



VICINITY MAP
SCALE 1" = 2000'

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING

410 Blackwell Street, Suite 10
Durham, NC 27701
(919) 474-2500

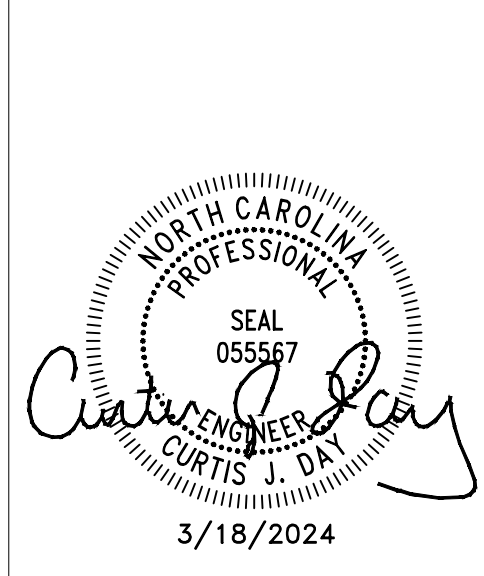
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NORTHCHASE BRANCH LIBRARY

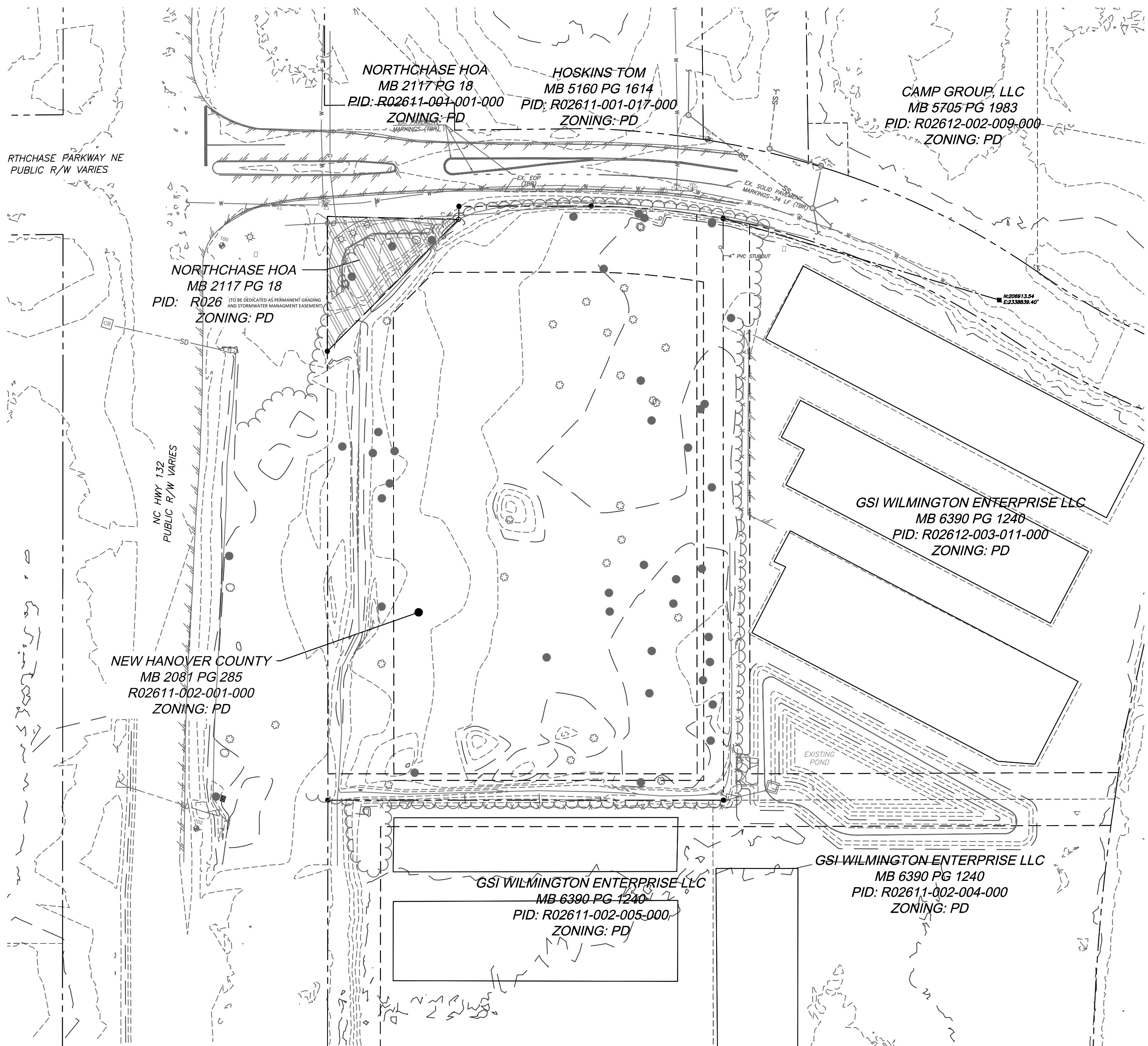
WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

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GENERAL NOTES

- THE CONTRACTOR SHALL NOTIFY NORTH CAROLINA 811 AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ANY WORK.
- ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH THE STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE EROSION CONTROL PLAN (ECP) AND THE STATE OF NORTH CAROLINA DEPARTMENT OF THE ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY DATED MARCH 24, 2023, COMPLETED BY CAPE FEAR ENGINEERING.
- DESTRUCTURES SHOWN ON THESE DRAWINGS ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. DAVENPORT DOES NOT WARRANT OR GUARANTEE THE CORRECTNESS OR THE COMPLETENESS OF THE INFORMATION GIVEN. THE CONTRACTOR MUST VERIFY ALL SUCH INFORMATION TO HIS OWN SATISFACTION. IN THE EVENT THAT INFORMATION IS IN CONFLICT WITH INFORMATION OBTAINED, THE CONTRACTOR SHALL IMMEDIATELY BRING IT TO THE ATTENTION OF THE ENGINEER PRIOR TO STARTING ANY WORK.
- CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES SHOWN BEFORE STARTING ANY WORK ON THESE PLANS. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR THE COST OF ANY AND ALL DAMAGES WHICH OCCUR AS A RESULT OF A FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES TO REMAIN.
- CONTRACTOR SHALL REMOVE DRIVEWAY ENTRANCES AND STRUCTURES TO LIMITS INDICATED ON THE DRAWING.
- CONTRACTOR SHALL NOT PROCEED WITH ANY DEMOLITION WORK UNTIL ALL UTILITY DISCONNECTIONS ARE COMPLETED AND VERIFIED IN WRITING.
- BURNING OF COMBUSTIBLE MATERIALS FROM DEMOLISHED STRUCTURES WILL NOT BE PERMITTED ON SITE.
- CONTRACTOR SHALL INSURE THAT ALL MATERIAL REMOVED FROM DEMOLISHED STRUCTURES ARE LEGALLY DISPOSED OF OFF-SITE.
- SEE EXISTING CONDITIONS AND DEMOLITION PLAN FOR APPROXIMATE UNITS OF PAVING REMOVAL.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO COMPLETE SUCH WORK.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION FROM THIS PLAN PRIOR TO ANY CHANGE BEING MADE. ANY DEVIATION FROM THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- SAW OUT EXISTING PAVEMENT AS NEEDED TO INSTALL NEW CONSTRUCTION.
- THE CONTRACTOR SHALL NOTE THAT IN CASE OF A DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
- TRENCH BACKFILL IN GRASS AREAS SHALL BE COMPACTED TO A MINIMUM 90% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH A.S.H.T.O. VERIFY DESIGNATION T-100, METHOD C. TRENCH BACKFILL IN STRUCTURAL AND PAVEMENT AREAS SHALL BE PLACED IN 6" TO 8" LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557). IN PAVED AREAS, FILL BELOW THE TOP 1/2 INCHES SHOULD BE COMPACTED TO 97%.
- CONTRACTOR SHALL ADJUST ALL EXISTING UTILITIES, I.E. MANHOLE FRAMES AND COVERS, ETC. WITHIN THE LIMITS OF THE CONTRACT TO PROPOSED GRADES AS REQUIRED.
- THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM STRUCTURES AT ALL TIMES.
- CONTRACTOR SHALL INSTALL SEDIMENT CONTROLS PRIOR TO BEGINNING ANY WORK AND MAINTAIN SEDIMENT CONTROLS THROUGHOUT THE ENTIRE DURATION OF DEMOLITION AND CONSTRUCTION ACTIVITIES.
- ALL DEMOLITION SHALL BE BACKFILLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A PORTION OF A UTILITY IS TO BE REMOVED THE CONTRACTOR SHALL TERMINATE AND CAP TO THE LIMITS INDICATED IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS.
- SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
- ANY STRUCTURE TO BE REMOVED SHALL REQUIRE A SEPARATE DEMOLITION PERMIT FROM THE BUILDING INSPECTIONS DEPARTMENT.
- MEANS OF EGRESS ILLUMINATION SHALL BE PROVIDED THROUGHOUT BUT DISCHARGES IN ACCORDANCE WITH NCEC.
- ALL EXISTING AND PROPOSED OVERHEAD POWER LINES ARE INDICATED ON THE SITE PLAN. IF NO OVERHEAD POWER LINES INDICATED, THERE SHALL BE NONE WITHIN 10 FEET OF THE PROPERTY LIMITS.



LOCATION MAP
SCALE: 1" = 60'

OWNER REPRESENTATIVE:
NEW HANOVER COUNTY - FACILITIES MANAGEMENT
200 DIVISION DRIVE
WILMINGTON, NC 28401
(910) 798-4338
CONTACT: KEVIN CAISON

OWNER:
NEW HANOVER COUNTY
230 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
(910) 798-7311

ENGINEER:
JOHN DAVENPORT ENGINEERING
119 BROOKSTOWN AVENUE, PH 1
WINSTON-SALEM, NC 27101
P: (336) 744-1636
CONTACT: CURTIS DAY, PE, LEED AP

SURVEYOR:
CAPE FEAR ENGINEERING
151 POOLE RD., SUITE 100
LELAND, NC 28541
P: (910) 563-1044
CONTACT: JASON W. FISHER, RLS

NOTES

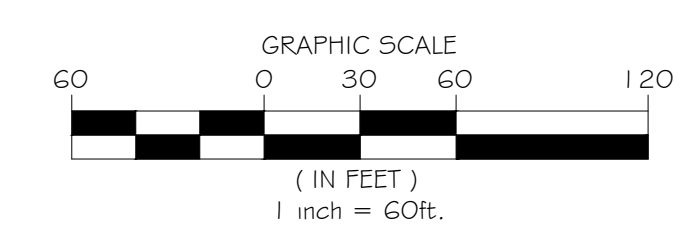
- CITY OF WILMINGTON STANDARDS, SPECIFICATIONS, AND STANDARD DETAILS DATED 2001 AND AS AMENDED ALONG WITH NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2024 AND AS AMENDED APPLY TO THESE PLANS.
- ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO THE FINAL CONNECTIONS OF SERVICES.
- ATTENTION IS DRAWN TO THE FACT THAT THE SCALE OF THESE DRAWINGS MAY HAVE BEEN DISTORTED DURING THE REPRODUCTION PROCESS.
- THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY JOHN DAVENPORT ENGINEERING, INC. SHALL BE WITHOUT LIABILITY TO JOHN DAVENPORT ENGINEERING, INC.

SITE DATA

- OWNER/APPLICANT: NEW HANOVER COUNTY FACILITIES MANAGEMENT
200 DIVISION DRIVE, WILMINGTON, NC 28401
P: (910) 798-4337
CONTACT: KEVIN CAISON
- ENGINEER: CURTIS DAY, P.E.
DAVENPORT ENGINEERING
119 BROOKSTOWN AVENUE
WINSTON-SALEM, NC 27101
(202) 240-9068
- PARCEL PIN ID.: RD2611-002-001-000
- PROPERTY REFERENCE: D.B. 2081, D.P. 0285
- ZONING: PD
- WATERSHED: PRINCE GEORGE CREEK
- LIMIT OF DISTURBANCE: 3.15 ACRES
- IMPERVIOUS SURFACE: 1.90 ACRES PROPOSED WITHIN LOD
- PROPOSED USE: 19,841 S.F. LIBRARY
- PARKING CALCULATIONS:
REQUIRED VEHICLE SPACES: 50 SPACES (2.5 SPACES PER 1,000 SF)
PROVIDED VEHICLE SPACES: 98 SPACES
REQUIRED ADA SPACES: 4 SPACES (INCLUDING 1 VAN)
PROVIDED ADA SPACES: 5 SPACES (INCLUDING 1 VAN)

LEGEND

EX PROPERTY CORNER	EX SANITARY SEWER	---
EX DRAINAGE MANHOLE	EX OVERHEAD ELECTRIC	---
EX CATCH BASIN	EX LIG ELECTRIC	---
EX STORM SEWER (AS NOTED)	EX FIBER OPTIC LINE	---
EX GRATE INLET	EX LIG TELEPHONE LINE	---
EX WATER METER	EX CONTOURS	1.0' - 2.0'
EX FIRE HYDRANT	EX FENCE	---
EX WATER VALVE	EX BOUNDARY LINE	---
EX WATER MANHOLE	SURVEYED RIGHT-OF-WAY LINE	---
EX WATER LINE	END OF INFORMATION	EOI
EX ELECTRIC MANHOLE	PIPE DIRECTION	PD
EX UTILITY POLE	LITTLE FREE LIBRARY	LFL
EX LIGHT POLE	CURB & GUTTER	C&G
EX ELECTRIC BOX	EDGE OF PAVEMENT	EOP
EX TRANSFORMER	STORM MANHOLE	STMH
EX TELEPHONE PEDESTAL	SANITARY SEWER MANHOLE	SSMH
EX SANITARY MANHOLE	REINFORCED CONCRETE PIPE	RCP
EX CLEANOUT	DUCTILE IRON PIPE	DIP
EX BOLLARD	TERRA COTTA PIPE	TCP
EX FLAGPOLE	POLYVINYL CHLORIDE PIPE	PVC
EX SIGN	CORRUGATED PLASTIC PIPE	CPP
EX TREE	VINYL FENCE	VF
EX BUSH	CHAIN LINK FENCE	CLF
EX LANDSCAPING	BOARD FENCE	BF
EX SIDEWALK	BARB WIRE	BW
SURVEY BENCHMARK		



ISSUE FOR

BID SET

ISSUE DATE
03/28/2024

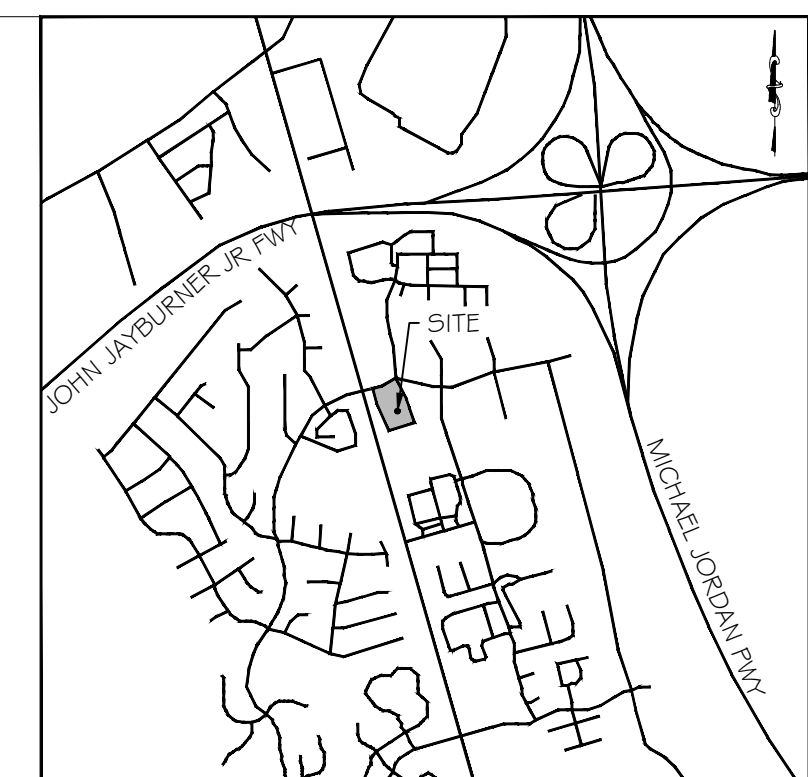
NO.	REASON	DATE
1	REVISED LOD	03/28/24

PROJECT TEAM

PRINCIPAL IN CHARGE	JD
PROJECT MANAGER	CD
DESIGN TEAM	GH
PROJECT NAME	NORTHCHASE BRANCH LIBRARY
PROJECT NO.	4400 NORTHCHASE PKWY NE WILMINGTON, NC 28405
SHEET NO.	514.18349.00
SHEET TITLE	TITLE SHEET

SHEET NUMBER

T-001



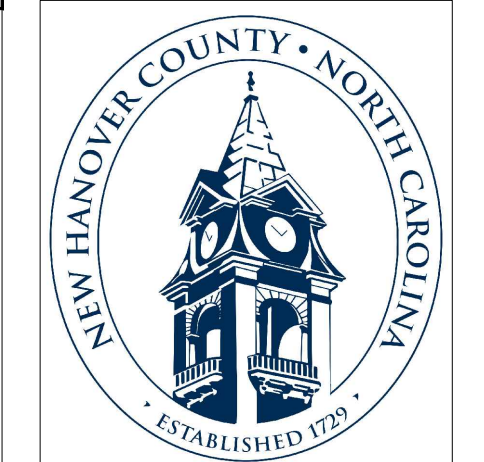
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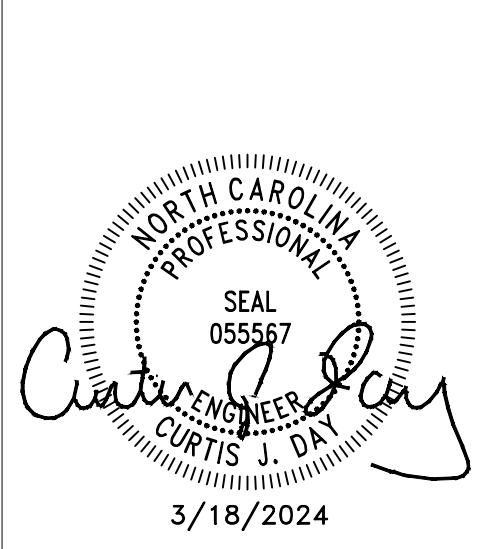
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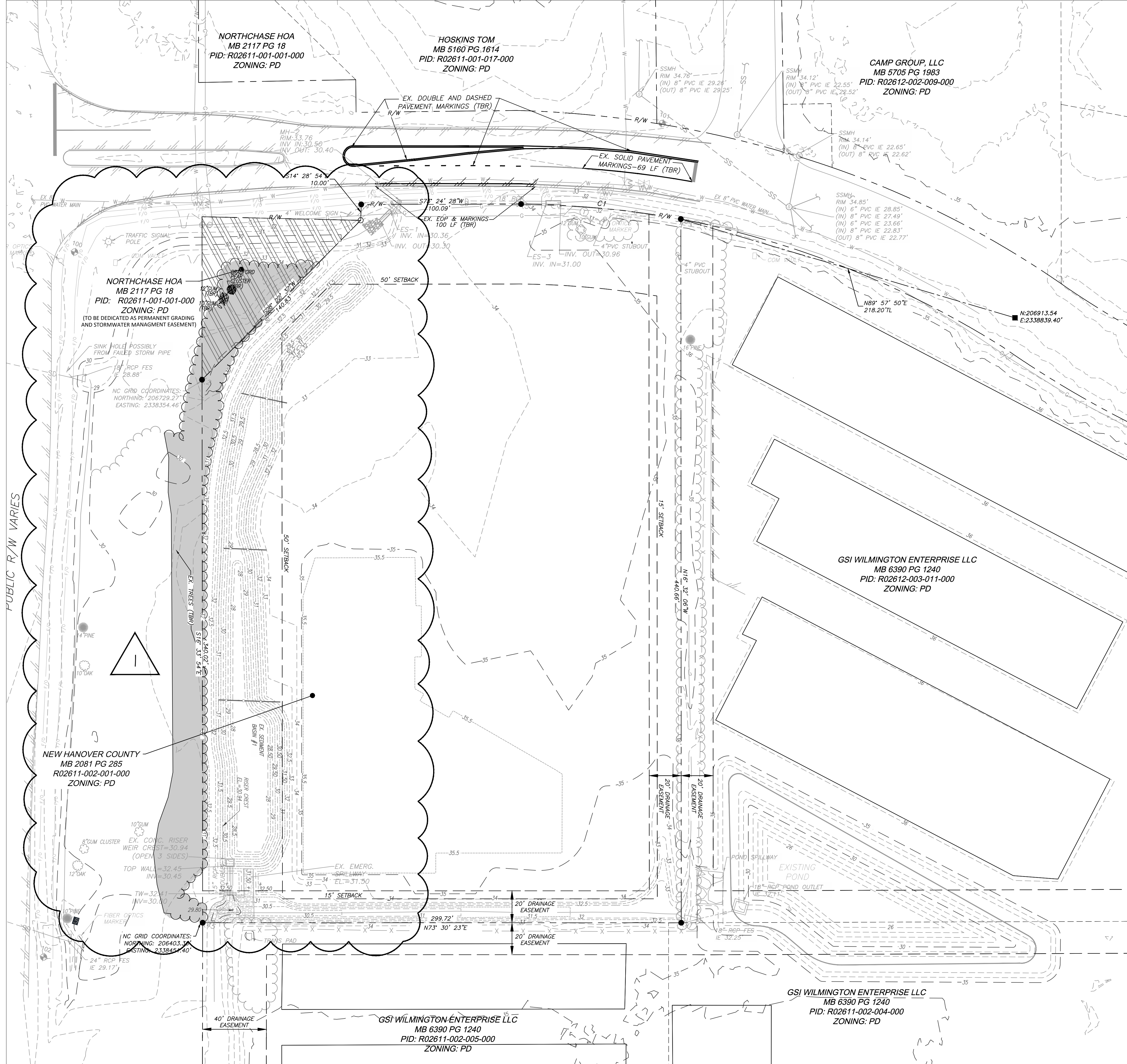
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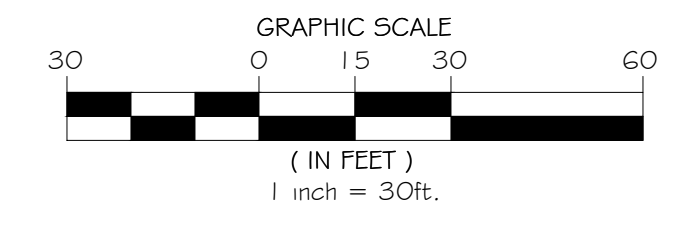
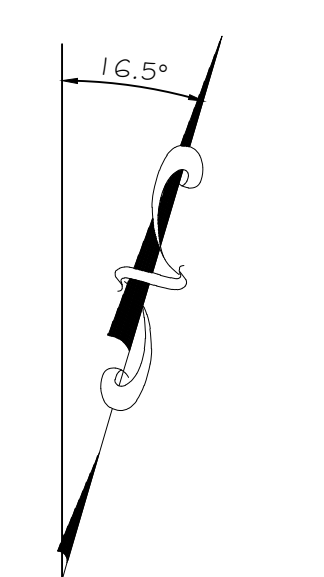
3/18/2024



LEGEND

EX. PROPERTY CORNER	○	EX SANITARY SEWER	—
EX DRAINAGE MANHOLE	⊙	EX OVERHEAD ELECTRIC	—
EX CATCH BASIN	⊞	EX UIG ELECTRIC	—
EX STORM SEWER (AS NOTED)	—	EX FIBER OPTIC LINE	—
EX GRATE INLET	⊞	EX UIG TELEPHONE LINE	—
EX WATER METER	⊞	EX CONTOURS	-1.0 -2.0
EX FIRE HYDRANT	⊞	EX FENCE	—
EX WATER VALVE	⊞	EX BOUNDARY LINE	—
EX WATER MANHOLE	⊞	SURVEYED RIGHT-OF-WAY LINE	—
EX WATER LINE	—	END OF INFORMATION	EOI
EX ELECTRIC MANHOLE	⊞	PIPE DIRECTION	PD
EX UTILITY POLE	⊞	LITTLE FREE LIBRARY	LFL
EX LIGHT POLE	⊞	CURB & GUTTER	C&G
EX ELECTRIC BOX	⊞	EDGE OF PAVEMENT	EOP
EX TRANSFORMER	⊞	STORM MANHOLE	STMH
EX TELEPHONE PEDESTAL	⊞	SANITARY SEWER MANHOLE	SSMH
EX SANITARY MANHOLE	⊞	REINFORCED CONCRETE PIPE	RCP
EX CLEANOUT	⊞	DUCTILE IRON PIPE	DIP
EX BOLLARD	⊞	TERRA COTTA PIPE	TCP
EX FLAGPOLE	⊞	POLYVINYL CHLORIDE PIPE	PVC
EX SIGN	⊞	CORRUGATED PLASTIC PIPE	CPP
EX TREE	⊞	VINYL FENCE	VF
EX BUSH	⊞	CHAIN LINK FENCE	CLF
EX LANDSCAPING	⊞	BOARD FENCE	BF
EX SIDEWALK	⊞	BARB WIRE	BW
SURVEY BENCHMARK	⊞		
PROPOSED GRADING & STORMWATER MANAGEMENT EASEMENT	⊞		

NOTE:
AN ADVANCE SITE PREP AND DEMOLITION PLAN WAS PREVIOUSLY SUBMITTED FOR THIS PROJECT, FOR THE CLEARING, MASS GRADING, PLACEMENT AND REMOVAL OF SURCHARGE AND ASSOCIATED EROSION AND SEDIMENT CONTROLS. THE EXISTING CONDITIONS SHOWN HEREON REFLECT THE CONDITIONS OF THE SITE AT THE COMPLETION OF THAT WORK.



ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

REVISIONS

NO.	REASON	DATE
1	REVISE EX. GRADING PER ADV SITE PLAN. SHOW ADDITIONAL TREES TO BE REMOVED FOR SWM.	03/28/24

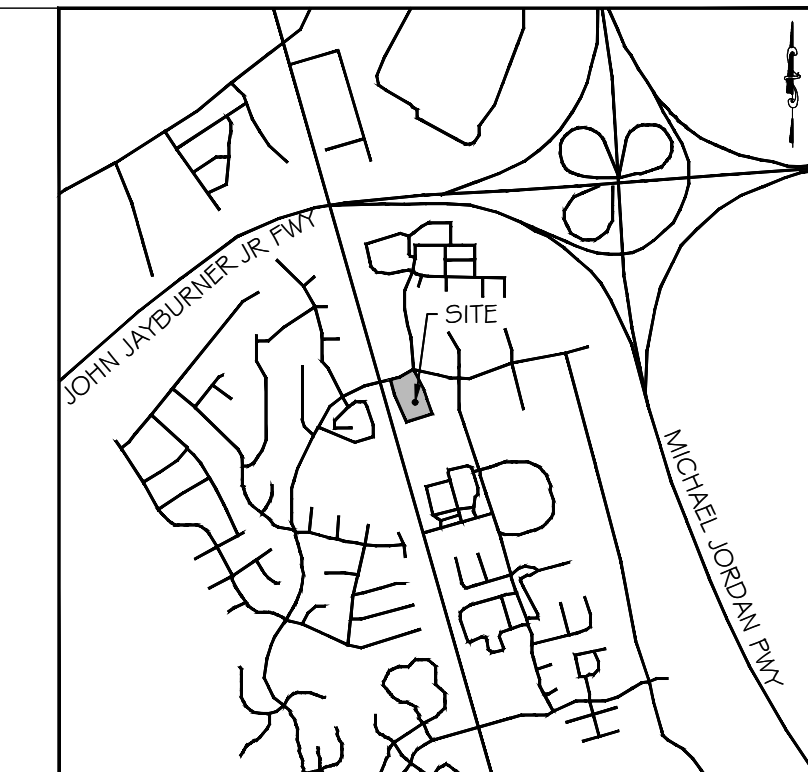
PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH
PREPARED NAME

NORTHCHASE BRANCH LIBRARY
4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET NUMBER
C-100

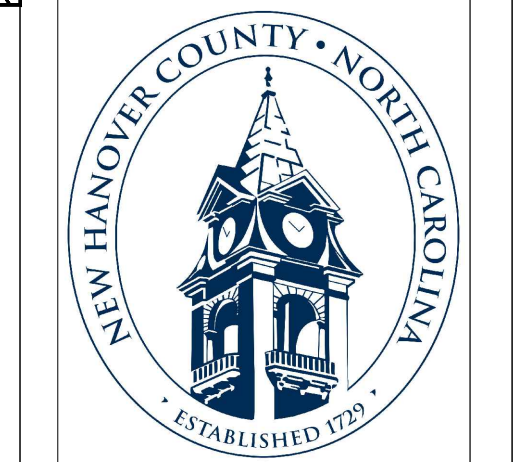


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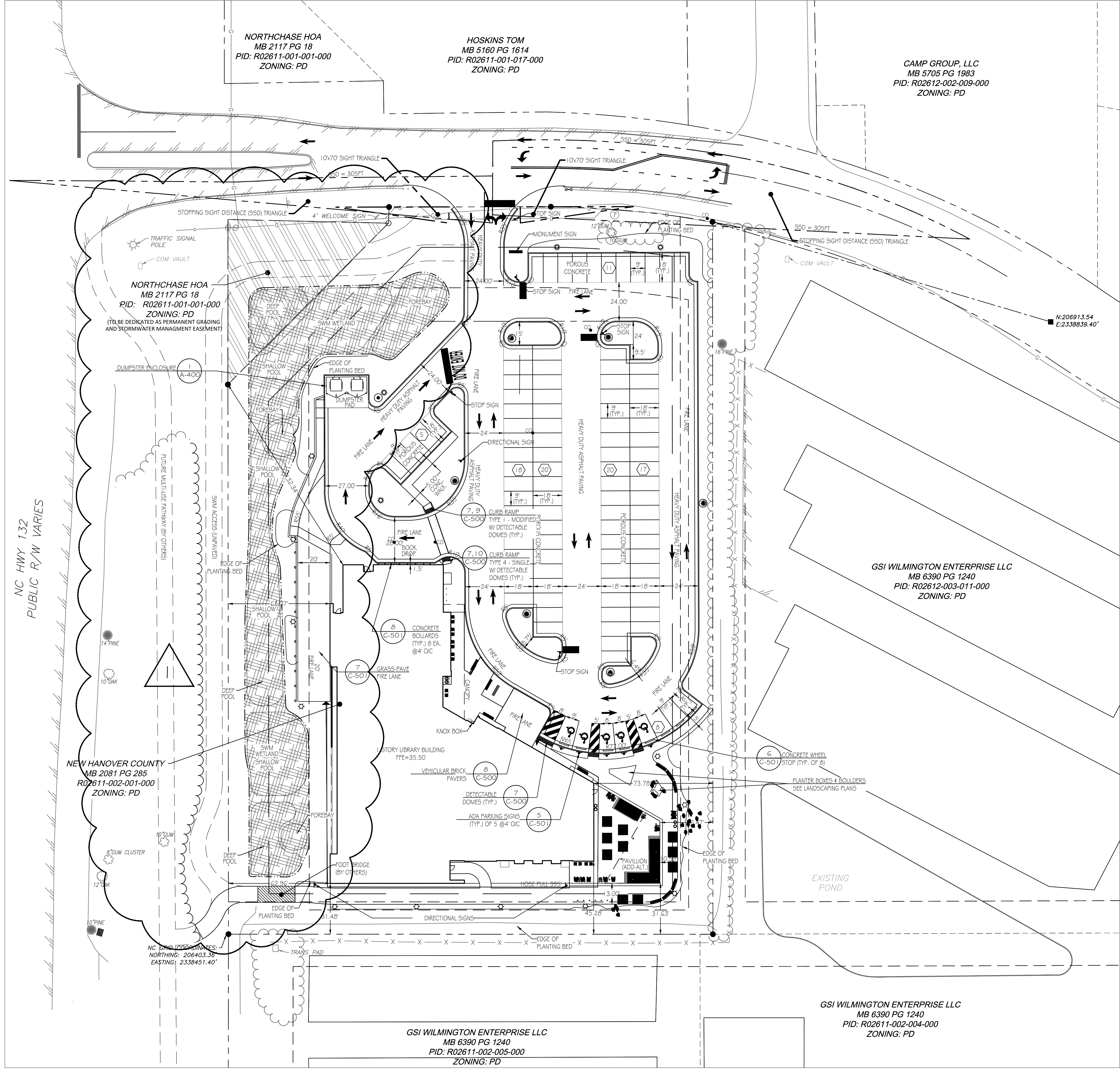
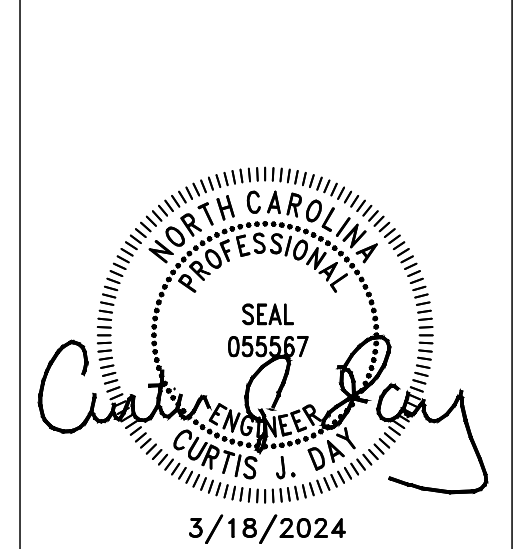
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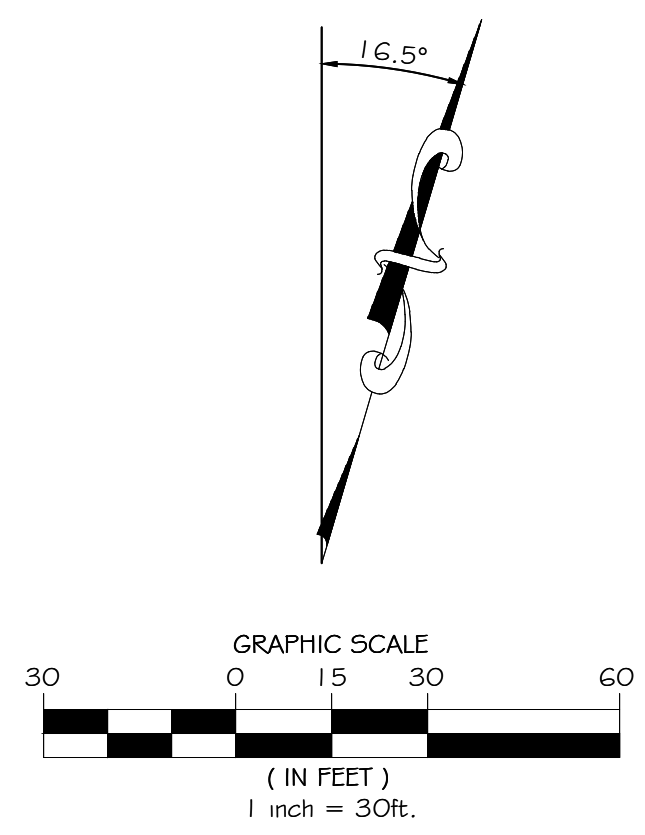


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NCBELS FIRM LICENSE NO. C-2522



LEGEND

EX. PROPERTY CORNER	EX SANITARY SEWER	EX OVERHEAD ELECTRIC
EX DRAINAGE MANHOLE	EX CATCH BASIN	EX LUG ELECTRIC
EX STORM SEWER (AS NOTED)	EX GRATE INLET	EX FIBER OPTIC LINE
EX WATER METER	EX FIRE HYDRANT	EX LUG TELEPHONE LINE
EX WATER VALVE	EX WATER VALVE	EX CONTOURS
EX WATER MANHOLE	EX WATER LINE	EX FENCE
EX ELECTRIC MANHOLE	EX UTILITY POLE	EX BOUNDARY LINE
EX LIGHT POLE	EX ELECTRIC BOX	SURVEYED RIGHT-OF-WAY LINE
EX TRANSFORMER	EX TELEPHONE PEDESTAL	END OF INFORMATION
EX SANITARY MANHOLE	EX CLEANOUT	PIPE DIRECTION
EX BOLLARD	EX BOLLARD	LITTLE FREE LIBRARY
EX FLAGPOLE	EX SIGN	CURB & GUTTER
EX TREE	EX BUSH	EDGE OF PAVEMENT
EX LANDSCAPING	EX SIDEWALK	STORM MANHOLE
SURVEY BENCHMARK	PROP. FIRE DEPT. ACCESS	SANITARY SEWER MANHOLE
PROP. FIRE DEPT. ACCESS	PROP. CONC. SIDEWALK	REINFORCED CONCRETE PIPE
PROP. REINFORCED CONC. PAVERS	PROP. HEAVY DUTY	DUCTILE IRON PIPE
PROP. PERMEABLE CONCRETE	PROP. LANDSCAPE PAVERS	TERRA COTTA PIPE
PROP. HEAVY DUTY ASPHALT	PROP. MILL & PAVE	POLYVINYL CHLORIDE PIPE
PROP. STORMWATER WETLAND	PROP. RIP-RAP	CORRUGATED PLASTIC PIPE
PROP. STORM DRAIN	PROP. SMALL SWALE	VINYL FENCE
PROP. STORM MANHOLE	PROP. SANITARY LINE	CHAIN LINK FENCE
PROP. SANITARY MANHOLE	PROP. CLEANOUT	BOARD FENCE
PROP. CLEANOUT	PROP. SANITARY MANHOLE	BARB WIRE
PROP. REDUCER	PROP. REDUCER	PROPERTY LINE
PARKING SPACE COUNT		PROP. POWER LINE
		RELOCATED PARKING PAY STATION
		PROPOSED STREET LIGHT
		RELOCATED POWER POLE
		PROPOSED SIGN
		PROP. WATER METER
		PROP. DOM. WATER
		PROP. FIRE
		BACK FLOW PREVENTER
		REDUCED PRESSURE
		DETECTOR ASSEMBLY
		PROP. WATER VALVE
		PROP. FIRE HYDRANT
		PROP. TEE FITTING
		PROP. BEND FITTING
		PROP. REDUCER



BID SET

ISSUE DATE: 03/28/2024

NO.	REASON	DATE
1	REVISE TO SHOW DRAFTED POND, SWM ACCESS AND SWM EASEMENT	03/28/24

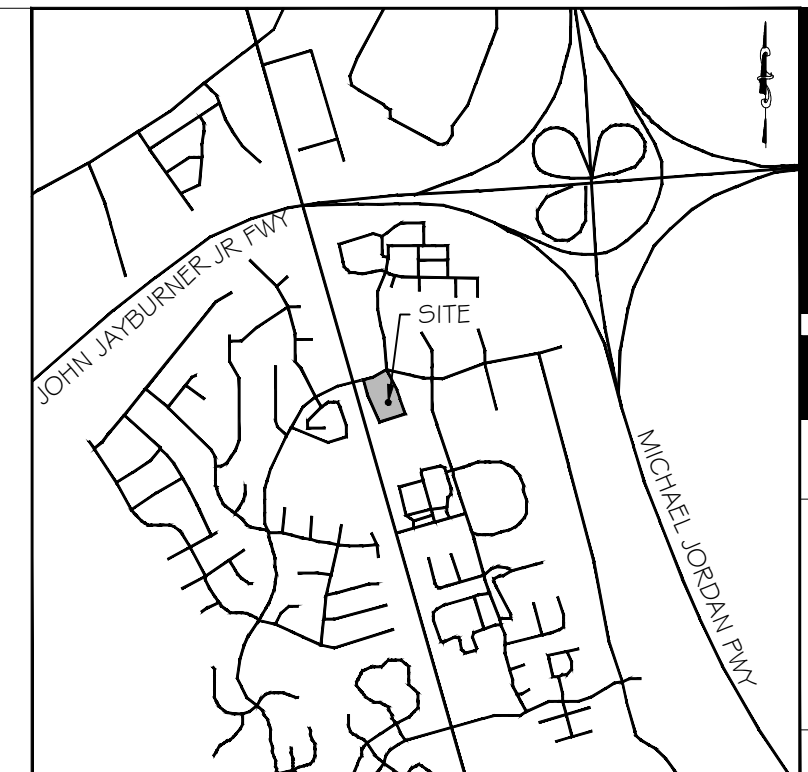
PROJECT TEAM
PRINCIPAL IN CHARGE: JD
PROJECT MANAGER: CD
DESIGN TEAM: GH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY

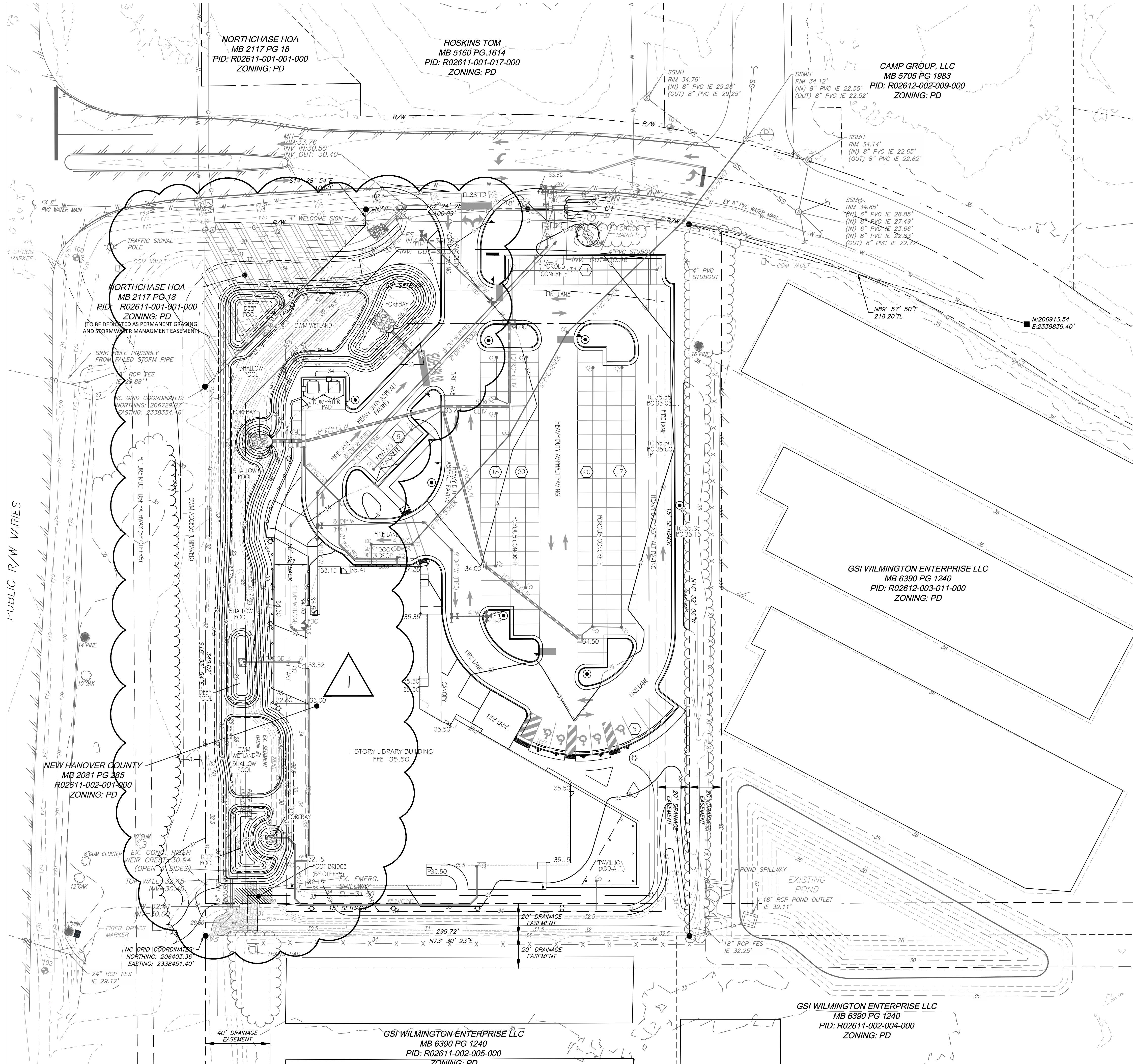
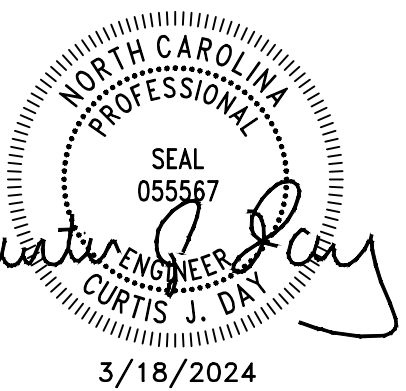
PROJECT NO.
514.18349.00

SHEET TITLE
SITE LAYOUT

SHEET NUMBER
C-200



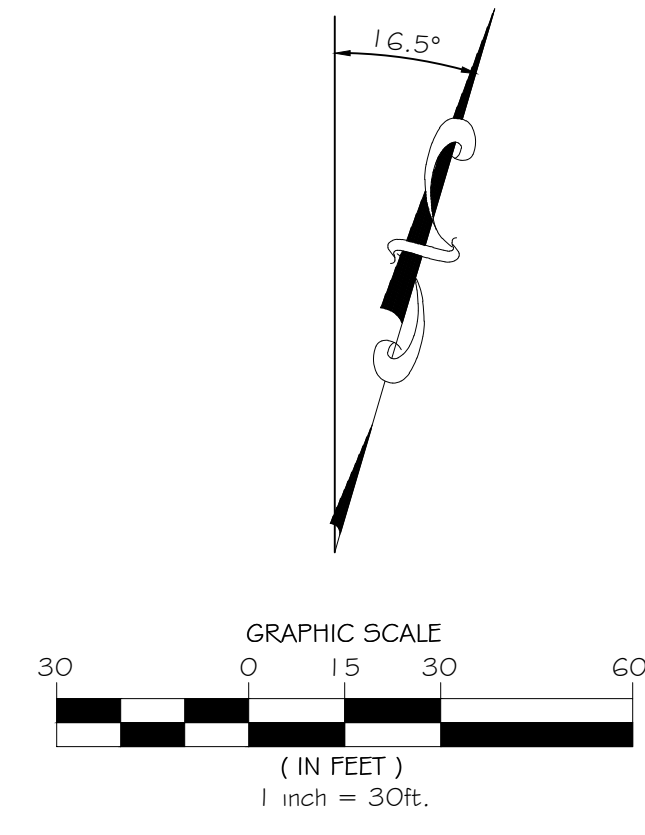
VICINITY MAP
SCALE 1" = 2000'



LEGEND

EX. PROPERTY CORNER	EX SANITARY SEWER	EX OVERHEAD ELECTRIC
EX DRAINAGE MANHOLE	EX CATCH BASIN	EX UG ELECTRIC
EX STORM SEWER (AS NOTED)	EX GRATE INLET	EX FIBER OPTIC LINE
EX WATER METER	EX FIRE HYDRANT	EX UG TELEPHONE LINE
EX WATER VALVE	EX WATER MANHOLE	EX CONTOURS
EX WATER LINE	EX ELECTRIC MANHOLE	EX FENCE
EX TRANSFORMER	EX UTILITY POLE	EX BOUNDARY LINE
EX TELEPHONE PEDESTAL	EX LIGHT POLE	SURVEYED RIGHT-OF-WAY LINE
EX SANITARY MANHOLE	EX ELECTRIC BOX	END OF INFORMATION
EX CLEANOUT	EX TRANSFORMER	PIPE DIRECTION
EX BOLLARD	EX TELEPHONE PEDESTAL	LITTLE FREE LIBRARY
EX SIGN	EX SANITARY MANHOLE	CURB & GUTTER
EX TREE	EX CLEANOUT	EDGE OF PAVEMENT
EX BUSH	EX BOLLARD	STORM MANHOLE
EX LANDSCAPING	EX FLAGPOLE	SANITARY SEWER MANHOLE
EX SIDEWALK	EX SIGN	REINFORCED CONCRETE PIPE
SURVEY BENCHMARK	EX TREE	DUCTILE IRON PIPE
PROP. FIRE DEPT. ACCESS	EX BUSH	TERRA COTTA PIPE
GRASS PAVE SYSTEM	EX LANDSCAPING	POLYVINYL CHLORIDE PIPE
PROP. FIRE DEPT. ACCESS	EX SIDEWALK	CORRUGATED PLASTIC PIPE
REINFORCED CONC. PAVERS	PROP. FIRE DEPT. ACCESS	VINYL FENCE
PROP. CONC. SIDEWALK	GRASS PAVE SYSTEM	CHAIN LINK FENCE
PROP. HEAVY DUTY REINFORCED CONCRETE	PROP. FIRE DEPT. ACCESS	BOARD FENCE
PROP. PERMEABLE CONCRETE	REINFORCED CONC. PAVERS	BARB WIRE
PROP. HEAVY DUTY ASPHALT	PROP. CONC. SIDEWALK	PROPERTY LINE
PROP. LANDSCAPE PAVERS	PROP. HEAVY DUTY REINFORCED CONCRETE	PROP. POWER LINE
PROP. MILL & PAVE	PROP. PERMEABLE CONCRETE	RELOCATED PARKING PAY STATION
PROP. STORMWATER WETLAND	PROP. HEAVY DUTY ASPHALT	PROPOSED STREET LIGHT
PROP. RIP-RAP	PROP. LANDSCAPE PAVERS	RELOCATED POWER POLE
PROP. SMALL SWALE	PROP. MILL & PAVE	PROPOSED SIGN
PROP. STORM DRAIN	PROP. STORMWATER WETLAND	PROP. WATER METER
PROP. STORM MANHOLE	PROP. RIP-RAP	PROP. DOM. WATER
PROP. SANITARY LINE	PROP. SMALL SWALE	PROP. FIRE
PROP. SANITARY MANHOLE	PROP. STORM DRAIN	BACK FLOW PREVENTER
PROP. CLEANOUT	PROP. STORM MANHOLE	REDUCED PRESSURE DETECTOR ASSEMBLY
PROPOSED GRADING & STORMWATER MANAGEMENT EASEMENT	PROP. SANITARY LINE	PROP. WATER VALVE
	PROP. SANITARY MANHOLE	PROP. FIRE HYDRANT
	PROP. CLEANOUT	PROP. TEE FITTING
		PROP. BEND FITTING
		PROP. REDUCER
		PARKING SPACE COUNT

NOTE: SEE SHEET C-201A FOR ADDITIONAL SPOT SHOT ELEVATIONS



BID SET

ISSUE DATE
03/28/2024

REVISIONS

NO.	REASON	DATE
1	REVISED TO SHOW EXPANDED POND, SWM ACCESS AND SWM EASEMENT. REVISED ES-1 & ES-3	03/28/24

PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH

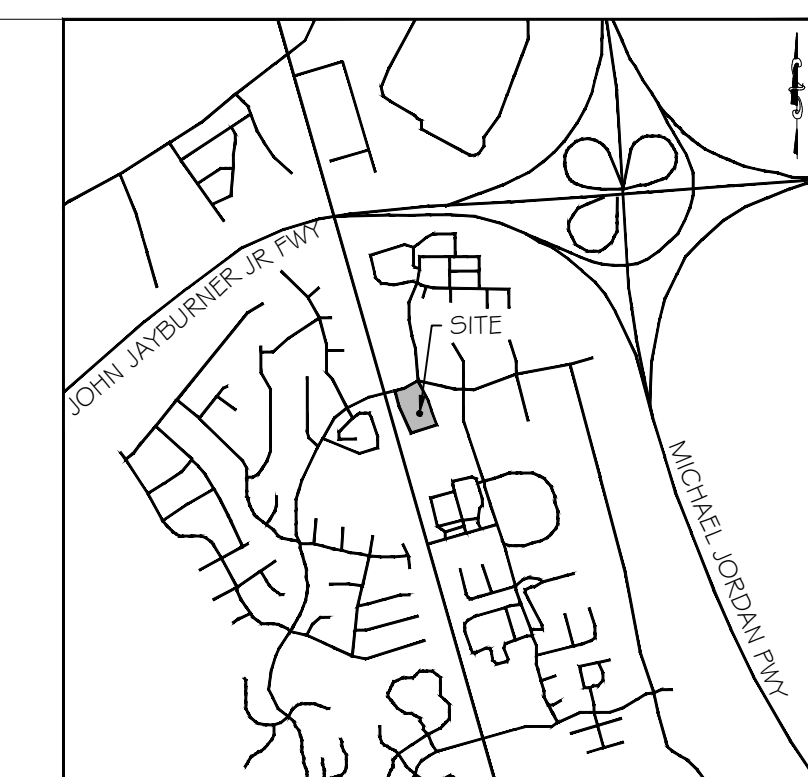
PROJECT NAME
NORTHCHASE BRANCH LIBRARY

4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
GRADING PLAN

SHEET NUMBER
C-201



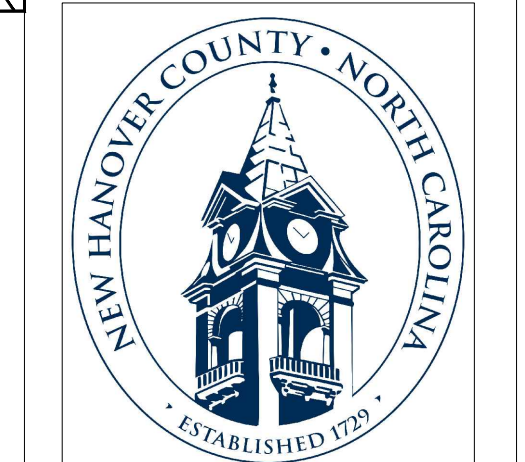
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(919) 274-2560

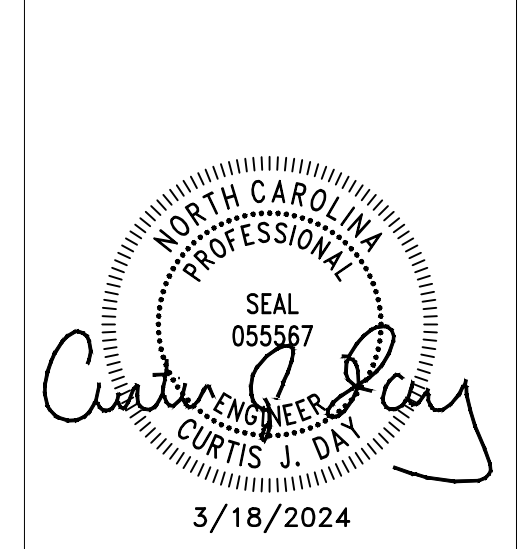
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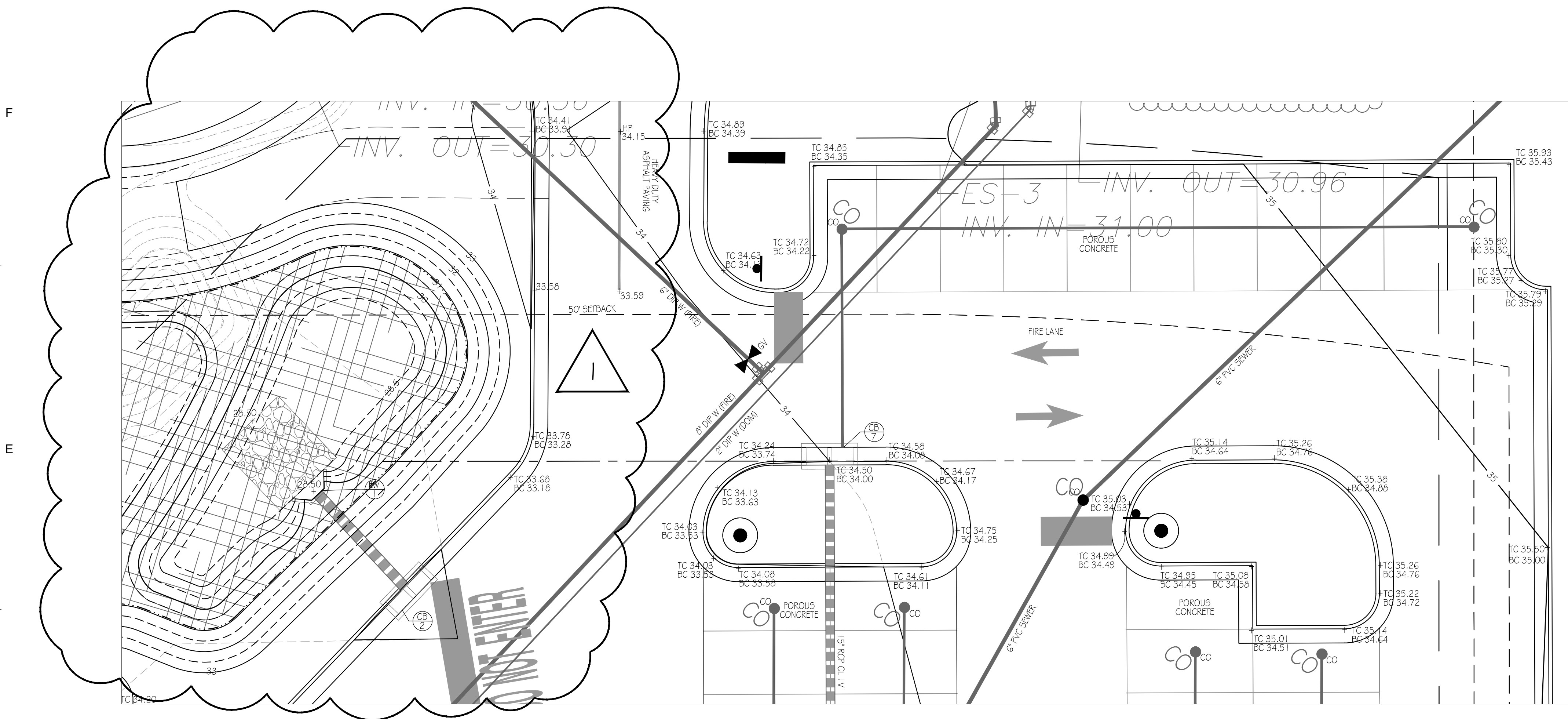
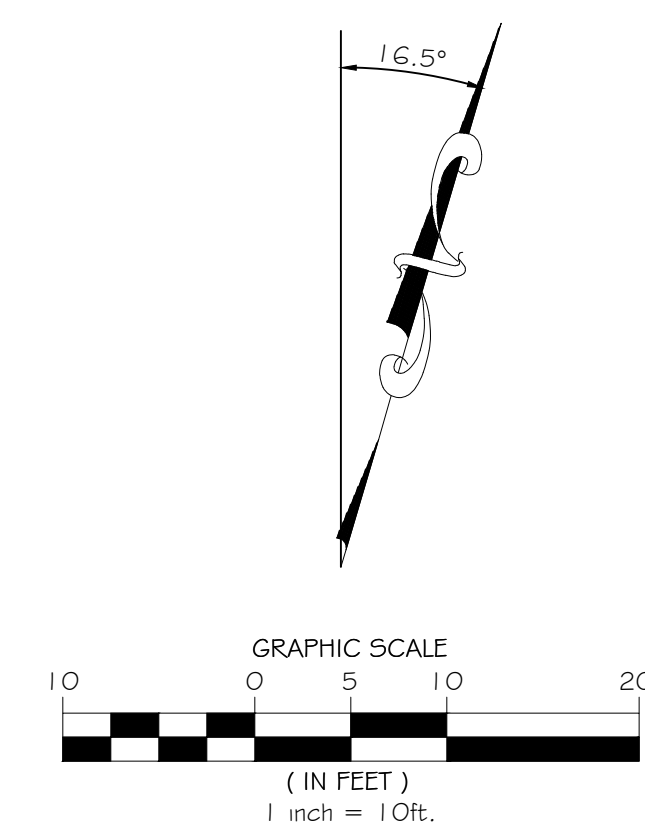


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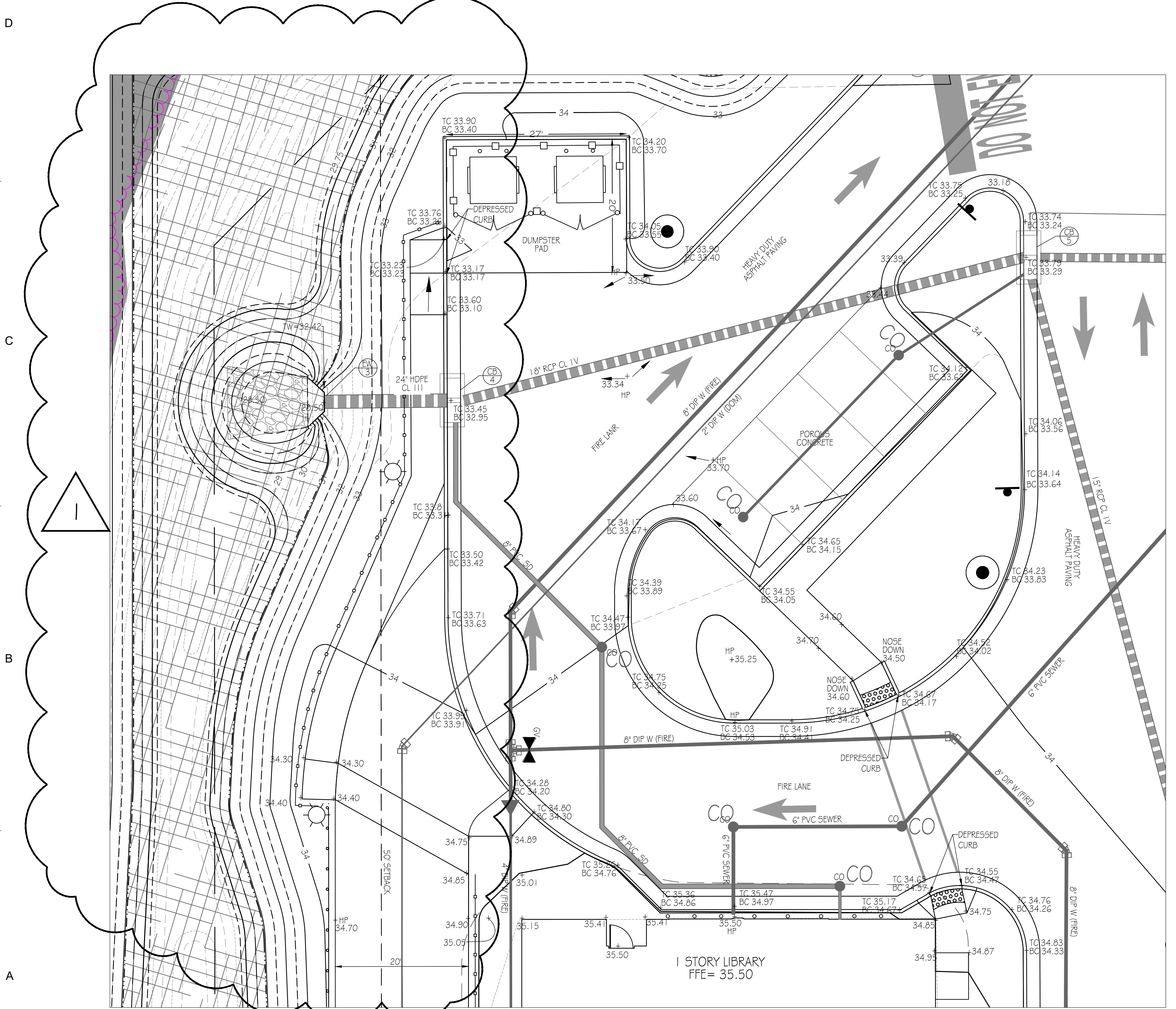


LEGEND

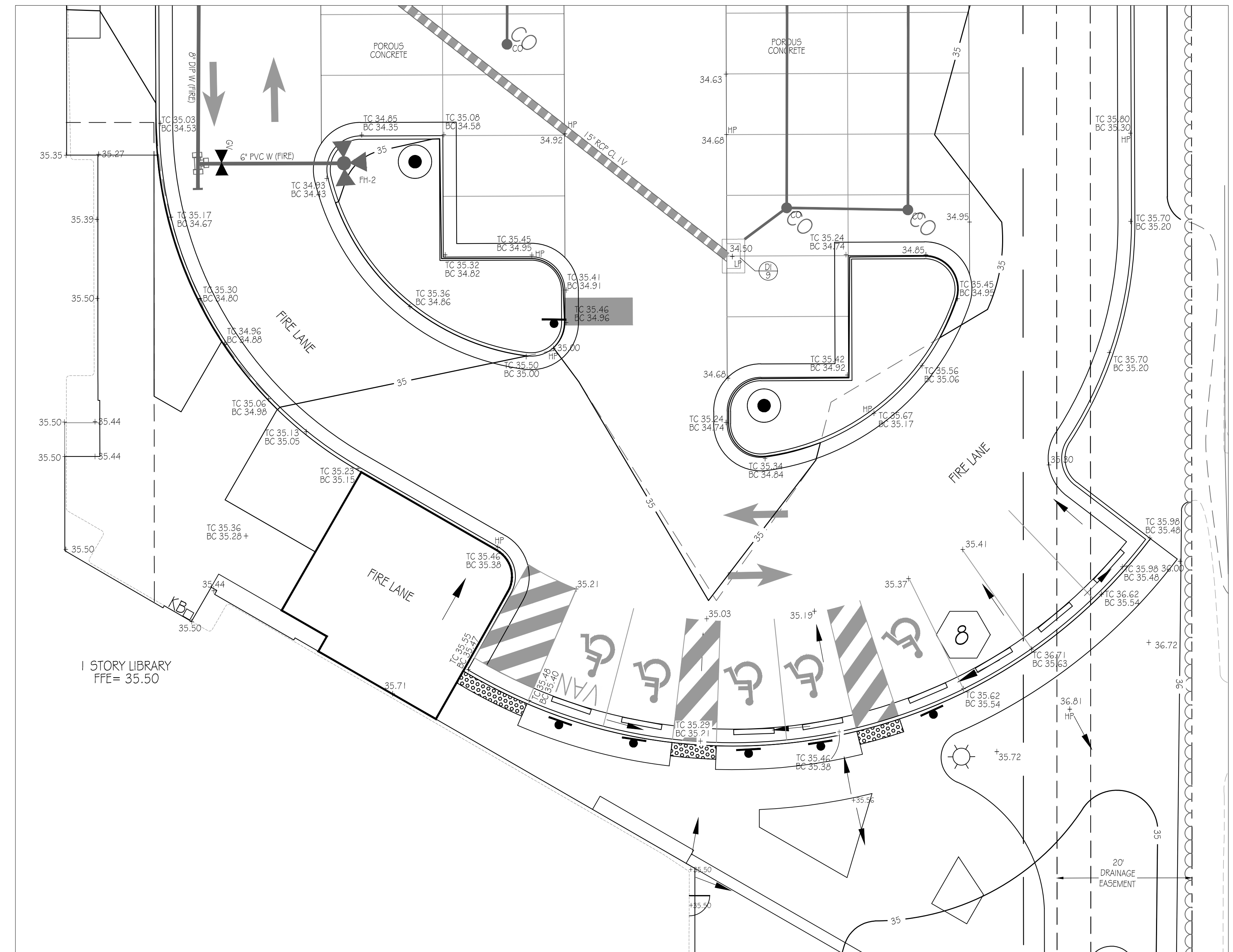
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|---------------------|-------------------|---------------------------|----------------|---------------------|----------------------|----------------|------------------|------------------|-------------------------------|--------------------|----------------|-----------------------|---------------------|------------------|---------------|--------------------------|-------------------|------------------|-------------------------|-------------------------|-------------|------------------|---|---|----------------------|--------------------------------------|-------------------------------|--------------------------|------------------------|-------------------|--------------------------|------------------|-------------------|---------------------|------------------------------------|---------------------|------------------------|-------------------|---|---------------|---------------------|
| EX PROPERTY CORNER | EX SANITARY SEWER | EX OVERHEAD ELECTRIC | EX UG ELECTRIC | EX FIBER OPTIC LINE | EX UG TELEPHONE LINE | EX CONTOURS | EX FENCE | EX BOUNDARY LINE | EX SURVEYED RIGHT-OF-WAY LINE | END OF INFORMATION | PIPE DIRECTION | LITTLE FREE LIBRARY | CURB & GUTTER | EDGE OF PAVEMENT | STORM MANHOLE | REINFORCED CONCRETE PIPE | DUCTILE IRON PIPE | TERRA COTTA PIPE | POLYVINYL CHLORIDE PIPE | CORRUGATED PLASTIC PIPE | VINYL FENCE | CHAIN LINK FENCE | BOARD FENCE | BARB WIRE | PROPERTY LINE | PROP. POWER LINE | RELOCATED PARKING PAY STATION | PROPOSED STREET LIGHT | RELOCATED POWER POLE | PROPOSED SIGN | PROP. WATER METER | PROP. DOM. WATER | PROP. FIRE | BACK FLOW PREVENTER | REDUCED PRESSURE DETECTOR ASSEMBLY | PROP. WATER VALVE | PROP. FIRE HYDRANT | PROP. TEE FITTING | PROP. BEND FITTING | PROP. REDUCER | PARKING SPACE COUNT |
| EX DRAINAGE MANHOLE | EX CATCH BASIN | EX STORM SEWER (AS NOTED) | EX GRATE INLET | EX WATER METER | EX FIRE HYDRANT | EX WATER VALVE | EX WATER MANHOLE | EX UTILITY POLE | EX LIGHT POLE | EX ELECTRIC BOX | EX TRANSFORMER | EX TELEPHONE PEDESTAL | EX SANITARY MANHOLE | EX CLEANOUT | EX BOLLARD | EX FLAGPOLE | EX SIGN | EX TREE | EX BUSH | EX LANDSCAPING | EX SIDEWALK | SURVEY BENCHMARK | PROP. FIRE DEPT. ACCESS "GRASS-PAVE" SYSTEM | PROP. FIRE DEPT. ACCESS REINFORCED CONC. PAVERS | PROP. CONC. SIDEWALK | PROP. HEAVY DUTY REINFORCED CONCRETE | PROP. PERMEABLE CONCRETE | PROP. HEAVY DUTY ASPHALT | PROP. LANDSCAPE PAVERS | PROP. MILL & PAVE | PROP. STORMWATER WETLAND | PROP. RIP-RAP | PROP. SMALL SWALE | PROP. STORM DRAIN | PROP. STORM MANHOLE | PROP. SANITARY LINE | PROP. SANITARY MANHOLE | PROP. CLEANOUT | PROP. PROPOSED GRADING & STORMWATER MANAGEMENT EASEMENT | | |



GRADING BLOWUP #1
SCALE: 1" = 10' (HORIZ)

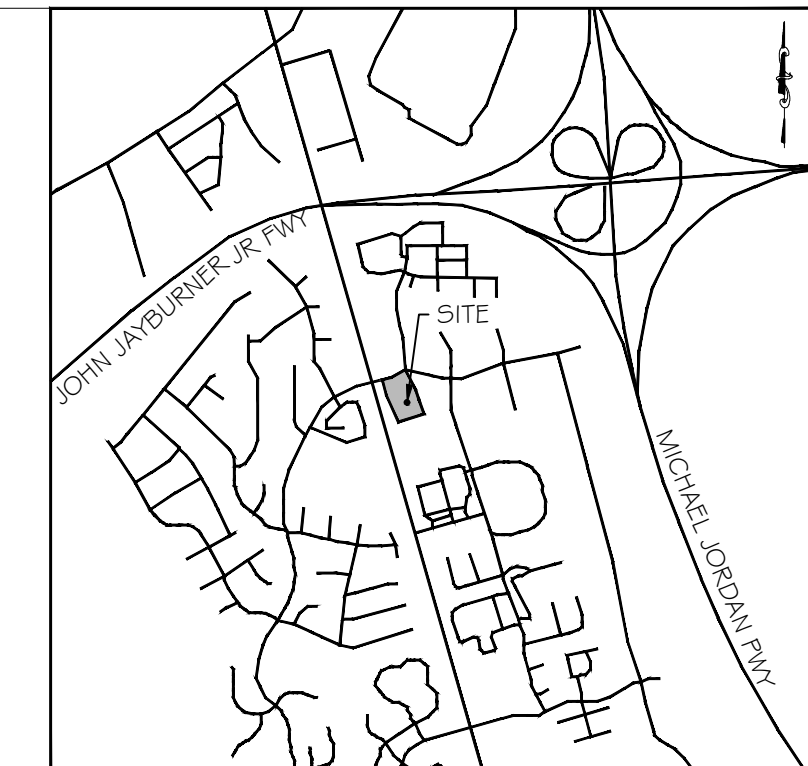


GRADING BLOWUP #2
SCALE: 1" = 10' (HORIZ)



GRADING BLOWUP #3
SCALE: 1" = 10'

ISSUE FOR		
BID SET		
ISSUE DATE		
03/28/2024		
REVISIONS		
NO.	REASON	DATE
1	REVISED POND GRADING, EX-1 & EX-3	03/28/24
PROJECT TEAM		
PRINCIPAL IN CHARGE		
JD		
PROJECT MANAGER		
CD		
DESIGN TEAM		
GH		
PROJECT NAME		
NORTHCHASE BRANCH LIBRARY		
4400 NORTHCHASE PKWY NE		
WILMINGTON, NC 28405		
PROJECT NO.		
514.18349.00		
SHEET TITLE		
GRADING PLAN BLOWUPS		
SHEET NUMBER		
C-201A		



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DIVERSIFIED ARCHITECTURAL CONSULTING

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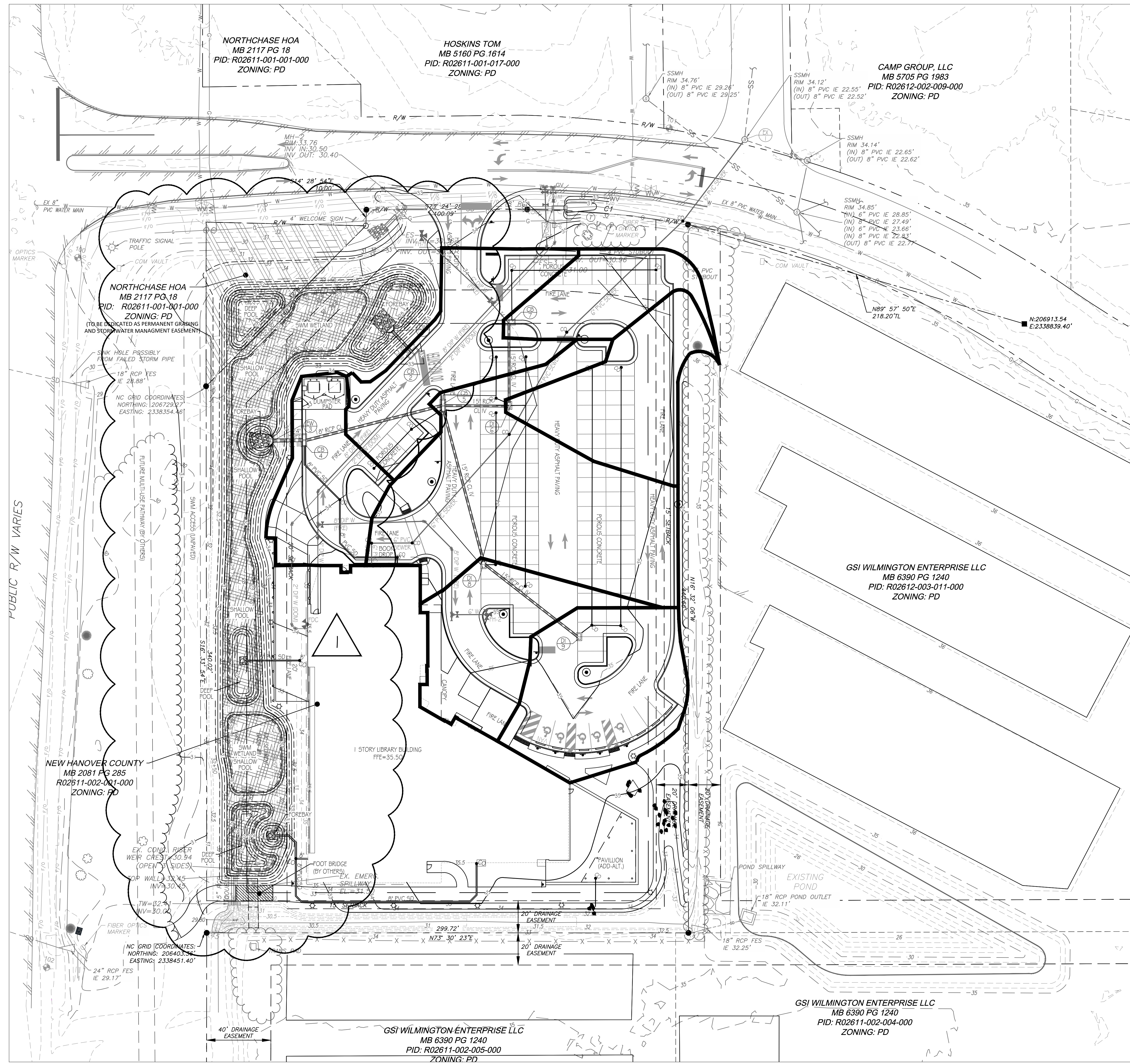
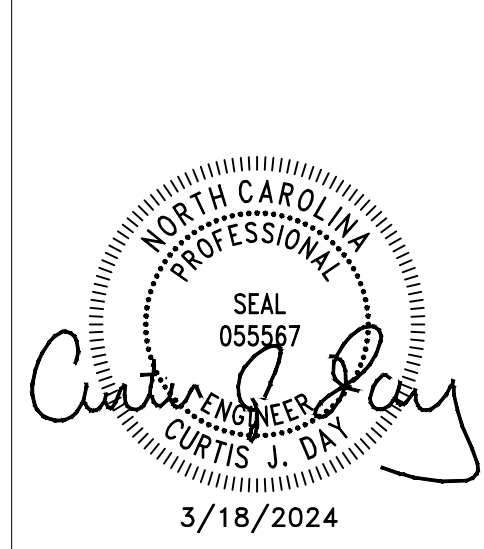
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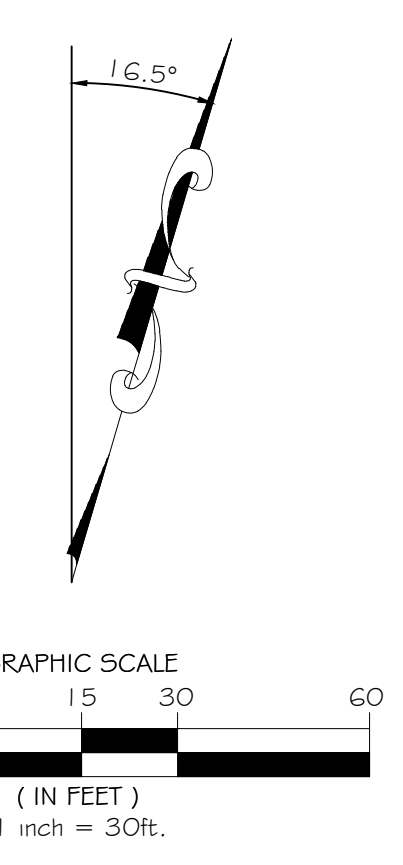


LEGEND

- EX. PROPERTY CORNER
- EX DRAINAGE MANHOLE
- EX CATCH BASIN
- EX STORM SEWER (AS NOTED)
- EX GRATE INLET
- EX WATER METER
- EX FIRE HYDRANT
- EX WATER VALVE
- EX WATER MANHOLE
- EX WATER LINE
- EX ELECTRIC MANHOLE
- EX UTILITY POLE
- EX LIGHT POLE
- EX ELECTRIC BOX
- EX TRANSFORMER
- EX TELEPHONE PEDESTAL
- EX SANITARY MANHOLE
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- PROP. STORMWATER WETLAND
- PROP. RIP-RAP
- PROP. SMALL SWALE
- PROP. STORM DRAIN
- PROP. STORM MANHOLE
- PROP. SANITARY LINE
- PROP. SANITARY MANHOLE
- PROP. CLEANOUT
- PROP. SANITARY SEWER
- EX OVERHEAD ELECTRIC
- EX U/G ELECTRIC
- EX FIBER OPTIC LINE
- EX U/G TELEPHONE LINE
- EX CONTOURS
- EX FENCE
- EX BOUNDARY LINE
- SURVEYED RIGHT-OF-WAY LINE
- END OF INFORMATION
- PIPE DIRECTION
- LITTLE FREE LIBRARY
- CURB & GUTTER
- EDGE OF PAVEMENT
- STORM MANHOLE
- SANITARY SEWER MANHOLE
- REINFORCED CONCRETE PIPE
- DUCTILE IRON PIPE
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- POLYVINYL CHLORIDE PIPE
- CORRUGATED PLASTIC PIPE
- VINYL FENCE
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- PROPOSED STREET LIGHT
- RELOCATED POWER POLE
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- PROP. WATER METER
- PROP. DOM. WATER
- PROP. FIRE
- BACK FLOW PREVENTER
- REDUCED PRESSURE DETECTOR ASSEMBLY
- PROP. WATER VALVE
- PROP. FIRE HYDRANT
- PROP. TEE FITTING
- PROP. BEND FITTING
- PROP. REDUCER
- PARKING SPACE COUNT

DRAINAGE AREAS FOR STORM DRAINAGE

AREA NO.	AREA (AC.)	C FACTOR	IMPERVIOUS %
CB-2	0.20	0.5044	69.53
CB-4	0.14	0.7852	73.64
CB-5	0.40	0.8636	52.95
DI-6	0.17	0.8088	49.19
CB-7	0.11	0.7651	53.43
DI-8	0.16	0.8299	49.66
DI-9	0.22	0.8407	75.34



ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

REVISIONS

NO.	REASON	DATE
1	REVISED TO SHOW EXPANDED POND, SWM ACCESS AND SWM EASEMENT. REVISED DW-1 & DW-3.	03/28/24

PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH
PROJECT NAME

NORTHCHASE BRANCH LIBRARY
4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

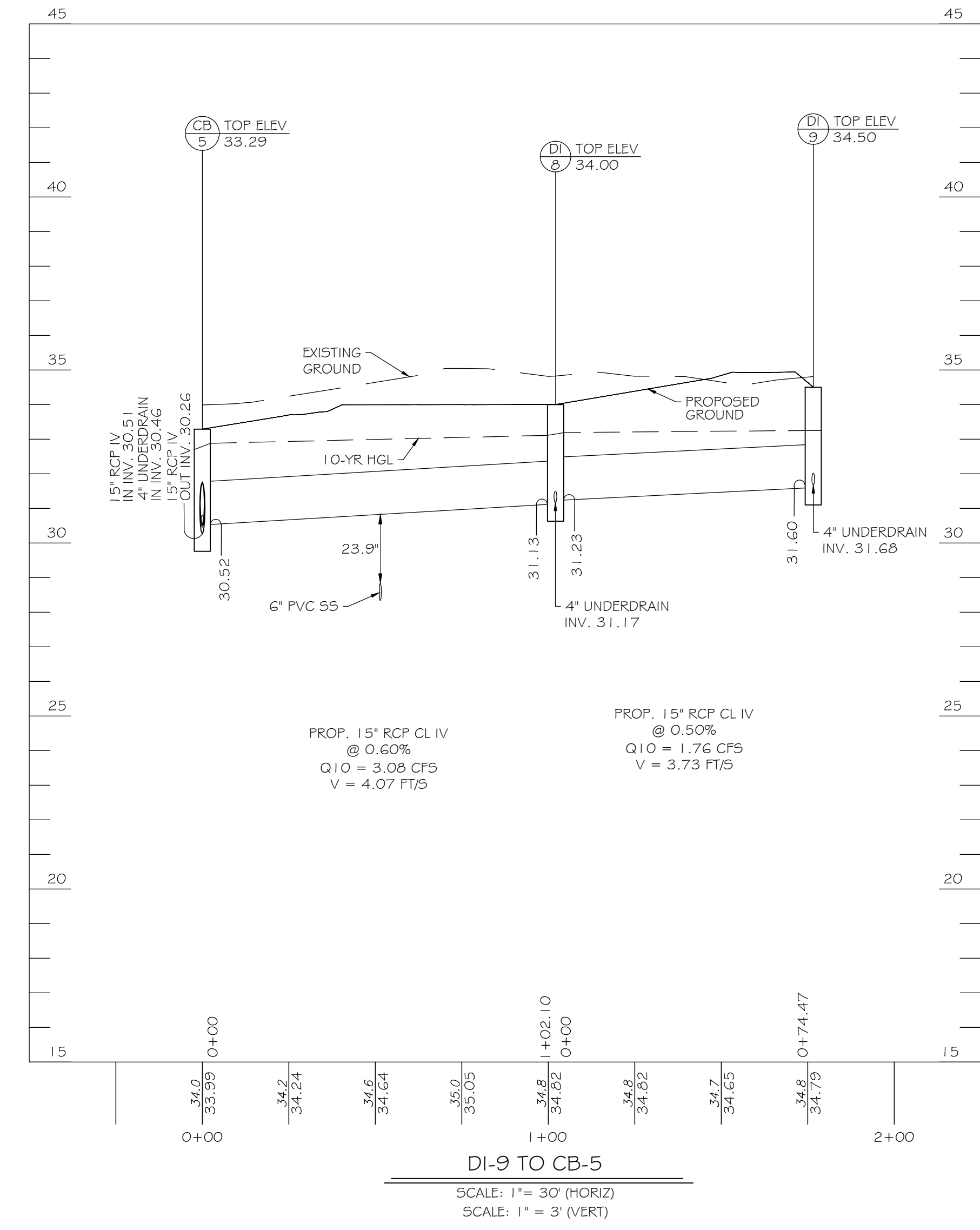
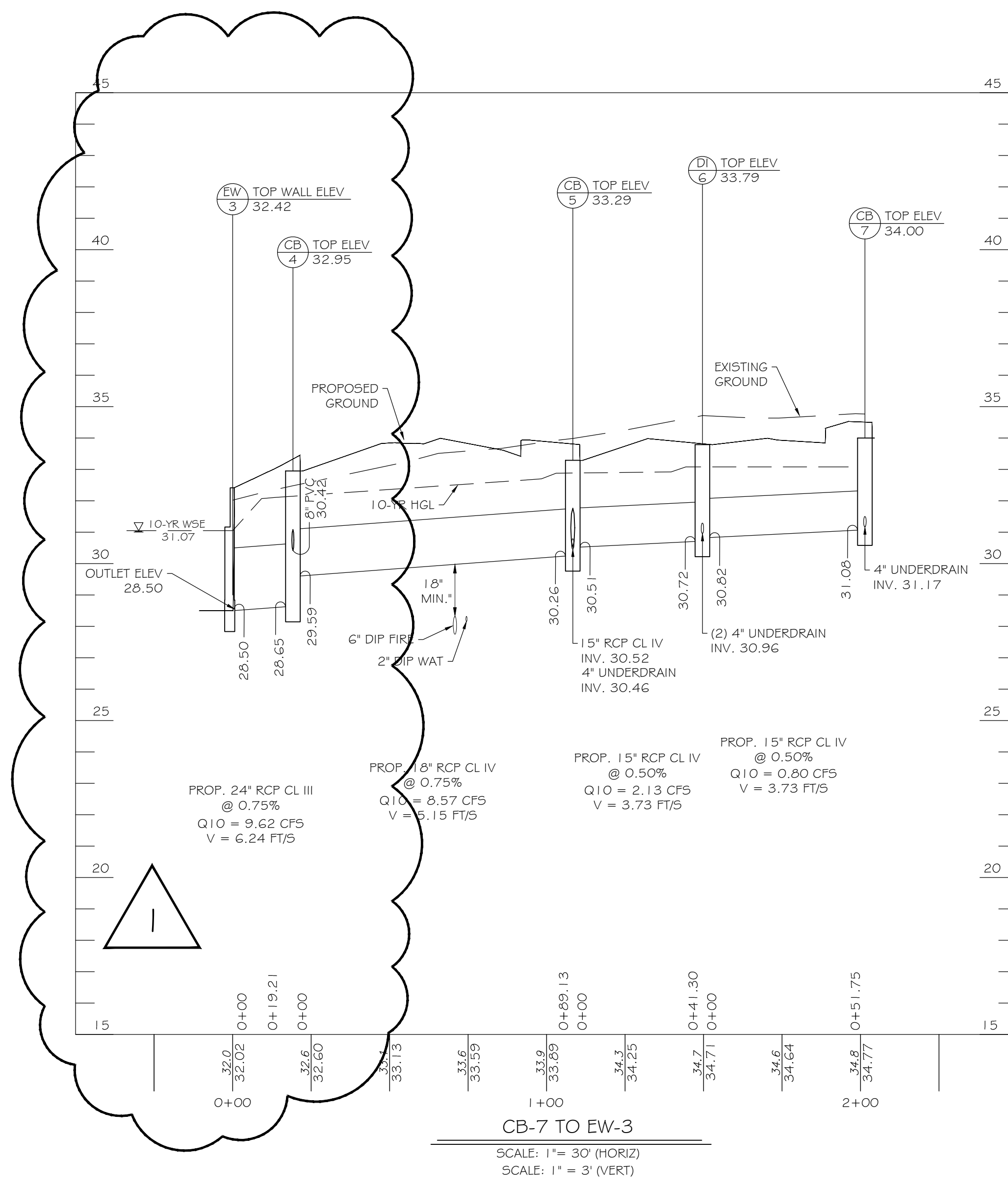
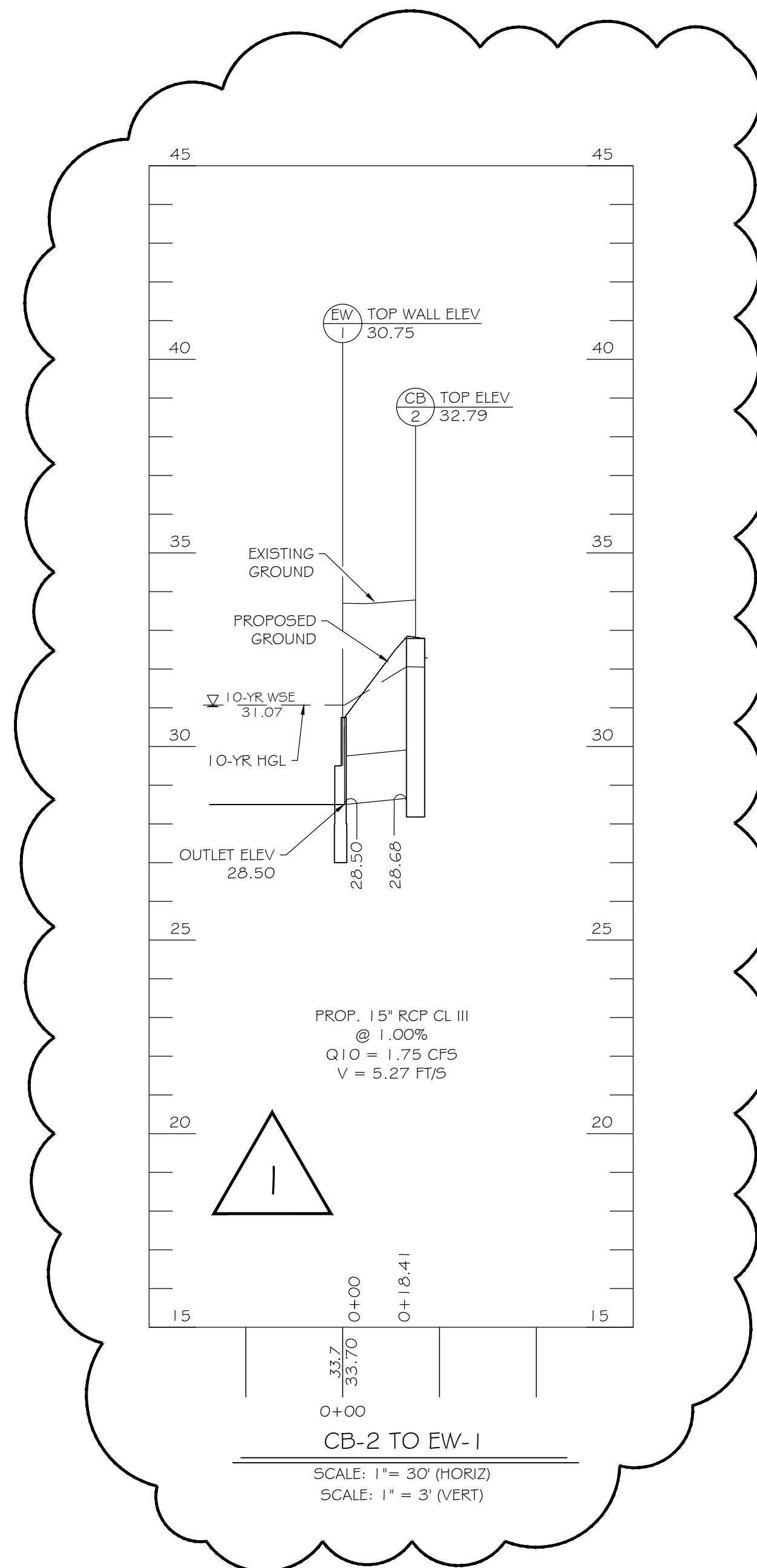
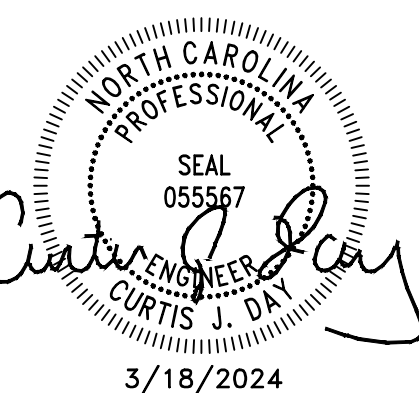
PROJECT NO.
514.18349.00

SHEET TITLE
DRAINAGE AREA MAP

SHEET NUMBER
C-202

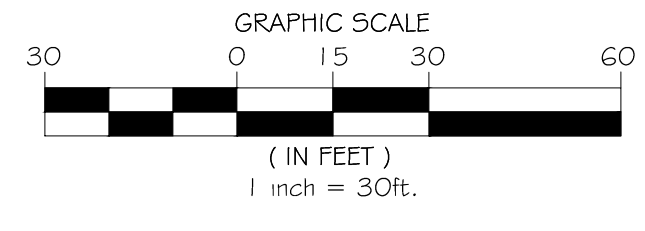


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NO.	TYPE	SIZE IN	INV. IN	SP. OUT	INV. OUT	TOP ELEV.	NORTHING	EASTING
EW-1	PRECAST CONCRETE ENDWALL, NCDOT STD 838.80, SHEET C-502	15"	28.50			30.75	206794.9282	2338456.0285
CB-2	CONCRETE CATCH BASIN, NCDOT STD 840.02, SHEET C-502			15'	28.68	32.79	206785.6227	2338471.9078
EW-3	PRECAST CONCRETE ENDWALL, NCDOT STD 838.80, SHEET C-502	24"	28.50			32.42	206708.6791	2338403.9047
CB-4	CONCRETE CATCH BASIN, NCDOT STD 840.02, SHEET C-502	8' 8'	28.59 30.42	4'	28.64	32.55	206714.3658	2338422.2877
CB-5	CONCRETE CATCH BASIN, NCDOT STD 840.02, SHEET C-502	15" 15" 4"	30.51 30.52 30.46	18'	30.26	33.29	206759.4926	2338499.1165
DI-6	TRAFFIC BEARING DROP INLET, NCDOT STD 840.35, SHEET C-502	15" 4"	30.92 30.96	15'	30.72	33.79	206771.3661	2338538.6700
CB-7	CONCRETE CATCH BASIN, NCDOT STD 840.02, SHEET C-502	4'	31.17	15'	31.08	34.00	206820.9304	2338471.9078
DI-8	TRAFFIC BEARING DROP INLET, NCDOT STD 840.35, SHEET C-502	15" 4"	31.23 31.17	15'	31.13	34.00	206671.8503	2338551.4871
DI-9	TRAFFIC BEARING DROP INLET, NCDOT STD 840.35, SHEET C-502	4"	31.68	15'	31.60	34.50	206645.8073	2338621.2555

