THICK
PANELS: P-7
SIMILAR: P-22



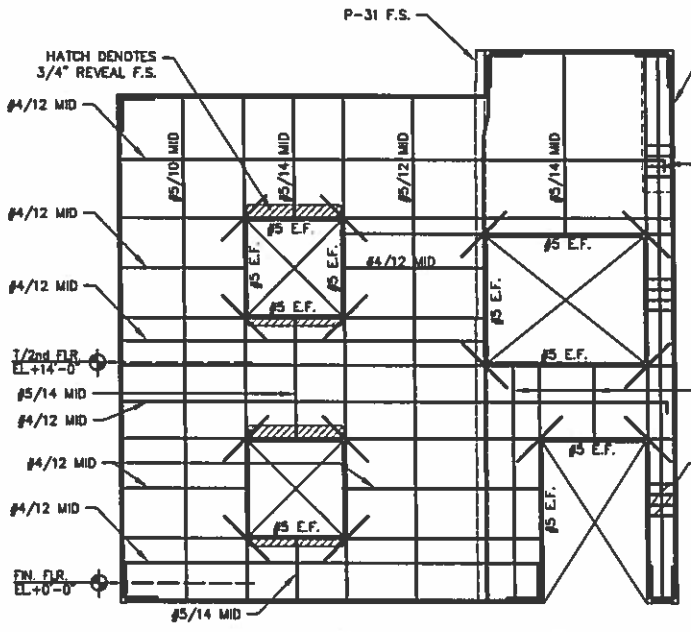
TYPE G-PANEL W/OPENING
8" THICK
PANELS: P-6
PANELS: P-21



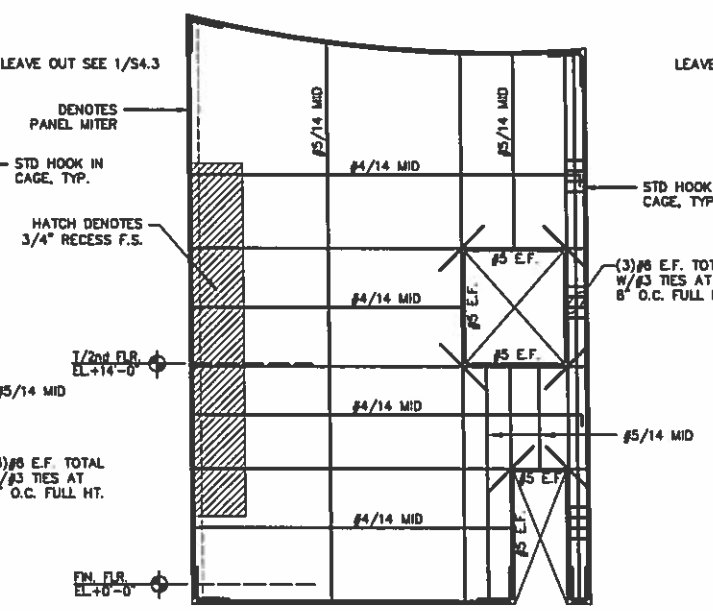
A-A RETURN LEG
N.T.S.



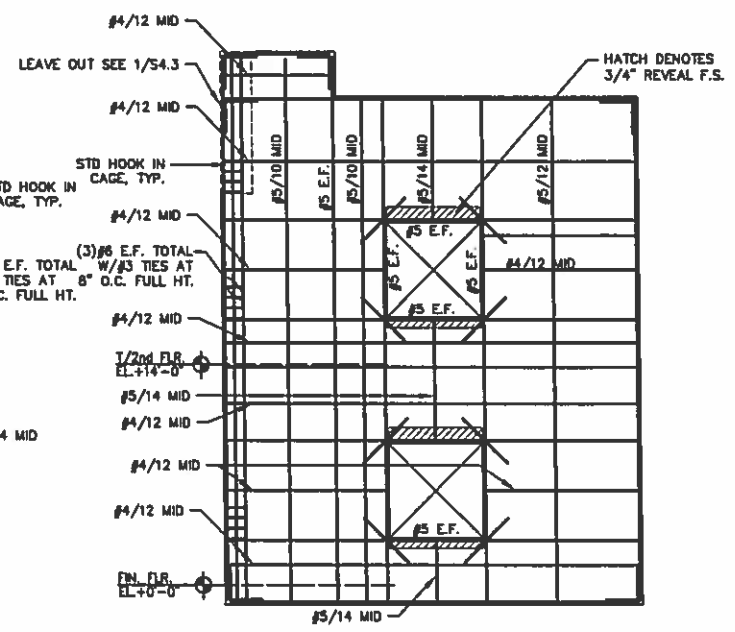
TYPE H-PANEL W/OPENINGS
8" THICK
PANELS: P-5