SIZE	MATERIAL	LENGTH
8"	8" PVC	116 LF
15"	RCP CLASS III	13 LF
15"	RCP CLASS IV	270 LF
18"	RCP CLASS IV	90 LF
24"	HDPE CLASS III	12 LF



ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

REVISIONS

NO.	REASON	DATE
1	REVISE PROFILES & DATA FOR EW-1 & EW-3	03/28/24

PROJECT TEAM

PRINCIPAL IN CHARGE
JD

PROJECT MANAGER
CD

DESIGN TEAM
CH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY

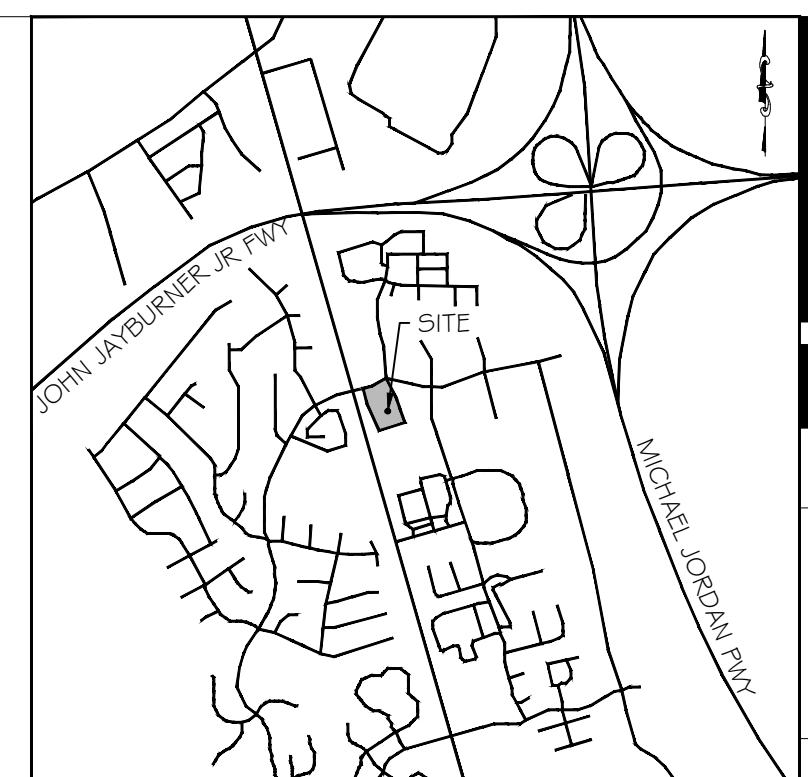
4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
STORM DRAIN PROFILES

SHEET NUMBER
C-203

F
E
D
C
B
A



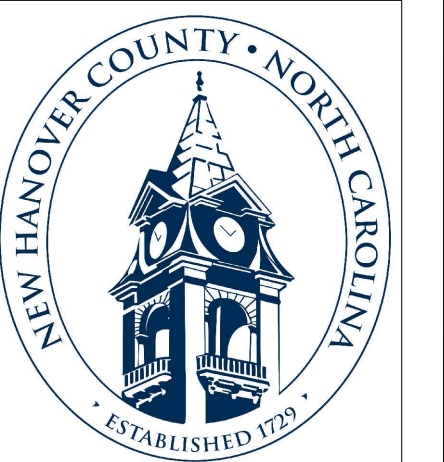
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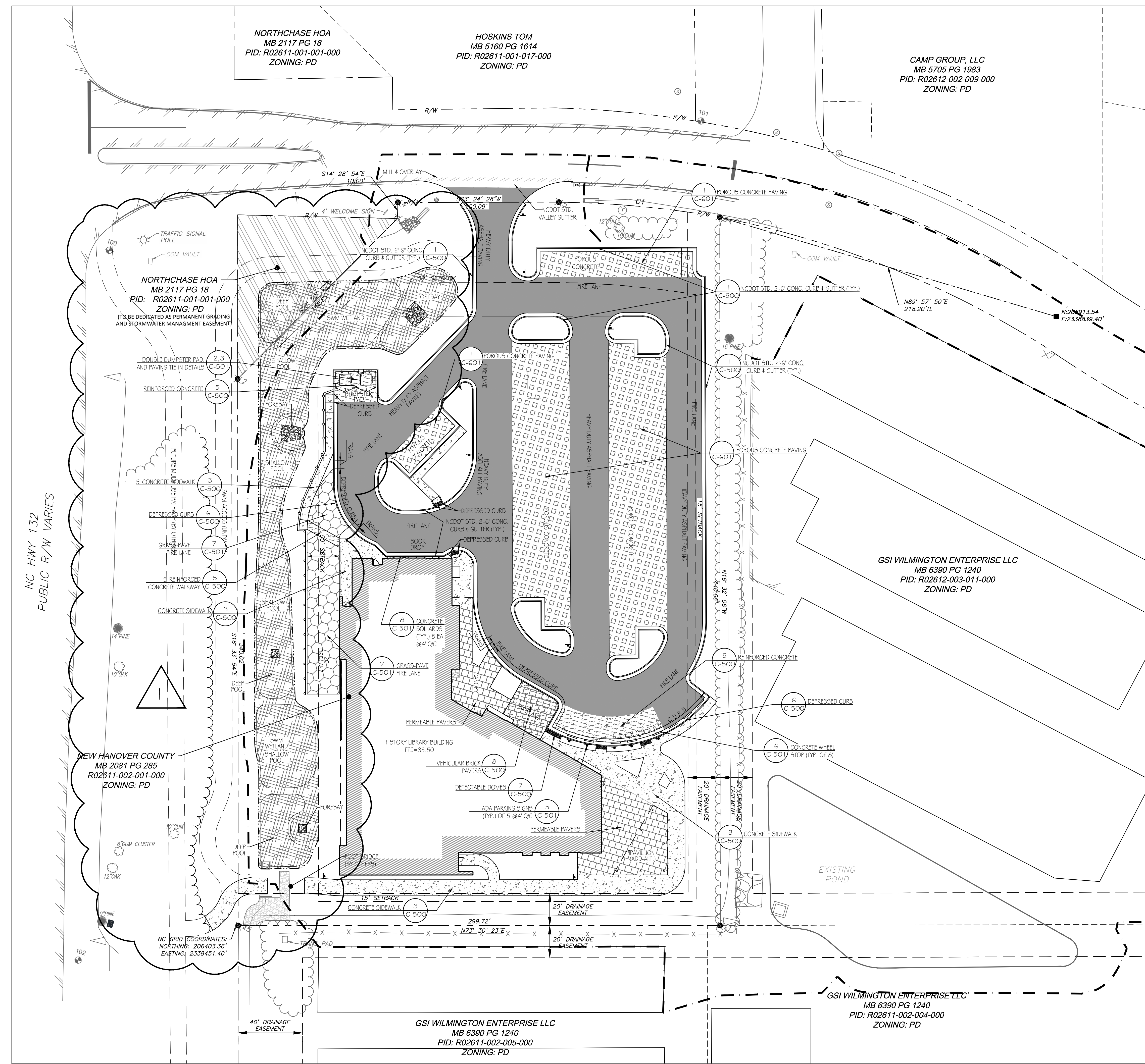
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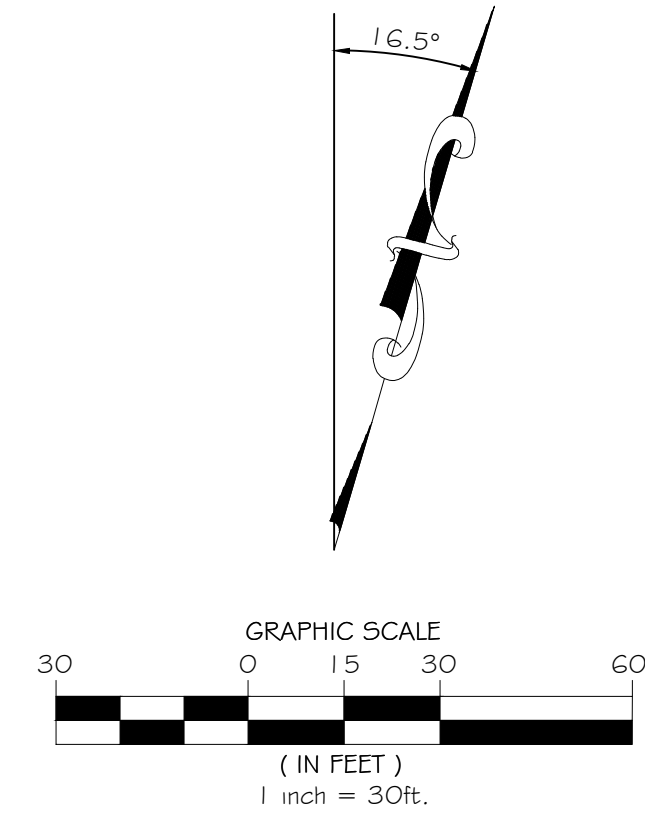
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PROFESSIONAL SEAL
COURTIS J. DAVIS
3/18/2024



LEGEND

- | | |
|-------------------------------|-------------------------------|
| EX. PROPERTY CORNER | EX SANITARY SEWER |
| EX DRAINAGE MANHOLE | EX OVERHEAD ELECTRIC |
| EX CATCH BASIN | EX UG ELECTRIC |
| EX STORM SEWER (AS NOTED) | EX FIBER OPTIC LINE |
| EX GRATE INLET | EX UG TELEPHONE LINE |
| EX WATER METER | EX CONTOURS |
| EX FIRE HYDRANT | EX FENCE |
| EX WATER VALVE | EX BOUNDARY LINE |
| EX WATER MANHOLE | SURVEYED RIGHT-OF-WAY LINE |
| EX WATER LINE | END OF INFORMATION |
| EX ELECTRIC MANHOLE | PIPE DIRECTION |
| EX UTILITY POLE | LITTLE FREE LIBRARY |
| EX LIGHT POLE | CURB & GUTTER |
| EX ELECTRIC BOX | EDGE OF PAVEMENT |
| EX TRANSFORMER | STORM MANHOLE |
| EX TELEPHONE PEDESTAL | SANITARY SEWER MANHOLE |
| EX SANITARY MANHOLE | REINFORCED CONCRETE PIPE |
| EX CLEANOUT | DUCTILE IRON PIPE |
| EX BOLLARD | TERRA COTTA PIPE |
| EX FLAGPOLE | POLYVINYL CHLORIDE PIPE |
| EX SIGN | CORRUGATED PLASTIC PIPE |
| EX TREE | VINYL FENCE |
| EX BUSH | CHAIN LINK FENCE |
| EX LANDSCAPING | CLP |
| EX SIDEWALK | BOARD FENCE |
| SURVEY BENCHMARK | BARB WIRE |
| PROP. FIRE DEPT. ACCESS | PROPERTY LINE |
| PROP. FIRE DEPT. ACCESS | PROP. POWER LINE |
| PROP. REINFORCED CONC. PAVERS | RELOCATED PARKING PAY STATION |
| PROP. CONC. SIDEWALK | PROPOSED STREET LIGHT |
| PROP. HEAVY DUTY | RELOCATED POWER POLE |
| PROP. REINFORCED CONCRETE | PROPOSED SIGN |
| PROP. PERMEABLE CONCRETE | PROP. WATER METER |
| PROP. HEAVY DUTY ASPHALT | PROP. DOM. WATER |
| PROP. LANDSCAPE PAVERS | PROP. FIRE |
| PROP. MILL & PAVE | PROP. FIRE |
| PROP. STORMWATER WETLAND | BACK FLOW PREVENTER |
| PROP. RIP-RAP | REDUCED PRESSURE |
| PROP. SMALL SWALE | DETECTOR ASSEMBLY |
| PROP. STORM DRAIN | PROP. WATER VALVE |
| PROP. STORM MANHOLE | PROP. FIRE HYDRANT |
| PROP. SANITARY LINE | PROP. TEE FITTING |
| PROP. SANITARY MANHOLE | PROP. BEND FITTING |
| PROP. CLEANOUT | PROP. REDUCER |
| PROPOSED GRADING & STORMWATER | PARKING SPACE COUNT |
| MANAGEMENT EASEMENT | |



BID SET

ISSUE DATE
03/28/2024

NO.	REASON	DATE
1	REVISED TO SHOW EXPANDED POND, SWM ACCESS AND SWM EASEMENT. REVISED PW-4 & PW-5.	03/28/24

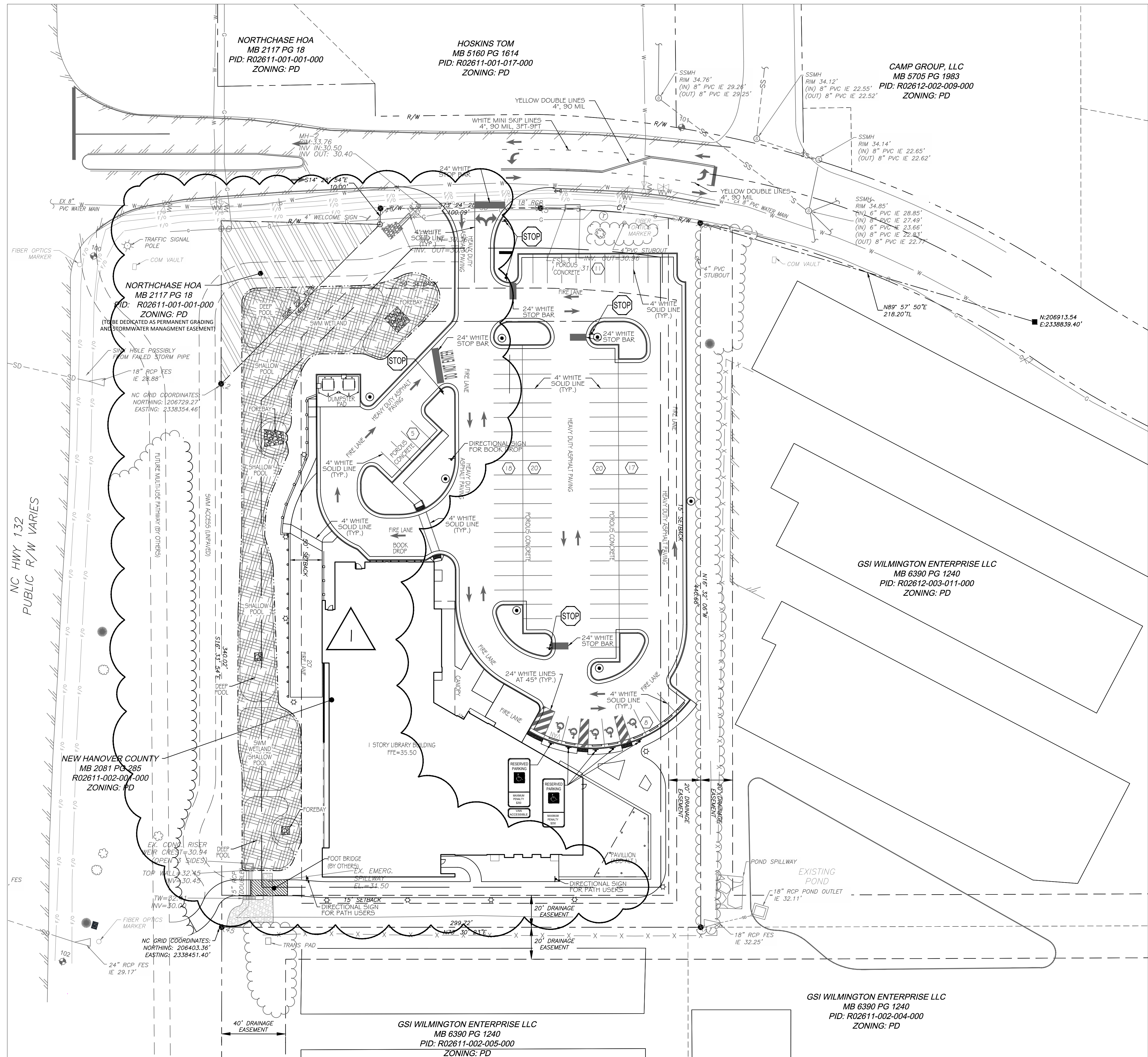
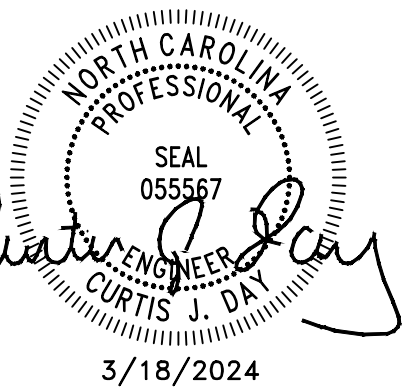
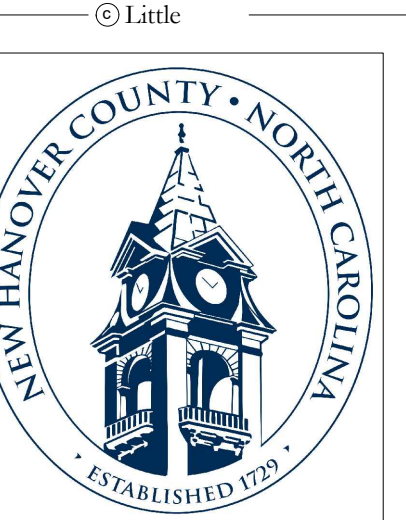
PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY
4400 NORTHCHASE
PKWY NE
WILMINGTON, NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
PAVING PLAN

SHEET NUMBER
C-300

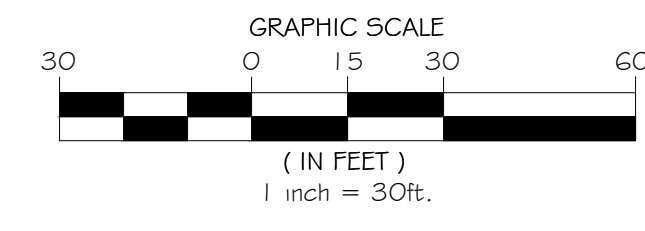


LEGEND

- EX PROPERTY CORNER
- EX DRAINAGE MANHOLE
- EX CATCH BASIN
- EX STORM SEWER (AS NOTED)
- EX GRATE INLET
- EX WATER METER
- EX FIRE HYDRANT
- EX WATER VALVE
- EX WATER MANHOLE
- EX WATER LINE
- EX ELECTRIC MANHOLE
- EX UTILITY POLE
- EX LIGHT POLE
- EX ELECTRIC BOX
- EX TRANSFORMER
- EX TELEPHONE PEDESTAL
- EX SANITARY MANHOLE
- EX CLEANOUT
- EX BOLLARD
- EX FLAGPOLE
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- PROP. HEAVY DUTY REINFORCED CONCRETE
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- PROP. HEAVY DUTY ASPHALT
- PROP. LANDSCAPE PAVERS
- PROP. MILL & PAVE
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- PROP. STORM MANHOLE
- PROP. SANITARY LINE
- PROP. SANITARY MANHOLE
- PROP. CLEANOUT
- PROPOSED GRADING & STORMWATER MANAGEMENT EASEMENT
- EX SANITARY SEWER
- EX OVERHEAD ELECTRIC
- EX UG ELECTRIC
- EX FIBER OPTIC LINE
- EX UG TELEPHONE LINE
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- EX FENCE
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- REINFORCED CONCRETE PIPE
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- TERRA COTTA PIPE
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- PROP. FIRE HYDRANT
- PROP. TEE FITTING
- PROP. BEND FITTING
- PROP. REDUCER
- PARKING SPACE COUNT

SIGNAGE SCHEDULE

SIGN DESCRIPTION	MUTCD CODE	QUANTITY	MINIMUM	SIGN MATERIAL
STOP	R1-1	5	30x30"	SHEET ALUMINUM (ASTM B209)
RESERVED PARKING	R7-8e	5	12"x26"	SHEET ALUMINUM (ASTM B209)
VAN ACCESSIBLE	R7-8j	5	12"x26"	SHEET ALUMINUM (ASTM B209)
DIRECTIONAL SIGNS	CUSTOM	3	CUSTOM	SHEET ALUMINUM (ASTM B209)



BID SET

ISSUE DATE
03/28/2024

NO.	REASON	DATE
1	REVISED TO SHOW EXPANDED POND, SWM ACCESS AND SWM EASEMENT, LANDED DIRECTION SIGNS FOR BOOKDROP AND PATH USERS.	03/28/24

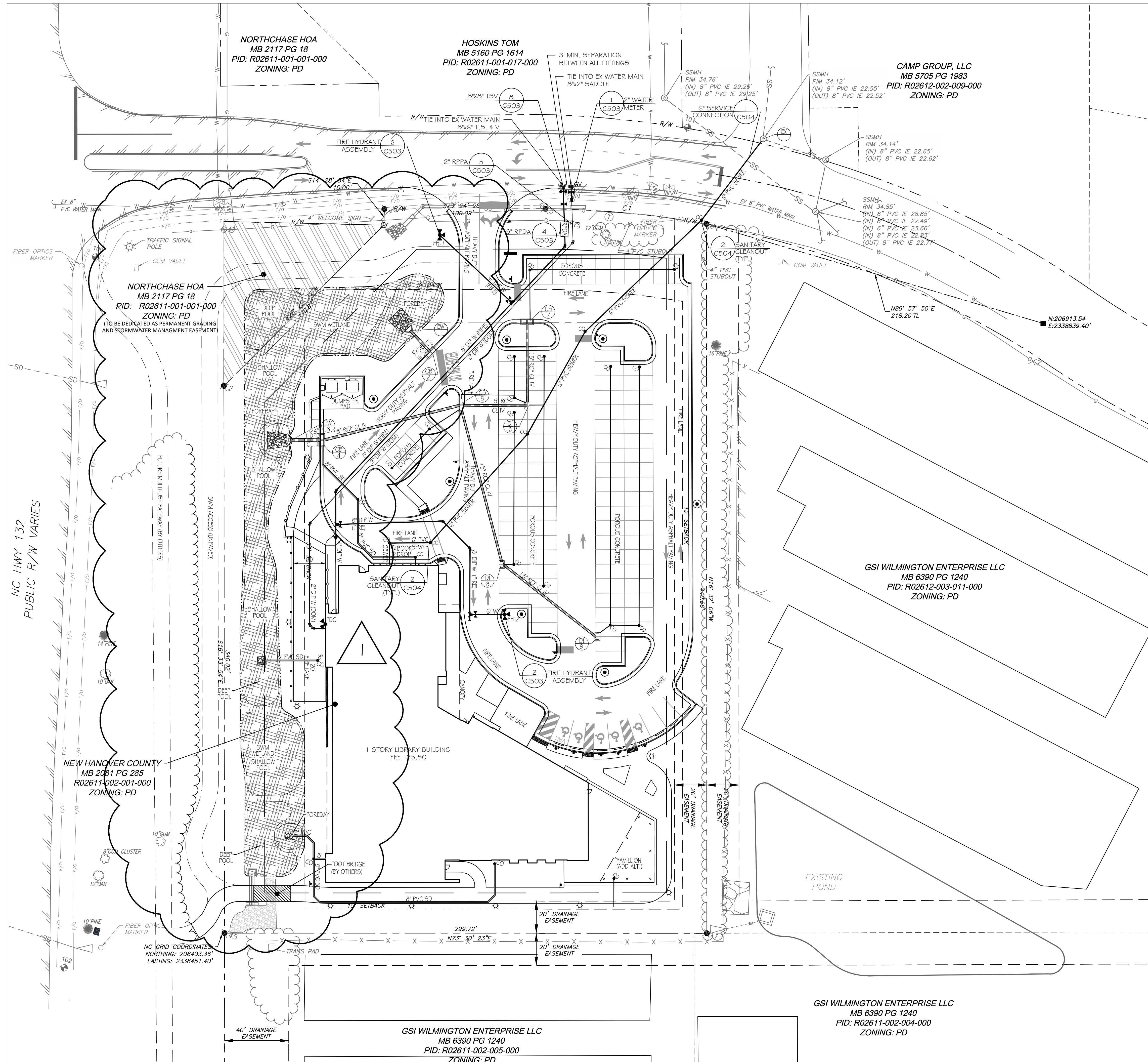
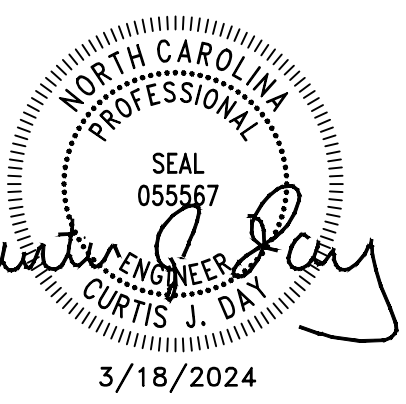
PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY
4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

PROJECT NO.
514.18349.00

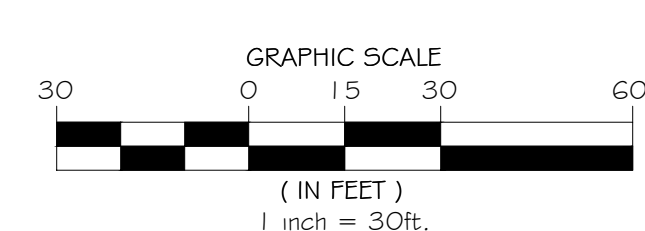
SHEET TITLE
SIGNAGE & STRIPING PLAN

SHEET NUMBER
C-301



LEGEND

EX. PROPERTY CORNER	EX SANITARY SEWER	EX OVERHEAD ELECTRIC
EX DRAINAGE MANHOLE	EX CATCH BASIN	EX CATCH BASIN
EX STORM SEWER (AS NOTED)	EX GRATE INLET	EX WATER METER
EX WATER METER	EX FIRE HYDRANT	EX WATER VALVE
EX WATER MANHOLE	EX WATER LINE	EX ELECTRIC MANHOLE
EX UTILITY POLE	EX LIGHT POLE	EX ELECTRIC BOX
EX TRANSFORMER	EX TELEPHONE PEDESTAL	EX SANITARY MANHOLE
EX CLEANOUT	EX BOLLARD	EX FLAGPOLE
EX SIGN	EX TREE	EX BUSH
EX LANDSCAPING	EX SIDEWALK	SURVEY BENCHMARK
PROP. FIRE DEPT. ACCESS	PROP. FIRE DEPT. ACCESS	PROP. POWER LINE
PROP. CONC. SIDEWALK	PROP. HEAVY DUTY REINFORCED CONC. PAVERS	PROP. PERMEABLE CONCRETE
PROP. HEAVY DUTY ASPHALT	PROP. LANDSCAPE PAVERS	PROP. MILL & PAVE
PROP. STORMWATER WETLAND	PROP. RIP-RAP	PROP. SMALL SWALE
PROP. STORM DRAIN	PROP. STORM MANHOLE	PROP. SANITARY LINE
PROP. SANITARY MANHOLE	PROP. CLEANOUT	PROPOSED GRADING & STORMWATER MANAGEMENT EASEMENT
EX FIBER OPTIC LINE	EX WIG TELEPHONE LINE	EX CONTOURS
EX FENCE	EX BOUNDARY LINE	SURVEYED RIGHT-OF-WAY LINE
END OF INFORMATION	PIPE DIRECTION	LITTLE FREE LIBRARY
CURB & GUTTER	EDGE OF PAVEMENT	STORM MANHOLE
SANITARY SEWER MANHOLE	REINFORCED CONCRETE PIPE	DUCTILE IRON PIPE
TERRA COTTA PIPE	POLYVINYL CHLORIDE PIPE	CORRUGATED PLASTIC PIPE
VINYL FENCE	CHAIN LINK FENCE	BOARD FENCE
BARB WIRE	PROPERTY LINE	PROPOSED STREET LIGHT
RELOCATED PARKING PAY STATION	PROPOSED STREET LIGHT	RELOCATED POWER POLE
PROPOSED SIGN	PROP. WATER METER	PROP. DOM. WATER
PROP. FIRE BACK FLOW PREVENTER	REDUCED PRESSURE DETECTOR ASSEMBLY	PROP. WATER VALVE
PROP. FIRE HYDRANT	PROP. TEE FITTING	PROP. BEND FITTING
PROP. REDUCER	PARKING SPACE COUNT	



BID SET

ISSUE DATE: 03/28/2024

NO.	REASON	DATE
1	REVISED TO SHOW EXPANDED POND, SWM ACCESS AND SWM EASEMENT. REVISED DW-1 & DW-2.	03/28/24

PROJECT TEAM
PRINCIPAL IN CHARGE: JD
PROJECT MANAGER: CD
DESIGN TEAM: GH
PROJECT NAME: NORTHCHASE BRANCH LIBRARY

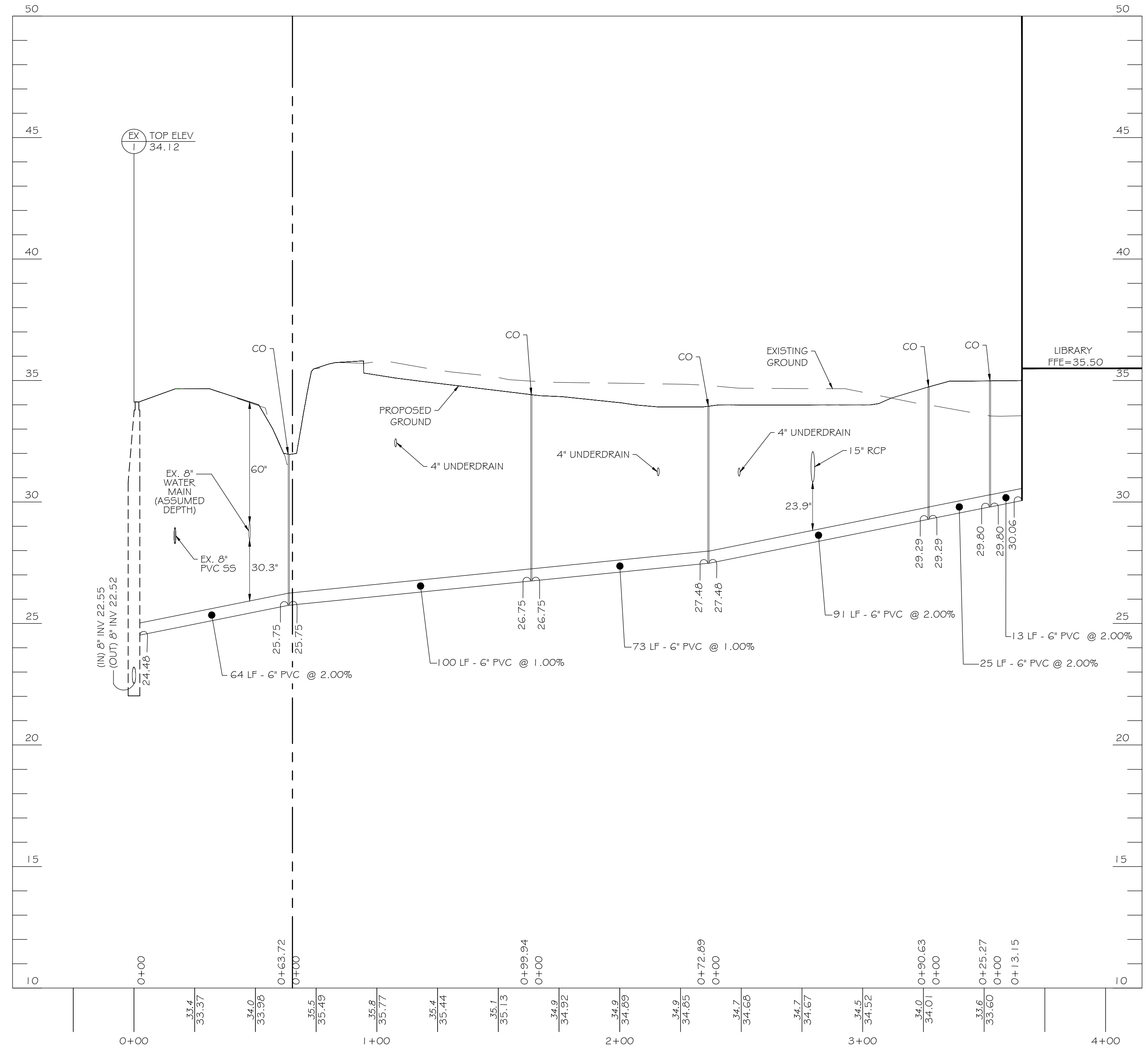
4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

PROJECT NO.: 514.18349.00

SHEET TITLE: UTILITY PLAN

SHEET NUMBER: C-400

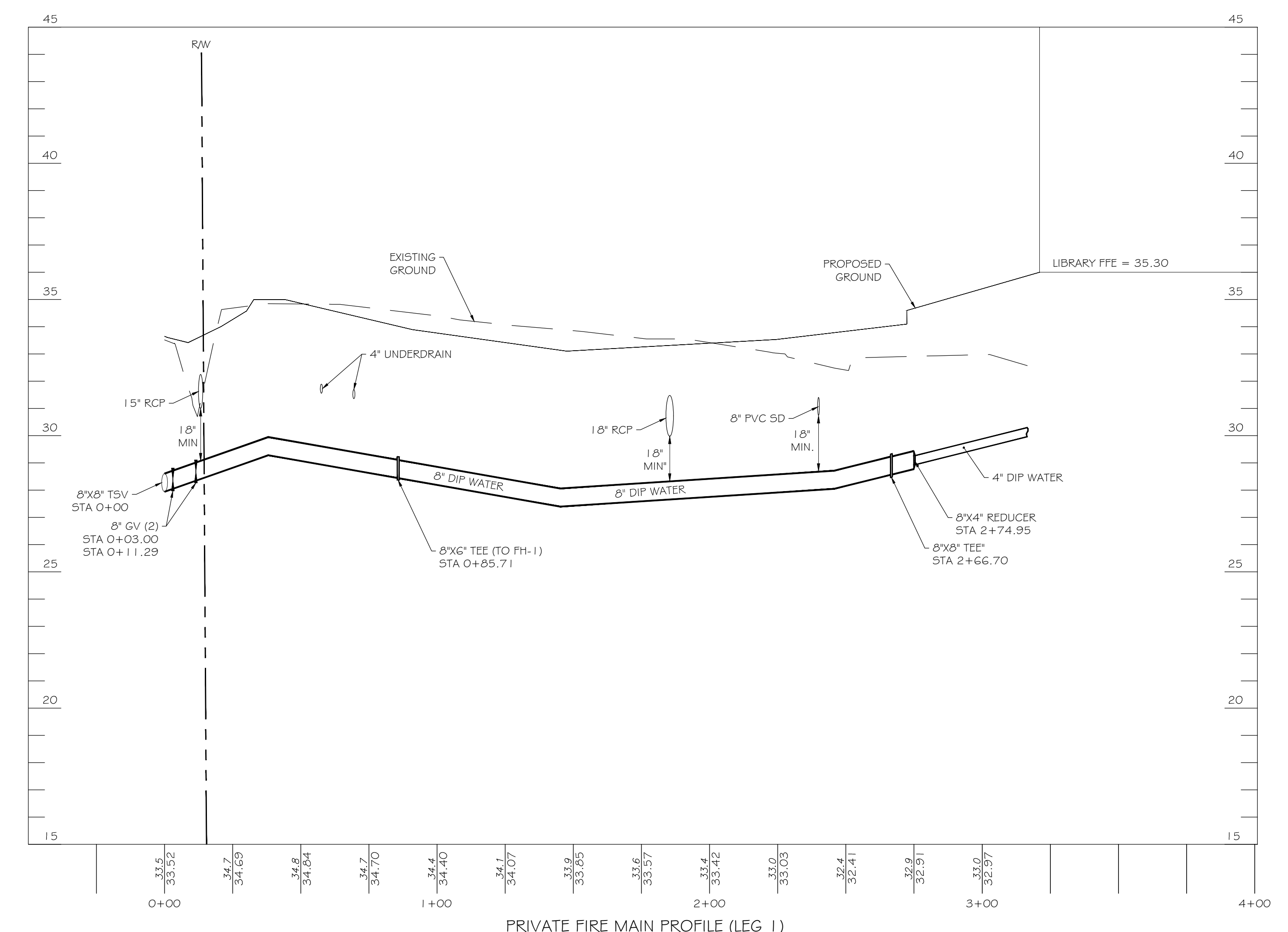
F
E
D
C
B
A



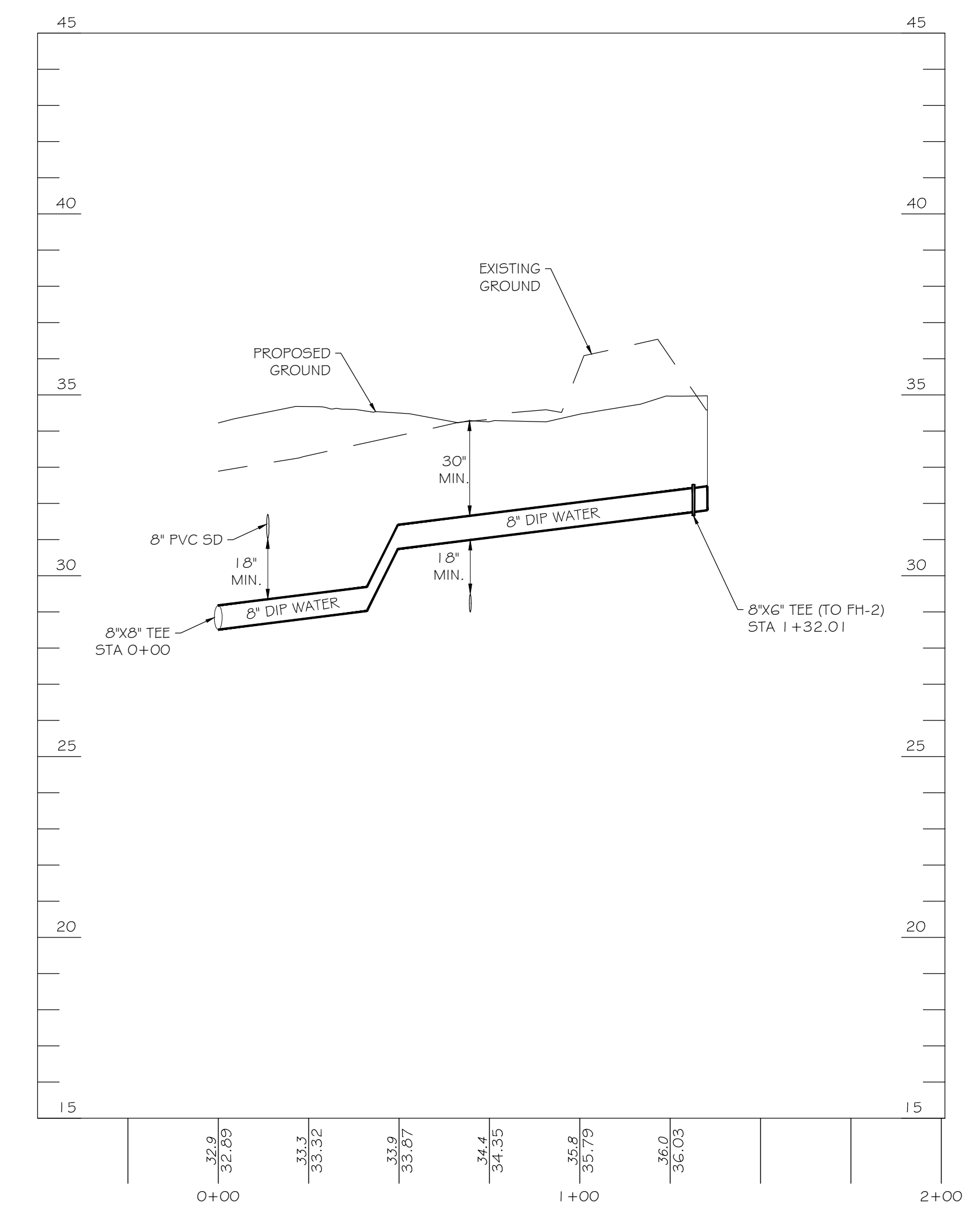
SANITARY SEWER PROFILE
SCALE: 1" = 30' (HORIZ)
SCALE: 1" = 3' (VERT)

SANITARY STRUCTURE SCHEDULE						
NO.	TYPE	SIZE IN	INV. IN	SIZE OUT	INV. OUT	TOP ELEV
EX-1	EXISTING MANHOLE	8"	24.48	8"	22.52	34.12

SANITARY PIPE SCHEDULE		
SIZE	MATERIAL	LENGTH
6"	PVC (SCH. 40)	366 LF

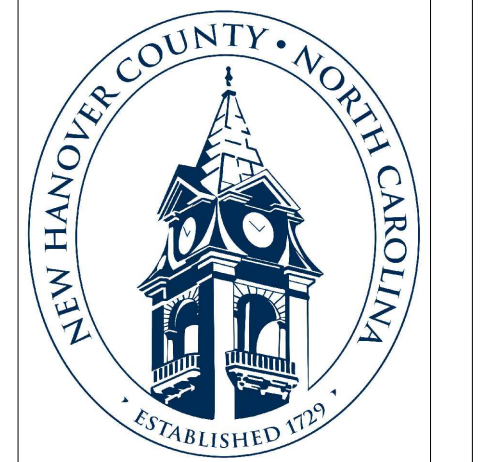
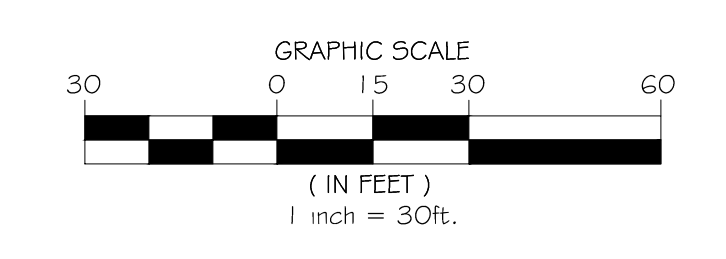


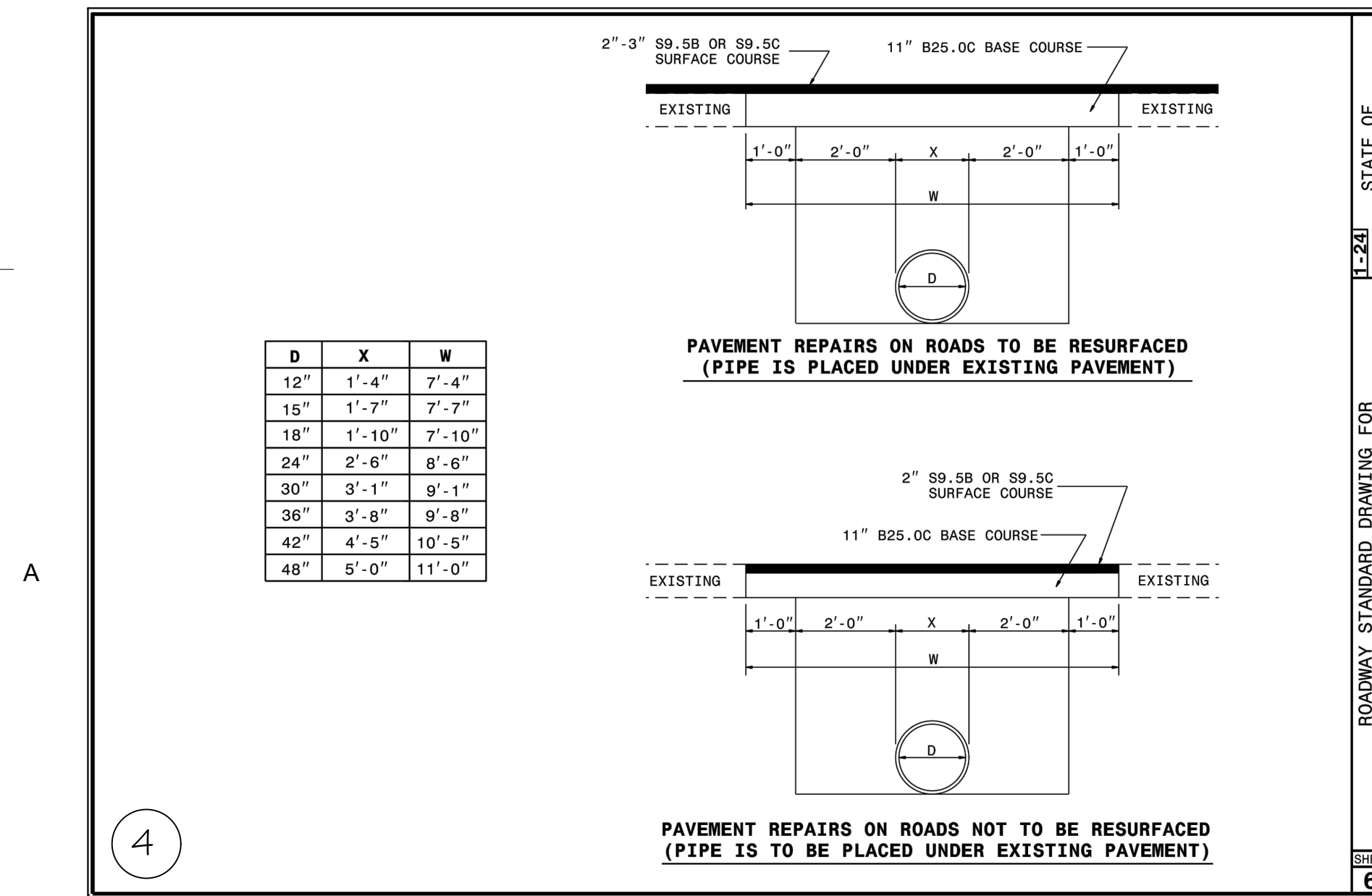
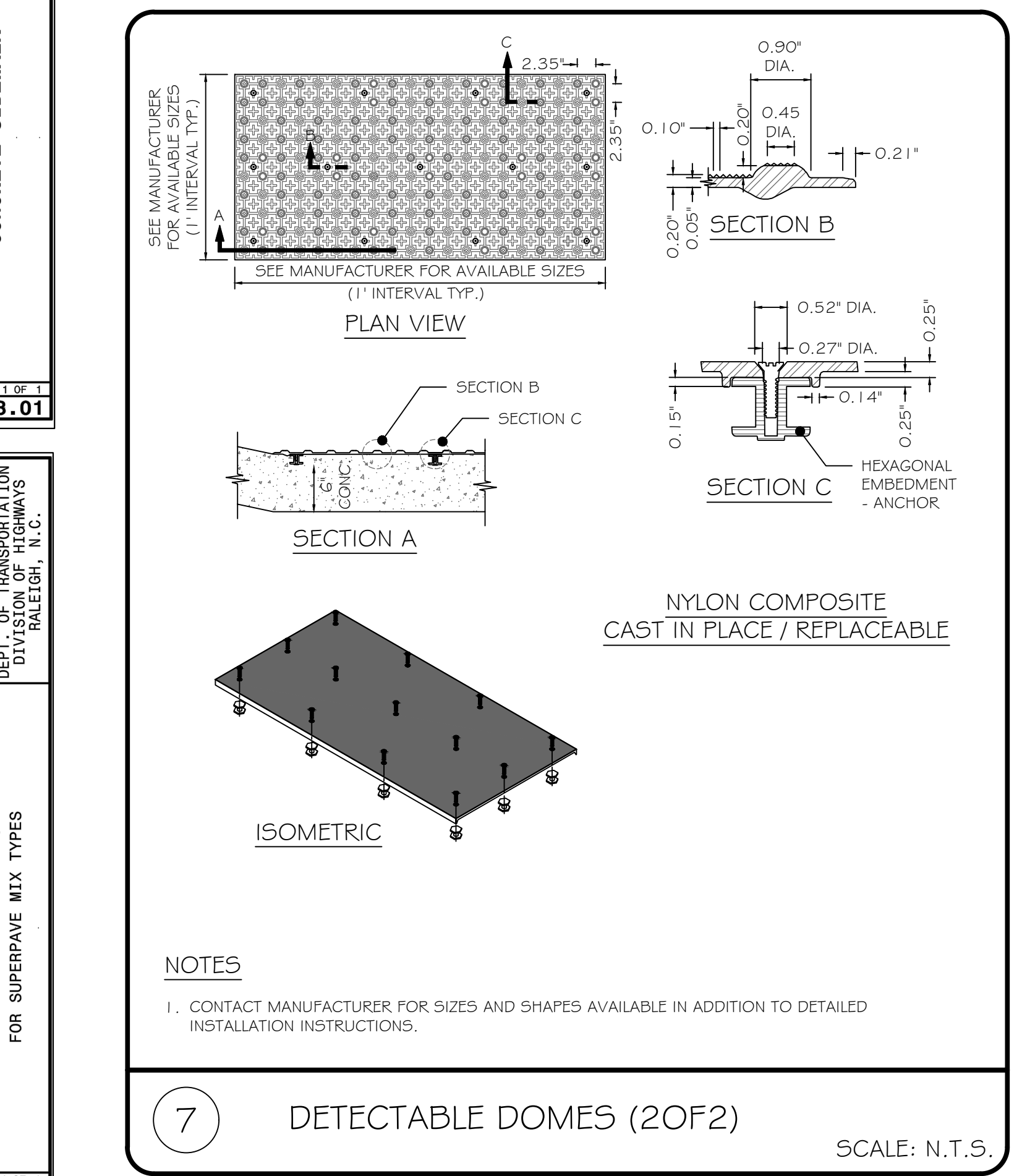
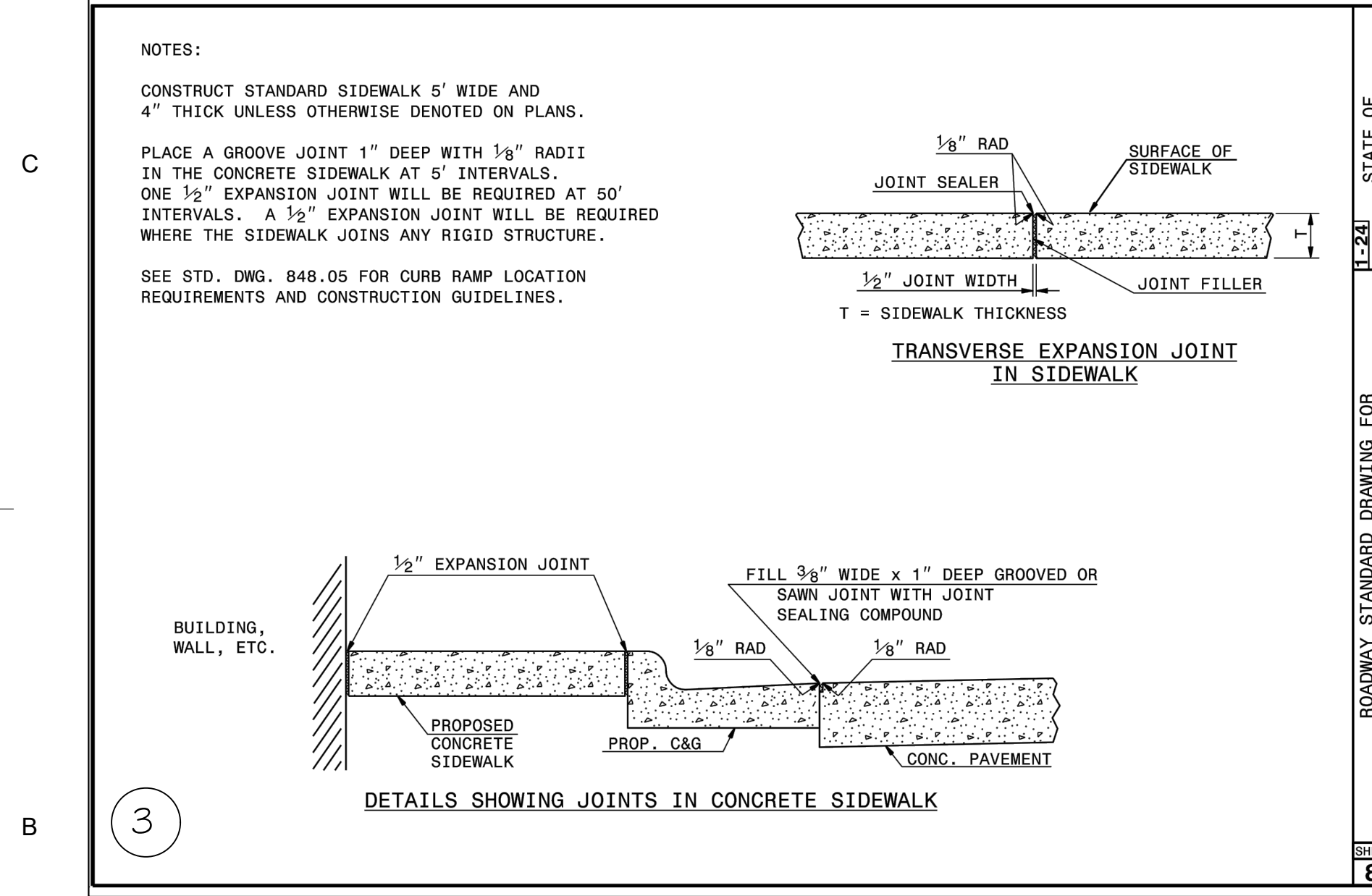
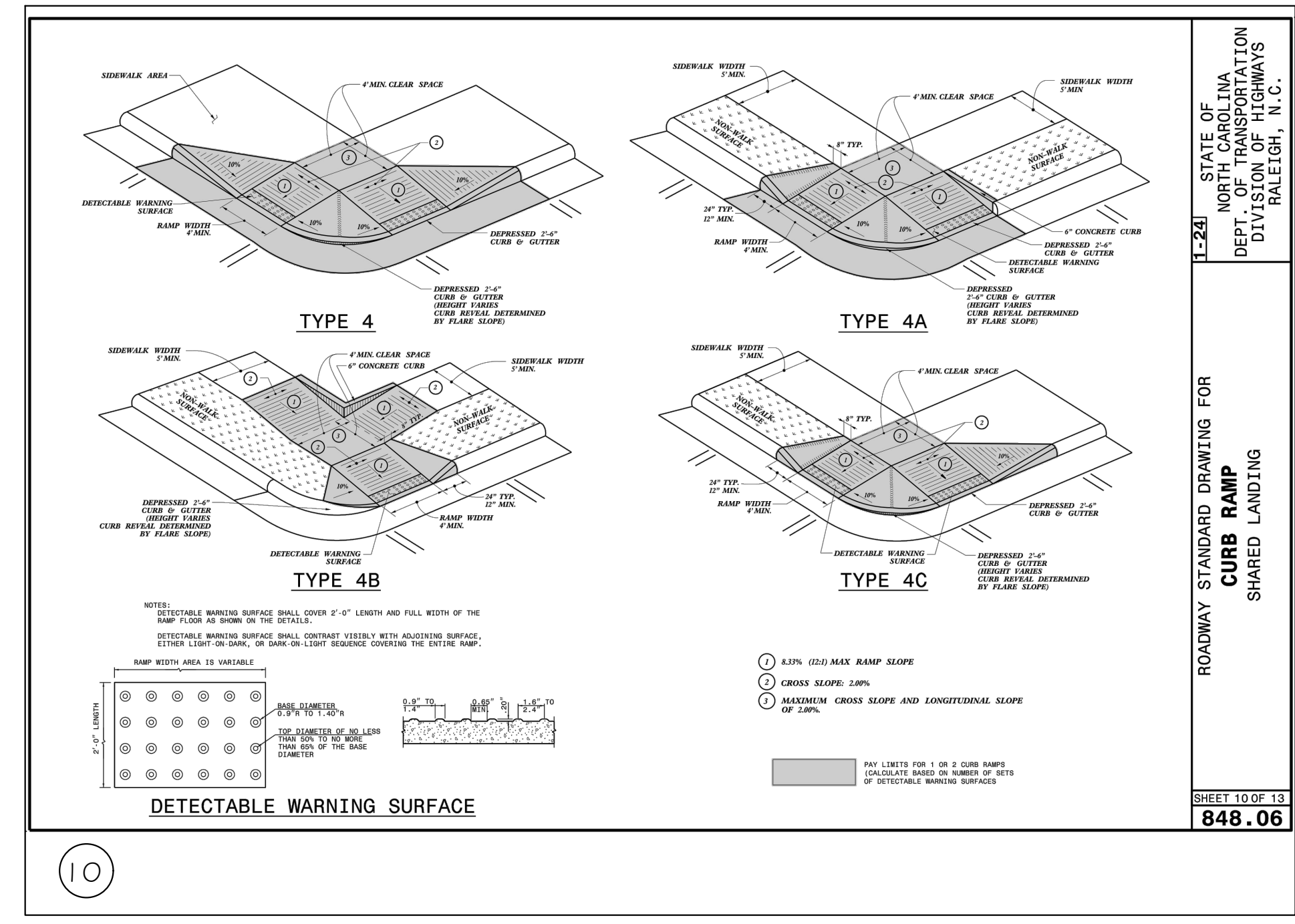
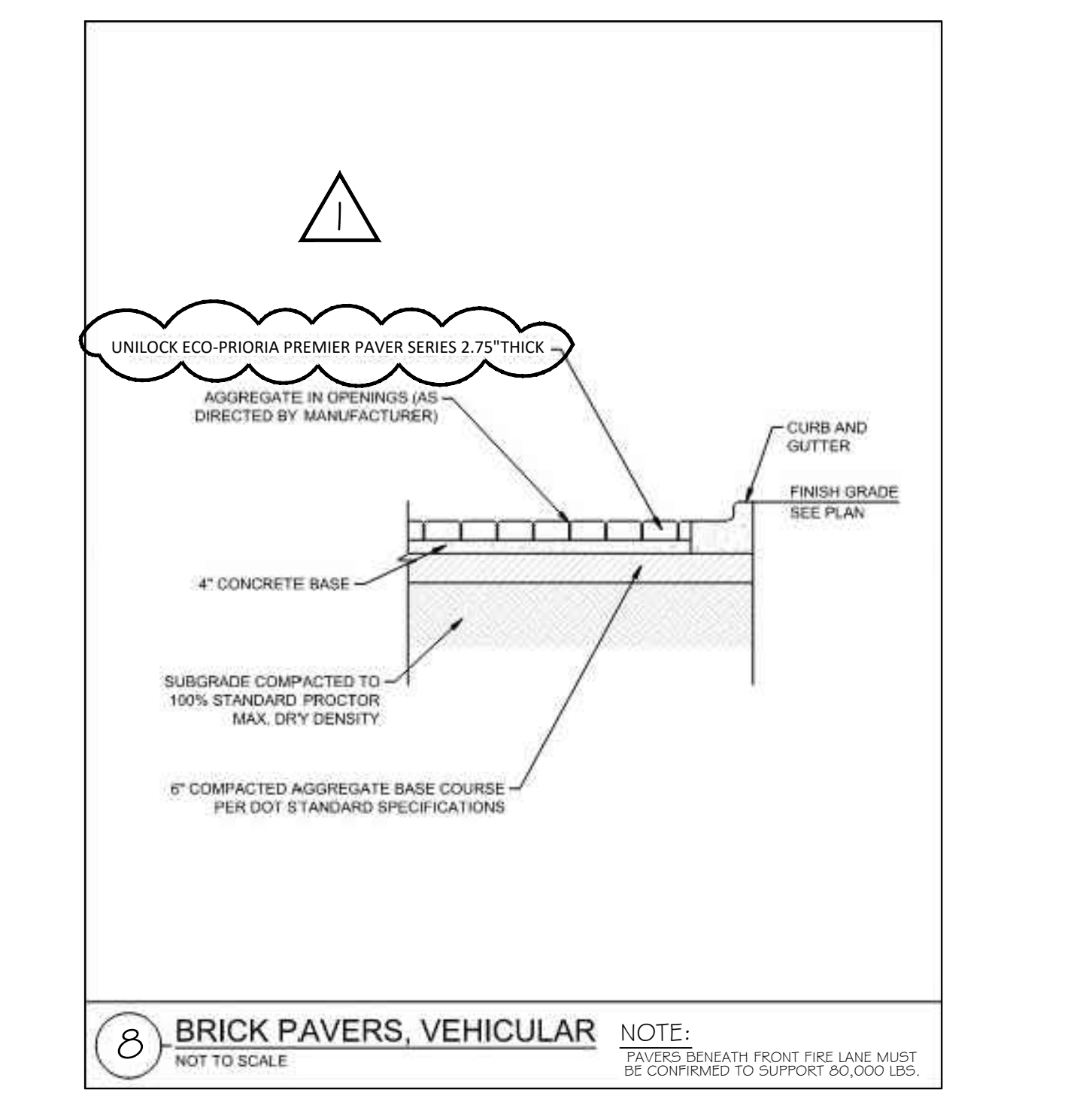
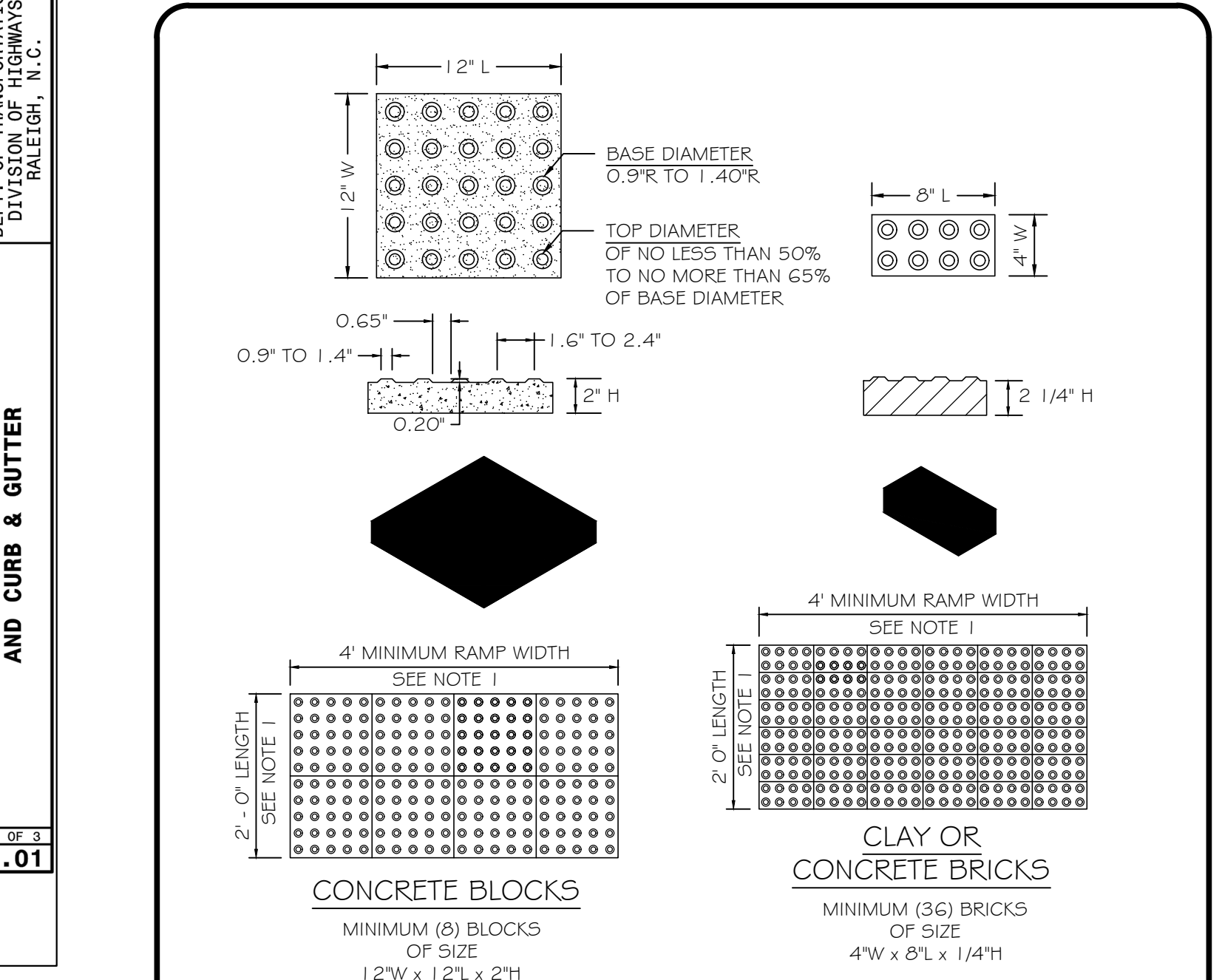
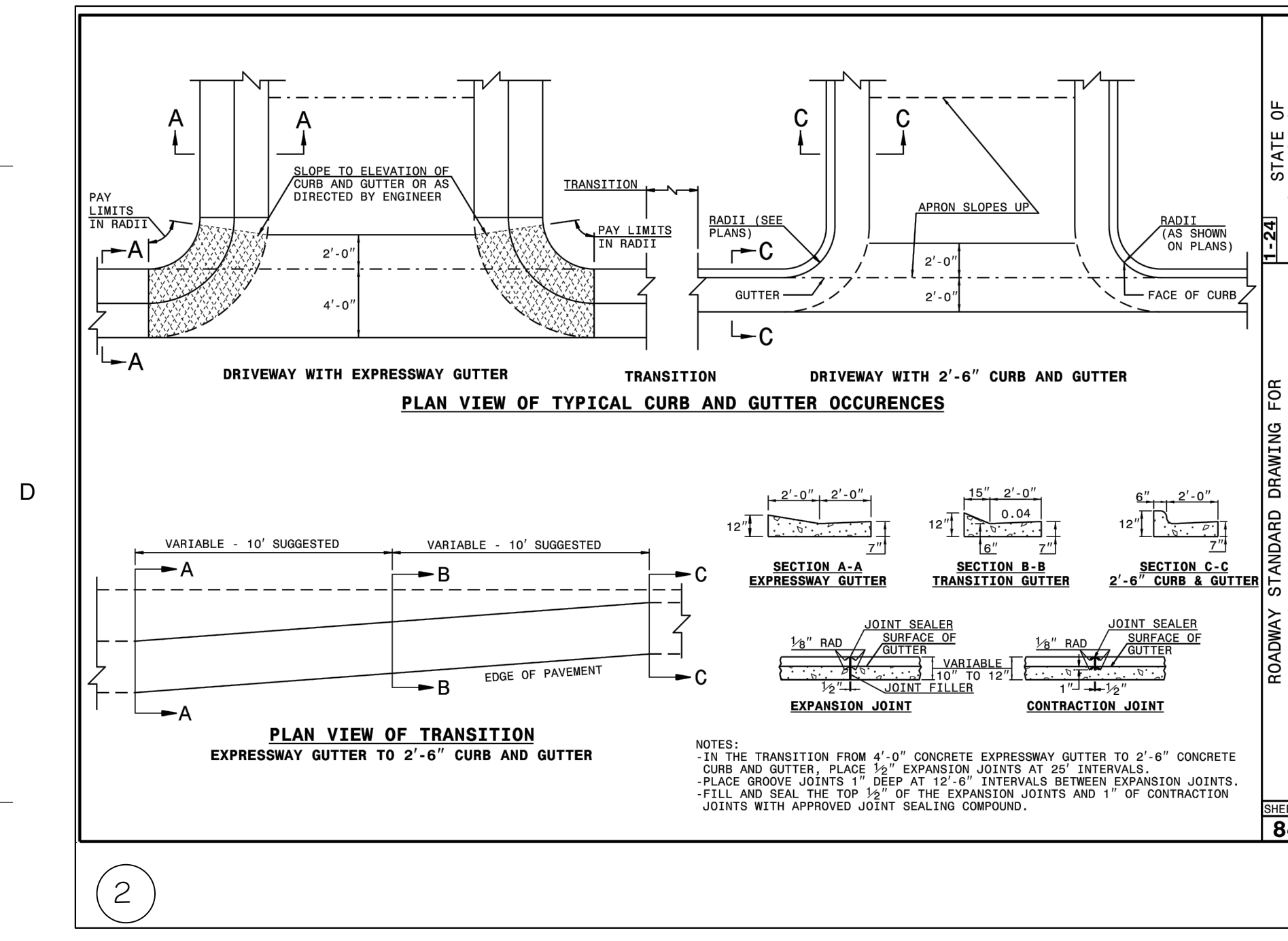
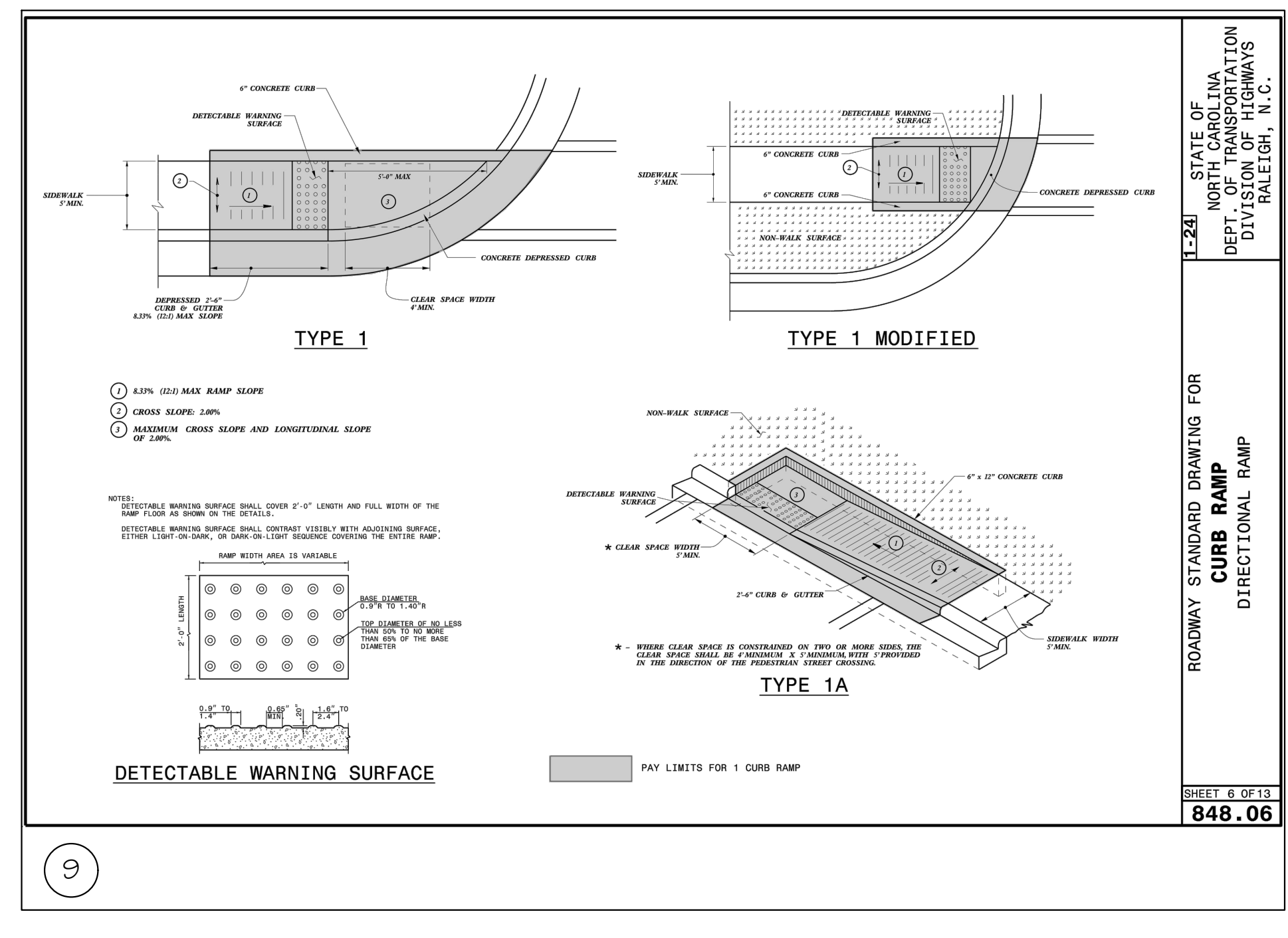
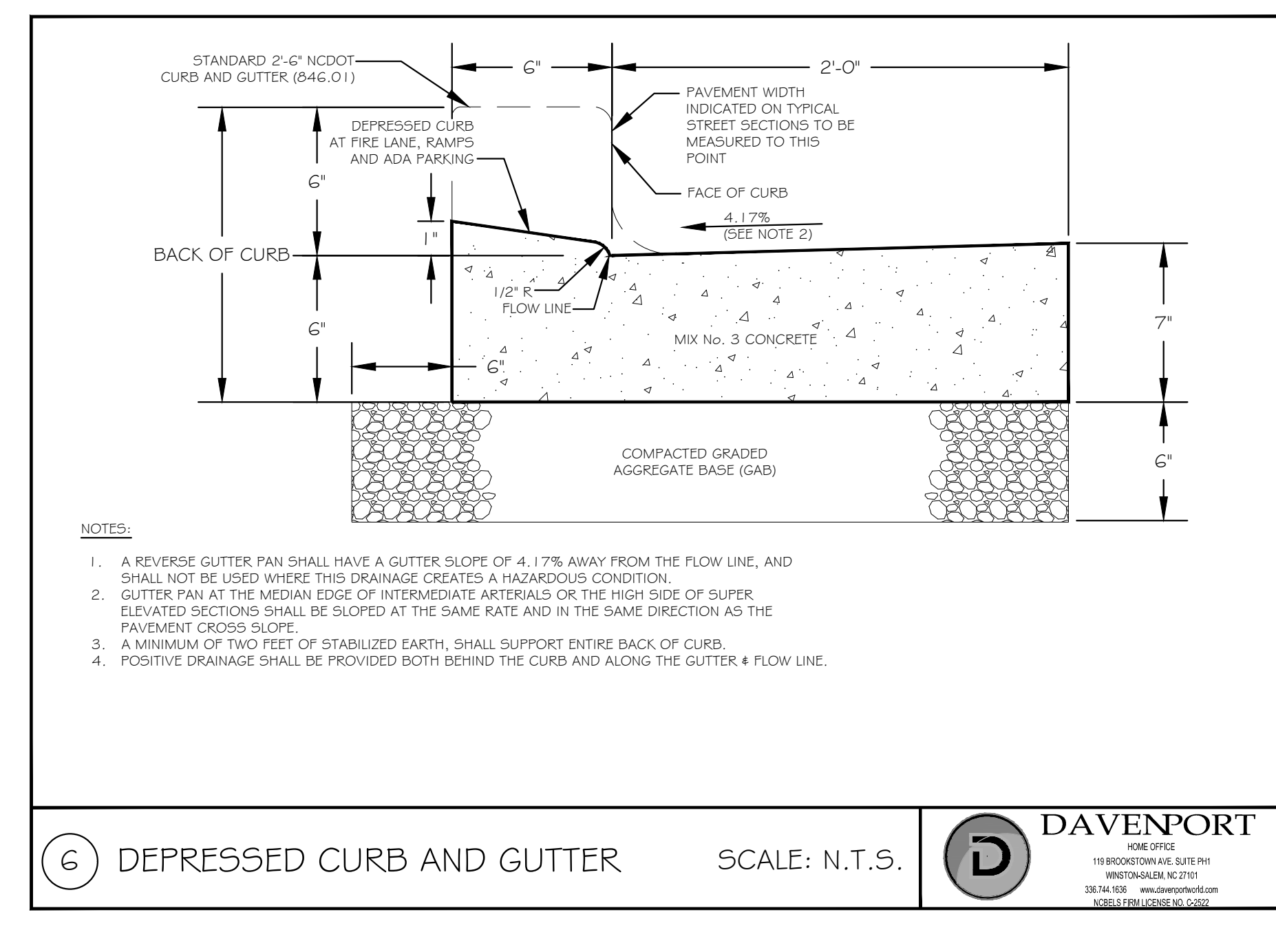
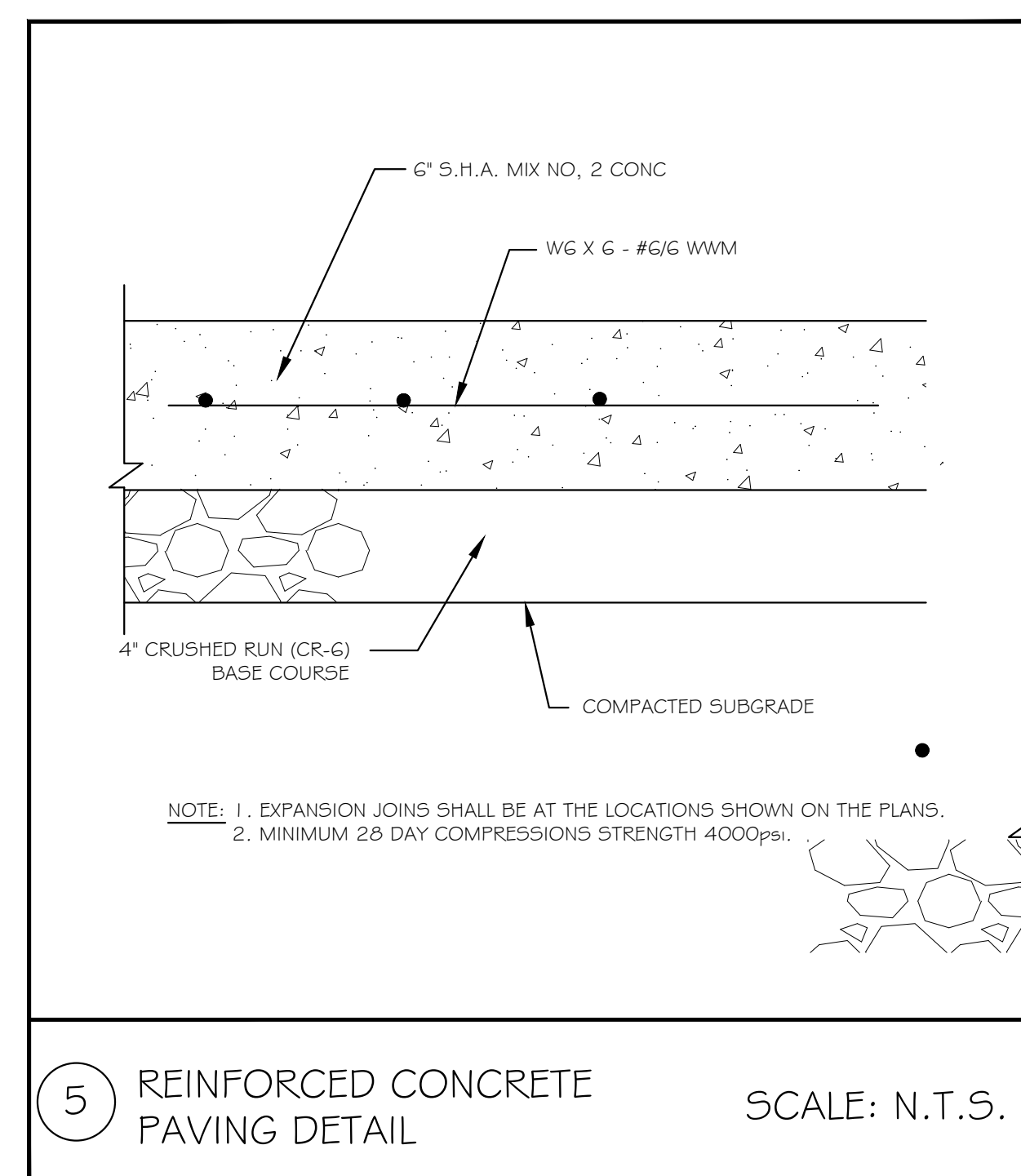
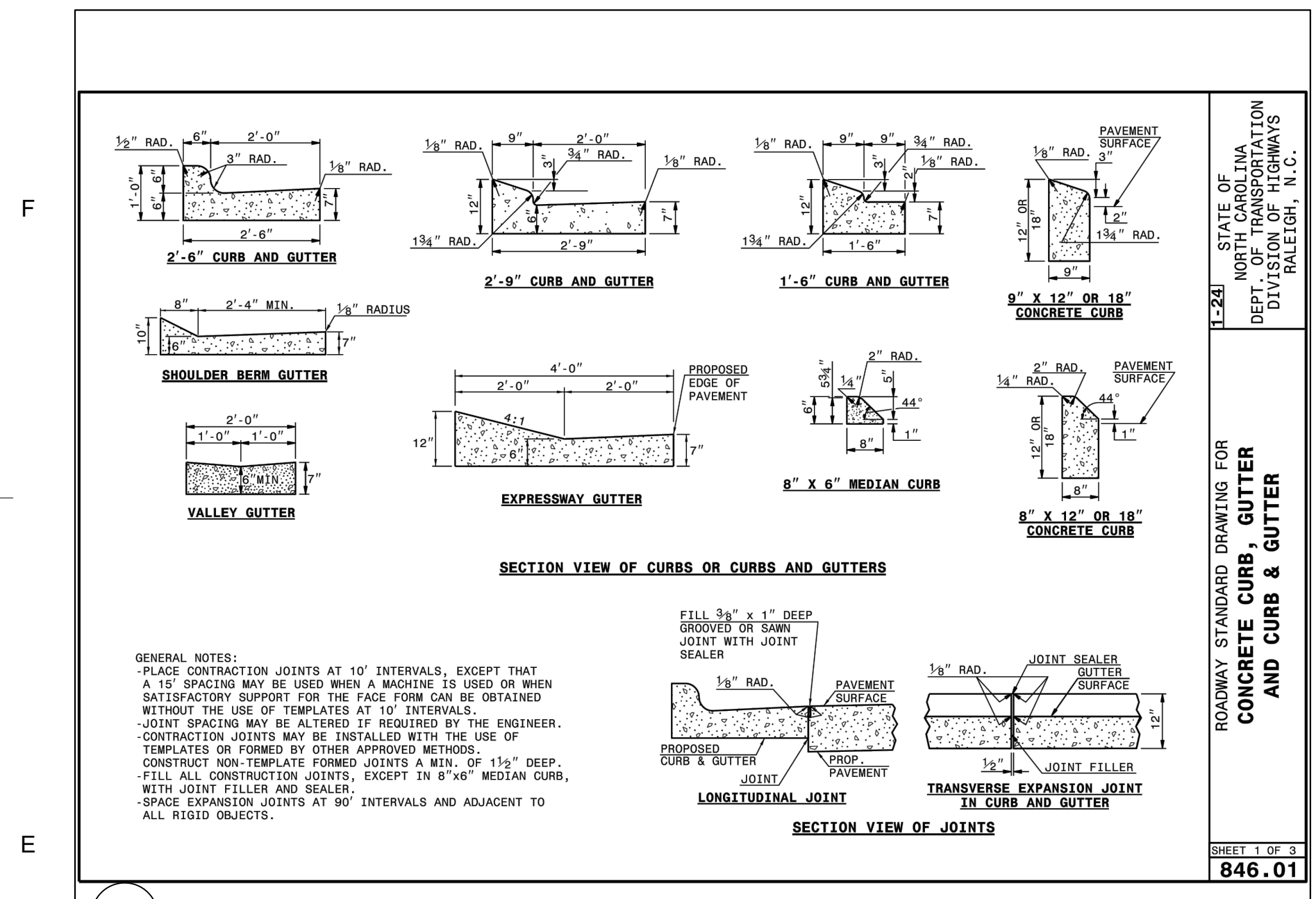
PRIVATE FIRE MAIN PROFILE (LEG 1)
SCALE: 1" = 30' (HORIZ)
SCALE: 1" = 3' (VERT)



PRIVATE FIRE MAIN PROFILE (LEG 2)
SCALE: 1" = 30' (HORIZ)
SCALE: 1" = 3' (VERT)

WATER PIPE SCHEDULE		
SIZE	MATERIAL	LENGTH
2"	DIP	349 LF
4"	DIP	46 LF
6"	DIP	84 LF
8"	DIP	451 LF





LITTLE
 DIVERSIFIED ARCHITECTURAL CONSULTING

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 (919) 474-2500

www.littleonline.com

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 ESTABLISHED 1704

NEW HANOVER COUNTY PUBLIC LIBRARY

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SEAL
 055567
 CURTIS J. DAVIS
 3/18/2024

ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

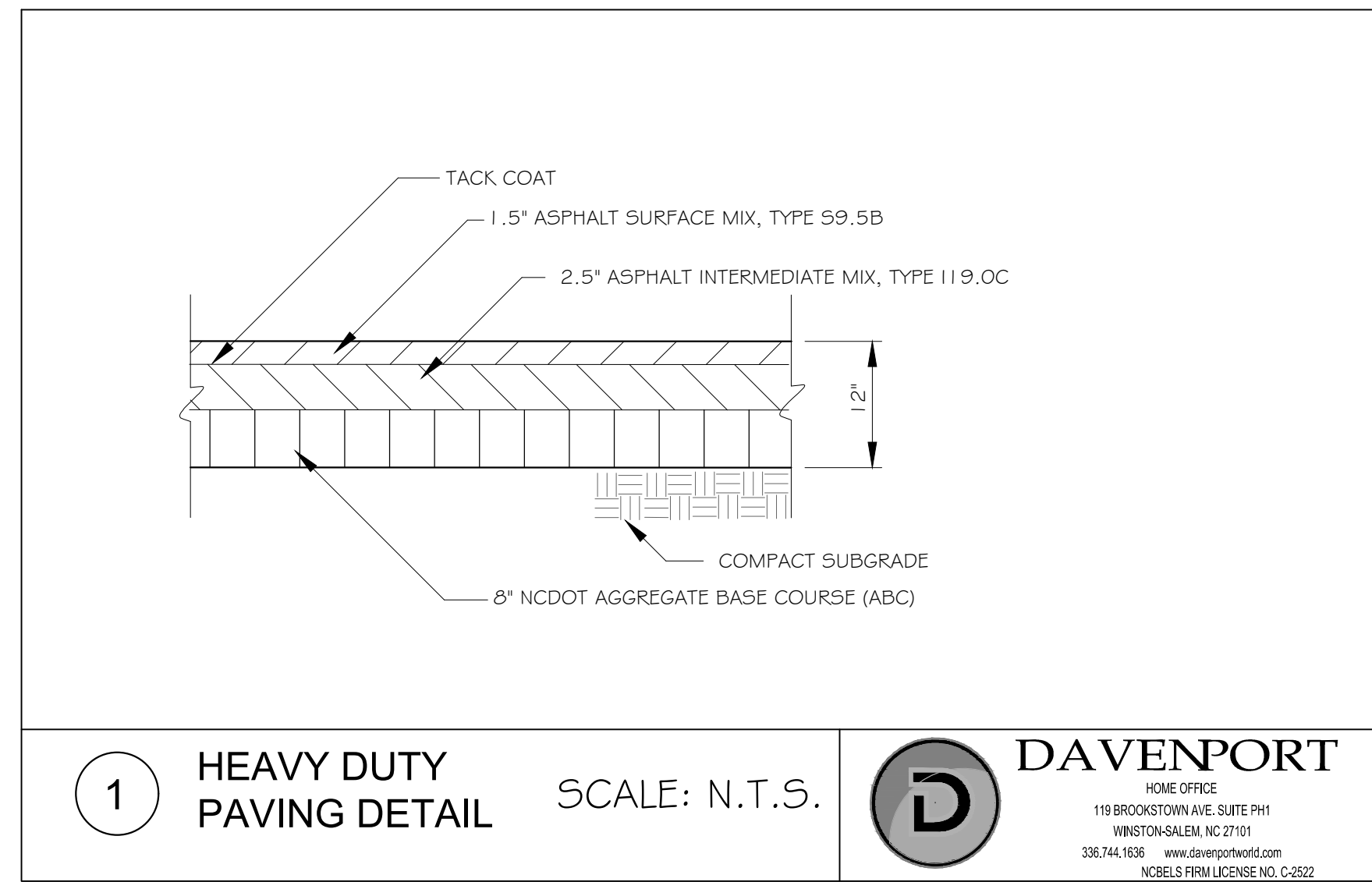
NO.	REASON	DATE
1	REVISED PAVEMENT DESCRIPTION	3/28/24

PROJECT TEAM
 PRINCIPAL IN CHARGE
JD
 PROJECT MANAGER
CD
 DESIGN TEAM
GH
 PROJECT NAME
NORTHCHASE BRANCH LIBRARY
 4400 NORTHCHASE PKWY NE
 WILMINGTON, NC 28405

PROJECT NO.
514.18349.00

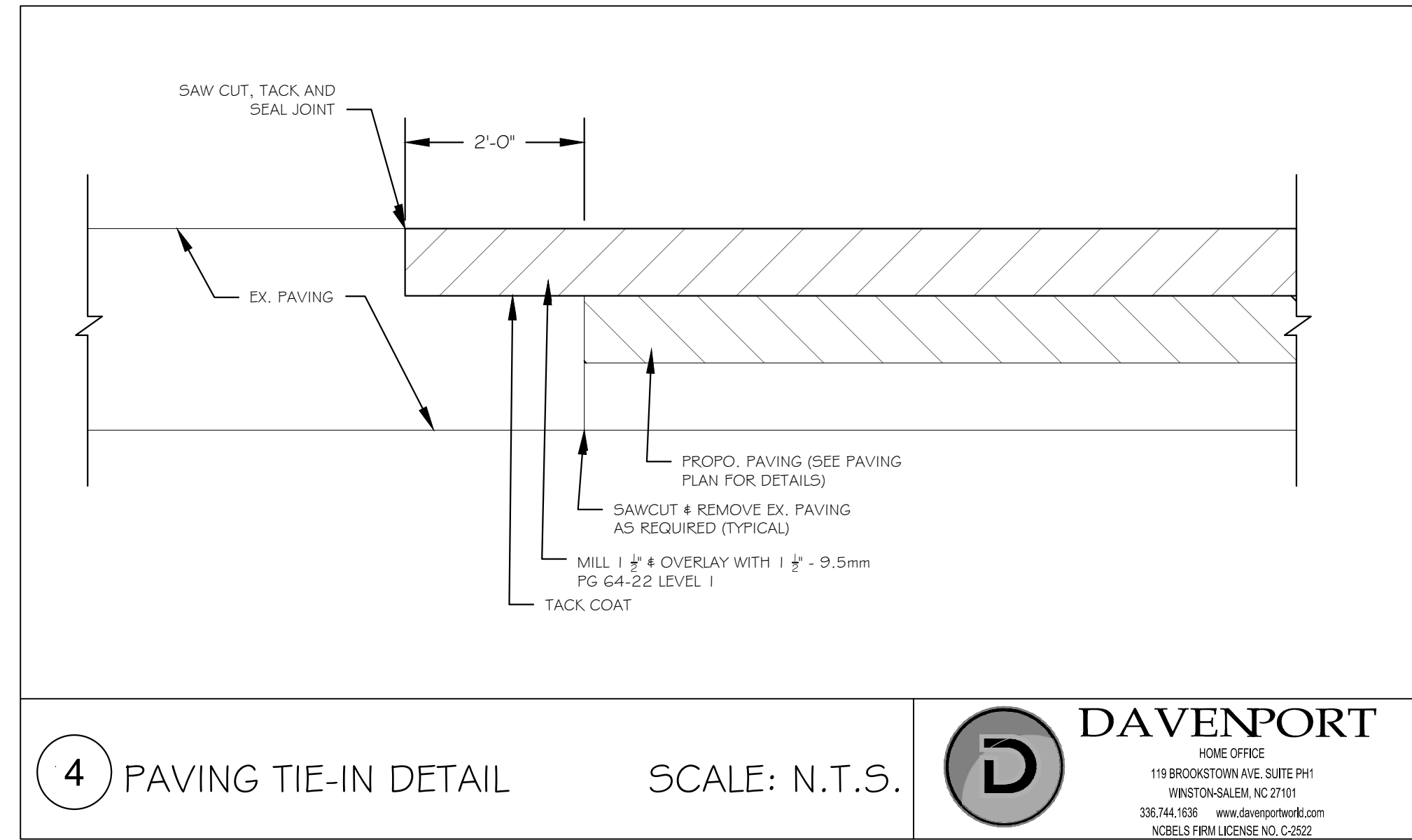
SHEET TITLE
SITE DETAILS

SHEET NUMBER
C-500



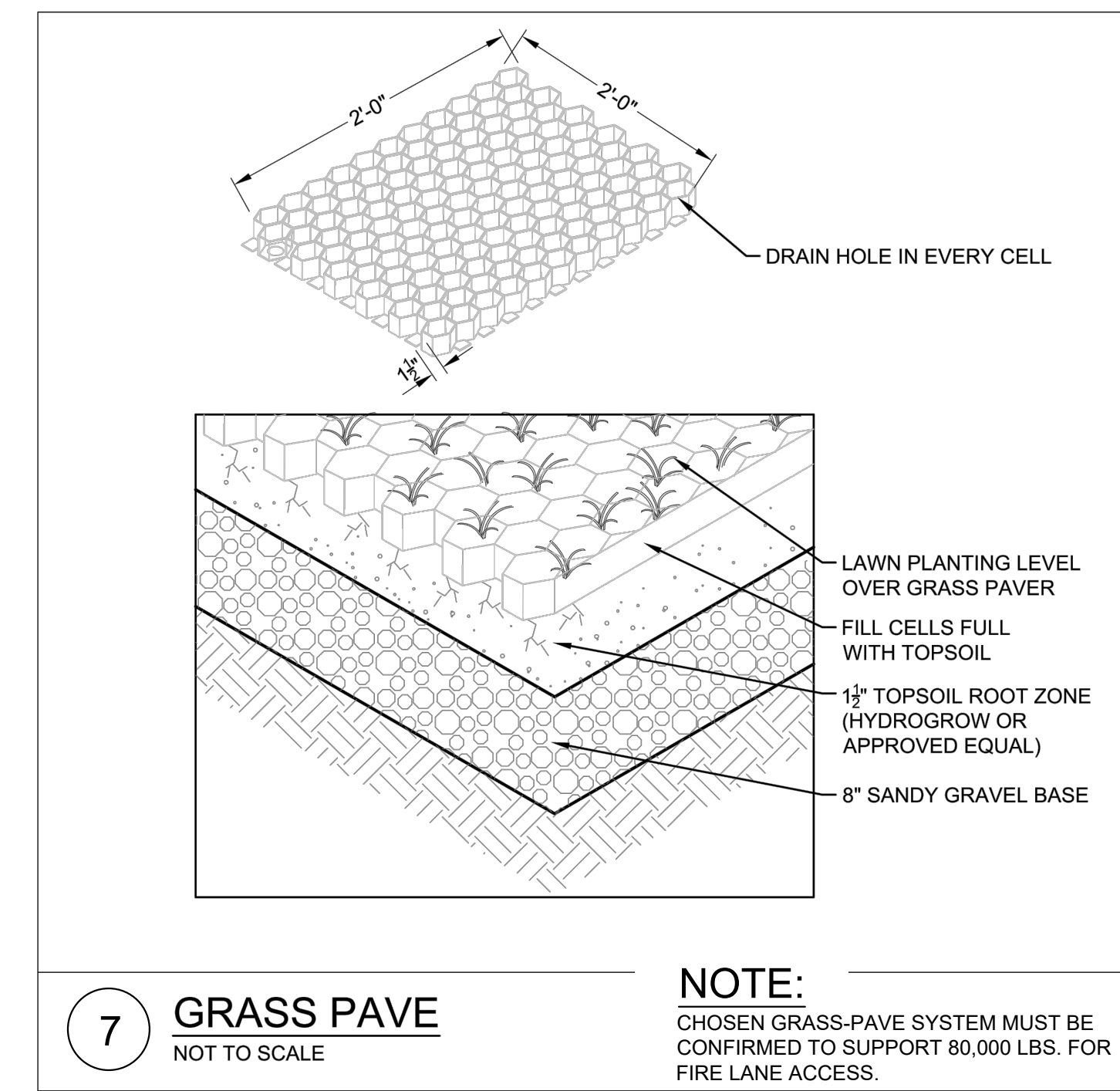
1 HEAVY DUTY PAVING DETAIL SCALE: N.T.S.

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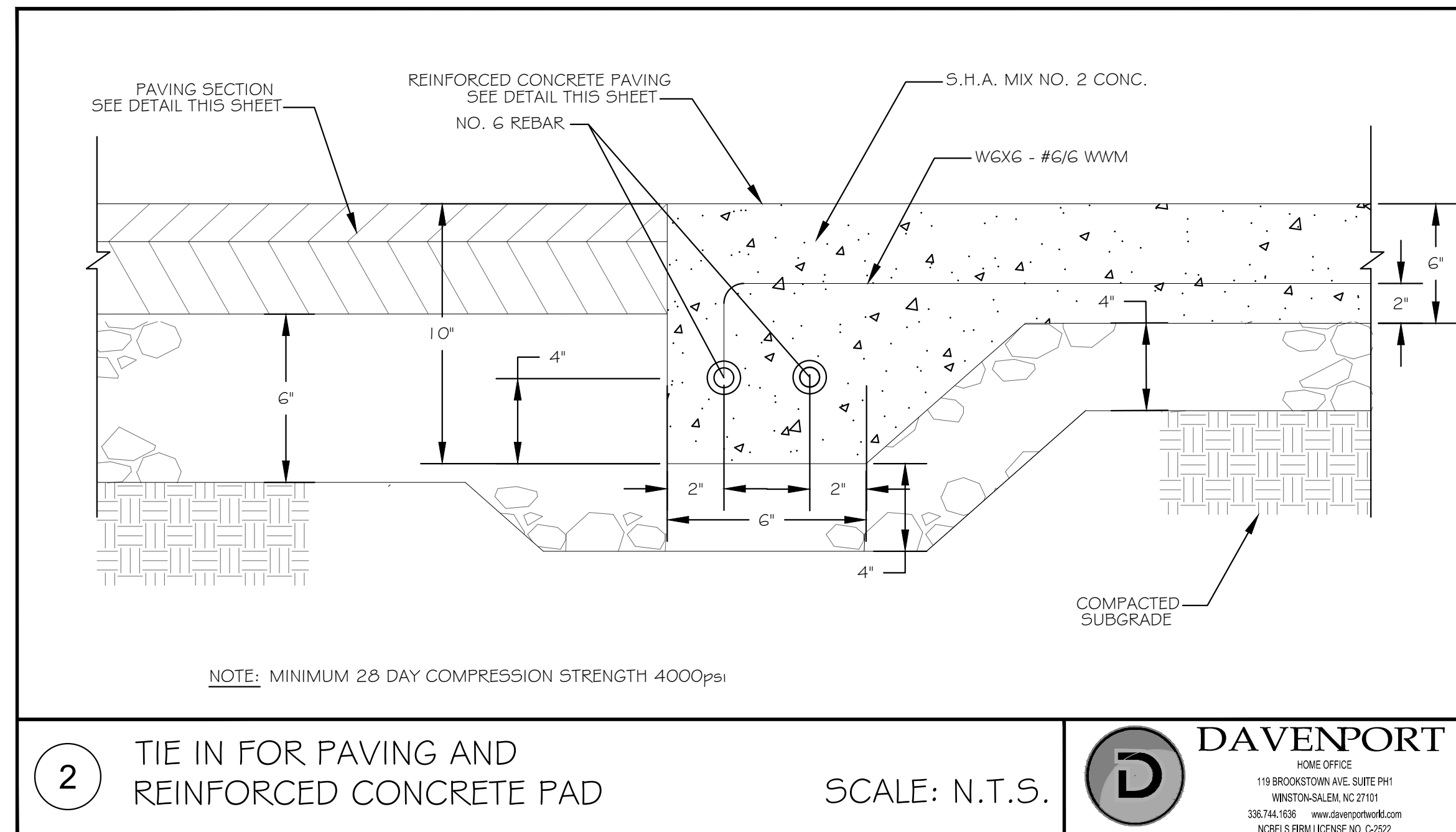
4 PAVING TIE-IN DETAIL SCALE: N.T.S.

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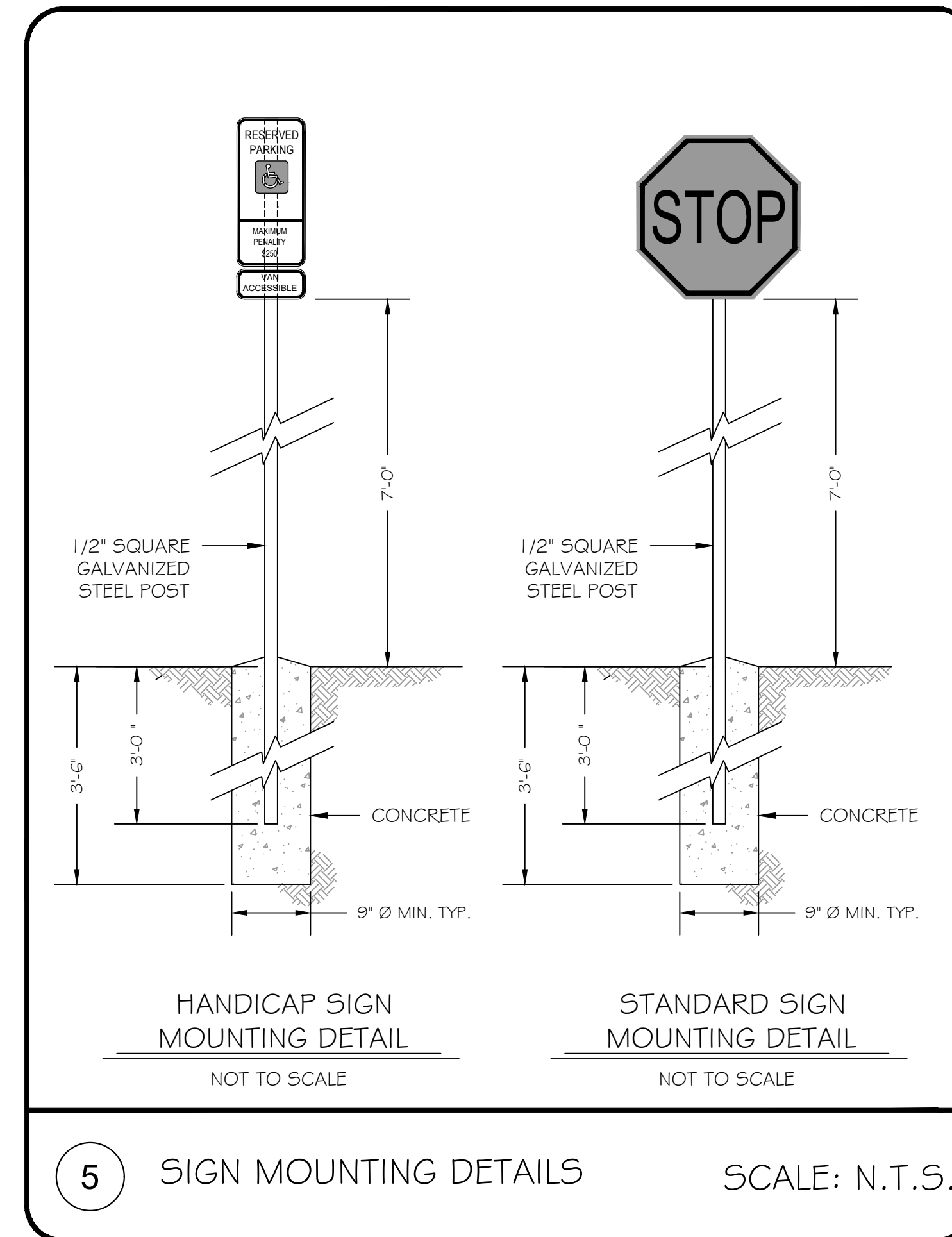
7 GRASS PAVE NOT TO SCALE

NOTE:
 CHOSEN GRASS-PAVE SYSTEM MUST BE CONFIRMED TO SUPPORT 80,000 LBS. FOR FIRE LANE ACCESS.



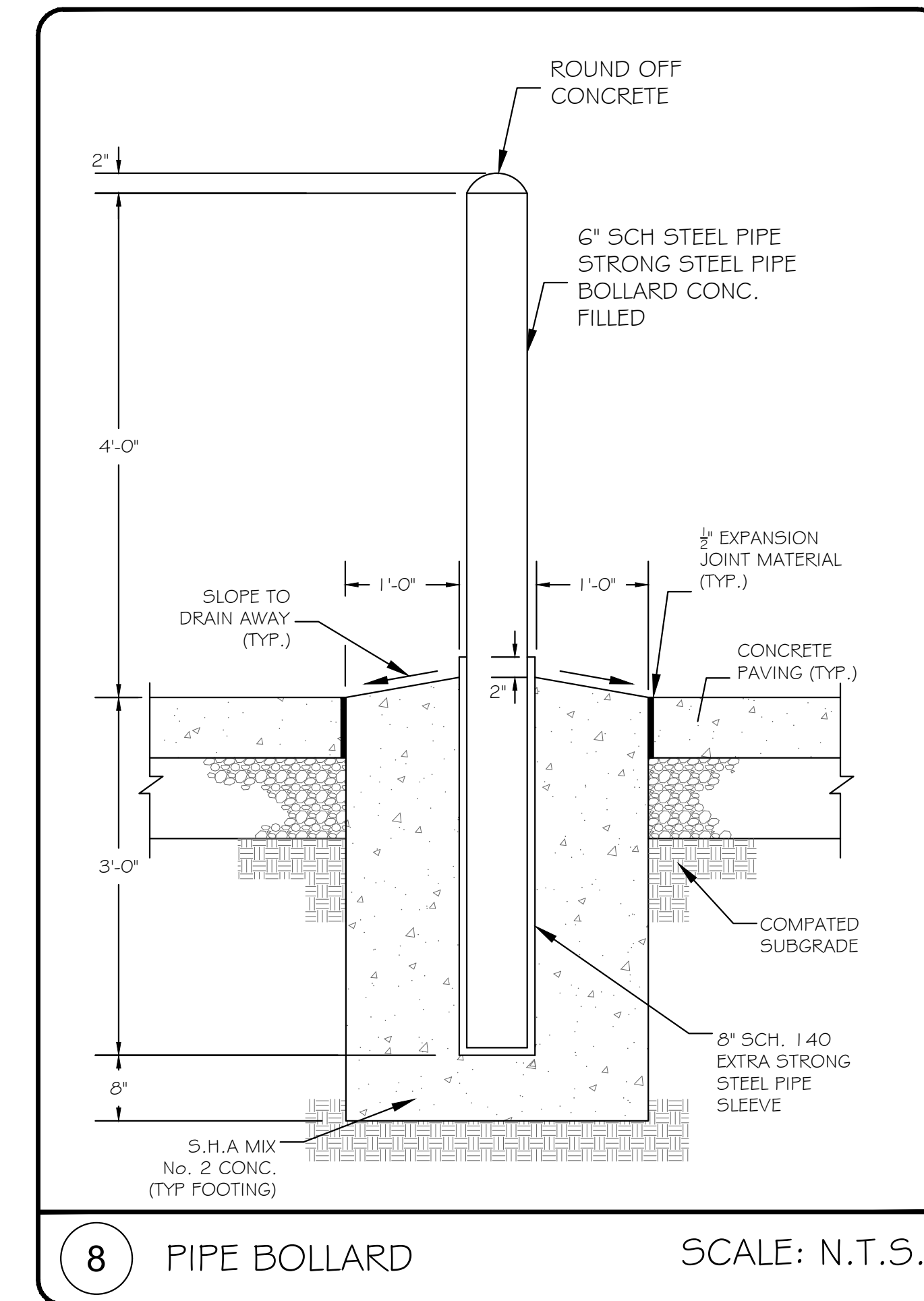
2 TIE IN FOR PAVING AND REINFORCED CONCRETE PAD SCALE: N.T.S.

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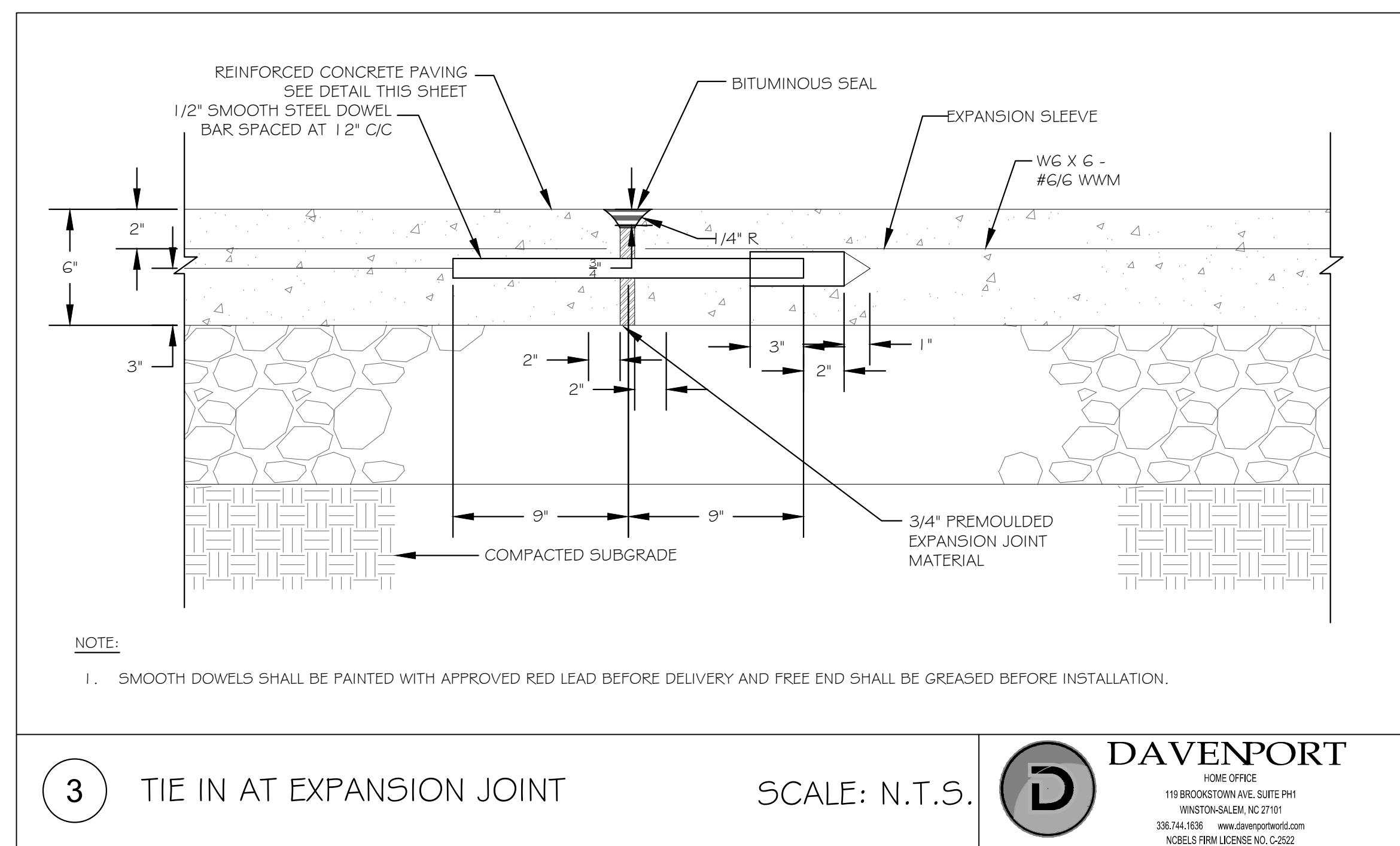
5 SIGN MOUNTING DETAILS SCALE: N.T.S.

SCALE: N.T.S.



8 PIPE BOLLARD SCALE: N.T.S.

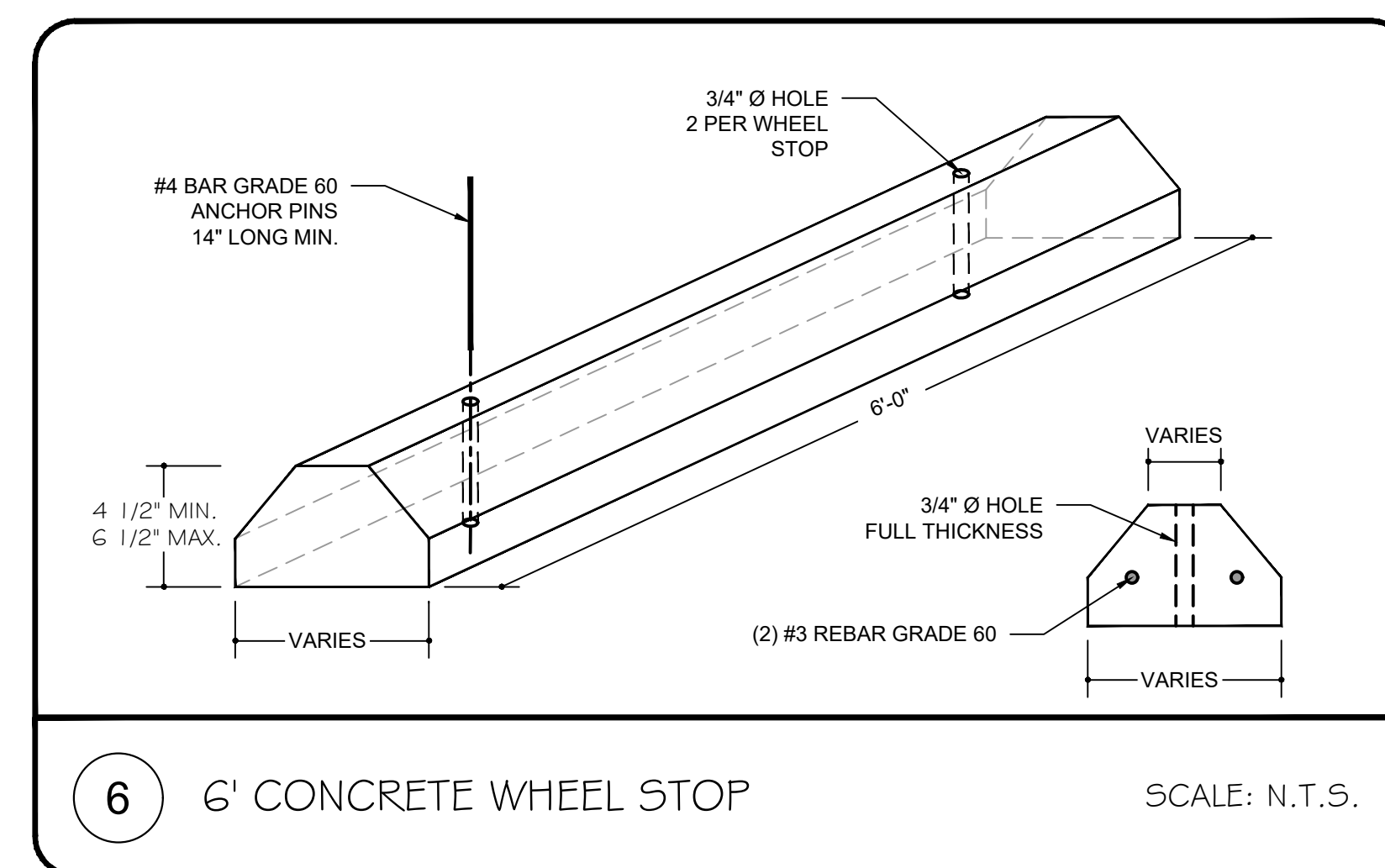
SCALE: N.T.S.



3 TIE IN AT EXPANSION JOINT SCALE: N.T.S.

SCALE: N.T.S.

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6 6\"/>

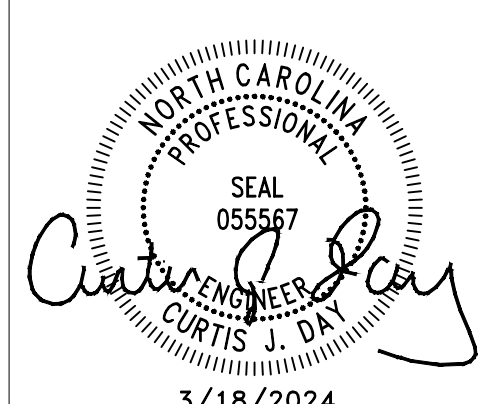
SCALE: N.T.S.

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ISSUE FOR

BID SET

ISSUE DATE

03/28/2024

REVISIONS

NO.	REASON	DATE

PROJECT TEAM

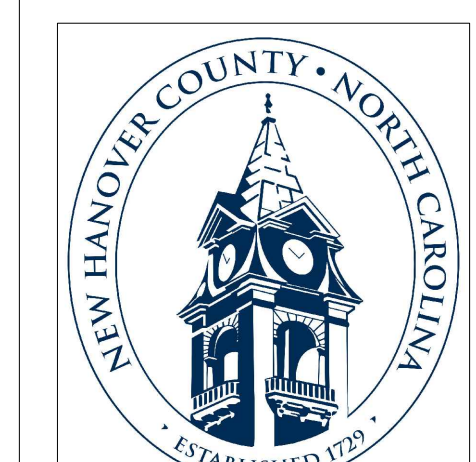
PRINCIPAL IN CHARGE	JD
PROJECT MANAGER	CD
DESIGN TEAM	GH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY
 4400 NORTHCHASE PKWY NE
 WILMINGTON, NC 28405

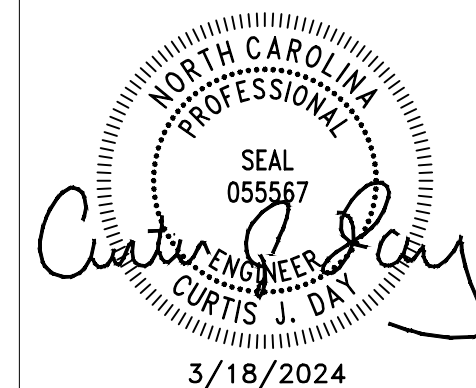
PROJECT NO.
514.18349.00

SHEET TITLE
SITE DETAILS

SHEET NUMBER
C-501



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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PRECAST CONCRETE ENDWALL
FOR SINGLE 12" THRU 72" PIPE - 90° SKEW

SHEET 1 OF 2

838.80

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
GUIDE FOR RIP RAP AT PIPE OUTLETS

SHEET 1 OF 1

876.02

ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

REVISIONS
NO. REASON DATE

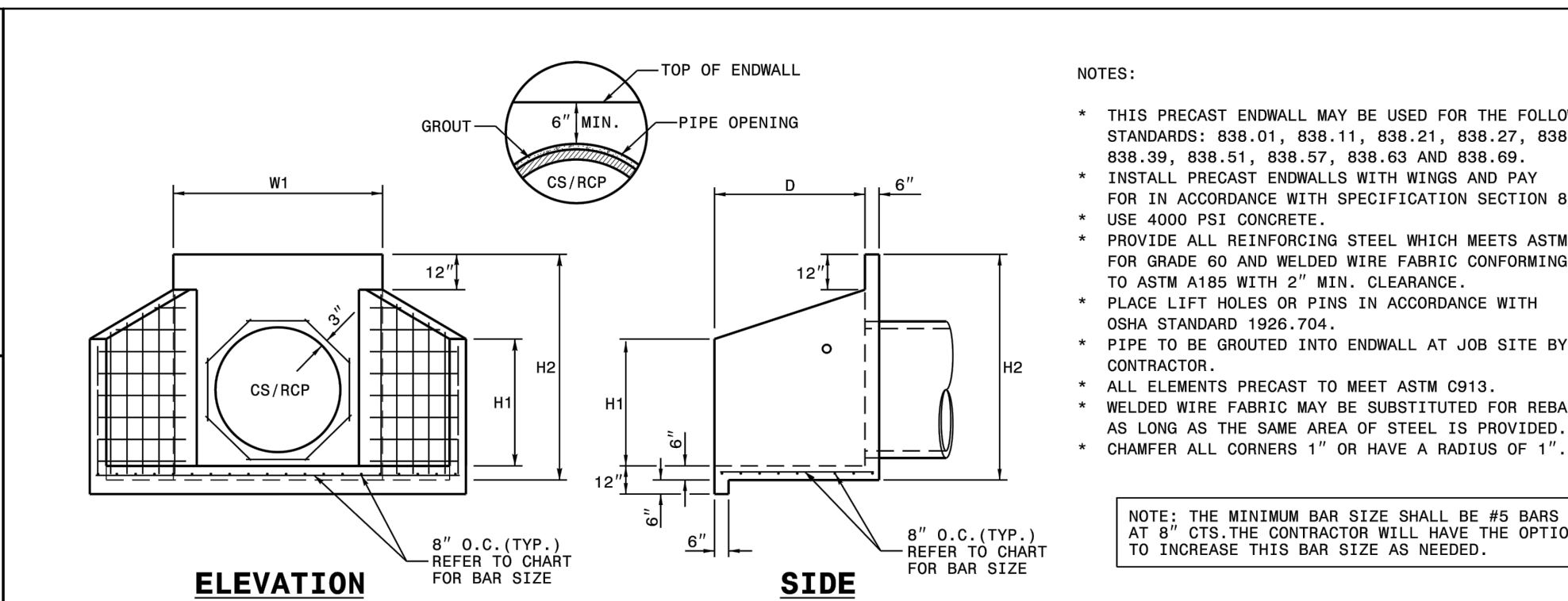
PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
CH

PROJECT NAME
NORTHCHASE BRANCH
LIBRARY
4400 NORTHCHASE
PKWY NE
WILMINGTON, NC 28405

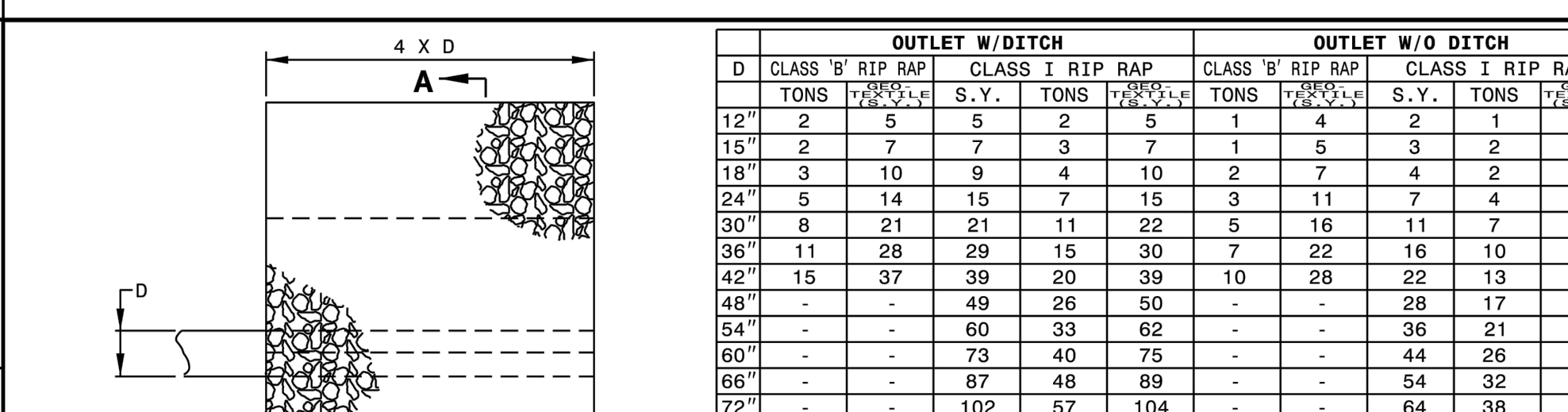
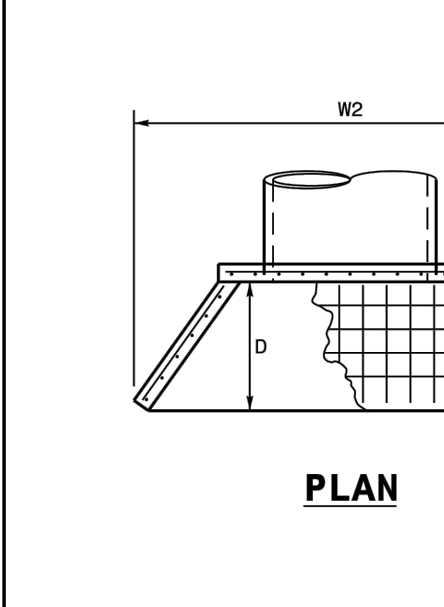
PROJECT NO.
514.18349.00

SHEET TITLE
STORM DRAIN
DETAILS

SHEET NUMBER
C-502



ENDWALL DIMENSIONS table with columns for PIPE DIA., BAR SIZE, MIN./MAX. H1, MIN./MAX. H2, MIN./MAX. D, MIN./MAX. W1, MIN./MAX. W2. Rows list various pipe diameters from 12" to 72" and corresponding bar sizes and dimensions.



OUTLET W/DITCH table with columns for D CLASS 'B' RIP RAP, CLASS I RIP RAP, CLASS II RIP RAP, and CLASS III RIP RAP. Rows list various pipe diameters and corresponding rip rap specifications.

H= RIP RAP TO TOP OF PIPE (MAX. H = D + T)
T= 12" CLASS 'B' RIP RAP, UNLESS OTHERWISE SHOWN ON PLANS
KEY-IN RIP-RAP

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC BEARING GRADED DROP INLET
FOR DOUBLE FRAME AND GRATES

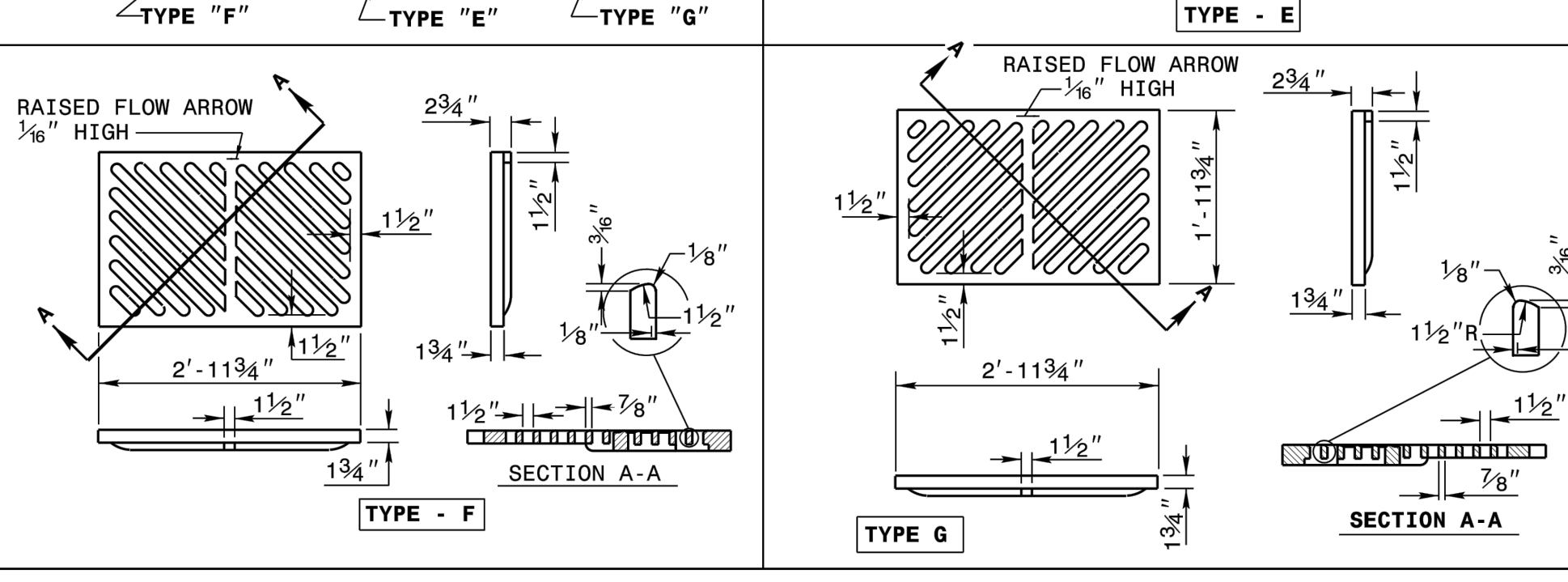
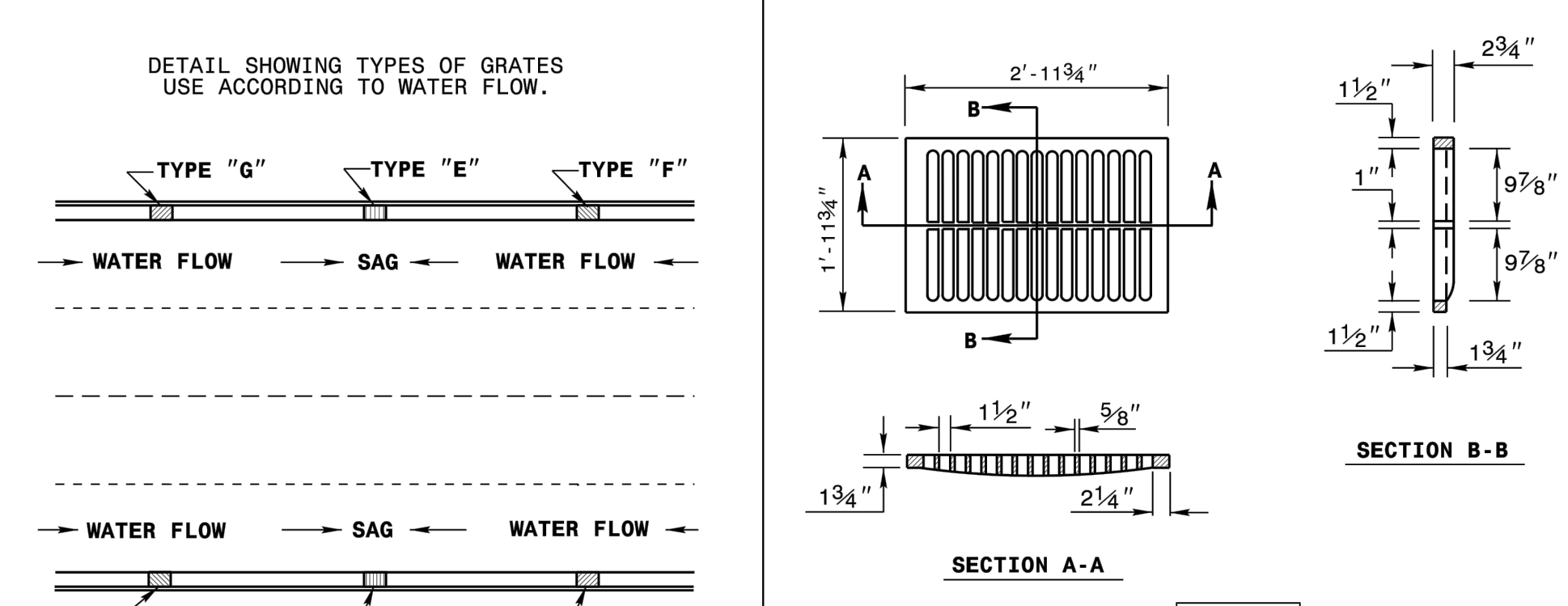
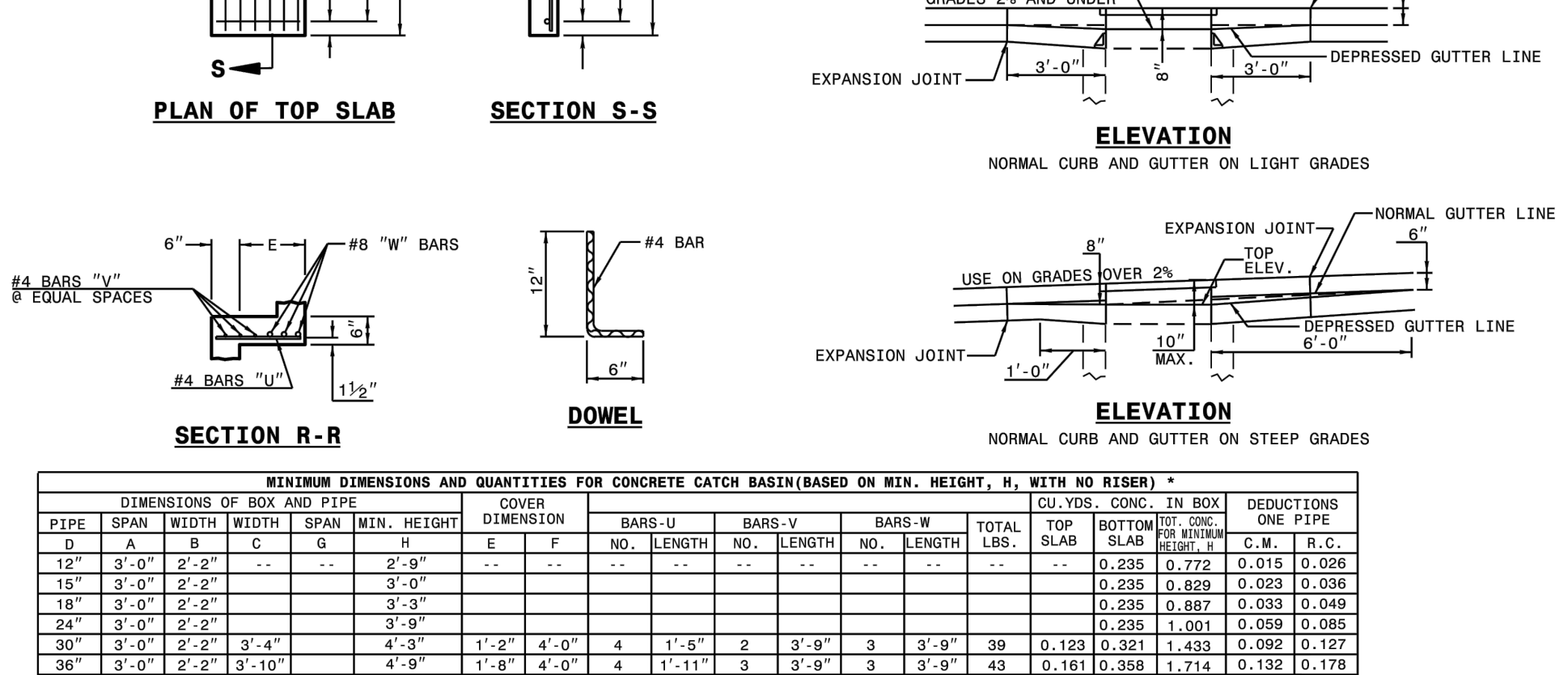
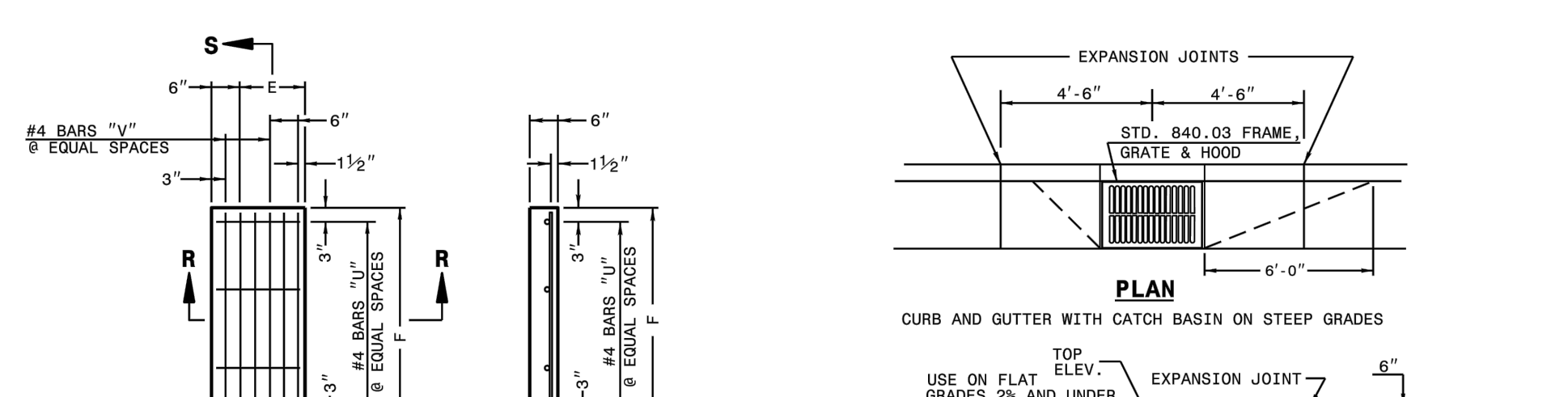
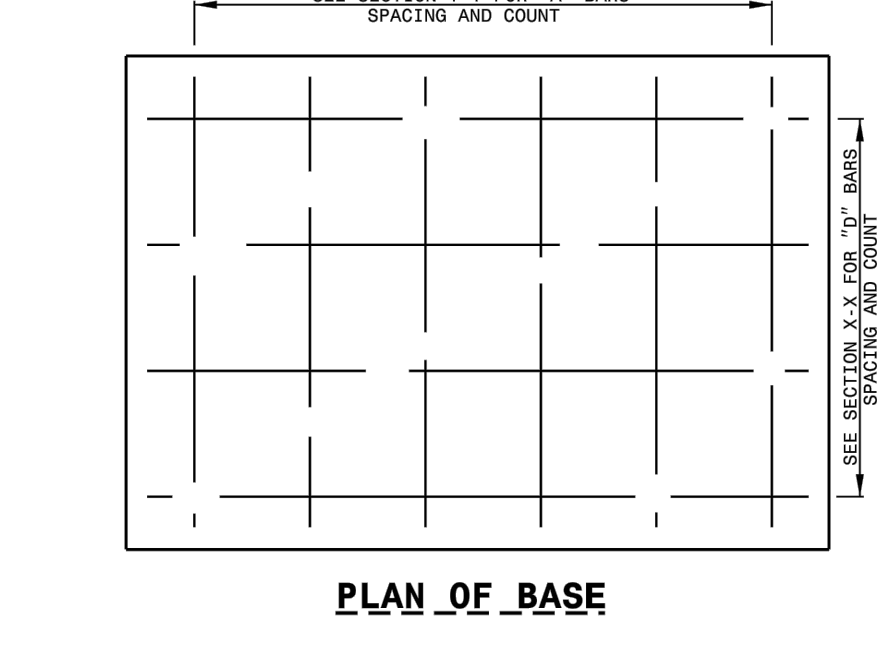
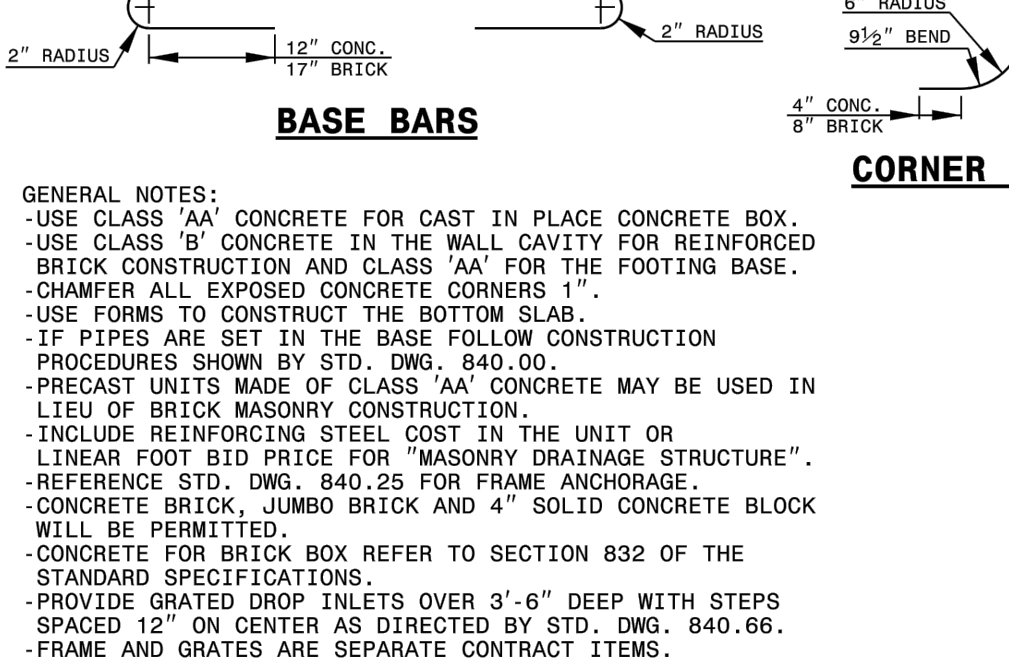
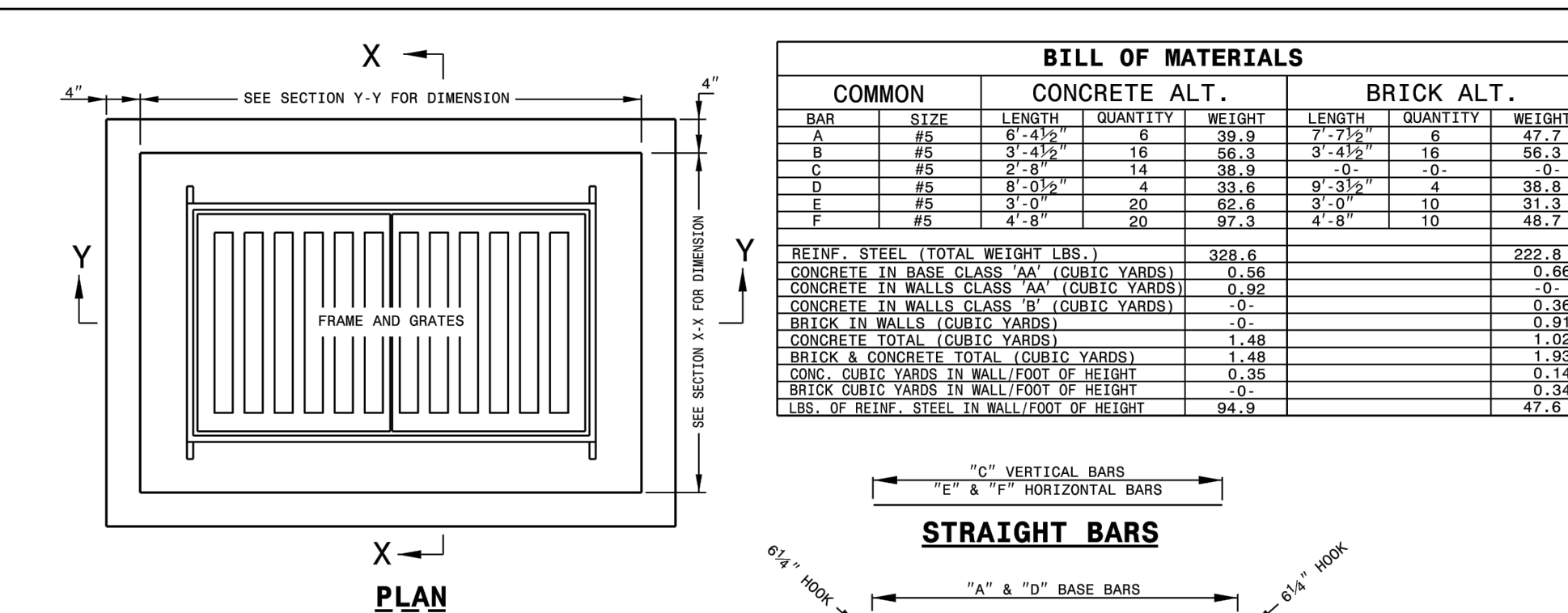
SHEET 2 OF 2
840.35

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN

SHEET 2 OF 2

840.03



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC BEARING GRADED DROP INLET
FOR DOUBLE FRAME AND GRATES

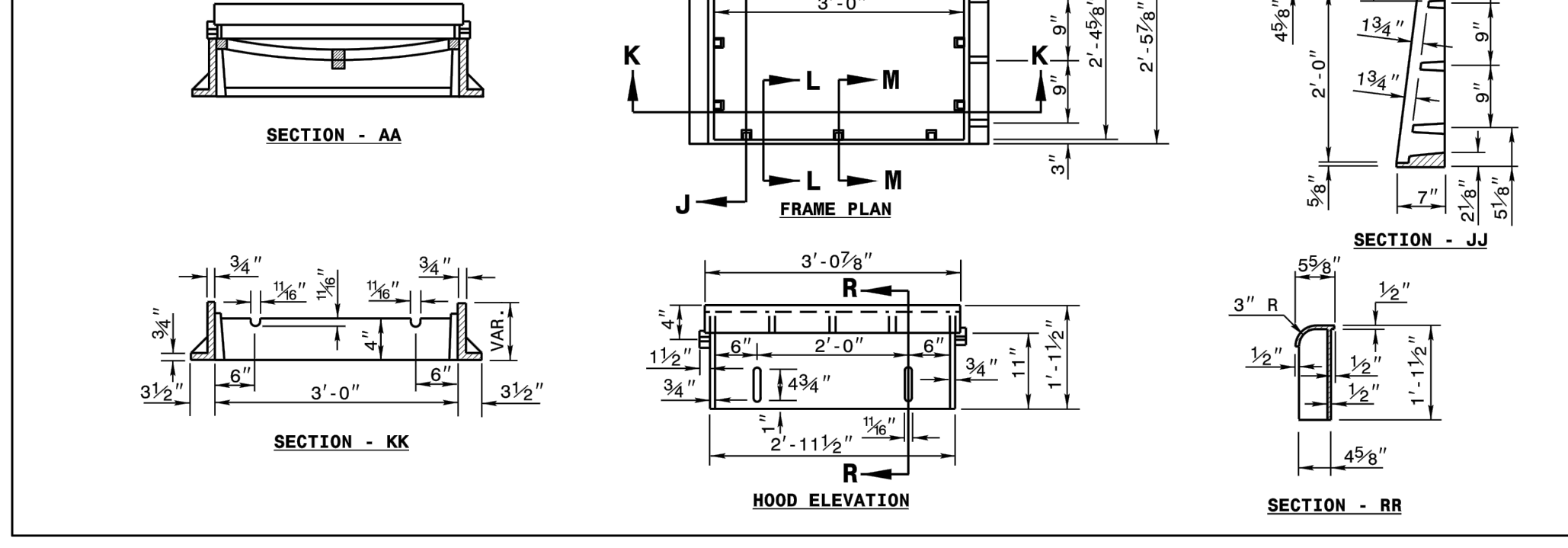
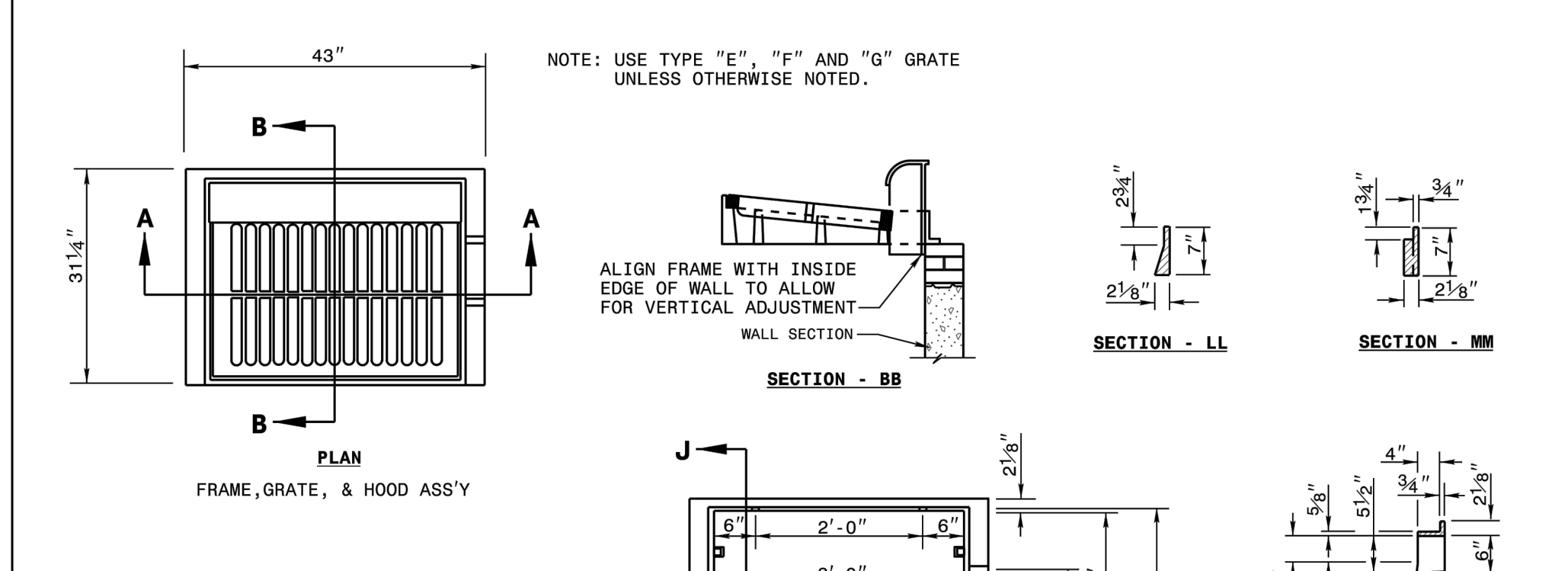
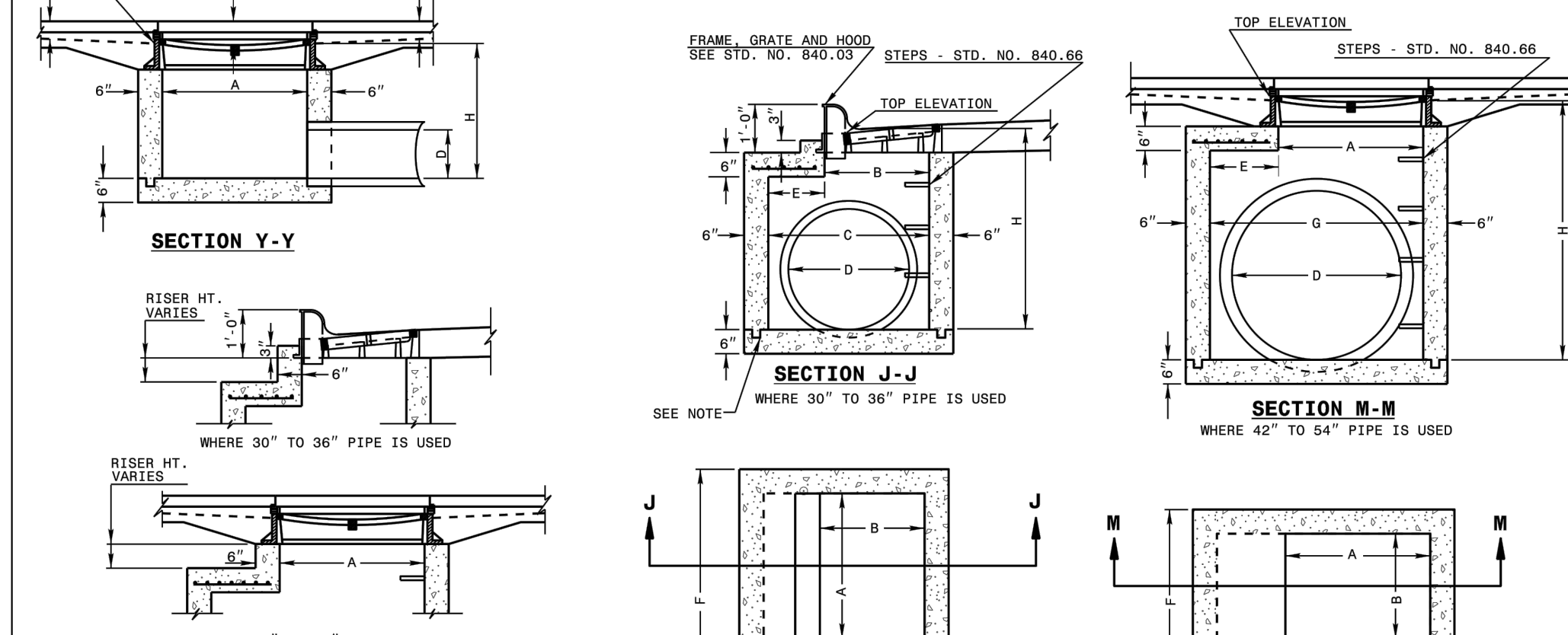
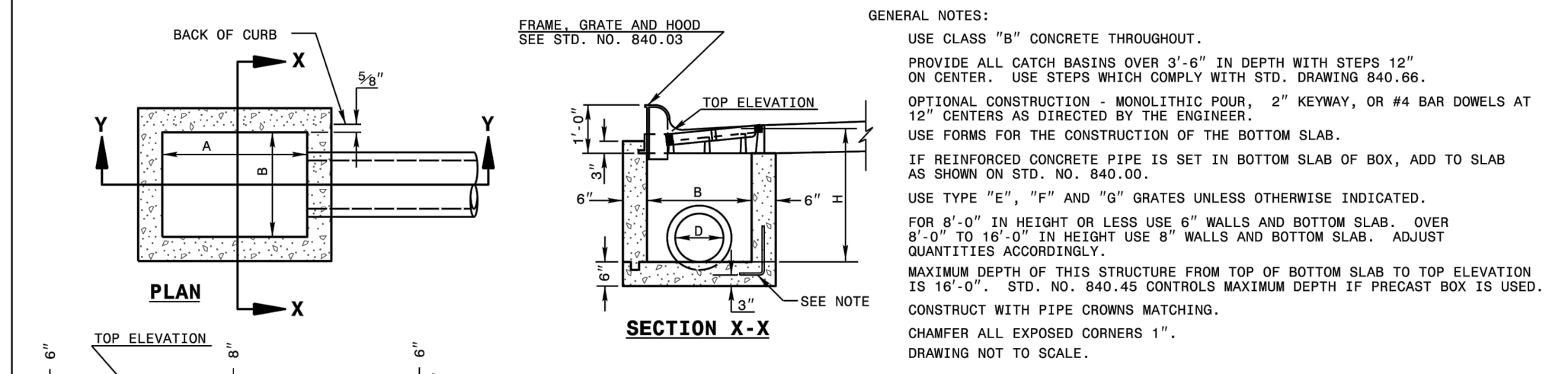
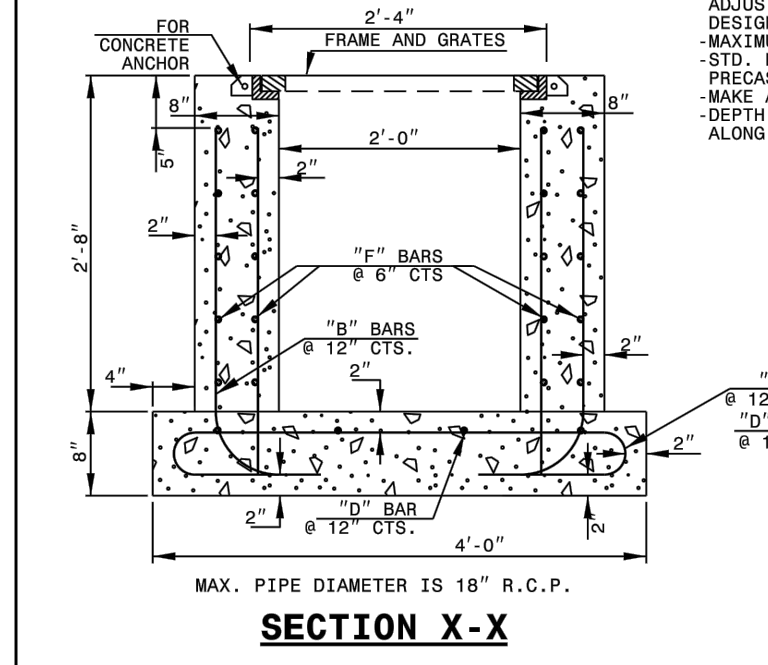
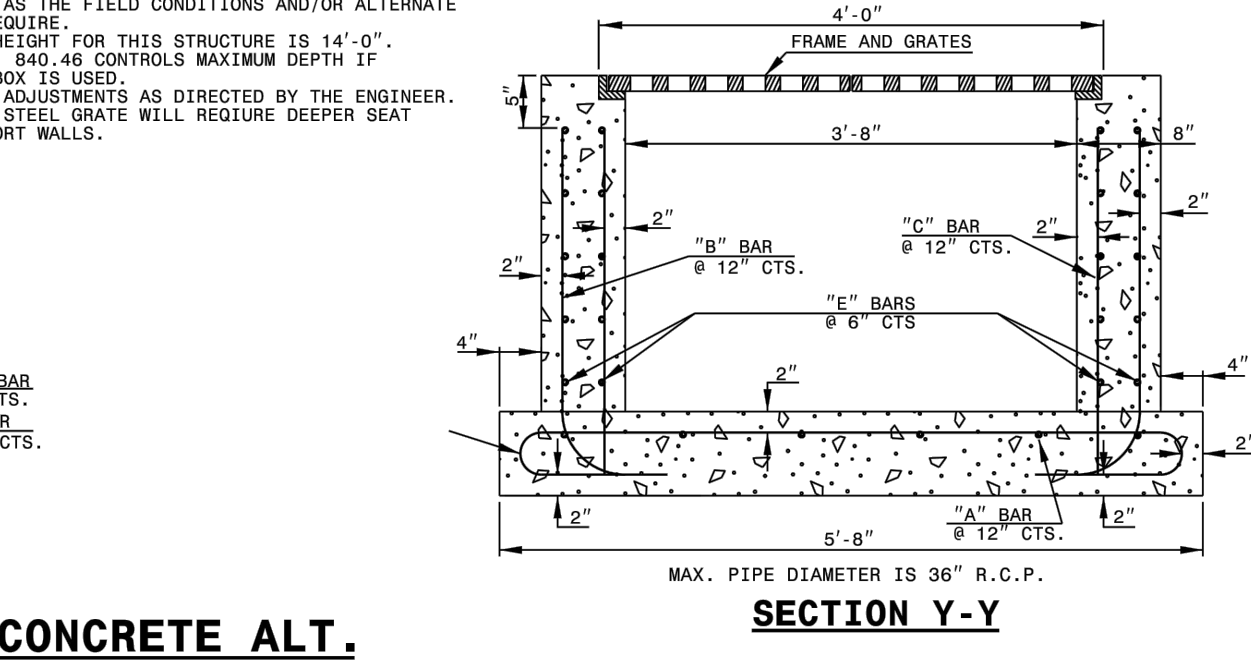
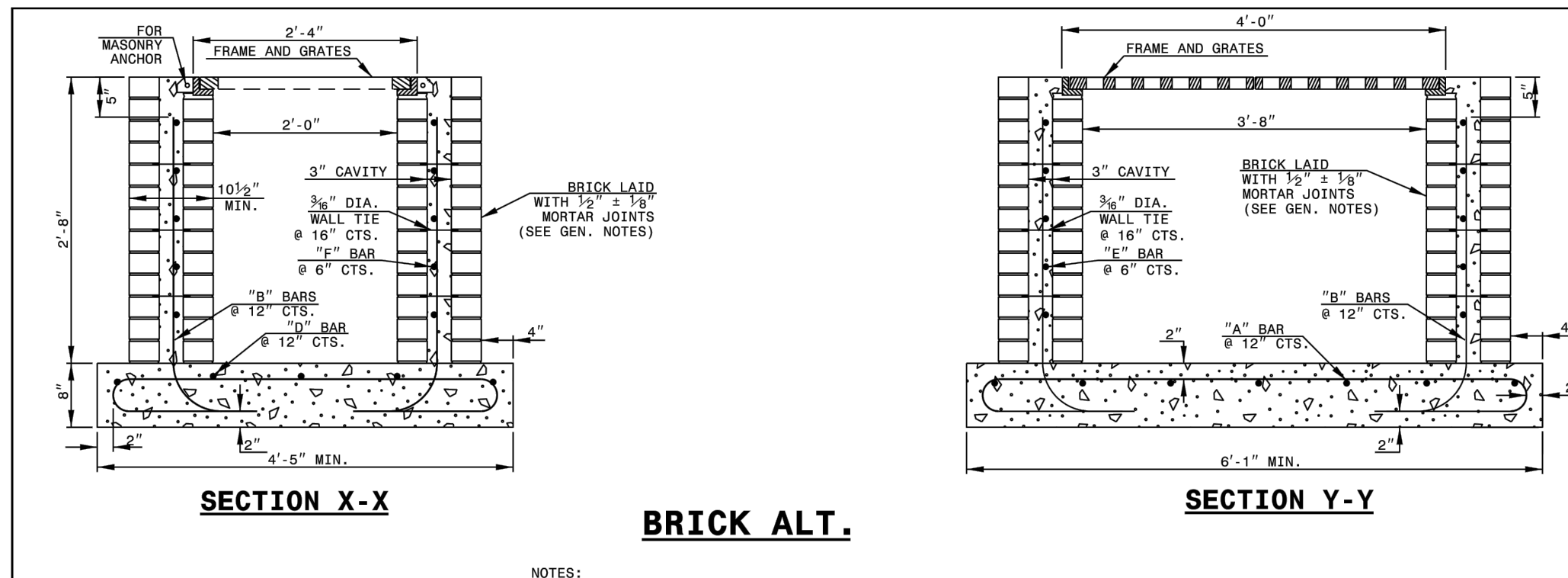
SHEET 1 OF 2
840.35

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
FRAME, GRATE, AND HOOD
FOR USE ON STANDARD CATCH BASIN

SHEET 1 OF 2

840.03



F

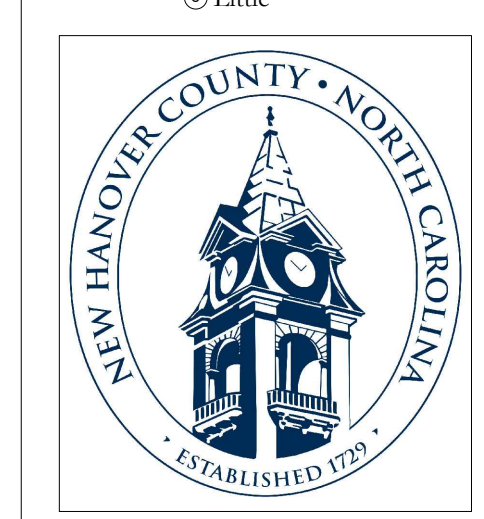
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D

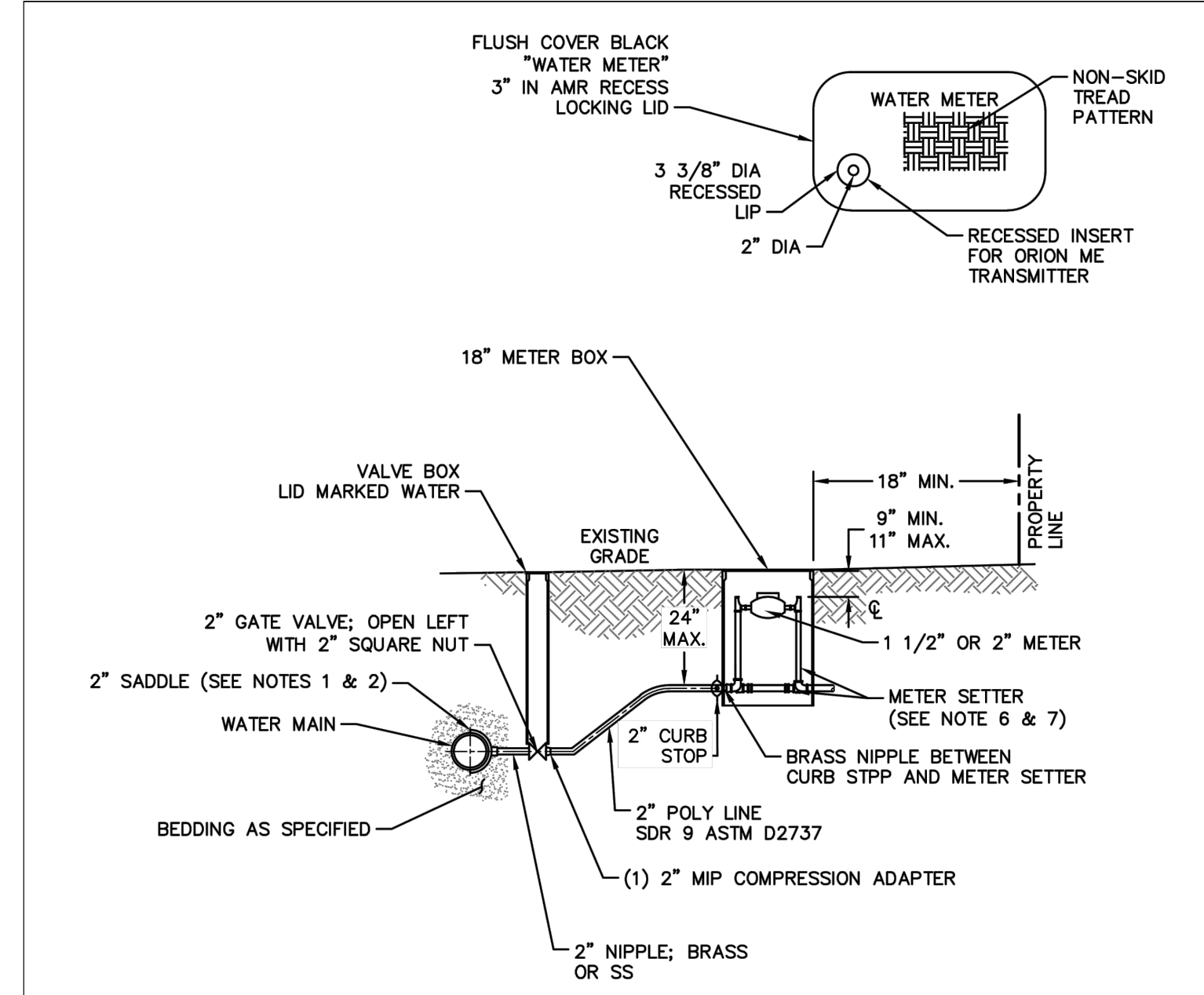
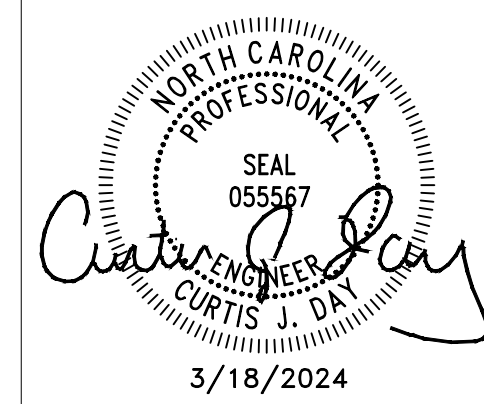
C

B

A

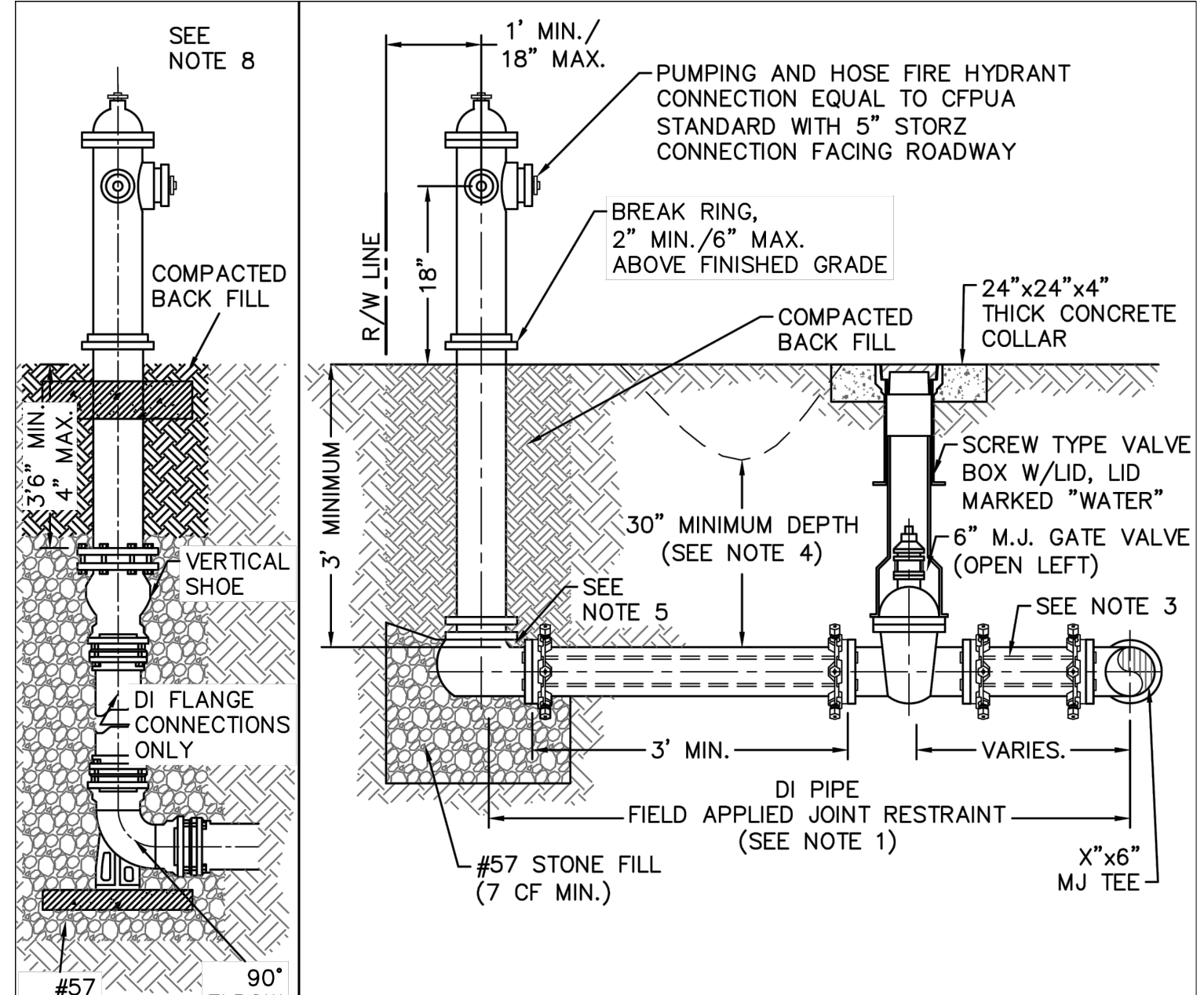


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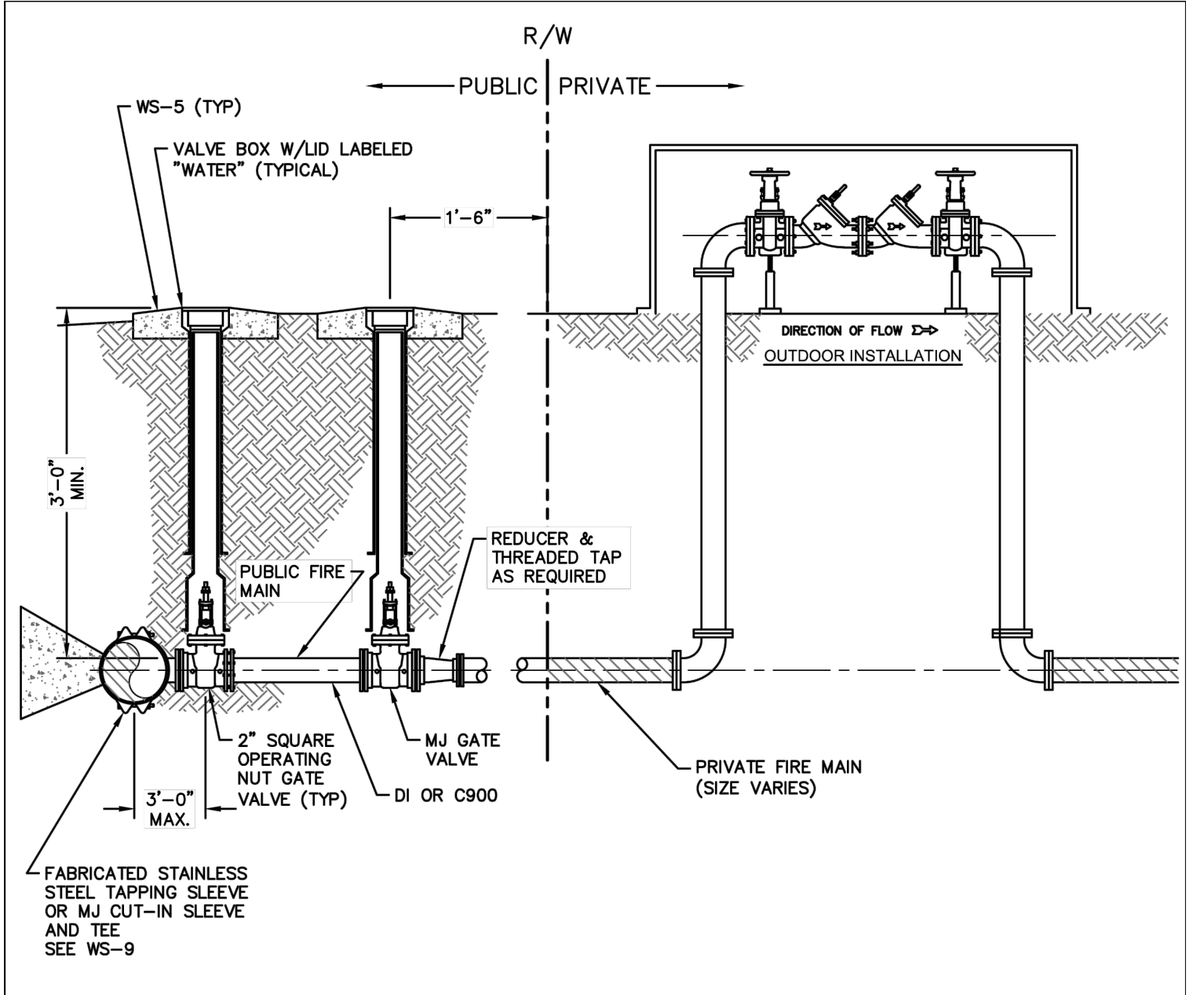
- NOTES:**
1. WATER SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN AND TERMINATE 18" INSIDE THE RIGHT-OF-WAY LINE.
 2. SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY.
 3. METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS.
 4. NON-TRAFFIC METER BOXES SHALL BE PER CFPUA STANDARD MATERIAL.
 5. 3" CLEAN FILL REQUIRED ALL AROUND 2" POLY SERVICE LINE.
 6. 1 1/2" METER - NL METER SETTER SHALL BE PER CFPUA STANDARD MATERIAL.
 7. 2" METER - NL METER SETTER SHALL BE PER CFPUA STANDARD MATERIAL.
 8. WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNERS.
 9. SERVICE PIPING AND METER SETTER TO BE CENTERED IN THE METER BOX.
 10. TRACING WIRE SHALL BE INSTALLED WITH ADHESIVE TAPE AT 12" INTERVALS AND EXTEND A MINIMUM OF 2' OUTSIDE OF METER BOX PER CFPUA DETAIL WS-6.

DETAIL: COMMERCIAL WATER SERVICE - 1 1/2 OR 2-INCH METERS	CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship, Sustainability, Service.	DETAIL NO: W-3 1
SCALE: NOT TO SCALE CFPUA DETAIL DATE: 01/01/2024		



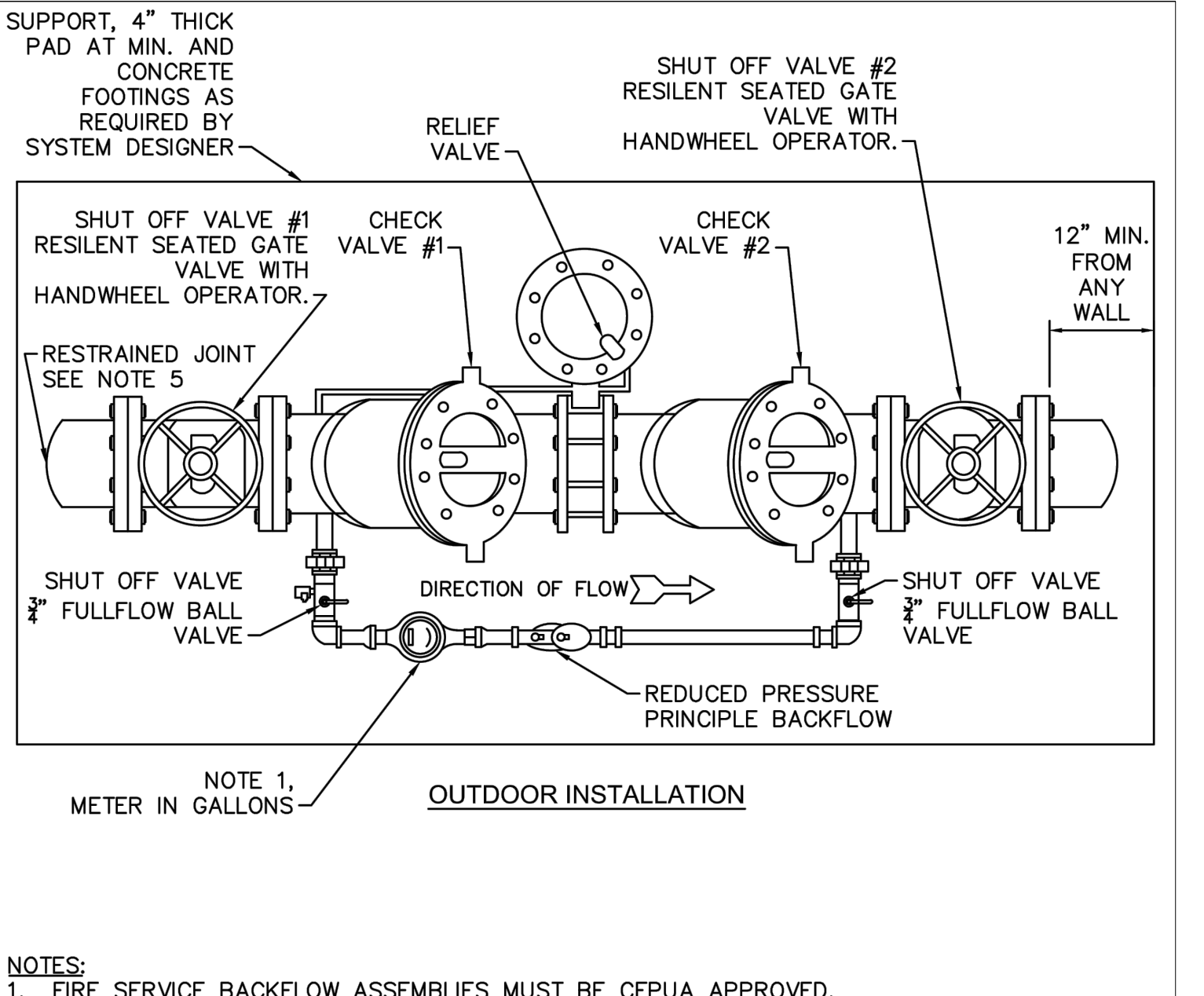
- NOTES:**
1. JOINT RESTRAINT SYSTEMS SHALL BE WEDGE ACTION STYLE FOR DI.
 2. WHEN HYDRANT LEGS REQUIRE FULL LENGTH PIPE SECTIONS, OVER BELL RESTRAINT SYSTEM SHALL HAVE 316 STAINLESS STEEL HARNESS AND FASTENERS.
 3. CONTINUOUS 316 STAINLESS STEEL RODS (TEE TO VALVE AND VALVE TO HYDRANT) MAY BE USED WITH 316 STAINLESS STEEL MJ T-BOLT AND GASKET KITS, AS AN ALTERNATIVE.
 4. HYDRANT AND VALVE SHALL BE PLACED OUTSIDE DITCH LIMITS.
 5. WEEP HOLES OPEN AND UNBLOCKED TO DRAIN.
 6. MJ TEE SHALL BE RESTRAINED ON EACH SIDE OF MAIN PLUS MAIN VALVES, FITTING, OR JOINTS WITHIN 10- FEET OF MJ TEE.
 7. TRACING WIRE SHALL EXTEND ALONG HYDRANT LATERAL AND UP TO FINISHED GRADE WITH 2- FEET EXTENDED ABOVE THE BREAK RING OF HYDRANT.
 8. HYDRANT TO UTILIZE A VERTICAL SHOE WHEN INSTALLED 5' IN DEPTH OR GREATER.

DETAIL: FIRE HYDRANT ASSEMBLY	CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship, Sustainability, Service.	DETAIL NO: W-9 2
SCALE: NOT TO SCALE CFPUA DETAIL DATE: 01/01/2024		



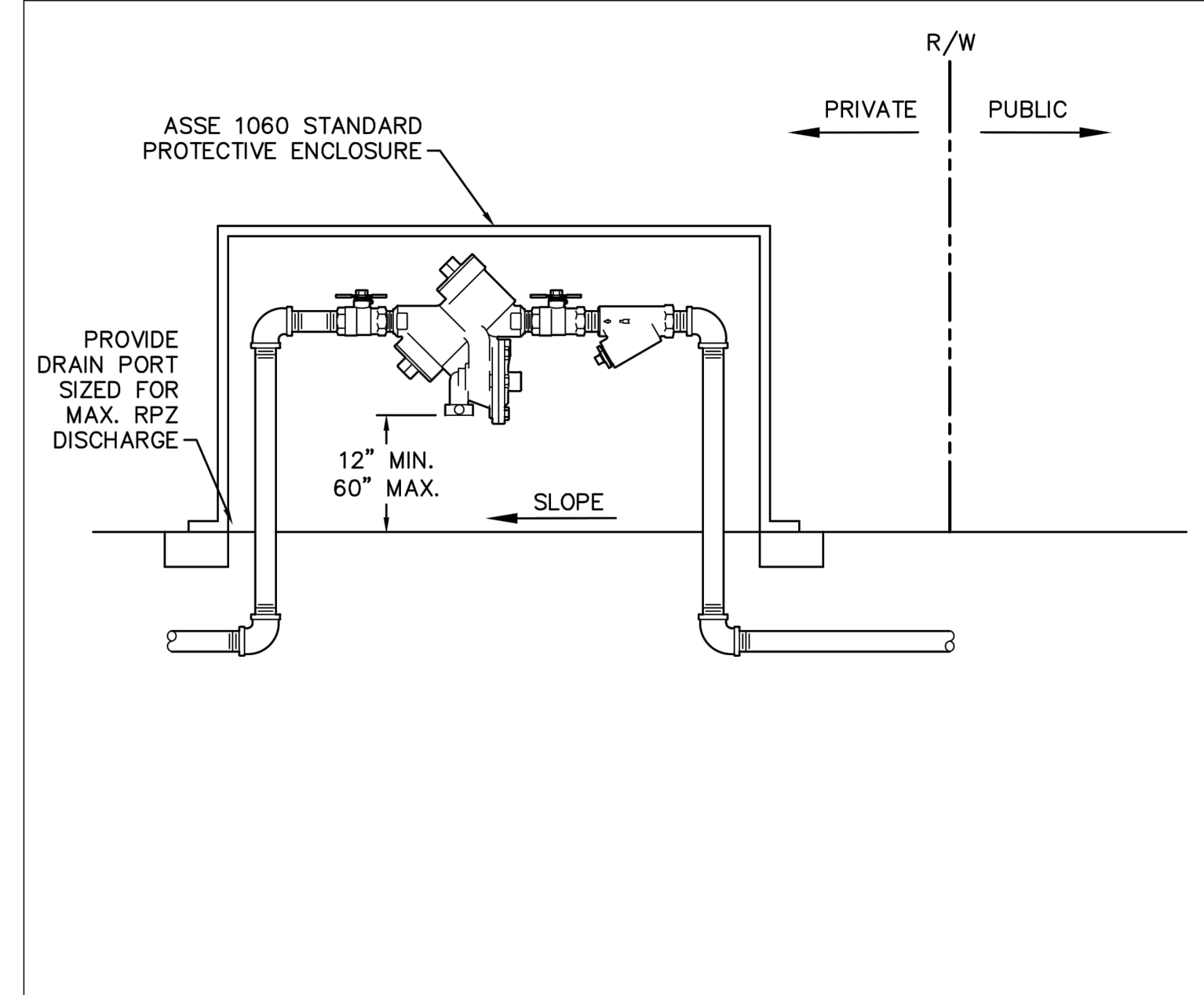
- NOTES:**
1. A GATE VALVE IS REQUIRED AT THE CFPUA FIRE MAIN TAP LOCATION.
 2. WHEN THE FIRE MAIN IS FROM OPPOSITE SIDE OF NC-DOT ROAD OR CITY STREET, A SECOND VALVE IS REQUIRED 18" INSIDE PUBLIC R/W.
 3. IF TAPPING VALVE IS LESS THAN 5- FEET FROM R/W THEN SECOND VALVE AT R/W IS NOT REQUIRED.

DETAIL: FIRE MAIN CONNECTION	CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship, Sustainability, Service.	DETAIL NO: W-10 3
SCALE: NOT TO SCALE CFPUA DETAIL DATE: 01/01/2024		



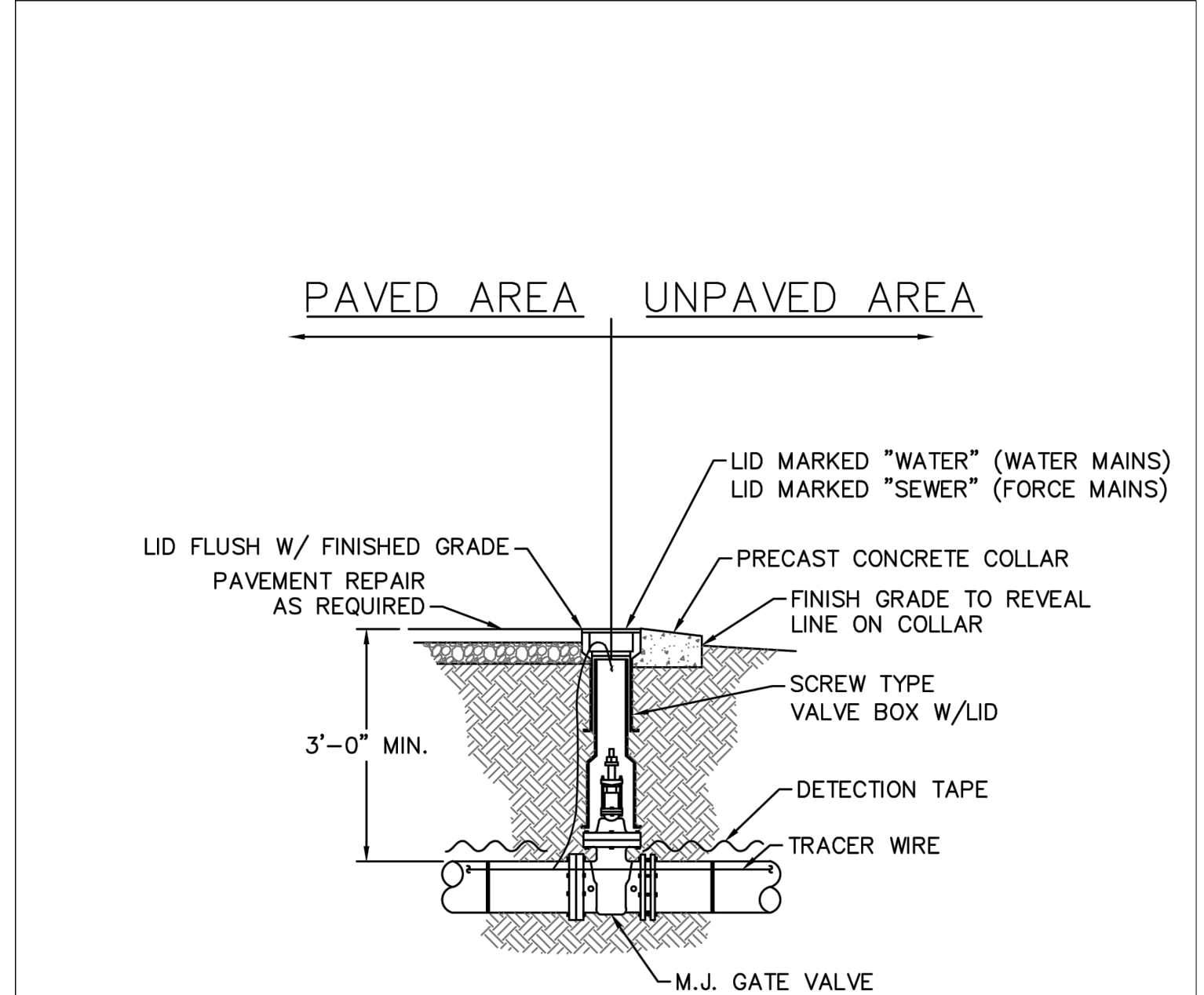
- NOTES:**
1. FIRE SERVICE BACKFLOW ASSEMBLIES MUST BE CFPUA APPROVED.
 2. ABOVE GROUND REDUCED PRESSURE DETECTOR ASSEMBLIES (RPDA) PER CFPUA STANDARDS.
 3. 4"-10" RPDA SHALL BE SUPPORTED WITH ADEQUATE SUPPORT PEDESTAL(S).
 4. OUTDOOR INSTALLATION SHALL HAVE A PROTECTIVE ENCLOSURE PER CFPUA STANDARDS.
 5. MAIN LINE 2 1/2" TO 3" BRASS, K-COPPER OR GALVANIZED PIPE, 4" TO 10" DIP. RESTRAINED JOINTS SHALL BE FLANGED OR APPROVED EQUAL.
 6. CFPUA APPROVED 2 1/2" - 10" RPDA INCLUDES SHUT OFF VALVES #1 AND #2. AS PART OF THE ASSEMBLY, NO SUBSTITUTIONS SHALL BE PERMITTED.
 7. TEST COCK #1 SHALL BE UPSTREAM OF SHUT OFF VALVE #1 AND IS PART OF THE APPROVED ASSEMBLY.
 8. MUST COMPLETE CFPUA'S BACKFLOW INSTALLATION FORM. CONTACT COMMUNITY COMPLIANCE AT 910-332-6558 OR VISIT WWW.CFPUA.ORG/COMMUNITYCOMPLIANCE AND COMPLETE THE ONLINE FORM.
 9. ONLY IN-LINE TESTABLE ASSEMBLIES APPROVED BY THE USC FOUNDATION FOR CROSS CONNECTION CONTROL OR ASSE SHALL BE ACCEPTED.