TYPE I-PANEL W/OPENINGS
8" THICK
PANELS: P-1



TYPE J-PANEL W/OPENINGS
8" THICK
PANELS: P-23



TYPE K-PANEL W/OPENINGS
8" THICK
PANELS: P-29

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Comm. No: JSG# 14101
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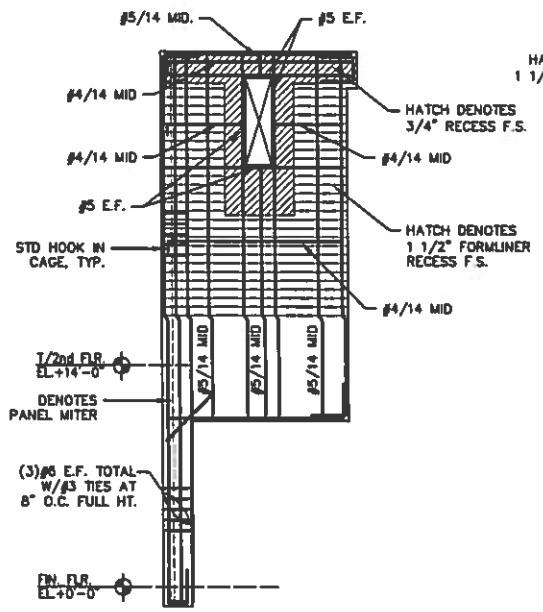
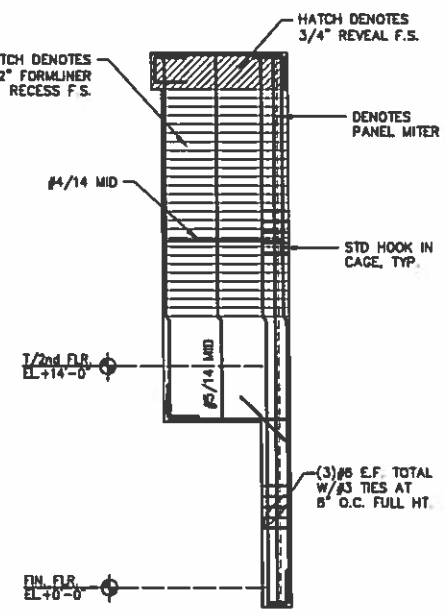
Drawn: E.B. / S.G.
Revised:

Title: PANEL REINFORCEMENT
Scale: 3/16"=1'-0"

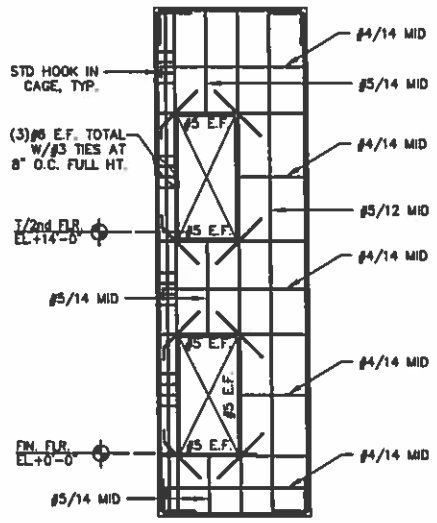
S5.1



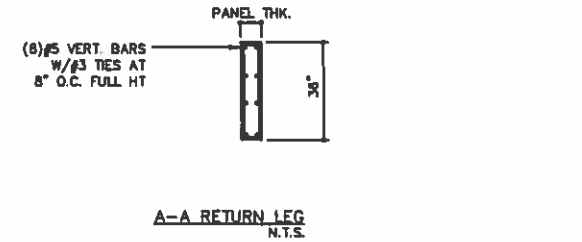
TYPE L-PANEL W/KNOTCH
8" THICK
PANELS: P-30



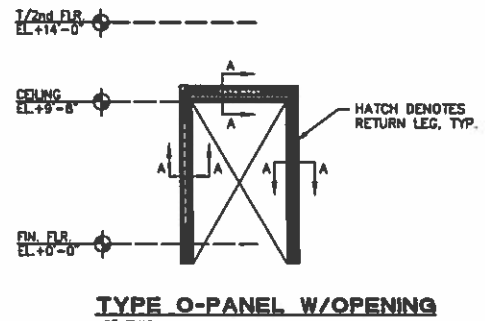
TYPE M-PANEL W/KNOTCH
8" THICK
PANELS: P-31