DETAIL: FIRE SERVICE REDUCED PRESSURE DETECTOR ASSEMBLY	CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship, Sustainability, Service.	DETAIL NO: EM-6 4
SCALE: NOT TO SCALE CFPUA DETAIL DATE: 01/01/2024		



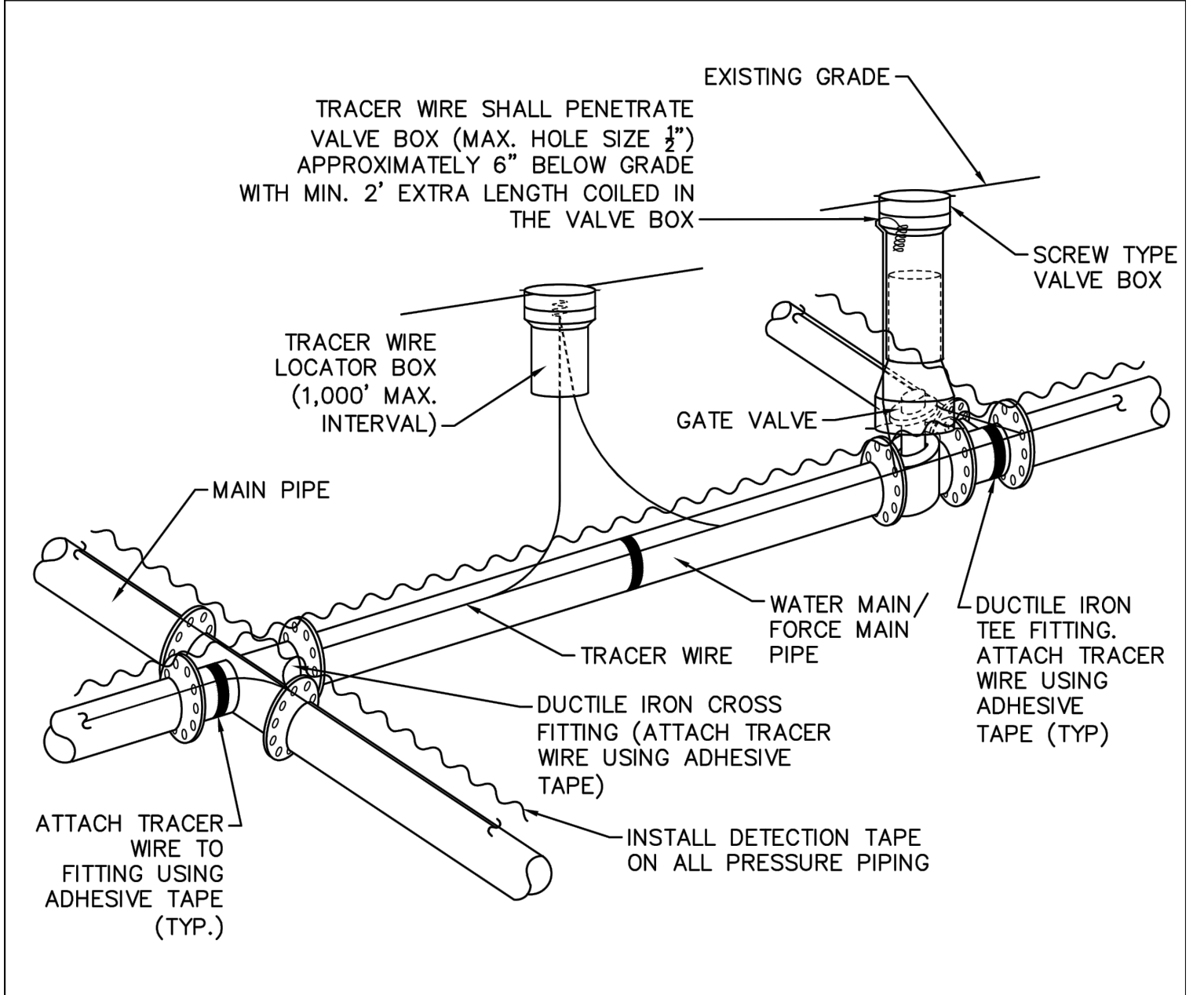
- NOTES:**
1. MUST BE MIN. 36" AWAY FROM ANY ELECTRICAL PANEL.
 2. VALVE REQUIRED DOWNSTREAM OF BACKFLOW ASSEMBLY.
 3. VERTICAL INSTALLATION SHALL BE DESIGNED AND SUBMITTED TO CFPUA EMD FOR APPROVAL.
 4. LOCATE AS NEAR TO RIGHT-OF-WAY AS POSSIBLE.
 5. MUST COMPLETE CFPUA'S BACKFLOW INSTALLATION FORM, CONTACT COMMUNITY COMPLIANCE AT 910-332-6558 OR VISIT WWW.CFPUA.ORG/COMMUNITYCOMPLIANCE AND COMPLETE THE ONLINE FORM.
 6. ONLY IN-LINE TESTABLE ASSEMBLIES APPROVED BY THE USC FOUNDATION FOR CROSS CONNECTION CONTROL OR ASSE SHALL BE ACCEPTED.

DETAIL: REDUCED PRESSURE PRINCIPLE ASSEMBLY	CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship, Sustainability, Service.	DETAIL NO: EM-1 5
SCALE: NOT TO SCALE CFPUA DETAIL DATE: 01/01/2024		



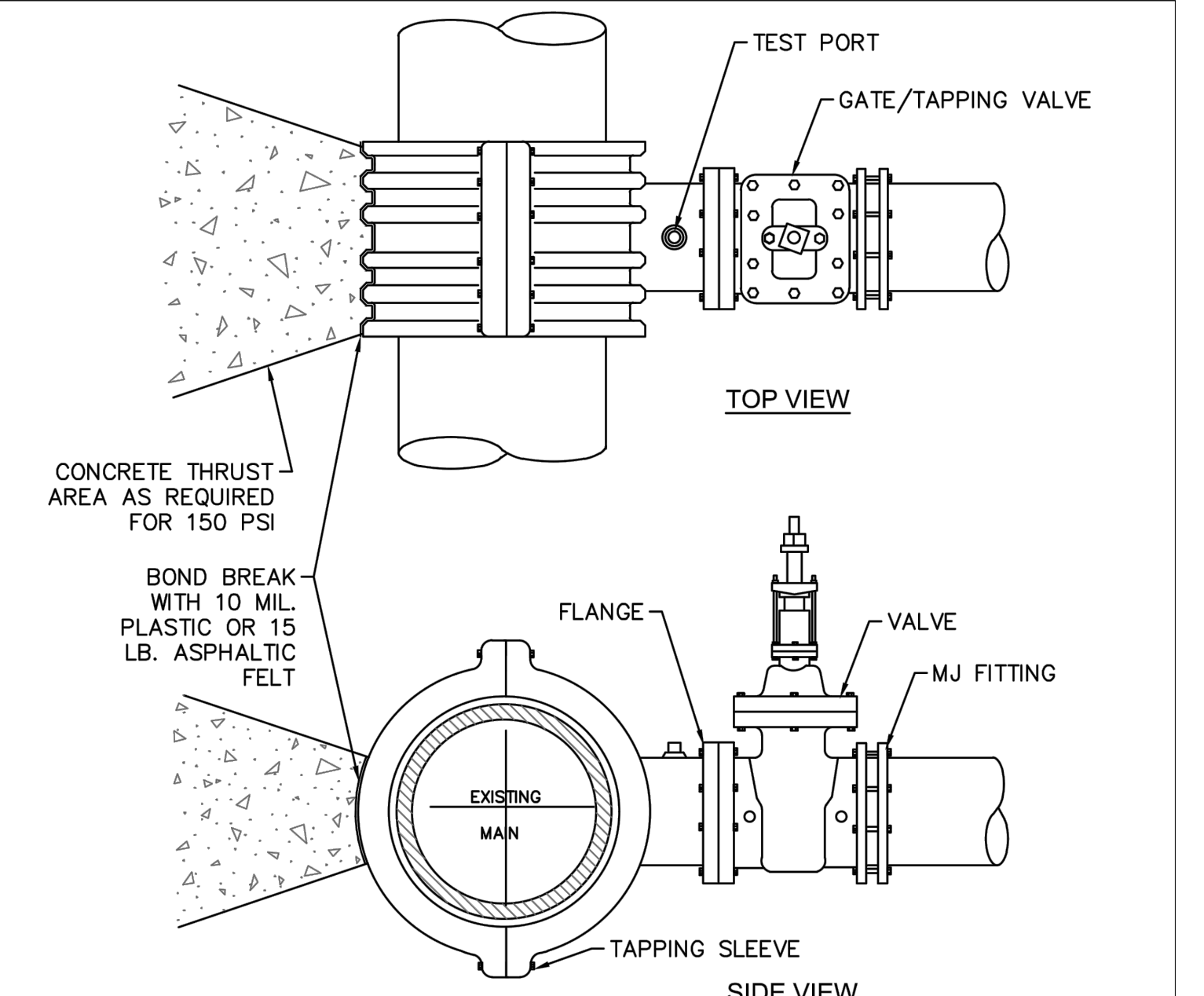
- NOTES:**
1. TRACER WIRE SHALL PENETRATE VALVE BOX THROUGH DRILLED HOLE, APPROX. 6" BELOW GRADE WITH MINIMUM 2- FEET EXTRA LENGTH COILED IN THE VALVE BOX; SEE WS-6.

DETAIL: VALVE DETAIL	CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship, Sustainability, Service.	DETAIL NO: WS-5 6
SCALE: NOT TO SCALE CFPUA DETAIL DATE: 01/01/2024		



- NOTES:**
1. TRACER WIRE SHALL BE INSTALLED PER THE CFPUA MSM.
 2. WIRE SHALL BE STRAPPED TO ALL PVC PIPING WITH ADHESIVE TAPE AT 12 FOOT INTERVALS.
 3. SECURE WIRE TO ALL TEE AND CROSS FITTINGS WITH ADHESIVE TAPE.
 4. ALL SPLICES IN THE WIRE SHALL BE MADE WITH 3M DBR DIRECT BURY SPLICE KITS.

DETAIL: TRACER WIRE DETAIL	CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship, Sustainability, Service.	DETAIL NO: WS-6 7
SCALE: NOT TO SCALE CFPUA DETAIL DATE: 01/01/2024		



- NOTES:**
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
 2. PIPE & FITTING TO BE WRAPPED IN 10 MIL. PLASTIC OR 15 LB. ASPHALTIC FELT PRIOR TO THRUST BLOCK BEING POURED.
 3. TEST PRESSURE SHALL NOT BE APPLIED FOR A MINIMUM OF 7 DAYS AFTER THRUST BLOCK PLACEMENT.
 4. BRANCH SHALL NOT EQUAL RUN DIAMETER UNLESS APPROVED BY CFPUA ENGINEERING.

DETAIL: TAPPING SLEEVE AND VALVE ASSEMBLY (4\"/> 	CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship, Sustainability, Service.	DETAIL NO: WS-9 8
SCALE: NOT TO SCALE CFPUA DETAIL DATE: 01/01/2024		

ISSUE FOR:
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ISSUE DATE:
03/28/2024

NO.	REASON	DATE

PROJECT TEAM:
 PRINCIPAL IN CHARGE: JD
 PROJECT MANAGER: CD
 DESIGN TEAM: GH

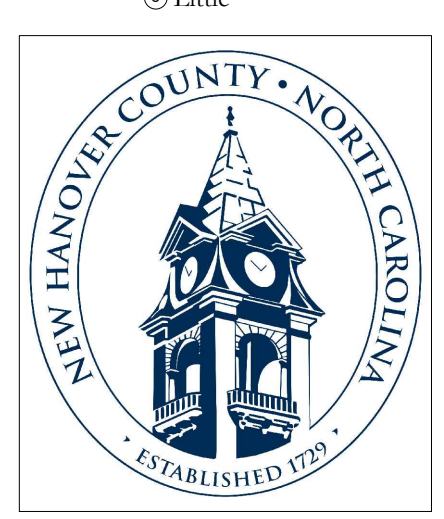
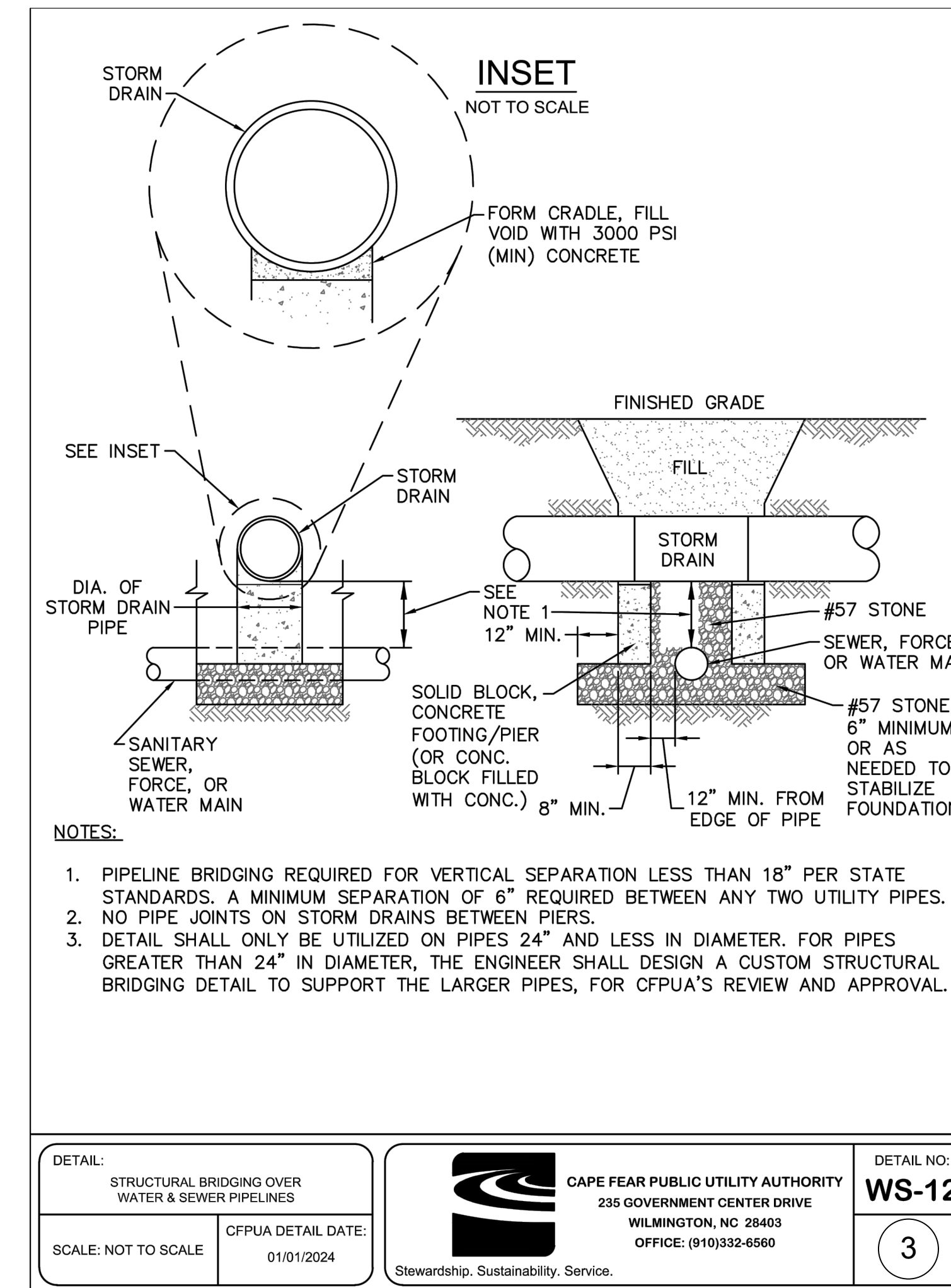
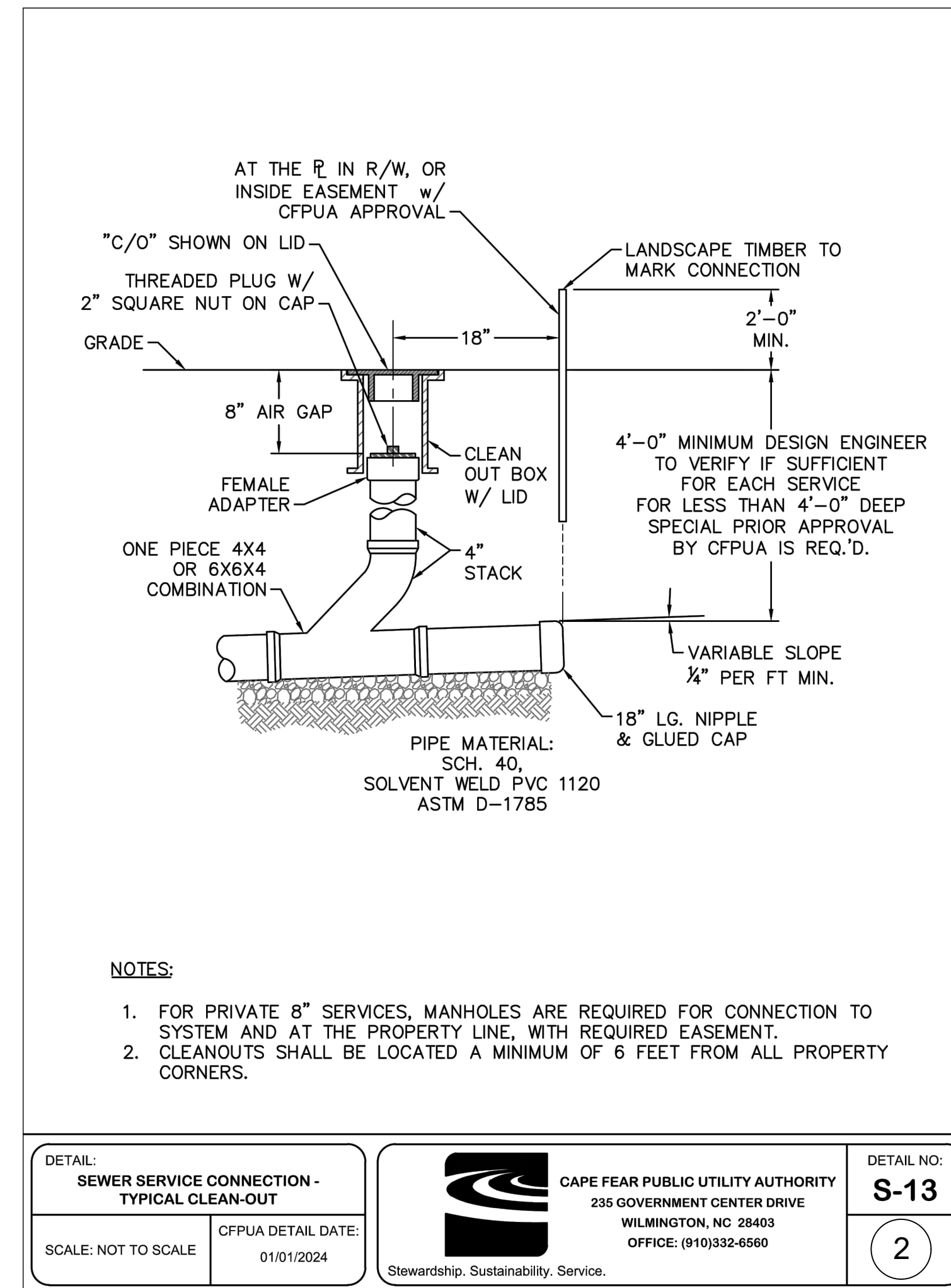
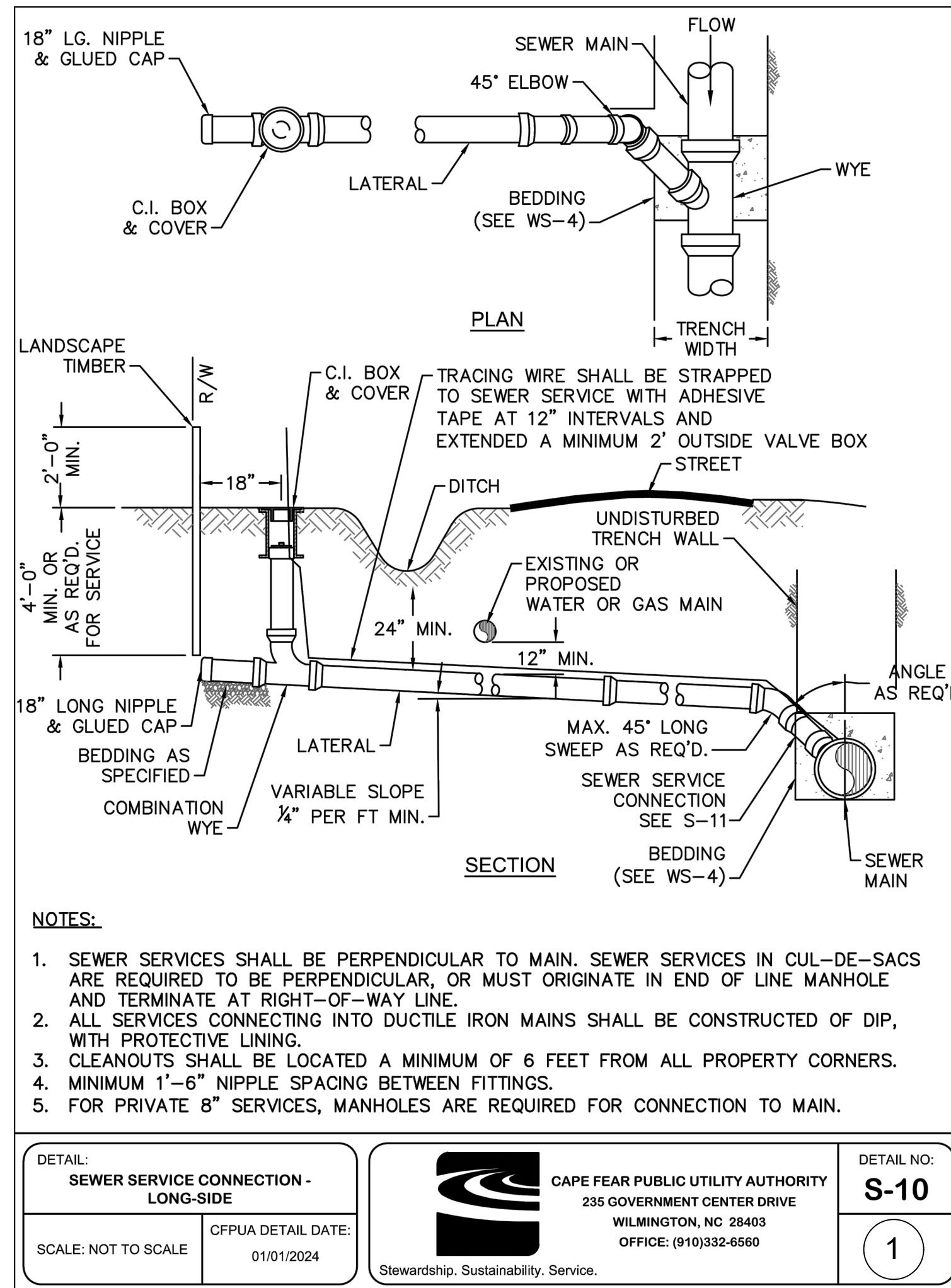
PROJECT NAME:
NORTHCHASE BRANCH LIBRARY

4400 NORTHCHASE PKWY NE
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PROJECT NO.
514.18349.00

SHEET TITLE:
UTILITY DETAILS

SHEET NUMBER:
C-503



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NO.	REASON	DATE

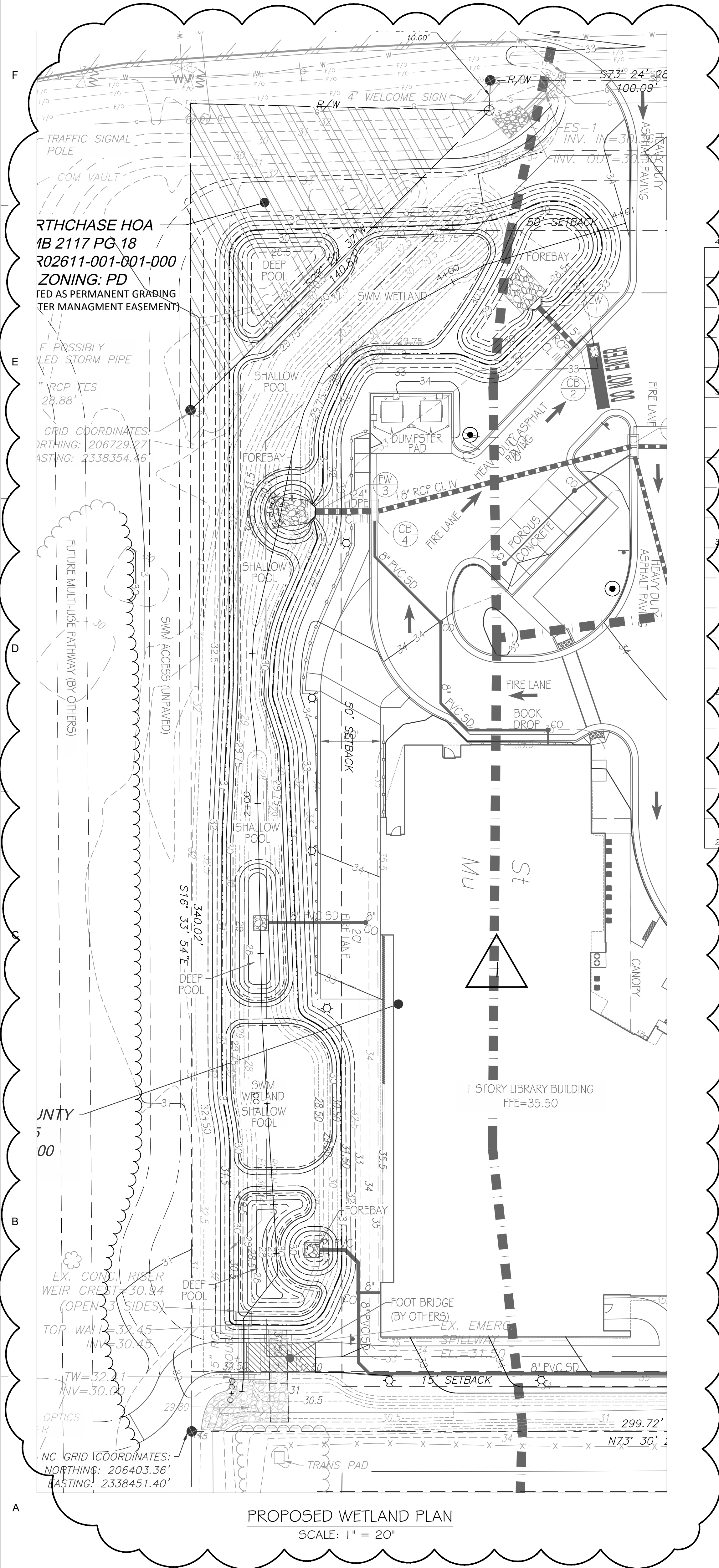
PROJECT LEAD:
 PRINCIPAL IN CHARGE
JD
 PROJECT MANAGER
CD
 DESIGN TEAM
GH

PROJECT NAME:
NORTHCHASE BRANCH LIBRARY
 4400 NORTHCHASE PKWY NE
 WILMINGTON, NC 28405

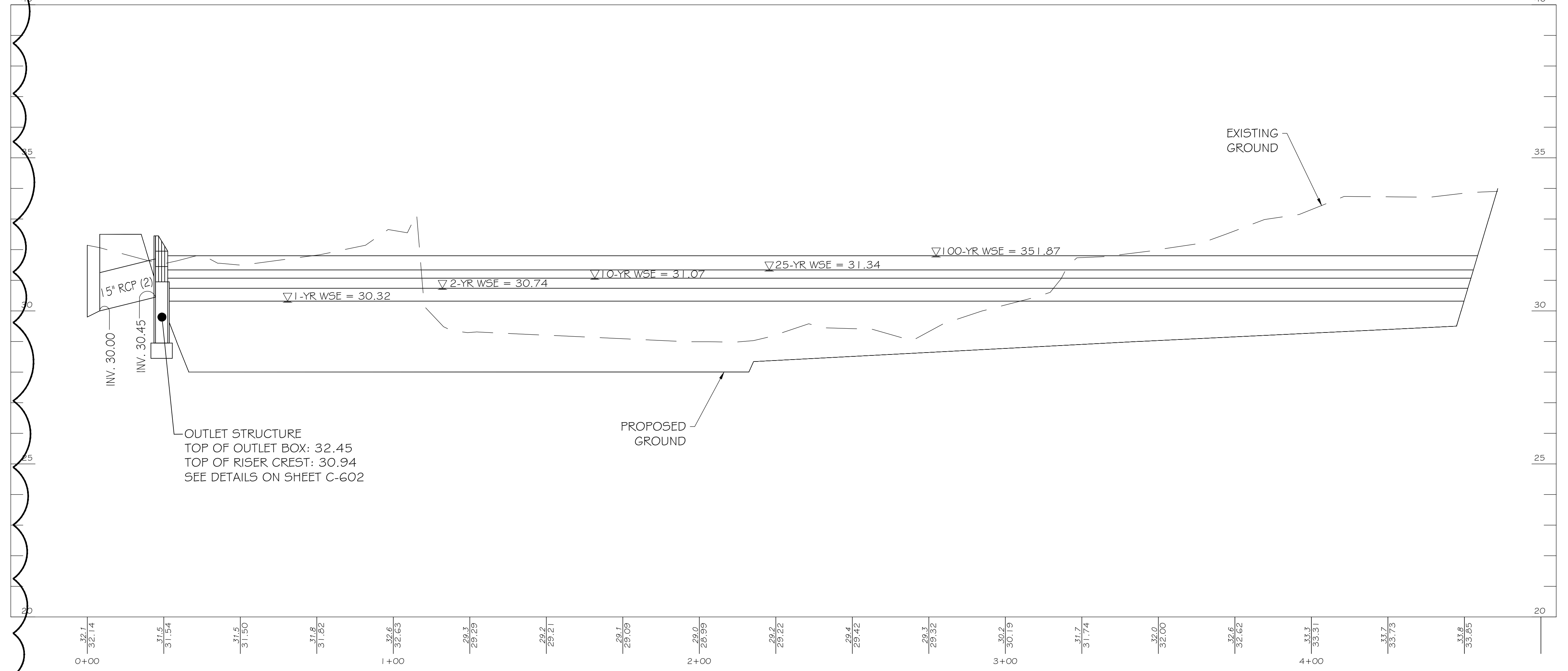
PROJECT NO.:
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SHEET TITLE:
UTILITY DETAILS

SHEET NUMBER:
C-504



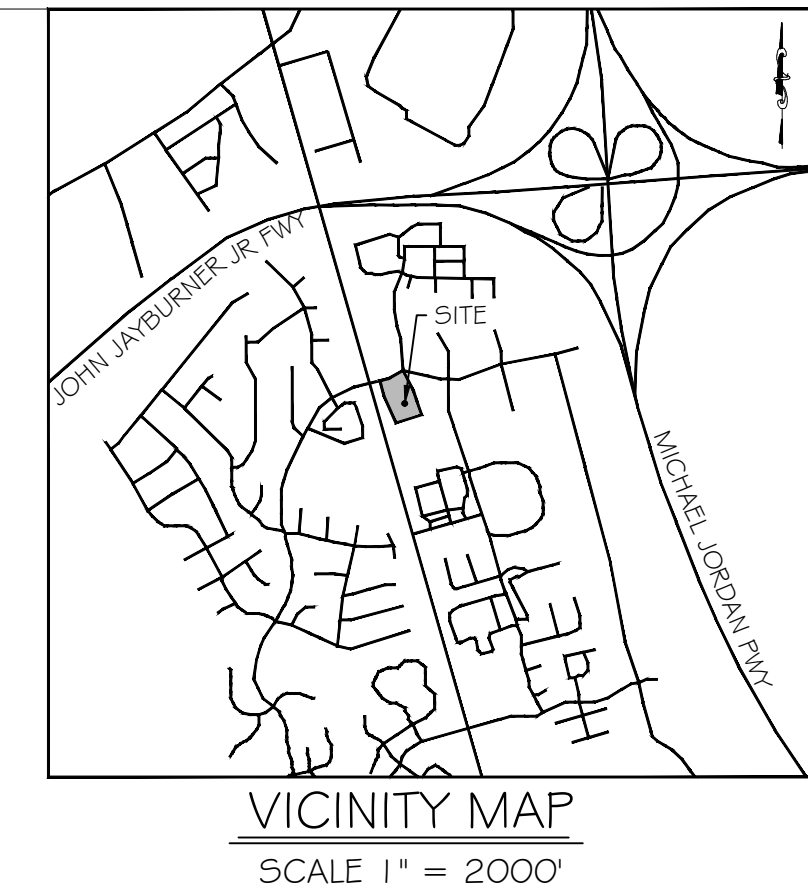
PROPOSED WETLAND PLAN
SCALE: 1" = 20"



PROPOSED WETLAND SECTION
SCALE: 1" = 20' (HORIZ)
SCALE: 1" = 2' (VERT)

LEGEND

EX. PROPERTY CORNER	○	EX SANITARY SEWER	—
EX DRAINAGE MANHOLE	⊙	EX OVERHEAD ELECTRIC	—
EX CATCH BASIN	⊕	EX U/G ELECTRIC	—
EX STORM SEWER (AS NOTED)	—	EX FIBER OPTIC LINE	—
EX GRATE INLET	⊕	EX U/G TELEPHONE LINE	—
EX WATER METER	⊕	EX CONTOURS	—
EX FIRE HYDRANT	⊕	EX FENCE	—
EX WATER VALVE	⊕	EX BOUNDARY LINE	—
EX WATER MANHOLE	⊕	SURVEYED RIGHT-OF-WAY LINE	—
EX WATER LINE	—	END OF INFORMATION	EOI
EX ELECTRIC MANHOLE	⊕	PIPE DIRECTION	PD
EX UTILITY POLE	⊕	LITTLE FREE LIBRARY	LFL
EX LIGHT POLE	⊕	CURB & GUTTER	C&G
EX ELECTRIC BOX	⊕	EDGE OF PAVEMENT	EOP
EX TRANSFORMER	⊕	STORM MANHOLE	SMH
EX TELEPHONE PEDESTAL	⊕	SANITARY SEWER MANHOLE	SSMH
EX SANITARY MANHOLE	⊕	REINFORCED CONCRETE PIPE	RCP
EX CLEANOUT	⊕	DUCTILE IRON PIPE	DIP
EX BOLLARD	⊕	TERRA COTTA PIPE	TCP
EX FLAGPOLE	⊕	POLYVINYL CHLORIDE PIPE	PVC
EX SIGN	⊕	CORRUGATED PLASTIC PIPE	CPF
EX TREE	⊕	VINYL FENCE	VF
EX BUSH	⊕	CHAIN LINK FENCE	CLF
EX LANDSCAPING	⊕	BOARD FENCE	BF
EX SIDEWALK	⊕	BARB WIRE	BW
SURVEY BENCHMARK	⊕	PROPERTY LINE	—
PROP. FIRE DEPT. ACCESS GRASS/PAVE SYSTEM	⊕	PROP. POWER LINE	—
PROP. CONC. SIDEWALK	⊕	RELOCATED PARKING PAY STATION	⊕
PROP. HEAVY DUTY REINFORCED CONCRETE	⊕	PROPOSED STREET LIGHT	⊕
PROP. PERMEABLE CONCRETE	⊕	RELOCATED POWER POLE	⊕
PROP. HEAVY DUTY ASPHALT	⊕	PROPOSED SIGN	⊕
PROP. LANDSCAPE PAVERS	⊕	PROP. WATER METER	WM
PROP. MILL & PAVE	⊕	PROP. DOM. WATER	⊕
PROP. STORMWATER WETLAND	⊕	PROP. FIRE	⊕
PROP. RIP-RAP	⊕	BACK FLOW PREVENTER	⊕
PROP. SMALL SWALE	⊕	REDUCED PRESSURE DETECTOR ASSEMBLY	⊕
PROP. STORM DRAIN	⊕	PROP. WATER VALVE	⊕
PROP. STORM MANHOLE	⊕	PROP. FIRE HYDRANT	⊕
PROP. SANITARY LINE	⊕	PROP. TEE FITTING	⊕
PROP. SANITARY MANHOLE	⊕	PROP. BOND FITTING	⊕
PROP. CLEANOUT	⊕	PROP. REDUCER	⊕
PROPOSED GRADING & STORMWATER MANAGEMENT EASEMENT	⊕	PARKING SPACE COUNT	⊕



VICINITY MAP
SCALE 1" = 2000'

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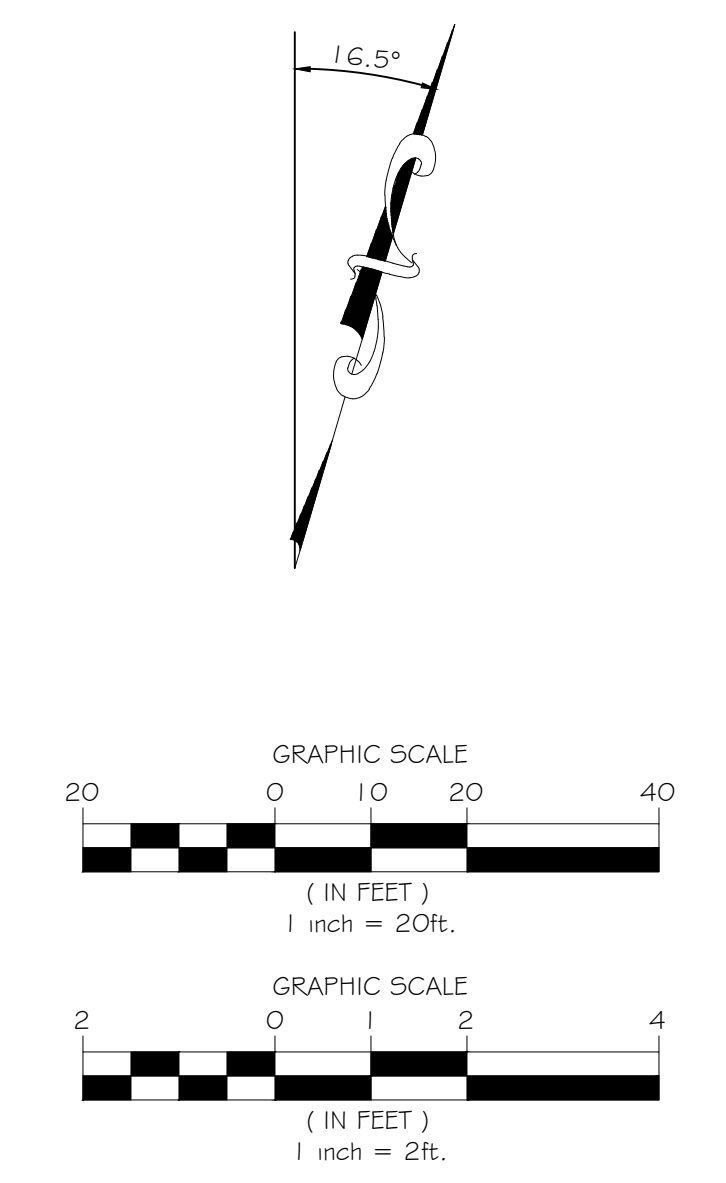
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Curtis J. J. J.
5/18/2024

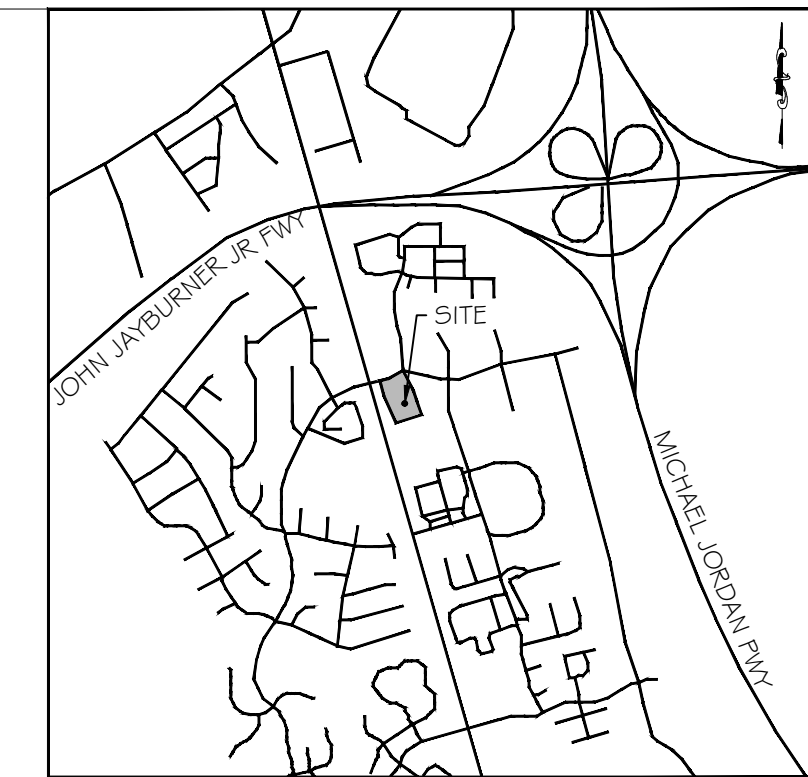
ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

NO.	REASON	DATE
1	REVISED TO SHOW EXPANDED POND, SWM ACCESS AND SWM EASEMENT	03/28/24

PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH
PROJECT NAME
NORTHCHASE BRANCH LIBRARY
4400 NORTHCHASE PKWY NE WILMINGTON, NC 28405
PROJECT NO.
514.18349.00
SHEET TITLE
STORMWATER MANAGEMENT PLAN
SHEET NUMBER
C-600



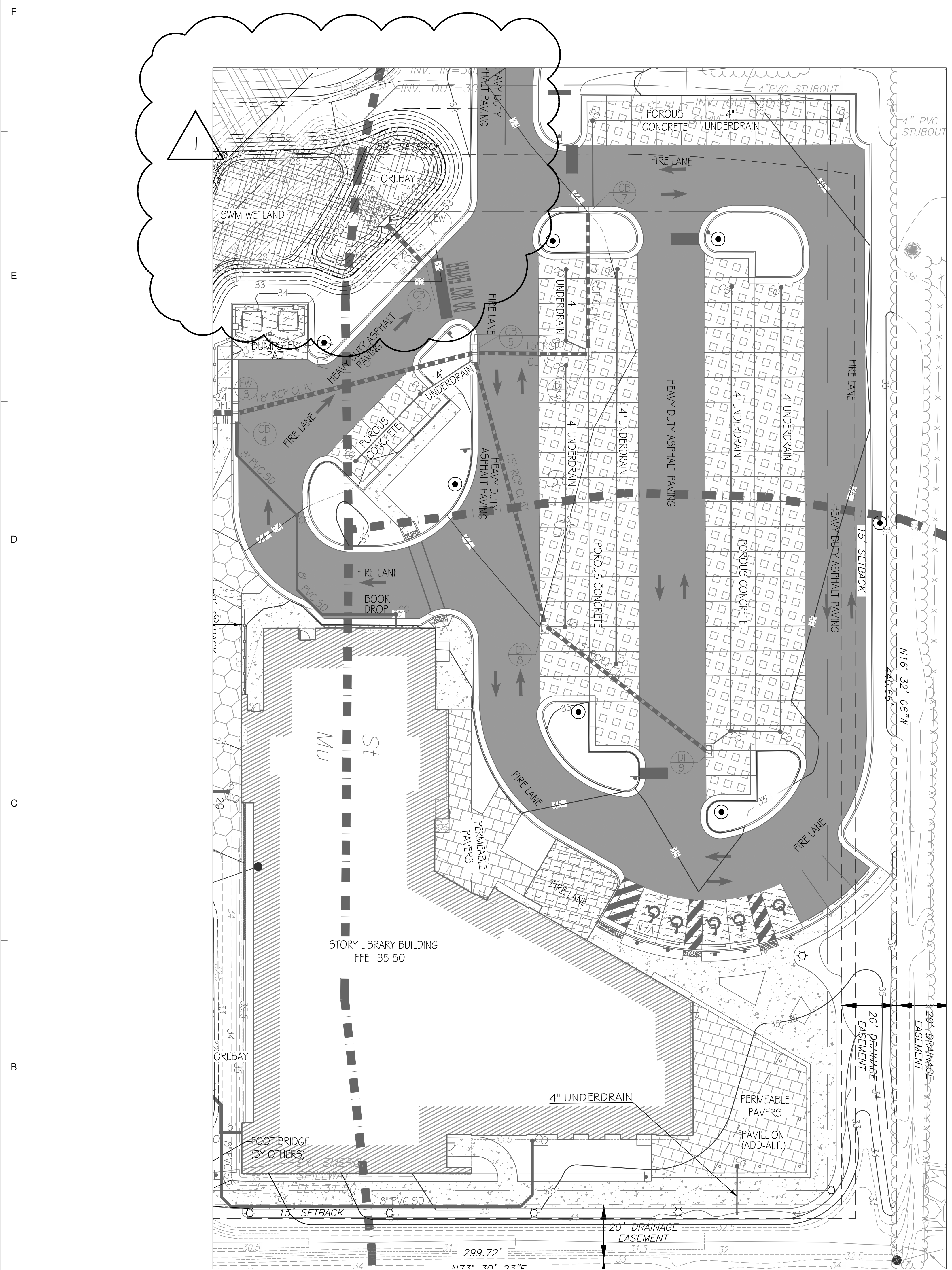


VICINITY MAP
SCALE 1" = 2000'

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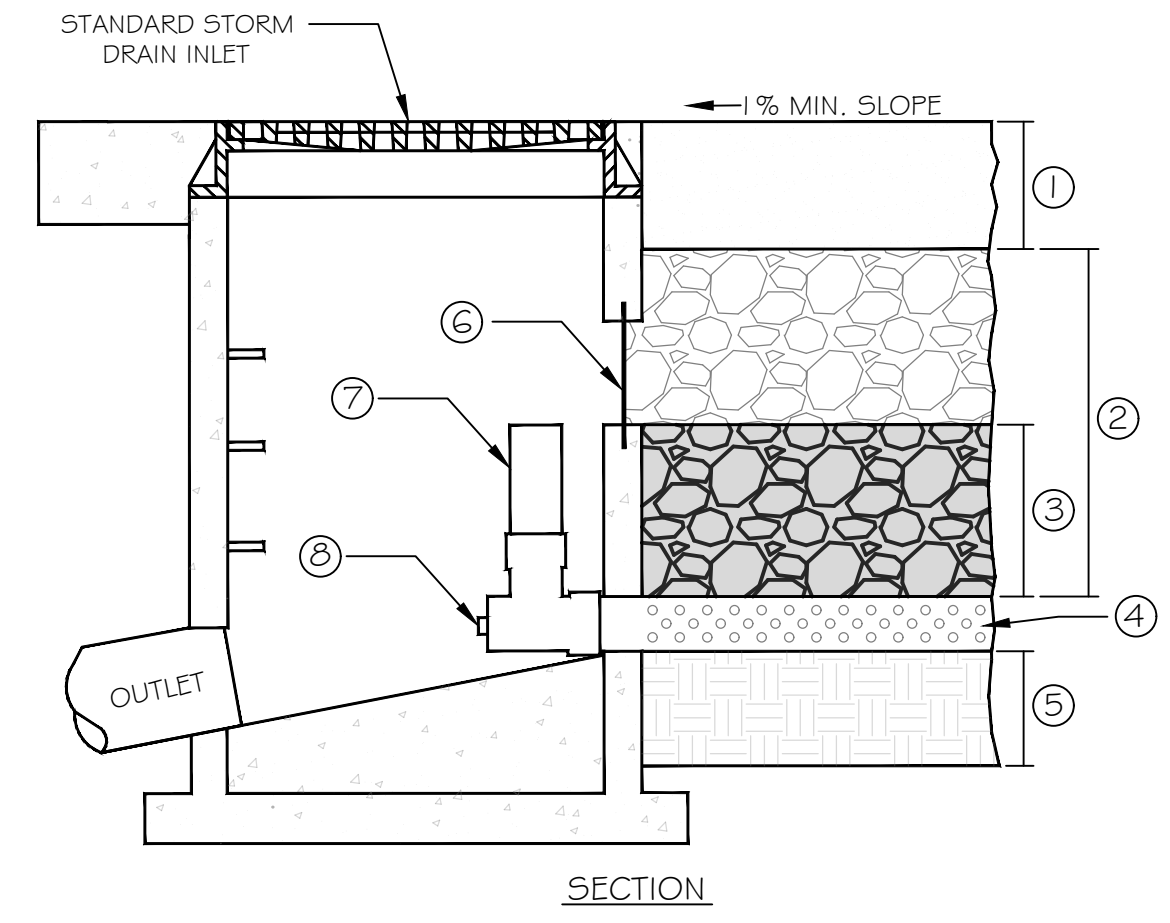


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PROPOSED WETLAND PLAN
SCALE: 1" = 20'

NOTE: PERMEABLE PAVER DETAIL LOCATED ON LANDSCAPE PLANS

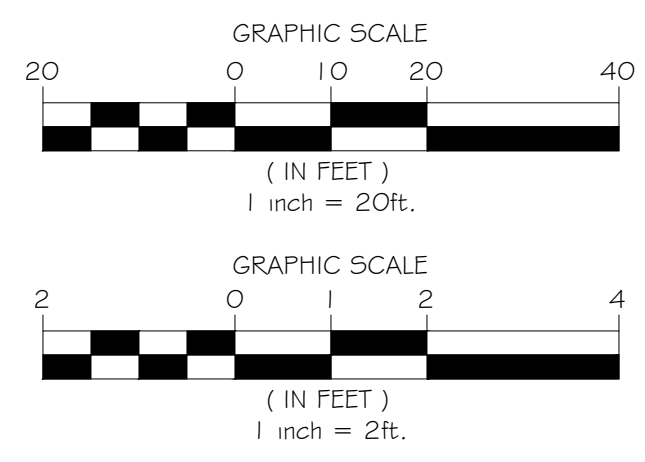
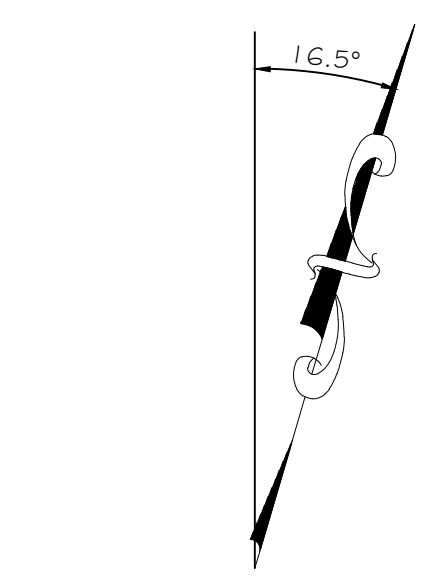


PAVEMENT ITEM	DEPTH
1	6"
2	24"
3	12"

- LEGEND**
- 1 PERVIOUS PORTLAND CONCRETE
 - 2 RESERVOIR LAYER, AASHTO #3, #2, OR #57 STONE (AASHTO #57 TO BE USED ONLY WITH MAX. RESERVOIR DEPTH OF 8")
 - 3 D₁₀ = DEPTH OF AGGREGATE IN RESERVOIR LAYER NEEDED TO TREAT WATER QUALITY STORM
 - 4 4" PERFORATED UNDERDRAIN
 - 5 IN SITU SOIL
 - 6 INLET SLOT WITH GALVANIZED OR STAINLESS STEEL GRATE (NOMINAL GRATE OPENINGS = 1/2")
 - 7 UPTURNED PIPE SETS D₁₀
 - 8 THREADED CAP FOR DEWATERING + MAINTENANCE

1 POROUS CONCRETE DETAIL
SCALE: N.T.S.

- LEGEND**
- EX PROPERTY CORNER
 - EX DRAINAGE MANHOLE
 - EX CATCH BASIN
 - EX STORM SEWER (AS NOTED)
 - EX GRATE INLET
 - EX WATER METER
 - EX FIRE HYDRANT
 - EX WATER VALVE
 - EX WATER MANHOLE
 - EX WATER LINE
 - EX ELECTRIC MANHOLE
 - EX UTILITY POLE
 - EX LIGHT POLE
 - EX ELECTRIC BOX
 - EX TRANSFORMER
 - EX TELEPHONE PEDESTAL
 - EX SANITARY MANHOLE
 - EX CLEANOUT
 - EX BOLLARD
 - EX FLAGPOLE
 - EX SIGN
 - EX TREE
 - EX BUSH
 - EX LANDSCAPING
 - EX SIDEWALK
 - SURVEY BENCHMARK
 - PROP. FIRE DEPT. ACCESS "GRASS-PAVE" SYSTEM
 - PROP. FIRE DEPT. ACCESS REINFORCED CONC. PAVERS
 - PROP. CONC. SIDEWALK
 - PROP. HEAVY DUTY REINFORCED CONCRETE
 - PROP. PERMEABLE CONCRETE
 - PROP. HEAVY DUTY ASPHALT
 - PROP. LANDSCAPE PAVERS
 - PROP. MILL & PAVE
 - PROP. STORMWATER WETLAND
 - PROP. RIP-RAP
 - PROP. SMALL SWALE
 - PROP. STORM DRAIN
 - PROP. STORM MANHOLE
 - PROP. SANITARY LINE
 - PROP. SANITARY MANHOLE
 - PROP. CLEANOUT
 - PROP. SANITARY SEWER
 - EX OVERHEAD ELECTRIC
 - EX UG ELECTRIC
 - EX FIBER OPTIC LINE
 - EX UG TELEPHONE LINE
 - EX CONTOURS
 - EX FENCE
 - EX BOUNDARY LINE
 - SURVEYED RIGHT-OF-WAY LINE
 - END OF INFORMATION
 - PIPE DIRECTION
 - LITTLE FREE LIBRARY
 - CURB + GUTTER
 - EDGE OF PAVEMENT
 - STORM MANHOLE
 - SANITARY SEWER MANHOLE
 - REINFORCED CONCRETE PIPE
 - DUCTILE IRON PIPE
 - TERRA COTTA PIPE
 - POLYVINYL CHLORIDE PIPE
 - CORRUGATED PLASTIC PIPE
 - VINYL FENCE
 - CHAIN LINK FENCE
 - BOARD FENCE
 - BARB WIRE
 - PROPERTY LINE
 - PROP. POWER LINE
 - RELOCATED PARKING PAY STATION
 - PROPOSED STREET LIGHT
 - RELOCATED POWER POLE
 - PROPOSED SIGN
 - PROP. WATER METER
 - PROP. DOM. WATER
 - PROP. FIRE
 - SACK FLOW PREVENTER
 - REDUCED PRESSURE DETECTOR ASSEMBLY
 - PROP. WATER VALVE
 - PROP. FIRE HYDRANT
 - PROP. TEE FITTING
 - PROP. BEND FITTING
 - PROP. REDUCER
 - PARKING SPACE COUNT
 - EOI
 - PD
 - LFL
 - C4G
 - EOP
 - STMH
 - SSMH
 - RCP
 - DIP
 - TCP
 - PVC
 - CPP
 - VF
 - CLF
 - BF
 - BW
 - WM
 - 2" W
 - 4" W
 - BFP
 - RPDA
 - 12



ISSUE FOR
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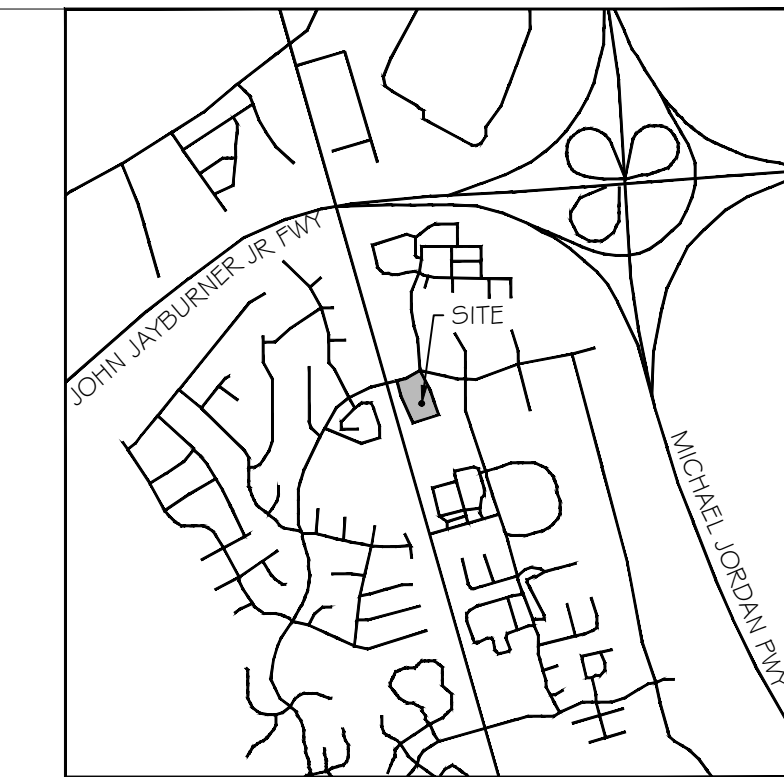
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PROJECT MANAGER
CD
DESIGN TEAM
GH

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PROJECT NO.
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SHEET TITLE
STORMWATER MANAGEMENT PLAN

SHEET NUMBER
C-601



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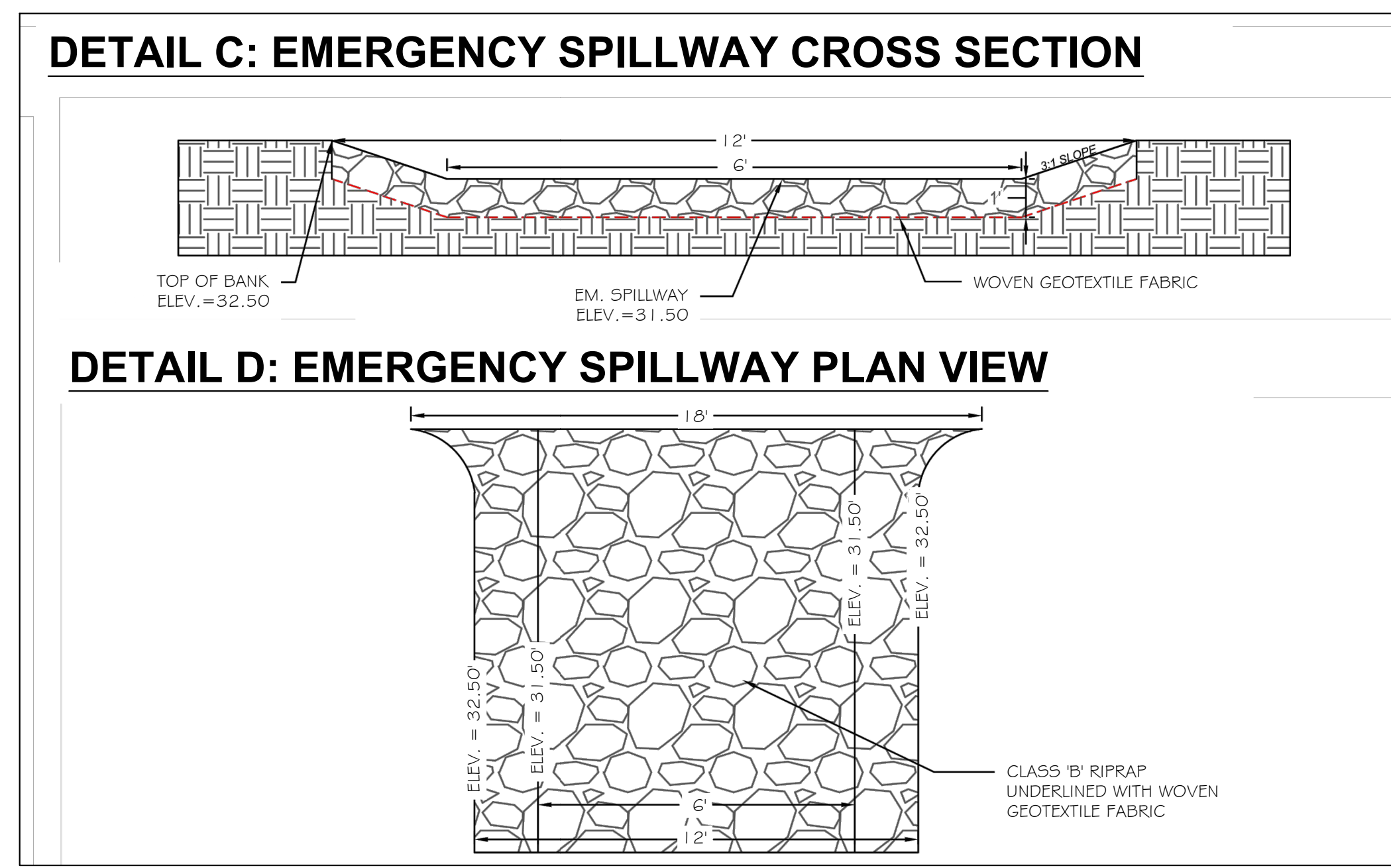
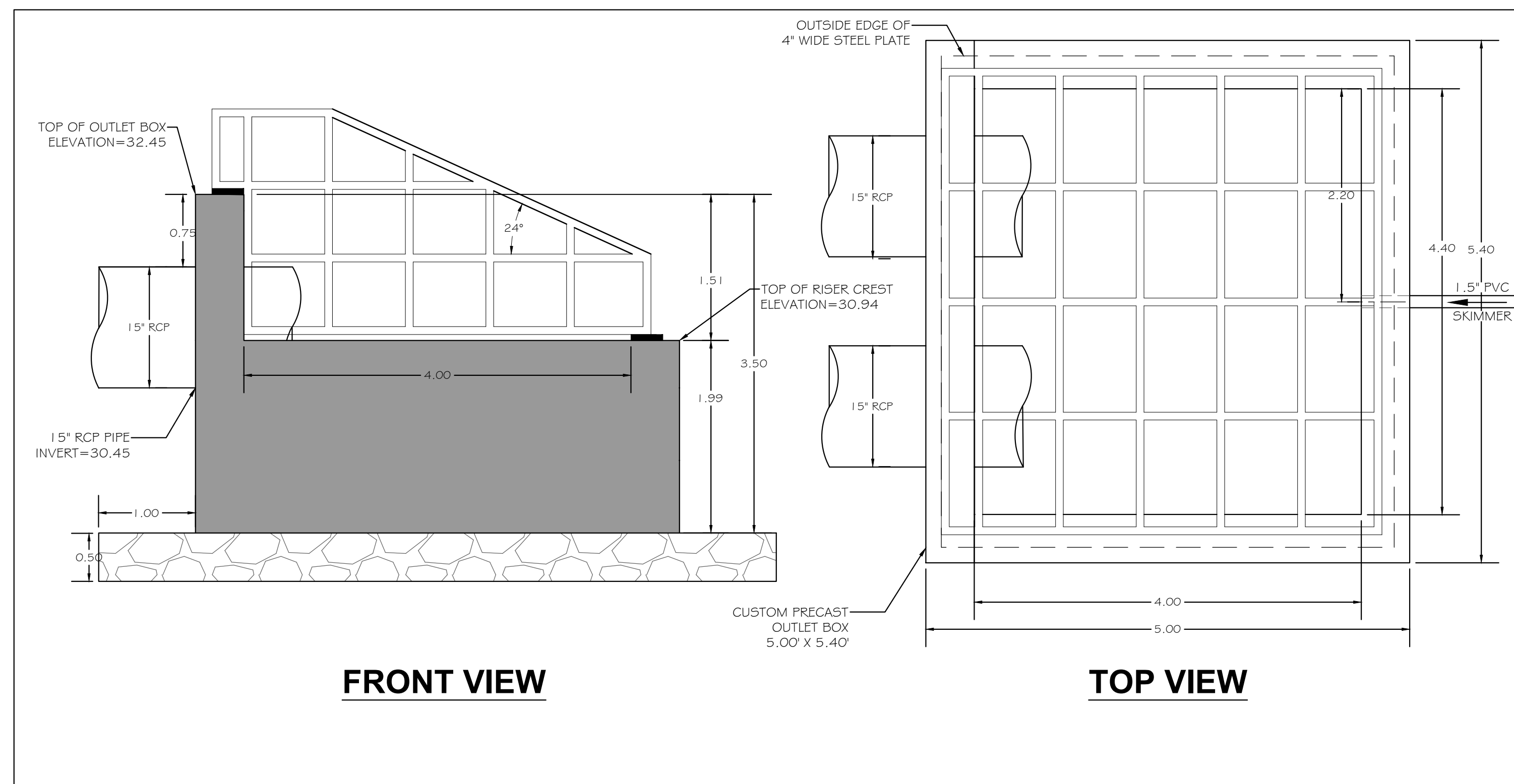
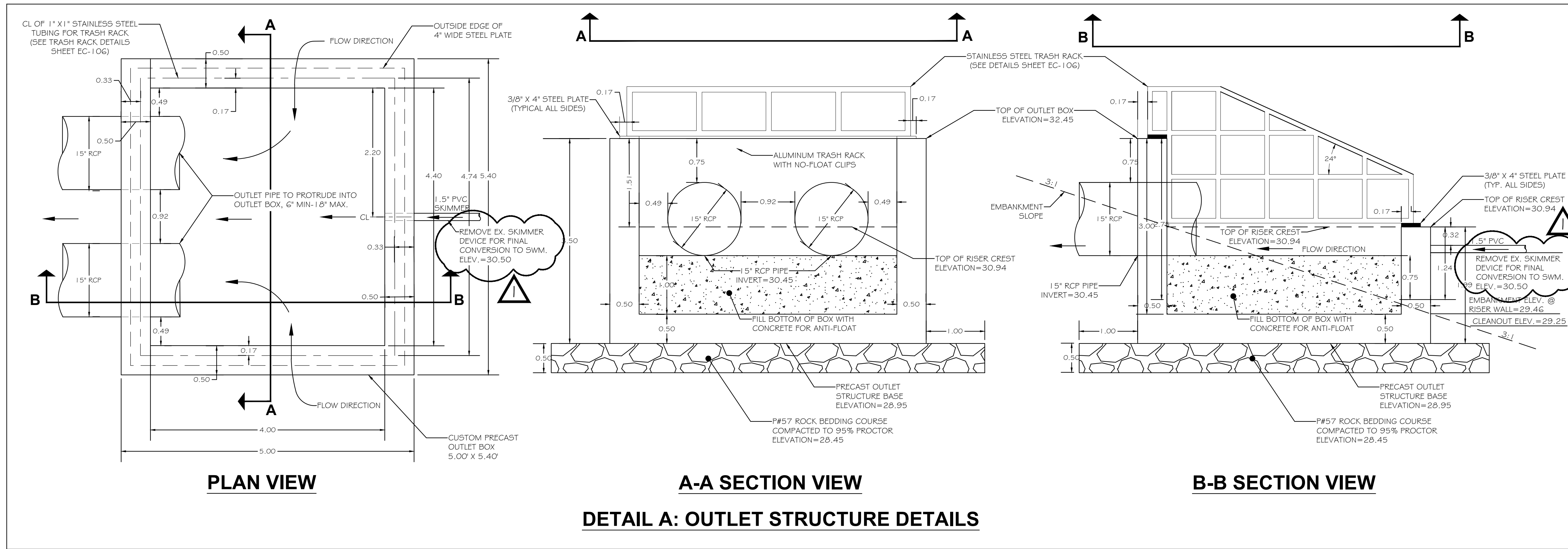
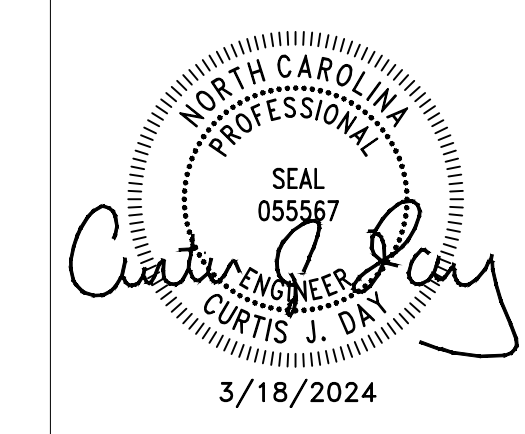
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NOTE: STORMWATER RISER STRUCTURE IS BEING INSTALLED UNDER THE ADVANCED SITE CONSTRUCTION, TO BE UTILIZED FOR SEDIMENT CONTROL. THE RISER WILL BE EXISTING AT TIME OF FINAL CONVERSION TO A STORMWATER MANAGEMENT FACILITY. MODIFICATIONS MAY BE REQUIRED AS SHOWN.

ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

NO.	REASON	DATE
1	ADD NOTES	03/28/24

PROJECT TEAM	
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DESIGN TEAM	GH

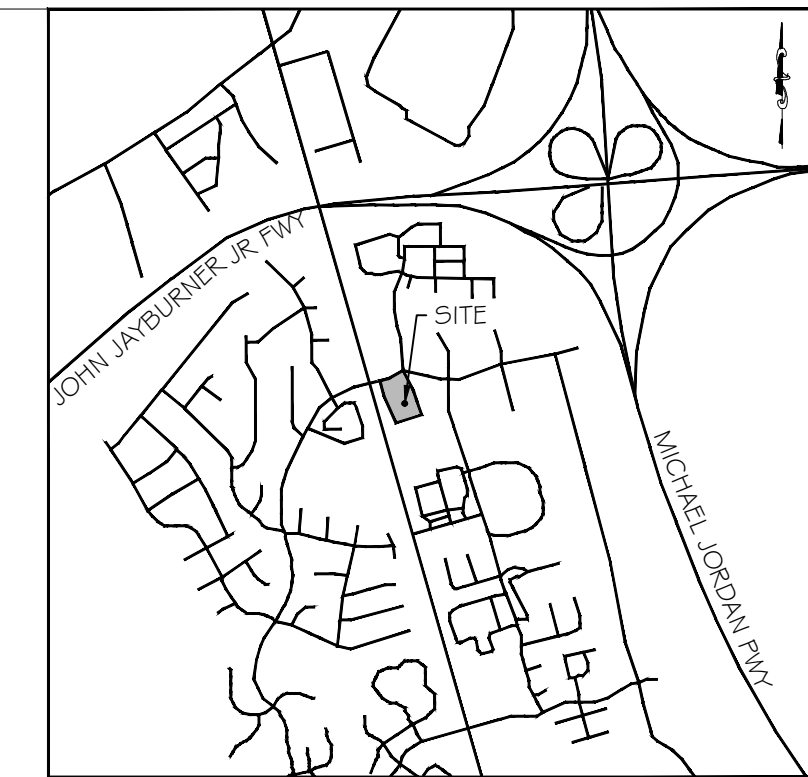
PROJECT NAME
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PROJECT NO.
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SHEET TITLE
STORMWATER MANAGEMENT DETAILS

SHEET NUMBER
C-602



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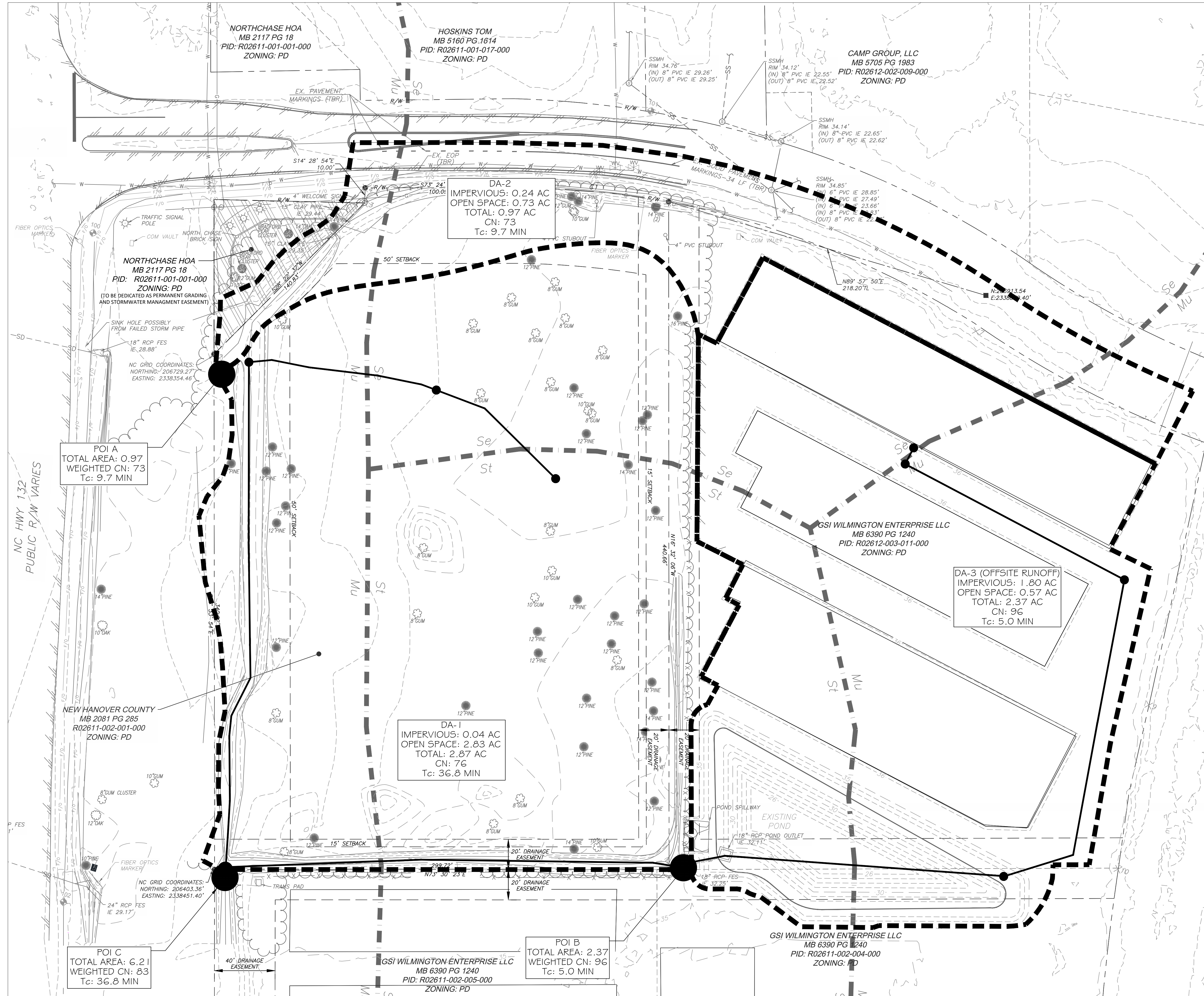
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PROFESSIONAL SEAL
NORTH CAROLINA PROFESSIONAL SEAL
055567
Curtis J. J. [Signature]
5/18/2024

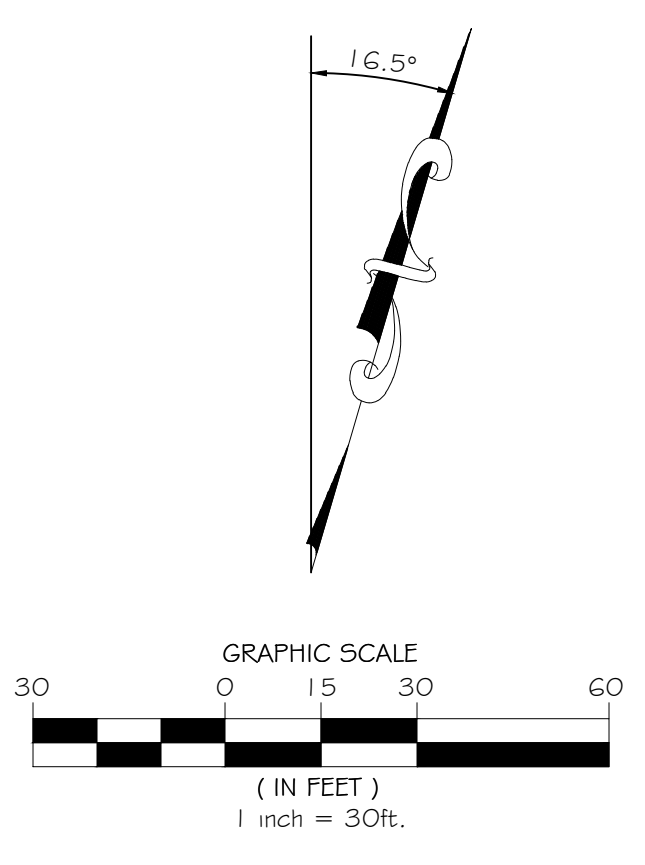


LEGEND

EX. PROPERTY CORNER	EX SANITARY SEWER	EX OVERHEAD ELECTRIC
EX DRAINAGE MANHOLE	EX WATER VALVE	EX UG ELECTRIC
EX CATCH BASIN	EX WATER MANHOLE	EX FIBER OPTIC LINE
EX STORM SEWER (AS NOTED)	EX WATER LINE	EX UG TELEPHONE LINE
EX GRATE INLET	EX ELECTRIC MANHOLE	EX CONTOURS
EX WATER METER	EX UTILITY POLE	EX FENCE
EX FIRE HYDRANT	EX LIGHT POLE	EX BOUNDARY LINE
EX WATER VALVE	EX ELECTRIC BOX	SURVEYED RIGHT-OF-WAY LINE
EX WATER MANHOLE	EX TELEPHONE PEDESTAL	END OF INFORMATION
EX WATER LINE	EX SANITARY MANHOLE	PIPE DIRECTION
EX ELECTRIC MANHOLE	EX SANITARY MANHOLE	LITTLE FREE LIBRARY
EX UTILITY POLE	EX CLEANOUT	CURB + GUTTER
EX LIGHT POLE	EX BOLLARD	EDGE OF PAVEMENT
EX ELECTRIC BOX	EX FLAGPOLE	STORM MANHOLE
EX TRANSFORMER	EX SIGN	SANITARY SEWER MANHOLE
EX TELEPHONE PEDESTAL	EX TREE	REINFORCED CONCRETE PIPE
EX SANITARY MANHOLE	EX BUSH	DUCTILE IRON PIPE
EX CLEANOUT	EX LANDSCAPING	TERRA COTTA PIPE
EX BOLLARD	EX SIDEWALK	POLYVINYL CHLORIDE PIPE
EX FLAGPOLE	SURVEY BENCHMARK	CORRUGATED PLASTIC PIPE
EX SIGN	PROP. FIRE DEPT. ACCESS	VINYL FENCE
EX TREE	PROP. FIRE DEPT. ACCESS	CHAIN LINK FENCE
EX BUSH	PROP. GRASS/PAVE SYSTEM	BOARD FENCE
EX LANDSCAPING	PROP. CONC. SIDEWALK	BARB WIRE
EX SIDEWALK	PROP. REINFORCED CONC. PAVERS	PROPERTY LINE
SURVEY BENCHMARK	PROP. PERMEABLE CONCRETE	PROP. POWER LINE
PROP. FIRE DEPT. ACCESS	PROP. HEAVY DUTY ASPHALT	RELOCATED PARKING PAY STATION
PROP. GRASS/PAVE SYSTEM	PROP. LANDSCAPE PAVERS	PROPOSED STREET LIGHT
PROP. CONC. SIDEWALK	PROP. MILL & PAVE	RELOCATED POWER POLE
PROP. REINFORCED CONCRETE	PROP. STORMWATER WETLAND	PROPOSED SIGN
PROP. HEAVY DUTY ASPHALT	PROP. RIP-RAP	PROP. WATER METER
PROP. LANDSCAPE PAVERS	PROP. SMALL SWALE	PROP. DOM. WATER
PROP. MILL & PAVE	PROP. STORM DRAIN	PROP. FIRE
PROP. STORMWATER WETLAND	PROP. STORM MANHOLE	BACK FLOW PREVENTER
PROP. RIP-RAP	PROP. SANITARY LINE	REDUCED PRESSURE
PROP. SMALL SWALE	PROP. SANITARY MANHOLE	DETECTOR ASSEMBLY
PROP. STORM DRAIN	PROP. CLEANOUT	PROP. WATER VALVE
PROP. STORM MANHOLE		PROP. FIRE HYDRANT
PROP. SANITARY LINE		PROP. TEE FITTING
PROP. SANITARY MANHOLE		PROP. BEND FITTING
PROP. CLEANOUT		PROP. REDUCER
		PARKING SPACE COUNT

LEGEND

HYDRAULIC FLOW LINE	---
DRAINAGE AREA BOUNDARY	---
SOIL BOUNDARY	---



ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

REVISIONS

NO.	REASON	DATE

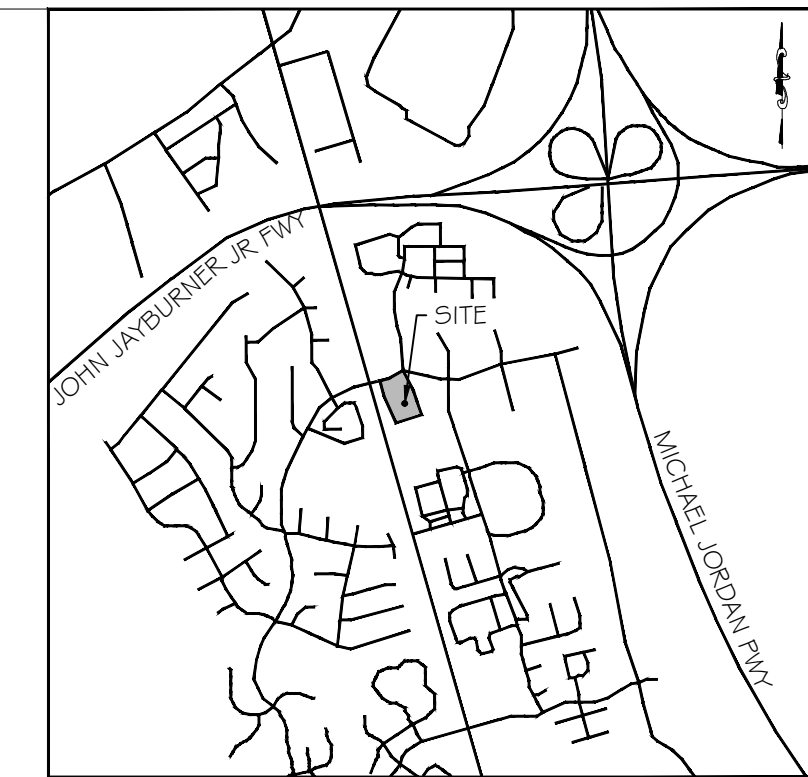
PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY
4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
STORMWATER MANAGEMENT EXISTING PEAK FLOW

SHEET NUMBER
C-603



LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTANTS

410 Blackwell Street, Suite 10
Durham, NC 27701
(919) 474-2500

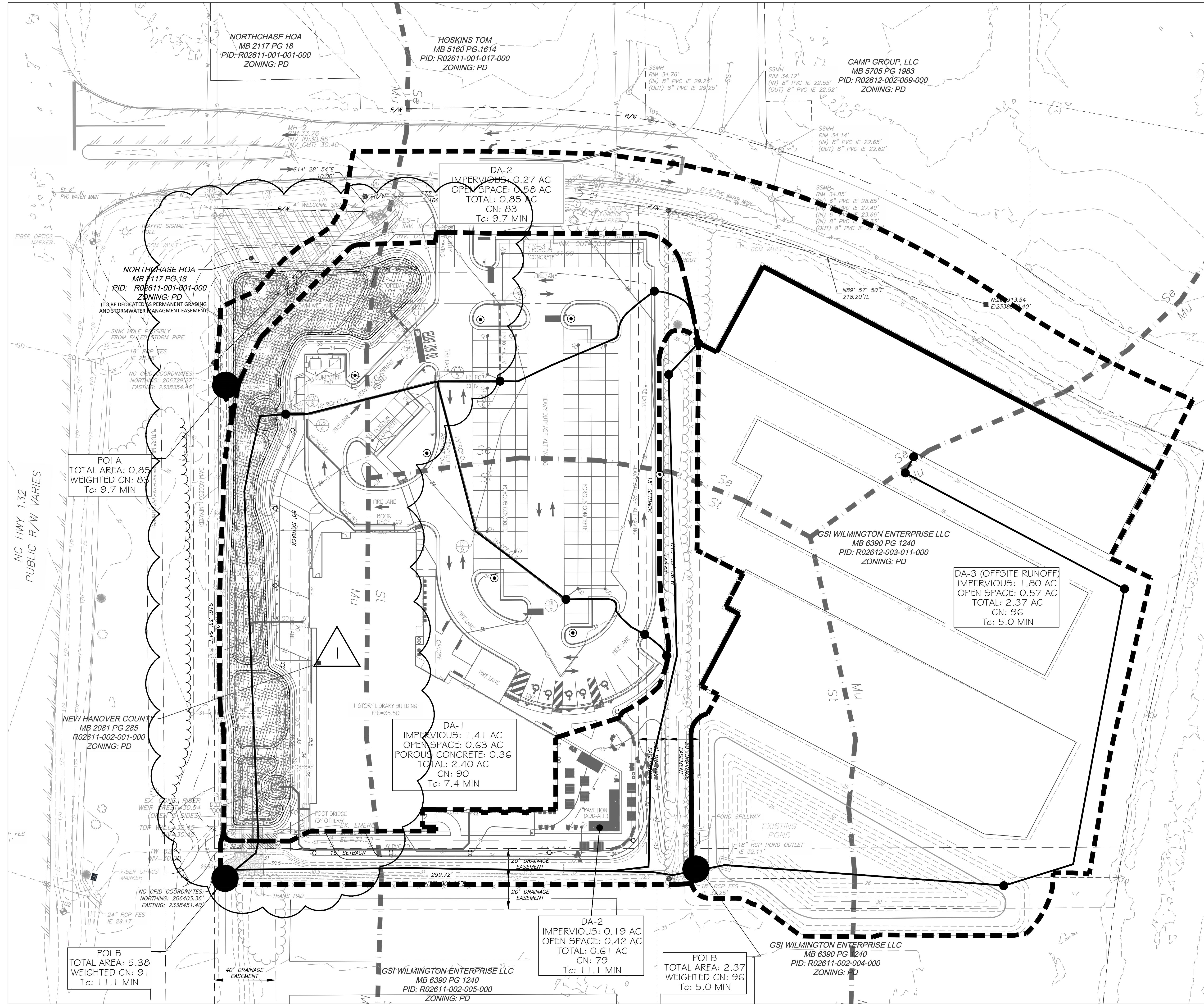
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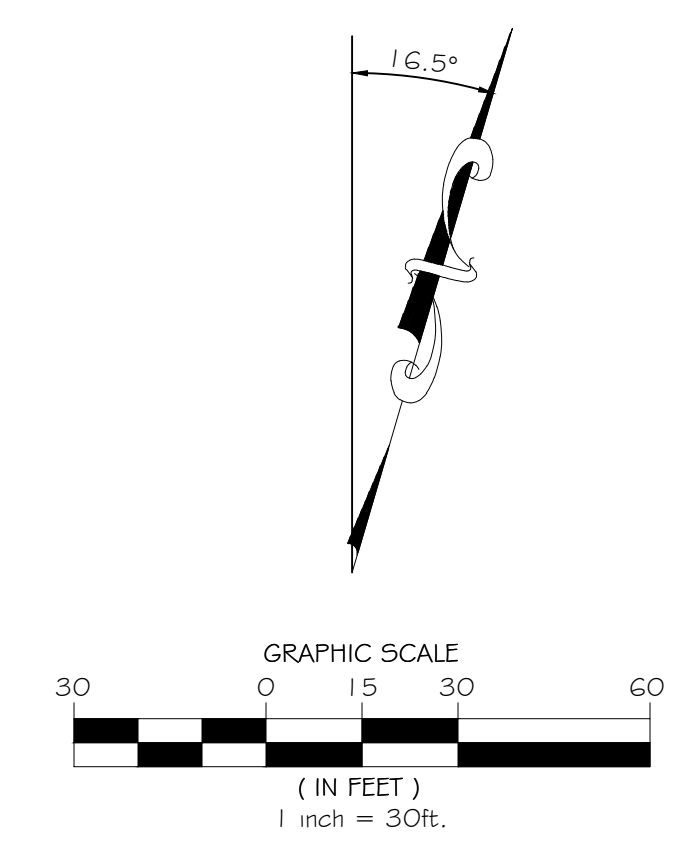


LEGEND

EX. PROPERTY CORNER	EX SANITARY SEWER	EX OVERHEAD ELECTRIC
EX DRAINAGE MANHOLE	EX CATCH BASIN	EX U/G ELECTRIC
EX STORM SEWER (AS NOTED)	EX GRATE INLET	EX FIBER OPTIC LINE
EX WATER METER	EX WATER VALVE	EX U/G TELEPHONE LINE
EX FIRE HYDRANT	EX WATER MAINHOLE	EX CONTOURS
EX WATER VALVE	EX WATER LINE	EX BOUNDARY LINE
EX ELECTRIC MANHOLE	EX UTILITY POLE	SURVEYED RIGHT-OF-WAY LINE
EX LIGHT POLE	EX ELECTRIC BOX	END OF INFORMATION
EX TRANSFORMER	EX TELEPHONE PEDESTAL	PIPE DIRECTION
EX SANITARY MANHOLE	EX CLEANOUT	LITTLE FREE LIBRARY
EX BOLLARD	EX FLAGPOLE	CURB + GUTTER
EX SIGN	EX TREE	EDGE OF PAVEMENT
EX BUSH	EX LANDSCAPING	STORM MANHOLE
EX SIDEWALK	SURVEY BENCHMARK	SANITARY SEWER MANHOLE
PROP. FIRE DEPT. ACCESS	PROP. CONC. SIDEWALK	REINFORCED CONCRETE PIPE
PROP. PERMEABLE CONCRETE	PROP. HEAVY DUTY REINFORCED CONCRETE	DUCTILE IRON PIPE
PROP. LANDSCAPE PAVERS	PROP. MLL # PAVE	TERRA COTTA PIPE
PROP. STORMWATER WETLAND	PROP. RIP-RAP	POLYVINYL CHLORIDE PIPE
PROP. SMALL SWALE	PROP. STORM DRAIN	CORRUGATED PLASTIC PIPE
PROP. STORM MANHOLE	PROP. SANITARY LINE	VINYL FENCE
PROP. SANITARY MANHOLE	PROP. CLEANOUT	CHAIN LINK FENCE
PROP. GRADING & STORMWATER MANAGEMENT EASEMENT		BOARD FENCE
		BARB WIRE
		PROPERTY LINE
		PROP. POWER LINE
		RELOCATED PARKING PAY STATION
		PROPOSED STREET LIGHT
		RELOCATED POWER POLE
		PROPOSED SIGN
		PROP. WATER METER
		PROP. DOM. WATER
		PROP. FIRE
		BACK FLOW PREVENTER
		REDUCED PRESSURE DETECTOR ASSEMBLY
		PROP. WATER VALVE
		PROP. FIRE HYDRANT
		PROP. TEE FITTING
		PROP. BEND FITTING
		PROP. REDUCER
		PARKING SPACE COUNT

LEGEND

HYDRAULIC FLOW LINE	---
DRAINAGE AREA BOUNDARY	---
SOIL BOUNDARY	---



ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

NO.	REASON	DATE
1	REVISED TO SHOW EXPANDED POND, SWM ACCESS AND SWM EASEMENT	03/28/24

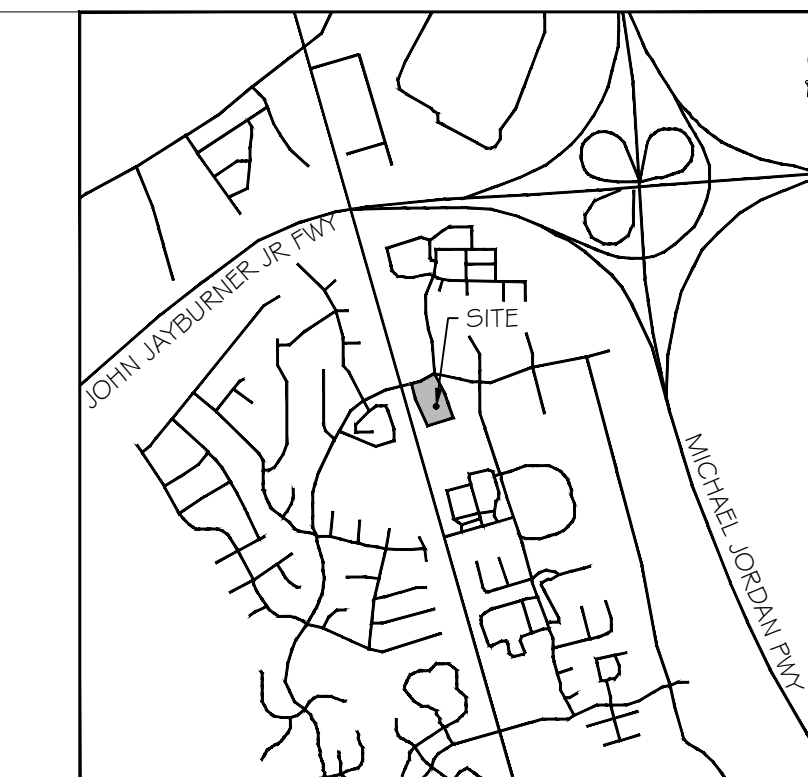
PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY
4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
STORMWATER MANAGEMENT POST PEAK FLOW

SHEET NUMBER
C-604



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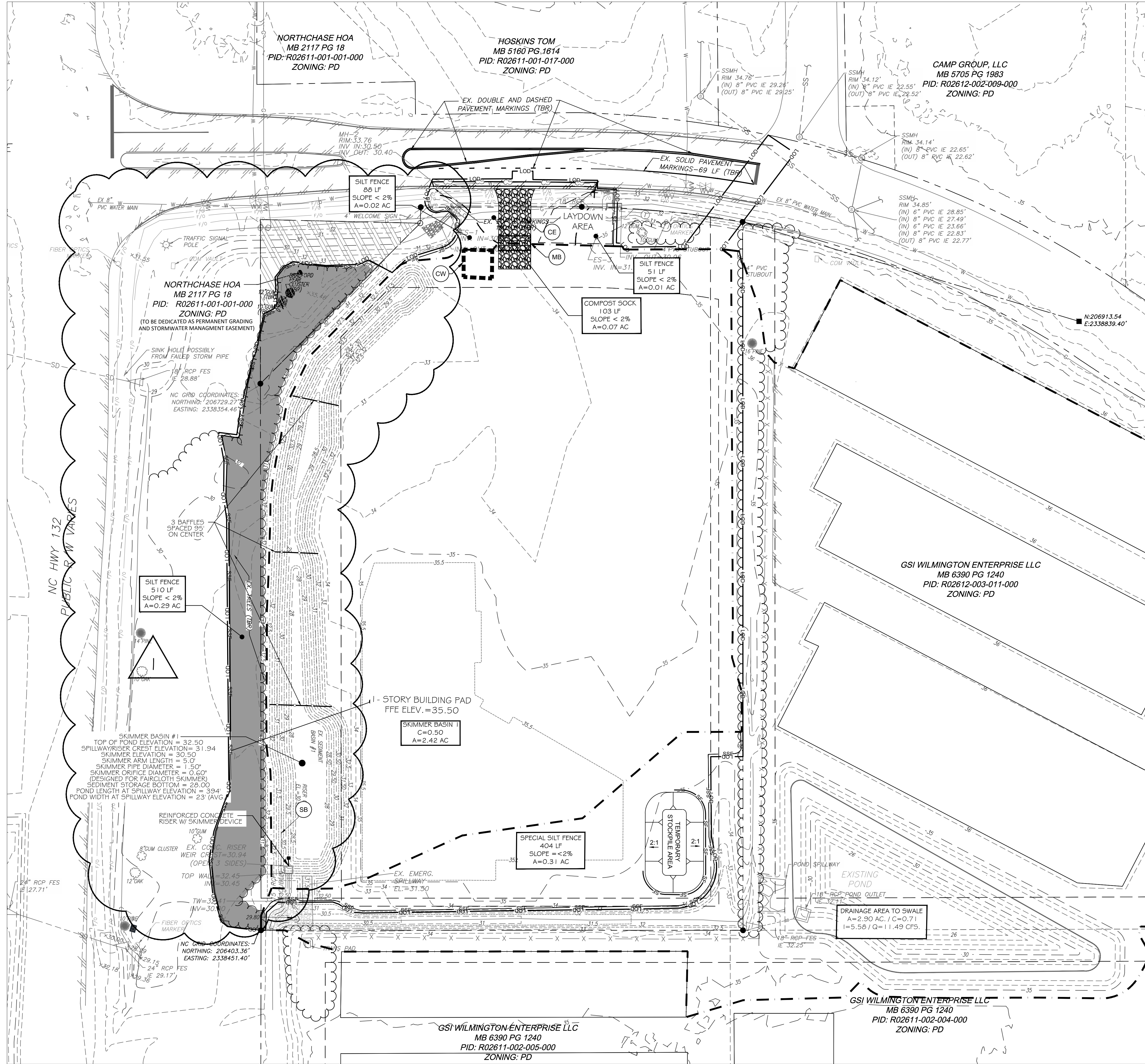
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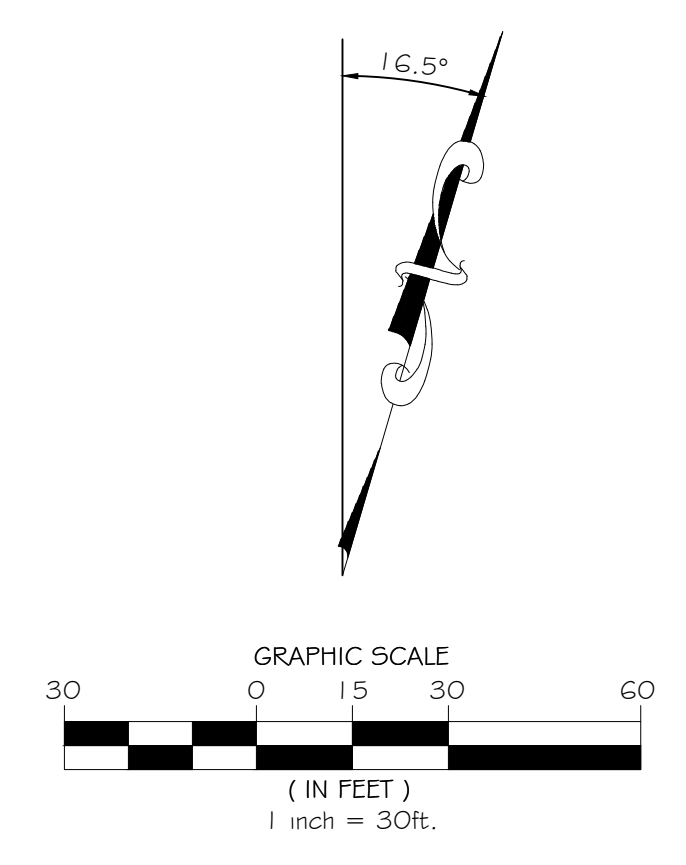


LEGEND

EX. PROPERTY CORNER	●	EX SANITARY SEWER	—
EX DRAINAGE MANHOLE	⊕	EX OVERHEAD ELECTRIC	—
EX CATCH BASIN	⊖	EX UG ELECTRIC	—
EX STORM SEWER (AS NOTED)	—SD	EX FIBER OPTIC LINE	—
EX GRATE INLET	⊠	EX UG TELEPHONE LINE	—
EX WATER METER	⊕	EX CONTOURS	-1.9 -20-
EX FIRE HYDRANT	⊕	EX FENCE	—
EX WATER VALVE	⊕	EX BOUNDARY LINE	—
EX WATER MANHOLE	⊕	SURVEYED RIGHT-OF-WAY LINE	—
EX WATER LINE	—	END OF INFORMATION	EOI
EX ELECTRIC MANHOLE	⊕	PIPE DIRECTION	PD
EX UTILITY POLE	⊕	LITTLE FREE LIBRARY	LFL
EX LIGHT POLE	⊕	CURB 4 GUTTER	C4G
EX ELECTRIC BOX	⊕	EDGE OF PAVEMENT	EOP
EX TRANSFORMER	⊕	STORM MANHOLE	STMH
EX TELEPHONE PEDESTAL	⊕	SANITARY SEWER MANHOLE	SSMH
EX SANITARY MANHOLE	⊕	REINFORCED CONCRETE PIPE	RCP
EX CLEANOUT	⊕	DUCTILE IRON PIPE	DIP
EX BOLLARD	⊕	TERRA COTTA PIPE	TCP
EX FLAGPOLE	⊕	POLYVINYL CHLORIDE PIPE	PVC
EX SIGN	⊕	CORRUGATED PLASTIC PIPE	CPP
EX TREE	⊕	VINYL FENCE	VF
EX BUSH	⊕	CHAIN LINK FENCE	CLF
EX LANDSCAPING	⊕	BOARD FENCE	BF
EX SIDEWALK	⊕	BARB WIRE	BW
SURVEY BENCHMARK	⊕		
PROPOSED GRADING & STORMWATER MANAGEMENT EASEMENT	⊕		

EROSION/SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
CE	⊕	TEMPORARY GRAVEL CONSTRUCTION ENTRANCE (WITH TIRE WASH)
SF	—SF—SF—	SILT FENCE
DF	—DF—DF—	DIVERSION FENCE
FB	⊕	FILTER BAG
TP	—TP—TP—	TEMPORARY PIPE TREE PROTECTION
LD	—LOD—	LIMITS OF DISTURBANCE
SB	⊕	RISER SKIMMER BASIN
WR	⊕	RIP-RAP INFLOW PROTECTION
CW	⊕	CONCRETE WASHOUT
CS	⊕	COMPOST SOCK
MB	⊕	MOUNTABLE BERM
	⊕	DRAINAGE DIVIDE



ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

NO.	REASON	DATE
1	REVISED TO SHOW EXPANDED DEMO AREA AND NEW SUPER SILT FENCE.	03/28/24

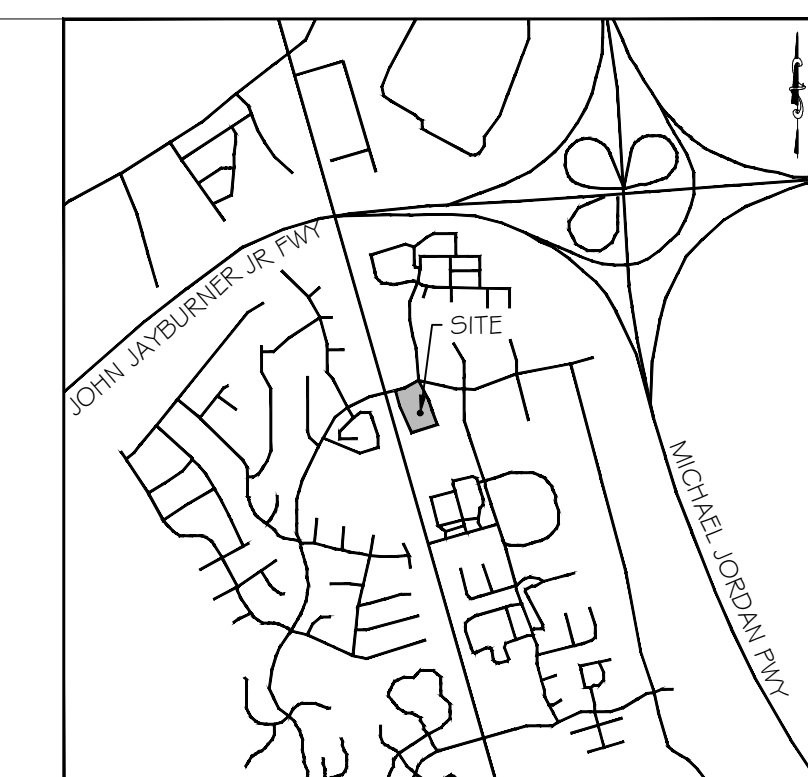
PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY
4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
EROSION AND SEDIMENT CONTROL PLAN FOR INITIAL CONDON

SHEET NUMBER
EC-100

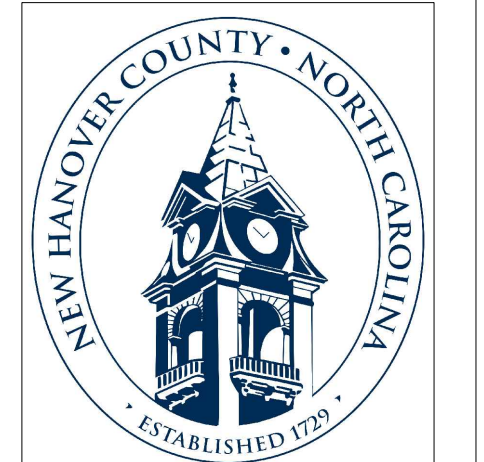


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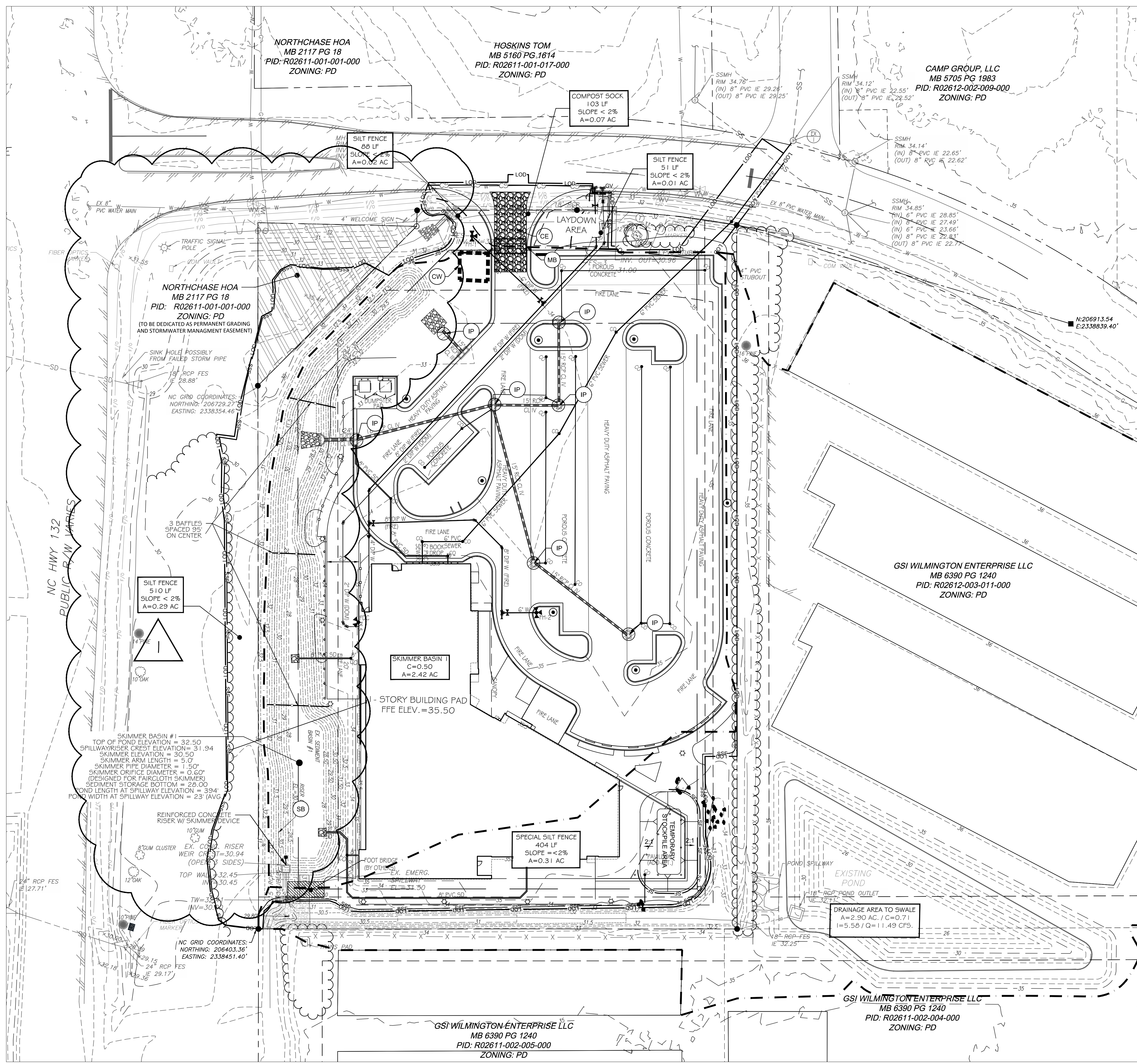


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WORTH CAROLINA
PROFESSIONAL
SEAL
05557
CURTIS J. DA
3/18/2024

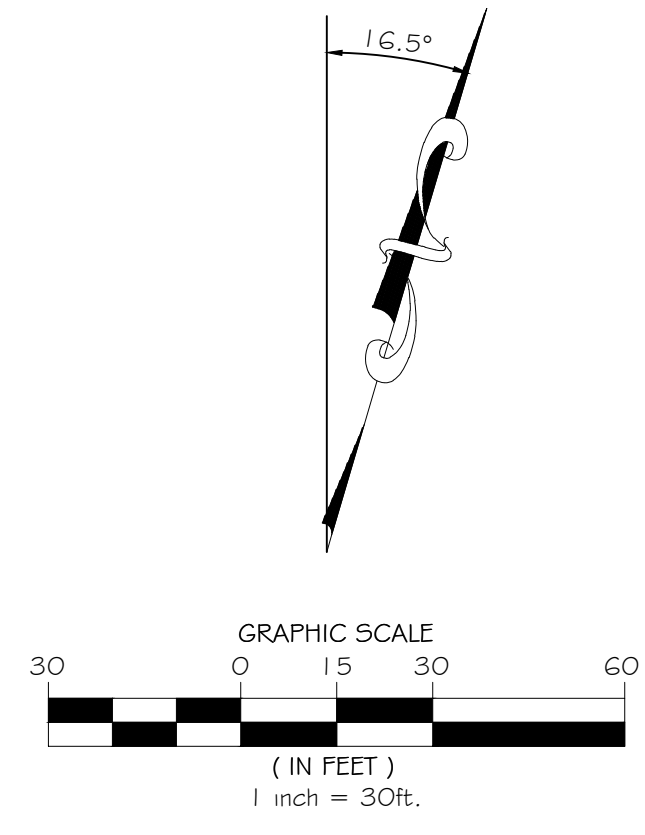


LEGEND

EX PROPERTY CORNER	EX SANITARY SEWER	EOI
EX DRAINAGE MANHOLE	EX OVERHEAD ELECTRIC	PD
EX CATCH BASIN	EX LUG ELECTRIC	LFL
EX STORM SEWER (AS NOTED)	EX FIBER OPTIC LINE	C4G
EX GRATE INLET	EX LUG TELEPHONE LINE	EOP
EX WATER METER	EX CONTOURS	STMH
EX FIRE HYDRANT	EX FENCE	SSMH
EX WATER VALVE	EX BOUNDARY LINE	RCF
EX WATER MANHOLE	SURVEYED RIGHT-OF-WAY LINE	DIP
EX WATER LINE		TCF
EX ELECTRIC MANHOLE		PVC
EX UTILITY POLE		CPP
EX LIGHT POLE		VF
EX ELECTRIC BOX		CLF
EX TRANSFORMER		BF
EX TELEPHONE PEDESTAL		BW
EX SANITARY MANHOLE		
EX CLEANOUT		
EX BOLLARD		
EX FLAGPOLE		
EX SIGN		
EX TREE		
EX BUSH		
EX LANDSCAPING		
EX SIDEWALK		
SURVEY BENCHMARK		
PROPOSED GRADING & STORMWATER MANAGEMENT EASEMENT		

EROSION/SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
CE	[Symbol]	TEMPORARY GRAVEL CONSTRUCTION ENTRANCE (WITH TIRE WASH)
SF	[Symbol]	SILT FENCE
DF	[Symbol]	DIVERSION FENCE
FB	[Symbol]	FILTER BAG
TP	[Symbol]	TEMPORARY PIPE
LD	[Symbol]	TREE PROTECTION
SB	[Symbol]	LIMITS OF DISTURBANCE
RSB	[Symbol]	RISER SKIMMER BASIN
RRP	[Symbol]	RIP-RAP INFLOW PROTECTION
CW	[Symbol]	CONCRETE WASHOUT
CS	[Symbol]	COMPOST SOCK
MB	[Symbol]	MOUNTABLE BERM
IP	[Symbol]	DRAINAGE DIVIDE



BID SET

ISSUE DATE
03/28/2024

REVISIONS

NO.	REASON	DATE
1	REVISE TO SHOW EXPANDED LOD AREA AND NEW SUPCR SILT FENCE	03/28/24

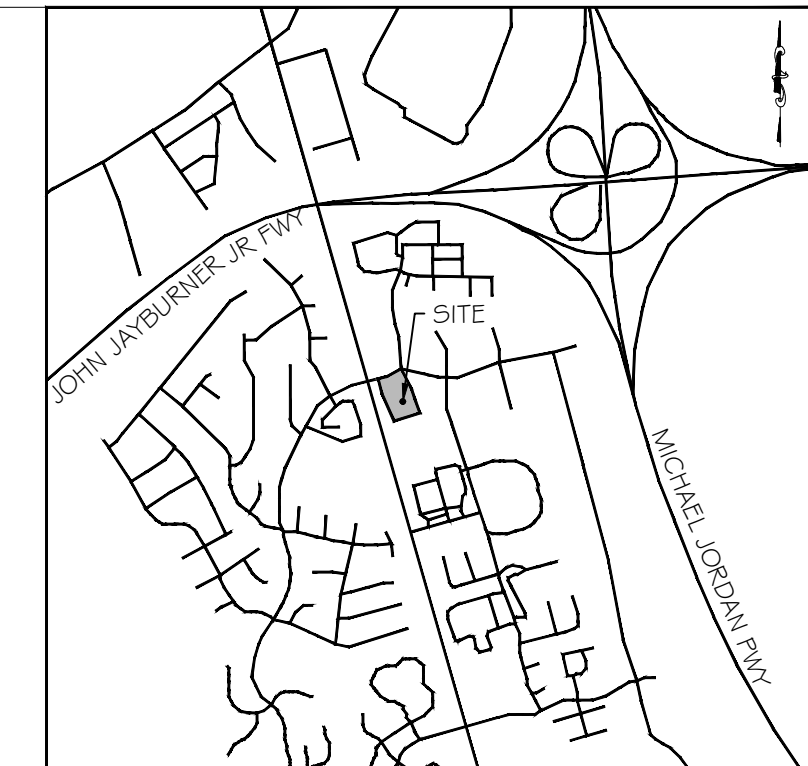
PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY
4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
EROSION AND SEDIMENT CONTROL PLAN FOR INTERIM CONDTION

SHEET NUMBER
EC-101



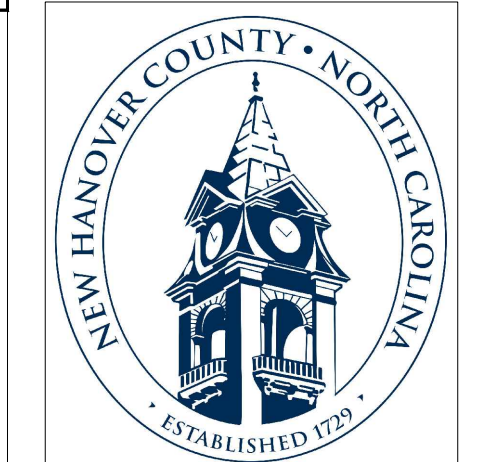
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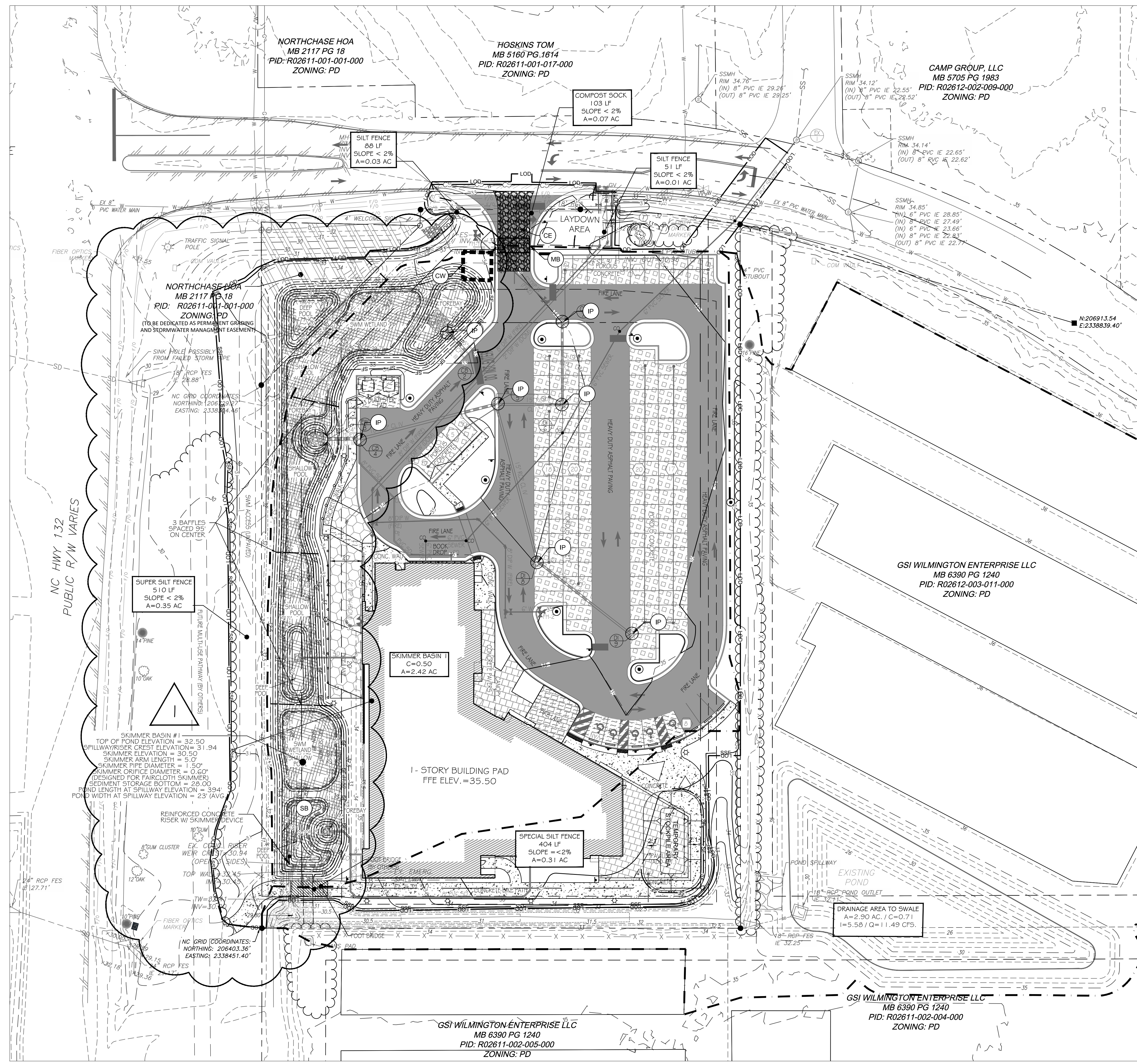


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PROFESSIONAL SEAL
CURTIS J. DAY
3/18/2024

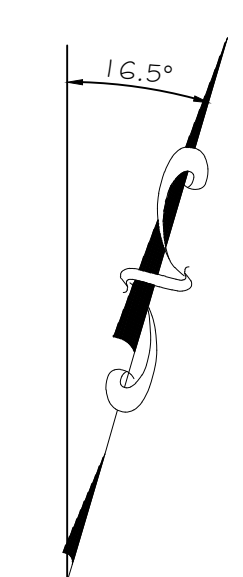


LEGEND

EX. PROPERTY CORNER	⊙	EX SANITARY SEWER	—
EX DRAINAGE MANHOLE	⊕	EX OVERHEAD ELECTRIC	—
EX CATCH BASIN	⊖	EX U/G ELECTRIC	—
EX STORM SEWER (AS NOTED)	⊗	EX FIBER OPTIC LINE	—
EX GRATE INLET	⊘	EX U/G TELEPHONE LINE	—
EX WATER METER	⊙	EX CONTOURS	—
EX FIRE HYDRANT	⊙	EX FENCE	—
EX WATER VALVE	⊙	EX BOUNDARY LINE	—
EX WATER MANHOLE	⊕	SURVEYED RIGHT-OF-WAY LINE	—
EX WATER LINE	—	END OF INFORMATION	EOI
EX ELECTRIC MANHOLE	⊕	PIPE DIRECTION	PD
EX UTILITY POLE	⊕	LITTLE FREE LIBRARY	LFL
EX LIGHT POLE	⊕	CURB & GUTTER	C&G
EX ELECTRIC BOX	⊕	EDGE OF PAVEMENT	EOP
EX TRANSFORMER	⊕	STORM MANHOLE	STMH
EX TELEPHONE PEDESTAL	⊕	SANITARY SEWER MANHOLE	SSMH
EX SANITARY MANHOLE	⊕	REINFORCED CONCRETE PIPE	RCP
EX CLEANOUT	⊕	DUCTILE IRON PIPE	DIP
EX BOLLARD	⊕	TERRA COTTA PIPE	TCP
EX FLAGPOLE	⊕	POLYVINYL CHLORIDE PIPE	PVC
EX SIGN	⊕	CORRUGATED PLASTIC PIPE	CPP
EX TREE	⊕	VINYL FENCE	VF
EX BUSH	⊕	CHAIN LINK FENCE	CLF
EX LANDSCAPING	⊕	BOARD FENCE	BF
EX SIDEWALK	⊕	BARB WIRE	BW
SURVEY BENCHMARK	⊕		
PROPOSED GRADING & STORMWATER MANAGEMENT EASEMENT	⊕		

EROSION/SEDIMENT CONTROL LEGEND

KEY	SYMBOL	DESCRIPTION
(CE)	⊕	TEMPORARY GRAVEL CONSTRUCTION ENTRANCE (WITH TIRE WASH)
(SF)	— SF — SF —	SILT FENCE
(DF)	— DF — DF —	DIVERSION FENCE
(FB)	⊕	FILTER BAG
(TP)	— TP — TP —	TEMPORARY PIPE
(LOD)	— LOD — LOD —	TREE PROTECTION
(SB)	⊕	LIMITS OF DISTURBANCE
(RIP)	⊕	RISE SKIMMER BASIN
(RIP-RAP)	⊕	RISE SKIMMER BASIN
(CW)	⊕	CONCRETE WASHOUT
(CS)	⊕	COMPOST SOCK
(MB)	⊕	MOUNTABLE BERM
(DP)	⊕	DRAINAGE DIVIDE



ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

NO.	REASON	DATE
1	REVISED TO SHOW NEW SWM GRADING, EXPANDED LOD AND NEW SILT FENCE AND SUPER SILT FENCE.	03/28/24

PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY

4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

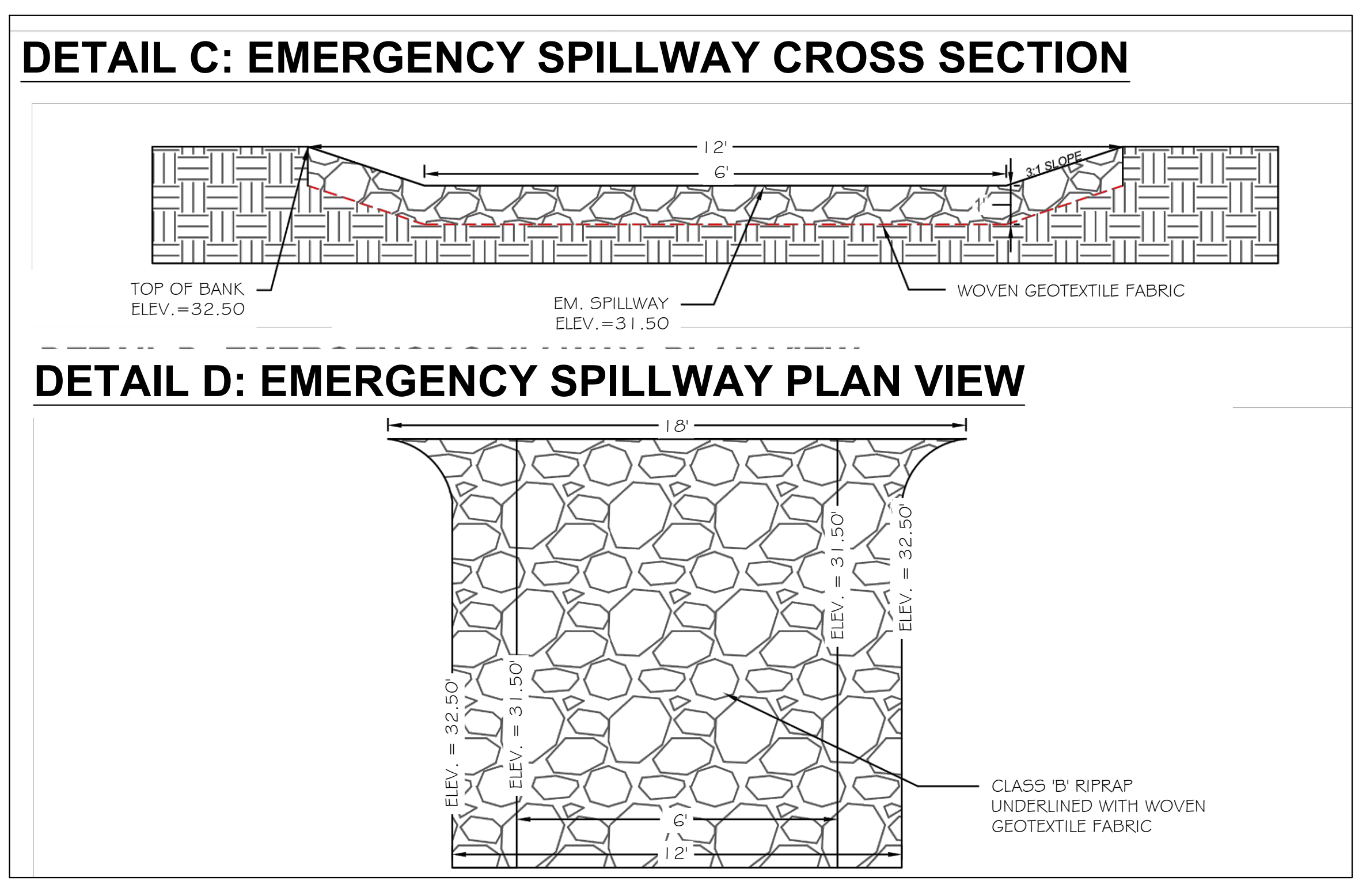
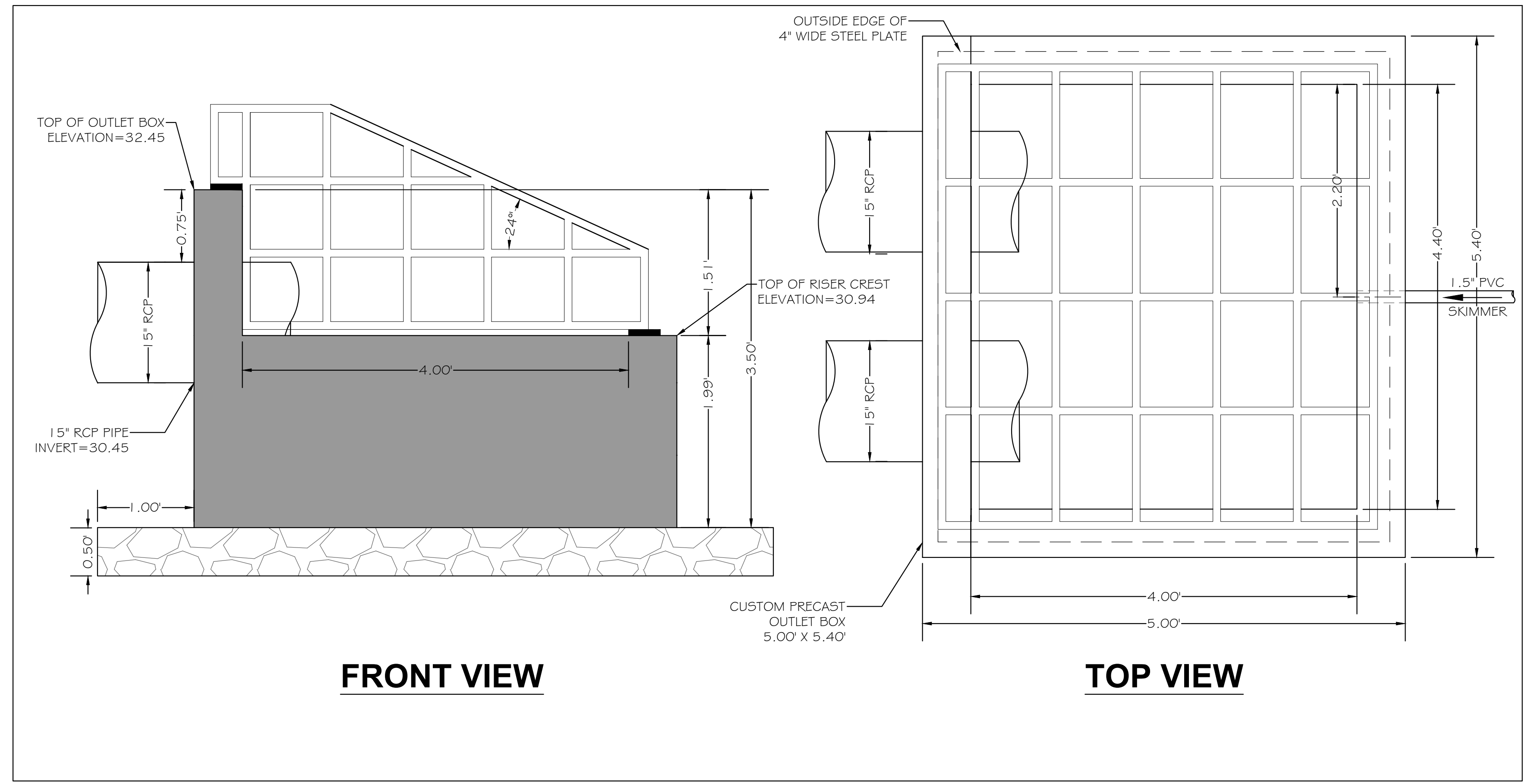
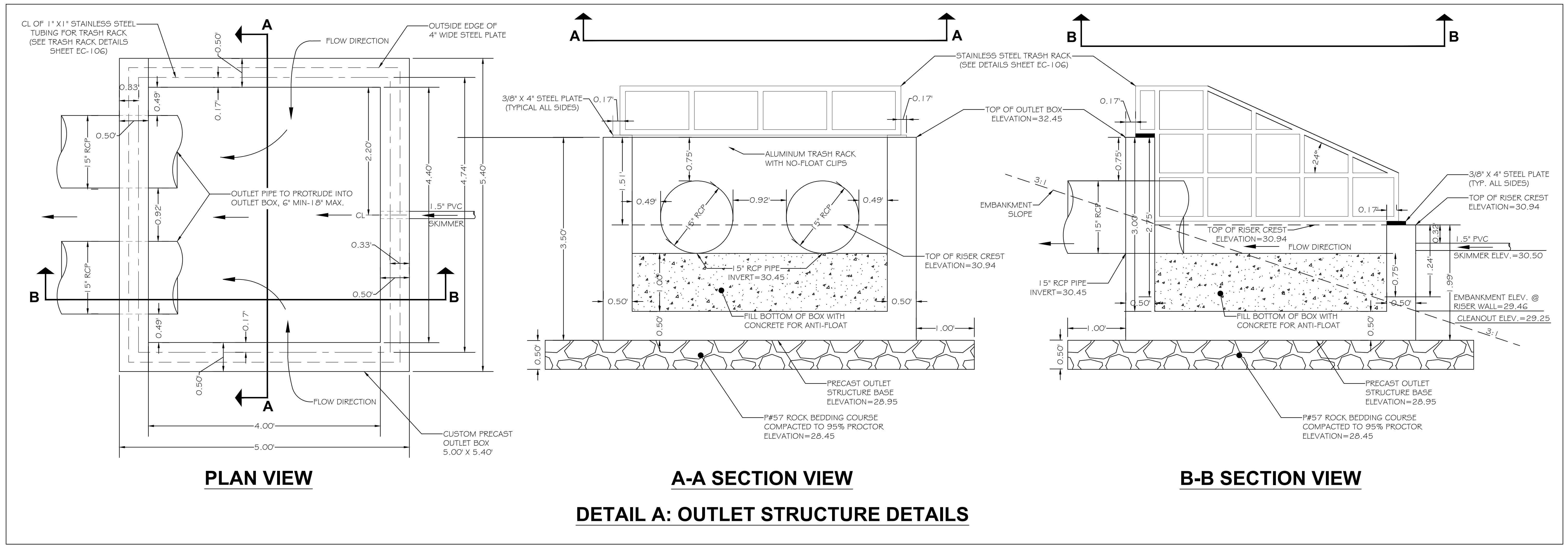
PROJECT NO.
514.18349.00

SHEET TITLE
EROSION AND SEDIMENT CONTROL PLAN FOR FINAL CONDTION

SHEET NUMBER
EC-102



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NOTE: RISER STRUCTURE IS TO BE CONSTRUCTED UNDER THE ADVANCE SITE PLAN AND SHOULD BE CONSIDERED EXISTING FOR PURPOSES OF THIS PLAN. DETAILS SHOWN FOR INFORMATIONAL PURPOSES ONLY.



ISSUE FOR	
BID SET	

ISSUE DATE	
03/28/2024	

REVISIONS		
NO.	REASON	DATE
1	ADD NOTES	03/28/24

PROJECT TEAM	
PRINCIPAL IN CHARGE	JD
PROJECT MANAGER	CD
DESIGN TEAM	GH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY
4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

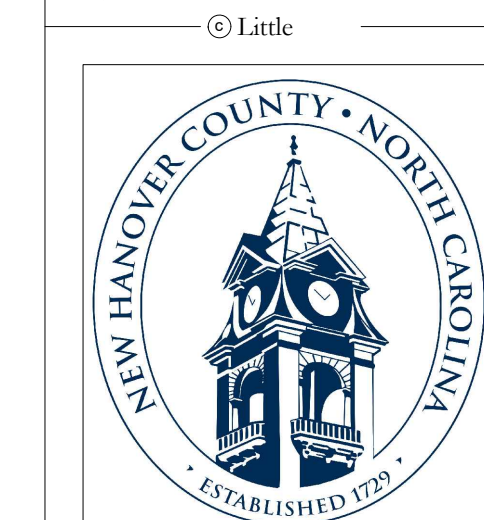
PROJECT NO.
514.18349.00

SHEET TITLE
SEDIMENT AND EROSION CONTROL STRUCTURE AND SPILLWAY DETAILS

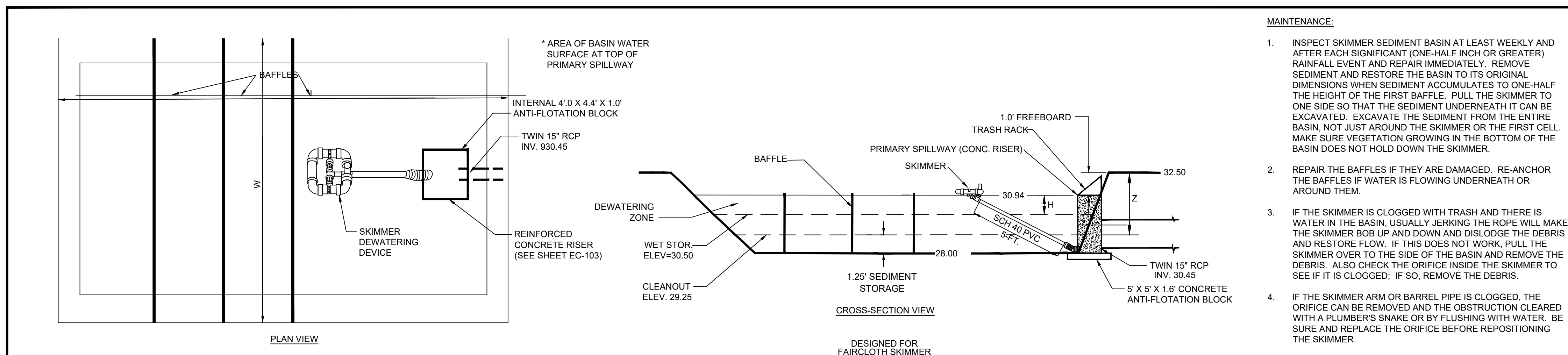
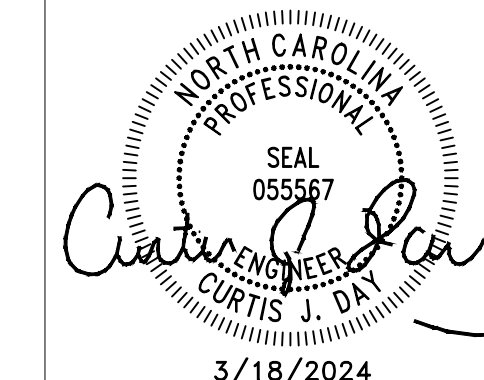
SHEET NUMBER
EC-103

F
E
D
C
B
A

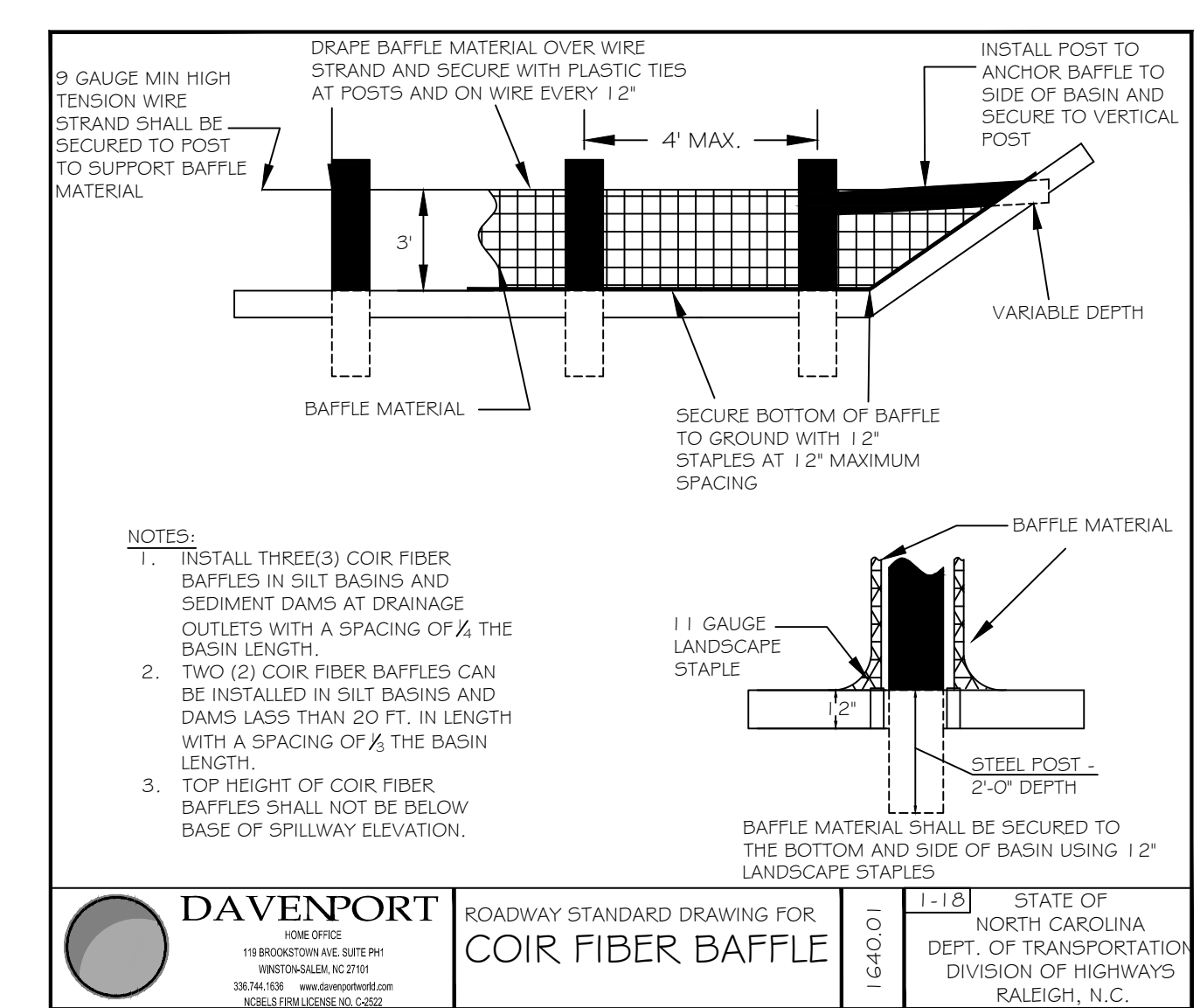
1 2 3 4 5 6 7



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NCBELS FIRM LICENSE NO. C-2822



- MAINTENANCE:**
- INSPECT SKIMMER SEDIMENT BASIN AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN. NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
 - REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
 - IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED. IF SO, REMOVE THE DEBRIS.
 - IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
 - CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.
 - FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.



NOTES:

- INSTALL THREE (3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF 1/2 THE BASIN LENGTH.
- TWO (2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF 2/3 THE BASIN LENGTH.
- TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF SPILLWAY ELEVATION.

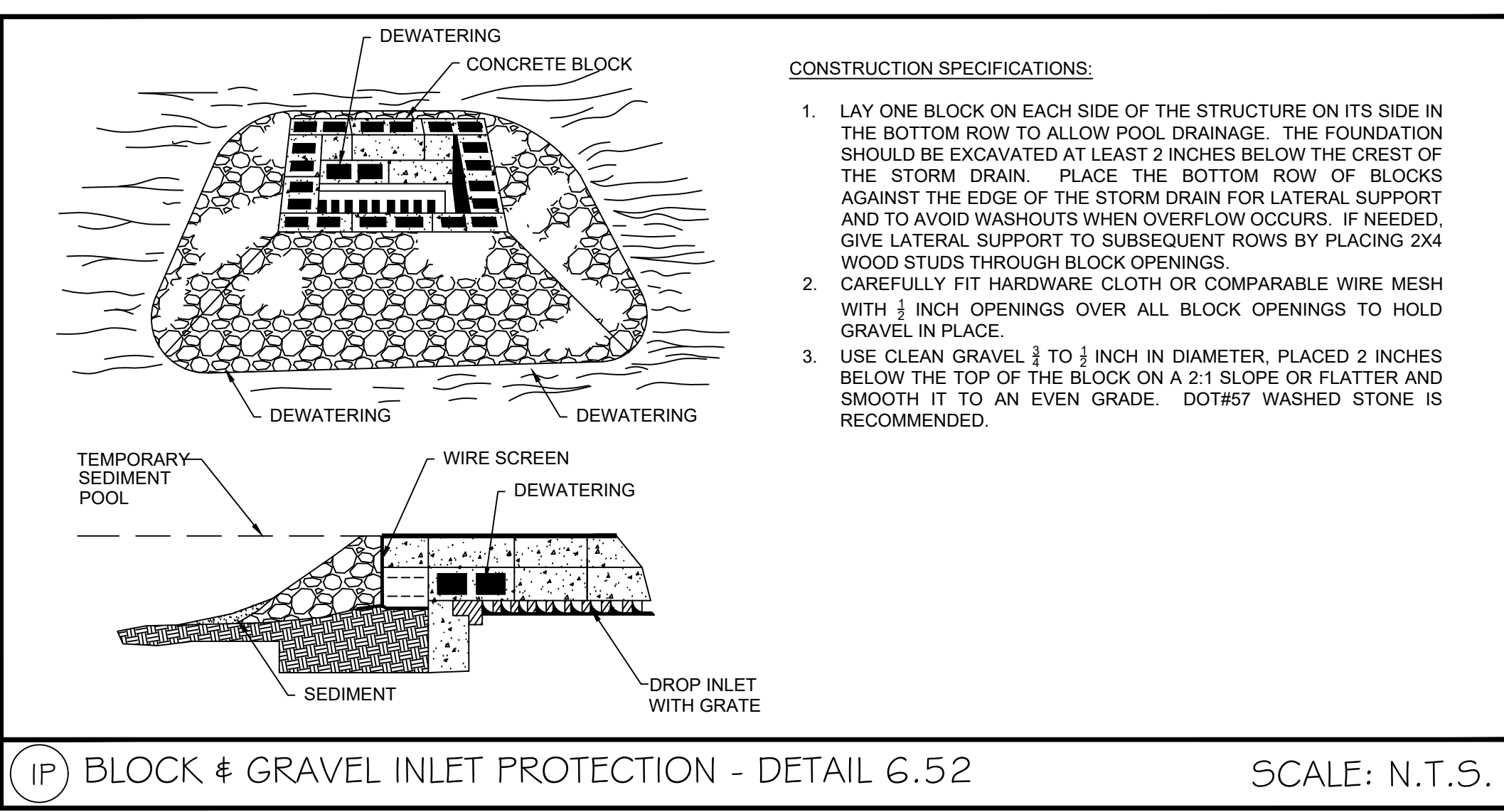
DAVENPORT ROADWAY STANDARD DRAWING FOR COIR FIBER BAFFLE

DATA BLOCK

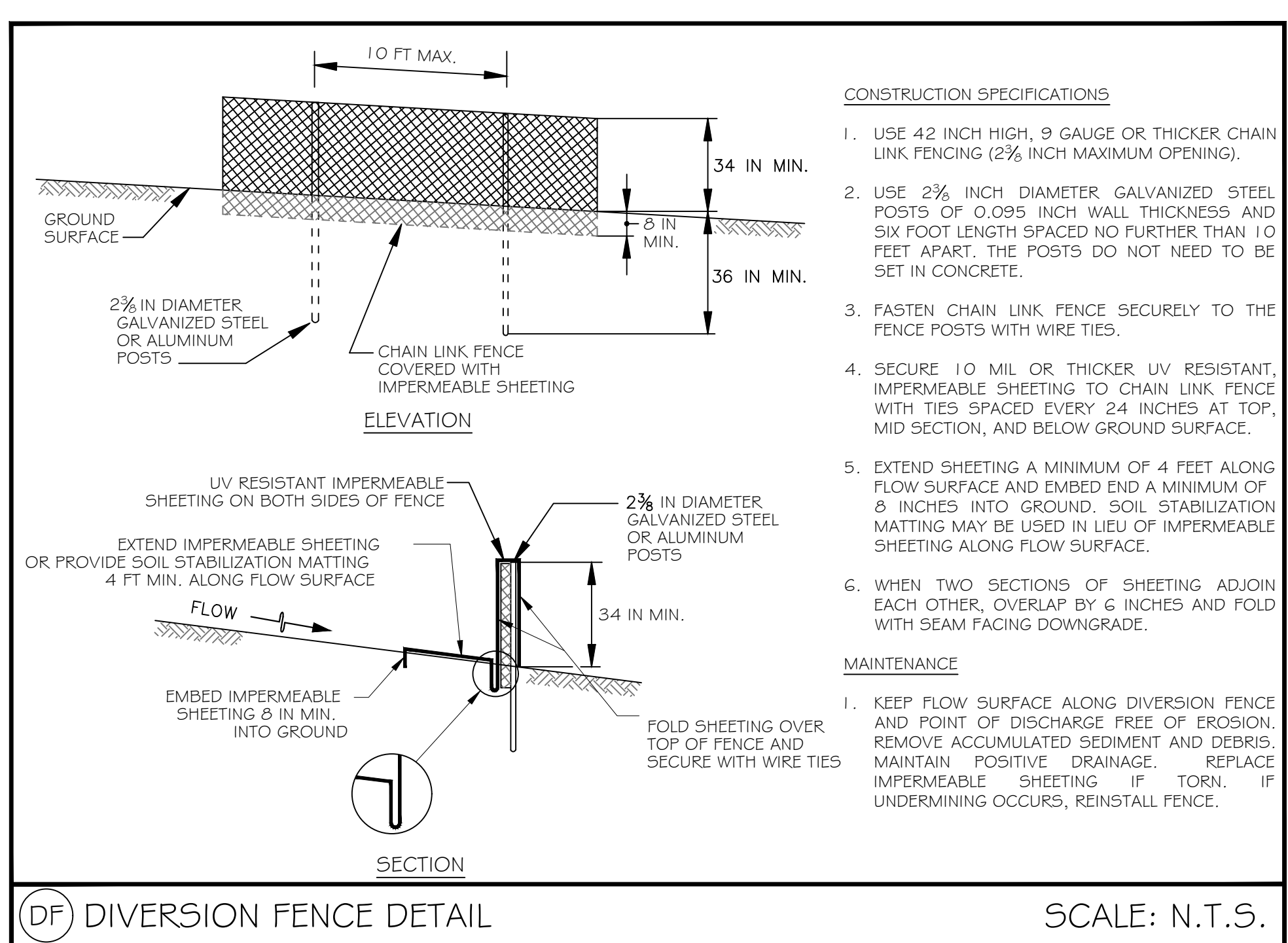
BASIN #	DRAINAGE AREA (ACRES)	DISTURBED AREA (ACRES)	Q ₁₀	BASIN SURFACE AREA REQUIRED (SQ FT)	BASIN SURFACE AREA PROVIDED (SQ FT)	BASIN VOLUME REQUIRED (CUIC FT)	BASIN VOLUME PROVIDED (CUIC FT)	CLEANOUT ELEVATION (FEET)	H (FEET)	Z (FEET)	L (FEET)	W (FEET)	Ls (FEET)	T (FEET)	Wd (FEET)	SKIMMER PIPE DIAMETER	SKIMMER ORIFICE DIAMETER	SKIMMER ARM LENGTH (FEET)	ANTI-FLOTATION BLOCK LENGTH (FEET)	ANTI-FLOTATION BLOCK WIDTH (FEET)	ANTI-FLOTATION BLOCK HEIGHT (FEET)	TOP ELEV.	BOTTOM ELEV.	SPILLWAY CREST ELEV.
INITIAL	5.39	1.12	15.57	5,061	11,116	2,024	4,545	29.50	0.44	3.25	394	23	2.18'	NA	NA	1.5"	0.9"	5.0'	4.4	4	1.0	32.50	28.00	31.50
INTERIM	2.42	2.42	6.76	2,197	11,116	4,361	4,545	29.50	0.44	3.25	394	23	2.18'	NA	NA	1.5"	0.7"	5.0'	4.4	4	1.0	32.50	28.00	31.50
FINAL	2.26	1.72	5.27	1,712	11,116	3,103	4,545	29.50	0.44	3.25	394	23	2.18'	NA	NA	1.5"	0.6	5.0'	4.4	4	1.0	32.50	28.00	31.50

SKIMMER BASIN

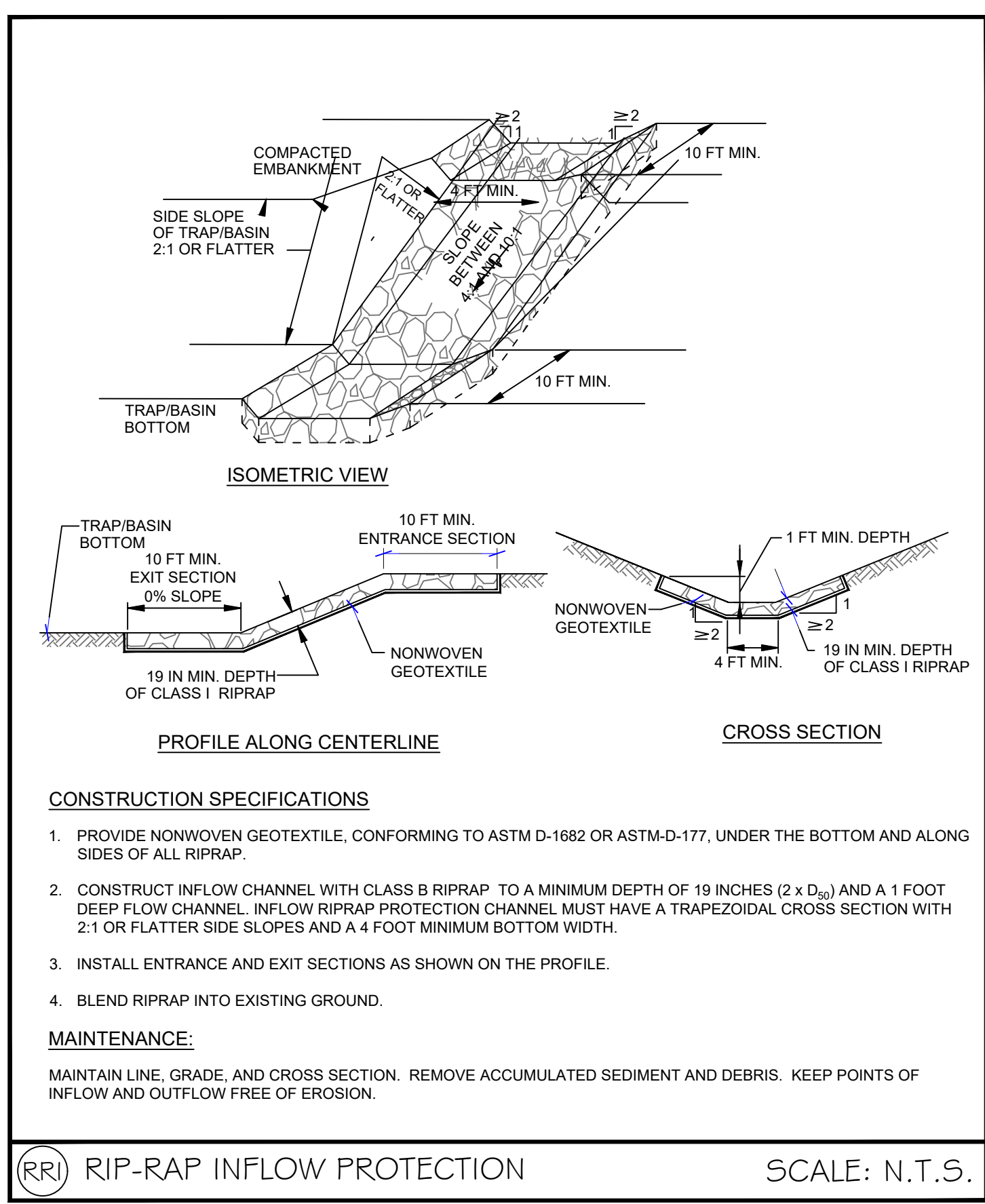
SCALE: N.T.S.



BLOCK & GRAVEL INLET PROTECTION - DETAIL 6.52



DIVERSION FENCE DETAIL



RIP-RAP INFLOW PROTECTION

Practice Standards and Specifications

6.87 CHECK DAM WITH A WEIR

Definition: A small stone dam structure with a weir outlet with a sediment storage area on the upper side.

Purpose: To reduce erosion in a drainage channel by restricting the velocity of flow. This structure also has some ability to provide sediment control.

Conditions Where Practice Applies: This temporary practice may be used in the following locations:

- At outlets of temporary diversions, graded channels, and temporary slope drains;
- In small natural drainage turnouts; and
- In locations where the dams can be easily cleaned and maintained on a regular basis.

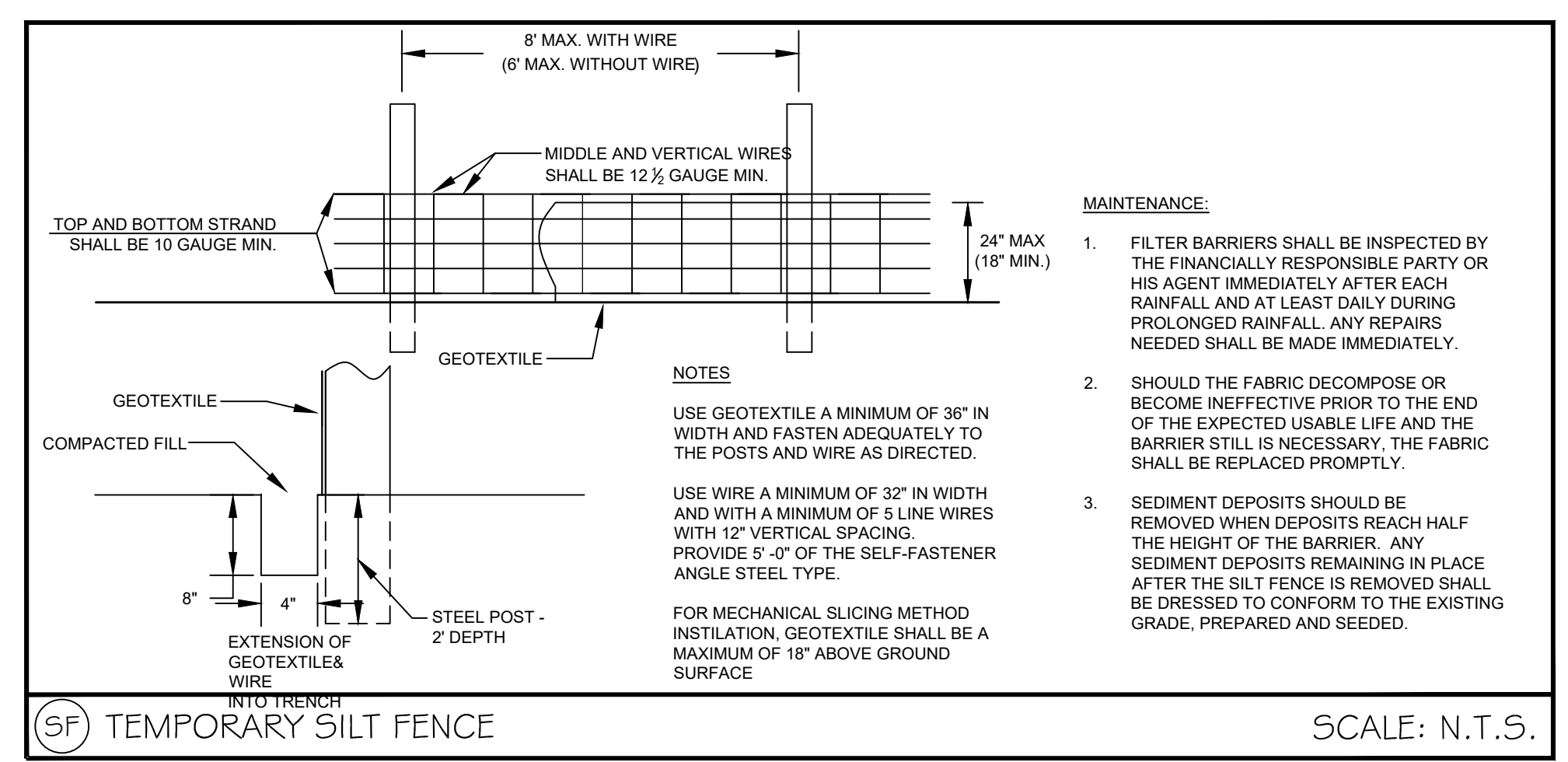
Do not use a check dam with a weir in intermittent or perennial streams.

Planning Considerations: Check dams are an expedient way to reduce gullying in the bottom of channels that will be filled or stabilized at a later date. The dams should only be used while permanent stabilization measures are being put into place.

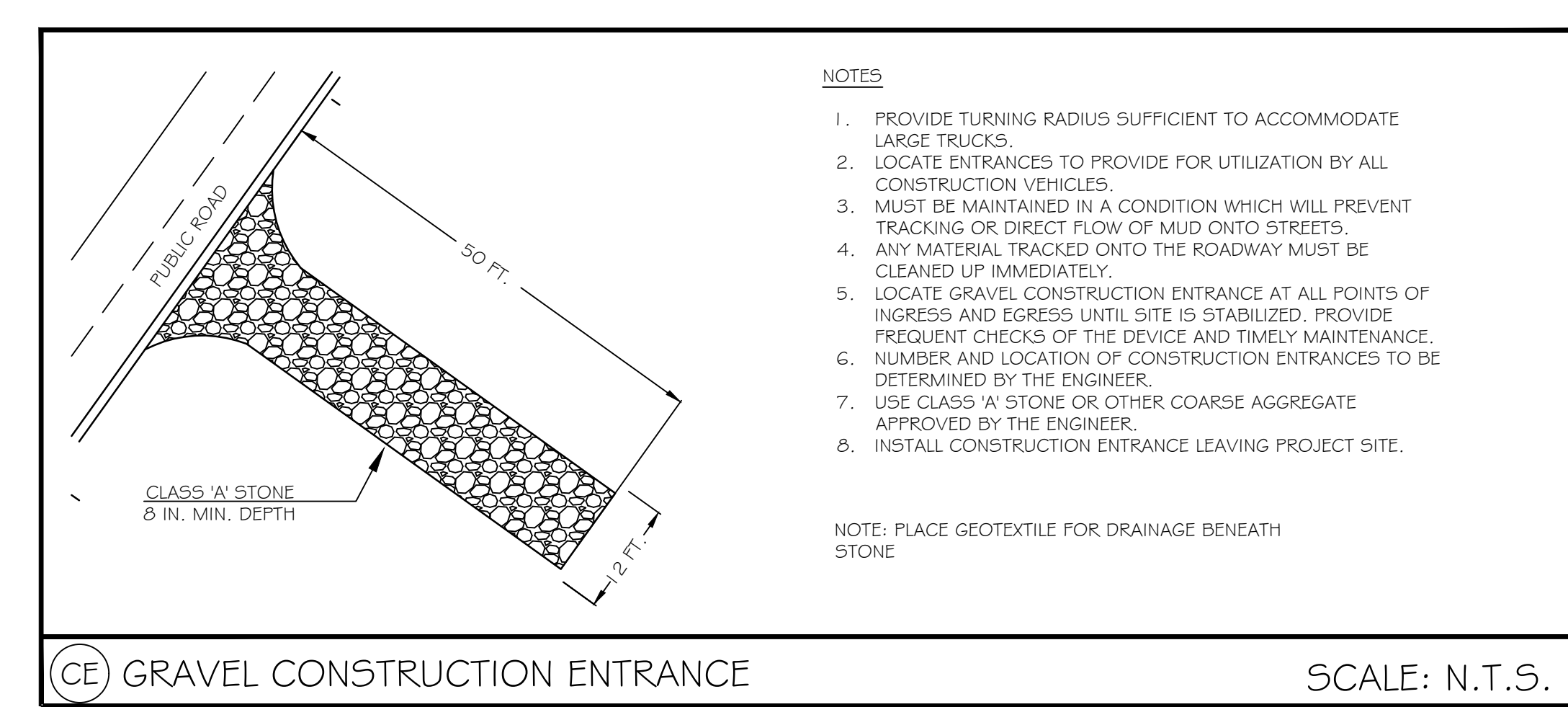
Check dams installed in grass-lined channels may kill the vegetative lining if submergence after it rains is too long and/or sedimentation is excessive. All stone and riprap must be removed if mowing is planned as part of vegetative maintenance.

Design Criteria: The following criteria should be used when designing a check dam with a weir:

- Keep the weir at least 9 inches lower than the outer edges at natural ground elevation. The weir length is variable to the size of the drainage area and peak runoff. The weir length may be sized as:
 $L (ft) = \frac{Q \text{ peak } (cfs)}{0.88}$
- Keep the side slope of the stone at 2:1 or flatter.
- The apron length (lower side of dam) should be approximately three times the height of the dam with a minimum length of 4 feet. Stabilize outflow areas along the channel to resist erosion.
- The maximum spacing between dams places the toe of the upstream dam at the same elevation as the top of the downstream dam (Figure 6.84a).
- Use NC DOT Class B stone and line the upstream side of the dam with NC DOT #5 or #57 stone.
- Key the stone into the ditch banks and extend it beyond the abutments a minimum of 1.5 feet to avoid washouts from overflow around the dams.
- Sediment storage area should be sized for the anticipated volume of sedimentation.



TEMPORARY SILT FENCE



GRAVEL CONSTRUCTION ENTRANCE

ISSUE FOR

BID SET

ISSUE DATE

03/28/2024

REVISIONS

NO.	REASON	DATE

PROJECT TEAM

PRINCIPAL IN CHARGE: JD
PROJECT MANAGER: CD
DESIGN TEAM: GH
PROJECT NAME: NORTHCHASE BRANCH LIBRARY

4400 NORTHCHASE PKWY NE, WILMINGTON, NC 28405

PROJECT NO: 514.18349.00

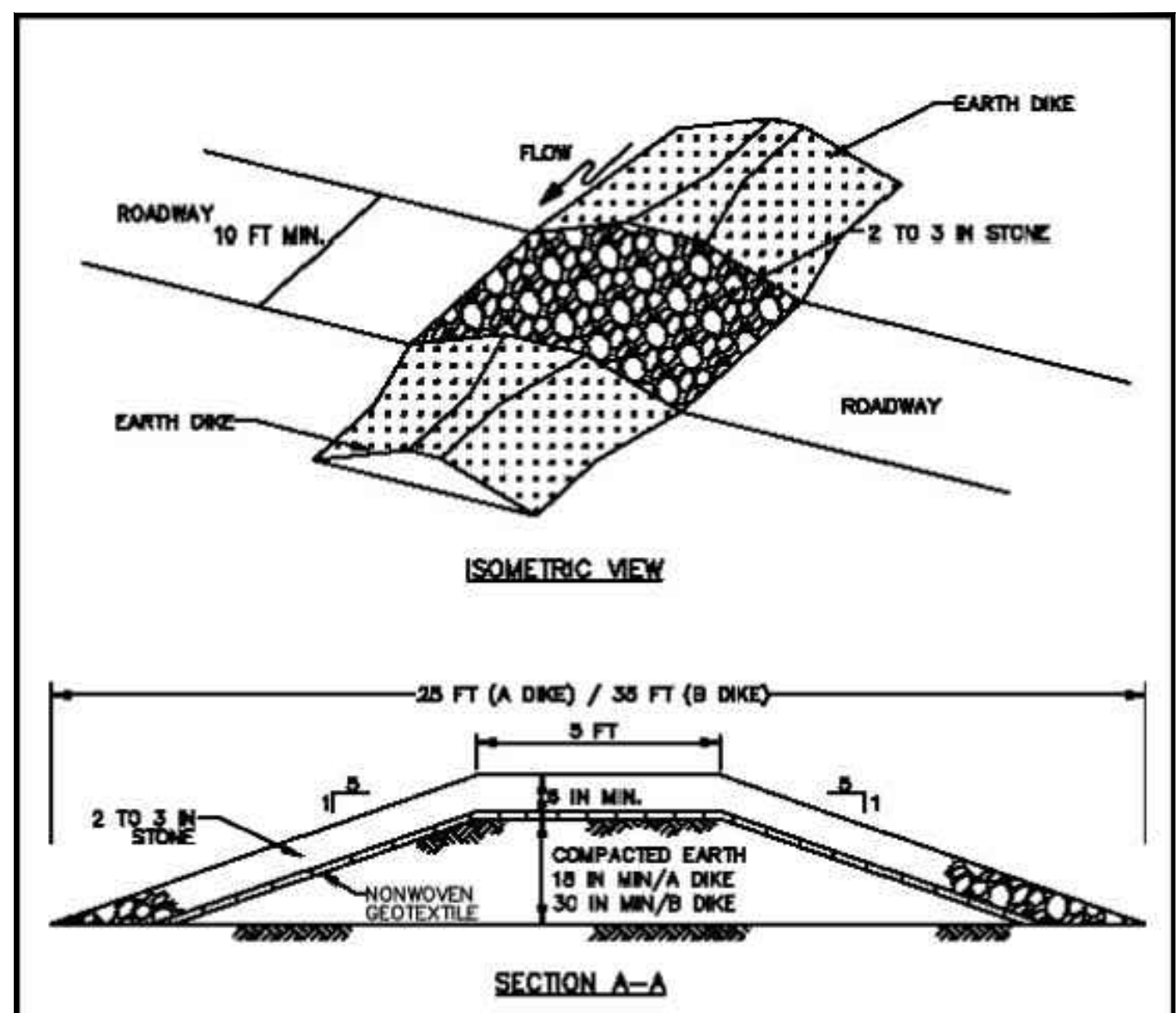
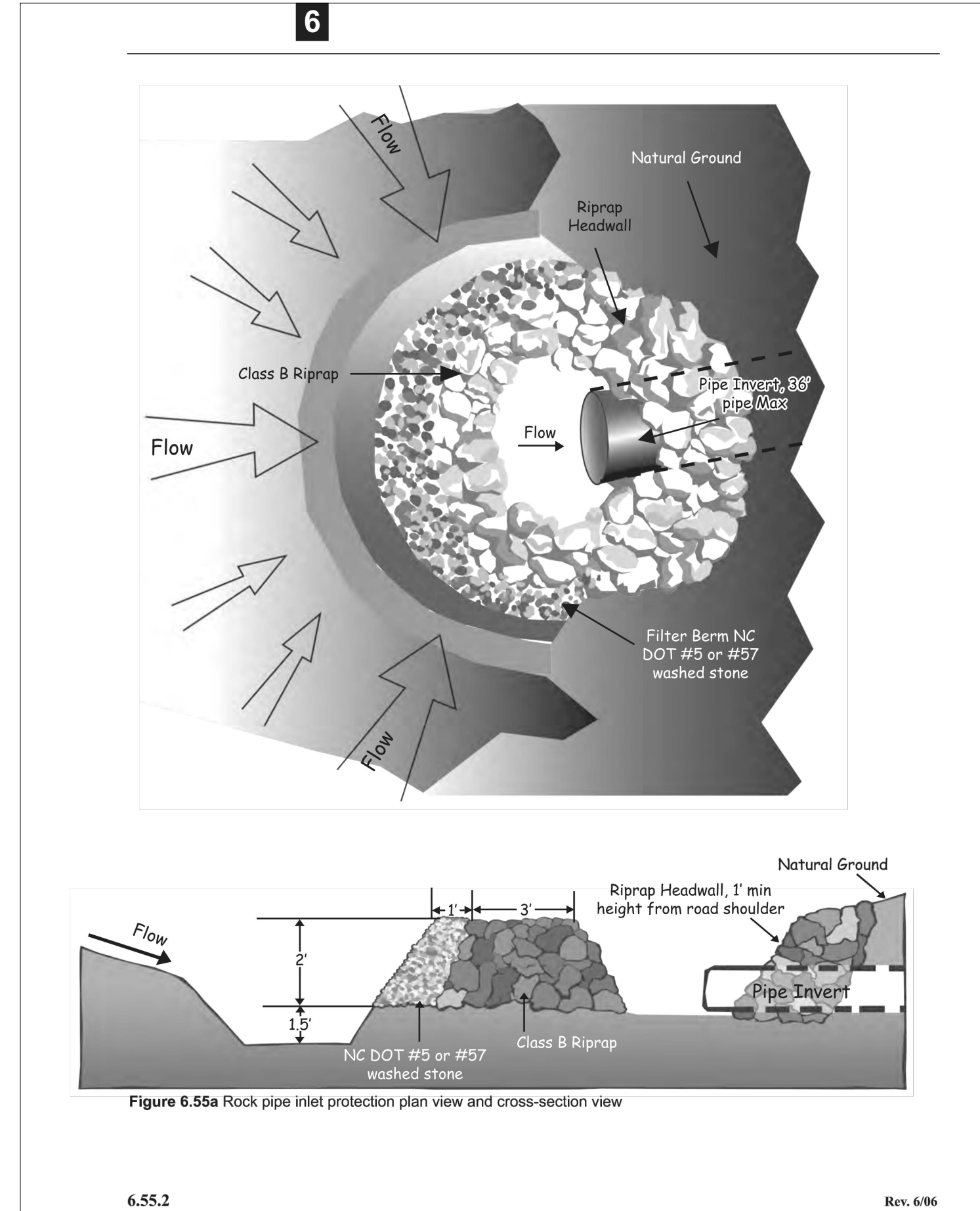
SHEET TITLE: EROSION AND SEDIMENT CONTROL DETAILS

SHEET NUMBER: EC-104

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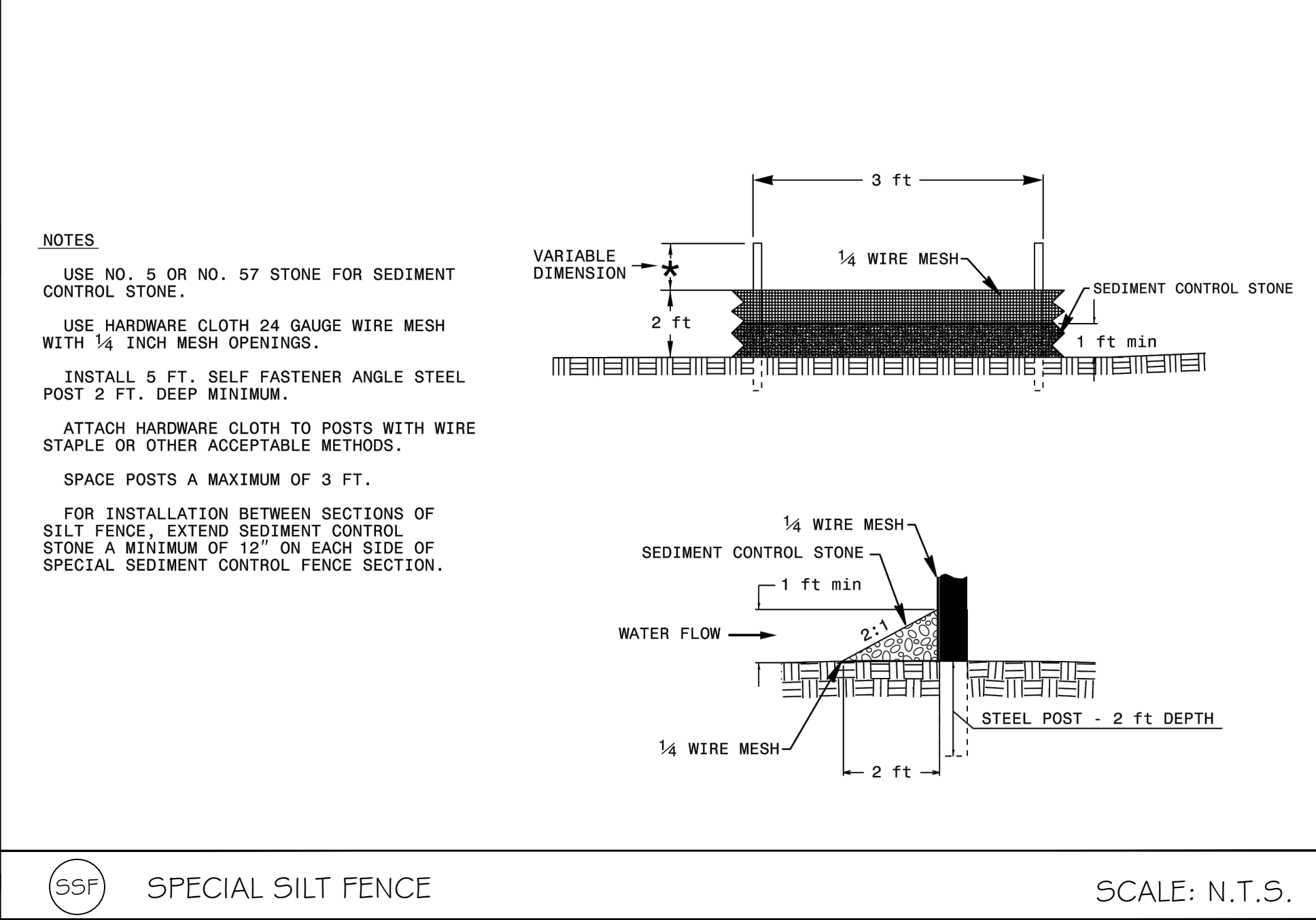


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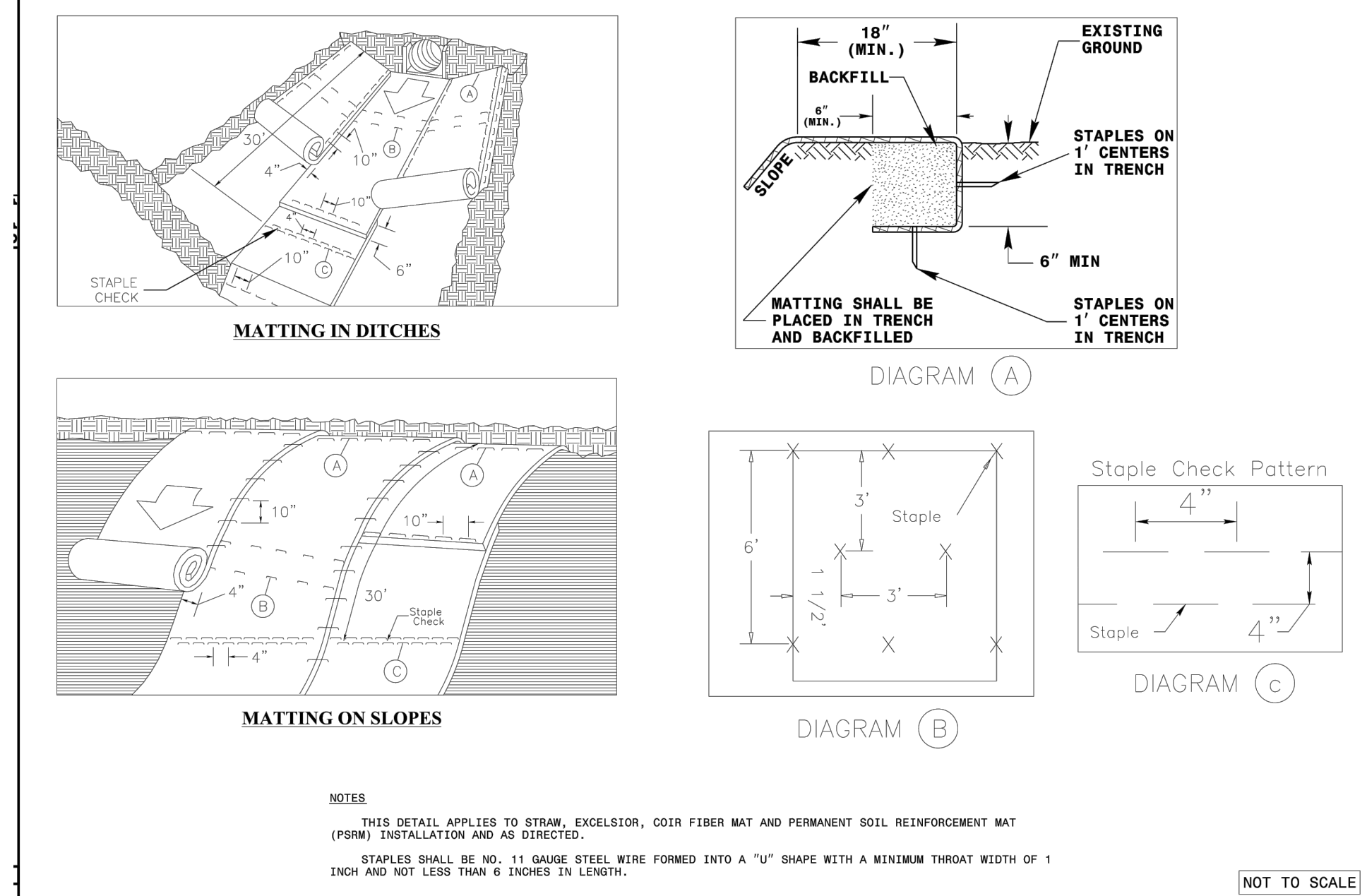
- CONSTRUCTION SPECIFICATIONS**
- USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
 - PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
 - PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
 - MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

(MB) MOUNTABLE BERM SCALE: N.T.S.

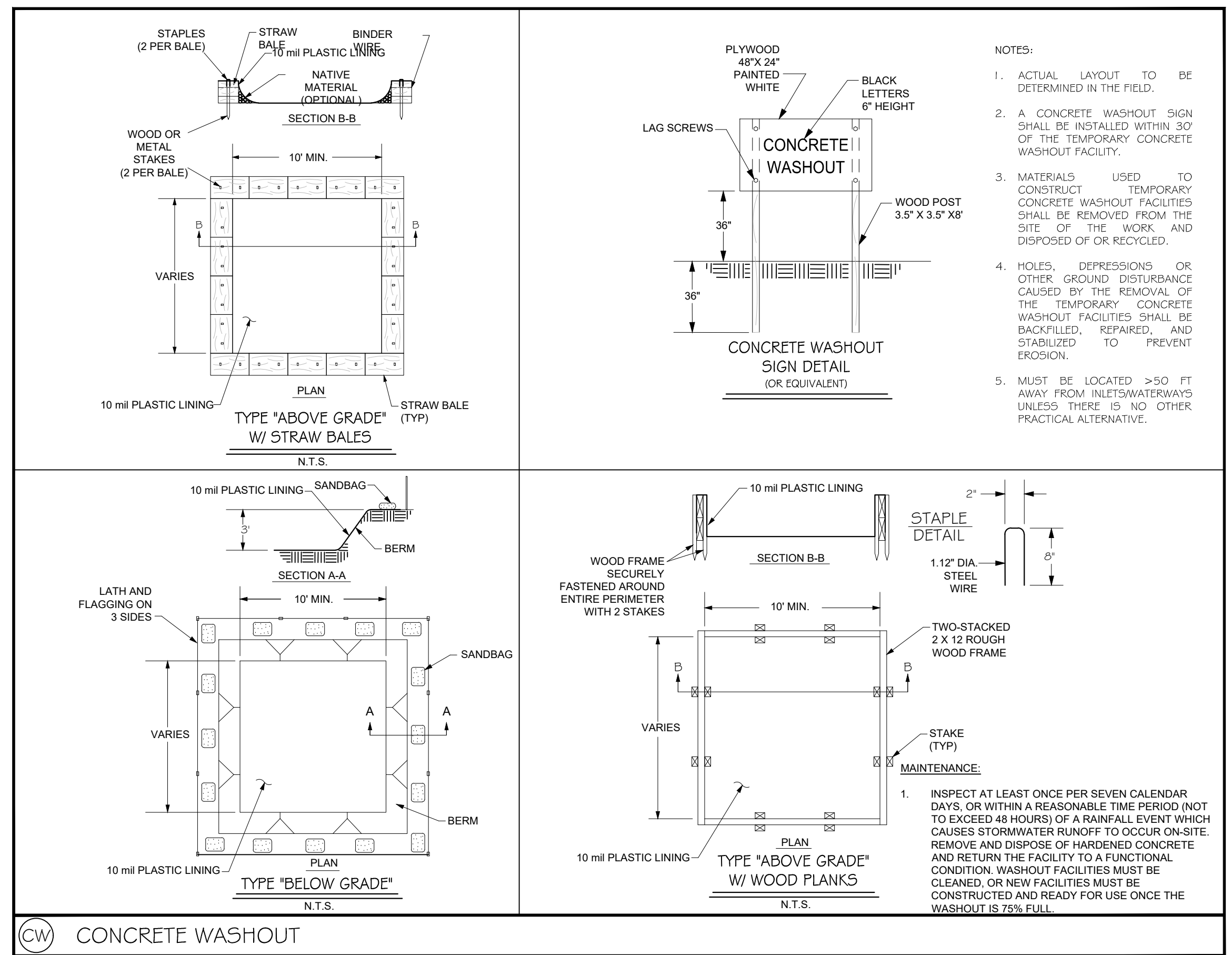


- NOTES**
- USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.
 - USE HARDWARE CLOTH 24 GAUGE WIRE MESH WITH 1/4 INCH MESH OPENINGS.
 - INSTALL 5 FT. SELF FASTENER ANGLE STEEL POST 2 FT. DEEP MINIMUM.
 - ATTACH HARDWARE CLOTH TO POSTS WITH WIRE STAPLE OR OTHER ACCEPTABLE METHODS.
 - SPACE POSTS A MAXIMUM OF 3 FT.
 - FOR INSTALLATION BETWEEN SECTIONS OF SILT FENCE, EXTEND SEDIMENT CONTROL STONE A MINIMUM OF 12" ON EACH SIDE OF SPECIAL SEDIMENT CONTROL FENCE SECTION.

(SF) SPECIAL SILT FENCE SCALE: N.T.S.

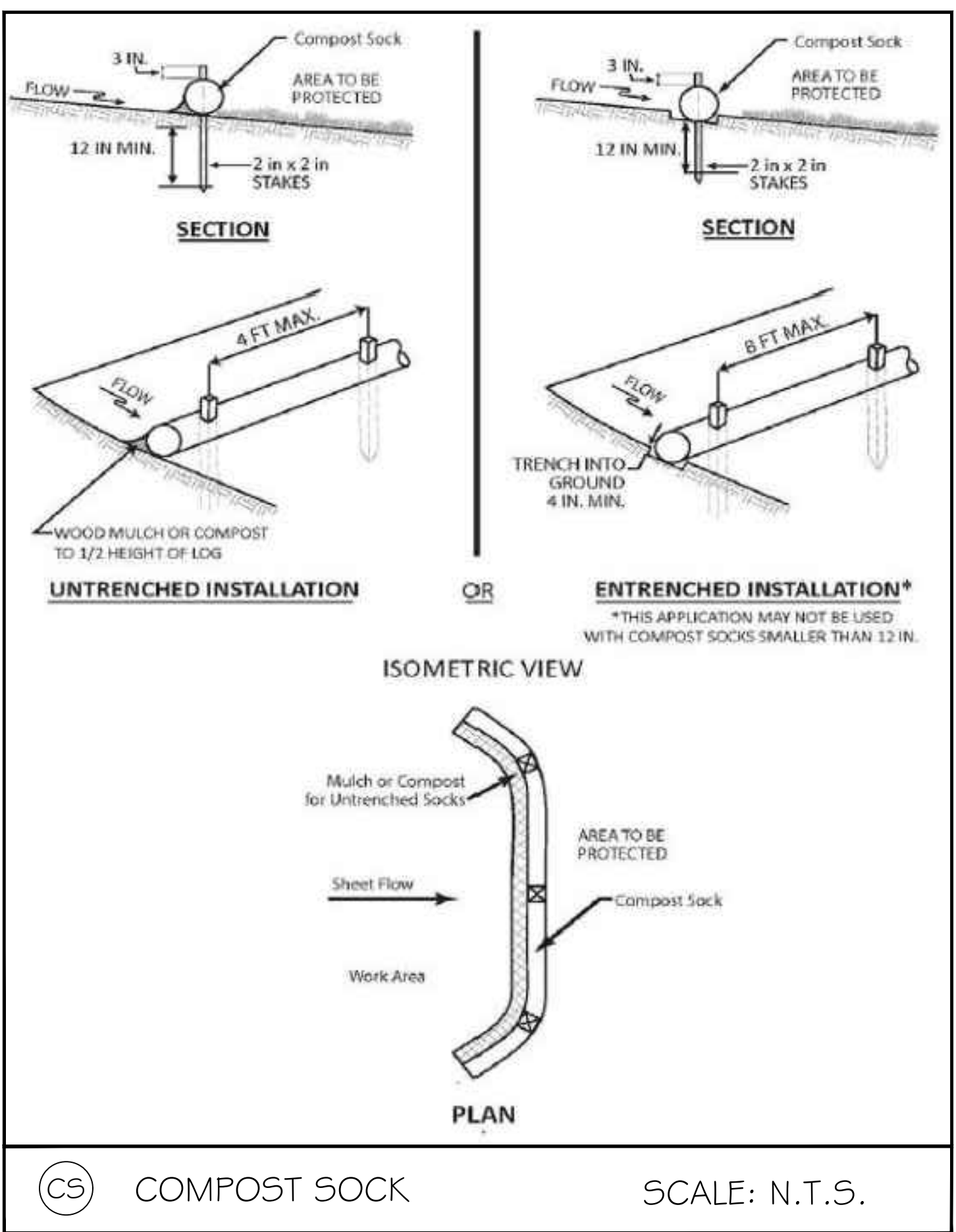


(ECM) EROSION CONTROL MATTING SCALE: N.T.S.

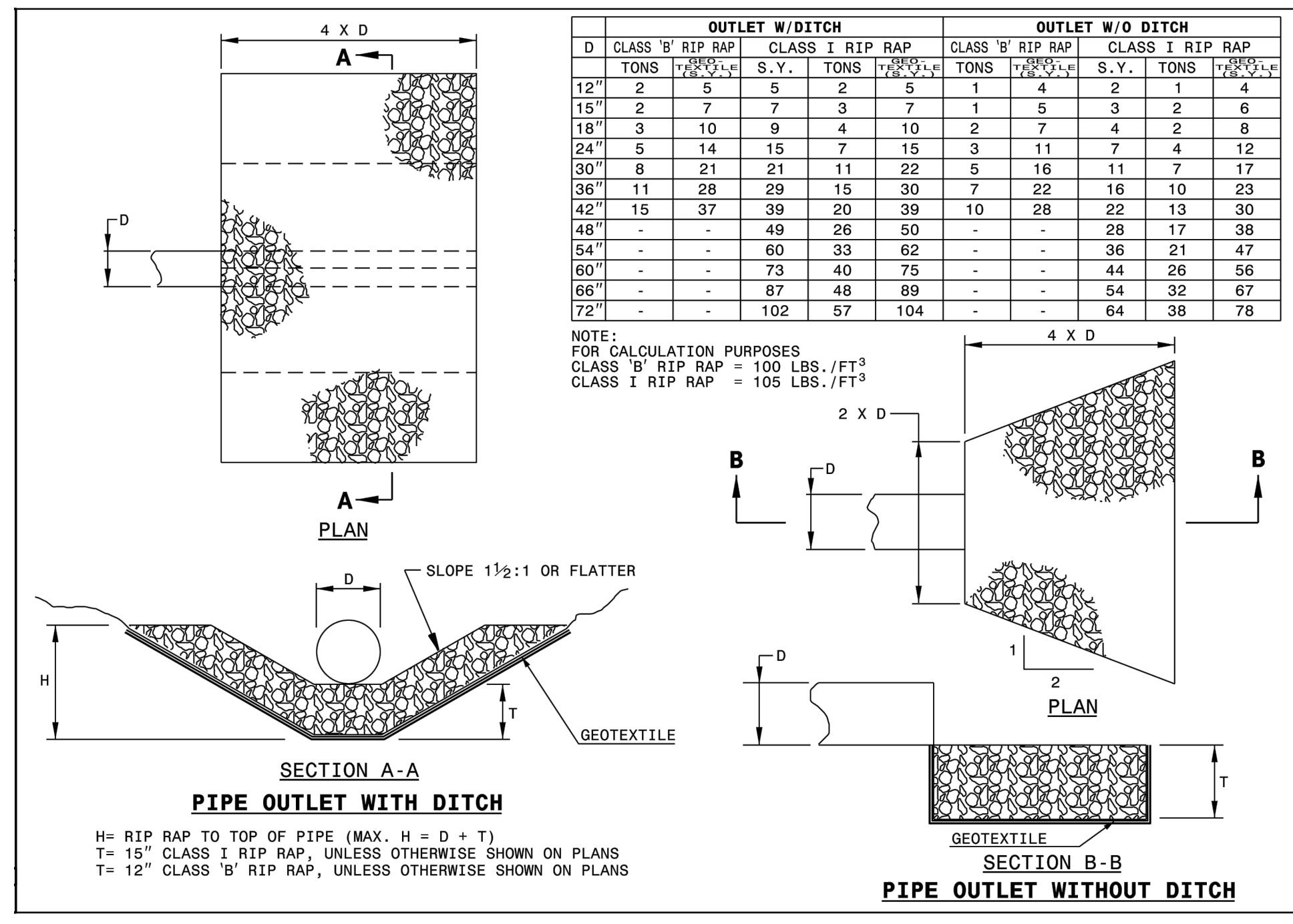


- NOTES**
- ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
 - A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
 - MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
 - HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.
 - MUST BE LOCATED >50 FT AWAY FROM INLETS/WATERWAYS UNLESS THERE IS NO OTHER PRACTICAL ALTERNATIVE.