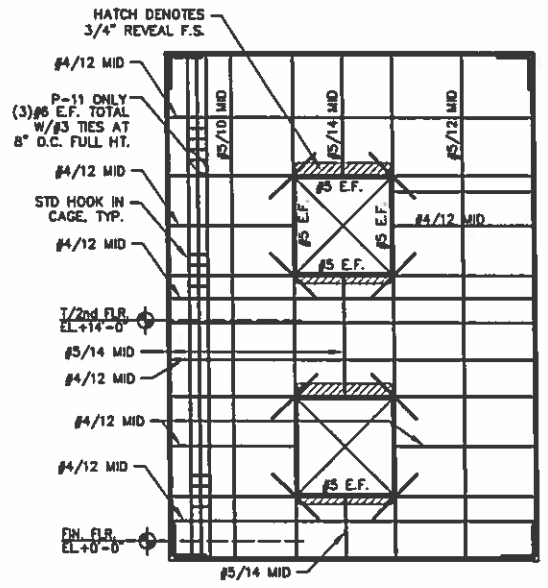
TYPE N-PANEL W/OPENINGS
8" THICK
PANELS: P-32



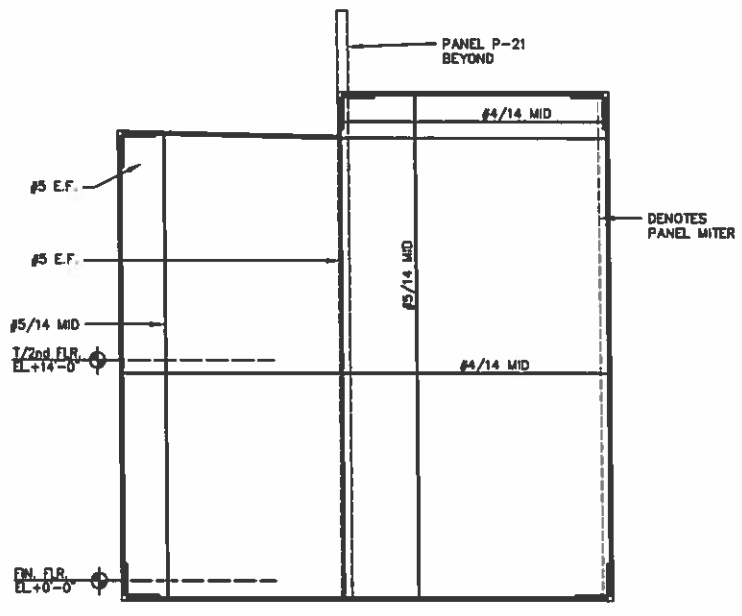
A-A RETURN LEG
N.T.S.



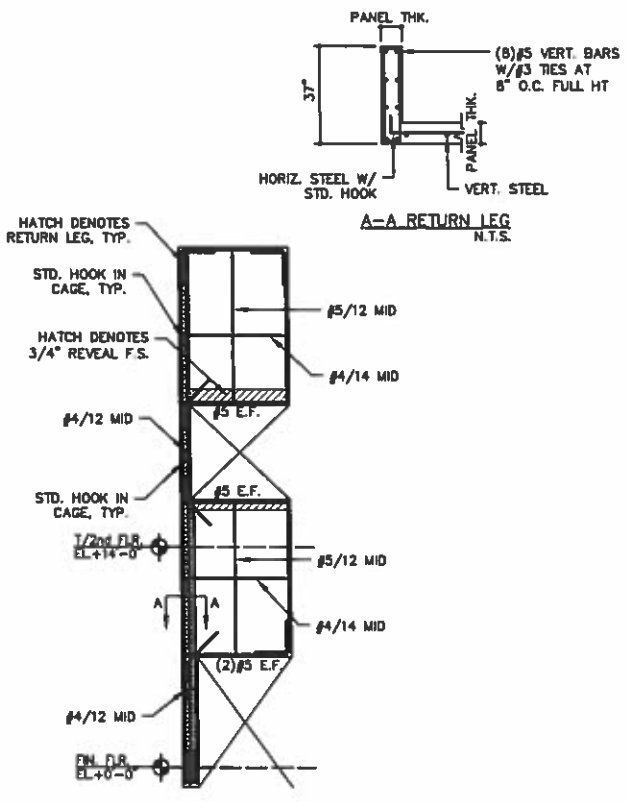
TYPE O-PANEL W/OPENING
8" THICK
PANELS: P-36



TYPE P-PANEL W/OPENINGS
8" THICK
PANELS: P-2, P-10, P-11, P-16, P-17, P-18
P-19, P-25, P-26, P-27, P-28



TYPE Q-SOLID PANEL
8" THICK
PANELS: P-20



A-A RETURN LEG
N.T.S.

TYPE R-PANEL W/RET. LEG
8" THICK
PANELS: P-24

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Revised:

Title:
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Scale: 3/16"=1'-0"

S5.2