(CW) CONCRETE WASHOUT SCALE: N.T.S.



(CS) COMPOST SOCK SCALE: N.T.S.



(CR) GUIDE FOR RIP RAP AT PIPE OUTLETS SCALE: N.T.S.

ISSUE FOR
BID SET

ISSUE DATE
03/28/2024

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
JD
PROJECT MANAGER
CD
DESIGN TEAM
GH

PROJECT NAME
NORTHCHASE BRANCH LIBRARY
4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

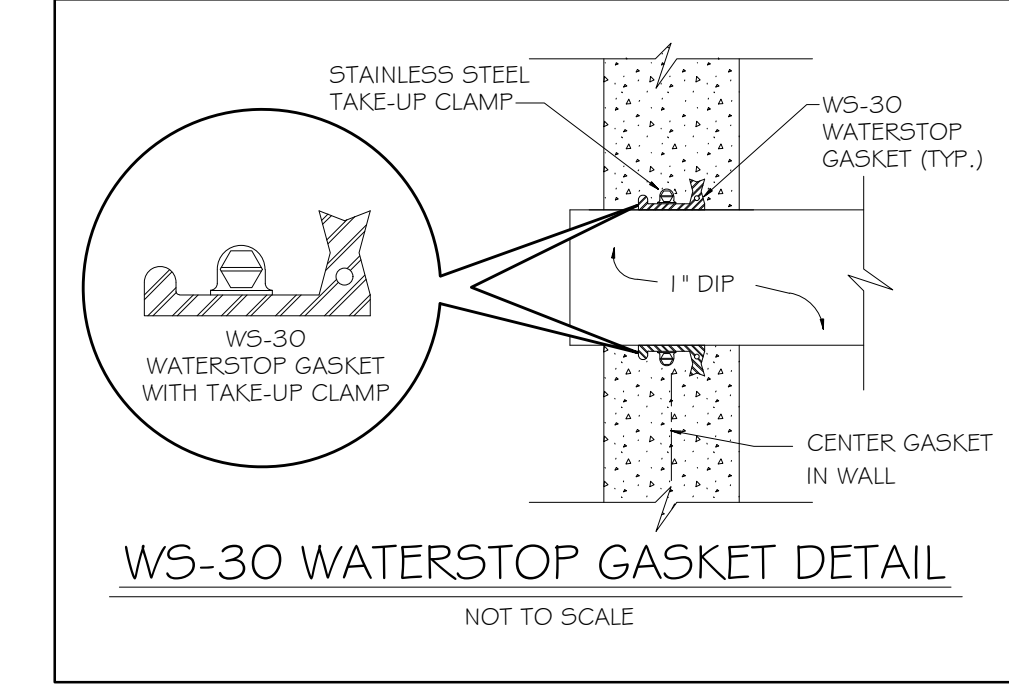
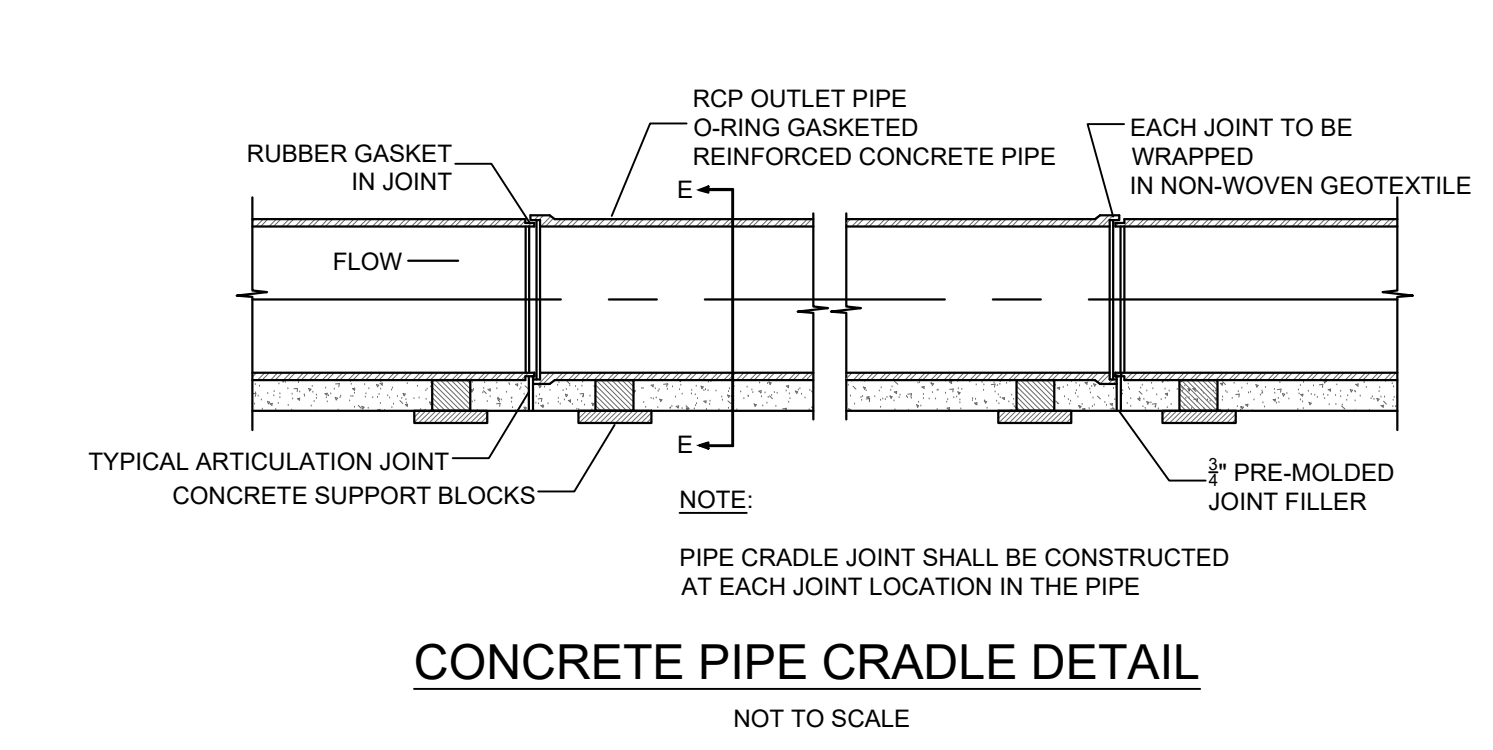
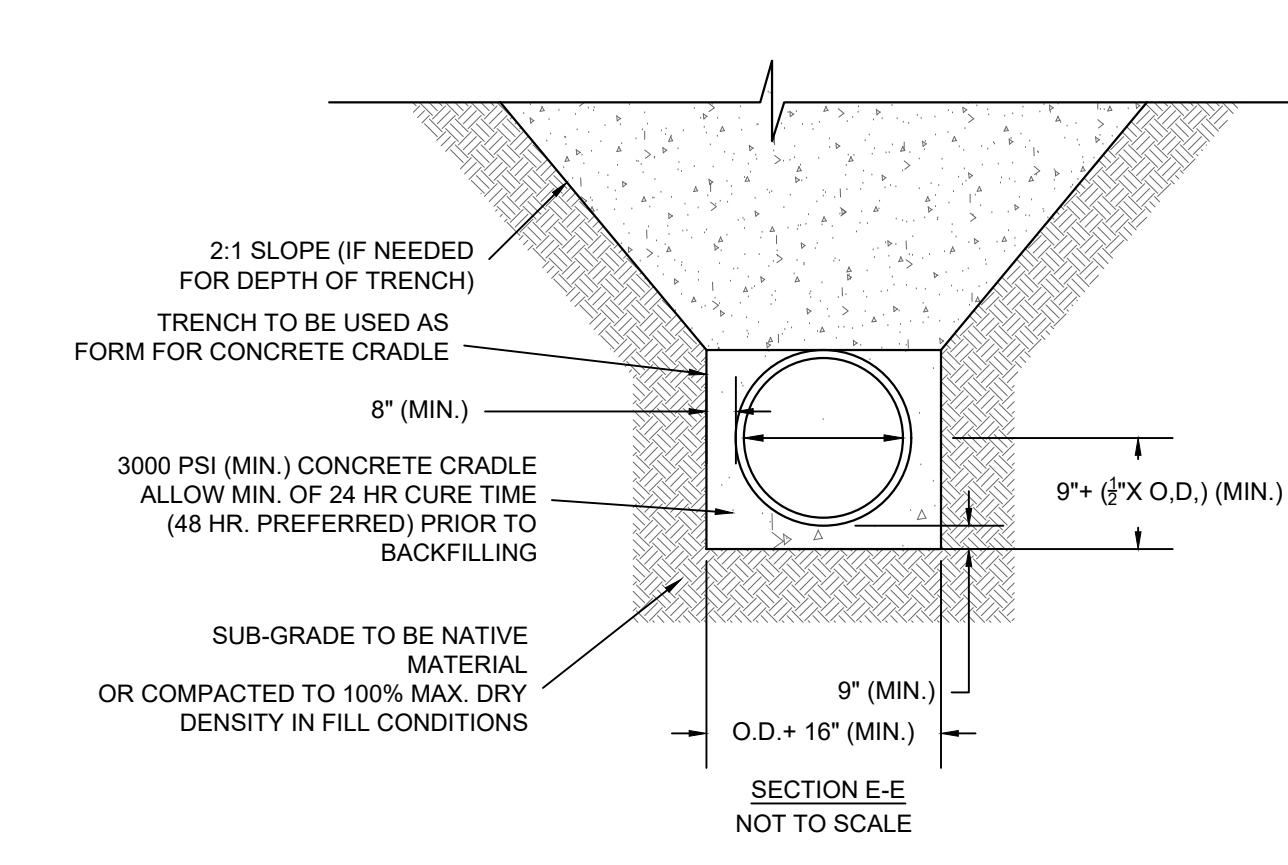
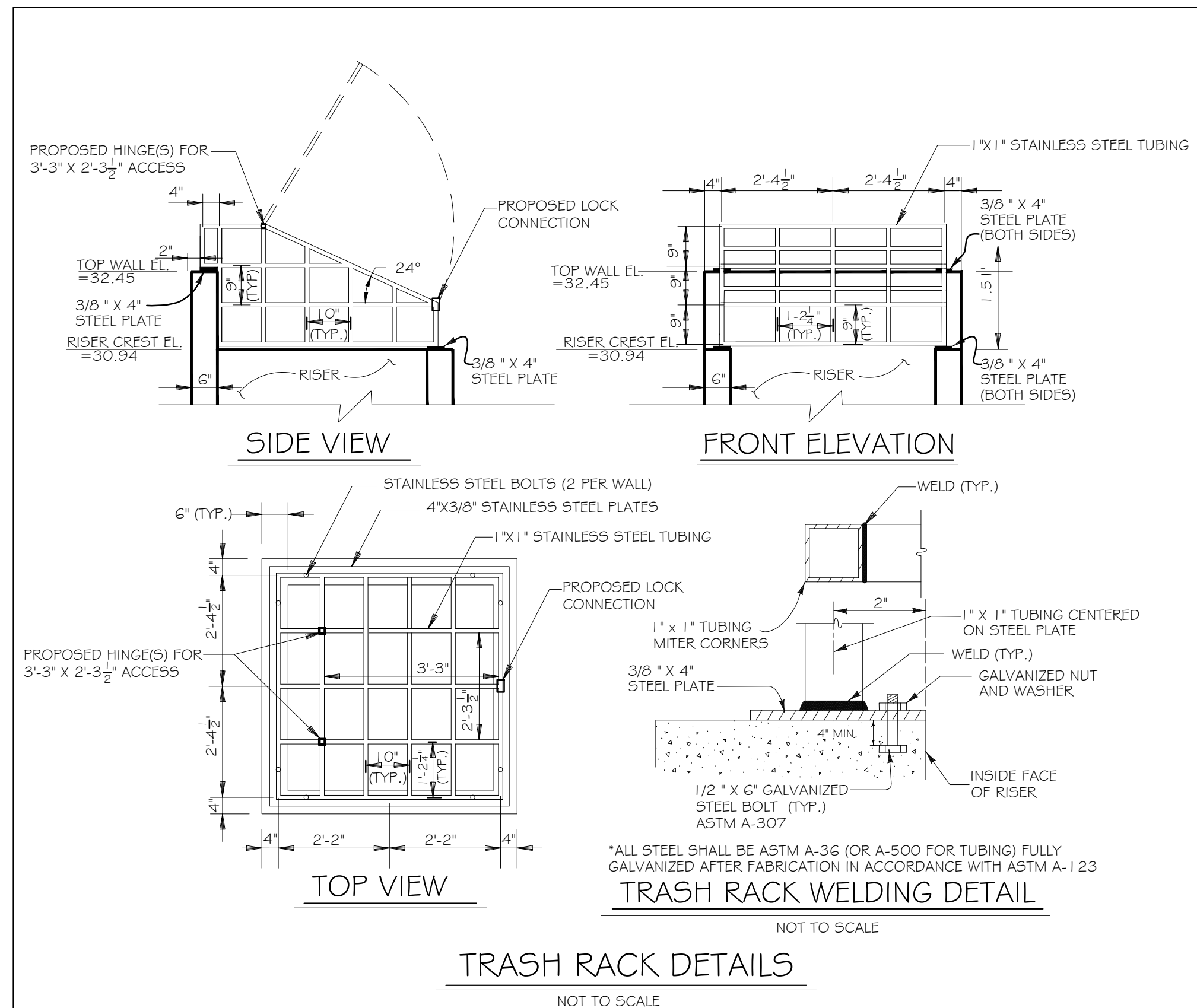
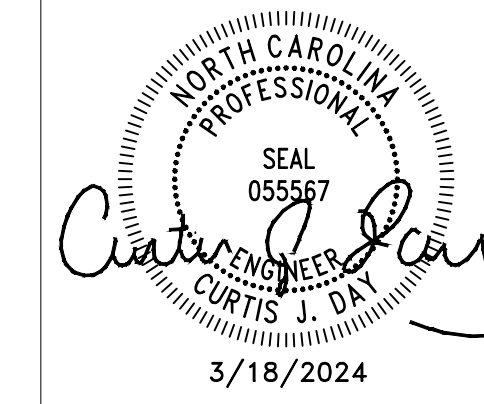
PROJECT NO.
514-18349-00

SHEET TITLE
EROSION AND SEDIMENT CONTROL DETAILS

SHEET NUMBER
EC-105



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NCBELS FIRM LICENSE NO. C-2322



EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION
THE PROJECT IS LOCATED AT 4400 NORTHCHASE PKWY., NE, WILMINGTON, NC. THIS PROJECT ULTIMATELY PROPOSES THE CONSTRUCTION OF A NEW NORTHCHASE PUBLIC LIBRARY, A NEW ENTRANCE FROM NORTHCHASE PARKWAY, INTERIOR DRIVEWAYS, PARKING AREAS, OUTDOOR EDUCATION AND SEATING AREAS, A BIKE PATH, UTILITY EXTENSIONS LIMITED TO WATER, SANITARY, AND STORM, AS WELL AS RELATED SERVICE LATERALS, CONDUITS FOR FRANCHISE UTILITIES, SIDEWALKS, STRIPING & SIGNAGE, STORMWATER WETLAND, AND NECESSARY REPAIRATIONS TO EXISTING STREETS.

THIS PLAN PROPOSES THE MASS GRADING OF THE PROJECT SITE IN ADVANCE OF FULL BUILD OUT FOR THE PURPOSES OF SURCHARGE SOIL PLACEMENT TO MITIGATE FLOOD STRUCTURAL SOILS BENEATH THE FUTURE BUILDING FOUNDATION, AS WELL AS EARLY PLACEMENT OF NECESSARY SEDIMENT CONTROLS AND A SEDIMENT BASIN WHICH WILL LATER BE CONVERTED TO A STORMWATER WETLAND UNDER THE ULTIMATE BUILDOUT.

EXISTING CONDITIONS
THE 2.95 ACRE SITE IS LOCATED AT 4400 NORTHCHASE PKWY., NE, WILMINGTON, NC. THE PROPERTY IS UNDEVELOPED AND MOSTLY WOODED, WITH DRAINAGE EASEMENTS ENCLASING THE WESTERN AND SOUTHERN PROPERTY LINES. A PRELIMINARY JURISDICTIONAL DETERMINATION HAS BEEN MADE BY THE U.S. ARMY CORPS OF ENGINEERS IDENTIFYING POTENTIAL JURISDICTIONAL WATERS OF THE US WITHIN A SWALE ALONG THE WESTERN BOUNDARY. STANDING WATER HAS BEEN OBSERVED IN THIS LOCATION. THE SITE RUNOFF GENERALLY FLOWS FROM NORTH EAST TO SOUTH WEST AND IS LOCATED IN THE PRINCE GEORGE WATERSHED AND IS PART OF THE CAPE FEAR RIVER BASIN.

OFFSITE RUNOFF ENTERS THE SUBJECT PROPERTY AT TWO POINTS. THE FIRST IS THROUGH A SHALLOW SWALE ALONG NORTHCHASE PARKWAY WHICH FLOWS THROUGH AN EXISTING 15' PIPE AND THEN TRAVELS ALONG THE WESTERN PROPERTY BOUNDARY THROUGH ANOTHER UNMAINTAINED SWALE AND EXITING THE PROPERTY AT THE SOUTHWEST CORNER OF THE PROPERTY. THE SECOND IS FROM THE OUTLET OF AN ADJACENT STORMWATER MANAGEMENT POND, WHICH ENTERS THE SITE AT THE SOUTH EAST CORNER AND FLOWS THROUGH A DRAINAGE EASEMENT AND SWALE ALONG THE SOUTHERN PROPERTY LINE WHERE IT JOINS WITH THE AFORESAIDED WESTERN SWALE AND EXITS THE PROPERTY AT THE SOUTH EAST CORNER. THE MAJORITY OF ONSITE RUNOFF IS SPLIT BETWEEN THE TWO SWALES BY A RIDGE AT THE CENTER OF THE SITE AND FLOWS TO THE SAME POINT OF EXIT DESCRIBED ABOVE. A SMALLER AREA OF ONSITE RUNOFF DRAINS TO THE NORTH TO THE SWALE ALONG NORTHCHASE PARKWAY AND JOINS WITH BOTH OFFSITE AND ONSITE RUNOFF THROUGH THE WESTERN SWALE TO THE SAME EXIT POINT.

OFFSITE AREAS
SIGNIFICANT AMOUNTS OF RUNOFF ENTER THE SITE FROM OFFSITE AREAS, AND FLOW TO A SINGLE POINT OF EXIT AT THE SOUTHWEST CORNER OF THE PROJECT SITE. DIVERTING THIS OFFSITE RUNOFF AWAY FROM OUR SITE IS NOT FEASIBLE. UNDER THIS PLAN, A NEW 15' CULVERT IS BEING PROPOSED WITHIN THE NORTHCHASE RIGHT OF WAY TO CONVEY RUNOFF FROM THE EXISTING ROADSIDE SWALE UNDER THE NEW ENTRANCE TO THE PROJECT SITE. THERE IS ALSO SOME MINOR ENCROACHMENT INTO THE ADJACENT PROPERTY TO THE SOUTH FOR NECESSARY GRADING IMPROVEMENTS TO THE EXISTING SWALE. ALL SUCH GRADING IS CONTAINED WITHIN THE EXISTING DRAINAGE EASEMENT.

ULTIMATELY THERE WILL BE ADDITIONAL MINOR IMPROVEMENTS REQUIRED IN THE NORTHCHASE PARKWAY RIGHT OF WAY FOR A DRIVEWAY CONNECTION, WATER AND SEWER CONNECTIONS, AND THE RE-STRIPING OF NORTHCHASE PARKWAY UNDER THE FULL BUILD OUT SITE PACKAGE.

SOILS
A GEOTECHNICAL STUDY HAS BEEN PERFORMED BY S&ME, INC. AND THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE STANDARDS AND SPECIFICATIONS NOTED IN THE STUDY DATED JULY 26, 2023. SOILS DELINEATION HAS BEEN PROVIDED ON THE EROSION CONTROL SHEETS.

Mu, Se, AND Sh, MURKVILLE, SEAGATE AND STALLINGS FINE SAND, RESPECTIVELY. ALL AREAS ARE TO 2 PERCENT SLOPES, WITH HYDROLOGIC SOIL GROUPS A/D FOR MURKVILLE AND STALLINGS AND GROUP B FOR SEAGATE.

SOIL BORINGS REVEALED SOILS LIMITATIONS FOR BUILDING CONSTRUCTION, WHICH REQUIRES MITIGATION. A SURCHARGE METHOD WAS DECIDED UPON, TO LOAD AND SUFFICIENTLY COMPACT EXISTING SOILS OVER A PERIOD OF TIME. THE GRADING, SEDIMENT CONTROL, AND CONSTRUCTION OF THIS PLAN.

LIMITS OF DISTURBANCE
3.15 ACRES (ROUNDS TO 4 ACRES FOR FEES)

CRITICAL AREAS
A PRELIMINARY JURISDICTIONAL DETERMINATION HAS BEEN MADE BY THE U.S. ARMY CORPS OF ENGINEERS IDENTIFYING POTENTIAL JURISDICTIONAL WATERS OF THE US WITHIN A SWALE ALONG THE WESTERN BOUNDARY. THERE ARE NO OTHER FLOOD ZONES, OR WETLANDS, IDENTIFIED WITHIN THIS SITE.

EROSION CONTROL MEASURES
THE SEDIMENT CONTROL CONCEPT FOR THIS SITE PROPOSES STAGING THE DEMO, GRADING AND CONSTRUCTION OF SEDIMENT CONTROLS, TO MINIMIZE THE AMOUNT OF AREA BEING DISTURBED AT ANY ONE TIME. UNDER THE INITIAL STAGE, INSTALLATION OF A SEDIMENT BASIN WILL OCCUR, WHICH WILL TEMPORARILY INTERCEPT BOTH ONSITE AND OFFSITE DRAINAGE. ASSOCIATED PERIMETER CONTROLS AND SITE CLEARING WILL BE DONE ONLY AS NECESSARY TO INSTALL THE BASIN AND MAKE NECESSARY IMPROVEMENTS TO THE SWALES ALONG THE WESTERN AND SOUTHERN BOUNDARIES. BOTH ARE BEING TEMPORARILY INTERCEPTED BY THE SEDIMENT BASIN WHILE GRADING IMPROVEMENTS ARE MADE. THE WESTERN SWALE WILL BE UTILIZED AS PART OF THE VOLUME OF THE SEDIMENT BASIN FOR THE DURATION OF THE PROJECT, WHILE THE SOUTHERN SWALE WILL BE STABILIZED AS QUICKLY AS POSSIBLE. ONCE THIS SWALE HAS BEEN STABILIZED, THE BASIN EMBANKMENT WILL BE RE-GRADED TO RE-DIRECT THAT DRAINAGE, WHICH INCLUDED RUNOFF FROM AN OFFSITE POND, AWAY FROM THE BASIN AND BACK TO ITS ORIGINAL COURSE. AT THIS POINT ALL DISTURBED ONSITE AREAS DRAINING TO THE SOUTHERN SWALE CAN EITHER BE HANDLED WITH PERIMETER CONTROLS. THE INTERIM STAGE WILL INCLUDE ADDITIONAL CLEARING, MASS GRADING OF THE SITE, PLACEMENT OF ADDITIONAL PERIMETER CONTROLS AND PLACEMENT OF SURCHARGE SOILS WITHIN THE BUILDING PAD. THE FINAL STAGE WILL INCLUDE THE REMOVAL OF SURCHARGE SOIL FROM THE SITE AND COMPLETION OF MASS GRADING IN ADVANCE OF THE COMMENCEMENT OF THE FULL BUILD OUT SITE PLAN. THE SEDIMENT BASIN WILL REMAIN IN PLACE TO BE UTILIZED FOR THE ULTIMATE CONSTRUCTION OF THE BUILDING, AND INSTALLATION OF PAVING AND SITE UTILITIES. SEE SHEET EC1.00 THROUGH EC1.07 FOR EROSION CONTROL CONSTRUCTION AND MAINTENANCE DETAILS.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION
Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during wetting or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-measuring device approved by the Division.
(2) E&S&C Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence, and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(c) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&S&C measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING
The approved E&S&C plan as well as any approved deviation shall be kept on the site. The approved E&S&C plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S&C plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&S&C measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&S&C plan.	Initial and date each E&S&C measure on a copy of the approved E&S&C plan or complete, date and sign an inspection report that lists each E&S&C measure shown on the approved E&S&C plan. This documentation is required upon the initial installation of the E&S&C measures or if the E&S&C measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&S&C plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&S&C plan.	Initial and date a copy of the approved E&S&C plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&S&C measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&S&C measures.	Initial and date a copy of the approved E&S&C plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site
In addition to the E&S&C plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical.

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years
All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported
Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:

- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 658-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 3030101a as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per item 110-(c) above	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(9)]	<ul style="list-style-type: none"> A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(9)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(i)(7)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(i)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&S&C plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&S&C plan authority has approved these items.

(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item 2)(c) and (d) of this permit.

(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems.

(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in item (c) above.

(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices.

(f) Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

ISSUE FOR: **BID SET**

ISSUE DATE: **03/28/2024**

NO.	REASON	DATE
1	REVISED LOD	03/28/24

PROJECT TEAM:
PRINCIPAL IN CHARGE: **JD**
PROJECT MANAGER: **CD**
DESIGN TEAM: **GH**

PROJECT NAME: **NORTHCHASE BRANCH LIBRARY**

4400 NORTHCHASE PKWY NE WILMINGTON, NC 28405

PROJECT NO.: **514.18349.00**

SHEET TITLE: **EROSION AND SEDIMENT CONTROL NOTES AND DETAILS**

SHEET NUMBER: **EC-106**

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SEQUENCE OF CONSTRUCTION:

NOTE: CLEARING, GRUBBING AND DEMOLITION SHALL BE DONE IN STAGES ACCORDING TO THIS SEQUENCE OF CONSTRUCTION AND DEMOLITION NOTES ON SHEET T-001. CLEARING AND GRUBBING SHALL BE PHASED TO THE EXTENT PRACTICAL TO MINIMIZE THE AMOUNT OF AREA DISTURBED AT ANY POINT IN TIME.

INITIAL STAGE: SITE PREPARATION AND DEMOLITION (SHEET EC-100)

- 2 WEEKS 1. CONTRACTOR TO OBTAIN GRADING PERMIT AND CERTIFICATE OF COVERAGE FOR THE NCG010000 CONSTRUCTION STORMWATER PERMIT. THE CERTIFICATE OF COVERAGE SHALL BE POSTED ON-SITE PRIOR TO LAND-DISTURBING ACTIVITY.
- 2 WEEKS 2. CONTACT NCDCEQ INSPECTOR A MINIMUM OF TWO WEEKS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING. THE CONTRACTOR IS TO SUBMIT A SCHEDULE OF WORK ACTIVITIES TO THE NEW HANOVER COUNTY DEPARTMENT OF PUBLIC WORKS PRIOR TO INITIATION OF ANY GRADING ACTIVITIES.
- 2 DAYS 3. STAKE INITIAL LIMIT OF DISTURBANCE AND INSTALL OR REPAIR EXISTING STABILIZED CONSTRUCTION ENTRANCE, MOUNTABLE BERMS, SILT FENCE/SPECIAL SILT FENCE, AND COMPOST SOCKS AT LOCATION SHOWN ON SHEET EC-100. INSTALL OR REPAIR ROCK PIPE INLET PROTECTION AT UPSTREAM END OF EXISTING PIPES WHERE SHOWN. MAKE SURE ALL NECESSARY SEDIMENT CONTROLS ARE IN PLACE PRIOR TO CLEARING OR GRADING.

NOTE: MAINTAIN EXISTING SKIMMER BASIN AS SHOWN ON SHEETS EC-100 AND DETAIL SHEETS EC-103 AND EC-104

NOTE: AS SITE IS BROUGHT TO GRADE CONTRACTOR IS TO SEED AND STABILIZE SITE AS REQUIRED.

INTERIM STAGE: (SHEET EC-101)

- 1 WEEK 6. STAKE INTERIM LIMIT OF DISTURBANCE AND INSTALL ADDITIONAL PERIMETER CONTROLS TO INCLUDE SILT FENCE/SPECIAL SILT FENCE, AT LOCATION SHOWN ON SHEET EC-101.
- 1 WEEK 7. CLEAR TREES AND OTHER VEGETATION AND STRIP AND GRUB THE SITE OF ORGANICS AND TOPSOIL AND ANY OTHER DELETERIOUS MATERIALS FOR A LATERAL DISTANCE OF AT LEAST 5 FEET BEYOND THE LIMITS OF NEW CONSTRUCTION (WITHIN THE INTERIM LOD) AS SHOWN ON SHEET EC-101 AND ACCORDING TO DEMOLITION NOTES ON SHEET T-001.
- 3 DAYS 8. BRING SITE TO ROUGH GRADE ELEVATIONS WITHIN THE INTERIM LIMIT OF DISTURBANCE AND BEGIN BUILDING FOUNDATION WORK.
- 6 WEEKS 9. INSTALL WATER AND SEWER MAINS AND STORM DRAINS.
- 6 WEEKS 10. INSTALL ROADWAY BASE PAVING, CURB AND GUTTER FOR THE DRIVEWAYS AND PARKING AREAS AND GRASS PAVE FIRE LANE.
- 6 MONTHS 11. COMPLETE CONSTRUCTION OF BUILDING AND SERVICE CONNECTIONS FOR WATER, SEWER AND STORM DRAIN ROOF LEADERS AS WELL AS OTHER UNDERGROUND UTILITY EXTENSIONS AND CONNECTIONS.

NOTE: NO MAJOR GRADING ACTIVITIES OR BASIN CONSTRUCTION ARE TO TAKE PLACE DURING WET WEATHER OR PERIODS OPREDICTED WET WEATHER I.E. HURRICANES; NOTIFY NCDCEQ LOS INSPECTOR WHEN PROJECT IS READY FOR A CLOSE OUT INSPECTION; FILE FOR NPDES NCG000000 E-NOTICE OF TERMINATION WHEN FINAL CLOSE OUT INSPECTION REPORT IS RECEIVED FROM NCDCEQ LOS; SEDIMENT BASIN AND TRAP EMBANKMENTS SHALL BE PROVIDED WITH ADEQUATE GROUND COVER IMMEDIATELY UPON CONSTRUCTION; INSPECT AND CLEANOUT SW SYSTEM BEFORE BRINGING ONLINE; SITE MUST BE "STORM READY" BEFORE ANY EXTENDED BREAKS IN CONSTRUCTION ACTIVITIES INCLUDING WEEKENDS (15A NCAC 04B .0106)(a)(2))

CONTRACTOR SHALL OBTAIN APPROVAL FROM NCDCEQ INSPECTOR PRIOR TO ANY OFFSITE BORROW OR WASTE ACTIVITIES. ANY BORROW OR WASTE MUST COME FROM OR GO TO A PERMITTED SITE AND OR FACILITY. WASTE AND OR FILL SITE PERMIT NUMBER: [15A NCAC 04B .0110]

- 1 DAY 12. PERMANENTLY STABILIZE ALL DISTURBED AREAS.

FINAL STAGE: (SHEET EC-102)

- 1 WEEK 13. STAKE LIMIT OF DISTURBANCE FOR FINAL CONDITIONS AND INSTALL ADDITIONAL SILT FENCE AND SPECIAL SILT FENCE.
- 3 WEEKS 14. AS CONSTRUCTION NEARS COMPLETION, INSTALL SURFACE PAVING, PERMEABLE PAVERS, FINE GRADE THE SITE INTERIOR, INSTALL SIDEWALKS, FENCES, AMENITIES SIGHT FURNISHINGS, SIGNAGE, LIGHTING AND LANDSCAPING AND STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED & MULCH.
- 3 WEEKS 15. RE-CONSTRUCT EMBANKMENT AS SHOWN ON SHEET EC-101 TO ITS PERMANENT LOCATION FOR PERMANENT SWM WETLANDS. STRUCTURAL EMBANKMENT FILL SHALL BE PLACED ACCORDING TO THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT BY SH&E, INC., DATED JULY 25, 2023, WHICH INCLUDES THE FOLLOWING:
 - USCS CLASSIFICATION OF SM, SC, SP, SW, OR SOME COMBINATION OF THESE.
 - CONTAIN LESS THAN 3 PERCENT ORGANICS.
 - BE FREE OF TRASH OR OTHER DELETERIOUS MATERIALS.
 - HAVE A MAXIMUM PARTICLE SIZE OF 2 INCHES OR LESS.
 - HAVE A MINIMUM STANDARD PROCTOR MAXIMUM DRY DENSITY OF 100 POUNDS PER CUBIC FOOT.

PLACE EMBANKMENT FILL IN 8'-10" LOOSE LIFTS AND COMPACT TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (MDD) (ASTM D698). THE TOP 12 INCHES SHOULD BE COMPACTED TO AT LEAST 98% OF THE MATERIALS STANDARD PROCTOR MDD. WITH MOISTURE CONTENT OF STRUCTURAL FILL TO BE MAINTAINED AT +/- 3% OF OPTIMUM MOISTURE DURING COMPACTION. RESHAPE BASIN VOLUME AS SHOWN ON SHEET EC-101.

- 3 DAYS 16. REPAIR AS NECESSARY THE STORM STRUCTURES TO PERMANENTLY REMAIN. THE STORM SYSTEM SHALL BE INSPECTED AND CLEANED AS NECESSARY TO ENSURE RESIDUAL SEDIMENT DOES NOT REMAIN. WITH PERMISSION OF INSPECTOR, ALL INLET PROTECTION AND SEDIMENT CONTROLS MAY BE REMOVED.
- 2 DAYS 17. WITH PERMISSION OF INSPECTOR, MODIFY THE RISER, BACKFILL AND/OR CONVERT SKIMMER BASIN #1 TO A PERMANENT STORMWATER MANAGEMENT FACILITY, PER THE STORMWATER MANAGEMENT PLANS, SHEETS C-500 THRU C-604. REMOVE SKIMMER, BAFFLES, AND INFLOW PROTECTION.
- 2 DAYS 18. WITH PERMISSION OF INSPECTOR, REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES. REPAIR EXISTING SIDEWALK, CURB AND GUTTER AND PAVING AS REQUIRED AFTER REMOVAL OF SEDIMENT CONTROL MEASURES. STABILIZE ALL AREAS DISTURBED DURING REMOVAL OF SEDIMENT CONTROL DEVICES WITH TOPSOIL, SEED & MULCH.

NOTE: CONTRACTOR TO OBTAIN SOIL TEST FOR PROPER FERTILIZATION APPLICATION RATES.

- 2 DAYS 19. CONTACT NCDCEQ INSPECTOR FOR FINAL INSPECTION AND APPROVAL OF SITE.

NOTE: SEE NCDCEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL CHAPTER 6 FOR SITE PREPARATION DETAILS AND SPECIFICATIONS.

NOTE: SEE SHEETS EC-103 THRU EC-107 FOR SEDIMENT CONTROL NOTES AND DETAILS.

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT
Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	- 7 days for slopes greater than 50' in length and with slopes steeper than 4:1 - 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones - 10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	- 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones - 10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION
Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> • Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting 	<ul style="list-style-type: none"> • Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS
Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.

1. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
2. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
3. Provide ponding area for containment of treated Stormwater before discharging offsite.
4. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

ISSUE FOR
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ISSUE DATE
03/28/2024

NO.	REASON	DATE
1	REVISED SEQUENCE OF CONSTRUCTION	03/28/24

PROJECT TEAM

PRINCIPAL IN CHARGE
JD

PROJECT MANAGER
CD

DESIGN TEAM
GH

PROJECT NAME

NORTHCHASE BRANCH LIBRARY

4400 NORTHCHASE PKWY NE
WILMINGTON, NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
EROSION AND SEDIMENT CONTROL NOTES

SHEET NUMBER
EC-107

F
E
D
C
B
A



MATERIALS LEGEND:

1	LIMITS OF CONSTRUCTION (2.96 ac.)	[Symbol]
2	CONCRETE SIDEWALK - SEE CIVIL	[Symbol]
3	HEAVY DUTY CONCRETE SIDEWALK - SEE CIVIL	[Symbol]
4	CONCRETE MULTI-USE TRAIL - SEE CIVIL	[Symbol]
5	PAVERS - HEAVY DUTY VEHICULAR, UNLOCK ECO-PRIOVA PAVER, HERRINGBONE PATTERN WITH SOLDIER COURSE EDGE	[Symbol]
6	PERMEABLE PAVERS - LIGHT DUTY PEDESTRIAN, UNLOCK ECO-PRIOVA PAVER, HERRINGBONE PATTERN WITH SOLDIER COURSE EDGE - SEE DETAIL 11.300	[Symbol]
7	FIRE LANE, GRASS PAVE - SEE CIVIL	[Symbol]
8	RIVER ROCK, 2-4" STONES - SEE DETAIL 31.300	[Symbol]
9	RIVER ROCK, 6-8" STONES - SEE DETAIL 31.300	[Symbol]
10	STEEL BED EDGING - SEE DETAIL 41.300	[Symbol]
11	PEDESTRIAN BRIDGE - BY OTHERS	[Symbol]
12	SOD - SEE PLANTING PLANS	[Symbol]
13	SHRUB AND PERENNIAL PLANTING - SEE PLANTING PLANS	[Symbol]
F1	POLE LIGHT, VEHICULAR - SEE ELECTRICAL FOR PRODUCT AND MOUNTING DETAIL	[Symbol]
F2	POLE LIGHT, PEDESTRIAN - SEE ELECTRICAL FOR PRODUCT AND MOUNTING DETAIL	[Symbol]
F3	BENCH - VESTRE 5506B COAST SEAT WITH OWNERLESS OCEAN PLASTIC, SURFACE MOUNTED	[Symbol]
F4	CAFE TABLE AND CHAIRS - VESTRE 3713 AND 3731 BERLIN TABLE AND CHAIRS ANCHORING WITH BASE PLATE, RAL 5021 WATER BLUE, STANDARD WOOD	[Symbol]
F5	ADIRONDACK CHAIR - ANOVA PLANK ADIRONDACK CHAIR HDPE (PLKGR), DRIFTWOOD GRAY - WOODGRAIN	[Symbol]
F6	PICNIC TABLE & BENCHES - VESTRE 763 APRIL PICNIC TABLE L1500, ADA MODEL WITH BACKREST 1 SIDE, RAL 5020 OCEAN BLUE, STANDARD WOOD	[Symbol]
F7	PICNIC TABLE & BENCHES - VESTRE 751 APRIL PICNIC TABLE L1500, ADA MODEL WITHOUT BACKREST, RAL 5020 OCEAN BLUE, STANDARD WOOD	[Symbol]
F8	BIKE RACK - VESTRE 686C VROOM BICYCLE RACK SMALL, CASTING IN THE GROUND, RAL 5021 WATER BLUE - SEE DETAIL 21.300	[Symbol]
F9	TRASH & RECYCLING RECEPTACLE - VESTRE 642 VROOM LITTER BIN 80L, HOT-DIP GALVANIZED AND POWDERCOATED STEEL, RAL 5020 OCEAN BLUE - PROVIDED BY HMC	[Symbol]
F10	BOULDERS - SEE DETAIL 61.300	[Symbol]
F11	CONCRETE BOLLARDS - SEE CIVIL	[Symbol]
F12	WAYFINDING & EDUCATIONAL SIGNAGE	[Symbol]
F13	ENTRY MONUMENT SIGN - SEE ELECTRICAL FOR POWER	[Symbol]
F14	ADD ALTERNATE: CUSTOM TIERED TIMBER BENCH - SEE DETAIL 51.300	[Symbol]

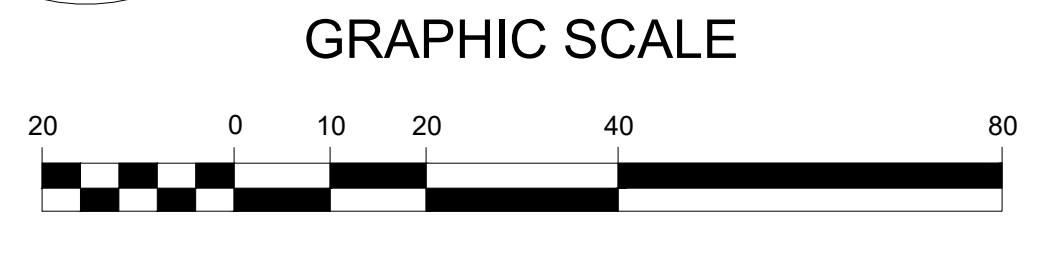
LAYOUT NOTES

- A. ALL PAVING CUTS SHALL BE MADE BY SAW CUTS.
- B. EXISTING ELEVATIONS SHALL BE FIELD VERIFIED AND MATCHED.
- C. CONTRACTOR TO COORDINATE ANY CHANGES IN FIELD CONDITIONS THAT MAY REVISE THE DESIGN WITH DESIGNER OF RECORD PRIOR TO PROCEEDING.
- D. ALL DIMENSIONS ARE TO FACE OF CURB OR TO FINISHED FACE OF BUILDING UNLESS NOTED OTHERWISE.
- E. ALL WORK WITHIN THE RIGHT OF WAY OF ALL ROADS AND HIGHWAYS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE APPROPRIATE STATE AND/OR LOCAL JURISDICTION. CONTRACTOR SHALL SECURE ALL NECESSARY DRIVEWAY AND ENCROACHMENT PERMITS PRIOR TO CONSTRUCTION. IF NECESSARY, CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL DURING CONSTRUCTION WITHIN THE RIGHT OF WAY, PER WORK AREA TRAFFIC CONTROL HANDBOOK (W.A.T.C.H.) STANDARDS.
- F. A MINIMUM OF 18" IS TO BE MAINTAINED BETWEEN ALL PAVED SURFACES AND TOPS OF FOOTINGS.
- G. CONTRACTOR TO INSTALL TEMPORARY SEEDING IN ALL DISTURBED AREAS NOT COVERED BY PAVEMENT UPON COMPLETION OF CONSTRUCTION. CONTRACTOR TO INSTALL PERMANENT SEEDING DURING APPROPRIATE SEEDING SEASON.
- H. BENCHES AND PICNIC TABLES TO BE SURFACE MOUNTED PER MANUFACTURING INSTRUCTIONS.
- I. ALL SITE FURNITURE TO BE OWNER PROVIDED, GENERAL CONTRACTOR INSTALLED.
- J. CONTRACTOR TO LOCATE LIGHTS IN THE FIELD AND SUBMIT PHOTOGRAPHS OF FLAGGED LOCATIONS TO LANDSCAPE ARCHITECT APPROVAL PRIOR TO DUKE ENERGY INSTALLATION.



CAUTION!!!

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESS OR IMPLIED AS TO THE COMPLETENESS OF ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



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ISSUE FOR
BID SET

ISSUE DATE
03.28.2024

REVISIONS NO.	REASON	DATE

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PROJECT NAME
NORTHCHASE BRANCH LIBRARY

4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
SITE MATERIALS PLAN

SHEET NUMBER
L100



MATERIALS LEGEND:

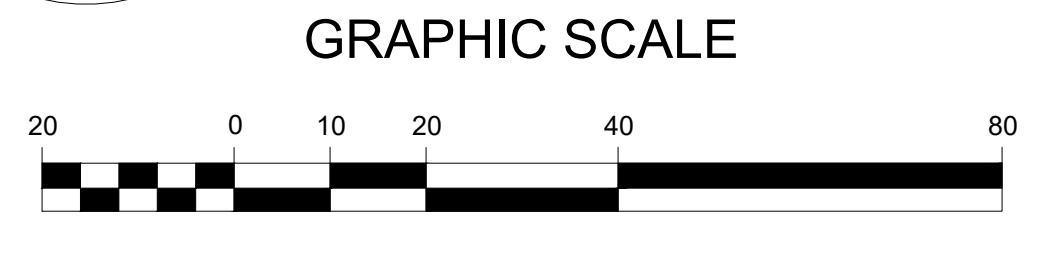
1	LIMITS OF CONSTRUCTION (2.96 ac.)	
2	CONCRETE SIDEWALK - SEE CIVIL	
3	HEAVY DUTY CONCRETE SIDEWALK - SEE CIVIL	
4	CONCRETE MULTI-USE TRAIL - SEE CIVIL	
5	PAVERS - HEAVY DUTY VEHICULAR, UNLOCK ECO-PRIORA PAVER, HERRINGBONE PATTERN WITH SOLDIER COURSE EDGE	
6	PERMEABLE PAVERS - LIGHT DUTY PEDESTRIAN, UNLOCK ECO-PRIORA PAVER, HERRINGBONE PATTERN WITH SOLDIER COURSE EDGE - SEE DETAIL 11.300	
7	FIRE LANE, GRASS PAVE - SEE CIVIL	
8	RIVER ROCK, 2-4" STONES - SEE DETAIL 31.300	
9	RIVER ROCK, 6-8" STONES - SEE DETAIL 31.300	
10	STEEL BED EDGING - SEE DETAIL 41.300	
11	PEDESTRIAN BRIDGE - BY OTHERS	
12	SOD - SEE PLANTING PLANS	
13	SHRUB AND PERENNIAL PLANTING - SEE PLANTING PLANS	
F1	POLE LIGHT, VEHICULAR - SEE ELECTRICAL FOR PRODUCT AND MOUNTING DETAIL	
F2	POLE LIGHT, PEDESTRIAN - SEE ELECTRICAL FOR PRODUCT AND MOUNTING DETAIL	
F3	BENCH - VESTRE 5506B COAST SEAT WITH OWNERLESS OCEAN PLASTIC, SURFACE MOUNTED	
F4	CAFE TABLE AND CHAIRS - VESTRE 3713 AND 3731 BERLIN TABLE AND CHAIRS ANCHORING WITH BASE PLATE, RAL 5021 WATER BLUE, STANDARD WOOD	
F5	ADIRONDACK CHAIR - ANOVA PLANK ADIRONDACK CHAIR HOLE (PLKGR), DRIFTWOOD GRAY - WOODGRAIN	
F6	PICNIC TABLE & BENCHES - VESTRE 753 APRIL PICNIC TABLE L1500, ADA MODEL WITH BACKREST 1 SIDE, RAL 5020 OCEAN BLUE, STANDARD WOOD	
F7	PICNIC TABLE & BENCHES - VESTRE 751 APRIL PICNIC TABLE L1500, ADA MODEL WITHOUT BACKREST, RAL 5020 OCEAN BLUE, STANDARD WOOD	
F8	BIKE RACK - VESTRE 686C VROOM BICYCLE RACK SMALL, CASTING IN THE GROUND, RAL 5021 WATER BLUE - SEE DETAIL 21.300	
F9	TRASH & RECYCLING RECEPTACLE - VESTRE 642 VROOM LITTER BIN 80L, HOT-DIP GALVANIZED AND POWDERCOATED STEEL, RAL 5020 OCEAN BLUE - PROVIDED BY HMC	
F10	BOULDERS - SEE DETAIL 61.300	
F11	CONCRETE BOLLARDS - SEE CIVIL	
F12	WAYFINDING & EDUCATIONAL SIGNAGE	
F13	ENTRY MONUMENT SIGN - SEE ELECTRICAL FOR POWER	
F14	ADD ALTERNATE: CUSTOM TIERED TIMBER BENCH - SEE DETAIL 51.300	

- LAYOUT NOTES**
- A. ALL PAVING CUTS SHALL BE MADE BY SAW CUTS.
 - B. EXISTING ELEVATIONS SHALL BE FIELD VERIFIED AND MATCHED.
 - C. CONTRACTOR TO COORDINATE ANY CHANGES IN FIELD CONDITIONS THAT MAY REVISE THE DESIGN WITH DESIGNER OF RECORD PRIOR TO PROCEEDING.
 - D. ALL DIMENSIONS ARE TO FACE OF CURB OR TO FINISHED FACE OF BUILDING UNLESS NOTED OTHERWISE.
 - E. ALL WORK WITHIN THE RIGHT OF WAY OF ALL ROADS AND HIGHWAYS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE APPROPRIATE STATE AND/OR LOCAL JURISDICTION. CONTRACTOR SHALL SECURE ALL NECESSARY DRIVEWAY AND ENCROACHMENT PERMITS PRIOR TO CONSTRUCTION. IF NECESSARY, CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL DURING CONSTRUCTION WITHIN THE RIGHT OF WAY, PER WORK AREA TRAFFIC CONTROL HANDBOOK (W.A.T.C.H.) STANDARDS.
 - F. A MINIMUM OF 18" IS TO BE MAINTAINED BETWEEN ALL PAVED SURFACES AND TOPS OF FOOTINGS.
 - G. CONTRACTOR TO INSTALL TEMPORARY SEEDING IN ALL DISTURBED AREAS NOT COVERED BY PAVEMENT UPON COMPLETION OF CONSTRUCTION. CONTRACTOR TO INSTALL PERMANENT SEEDING DURING APPROPRIATE SEEDING SEASON.
 - H. BENCHES AND PICNIC TABLES TO BE SURFACE MOUNTED PER MANUFACTURING INSTRUCTIONS.
 - I. ALL SITE FURNITURE TO BE OWNER PROVIDED, GENERAL CONTRACTOR INSTALLED.
 - J. CONTRACTOR TO LOCATE LIGHTS IN THE FIELD AND SUBMIT PHOTOGRAPHS OF FLAGGED LOCATIONS TO LANDSCAPE ARCHITECT APPROVAL PRIOR TO DUKE ENERGY INSTALLATION.



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RECORD DRAWINGS

PREPARED FROM INFORMATION PROVIDED BY THE CONTRACTOR CONSTRUCTING THE PROJECT. DESIGNER DOES NOT WARRANT THE INFORMATION HEREIN TO BE COMPLETE, ACCURATE, OR ALL ENCOMPASSING.



ISSUE FOR
BID SET

ISSUE DATE
03.28.2024

REVISIONS NO.	REASON	DATE

PROJECT TEAM

Jerry Guerrier, AIA

Charlie Hagen-Cazés, AIA

D. Powlen, PLA, M. Sweitzer

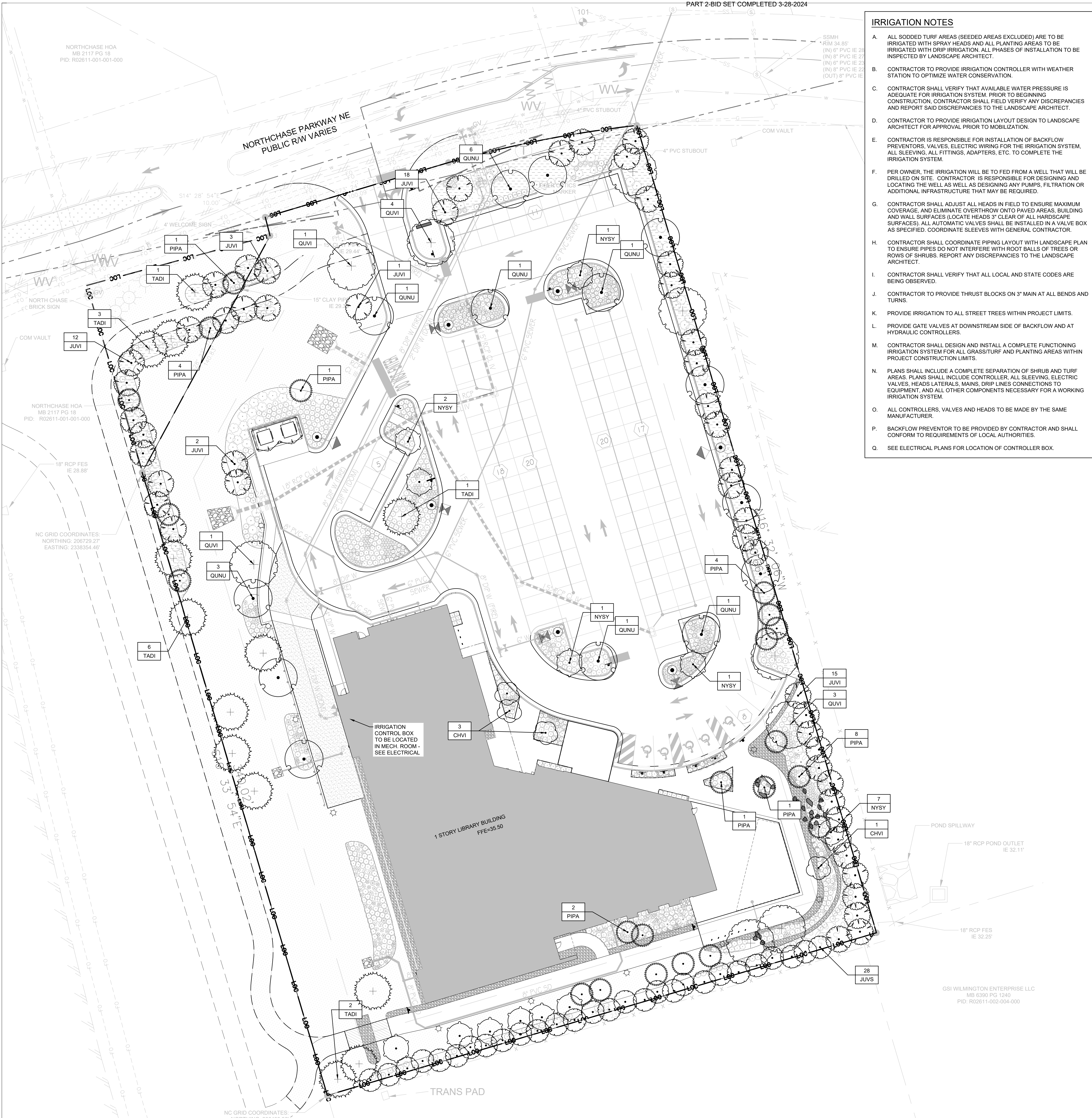
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- ### IRRIGATION NOTES
- ALL SODDED TURF AREAS (SEEDED AREAS EXCLUDED) ARE TO BE IRRIGATED WITH SPRAY HEADS AND ALL PLANTING AREAS TO BE IRRIGATED WITH DRIP IRRIGATION. ALL PHASES OF INSTALLATION TO BE INSPECTED BY LANDSCAPE ARCHITECT.
 - CONTRACTOR TO PROVIDE IRRIGATION CONTROLLER WITH WEATHER STATION TO OPTIMIZE WATER CONSERVATION.
 - CONTRACTOR SHALL VERIFY THAT AVAILABLE WATER PRESSURE IS ADEQUATE FOR IRRIGATION SYSTEM. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY ANY DISCREPANCIES AND REPORT SAID DISCREPANCIES TO THE LANDSCAPE ARCHITECT.
 - CONTRACTOR TO PROVIDE IRRIGATION LAYOUT DESIGN TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO MOBILIZATION.
 - CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF BACKFLOW PREVENTORS, VALVES, ELECTRIC WIRING FOR THE IRRIGATION SYSTEM, ALL SLEEVING, ALL FITTINGS, ADAPTERS, ETC. TO COMPLETE THE IRRIGATION SYSTEM.
 - PER OWNER, THE IRRIGATION WILL BE TO FED FROM A WELL THAT WILL BE DRILLED ON SITE. CONTRACTOR IS RESPONSIBLE FOR DESIGNING AND LOCATING THE WELL AS WELL AS DESIGNING ANY PUMPS, FILTRATION OR ADDITIONAL INFRASTRUCTURE THAT MAY BE REQUIRED.
 - CONTRACTOR SHALL ADJUST ALL HEADS IN FIELD TO ENSURE MAXIMUM COVERAGE, AND ELIMINATE OVERTHROW ONTO PAVED AREAS, BUILDING AND WALL SURFACES (LOCATE HEADS 3' CLEAR OF ALL HARDSCAPE SURFACES). ALL AUTOMATIC VALVES SHALL BE INSTALLED IN A VALVE BOX AS SPECIFIED. COORDINATE SLEEVES WITH GENERAL CONTRACTOR.
 - CONTRACTOR SHALL COORDINATE PIPING LAYOUT WITH LANDSCAPE PLAN TO ENSURE PIPES DO NOT INTERFERE WITH ROOT BALLS OF TREES OR ROWS OF SHRUBS. REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT.
 - CONTRACTOR SHALL VERIFY THAT ALL LOCAL AND STATE CODES ARE BEING OBSERVED.
 - CONTRACTOR TO PROVIDE THRUST BLOCKS ON 3" MAIN AT ALL BENDS AND TURNS.
 - PROVIDE IRRIGATION TO ALL STREET TREES WITHIN PROJECT LIMITS.
 - PROVIDE GATE VALVES AT DOWNSTREAM SIDE OF BACKFLOW AND AT HYDRAULIC CONTROLLERS.
 - CONTRACTOR SHALL DESIGN AND INSTALL A COMPLETE FUNCTIONING IRRIGATION SYSTEM FOR ALL GRASS/TURF AND PLANTING AREAS WITHIN PROJECT CONSTRUCTION LIMITS.
 - PLANS SHALL INCLUDE A COMPLETE SEPARATION OF SHRUB AND TURF AREAS. PLANS SHALL INCLUDE CONTROLLER, ALL SLEEVING, ELECTRIC VALVES, HEADS, LATERALS, MAINS, DRIP LINES CONNECTIONS TO EQUIPMENT, AND ALL OTHER COMPONENTS NECESSARY FOR A WORKING IRRIGATION SYSTEM.
 - ALL CONTROLLERS, VALVES AND HEADS TO BE MADE BY THE SAME MANUFACTURER.
 - BACKFLOW PREVENTOR TO BE PROVIDED BY CONTRACTOR AND SHALL CONFORM TO REQUIREMENTS OF LOCAL AUTHORITIES.
 - SEE ELECTRICAL PLANS FOR LOCATION OF CONTROLLER BOX.

- ### LANDSCAPE AND PLANTING NOTES
- MINIMUM TREE SIZE AT PLANTING IS 2" CALIPER (FOR SINGLE STEM TREES).
 - ALL MULTI-STEM PLANTS MUST BE TREE FORM, MAXIMUM 3" TO 5" TRUNKS, AND MINIMUM 8' TALL.
 - ALL NEW PLANTING AREAS (GRASS/TURF, SOD, PLANTS, TREES, SHRUBS, GROUNDCOVER, ETC.) SHALL BE FINE GRADED PRIOR TO INSTALLATION. FINE GRADING SHALL CONSIST OF UNCOMPACTED SOIL THAT IS HAND RAKED, SMOOTH, AND FREE OF DEBRIS (NO STONES, ROOTS, OR ANY OTHER MATERIAL GREATER THAN 1" IN SIZE).
 - TILL SOIL TO A DEPTH OF 24" FOR TREES AND SHRUBS AND 6" FOR GRASS/TURF. AMEND THE TOP 24" OF SOIL FOR TREES AND SHRUBS AND TOP 6" OF SOIL FOR GRASS/TURF TO MEET TOPSOIL/PLANTING MIX STANDARDS AS REQUIRED BY SPECIFICATIONS.
 - CONTRACTOR IS REQUIRED TO PERFORM SOIL TESTS TO DETERMINE SOIL NUTRIENT REQUIREMENTS FOR ALL GRASS/TURF, SOD, PLANT, TREE, SHRUB, AND GROUNDCOVER AREAS. CONTRACTOR TO SUBMIT SOIL TEST TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO MOBILIZATION.
 - IN ADDITION TO THE SOIL MIXTURE, CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING SOIL AMENDMENTS, AS INDICATED BY SOIL TESTS, AS WELL AS AN ADEQUATE DRAINAGE SYSTEM FOR PLANTING BEDS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN ENVIRONMENT SUITABLE FOR THE GROWTH OF HEALTHY PLANT MATERIAL. THE LANDSCAPE ARCHITECT MAY REQUIRE ADDITIONAL SOIL AMENDMENTS AND EXCAVATION OF EXISTING SOIL DURING ONSITE OBSERVATIONS PRIOR TO OR AFTER CONSTRUCTION. REFER TO PLANTING DETAILS FOR INFORMATION ON PLANTING BED PREPARATIONS. ALL PLANTING BEDS WILL BE PROBED BY THE LANDSCAPE ARCHITECT TO DETERMINE DEPTH AND SOIL QUALITY FOLLOWING INSTALLATION.
 - ALL PLANTING BEDS AND SOD/TURF/SEEDED AREAS TO RECEIVE AN AMENDED SOIL MIXTURE. SOIL MIX SHALL BE COMPOSED OF 75% EXISTING SOIL, 15% ORGANIC MATERIAL, AND 10% SAND. SUPPLEMENT SOIL MIX WITH NITROGEN CONCENTRATION AS DETERMINED BY SOIL TEST RESULTS.
 - SITE LIGHT POLES GREATER THAN 15' TALL MUST BE A MINIMUM OF 30' AWAY FROM ALL TREES. SITE LIGHT POLES LESS THAN 15' TALL MUST BE A MINIMUM OF 15' AWAY FROM ALL TREES.
 - ENSURE ALL TREES ARE A MINIMUM OF 15' FROM ALL UNDERGROUND UTILITIES (GAS, WATER, PHONE, AND ELECTRICAL LINES). CONTACT LANDSCAPE ARCHITECT IF FIELD MODIFICATIONS ARE REQUIRED.
 - NOTIFY LANDSCAPE ARCHITECT OF ANY SITE CONDITIONS WHICH MAY NECESSITATE MODIFICATIONS TO THE APPROVED PLANS. LANDSCAPE ARCHITECT SHALL, IF NECESSARY, MAKE "IN-FIELD MODIFICATIONS".
 - ALL DISTURBED AREAS SHALL BE LANDSCAPED (GRASS/TURF, SOD, PLANTS, TREES, SHRUBS, GROUNDCOVER, ETC.). ALL AREAS NOT DESIGNATED AS PLANTING BEDS OR SOD ARE TO BE SEEDED WITH GRASS SEED UNTIL A PERMANENT STAND OF GRASS IS ESTABLISHED PER THE SPECIFICATIONS.
 - CONTRACTOR IS RESPONSIBLE FOR INSPECTION OF EXISTING CONDITIONS AND PROMPTLY REPORTING ANY DISCREPANCIES TO LANDSCAPE ARCHITECT.
 - CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
 - LARGE MATURING TREES MAY NOT BE PLANTED WHERE OVERHEAD DISTRIBUTION OR TRANSMISSION LINES EXIST. IF TREES CONFLICT WITH POWER LINES, SIGNS, UNDERGROUND UTILITIES, OR ANY OTHER SITE FEATURES, CONTACT LANDSCAPE ARCHITECT BEFORE PLANTING.
 - CONTRACTOR VERIFIES THAT ALL PLANT MATERIAL IS AVAILABLE AS SPECIFIED WHEN BID/PROPOSAL IS SUBMITTED AND SAID MATERIAL AS SPECIFIED IS ALSO AVAILABLE AT TIME OF INSTALLATION. NO SUBSTITUTIONS DUE TO PLANT AVAILABILITY WILL BE APPROVED.
 - PLANT SCHEDULE WAS PREPARED FOR ESTIMATING PURPOSES. CONTRACTOR SHALL MAKE OWN QUANTITY TAKEOFFS USING PLANS TO DETERMINE FINAL QUANTITIES. PROMPTLY REPORT ANY DISCREPANCIES WHICH MAY AFFECT BIDDING. GRAPHIC REPRESENTATION OF PLANTS SHALL SUPERCEDE QUANTITIES LISTED IN THE PLANT SCHEDULE.
 - ROOT TYPE MAY BE FREELY SUBSTITUTED FOR BALLED AND BURLAPPED OR CONTAINER GROWN PLANTS (UNLESS NOTED AS SPECIMEN TREES ON PLANT SCHEDULE). ALL OTHER SPECIFICATIONS ARE TO REMAIN UNCHANGED (HEIGHT, WIDTH, ETC.).
 - FOR ALL TREES, SHRUBS, GROUNDCOVERS AND SOD - CONTRACTOR TO APPLY A PRE-EMERGENT HERBICIDE, PREEMERGENT OR EQUAL TO ALL PLANT BED AREAS AND PROVIDE DOCUMENTATION OF QUANTITY AND PRODUCT USED TO LANDSCAPE ARCHITECT PRIOR TO FINAL PROJECT APPROVAL.
 - FOR ALL SEEDED GRASS/TURF - REMOVE WEEDS BEFORE SEEDING. WHERE WEEDS ARE PRESENT, APPLY SELECTIVE HERBICIDES TO ELIMINATE ALL WEEDS. DO NOT USE PRE-EMERGENCE HERBICIDES.
 - CONTRACTOR IS TO PROVIDE OWNER AN ESTABLISHED, HEALTHY, UNIFORM, CLOSE STAND OF GRASS, FREE OF WEEDS AND SURFACE IRREGULARITIES, WITH COVERAGE EXCEEDING 90% OVER ANY 10 SQ FT AREA AND BARE SPOTS ARE NOT TO EXCEED 5 BY 5 INCHES.
 - ALL PLANT MATERIAL MUST BE PLANTED IN CORRELATION WITH THE APPROPRIATE GROWING SEASON OF INDIVIDUAL PLANT REQUIREMENTS. SOME PERENNIALS MAY REQUIRE A SPRING PLANTING IN ORDER TO SURVIVE A FULL WINTER DORMANCY.
 - ALL PLANT MATERIAL AND WORKMANSHIP TO BE GUARANTEED FOR ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER. REPLACEMENT PLANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS DOCUMENT AND SPECIFICATIONS. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR DEFECTS RESULTING FROM NEGLIGENCE BY THE OWNER, ABUSE OR DAMAGE BY OTHERS.
 - ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING THE PLANTING PIT. REMOVE TOP 1/3 OF THE BURLAP FROM ROOT BALL.

- ### MAINTENANCE NOTES
- OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL REQUIRED LANDSCAPING BY KEEPING LAWNS MOWED, ALL PLANTS MAINTAINED AS DISEASE FREE, ALL PLANTING BEDS GROOMED AND KEPT WEED FREE (EXCEPT IN AREAS OF PRESERVED EXISTING NATURAL VEGETATION (I.E., THICKETS), AND KEPT FREE FROM TRASH, DEBRIS AND OTHER OBJECTIONABLE MATERIALS.
 - THE REPLACEMENT OF ANY REQUIRED PLANTING, WHICH IS REMOVED OR DIES AFTER THE DATE OF PLANTING, SHALL BE REPLACED DURING THE NEXT PLANTING SEASON; AND THE REPLACEMENT OF ANY TREE IN A TREE SAVE AREA, WHICH IS REMOVED OR DIES AFTER THE DATE OF APPROVAL OF A PRESERVATION LANDSCAPE PLAN, SHALL BE DURING THE NEXT PLANTING SEASON.

- ### LANDSCAPE CALCULATIONS & UDO REQUIREMENTS:
- STREET YARD REQUIREMENTS (5.4.6.C) NORTHCHASE PKWY (EXCLUDING DRIVES & EASEMENTS)**
 - ZONING: PD WITH B-2 UNDERLYING ZONING, STREET YARD FACTOR = 25**
 - 7 TREES REQUIRED; 9 PROVIDED**
 - 44 SHRUBS REQUIRED; 58 PROVIDED**
 - N COLLEGE ST: EXEMPT, AREAS DESIGNATED FOR STORMWATER FUNCTIONS SHALL NOT BE INCLUDED IN THE REQUIRED STREET YARD AREA.
 - GENERAL STANDARDS (5.4.2.B)**
 - NEW TREES PLANTED (2" cal. min.): 153
 - REQUIRED: 45 | PROVIDED: 153
 - PARKING LOT INTERIORS (5.4.5.C)**
 - 8% OF TOTAL AREA FOR PARKING TO BE LANDSCAPED
 - 1.1. REQUIRED: 4051.2 SQ FT | PROVIDED 4170.6 SQ FT
 2. 1 TREE REQUIRED PER 144 SQ FT OF LANDSCAPED AREA
 - 2.1. REQUIRED: 28 TREES | PROVIDED 45 TREES
 - FOUNDATION PLANTINGS (5.4.7)**
 - 12% OF THE AREA OF THE FIRST FLOOR BUILDING FACE ADJACENT TO THE PARKING AREA
 - 1.1. REQUIRED: 496 SQ FT | PROVIDED: 639 SQ FT

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GRAPHIC SCALE

410 Blackwell Street, Suite 10
Durham, NC 27701
(919) 274-2500

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RECORD DRAWINGS

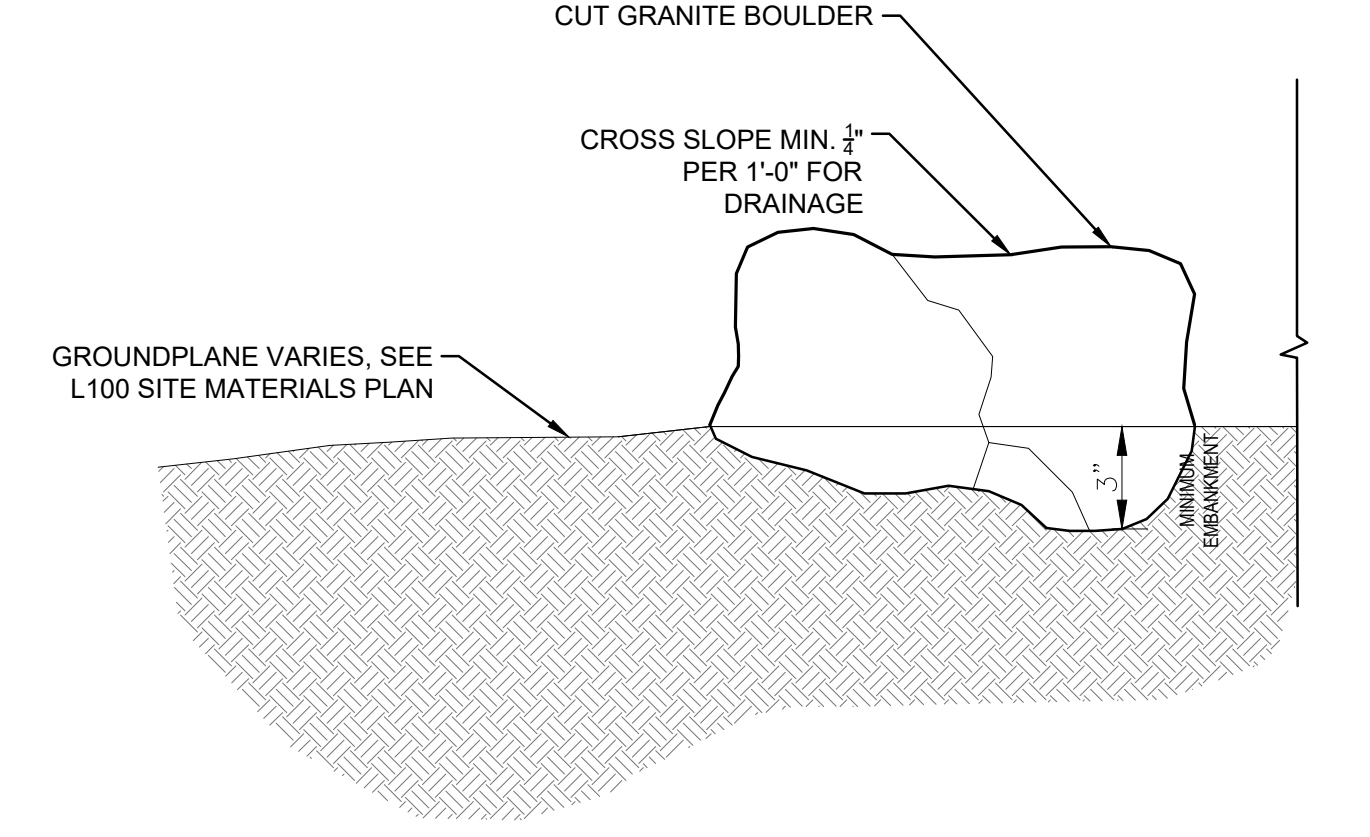
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David L. Hagen
3/27/24

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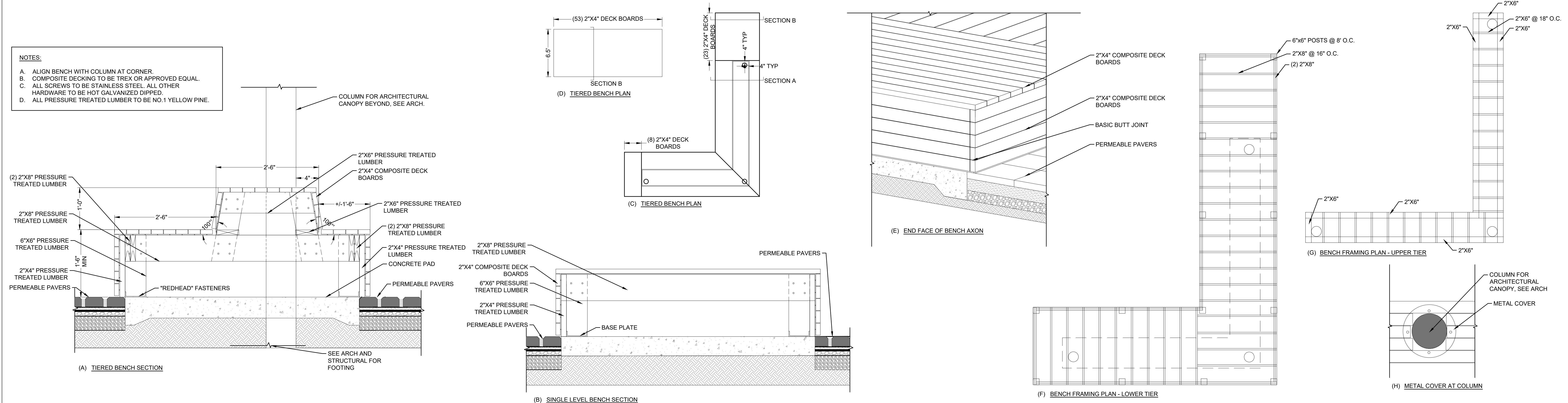
PROJECT TEAM	
Jerry Guerrier, AIA	Charlie Hagen-Cazés, AIA
D. Powlen, PLA, M. Swelzer	
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SHEET TITLE TREE PLANTING PLAN	
SHEET NUMBER L200	

- NOTES:**
- A. BOULDER SIZE RANGE: 2' x 2' - 3' x 3'
 - B. CONTRACTOR TO STOCKPILE ANY BOULDERS THAT FIT DESCRIPTION FOUND ON SITE DURING EXCAVATION AND NOTIFY LANDSCAPE ARCHITECT FOR REVIEW
 - C. ADDITIONAL BOULDERS TO BE SOURCED FROM A LOCAL QUARRY
 - D. LANDSCAPE ARCHITECT TO CONFIRM BOULDER STONE AND SELECT BOULDERS THROUGH PHOTOGRAPHS OR SITE VISIT

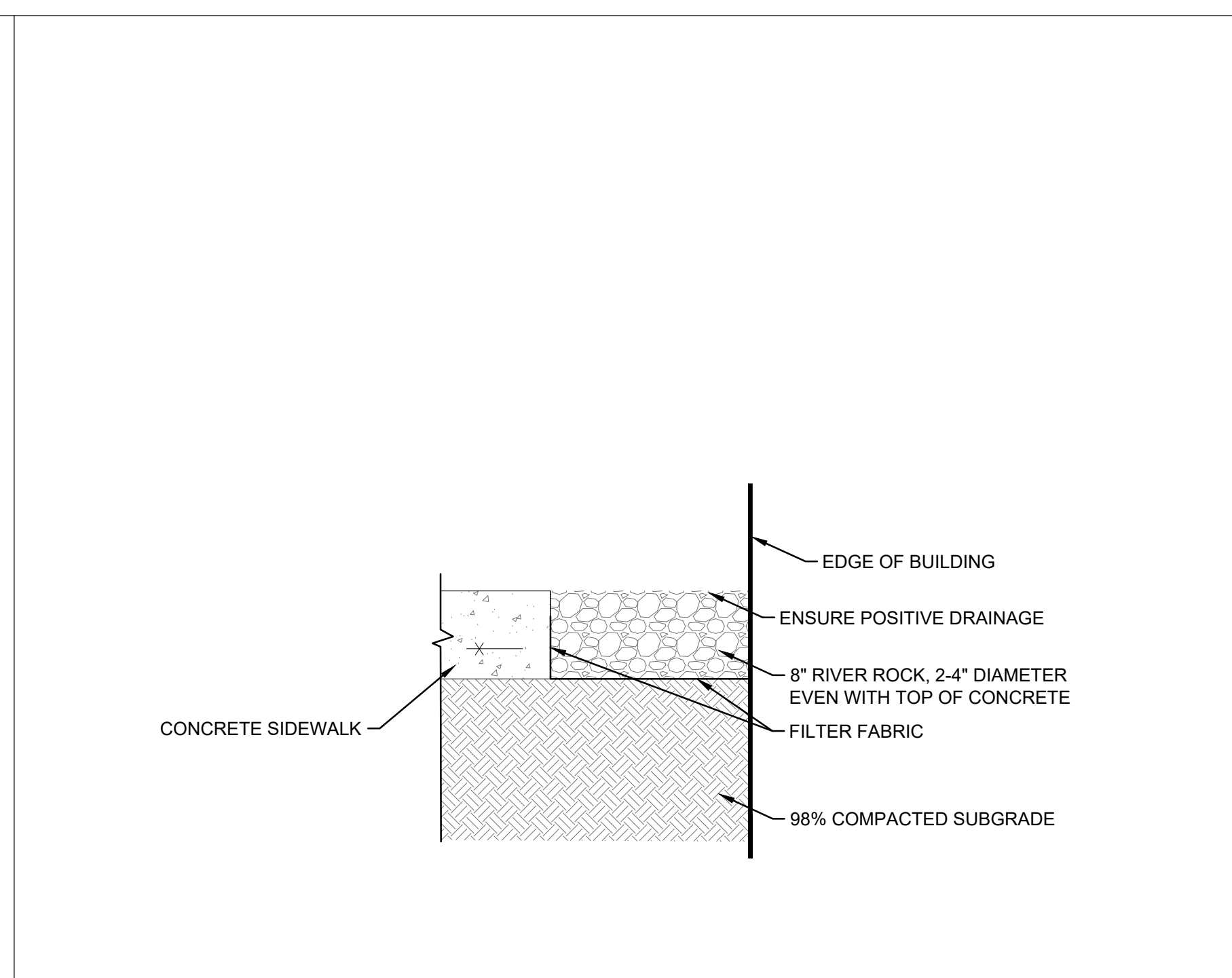
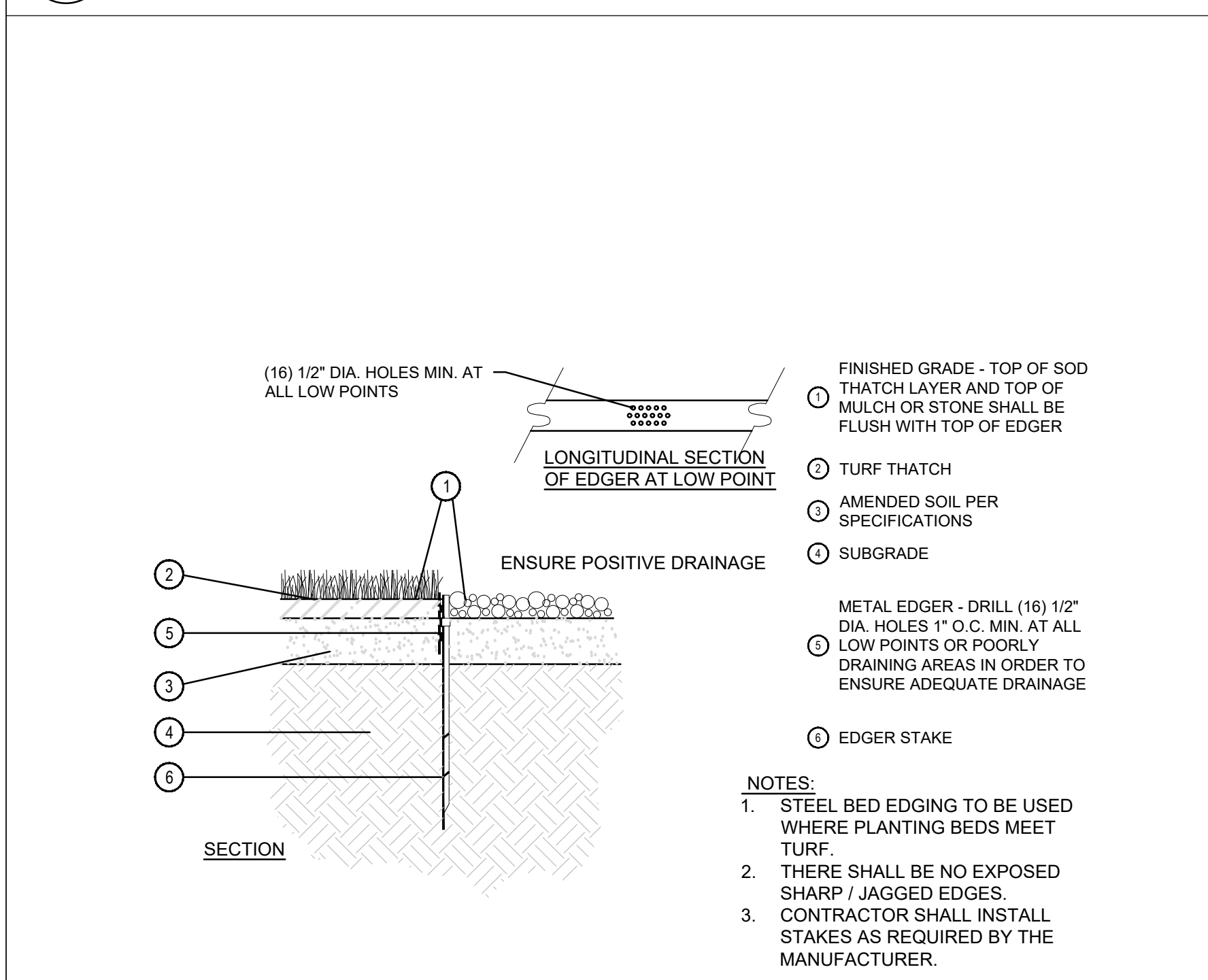


6 BOULDERS
NOT TO SCALE

- NOTES:**
- A. ALIGN BENCH WITH COLUMN AT CORNER.
 - B. COMPOSITE DECKING TO BE TREX OR APPROVED EQUAL.
 - C. ALL SCREWS TO BE STAINLESS STEEL. ALL OTHER HARDWARE TO BE HOT GALVANIZED DIPPED.
 - D. ALL PRESSURE TREATED LUMBER TO BE NO. 1 YELLOW PINE.

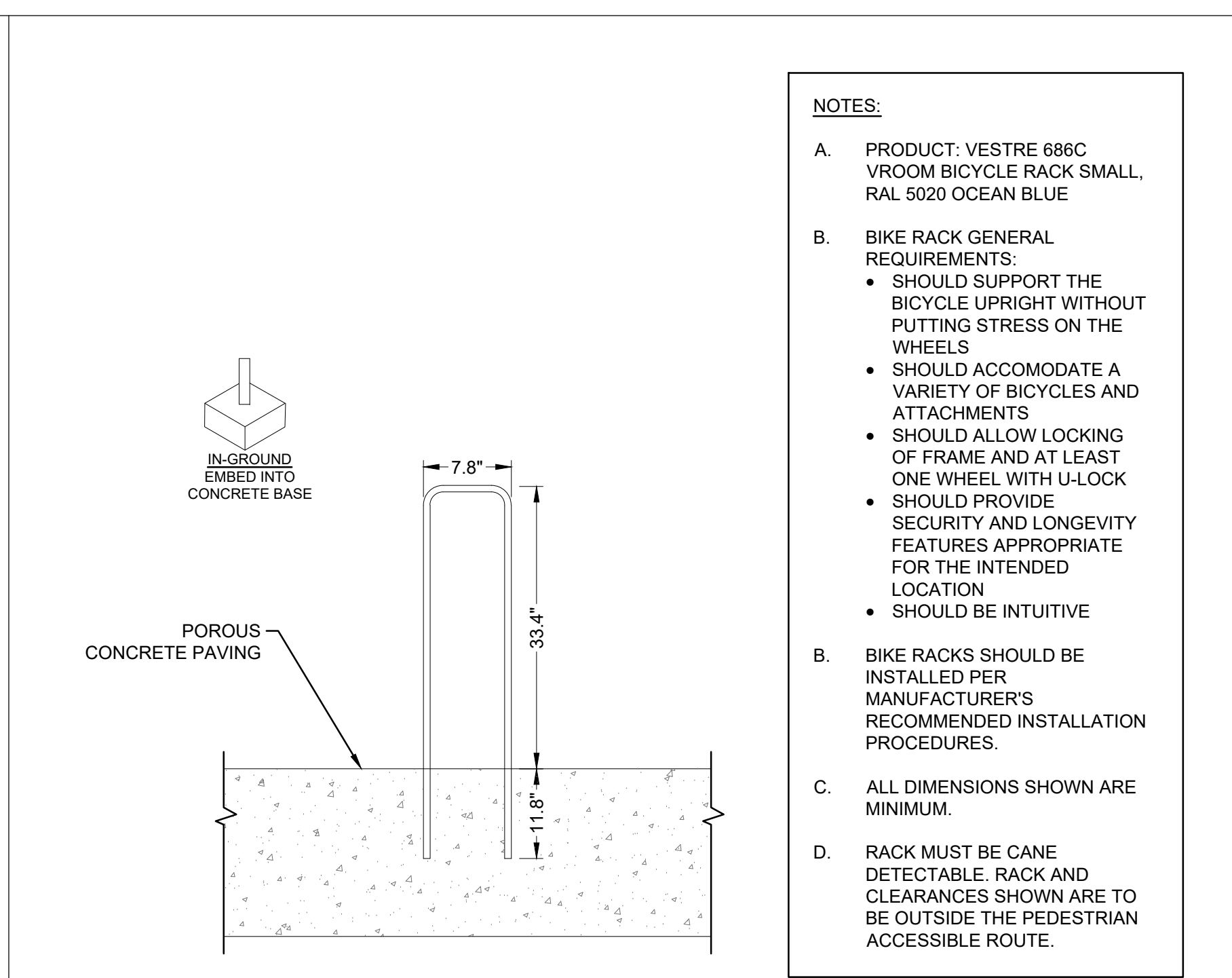


5 TIERED TIMBER BENCH - PAVILION ADD ALTERNATE
NOT TO SCALE

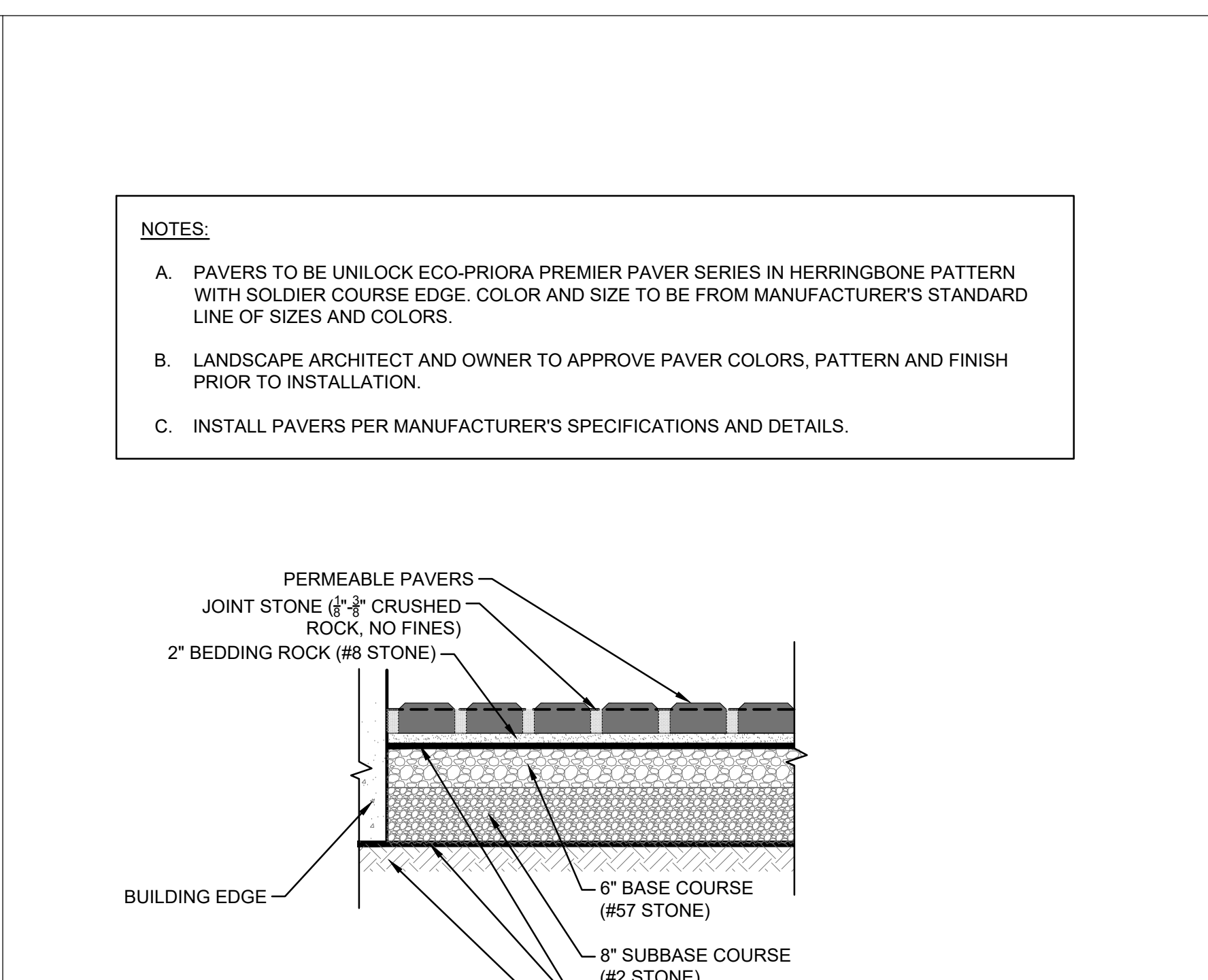


4 STEEL BED EDGING
NOT TO SCALE

3 RIVER ROCK AT CONCRETE EDGE
NOT TO SCALE



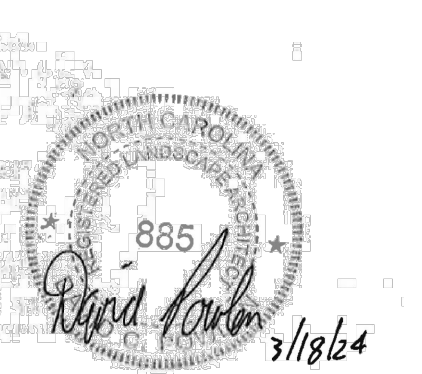
2 BIKE RACK
NOT TO SCALE



1 PERMEABLE UNIT PAVERS
NOT TO SCALE

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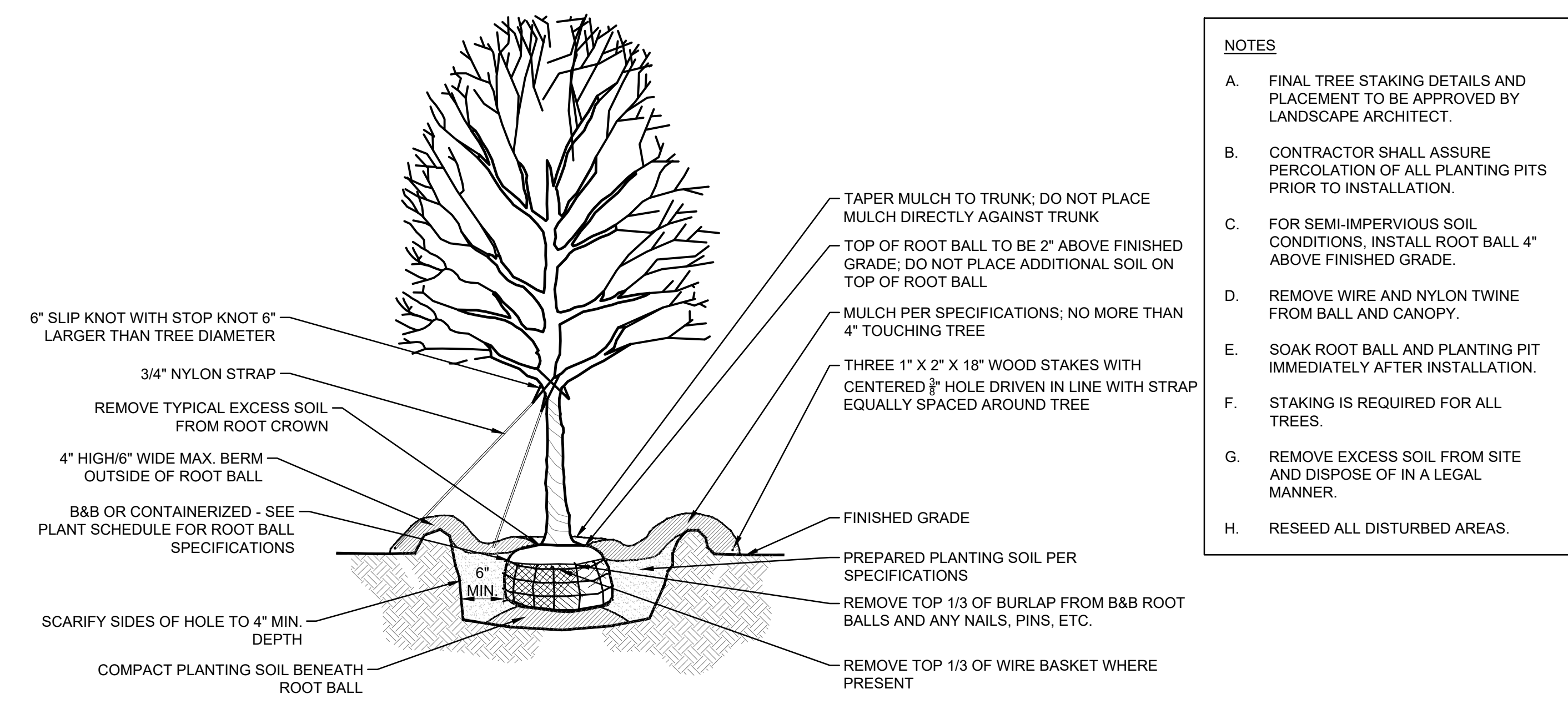
SITE DETAILS

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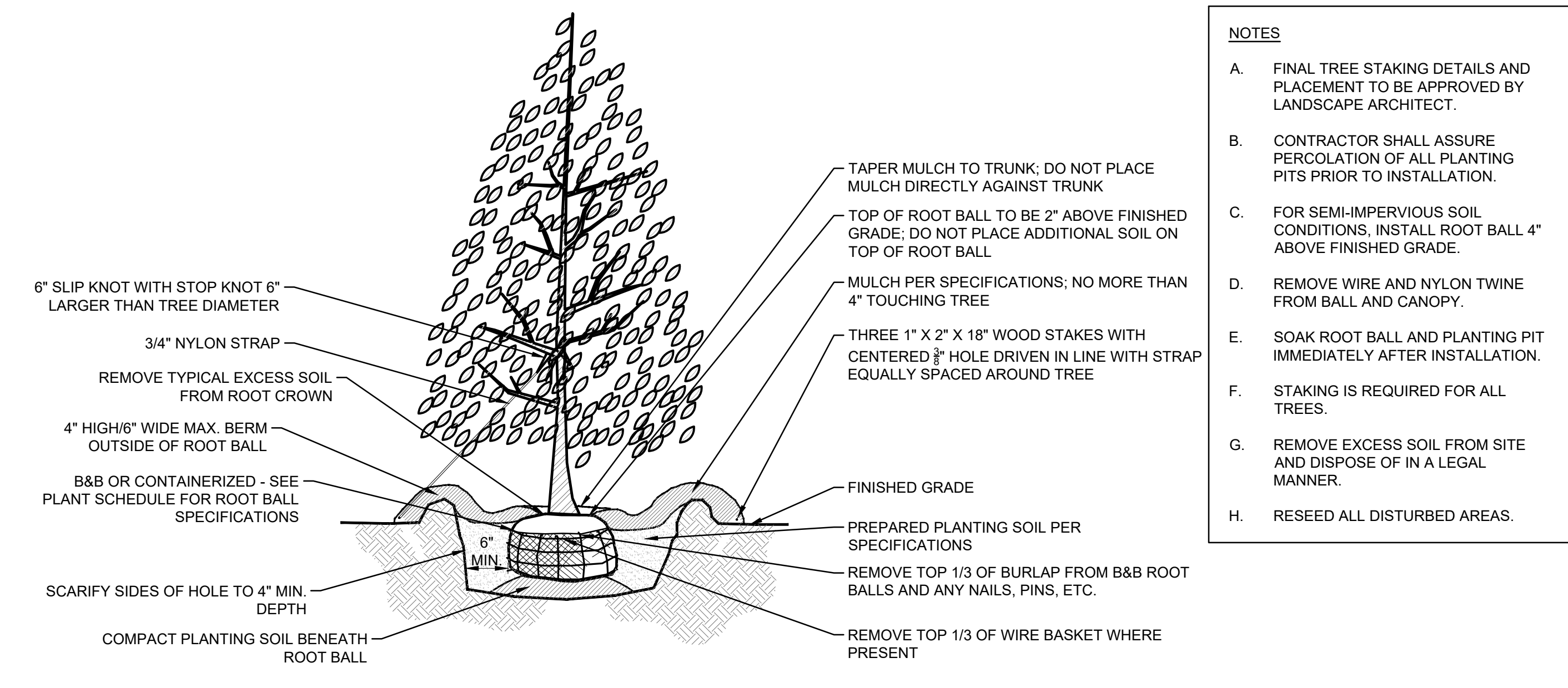
PLANT SCHEDULE

CODE	BOTANICAL / COMMON NAME	ROOT	CAL	QTY	
LG. DECIDUOUS					
NYSY	NYSSA SYLVATICA / TUPELO	B&B	2'-2.5"	12	
QUNU	QUERCUS NUTTALLII / NUTTALL OAK	B&B	2'-2.5" MIN	14	
TADI	TAXODIUM DISTICHUM / BALD CYPRESS	B&B	2'-2.5"	13	
LG. EVERGREEN					
JUVS	JUNIPERUS VIRGINIANA / EASTERN REDCEDAR	15 GAL.		28	
JUVI	JUNIPERUS VIRGINIANA / EASTERN REDCEDAR	B&B	2'-2.5"	51	
PIPA	PINUS PALUSTRIS / LONGLEAF PINE	B&B	2'-2.5"	22	
QUVI	QUERCUS VIRGINIANA / SOUTHERN LIVE OAK	B&B	2'-2.5" MIN	9	
UNDERSTORY					
CHVI	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE	B&B	2'-2.5"	4	
CODE	BOTANICAL / COMMON NAME	CONT	SIZE	SPACING	QTY
DECIDUOUS SHRUBS					
ILVE	ILEX VERTICILLATA / WINTERBERRY	1 GAL.		36" o.c.	9
ILVM	ILEX VERTICILLATA 'MALE' / MALE WINTERBERRY	1 GAL.		36" o.c.	2
ITVI	ITEA VIRGINICA / VIRGINIA SWEETSPIRE	1 GAL.		36" o.c.	7
EVERGREEN SHRUBS					
DARA	DANAE RACEMOSA / POET'S LAUREL	1 GAL.		48" o.c.	17
ILGL	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY	1 GAL.		36" o.c.	16
ILVO	ILEX VOMITORIA / YALPON HOLLY	1 GAL.		60" o.c.	74
JUSM	JUNIPERUS CONFERTA 'SILVER MIST' / SILVER MIST SHORE JUNIPER	1 GAL.		30" o.c.	154
MOCA	MORELLA CAROLINENSIS / BAYBERRY	1 GAL.		60" o.c.	44
SAMI	SABAL MINOR / DWARF PALMETTO	1 GAL.		120" o.c.	7
YUFI	YUCCA FILAMENTOSA / ADAM'S NEEDLE	1 GAL.		36" o.c.	58
YUEX	YUCCA FILAMENTOSA 'EXCALIBUR' / EXCALIBUR ADAM'S NEEDLE	1 GAL.		36" o.c.	4
GRASSES					
MUPC	MUHLENBERGIA CAPILLARIS 'PINK CLOUD' / PINK CLOUD PINK MUHLY GRASS	1 GAL.		36" o.c.	414
MUWC	MUHLENBERGIA SERICEA 'WHITE CLOUD' / WHITE CLOUD DUNE HAIRGRASS	1 GAL.		36" o.c.	14
PAHM	PANICUM VIRGATUM 'HEAVY METAL' / HEAVY METAL SWITCH GRASS	1 GAL.		36" o.c.	241
SSSO	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION' / STANDING OVATION LITTLE BLUESTEM	1 GAL.		18" o.c.	460
SPHE	SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSSEED	1 GAL.		42" o.c.	77
PERENNIALS					
ACMI	ACHILLEA MILLEFOLIUM / COMMON YARROW	1 GAL.		36" o.c.	15
ASCI	ASCLEPIAS INCARNATA 'CINDERELLA' / CINDERELLA SWAMP MILKWEED	1 GAL.		24" o.c.	7
ASTU	ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED	1 GAL.		24" o.c.	18
COCA	CONRADINA CANESCENS / FALSE ROSEMARY	1 GAL.		36" o.c.	90
IRVE	IRIS VERSICOLOR / BLUE FLAG	1 GAL.		24" o.c.	41
LOCA	LOBELIA CARDINALIS / CARDINAL FLOWER	1 GAL.		24" o.c.	17
RUFU	RUDBECKIA FULGIDA / CONEFLOWER	1 GAL.		24" o.c.	13
SOFI	SOLIDAGO RUGOSA 'FIREWORKS' / FIREWORKS WRINKLELEAF GOLDENROD	1 GAL.		36" o.c.	11
SEDGES					
CARR	CAREX BUCHANANII 'RED ROOSTER' / RED ROOSTER LEAF SEDGE	1 GAL.		18" o.c.	13
CABL	CAREX FLACCA 'BLUE ZINGER' / BLUE ZINGER SEDGE	PLUG		12" o.c.	243
GROUND COVERS					
BRMU	BROWN HARDWOOD MULCH / NATURAL HARDWOOD MULCH	MULCH			7,759 SF
ADDITIONAL	QTY	DESCRIPTION	REMARKS		
SOD		TIFWAY 419 BERMUDA SOD	SOD MUST NOT BE GROWN IN SOIL THAT HAS AN IMPERMEABLE LAYER WHILE AT SOD NURSERY		



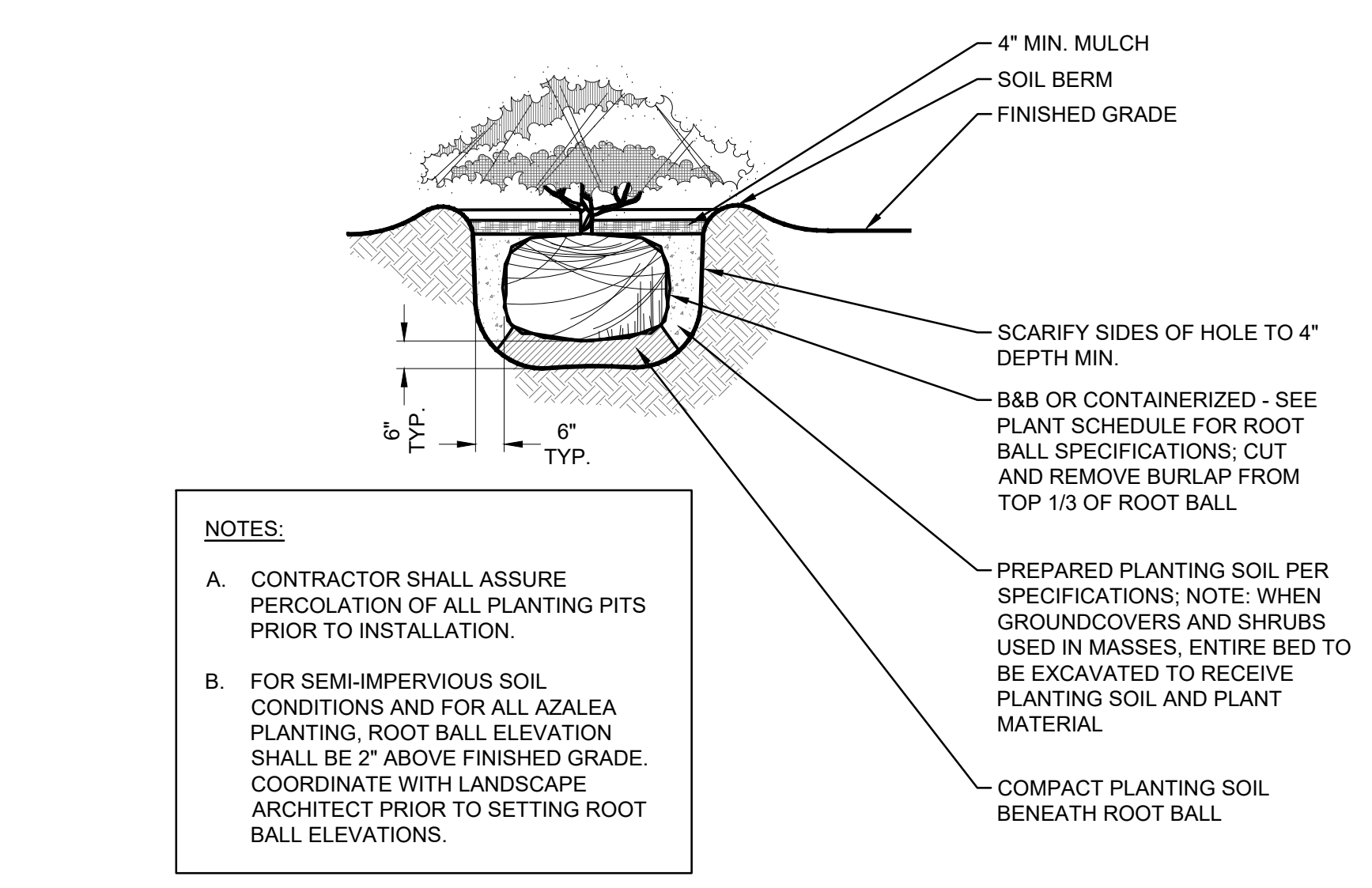
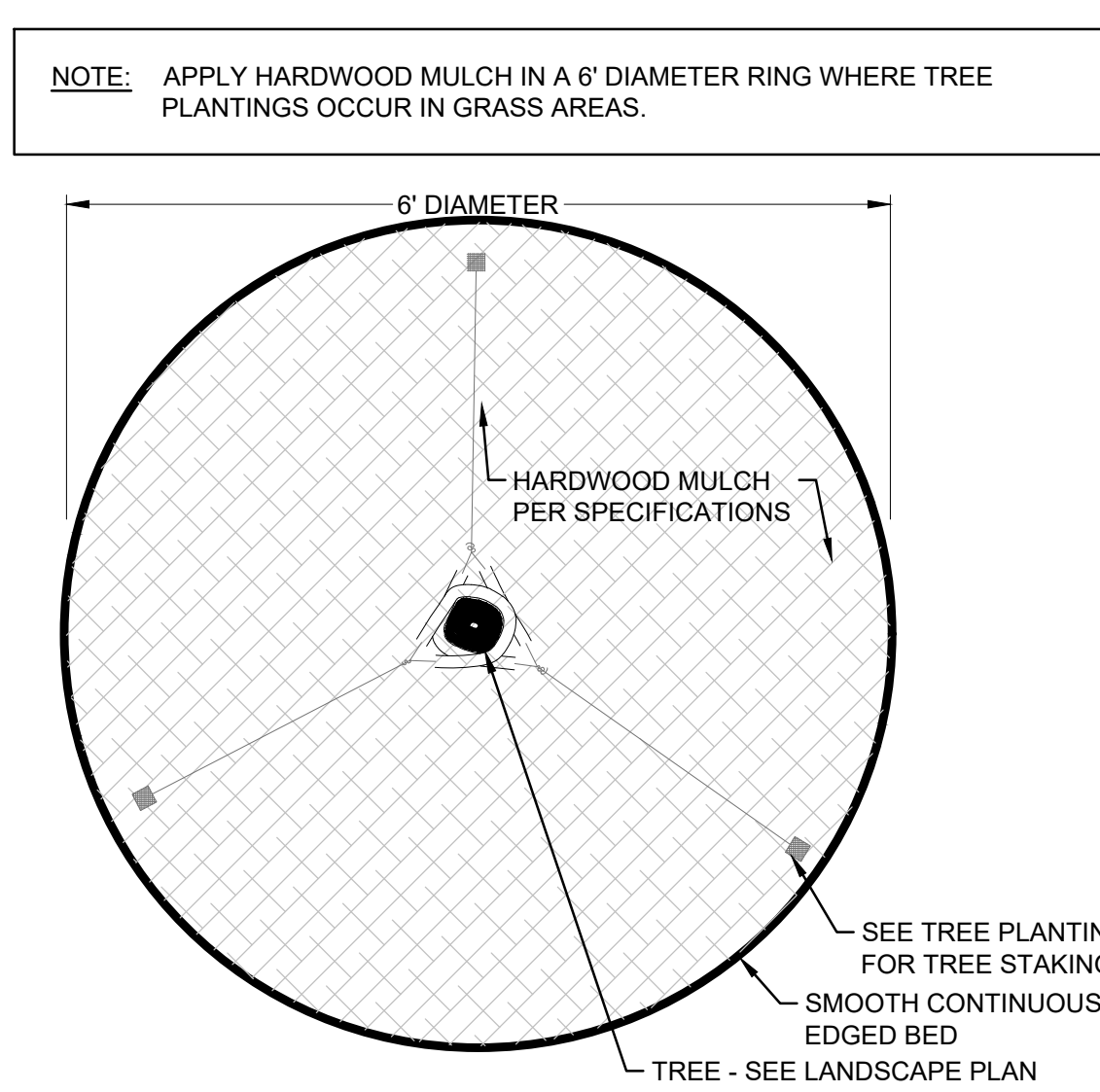
- NOTES**
- FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY LANDSCAPE ARCHITECT.
 - CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
 - FOR SEMI-IMPERVIOUS SOIL CONDITIONS, INSTALL ROOT BALL 4" ABOVE FINISHED GRADE.
 - REMOVE WIRE AND NYLON TWINE FROM BALL AND CANOPY.
 - SOAK ROOT BALL AND PLANTING PIT IMMEDIATELY AFTER INSTALLATION.
 - STAKING IS REQUIRED FOR ALL TREES.
 - REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF IN A LEGAL MANNER.
 - RESEED ALL DISTURBED AREAS.

6 LARGE MATURING TREE
NOT TO SCALE



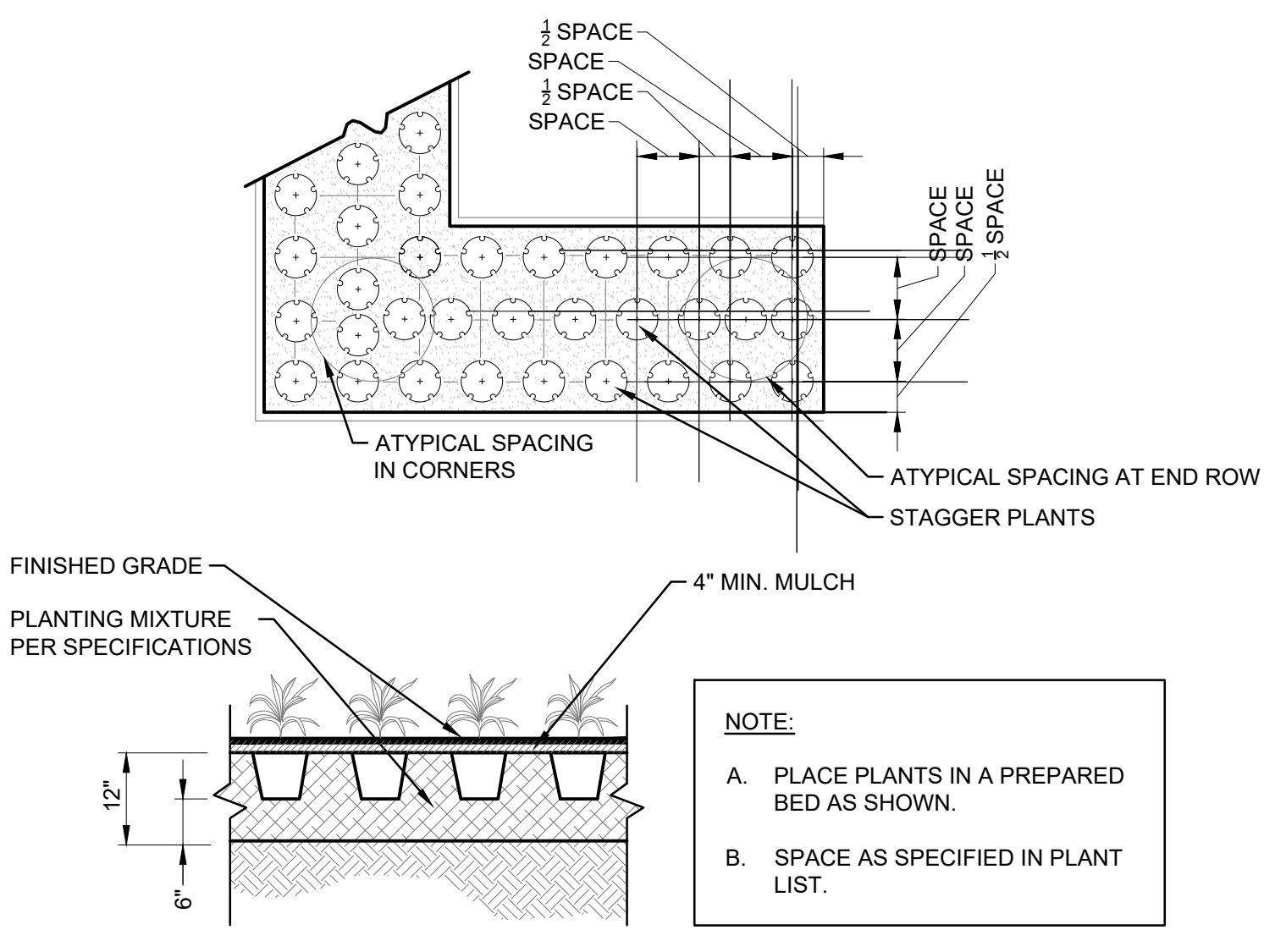
- NOTES**
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 - FOR SEMI-IMPERVIOUS SOIL CONDITIONS, INSTALL ROOT BALL 4" ABOVE FINISHED GRADE.
 - REMOVE WIRE AND NYLON TWINE FROM BALL AND CANOPY.
 - SOAK ROOT BALL AND PLANTING PIT IMMEDIATELY AFTER INSTALLATION.
 - STAKING IS REQUIRED FOR ALL TREES.
 - REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF IN A LEGAL MANNER.
 - RESEED ALL DISTURBED AREAS.

7 PLANTING SCHEDULE
NOT TO SCALE



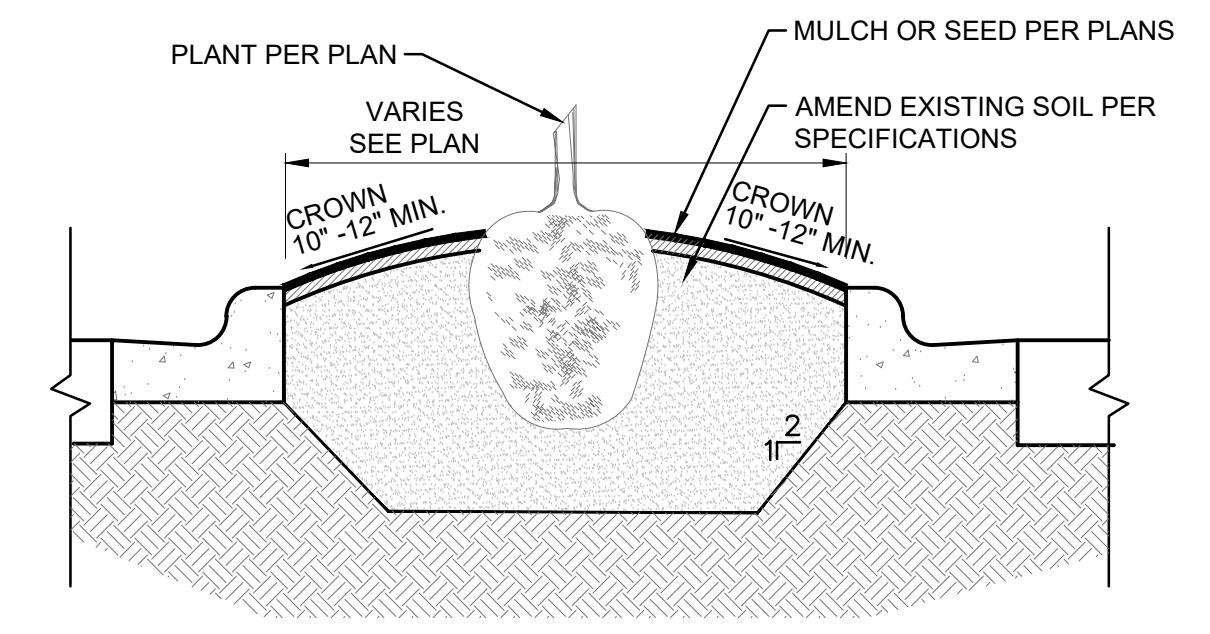
- NOTES**
- CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
 - FOR SEMI-IMPERVIOUS SOIL CONDITIONS AND FOR ALL AZALEA PLANTING, ROOT BALL ELEVATION SHALL BE 2" ABOVE FINISHED GRADE. COORDINATE WITH LANDSCAPE ARCHITECT PRIOR TO SETTING ROOT BALL ELEVATIONS.

5 EVERGREEN TREE
NOT TO SCALE



- NOTE:**
- PLACE PLANTS IN A PREPARED BED AS SHOWN.
 - SPACE AS SPECIFIED IN PLANT LIST.

- NOTES:**
- FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS BEFORE AMENDING SOIL AND PLANTING TREES.
 - PLANTING PIT SOIL MIXTURE: AMEND EXISTING SOIL WITH 3 PARTS TOPSOIL, 1 PART COARSE SAND AND 1 PART COMPOST/PEAT MOSS.
 - REFER TO LANDSCAPE SPECIFICATIONS FOR TOPSOIL/PLANTING MIX SPECIFICATIONS.

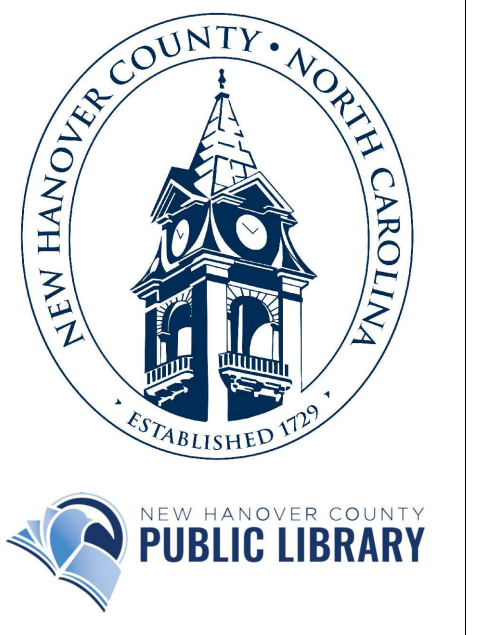


1 PARKING LOT ISLAND TREE
NOT TO SCALE

4 MULCH RING
NOT TO SCALE

3 SHRUB PLANTING
NOT TO SCALE

2 PLANT MASSING AND GROUNDCOVER
NOT TO SCALE



RECORD DRAWINGS

PREPARED FROM INFORMATION PROVIDED BY THE CONTRACTOR CONSTRUCTING THE PROJECT. DESIGNER DOES NOT WARRANT THE INFORMATION HEREIN TO BE COMPLETE, ACCURATE, OR ALL-ENCOMPASSING.



ISSUE FOR BID SET

ISSUE DATE: 03.28.2024

NO.	REASON	DATE

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PROJECT NO.
514.18349.00
SHEET TITLE
LANDSCAPE DETAILS

SHEET NUMBER
L301

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BID SET - 03.28.2024



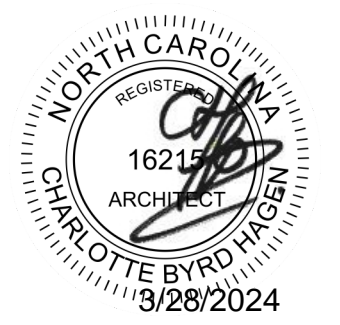
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SHEET NUMBER
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ABBREVIATIONS

Abbr.	Abbreviated Phrase	Abbr.	Abbreviated Phrase	Abbr.	Abbreviated Phrase
ACT	ACOUSTIC CEILING TILE	FOB	FACE OF BRICK	OFF	OFFICE
ADA	AMERICANS WITH DISABILITIES ACT	FOS	FACE OF GLASS	OH	OPPOSITE HAND
ADJ	ADJUSTABLE	FOS	FACE OF SHEATHING	OPNG	OPENING
AED	AUTOMATED EXTERNAL DEFIBRILLATOR	FR	FIRE RETARDANT TREATED		
AFF	ABOVE FINISH FLOOR (POLYMER)	FRP	FIBERGLASS REINFORCED PLASTIC	PED	PEDESTAL, PEDESTRIAN, PEDIATRIC
AL	ALUMINUM	FT	FOOT, FEET	PERF	PERFORATE(D)
ALT	ALTERNATE	FURR	FURR(ED), (ING)	PER	PREFABRICATE(D)
AMC	ACOUSTICAL METAL CEILING	FUT	FUTURE	PL_PLAM	PLASTIC LAMINATE
APC	ACOUSTICAL PANEL CEILING	FWC	FABRIC WALL COVERING	PLAS	PLASTER, PLASTIC
APPROX	APPROXIMATE	FWP	FABRIC WRAPPED PANEL	PLWD	PLYWOOD
ARCH	ARCHITECT(URAL)	GA	GAUGE	PNL	PANEL
ARP	ACRYLIC RESIN PANEL	GALV	GALVANIZED	PNT	PAINT(ED)
AWC	ACOUSTICAL WOOD CEILING	GB	GLASS BOARD	PR	PAIR
BBD	BULLETIN BOARD	GC	GENERAL CONTRACTOR	PT	PRESSURE TREAT(ED)
BD	BOARD	GL	GLASS, GLAZING	PTN	PARTITION
BO	BOTTOM OF	GR	GROUT	QT	QUARRY TILE
BOT	BOTTOM	GRAN	GRANITE	QZ	QUARTZ, ENGINEERED QUARTZ
		GSB	GYPSSUM WALL BOARD		
		GYP	GYPSSUM	RB	RUBBER BASE
CL_CL	CENTERLINE	HC	HOLLOW CORE	RBT	RUBBER TILE
CAB	CABINET	HD	HAND DRYER	REC	RECEPTACLE
CC	CUBICLE CURTAIN	HDR	HEADER	REF	REFERENCE, REFER
CIR	CIRCLE	HDW	HARDWARE	REFR	REFRIGERATOR
CLG	CEILING	HGT	HEIGHT	REQD	REQUIRED
CLOS	CLOSET	HORIZ	HORIZONTAL(LY)	RM	ROOM
CLR	CLEAR(ANCE)	HR	HOUR	RS	RESILIENT
COL	COLUMN	HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	SBR	SHELF AND ROD
CON_CONC	CONCRETE	HWD	HARDWOOD	SCW	SOLID CORE WOOD
CONST	CONSTRUCTION	IBC	INTERNATIONAL BUILDING CODE	SECT	SECTION
CONT	CONTINUOUS / CONTINUE	ID	INSIDE DIAMETER	SF	SQUARE FEET
CONTR	CONTRACTOR	INCL	INCLUDE(D), (ING)	SFRM	SHOWER
COORD	COORDINATE	INSUL	INSULATE(D), (ING)	SHR	SHOWER
CPT	CARPET	INT	INTERIOR	SIM	SIMILAR
CRB	COVERED RUBBER BASE			SPEC	SPECIFICATION(S)
CT	CERAMIC OR PORCELAIN TILE	JAN	JANITOR'S CLOSET	SS	STAINLESS STEEL
CTR	CENTER	JT	JOINT	SSM	SOLID SURFACE MATERIAL
				ST	STONE
D	DRYER	KIT	KITCHEN	STD	STANDARD
DBL	DOUBLE	KPL	KICK PLATE	STOR	STORAGE
DEG	DEGREE			SUSP	SUSPENDED
DEMO	DEMOLISH / DEMOLITION	L	LENGTH	SUSP CLG	SUSPENDED CEILING
DET_DTL	DETAIL	LAM	LAMINATE(D)	SV	SHEET VINYL
DIA	DIAMETER	LBL	LABEL	SYS	SYSTEM
DM	DIMENSION	LCKR	LOCKER		
DS	DOWNSPOUT	LIN	LINOLEUM	TB	TACK BOARD
DWG	DRAWING(S)	LT	LIGHT	TEMP	TEMPERED, TEMPORARY
DWN	DOWN	LVL	LAMINATED VENEER LUMBER	TME	TO MATCH EXISTING
DWR	DRAWER	LVT	LUXURY VINYL TILE	TYP	TYPICAL
				TZ	TERRAZZO
EA	EACH				
ELEV	ELEVATION	MATL	MATERIAL(S)	UNO	UNLESS NOTED OTHERWISE
ELEC	ELECTRICAL	MAX	MAXIMUM		
ELEV	ELEVATOR	MB	MARKER BOARD	VB	VINYL BASE
EOS	EDGE OF SLAB	MECH	MECHANICAL	VCT	VINYL COMPOSITE TILE
EP	EPOXY FLOORING	MFR	MECHANICAL MANUFACTURE(R)	VERT	VERTICALLY
EQ	EQUAL(LY)	MIN	MINIMUM	VIF	VERIFY IN FIELD
EQPT	EQUIPMENT	MISC	MISCELLANEOUS	VIN	VINYL
EW	EACH WAY	MP	METAL PANEL	VT	VINYL TILE
EW	ELECTRIC WATER COOLER	MTD	MOUNTED	VWC	VINYL WALL COVERING
EXIST	EXISTING	MTL	METAL		
EXP	EXPANSION	MULL	MULLION	W	WIDTH
EXT	EXTERIOR	MWK	MILLWORK	W/	WITH
FAAP	FIRE ALARM ANNUNCIATOR PANEL	N	NORTH	WO	WITHOUT
FACP	FIRE ALARM CONTROL PANEL	NIC	NOT IN CONTRACT	WB	WOOD BASE
FBD	FURNISHED BY OTHERS	NO_#	NUMBER	WC	WATER CLOSET
FDC	FIRE DEPARTMENT CONNECTION	NR	NOISE REDUCTION	WD	WOOD
FE	FIRE EXTINGUISHER	NBC	NOISE REDUCTION COEFFICIENT	WGT	WEIGHT
FEC	FIRE EXTINGUISHER CABINET	NTS	NOT TO SCALE	WIN	WINDOW
FF	FINISH FLOOR			WM	WALK-OFF MAT/ FLOORING
FFN	FINISHED			WTW	WALL TO WALL
FLR	FLOORING(S)				
FLUOR	FLUORESCENT				
FO	FACE OF				

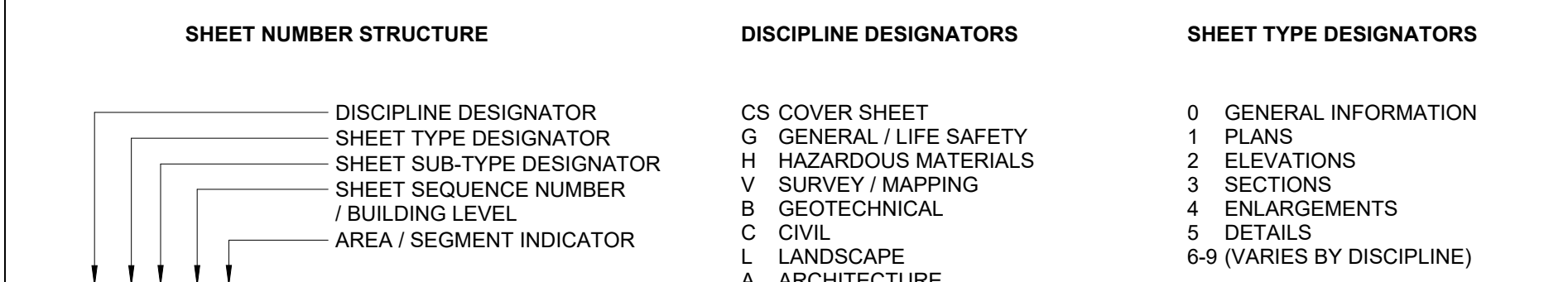
GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS WHICH INCLUDE THE OWNER/CONTRACTOR AGREEMENT, THE PROJECT MANUAL, THE DRAWINGS AND ALL ADDENDA AND MODIFICATIONS ISSUED BY THE ARCHITECT.
- REVIEW DOCUMENTS AND VERIFY DIMENSIONS AND FIELD CONDITIONS WHEN APPLICABLE. CONFIRM THAT WORK IS BUILDABLE AS SHOWN. ANY CONFLICTS OR OMISSIONS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT FOR CLARIFICATION PRIOR TO THE PERFORMANCE OF WORK.
- COMPLIANCE WITH INDUSTRY STANDARDS, METHODS OF CONSTRUCTION, AND INSTALLATION AND ERECTION OF ELEMENTS AND MATERIALS ARE THE CONTRACTOR'S RESPONSIBILITY.
- THE GC AND EACH SUBCONTRACTOR ARE REQUIRED TO BE FAMILIAR WITH THE ENTIRE SET OF THESE CONTRACT DOCUMENTS AND ARE RESPONSIBLE FOR COORDINATION OF THEIR WORK WITH OTHER TRADES. CORRECTIONS FOR UNCOORDINATED WORK WILL BE MADE AT THE CONTRACTOR'S EXPENSE.
- WORK NOTED "BY OTHERS" OR "NIC" SHALL BE PROVIDED BY OWNER OR UNDER SEPARATE CONTRACT.
- PROTECT AREAS ADJACENT TO WORK AREA FROM DAMAGE DURING CONSTRUCTION. PATCH AND REPAIR ALL DAMAGED AREAS TO MATCH ADJACENT FINISH AND ENSURE A SMOOTH SURFACE DO NOT SCALE DRAWINGS. ALL PARTITION LOCATIONS, DIMENSIONS, AND TYPES, AND ALL DOOR AND WINDOW LOCATIONS SHALL BE AS SHOWN ON PARTITION PLAN. IN CASE OF CONFLICT, NOTIFY ARCHITECT. PARTITION PLAN SUPERSEDES OTHER PLANS.
- COORDINATE AND PROVIDE METAL OR RATED SOLID WOOD (FIRE TREATED) BLOCKING IN PARTITIONS AND CEILINGS FOR ALL WALL HUNG AND CEILING ATTACHED ITEMS INCLUDING MILLWORK, EQUIPMENT, AND FURNITURE. COORDINATE WITH OWNER AND VENDOR TO IDENTIFY LOCATIONS AND SIZES OF ITEMS PROVIDED/INSTALLED BY OTHERS.
- PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE OF GYPSUM BOARD, UNLESS INDICATED OTHERWISE. DIMENSIONS MARKED "CLEAR", "HOLD", AND "MIN" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF FINISHES. COORDINATE THICKNESS WITH FINISH SCHEDULE, SPECIFICATIONS, AND DETAILS.
- COLUMN CENTER LINES, OR GRID LINES, ARE SHOWN FOR DIMENSIONING. VERIFY EXACT LOCATIONS IN FIELD.
- PROVIDE PARTITION TYPE WITH THE HIGHEST UL AND/OR ACOUSTICAL PERFORMANCE RATING WHERE MORE THAN ONE PARTITION TYPE IS INDICATED.
- "ALIGN" SHALL MEAN TO ACCURATELY LOCATE FINISH FACES IN THE SAME PLANE.
- MATERIALS USED IN UL RATED ASSEMBLIES SHALL CONFORM TO REFERENCED STANDARDS.
- STENCIL BOTH SIDES OF UL RATED PARTITIONS ABOVE SCHEDULED CEILING WITH REQUIRED PROTECTION TYP.
- FIRE STOP PENETRATIONS IN UL RATED ASSEMBLIES TO MAINTAIN/Achieve LEVEL OF PROTECTION REQUIRED FOR ASSEMBLY TYPE. FIRE STOP ALONG PERIMETER OF RATED ASSEMBLIES WHERE VOIDS OCCUR. REFER TO UL DETAILS FOR MORE INFORMATION. GC SHALL NOTIFY THE ARCHITECT OF ANY PENETRATIONS TO RATED ASSEMBLIES NOT COVERED BY THE UL DETAILS PROVIDED IN THIS DRAWING SET AND PROVIDE DETAILS FOR ARCHITECT REVIEW PRIOR TO PROCEEDING WITH WORK.
- PROVIDE FIRE EXTINGUISHER CABINETS, SMOKE DETECTORS AND ALL OTHER LIFE SAFETY DEVICES AS REQUIRED BY CODE. PROVIDE DRAWING SHOWING LOCATION, OF DEVICES FOR REVIEW PRIOR TO FRAMING OF WALLS. DO NOT PLACE IN FIRE RATED PARTITIONS.
- PROVIDE HOT AND COLD WATER LINES, SOIL, VENT LINES AND PRESSURE AND SHUTOFF VALVES AS REQUIRED IN ACCORDANCE WITH LOCAL BUILDING AND PLUMBING CODES FOR PLUMBING FIXTURES.
- COORDINATE SCHEDULE FOR TELEPHONE, DATA, SECURITY, AND AUDIO VISUAL INSTALLATIONS WITH TENANT AND OWNER.

SHEET INDEX

SHEET NUMBER	SHEET NAME	SHEET NUMBER	SHEET NAME
00 COVER SHEET	COVER SHEET	A521	SECTION DETAILS
01 GENERAL/LIFE SAFETY	GENERAL INFORMATION AND SHEET INDEX	A522	SECTION DETAILS
G001	BUILDING CODE SUMMARY-NC APPENDIX B	A523	SECTION DETAILS
G002	FIRE RESISTANCE DESIGNS	A810	CEILING DETAILS
G100	LIFE SAFETY PLAN	A821	FINISH PLAN & SCHEDULE
		A822	INTERIOR ELEVATIONS
		A823	INTERIOR ELEVATIONS
		A831	INTERIOR ELEVATIONS
		A832	CASEWORK SECTIONS
		A851	CASEWORK SECTIONS
		A900	FURNITURE PLAN
		A920	DOOR SCHEDULE, DOOR AND FRAME TYPES
		A920	INTERIOR FRAMING SYSTEM ELEVATIONS
02 CIVIL	TITLE SHEET	06 - STRUCTURAL	GENERAL NOTES
T401	EXISTING CONDITIONS PLAN	S001	STATEMENT OF SPECIAL INSPECTIONS
C-100	SITE LAYOUT	S101	FOUNDATION PLAN
C-200	GRADING PLAN	S102	LOW ROOF FRAMING PLAN
C-201A	GRADING PLAN BLOWUPS	S103	HIGH ROOF FRAMING PLAN
C-202	DRAINAGE AREA MAP	S201	BRACE FRAME ELEVATIONS
C-203	STORM DRAIN PROFILES	S202	BRACE CONN DETAILS
C-300	PAVING PLAN	S301	FOUNDATION DETAILS-I
C-301	SIGNAGE AND STRIPING PLAN	S302	FOUNDATION DETAILS-II
C-400	UTILITY PLAN	S303	FOUNDATION DETAILS-III TYP CONN DETAILS
C-401	UTILITY PROFILES	S311	ROOF FRAMING DETAILS-I
C-500	SITE DETAILS	S312	ROOF FRAMING DETAILS-II
C-501	SITE DETAILS	S313	ROOF FRAMING DETAILS-III
C-502	STORM DRAIN DETAILS		
C-503	UTILITY DETAILS		
C-504	UTILITY DETAILS		
C-600	STORMWATER MANAGEMENT PLAN		
C-601	STORMWATER MANAGEMENT PLAN		
C-602	STORMWATER MANAGEMENT DETAILS		
C-603	STORMWATER MANAGEMENT EXISTING PEAK FLOW		
C-604	STORMWATER MANAGEMENT POST PEAK FLOW		
EC-100	EROSION AND SEDIMENT CONTROL PLAN FOR INITIAL CONDITION	07 - FIRE SUPPRESSION	FIRE SUPPRESSION COVER SHEET
EC-101	EROSION AND SEDIMENT CONTROL PLAN FOR INTERIM CONDITION	FS001	FIRE SUPPRESSION MAIN PIPING PLAN
EC-102	EROSION AND SEDIMENT CONTROL PLAN FOR FINAL CONDITION	FS112	FIRE SUPPRESSION HAZARD GROUP PLAN
EC-103	SEDIMENT AND EROSION CONTROL STRUCTURE AND SPILLWAY DETAILS	08 - PLUMBING	PLUMBING COVER SHEET
EC-104	EROSION AND SEDIMENT CONTROL DETAILS	P001	PLUMBING DRAINAGE PLAN
EC-105	EROSION AND SEDIMENT CONTROL DETAILS	P111	PLUMBING PIPING PLAN
EC-106	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	P131	PLUMBING ROOF PLAN
EC-107	EROSION AND SEDIMENT CONTROL NOTES	P501	PLUMBING DETAILS
		P502	PLUMBING DETAILS
		P711	PLUMBING DRAINAGE RISER
		P721	PLUMBING PIPING RISER
		P731	PLUMBING RAIN LEADER RISER
03 LANDSCAPE	LAYOUT PLAN	09 - MECHANICAL	MECHANICAL GENERAL NOTES & LEGEND
L100	SITE MATERIALS PLAN	M001	MECHANICAL DUCTWORK PLAN
L101	LAYOUT PLAN	M111	MECHANICAL PIPING AND CONTROL PLAN
L200	TREE PLANTING PLAN	M131	MECHANICAL ROOF PLAN
L201	UNDERSTORY PLANTING PLAN	M211	MECHANICAL CEILING PLAN
L300	TO MATCH EXISTING	M301	MECHANICAL SECTIONS
L301	LANDSCAPE DETAILS	M501	MECHANICAL DETAILS
		M502	MECHANICAL DETAILS
04 ARCHITECTURE	WALL TYPES - INTERIOR PARTITIONS	M601	MECHANICAL SCHEDULES
A010	EXTERIOR SYSTEMS - WALL AND ROOF	M801	MECHANICAL CONTROL DIAGRAMS
A020	ARCHITECTURAL SITE PLAN	M802	MECHANICAL CONTROL DIAGRAMS
A101	FLOOR PLAN	M901	3D DIAGRAMS
A111	ROOF PLAN		
A112	ROOF DETAILS		
A113	REFLECTED CEILING PLAN		
A121	ENLARGED REFLECTED CEILING PLANS	10 - ELECTRICAL	ELECTRICAL COVERSHEET
A122	EXTERIOR ELEVATIONS	E000	ELECTRICAL SITE PLAN
A210	EXTERIOR FRAMING SYSTEM ELEVATIONS	E100	ELECTRICAL POWER PLAN
A211	EXTERIOR FRAMING SYSTEM ELEVATIONS	E111	ELECTRICAL LIGHTING PLAN
A220	BUILDING SECTIONS E/W	E122	ELECTRICAL LIGHTING CONTROL PLAN
A310	BUILDING SECTIONS N/S	E131	MECHANICAL POWER PLAN - ROOF
A311	WALL SECTIONS	E132	ELECTRICAL DETAILS
A320	WALL SECTIONS	E500	ELECTRICAL DETAILS
A321	WALL SECTIONS	E501	ELECTRICAL DETAILS
A322	WALL SECTIONS	E600	LIGHTING FIXTURE SCHEDULE
A323	WALL SECTIONS	E610	MECHANICAL EQUIPMENT POWER SCHEDULE
A324	WALL SECTIONS	E700	SINGLE LINE DIAGRAM
A400	ENLARGED DUMPSTER ENCLOSURE PLAN AND ELEVATIONS	E701	PANEL SCHEDULES
A401	STORYTIME PAVILION- ENLARGED PLAN AND ELEVATIONS - ADD ALTERNATE	11 - FIRE ALARM	FIRE ALARM COVER SHEET
A402	STORYTIME PAVILION- REFLECTED CEILING PLAN AND ROOF PLAN - ADD ALTERNATE	FA000	FIRE ALARM PLAN
A403	ENLARGED TOILET PLANS AND ELEVATIONS	FA111	FIRE ALARM PLAN
A511	PLAN DETAILS		
A512	PLAN DETAILS		

SHEET NUMBERING LEGEND



SYMBOLS

ARCHITECTURAL ELEMENTS	VIEW ELEMENTS	SITE & LOCATION ELEMENTS
ROOM NAME: 101	DETAIL MARKER: 2 A301	ELEVATION DATUM POINT: Level Name 0'-0"
DOOR NUMBER: @A00A.XX	SECTION MARKER: 1 A101	COLUMN GRID AND GRID BUBBLES: 00
WALL TAG: @A00A.XX	EXTERIOR ELEVATION MARKER: 1 AS.0.2B	NORTH ARROW
ALUMINUM FRAMING SYSTEM TAG: AFS-20	INTERIOR ELEVATION MARKER: 1 AS.0.2B 1	ANNOTATIONS: 00 SHEET KEYNOTE
WINDOW TAG: A		
TOILET ACCESSORIES TAG: X		
MATERIALS TAG: ?		
EQUIPMENT TAG: E-1		
CARD READER: CR		
CEILING TYPE FINISH ELEVATION: ACT-1, 7'-0"		



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BID SET

ISSUE DATE: 03.28.2024

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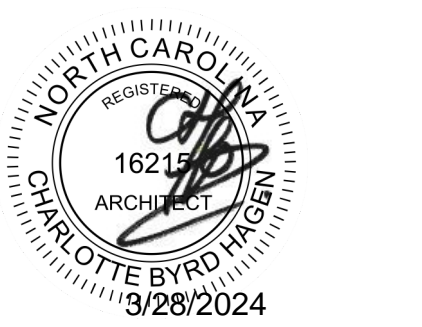
PROJECT NO. 514.18349.00

SHEET TITLE: GENERAL INFORMATION AND SHEET INDEX

SHEET NUMBER: G001

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ISSUE FOR BID SET

ISSUE DATE 03.28.2024

REVISIONS NO. REASON DATE

PROJECT TEAM PRINCIPAL IN CHARGE JERRY GUERRIER, AIA PROJECT MANAGER Charlotte Hagen, AIA DESIGN TEAM Designer

PROJECT NO. 514.18349.00 SHEET TITLE BUILDING CODE SUMMARY-NC APPENDIX B

PROJECT NO. 514.18349.00 SHEET TITLE BUILDING CODE SUMMARY-NC APPENDIX B

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PROJECT NO. 514.18349.00 SHEET TITLE BUILDING CODE SUMMARY-NC APPENDIX B

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS ELECTRICAL DESIGN (PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE) ELECTRICAL SUMMARY

2018 NC Administrative Code and Policies Revised 6/15/2020

2018 NC Administrative Code and Policies Revised 6/15/2020

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS STRUCTURAL DESIGN (PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE) DESIGN LOADS

2018 NC Administrative Code and Policies Revised 6/15/2020

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS MECHANICAL DESIGN (PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE) MECHANICAL SUMMARY

2018 NC Administrative Code and Policies Revised 6/15/2020

ENERGY REQUIREMENTS: The following data shall be considered minimum and any special attributes required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet.

2018 NC Administrative Code and Policies Revised 6/15/2020

2018 NC Administrative Code and Policies Revised 6/15/2020

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS STRUCTURAL DESIGN (PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE) DESIGN LOADS

2018 NC Administrative Code and Policies Revised 6/15/2020

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS MECHANICAL DESIGN (PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE) MECHANICAL SUMMARY

2018 NC Administrative Code and Policies Revised 6/15/2020

FIRE PROTECTION REQUIREMENTS

2018 NC Administrative Code and Policies Revised 6/15/2020

2018 NC Administrative Code and Policies Revised 6/15/2020

PERCENTAGE OF WALL OPENING CALCULATIONS

2018 NC Administrative Code and Policies Revised 6/15/2020

ACCESSIBLE DWELLING UNITS (SECTION 1107)

2018 NC Administrative Code and Policies Revised 6/15/2020

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

CONTACT: ARCHITECTURAL: Little Diversified Arch. Cons. Charlotte Hagen, 16215

2018 NC BUILDING CODE: New Building Addition Renovation

2018 NC EXISTING BUILDING CODE: EXISTING: Prescriptive Repair Chapter 14

CONSTRUCTED: (date) RENOVATED: (date)

BASIC BUILDING DATA Construction Type: I-A I-B I-C I-D I-E I-F I-G I-H I-I I-J I-K I-L I-M I-N I-O I-P I-Q I-R I-S I-T I-U I-V I-W I-X I-Y I-Z

2018 NC Administrative Code and Policies Revised 6/15/2020

Gross Building Area Table

ALLOWABLE AREA

Primary Occupancy Classification: Assembly Business Educational Factory Hazardous Institutional Mercantile Residential Storage Utility and Miscellaneous

Actual Area of Occupancy A + Actual Area of Occupancy B ≤ Allowable Area of Occupancy A + Allowable Area of Occupancy B ≤ 1.00

2018 NC Administrative Code and Policies Revised 6/15/2020

STORY NO. DESCRIPTION AND USE (A) (B) (C) (D)

Frontage area increases from Section 506.3 are computed thus: a. Perimeter which fronts a public way or open space having 20 feet minimum width = (F) b. Total Building Footprint = (F) c. Ratio (F/P) = (F/P) d. W = Minimum width of public way = (W) e. Percent of frontage increase I = 100[(F/P - 0.25) x W/30 - (W)]

ALLOWABLE HEIGHT

ALLOWABLE HEIGHT

Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4. The maximum height of air traffic control towers must comply with Table 412.3.1. The maximum height of open parking garages must comply with Table 406.5.4.

2018 NC Administrative Code and Policies Revised 6/15/2020

2018 NC Administrative Code and Policies Revised 6/15/2020

2018 NC Administrative Code and Policies Revised 6/15/2020

2018 NC Administrative Code and Policies Revised 6/15/2020

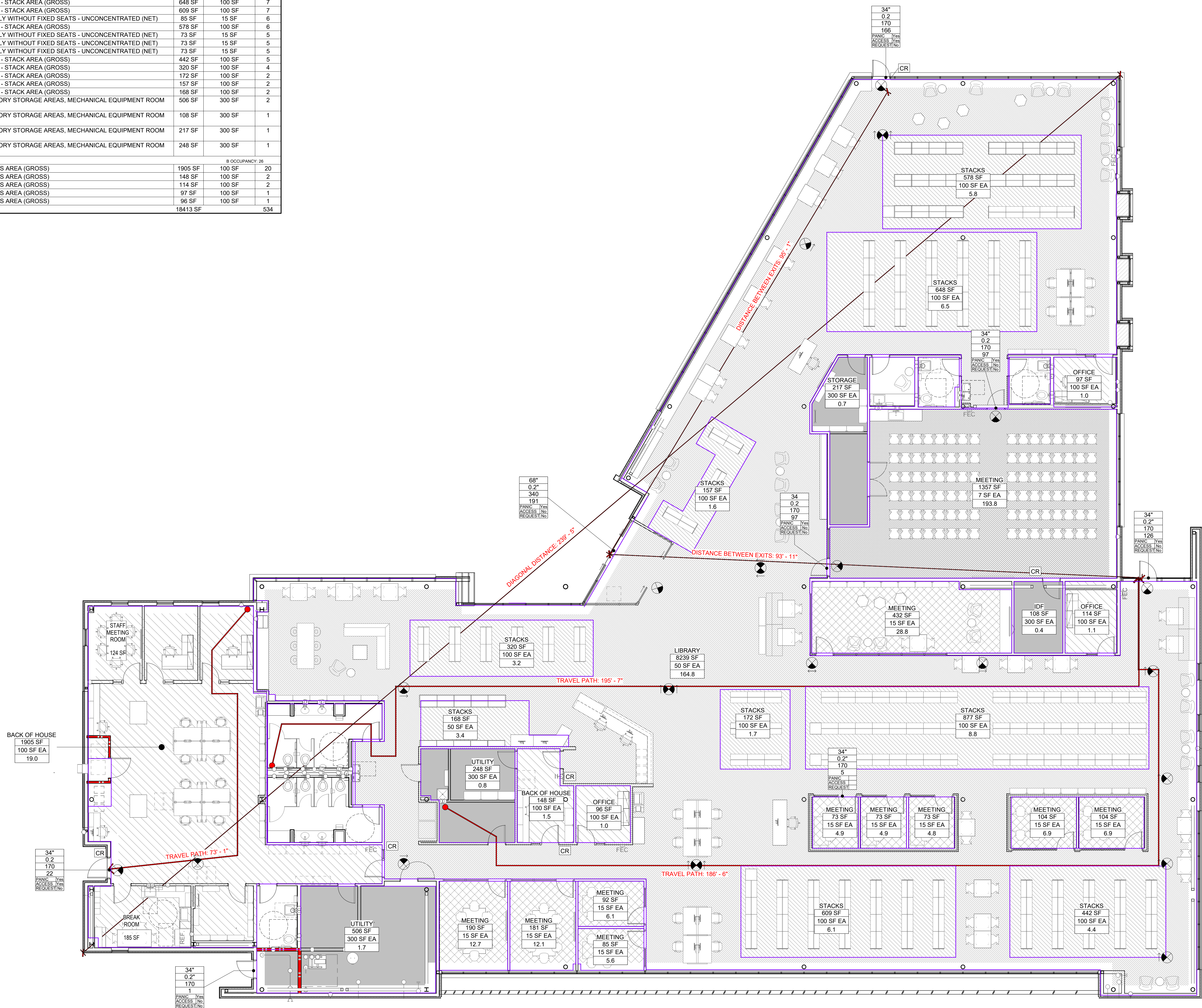
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SEE ELECTRICAL DRAWINGS SEE STRUCTURAL DRAWINGS SEE MECHANICAL DRAWINGS

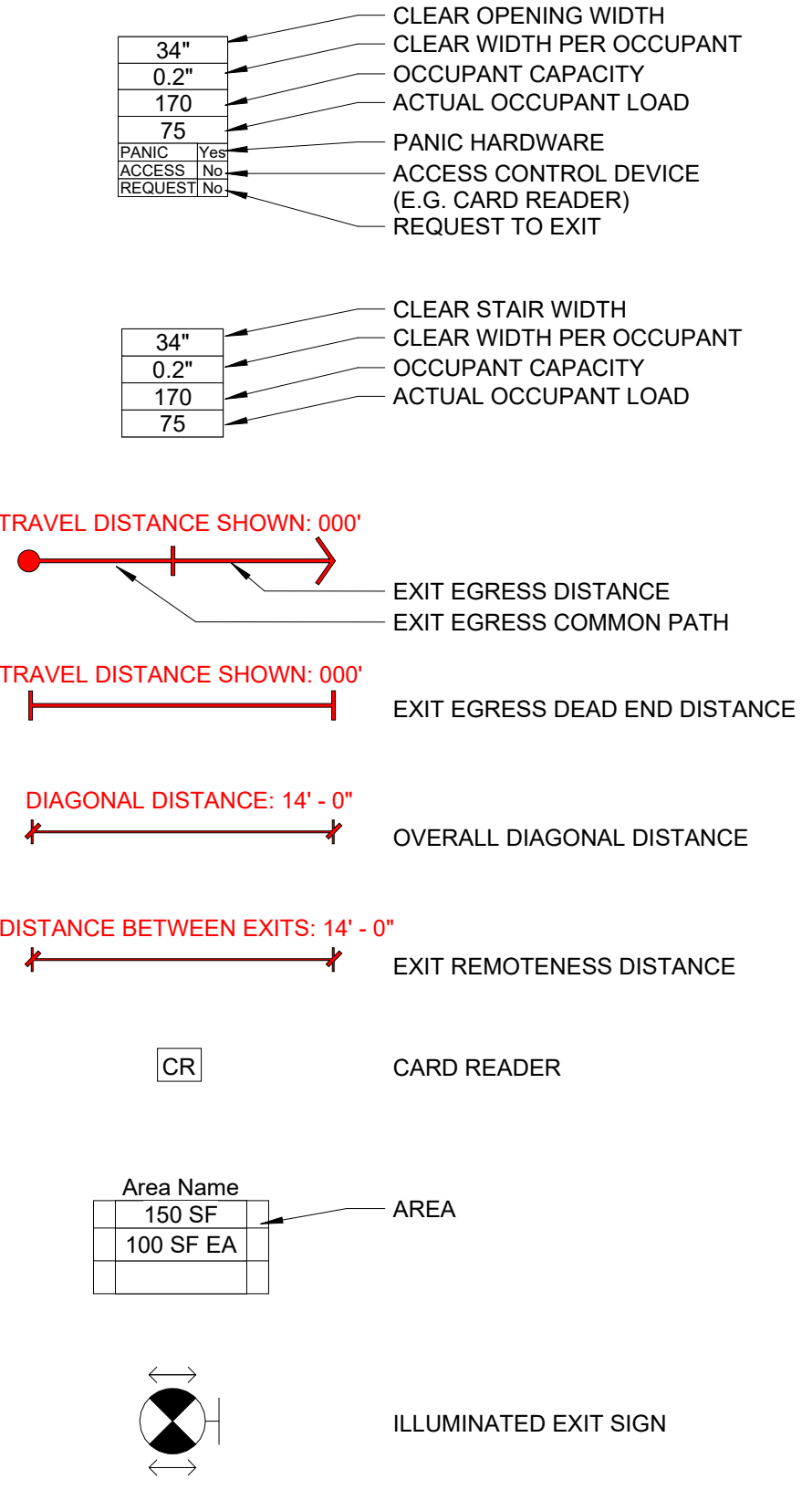
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OCCUPANT LOAD					
OCC.CLASS.	DESCRIPTION	FUNCTION (USE) OF SPACE	AREA	PER OCCUPANT	LOAD
A3 OCCUPANCY: 507					
A-3	MEETING	ASSEMBLY WITHOUT FIXED SEATS - CONCENTRATED (NET)	1357 SF	7 SF	194
A-3	LIBRARY	LIBRARY - READING ROOM (NET)	8239 SF	50 SF	165
A-3	MEETING	ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED (NET)	432 SF	15 SF	29
A-3	MEETING	ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED (NET)	181 SF	15 SF	13
A-3	MEETING	ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED (NET)	190 SF	15 SF	13
A-3	STACKS	LIBRARY - STACK AREA (GROSS)	877 SF	100 SF	9
A-3	MEETING	ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED (NET)	92 SF	15 SF	7
A-3	MEETING	ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED (NET)	104 SF	15 SF	7
A-3	MEETING	ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED (NET)	104 SF	15 SF	7
A-3	STACKS	LIBRARY - STACK AREA (GROSS)	648 SF	100 SF	7
A-3	STACKS	LIBRARY - STACK AREA (GROSS)	609 SF	100 SF	7
A-3	MEETING	ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED (NET)	85 SF	15 SF	6
A-3	STACKS	LIBRARY - STACK AREA (GROSS)	578 SF	100 SF	6
A-3	MEETING	ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED (NET)	73 SF	15 SF	5
A-3	MEETING	ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED (NET)	73 SF	15 SF	5
A-3	MEETING	ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED (NET)	73 SF	15 SF	5
A-3	STACKS	LIBRARY - STACK AREA (GROSS)	442 SF	100 SF	5
A-3	STACKS	LIBRARY - STACK AREA (GROSS)	320 SF	100 SF	4
A-3	STACKS	LIBRARY - STACK AREA (GROSS)	172 SF	100 SF	2
A-3	STACKS	LIBRARY - STACK AREA (GROSS)	157 SF	100 SF	2
A-3	STACKS	LIBRARY - STACK AREA (GROSS)	168 SF	100 SF	2
A-3	UTILITY	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM (GROSS)	506 SF	300 SF	2
A-3	IDF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM (GROSS)	108 SF	300 SF	1
A-3	STORAGE	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM (GROSS)	217 SF	300 SF	1
A-3	UTILITY	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM (GROSS)	248 SF	300 SF	1
B OCCUPANCY: 20					
B	BACK OF HOUSE	BUSINESS AREA (GROSS)	1905 SF	100 SF	20
B	BACK OF HOUSE	BUSINESS AREA (GROSS)	148 SF	100 SF	2
B	OFFICE	BUSINESS AREA (GROSS)	114 SF	100 SF	2
B	OFFICE	BUSINESS AREA (GROSS)	97 SF	100 SF	1
B	OFFICE	BUSINESS AREA (GROSS)	98 SF	100 SF	1
OCCUPANT LOAD TOTAL			18413 SF		534

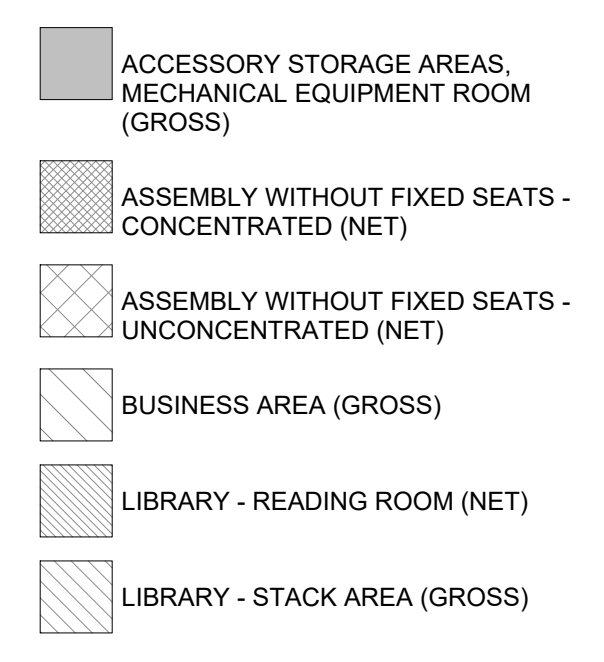
MEANS OF EGRESS SIZING						
OCCUPANT LOAD	EGRESS CAPACITY FACTOR	EXIT WIDTHS			NUMBER OF EXITS	
		REQUIRED	DOORS	PROVIDED	REQUIRED	PROVIDED
534	0.2	106.6		170.00"	3	4



LIFE SAFETY SYMBOLS



FUNCTION OF SPACE LEGEND



LITTLE
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ISSUE FOR: BID SET

ISSUE DATE: 03.28.2024

REVISIONS NO.	REASON	DATE

PROJECT TEAM:
PRINCIPAL IN CHARGE: Jerry Guerrier, AIA
PROJECT MANAGER: Charlotte Hagen, AIA
DESIGN TEAM: Designer

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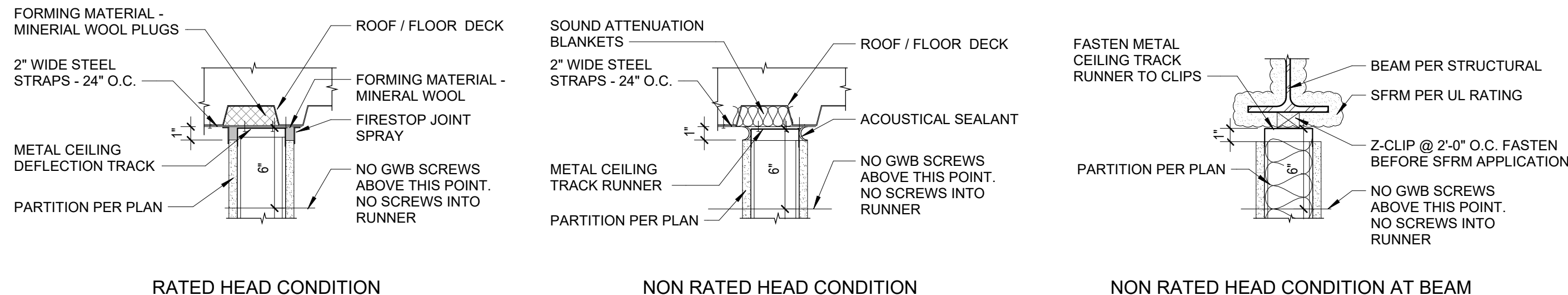
PROJECT NO.: 514.18349.00
SHEET TITLE: LIFE SAFETY PLAN

SHEET NUMBER: G100

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1A LIFE SAFETY PLAN - LEVEL 01
G100 1/8" = 1'-0"

GWB HEAD CONDITIONS



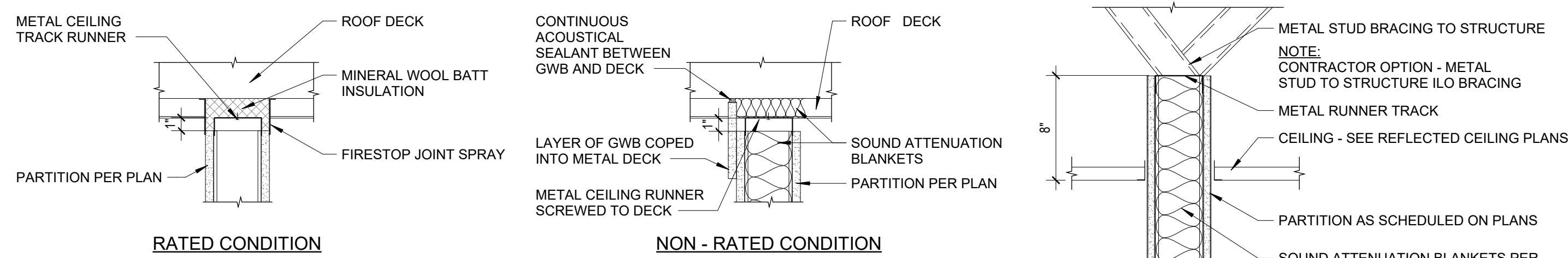
RATED HEAD CONDITION

NON RATED HEAD CONDITION

NON RATED HEAD CONDITION AT BEAM

HEAD - GWB - PARALLEL TO DECKING

1 1/2" = 1'-0"

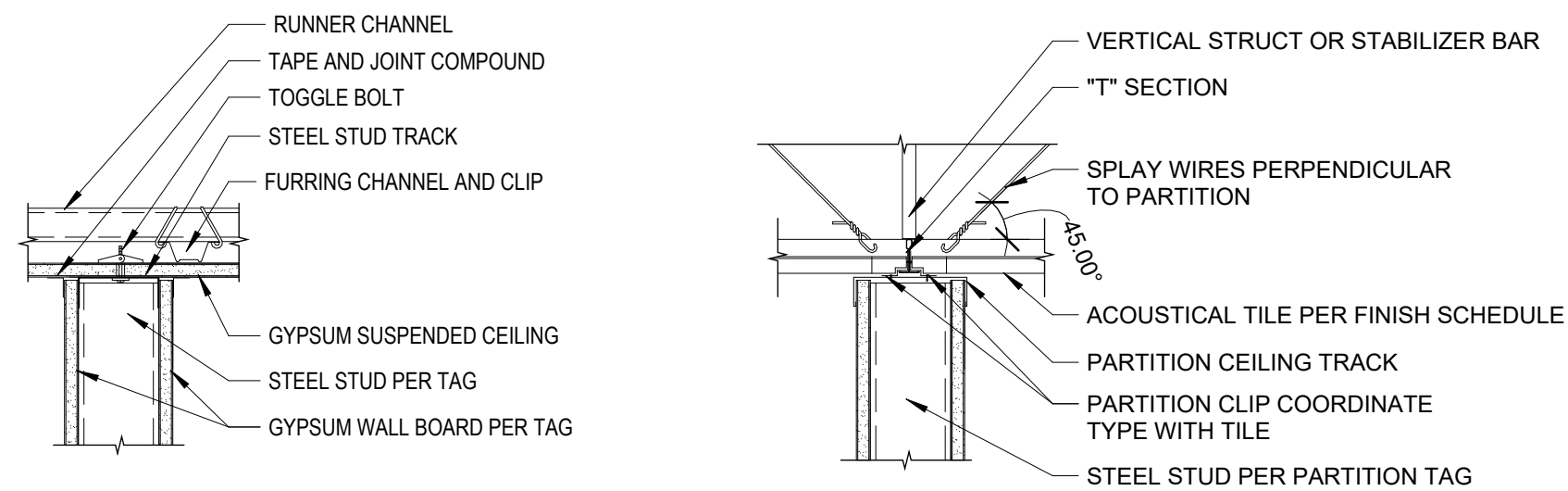


RATED CONDITION

NON - RATED CONDITION

HEAD - GWB - PERPENDICULAR TO DECK - COND. A

1 1/2" = 1'-0"



HEAD - GWB - COND. C

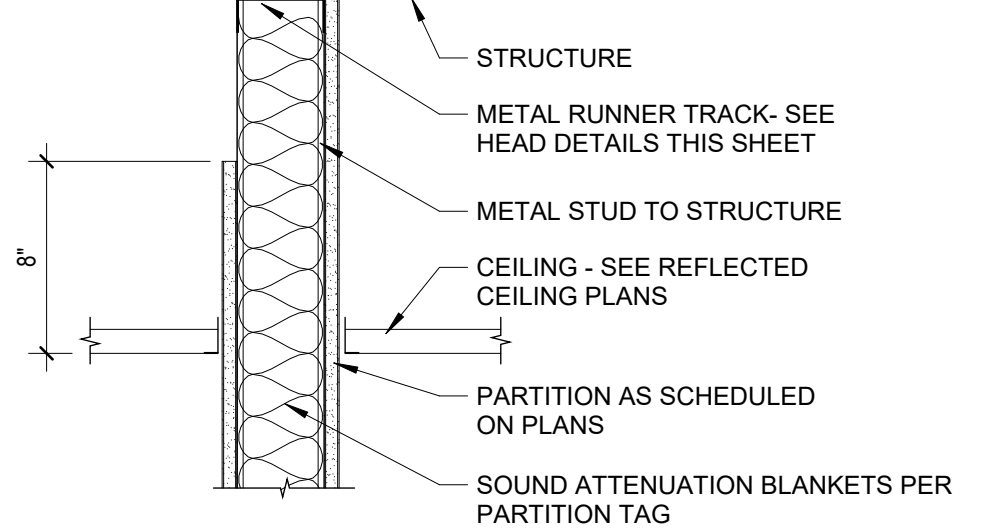
1 1/2" = 1'-0"

HEAD - GWB - COND. C (ACT)

1 1/2" = 1'-0"

HEAD - GWB - COND. B(1)

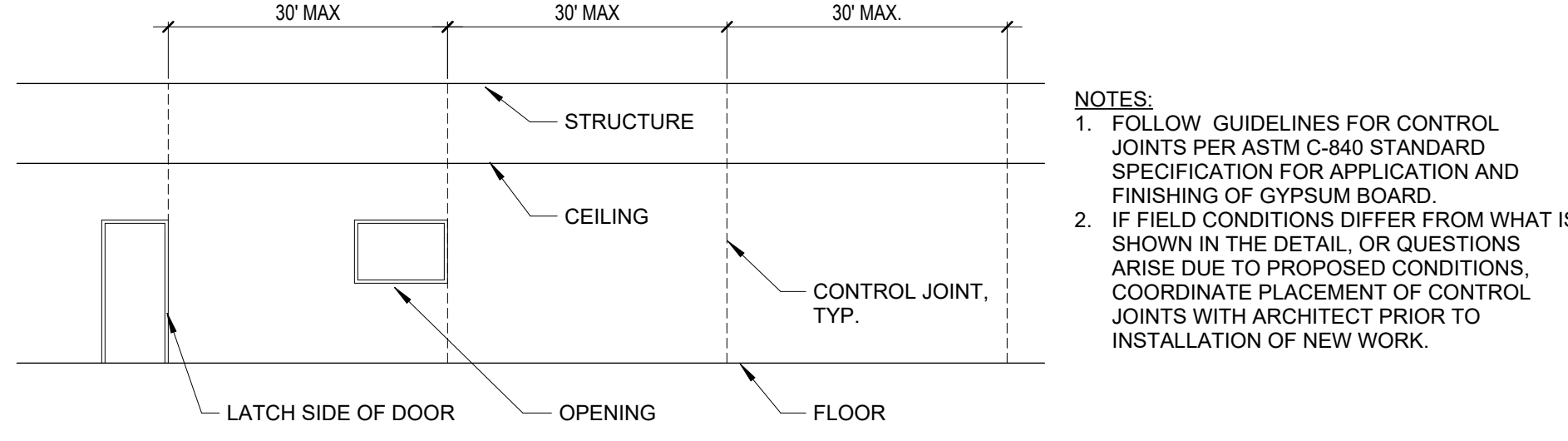
1 1/2" = 1'-0"



HEAD - GWB - COND. B(2)

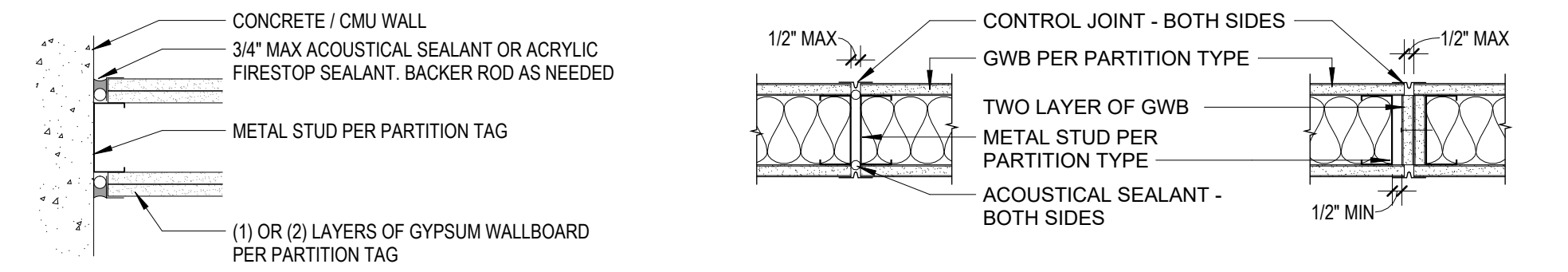
1 1/2" = 1'-0"

GWB CONTROL JOINTS



TYPICAL GWB CONTROL JOINT DIAGRAM - ELEVATION

NOT TO SCALE



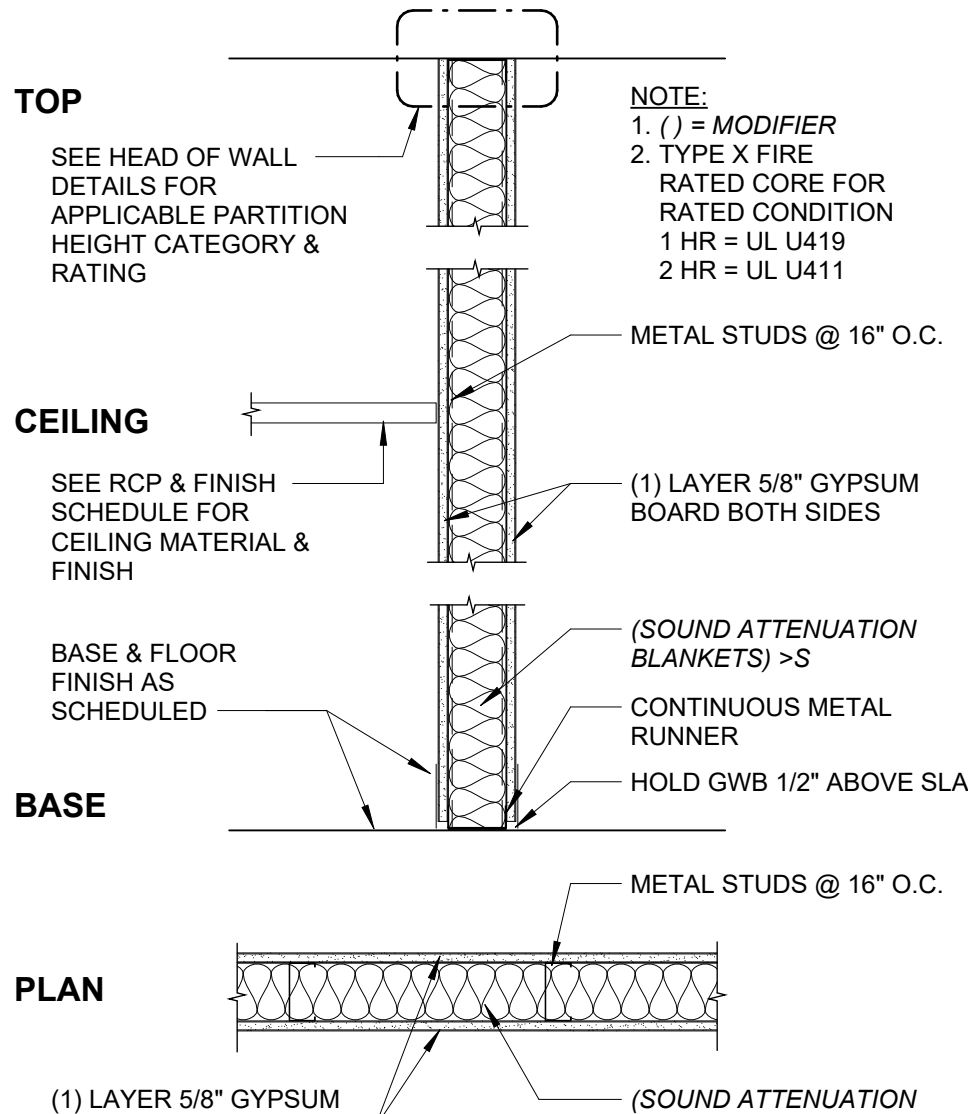
SEALANT JOINT - GWB-CONCRETE

1 1/2" = 1'-0"

CONTROL JOINT - GYPSUM

1 1/2" = 1'-0"

PARTITION TYPES



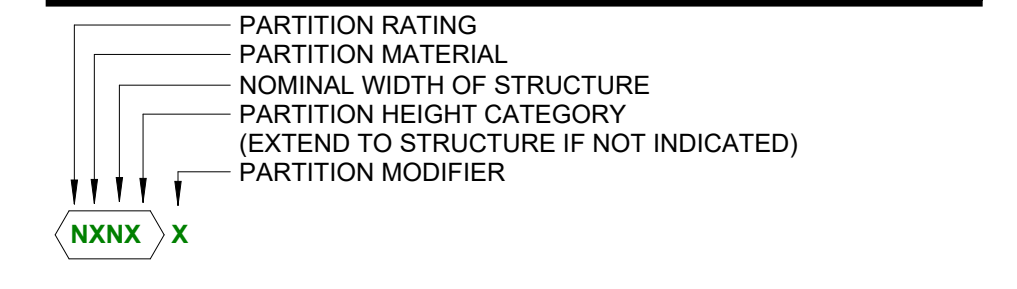
<xGxA> GWB - SLAB TO DECK

1" = 1'-0"

GENERAL NOTES - PARTITIONS

- A. FIRE- AND SMOKE-RATED PARTITION ASSEMBLIES CONTINUE TO STRUCTURE ABOVE UNLESS NOTED OTHERWISE, OR UNLESS OTHERWISE INDICATED BY THE CORRESPONDING FIRE RATED ASSEMBLY DIAGRAM.
- B. ALL MATERIALS USED IN RATED ASSEMBLIES SHALL CONFORM TO REFERENCED STANDARDS.
- C. FIRE SAFE ALL PENETRATIONS THROUGH FIRE RATED WALLS TO THE LEVEL OF PROTECTION REQUIRED BY THE WALL. FIRE SAFE AT PERIMETERS OF RATED WALLS WHERE VOIDS OCCUR, SUCH AS GROUT, FLUTES, PENETRATIONS THROUGH FIRE RATED WALLS TO PERIMETER EDGES AND PENETRATIONS AT SOUND-INSULATED WALLS TO ACHIEVE STC RATING AS INDICATED. OFFSET ELECTRICAL AND TELEPHONE OUTLETS 1" MIN (SEPARATE STUD CAVITIES).
- D. PROVIDE MOISTURE- AND MOLD-RESISTANT FIBERGLASS MAT GYPSUM BOARD AT WET WALLS IN TOILET ROOMS THAT RECEIVE CERAMIC TILE. ANET INTERIOR SIDE OF JANITORS CLOSETS AND MECHANICAL ROOMS.
- E. CROSS BRACE CHASE PARTITIONS FROM STUD TO STUD AT 4'-0" O.C. VERTICAL MINIMUM AND PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE STEEL STUD GAUGES AND/OR DIAGONAL BRACING AT TOPS OF WALLS PER MANUFACTURER'S RECOMMENDATIONS FOR WALL TYPE, HEIGHT, AND USE BASED ON L/240 LIMITING HEIGHTS.
- F. PROVIDE CONTINUOUS HORIZONTAL BRIDGING FOR WALLS EXTENDING 10' OR GREATER IN HEIGHT FROM FINISH FLOOR.
- G. PARTITIONS TYPES SHOW GENERAL REQUIREMENTS FOR PARTITIONS. REFER TO SPECIFICATIONS, MANUFACTURER'S PRODUCT TECHNICAL DATA, AND REQUIREMENTS OF APPLICABLE TESTING AGENCIES FOR SPECIFICS OF PARTITION CONSTRUCTION.
- H. WHERE NEW PARTITION ALIGNS WITH THE FACE OF AN EXISTING FURRED COLUMN OR PARTITION, REMOVE CORNER BEAD, TAPE, SPACKLE AND SAND JOINT BETWEEN NEW AND EXISTING GYPSUM BOARD. PARTITION TYPES CONVEY GENERAL REQUIREMENTS FOR PARTITIONS. REFER TO PRODUCT MANUFACTURER'S SPECIFICATIONS AND REQUIREMENTS OF APPLICABLE TESTING AGENCIES FOR SPECIFICS OF PARTITION CONSTRUCTION WHERE APPLICABLE.

PARTITION TAG KEY



- PARTITION RATING:**
 - 0xxx NON-RATED
 - 1xxx 1-HOUR RATED
 - 2xxx 2-HOUR RATED
 - 3xxx 3-HOUR RATED
 - 4xxx 4-HOUR RATED
- PARTITION CONSTRUCTION:**
 - xFxx FURRING
 - xGxx GYP / METAL STUD
 - xSxx SHAFT
 - xMxx MASONRY
 - xWxx GYP / JOOD STUD
 - xTxX TRANSPARENT / GLASS
 - xExx EXISTING
- PARTITION MODIFIER:**
 - A ABOVE ACCESS FLOOR
 - B BALLISTIC LEVEL RATED
 - C CHAINLINK / MESH FENCING
 - E EXTRA LAYER OF GYPSUM
 - G GROUT MASONRY SOLID
 - I IMPACT RESISTANT
 - K SMOKE RATED
 - M METAL PANEL
 - O MOVABLE PARTITION (OPERABLE)
 - R MOISTURE RESISTANT
 - S SOUND ATTENUATION BATTS
 - V VAPOR BARRIER
 - W WOOD FINISH (SEE FINISH SCHEDULE)
 - Z ACCENT WALL (SEE INTERIOR DETAILS)

- NOMINAL WIDTH OF STRUCTURE:** (SEE PARTITION STRUCTURE KEY BELOW)
 - xxxxA EXTEND TO STRUCTURE ABOVE
 - xxxxB TERMINATE ABOVE CEILING (1'-0" ABOVE CEILING HEIGHT) TYPICAL
 - xxxxC TERMINATE AT CEILING
 - xxxxP PARTIAL HEIGHT PARTITIONS

PARTITION STRUCTURE KEY

NON STRUCTURAL METAL FRAMING	CONCRETE MASONRY UNIT (CMU)
xG2x 1-5/8" METAL STUD	xM4x 4" CMU
xG3x 2-1/2" METAL STUD	xM6x 6" CMU
xG4x 3-5/8" METAL STUD	xM8x 8" CMU
xG6x 6" METAL STUD	xM12x 12" CMU
xG8x 8" METAL STUD	

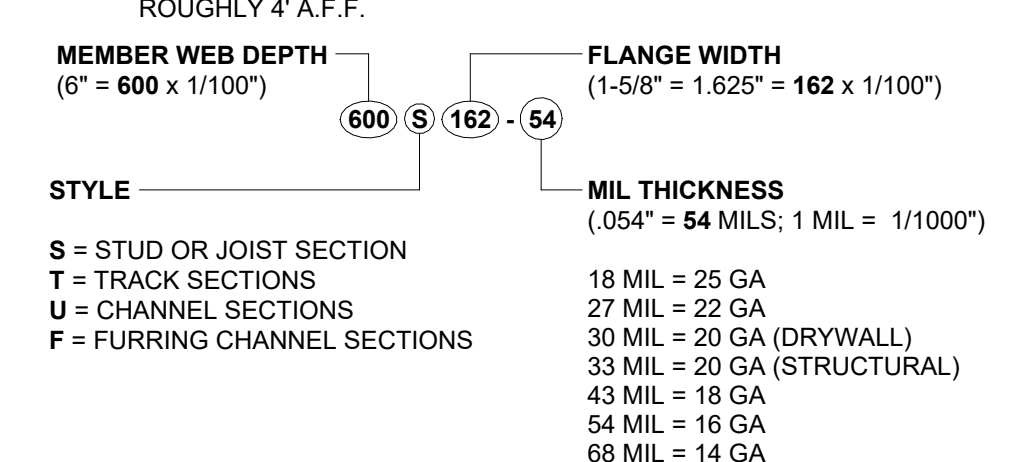
METAL FURRING CHANNELS	WOOD FRAMING
xF0x 1/2" FURRING CHANNEL	xW4x 2X4 WOOD FRAMING
xF1x 7/8" FURRING CHANNEL	xW6x 2X6 WOOD FRAMING
xF2x 1-1/2" FURRING CHANNEL	xW8x 2X8 WOOD FRAMING

- NOTE:** FOR SIZES ABOVE xF2x USE NON-STRUCTURAL METAL FRAMING ATTACHED TO SUBSTRATE
- NON STRUCTURAL SHAFT FRAMING**
 - xS2x 2-1/2" C-H STUD W/ 1" GYP SHAFT LINER
 - xS4x 4" C-H STUD W/ 1" GYP SHAFT LINER
 - xS6x 6" C-H STUD W/ 1" GYP SHAFT LINER

LIMITING HEIGHTS - STEEL STUDS

WALL HEIGHT	DEFLECTION LIMIT OF L/240		DEFLECTION LIMIT OF L/360	
	WITHOUT SHELVING	WITH SHELVING	WITHOUT SHELVING	WITH SHELVING
<10'	362S125-18 16" O.C.	362S125-18 16" O.C.	362S125-18 16" O.C.	362S125-18 16" O.C.
<12'	362S125-18 16" O.C.	362S125-33 16" O.C.	362S125-18 16" O.C.	362S125-33 16" O.C.
<14'	362S125-18 16" O.C.	362S125-33 16" O.C.	362S125-33 16" O.C.	362S125-33 16" O.C.
<16'	362S125-33 16" O.C.	362S125-33 16" O.C.	362S125-54 16" O.C.	362S125-54 16" O.C.
<18'	362S125-43 16" O.C.	362S125-43 16" O.C.	600S125-33 16" O.C.	600S125-33 16" O.C.
<20'	362S125-68 16" O.C.	362S125-68 16" O.C.	600S125-33 16" O.C.	600S125-33 16" O.C.

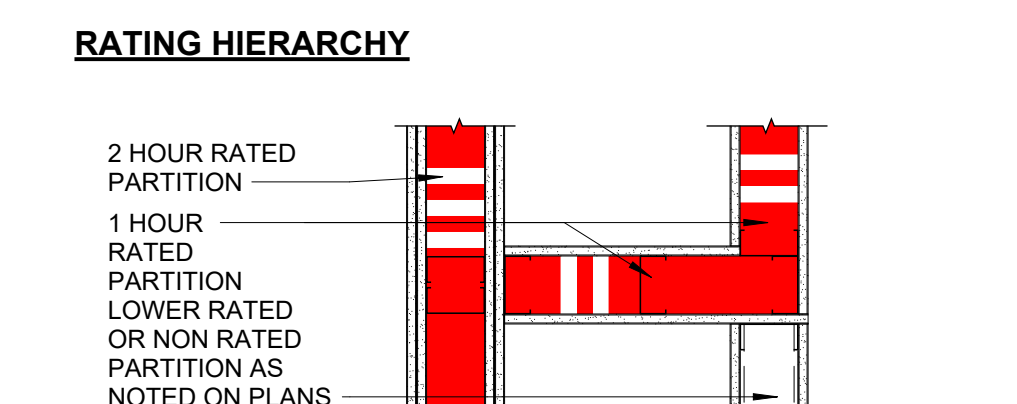
- NOTES:**
 - DESIGN LATERAL LOAD OF 5 PSF, AND NO VERTICAL LOAD (NON-LOAD-BEARING).
 - DEFLECTION LIMIT OF L/360 SHALL BE USED FOR BRITTLE WALL FINISHES, SUCH AS TILE, TERRAZZO, AND PLASTER. DEFLECTION LIMIT OF L/240 MAY BE USED FOR ALL OTHER CONDITIONS.
 - "WITH SHELVING" DESIGN FOR 16" SHELVING UNIT. LOAD OF 73 POUNDS PER LINEAR FOOT INCLUDING CONTENTS, CENTERED 8" FROM FACE OF WALL, FOR ONE ROW OF SHELVING ROUGHLY 4' A.F.F.



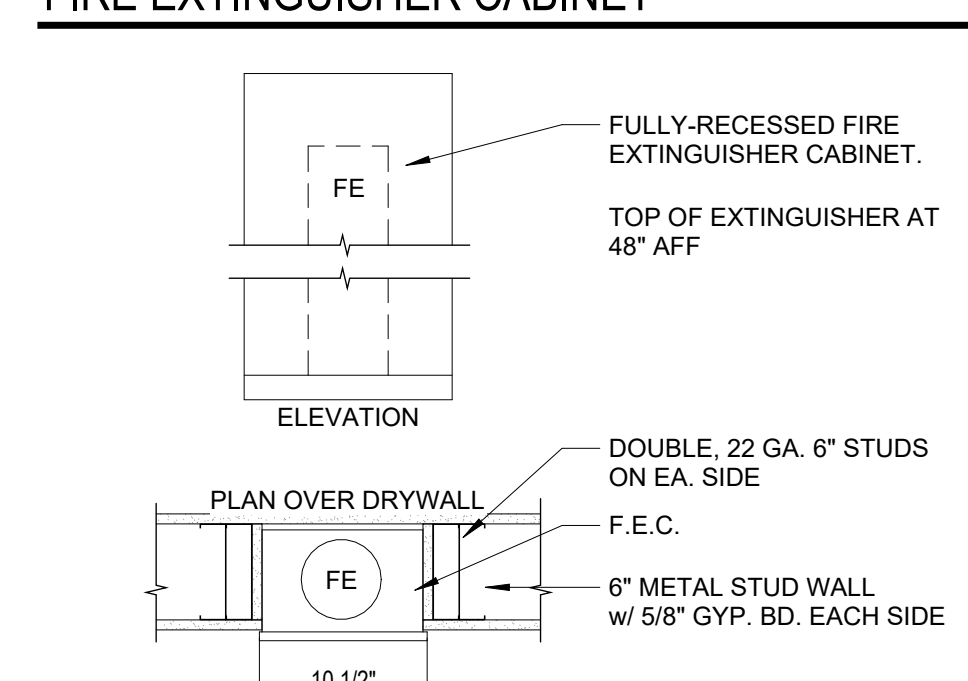
PARTITION HIERARCHY

- PARTITION TO MULLION**
 - WINDOW WALL
 - MULLION
 - GLASS
 - 1/2" CONTINUOUS CLOSED CELL NEOPRENE COMPRESSED FILLER
 - PROVIDE BRAKE METAL (COLOR TO MATCH WALLS)
 - CONTOUR GWB TO SILL BELOW AS REQUIRED
 - INTERIOR PARTITION AS SCHEDULED
- NOTE:** NO PHYSICAL OR MECHANICAL ATTACHMENT TO MULLION SHALL BE ALLOWED.

RATING HIERARCHY



FIRE EXTINGUISHER CABINET



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OVERSEER ARCHITECTURAL CONSULTING

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REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

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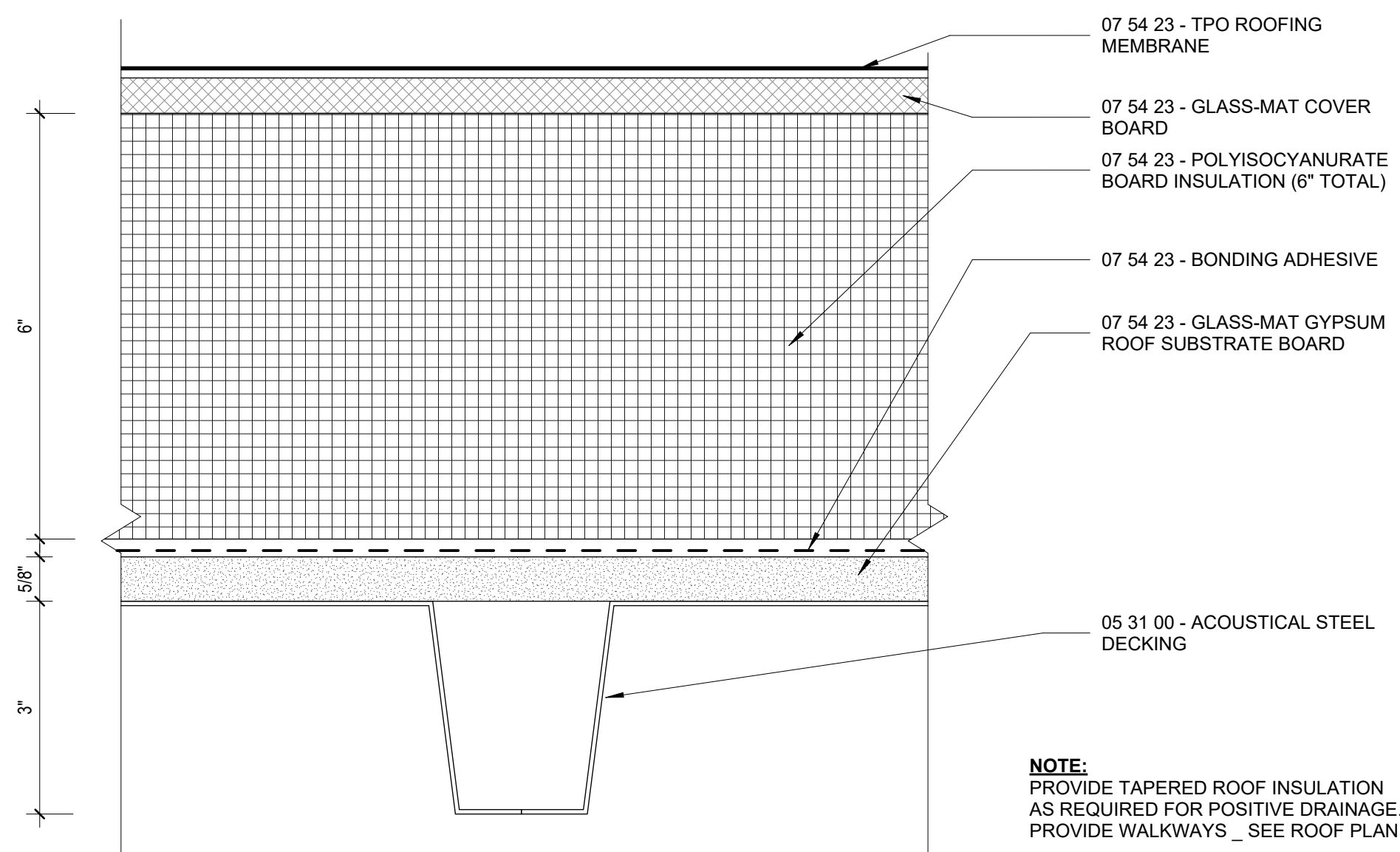
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

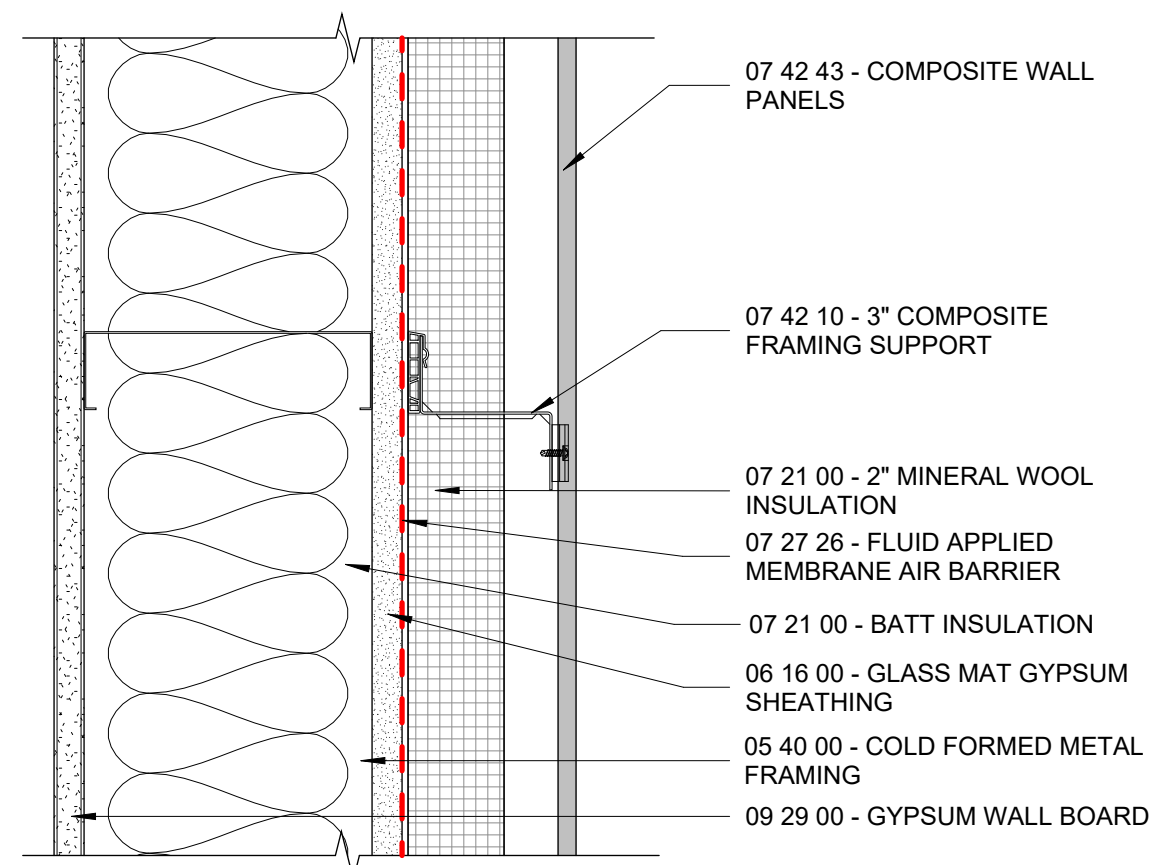
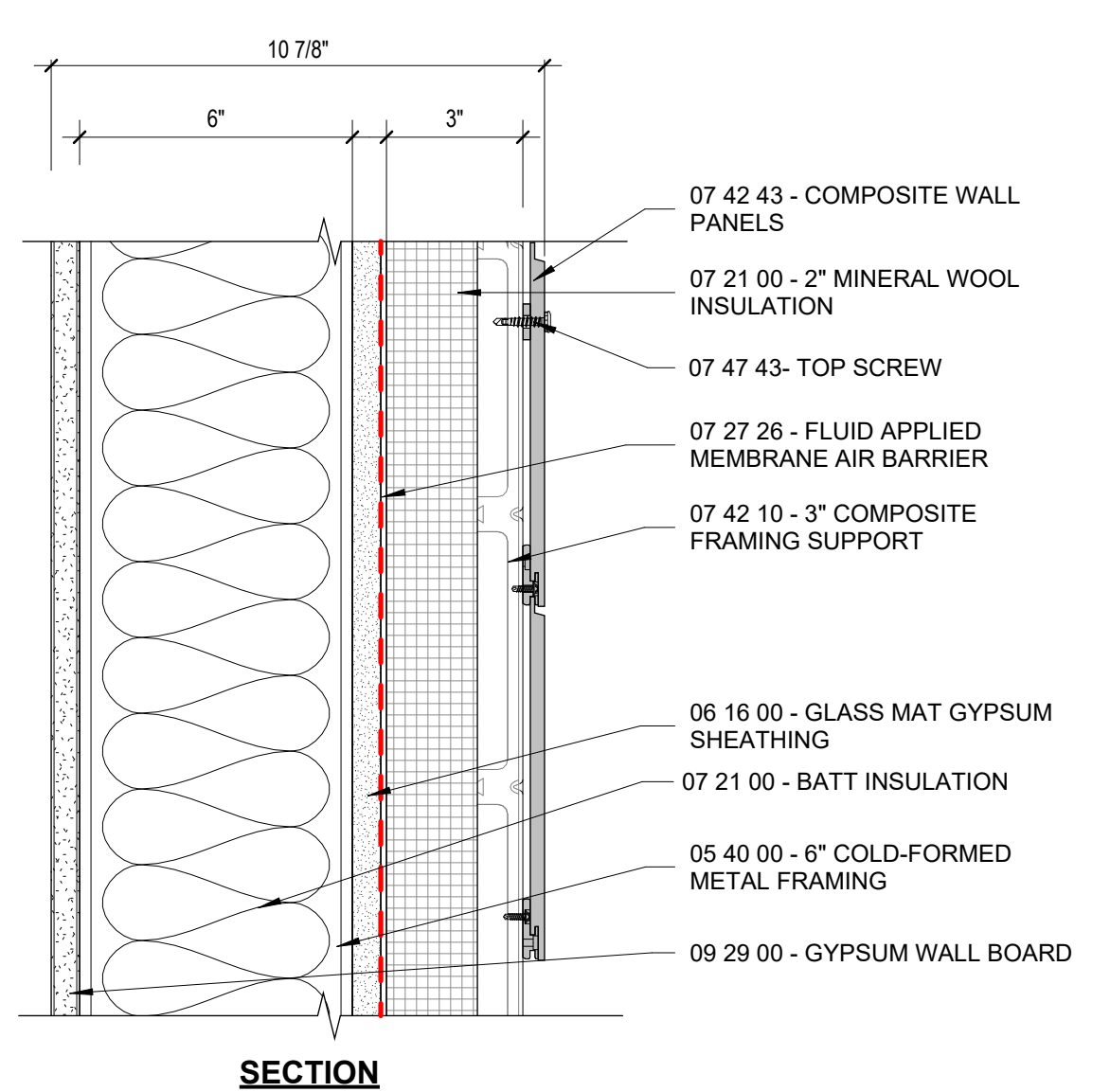
SHEET TITLE
WALL TYPES - INTERIOR PARTITIONS

SHEET NUMBER
A010

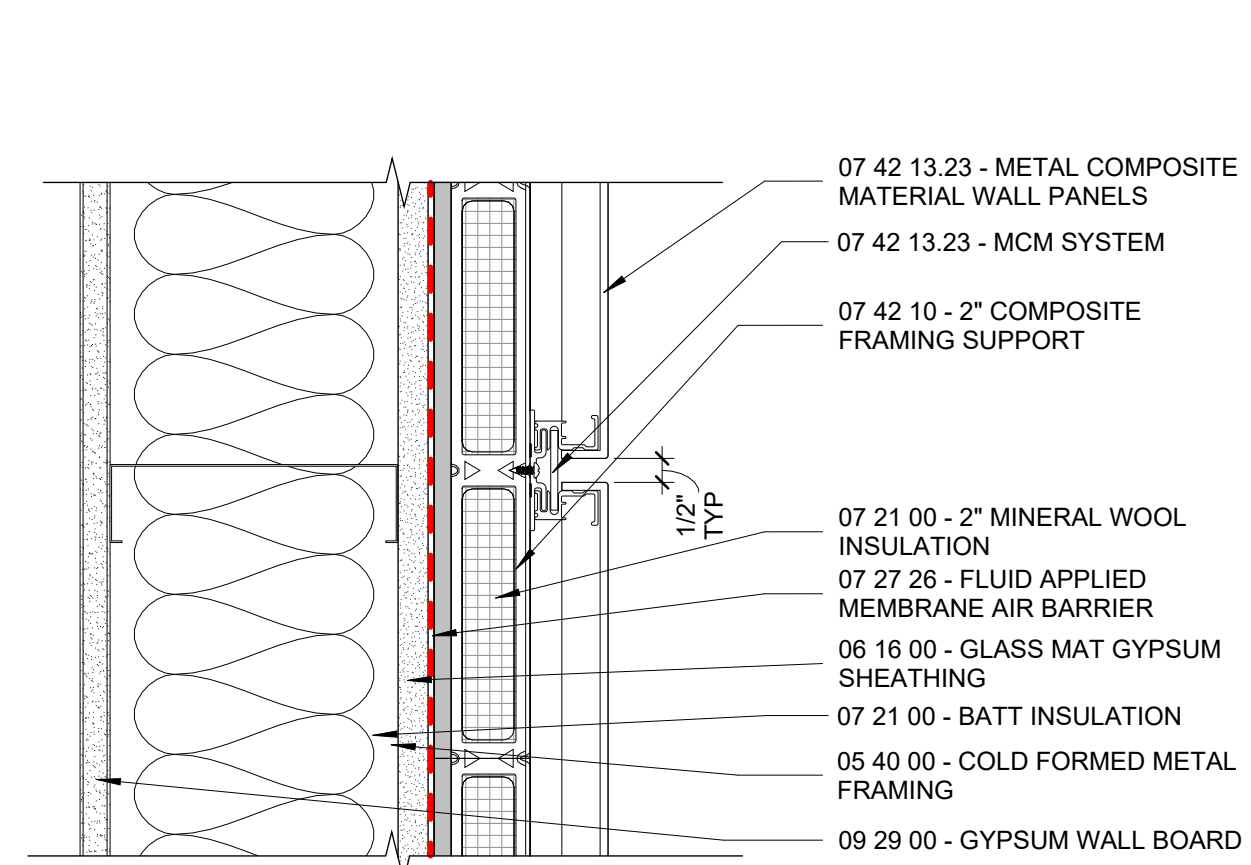
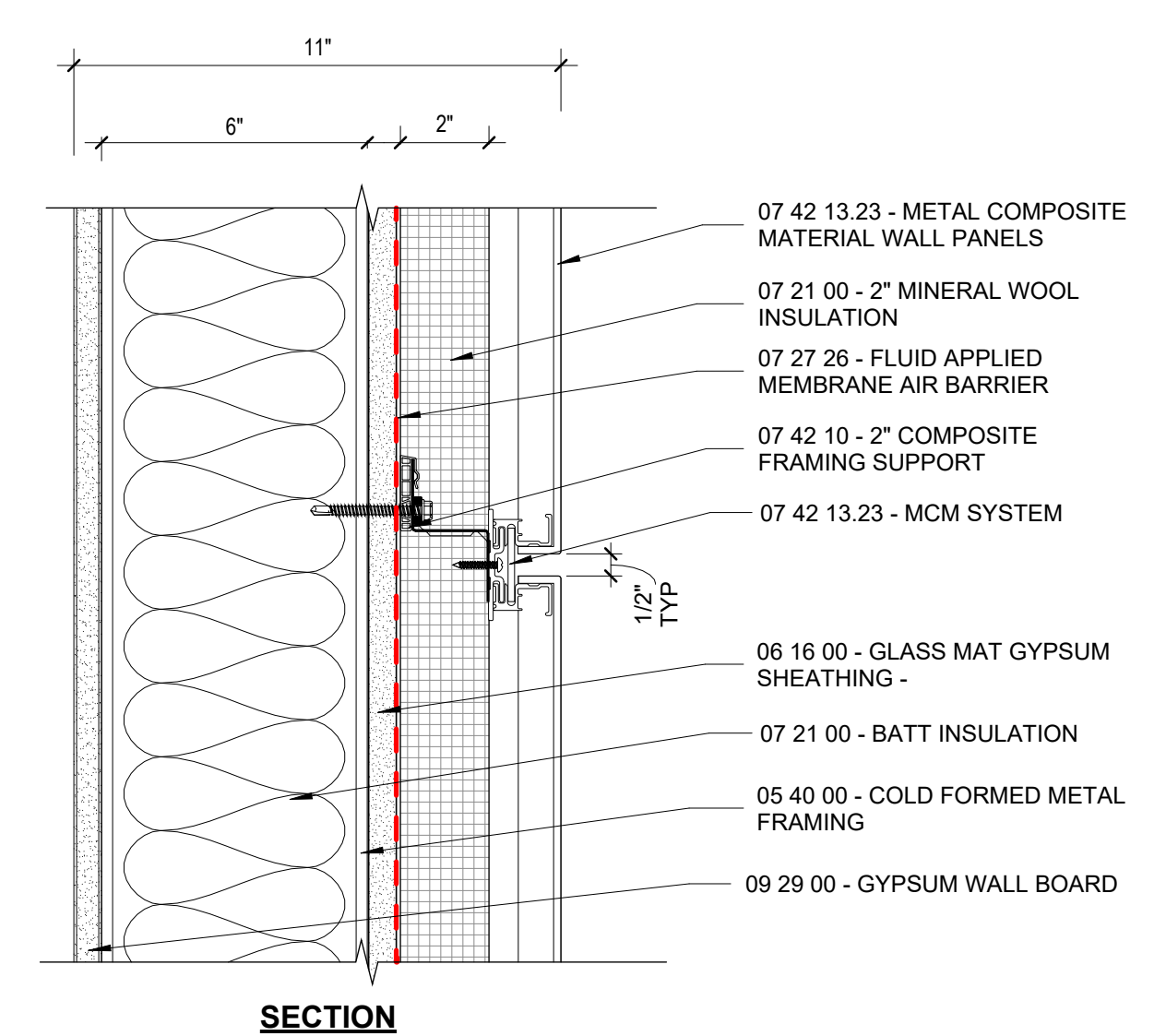
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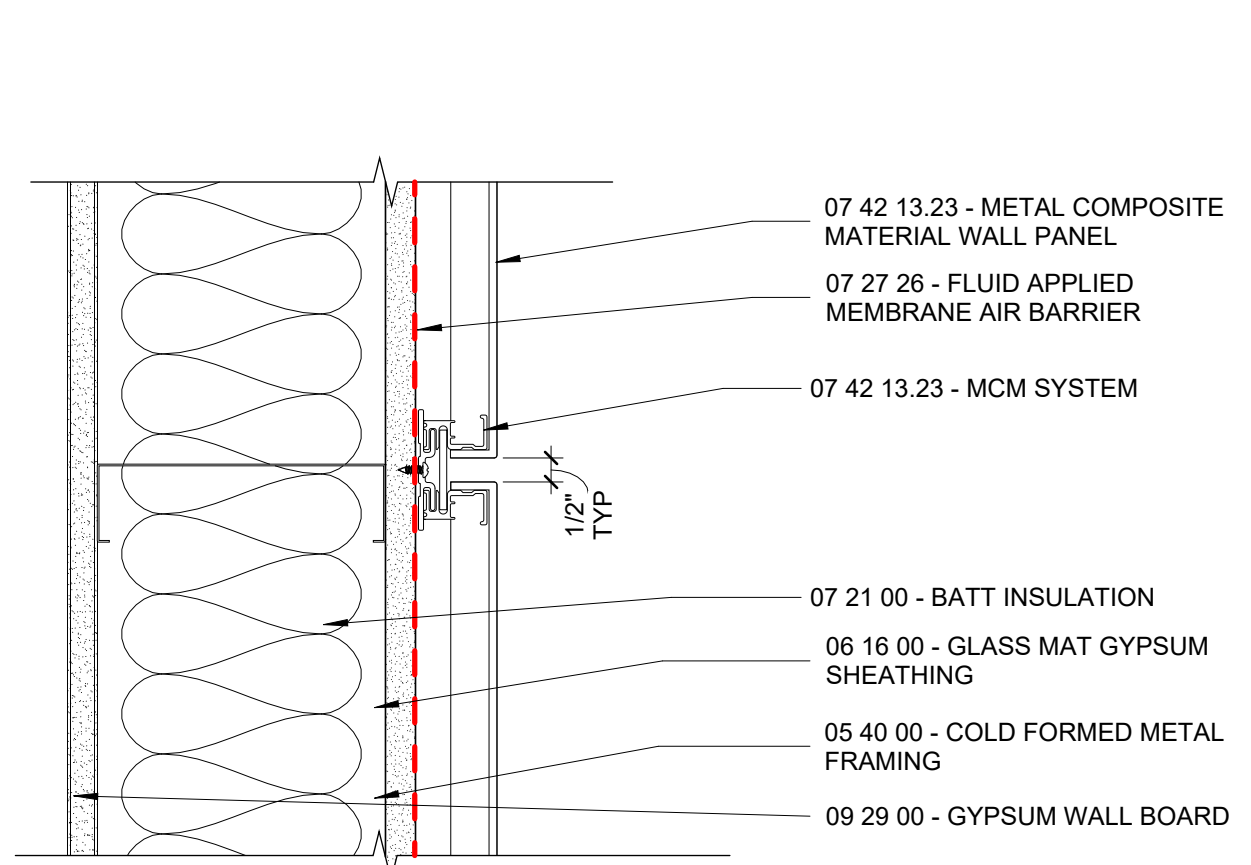
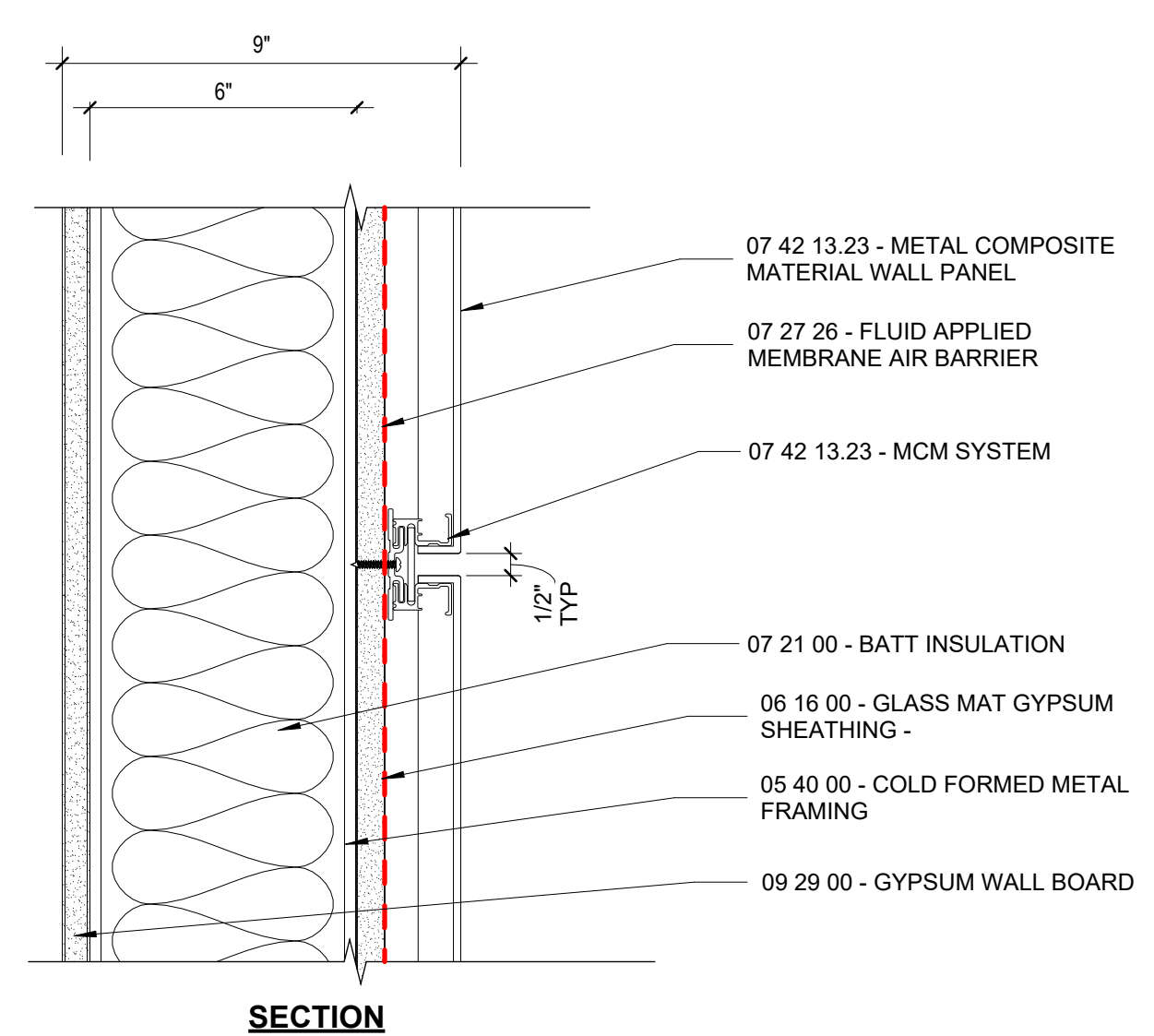
RS01	
Description of Assembly	Thermoplastic Polyolefin (TPO) Roofing Membrane, Cover Board, Insulation, Vapor Retarder, Substrate Board, Roof Deck
U-Value of Assembly	0.025
R-Value of Insulation	Rigid Insulation @ R-7.2 per inch



WS01	
Description of Assembly	High Pressure Laminated Rainscreen (HPL), Green Girt & Furring Channel Attachment, Mineral Wool CI, Air Barrier, Sheathing, Metal Framing w/ Cavity Insulation, Interior Finish
U-Value of Assembly	0.065
R-Value of Insulation	Cavity Batt Insulation @ R-25 / inch; Mineral Wool Board Insulation @ R-3.8 / inch

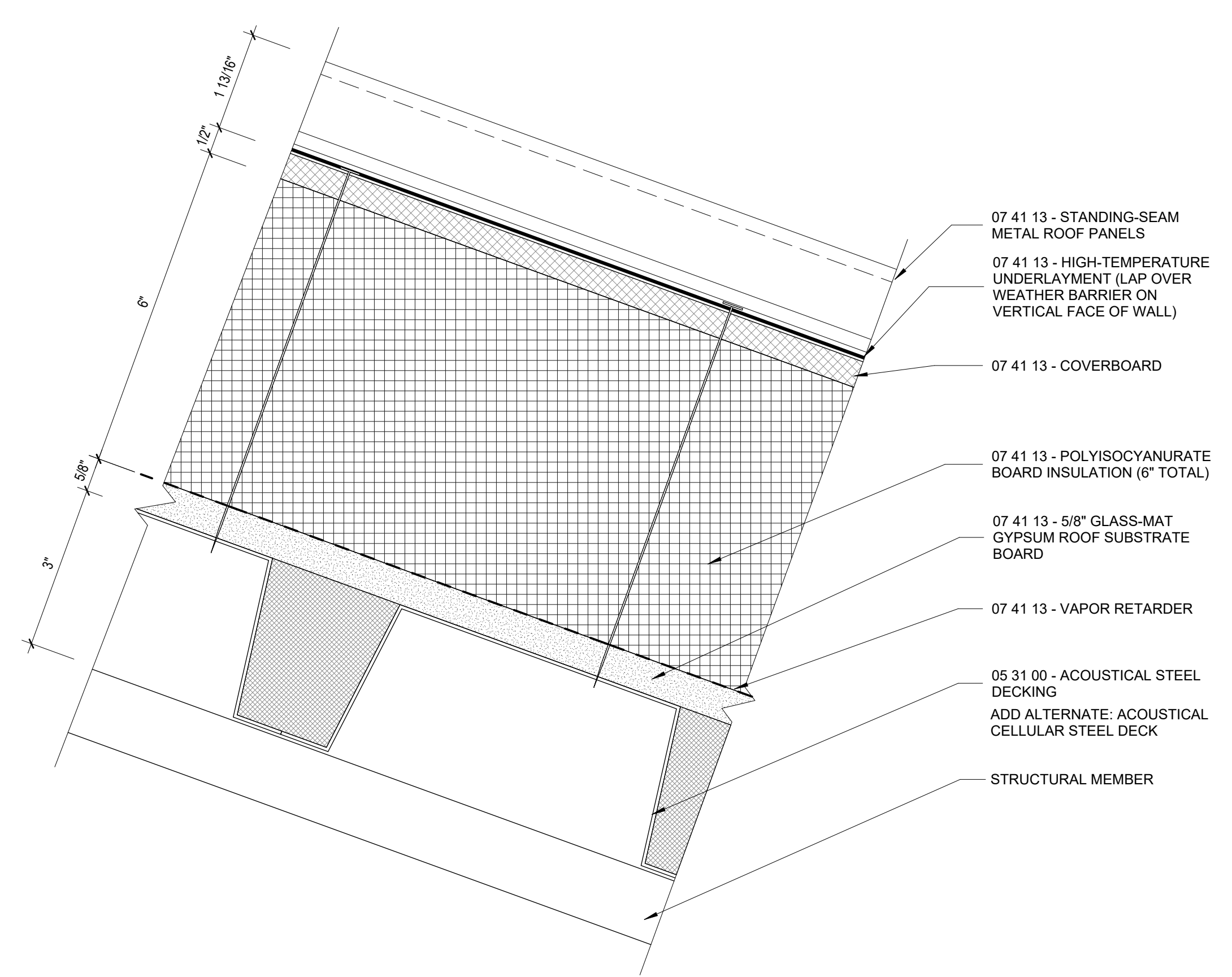


WS02	
Description of Assembly	Metal Composite Material (MCM) Rainscreen, Mineral Wool Insulation & Knight MFI System (Horizontal), Air Barrier, Sheathing, Metal Framing w/ Cavity Insulation
U-Value of Assembly	0.065
R-Value of Insulation	Cavity Batt Insulation @ R-25 / inch; Mineral Wool Board Insulation @ R-3.8 / inch

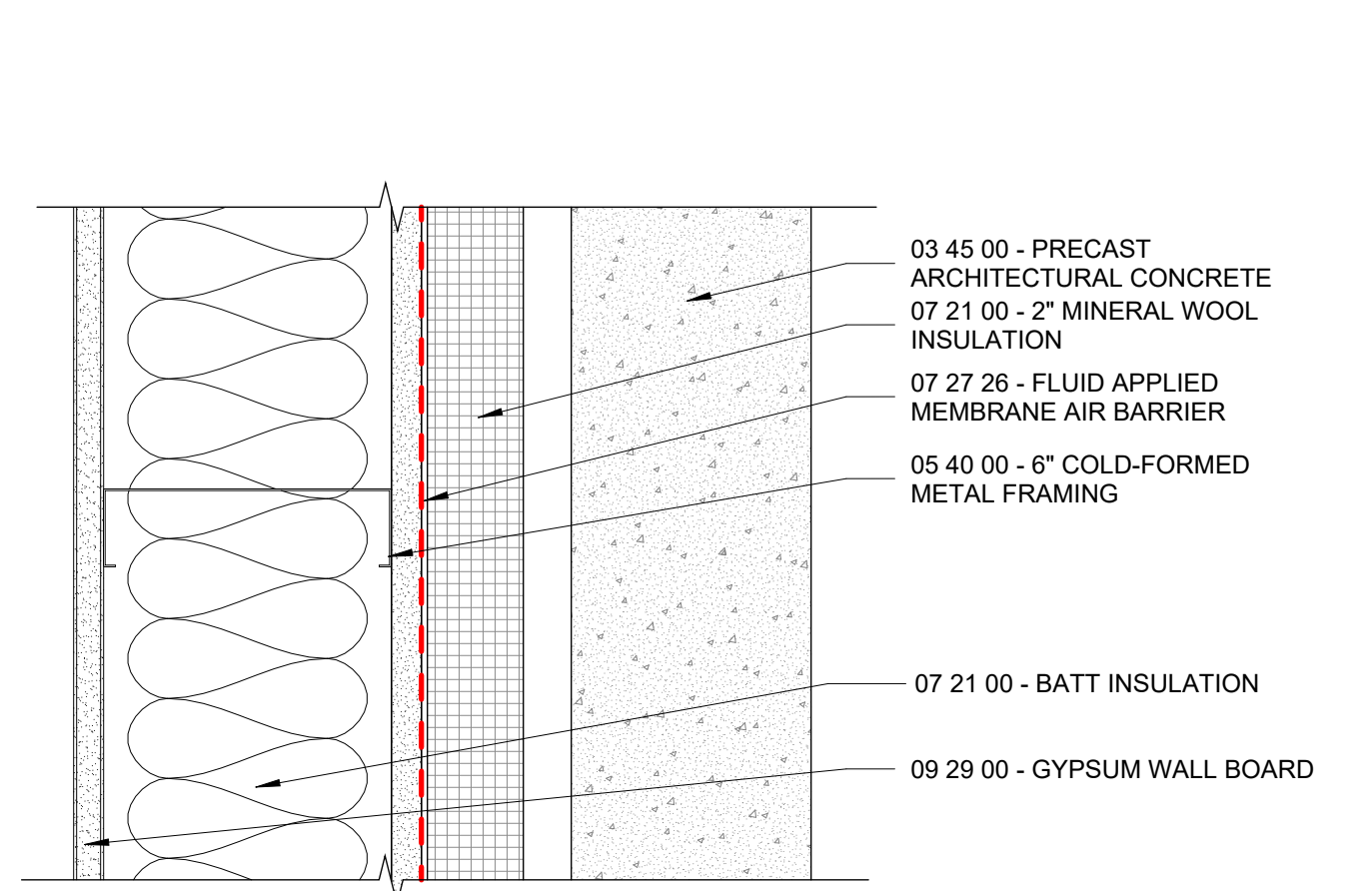
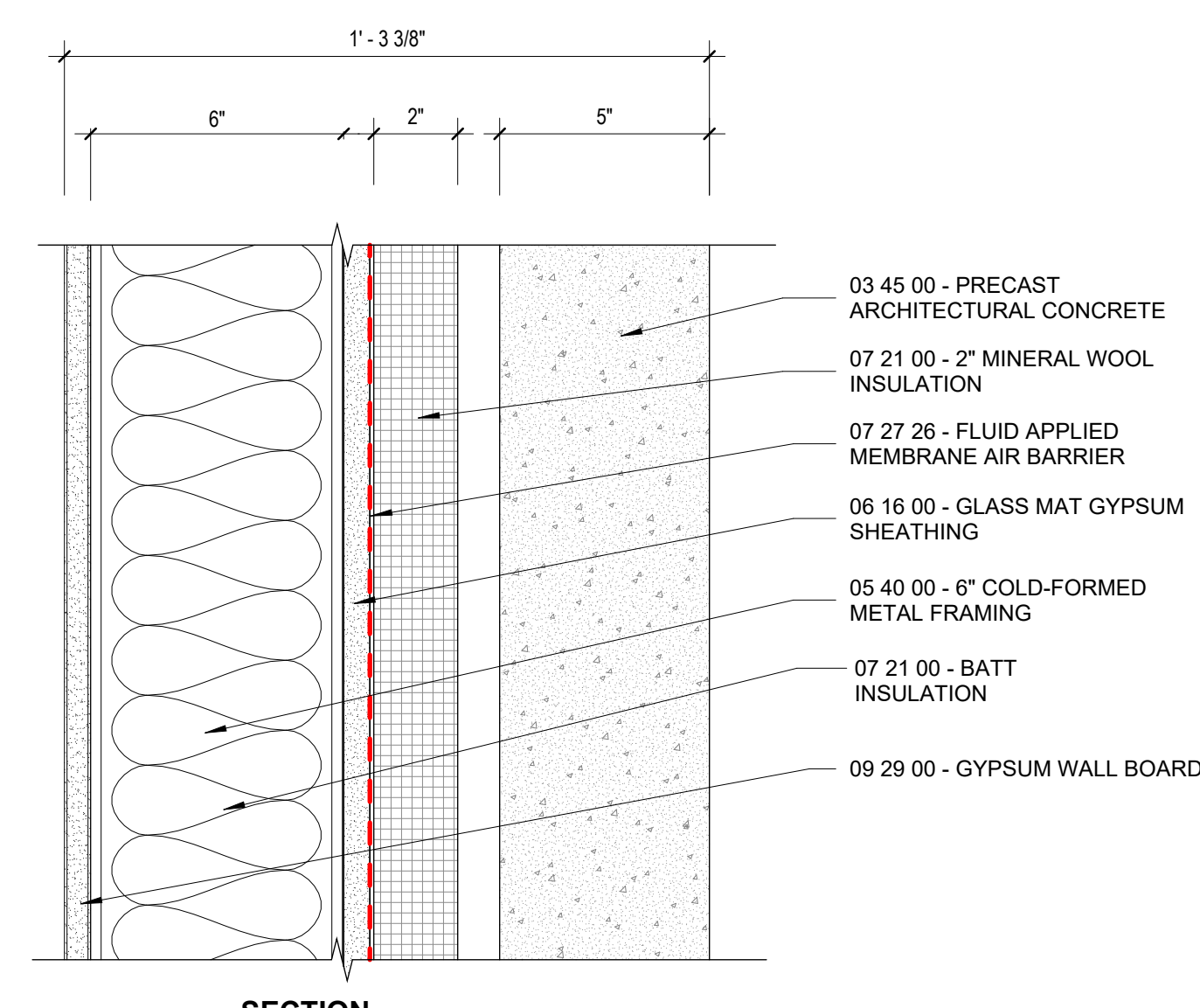


WS02A	
Description of Assembly	Metal Composite Material (MCM) Rainscreen, Air Barrier, Sheathing, Metal Framing w/ Cavity Insulation
U-Value of Assembly	0.065
R-Value of Insulation	Cavity Batt Insulation @ R-25 / inch

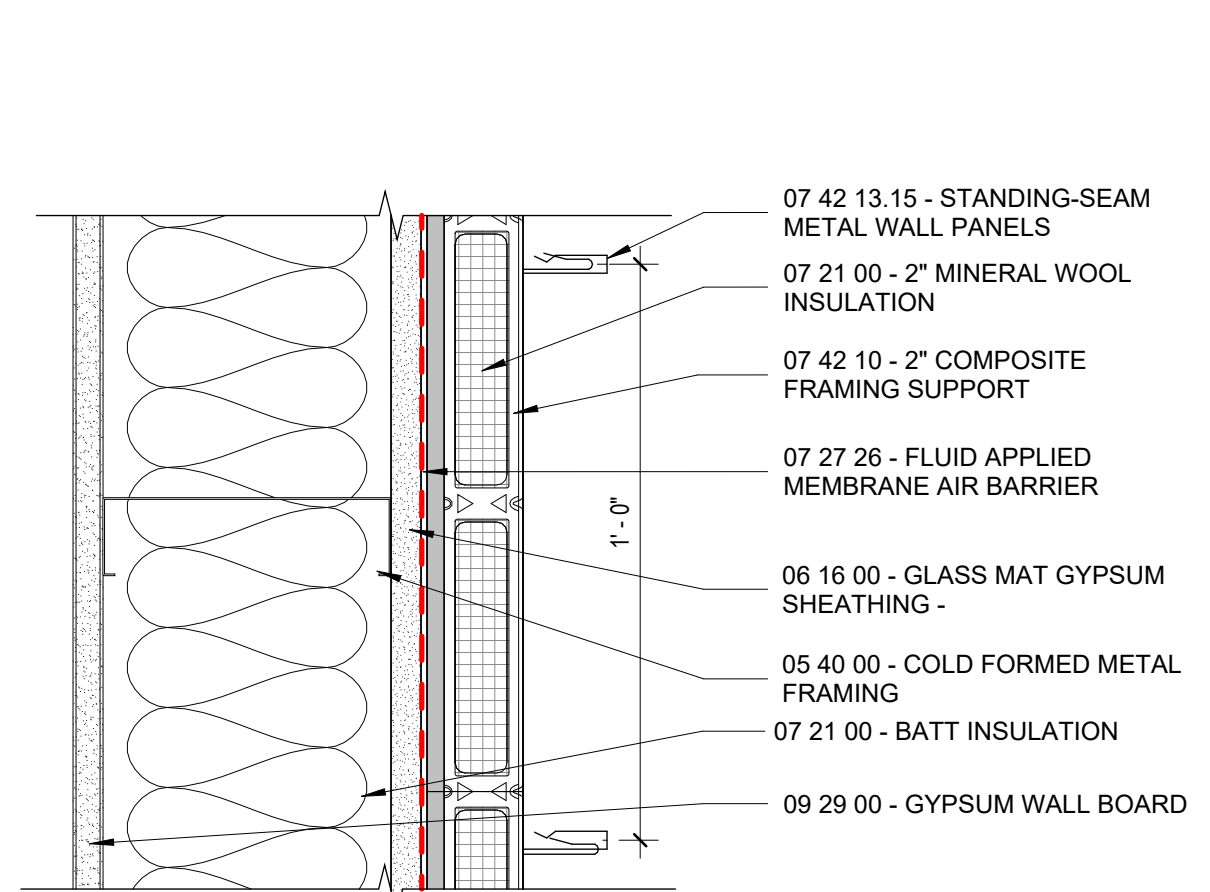
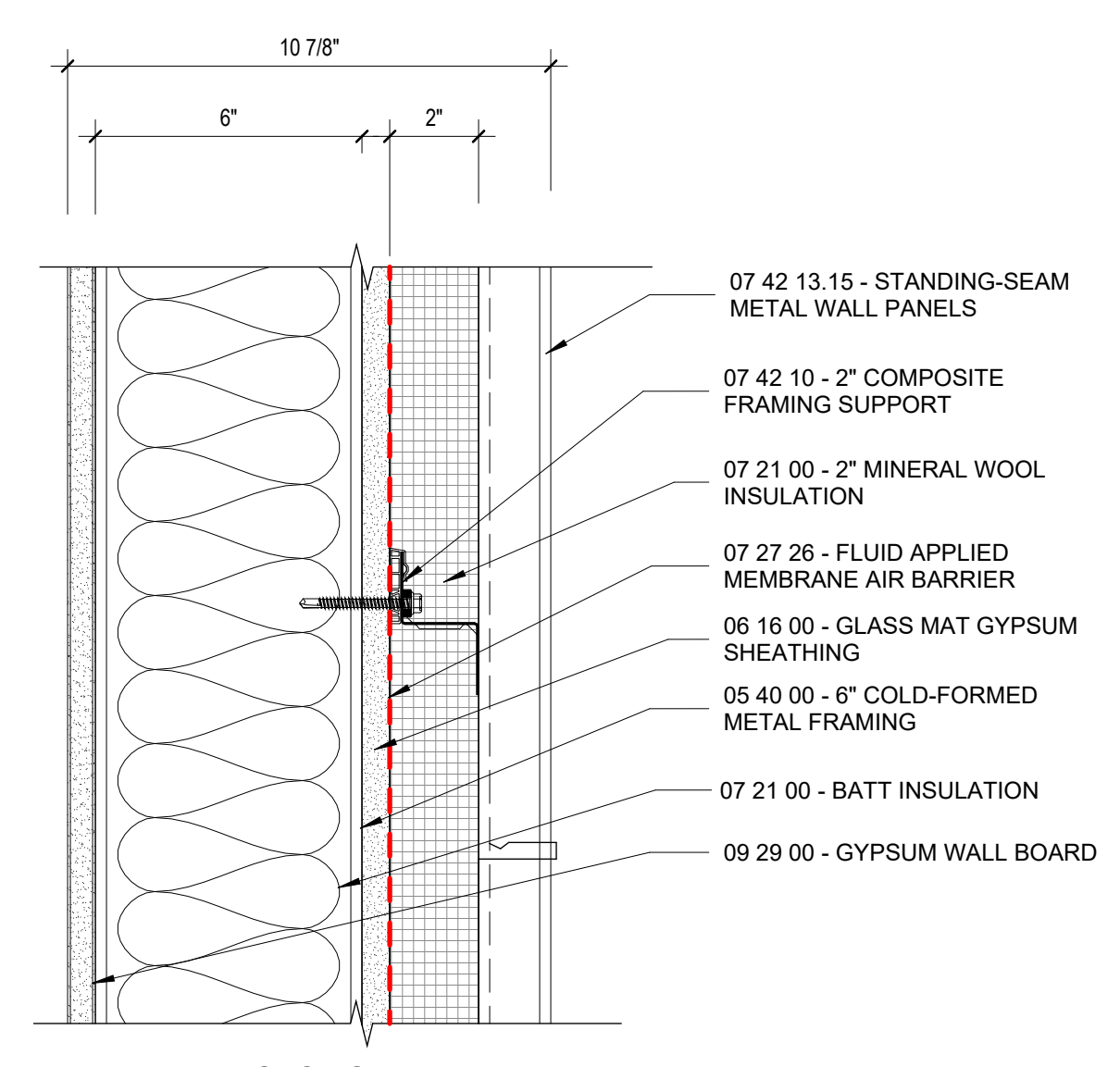
NOTE: THIS WALL TYPE OCCURS AT EDGE OF EXTERIOR CANOPY ONLY



RS02	
Description of Assembly	Standing Seam Metal (SMS) Roof Panel, Self-adhering High Temperature Underlayment, Continuous Zee Purlin, 6" Rigid Insulation, Corrugated Metal Deck
U-Value of Assembly	0.072
R-Value of Insulation	Rigid Insulation @ R-7.2 per inch



WS03	
Description of Assembly	Pre-cast Concrete Panel, Mineral Wool CI, Air Barrier, Sheathing, Metal Framing w/ Cavity Insulation, Interior Finish
U-Value of Assembly	0.065
R-Value of Insulation	Cavity Batt Insulation @ R-25 / inch; Mineral Wool Board Insulation @ R-3.8 / inch



WS04	
Description of Assembly	Standing Seam Metal (SSM) Snap Lock Panels, Green Girt & Furring Channel Attachment, Mineral Wool CI, Air Barrier, Sheathing, Metal Framing w/ Cavity Insulation, Interior Finish, Continuous from Roof to Wall Panel
U-Value of Assembly	0.065
R-Value of Insulation	Cavity Batt Insulation @ R-25 / inch; Mineral Wool Board Insulation @ R-3.8 / inch

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING

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16215 ARCHITECT
CHARLOTTE BY REGISTRATION
3/28/2024

ISSUE FOR
BID SET

ISSUE DATE
03.28.2024

REVISIONS NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer
PROJECT ENGINEER

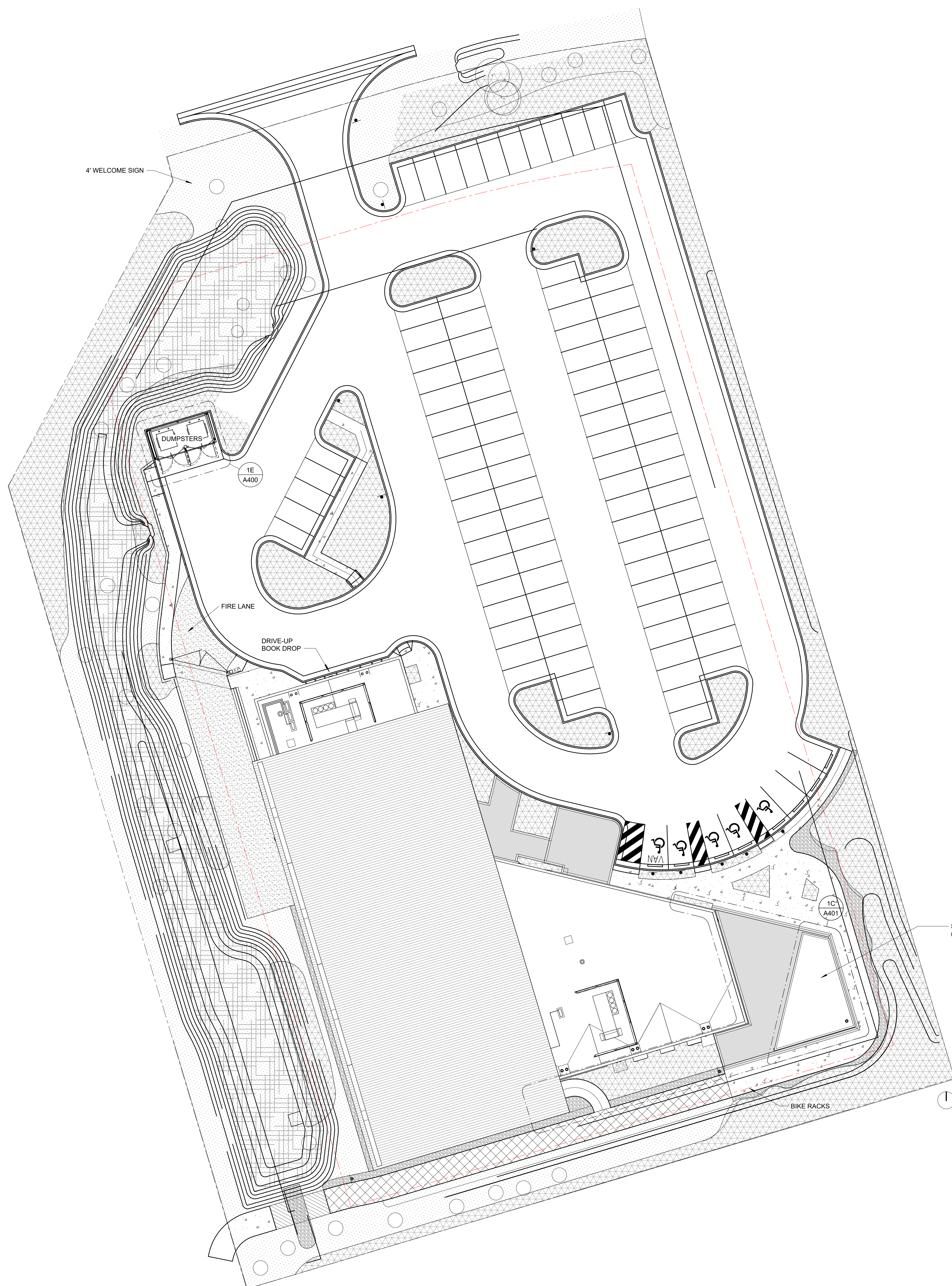
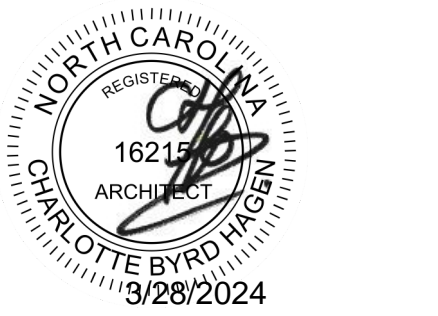
NORTHCHASE BRANCH LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
EXTERIOR SYSTEMS - WALL AND ROOF

SHEET NUMBER
A020

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1A ARCHITECTURAL SITE PLAN
A101 1" = 20'-0"

ISSUE FOR
BID SET

ISSUE DATE
03.28.2024

REVISIONS NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

PROJECT NAME
NORTHCHASE BRANCH LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
ARCHITECTURAL SITE PLAN

SHEET NUMBER
A101

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1A FLOOR PLAN
A111
1/8" = 1'-0"

SHEET KEYED NOTES

- 01 ROOF ACCESS LADDER.
- 14 CONTINUOUS SOLID SURFACE BUILT-IN SEATING WALL (18" HIGH X 28" DEEP) BELOW STOREFRONT SYSTEM.
- 19 WALL MOUNTED TV.
- 20 RECESSED KNOX BOX AT 48" AFF.
- 24 ADD LAYER OF 1/2" FIRE TREATED PLYWOOD ON GWB WALL ON THIS WALL (IN ADDITION TO GWB LAYER), FLOOR TO CEILING.

SHEET GENERAL NOTES

- A. PROVIDE CONTROL JOINTS ON GYPSUM BOARD ASSEMBLIES PER SPECIFICATIONS AND WHERE SHOWN.
- B. EXTEND WALLS TO DECK ABOVE STOREFRONT SYSTEMS AND GLASS WALL PARTITIONS.
- C. PARTITIONS AT BUILDING PERIMETER SHALL BE CENTERED ON CENTER LINE OF COLUMN OR WINDOW MULLION, UNLESS OTHERWISE NOTED.
- D. ALIGN FINISHES ON EXPOSED SIDE OF PARTITION AND FURR CONCEALED SIDE OF PARTITION AS REQUIRED TO PROVIDE FLUSH INSTALLATION WHERE ADJACENT PARTITION TYPES DIFFER IN OVERALL THICKNESS.
- E. PROVIDE TOOLED SEALANT JOINT AT DISIMILAR MATERIALS, SUCH AS MILLWORK OR DOOR FRAME AT A WALL.
- F. ALL PIPING, CONDUITS, AND RELATED MEP ITEMS SHALL BE CONCEALED WITHIN DRYWALL FURRING AS REQ'D IN FINISHED AREAS WHETHER SHOWN ON DRAWINGS OR NOT. UNO.

RATED WALLS AND PARTITIONS

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]

LITTLE
OVERSEEN ARCHITECTURAL CONSULTING

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PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Little

PROJECT NAME
NORTHCHASE BRANCH LIBRARY

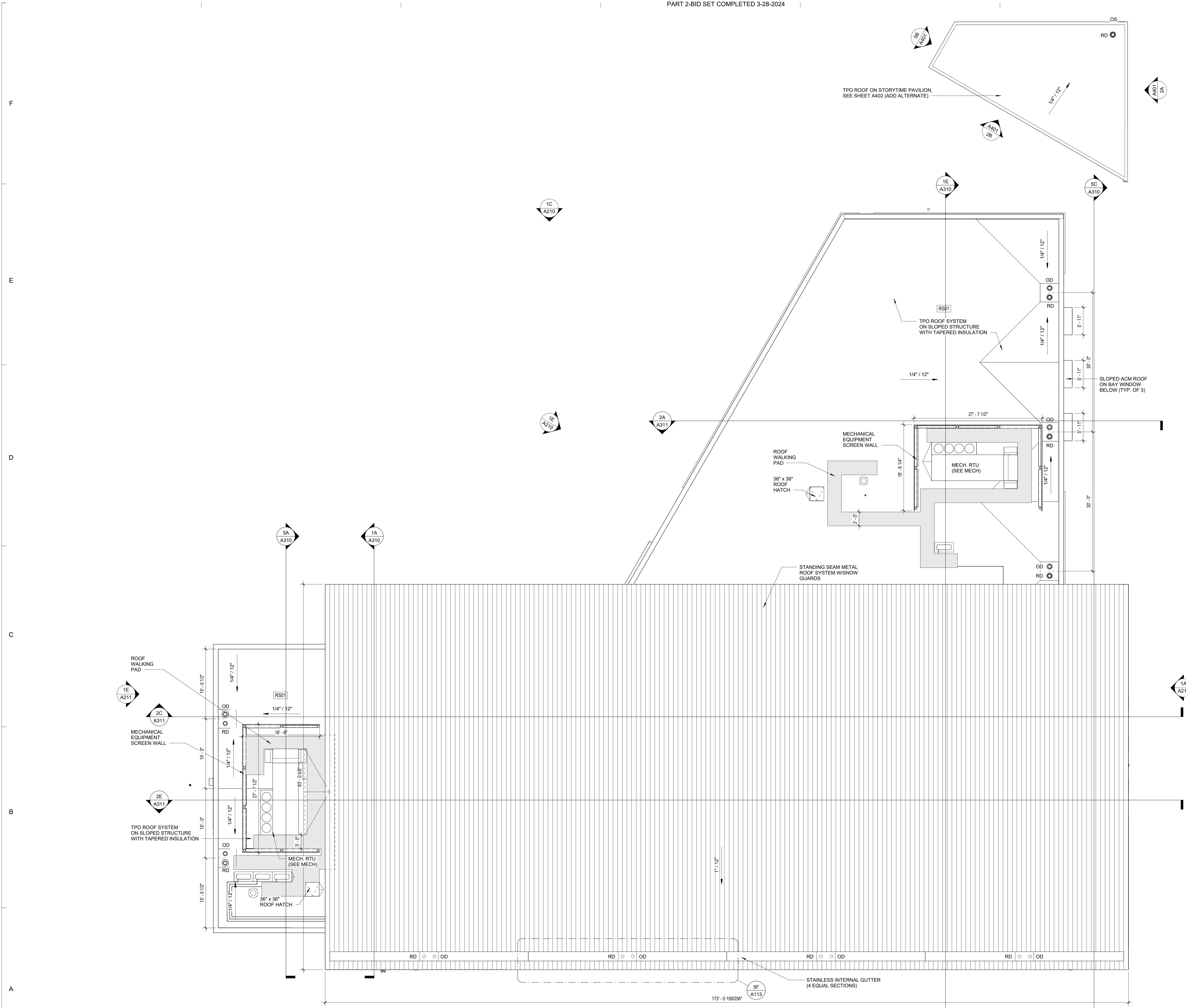
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
FLOOR PLAN

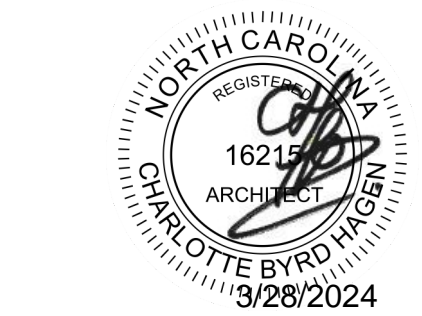
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PROJECT TEAM
 PRINCIPAL IN CHARGE
 Jerry Guerrier, AIA
 PROJECT MANAGER
 Charlotte Hagen, AIA
 DESIGN TEAM
 Designer

PROJECT NAME
 NORTHCHASE BRANCH
 LIBRARY
 4400 Northchase Parkway NE
 Wilmington NC 28405

PROJECT NO.
 514.18349.00

SHEET TITLE
 ROOF PLAN

SHEET NUMBER
 A112



ISSUE FOR
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ISSUE DATE
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PROJECT TEAM

PRINCIPAL IN CHARGE
Jerry Guerrier, AIA

PROJECT MANAGER
Charlotte Hagen, AIA

DESIGN TEAM
Designer

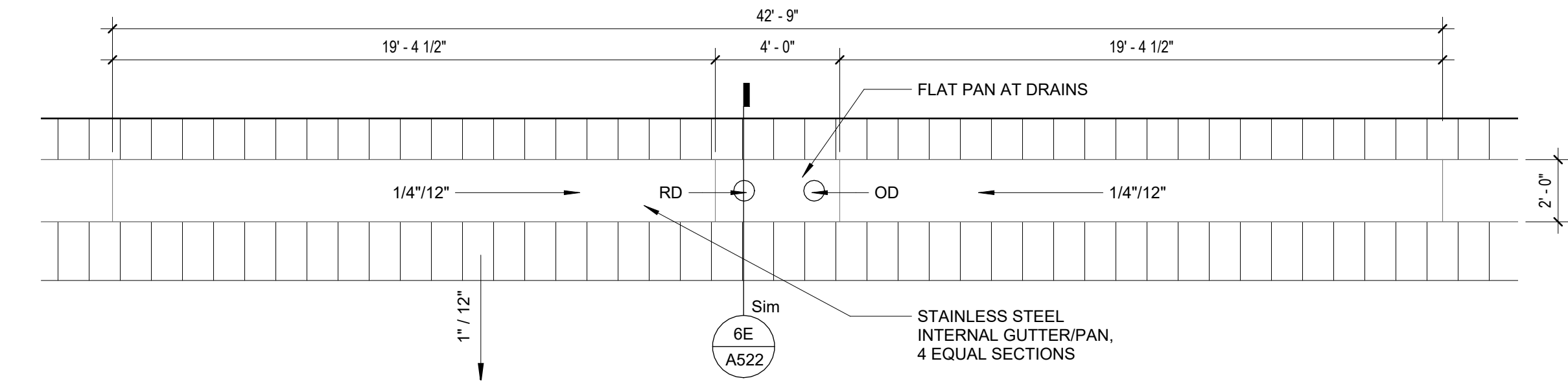
PROJECT NAME
NORTHCHASE BRANCH LIBRARY

4400 Northchase Parkway NE
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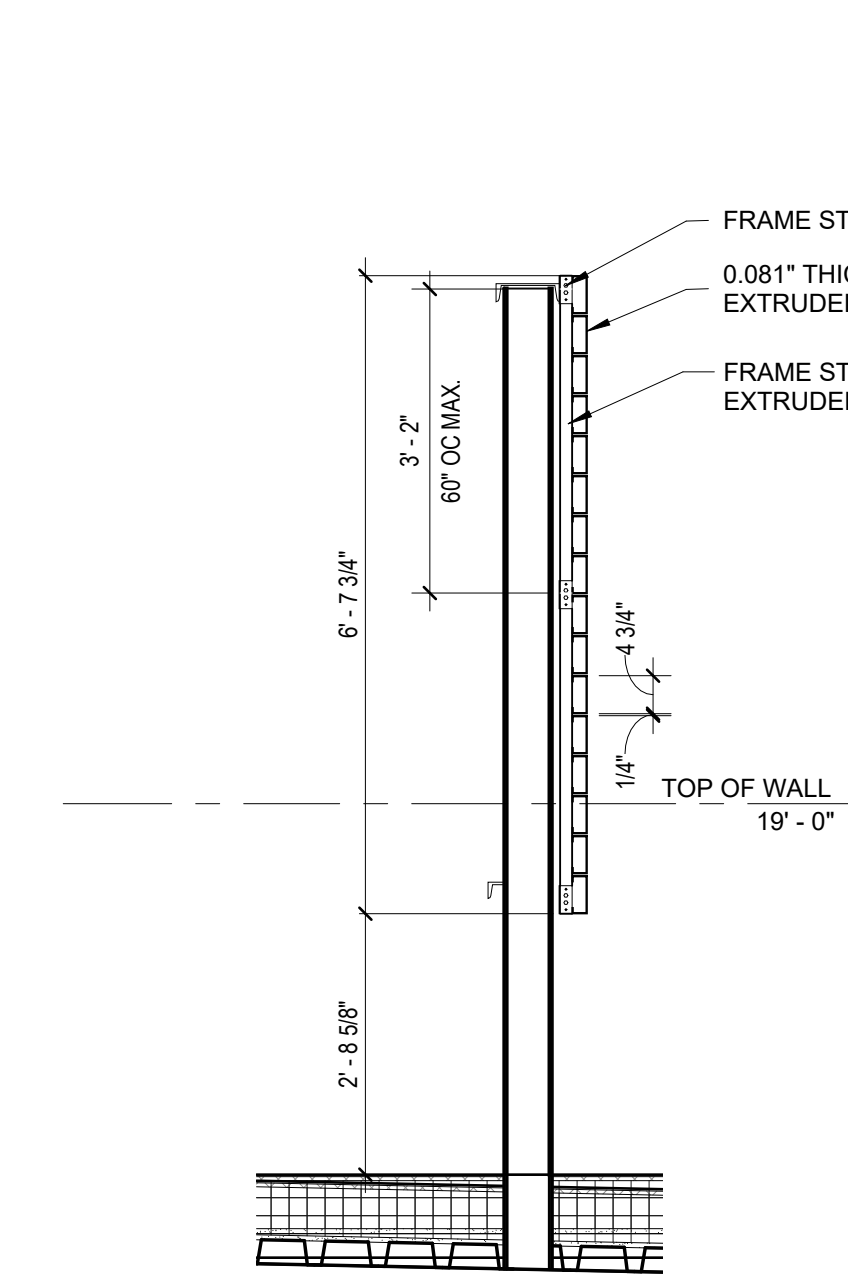
PROJECT NO.
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SHEET TITLE
ROOF DETAILS

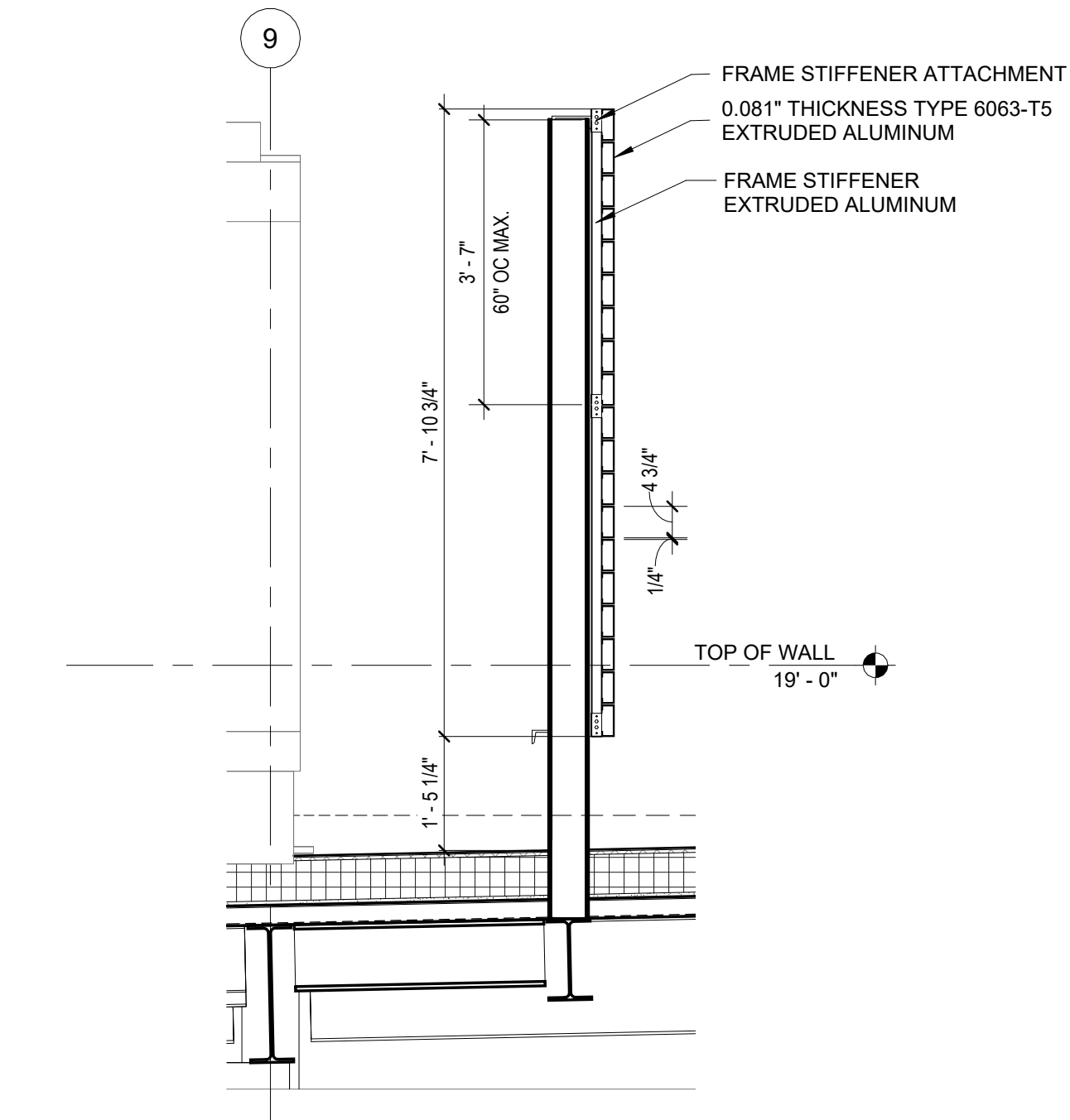
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A113



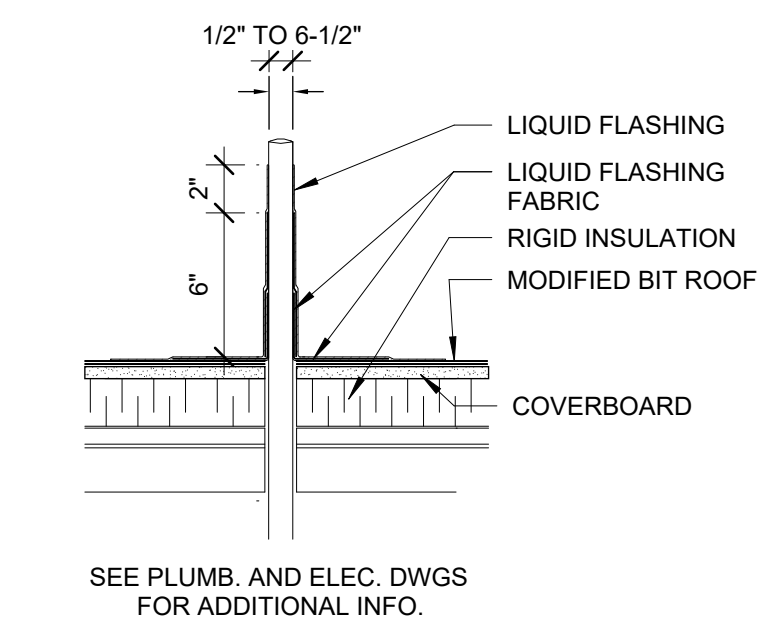
5F ENLARGED ROOF PLAN - INTERNAL GUTTER
A113 1/4" = 1'-0"



5D SECTION - NORTH MECHANICAL SCREENING
A113 1/2" = 1'-0"



7D SECTION - SOUTH MECHANICAL SCREENING
A113 1/2" = 1'-0"



7C ROOF DETAIL - PIPE PENETRATION
A113 1 1/2" = 1'-0"

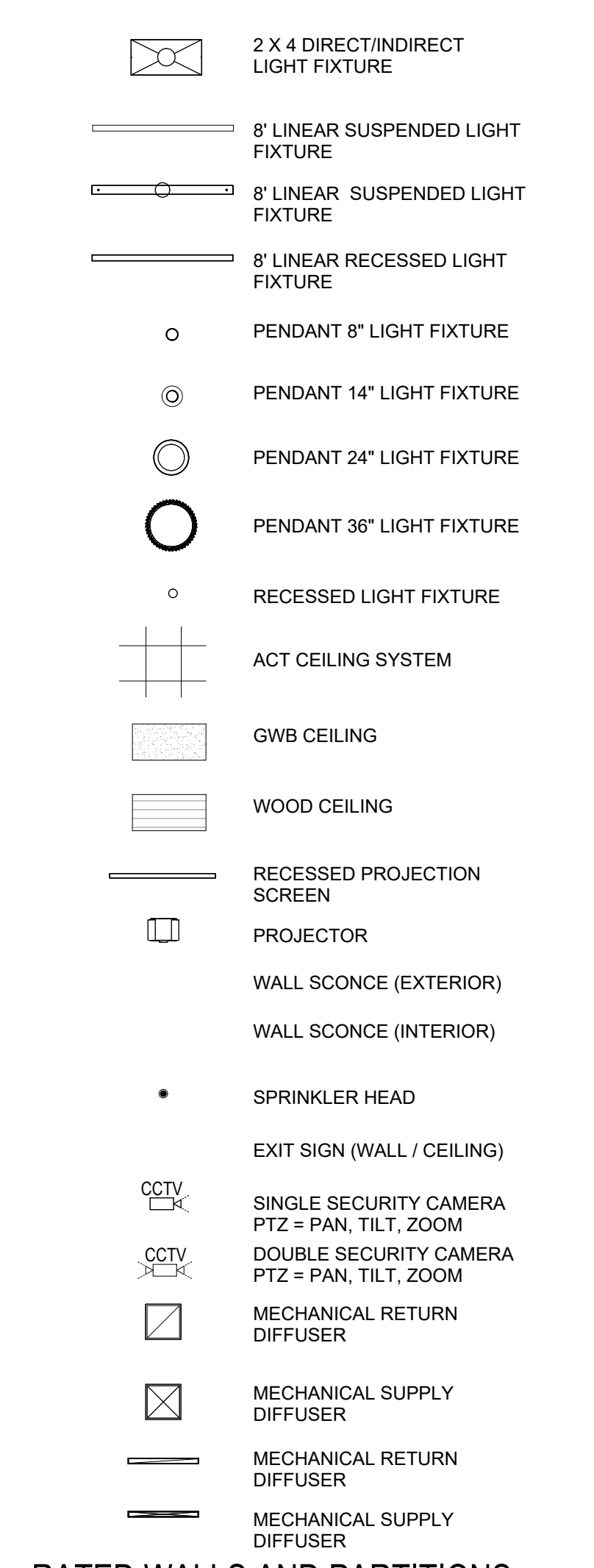
SHEET KEYED NOTES

- 01 ROOF ACCESS LADDER.
- 51 SUSPENDED ARMSTRONG SOUNDSCAPE BLADES (10"x46"x2"), BOTTOM OF PANEL AT 10' 0" ABOVE FINISH FLOOR. SEE FINISH MATERIAL SCHEDULE (SHEET A510)
- 52 SUSPENDED ARMSTRONG SOUNDSCAPE BLADES (10"x44"x2"), BOTTOM OF PANEL AT 10' 0" ABOVE FINISH FLOOR. SEE FINISH MATERIAL SCHEDULE (SHEET A510)
- 53 30" X 30" WALL ACCESS PANEL APPROX. 19' AFF FOR ROOF DRAIN CLEANOUT ACCESS. COORDINATE FINAL LOCATION IN FIELD WITH PIPING. SEE FINISH MATERIAL SCHEDULE (SHEET A510)
- 54 ROLLER SHADES. ALIGN JOINTS AT VERTICAL STOREFRONT MULLIONS. SEE SHADE-1 ON FINISH MATERIAL SCHEDULE (SHEET A510)
- 56 BOTTOM OF FIXTURE AT 9' 0" ABOVE FINISH FLOOR
- 57 BOTTOM OF FIXTURE AT 12' 0" ABOVE FINISH FLOOR
- 58 BOTTOM OF FIXTURE AT 12' 0" ABOVE FINISH FLOOR
- 60 BOTTOM OF FIXTURE AT 9' 0" ABOVE FINISH FLOOR
- 61 BOTTOM OF FIXTURE AT 11' 0" ABOVE FINISH FLOOR
- 62 BOTTOM OF FIXTURE AT 8' 0" ABOVE FINISH FLOOR
- 63 PROVIDE 3-5/8" METAL JOISTS AT TOP OF WALLS 24" O.C. IN THIS ROOM (SIZE TO BE DETERMINED BY DELEGATED DESIGN METAL STUD ENGINEER) TO SUPPORT SUSPENDED CEILING SYSTEM AND LIGHTS. DO NOT SUSPEND CEILING FROM ROOF DECK ABOVE (WALLS ARE NOT FULL HEIGHT).
- 64 SPRAY EXPOSED DECKING, CEILING STRUCTURE, CONDUIT AND DUCTWORK WITH DRYFALL PAINT SYSTEM. COLOR P-10.
- 65 INTEGRATED ACCESS PANEL TO MATCH CEILING SYSTEM. COORDINATE EXACT SIZE AND LOCATION DURING SHOP DRAWINGS.

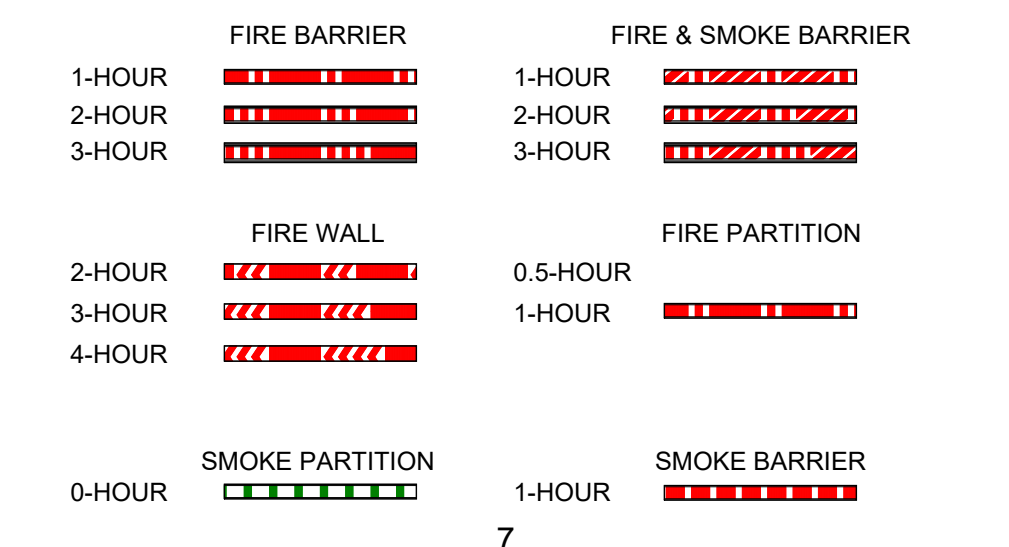
SHEET GENERAL NOTES

- A. COORDINATE CEILING, SOFFIT AND BULKHEAD INSTALLATIONS WITH OTHER ELEMENTS OF WORK.
- B. CEILING HEIGHTS ARE GIVEN FROM FINISHED FLOOR ELEVATION. ANY CONFLICT/DISCREPANCY SHALL BE REPORTED TO ARCHITECT.
- C. CENTER SUSPENDED CEILING GRIDS IN ROOMS. UNDO LOCATE GRIDS AS INDICATED ON THIS PLAN. CEILING GRIDS TO BE LOCATED TO AVOID CUT TILES LESS THAN 6".
- D. LOCATE MECHANICAL, ELECTRICAL AND SPRINKLER DEVICES AS INDICATED. CEILING PLAN SHALL GOVERN FOR LOCATION OF ALL DEVICES AS SHOWN. ENGINEERING DOCUMENTS SHALL PREVAIL ONLY IN CASE OF SCOPE OF WORK AND ELEMENTS OCCURRING ABOVE CEILING. DISCREPANCIES BETWEEN ARCHITECTURAL AND ENGINEERING DOCUMENTS MUST BE BROUGHT TO THE ARCHITECT'S ATTENTION PRIOR TO COMMENCING WORK. AT THE TIME OF BID, ANY DISCREPANCIES NOT BROUGHT TO THE ARCHITECT'S ATTENTION SHALL BE THE RESPONSIBILITY OF THE GC.
- E. ALL CEILING ELEMENTS INCLUDING BUT NOT LIMITED TO SPRINKLER HEADS, OCCUPANCY SENSORS, SMOKE DETECTORS, ETC SHALL BE CENTERED IN MODULE OF THE TILE INDICATED.
- F. MIX TILE IN A UNIFORM MANNER TO ELIMINATE BANDING OR BATCHING.
- G. FOLLOWING COMPLETION OF ACOUSTICAL CEILING INSTALLATION, ALL JOINTS SHALL BE STRAIGHT AND TRUE TO LINE, WITH EXPOSED SURFACES FLUSH AND LEVEL.
- H. FULL HEIGHT PARTITION WALLS CANNOT HAVE ANY PORTION OF A V.A.V. BOX OR FAN POWERED BOX ABOVE THEM. RELOCATE AFFECTED V.A.V. AND F.P. BOXES AS REQUIRED.
- I. IF CEILING DIFFUSER, LIGHT FIXTURES, OR OTHER ELEMENTS ON OR ABOVE THE CEILING CAN NOT BE LOCATED AS SHOWN ON THE DRAWINGS, SUCH INTERFERENCE SHALL BE REPORTED IMMEDIATELY TO ARCHITECT FOR RELOCATION.
- J. PROVIDE EMERGENCY BATTERY PACKS OR EMERGENCY CIRCUITS AS REQUIRED BY CODE.
- K. PROVIDE FINAL QUANTITY AND LOCATION OF EMERGENCY DEVICES, INCLUDING BUT NOT LIMITED TO: BATTERY PACKS, EXIT SIGNS, FIRE ALARMS, ETC.) IN COMPLIANCE WITH AUTHORITY HAVING JURISDICTION.
- L. DIMMERS AND SWITCHES SHALL BE GANGED TOGETHER IN LARGEST MULTI GANG BOXES WITH COMMON FACE PLATES POSSIBLE. STACKING OF LARGE BOXES (5 SWITCHES ABOVE 5 SWITCHES) IS ACCEPTABLE.
- M. MATERIALS PLACED IN CEILING SHALL BE REQUIRED TO HAVE A FLENUM RATING.
- N. STENCIL RATED WALLS ABOVE CEILING.
- O. MAINTAIN 18" CLEARANCE BETWEEN THE UNDERSIDE OF SPRINKLER HEADS AND THE TOPS OF OBSTRUCTIONS BELOW.
- P. ALL EXPOSED CONDUIT, PIPING, DUCT WORK, AND STRUCTURE SHALL BE PAINTED.
- Q. PROVIDE CONTROL JOINTS ON GYPSUM BOARD ASSEMBLIES PER CONSTRAINTS IN SPECIFICATIONS. LOCATE AS SHOWN ON RCP (AS APPLICABLE).
- R. PRIOR TO INSTALLATION OF CEILINGS, ALL PENETRATIONS THROUGH RATED AND ACOUSTICAL PARTITIONS ARE TO BE REVIEWED FOR PROPER FIRESTOPPING AND SOUND SEALING INSTALLATION.

REFLECTED CEILING PLAN LEGEND



RATED WALLS AND PARTITIONS



Type Mark	Description	Manufacturer	Model	Comments
ACT-1	ACOUSTIC PANEL CEILING	ARMSTRONG	ULTIMA BEVELED TEGULAR 1901 24"x24" WHITE, 15/16" PRELUDE GRID, WHITE	CUSTOM TO MATCH COLOR P-7
GWB	TYPICAL DRYWALL CEILING			PAINTED P-2 UNO
WPC-1	WOOD PLANK CEILING	ARMSTRONG	WOODWORKS LINEAR VENEERED OPEN 6"X6" CONSTANTS WALNUT WITH BACKSTAGE NOIR INFILL PANEL IN BLACK	INSTALL ON 15X16" PRELUDE GRID. ACCESS PANELS AS INDICATED ON RCP

2F REFLECTED CEILING PLAN - AT CLERESTORY ROOF
1/8" = 1'-0"

1A REFLECTED CEILING PLAN - LEVEL 01
1/8" = 1'-0"

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JERRY GUERRIER, AIA
ARCHITECT
LICENSED BY THE STATE OF NORTH CAROLINA
3/28/2024

ISSUE FOR BID SET		
NO.	REASON	DATE
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PROJECT TEAM
 PRINCIPAL IN CHARGE: Jerry Guerrier, AIA
 PROJECT MANAGER: Charlotte Hagen, AIA
 DESIGN TEAM Designer

NORTHCHASE BRANCH LIBRARY
 4400 Northchase Parkway NE
 Wilmington NC 28405

PROJECT NO. 514.18349.00
 SHEET TITLE REFLECTED CEILING PLAN
 SHEET NUMBER A121

SHEET KEYED NOTES

- 51 SUSPENDED ARMSTRONG SOUNDSCAPE BLADES (10"x46"x2"), BOTTOM OF PANEL @ 10' 0" ABOVE FINISH FLOOR, SEE FINISH MATERIAL SCHEDULE (SHEET A810)
- 52 SUSPENDED ARMSTRONG SOUNDSCAPE BLADES (10"x94"x2"), BOTTOM OF PANEL @ 10' 0" ABOVE FINISH FLOOR, SEE FINISH MATERIAL SCHEDULE (SHEET A810)
- 59 BOTTOM OF FIXTURE AT 11' 0" ABOVE FINISH FLOOR
- 61 BOTTOM OF FIXTURE AT 11' 0" ABOVE FINISH FLOOR
- 64 SPRAY EXPOSED DECKING, CEILING STRUCTURE, CONDUIT AND DUCTWORK WITH DRYFALL PAINT SYSTEM, COLOR P-10.

SHEET GENERAL NOTES

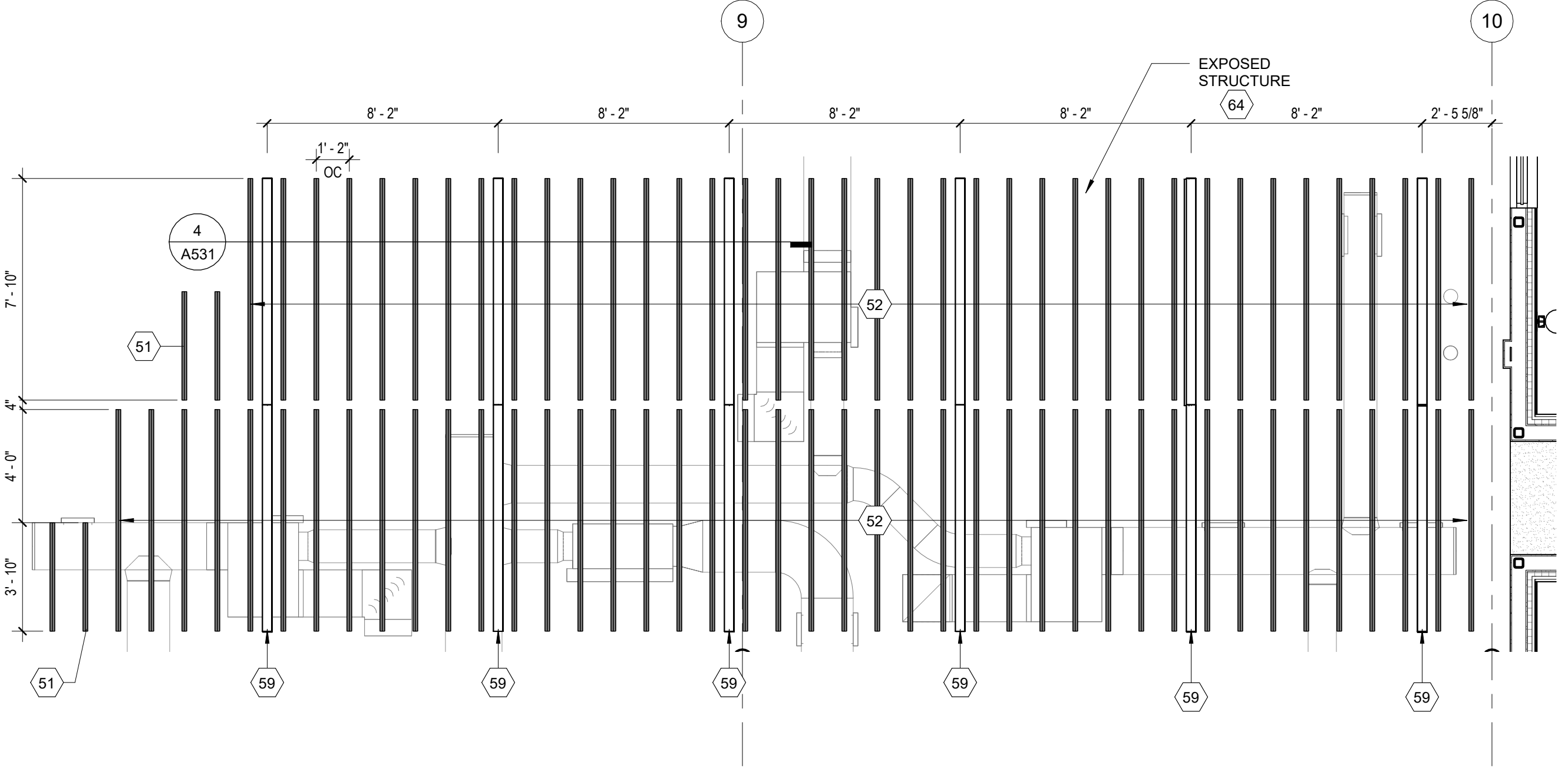
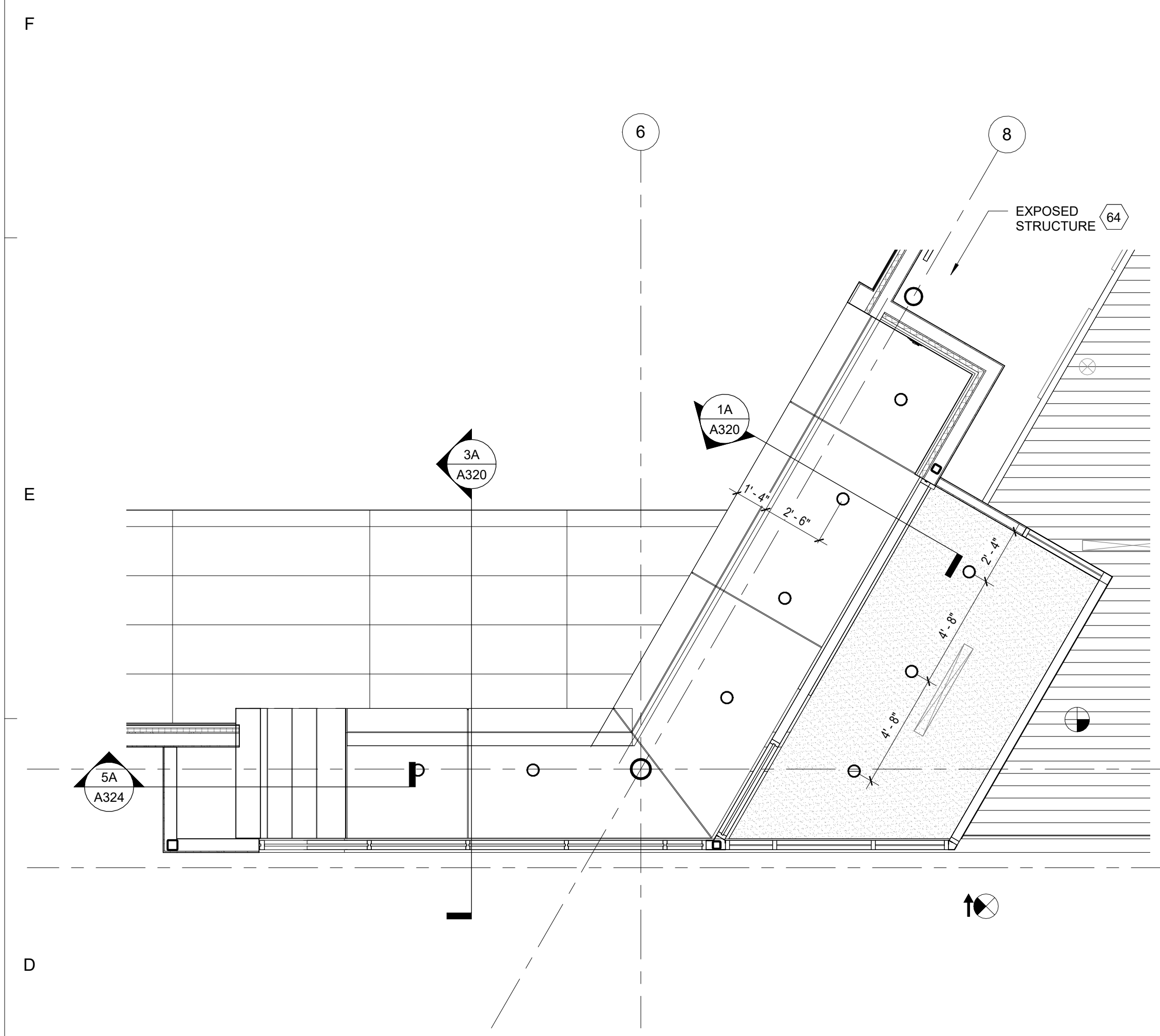
- A. COORDINATE CEILING, SOFFIT AND BULKHEAD INSTALLATIONS WITH OTHER ELEMENTS OF WORK.
- B. CEILING HEIGHTS ARE GIVEN FROM FINISHED FLOOR ELEVATION. ANY CONFLICT/DISCREPANCY SHALL BE REPORTED TO ARCHITECT.
- C. CENTER SUSPENDED CEILING GRIDS IN ROOMS. UNO. LOCATE GRIDS AS INDICATED ON THIS PLAN. CEILING GRIDS TO BE LOCATED TO AVOID CUT TILES LESS THAN 6".
- D. LOCATE MECHANICAL, ELECTRICAL, AND SPRINKLER DEVICES AS INDICATED. CEILING PLAN SHALL GOVERN FOR LOCATION OF ALL DEVICES AS SHOWN. ENGINEERING DOCUMENTS SHALL PREVAIL ONLY IN CASE OF SCOPE OF WORK AND ELEMENTS OCCURRING ABOVE CEILING. DISCREPANCIES BETWEEN ARCHITECTURAL AND ENGINEERING DOCUMENTS MUST BE BROUGHT TO THE ARCHITECT'S ATTENTION PRIOR TO COMMENCING WORK. AT THE TIME OF BID, ANY DISCREPANCIES NOT BROUGHT TO THE ARCHITECT'S ATTENTION SHALL BE THE RESPONSIBILITY OF THE GC.
- E. ALL CEILING ELEMENTS INCLUDING BUT NOT LIMITED TO SPRINKLER HEADS, OCCUPANCY SENSORS, SMOKE DETECTORS, ETC. SHALL BE CENTERED IN MODULE OF THE TILE INDICATED.
- F. MIX TILE IN A UNIFORM MANNER TO ELIMINATE BANDING OR BATCHING.
- G. FOLLOWING COMPLETION OF ACOUSTICAL CEILING INSTALLATION, ALL JOINTS SHALL BE STRAIGHT AND TRUE TO LINE, WITH EXPOSED SURFACES FLUSH AND LEVEL.
- H. FULL HEIGHT PARTITION WALLS CANNOT HAVE ANY PORTION OF A V.A.V. BOX OR FAN POWERED BOX ABOVE THEM. RELOCATE AFFECTED V.A.V. AND F.P. BOXES AS REQUIRED.
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- J. PROVIDE EMERGENCY BATTERY PACKS OR EMERGENCY CIRCUITS AS REQUIRED BY CODE.
- K. PROVIDE FINAL QUANTITY AND LOCATION OF EMERGENCY DEVICES, (INCLUDING BUT NOT LIMITED TO: BATTERY PACKS, EXIT SIGNS, FIRE ALARMS, ETC.) IN COMPLIANCE WITH AUTHORITY HAVING JURISDICTION.
- L. DIMMERS AND SWITCHES SHALL BE GANGED TOGETHER IN LARGEST MULTI GANG BOXES WITH COMMON FACE PLATES POSSIBLE. STACKING OF LARGE BOXES (5 SWITCHES ABOVE 5 SWITCHES) IS ACCEPTABLE.
- M. MATERIALS PLACED IN CEILING SHALL BE REQUIRED TO HAVE A FLENIUM RATING.
- N. STENCIL RATED WALLS ABOVE CEILING.
- O. MAINTAIN 18" CLEARANCE BETWEEN THE UNDERSIDE OF SPRINKLER HEADS AND THE TOPS OF OBSTRUCTIONS BELOW.
- P. ALL EXPOSED CONDUIT, PIPING, DUCT WORK, AND STRUCTURE SHALL BE PAINTED.
- Q. PROVIDE CONTROL JOINTS ON GYPSUM BOARD ASSEMBLIES PER CONSTRAINTS IN SPECIFICATIONS. LOCATE AS SHOWN ON RCP (AS APPLICABLE).
- R. PRIOR TO INSTALLATION OF CEILINGS, ALL PENETRATIONS THROUGH RATED AND ACOUSTICAL PARTITIONS ARE TO BE REVIEWED FOR PROPER FIRESTOPPING AND SOUND SEALING INSTALLATION.

REFLECTED CEILING PLAN LEGEND

- 2 X 4 DIRECT/INDIRECT LIGHT FIXTURE
- 8' LINEAR SUSPENDED LIGHT FIXTURE
- 8' LINEAR SUSPENDED LIGHT FIXTURE
- 8' LINEAR RECESSED LIGHT FIXTURE
- PENDANT 8" LIGHT FIXTURE
- PENDANT 14" LIGHT FIXTURE
- PENDANT 24" LIGHT FIXTURE
- PENDANT 36" LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- ACT CEILING SYSTEM
- GWB CEILING
- WOOD CEILING
- RECESSED PROJECTION SCREEN
- PROJECTOR
- WALL SCONCE (EXTERIOR)
- WALL SCONCE (INTERIOR)
- SPRINKLER HEAD
- EXIT SIGN (WALL / CEILING)
- SINGLE SECURITY CAMERA PTZ = PAN, TILT, ZOOM
- DOUBLE SECURITY CAMERA PTZ = PAN, TILT, ZOOM
- MECHANICAL RETURN DIFFUSER
- MECHANICAL SUPPLY DIFFUSER
- MECHANICAL RETURN DIFFUSER
- MECHANICAL SUPPLY DIFFUSER

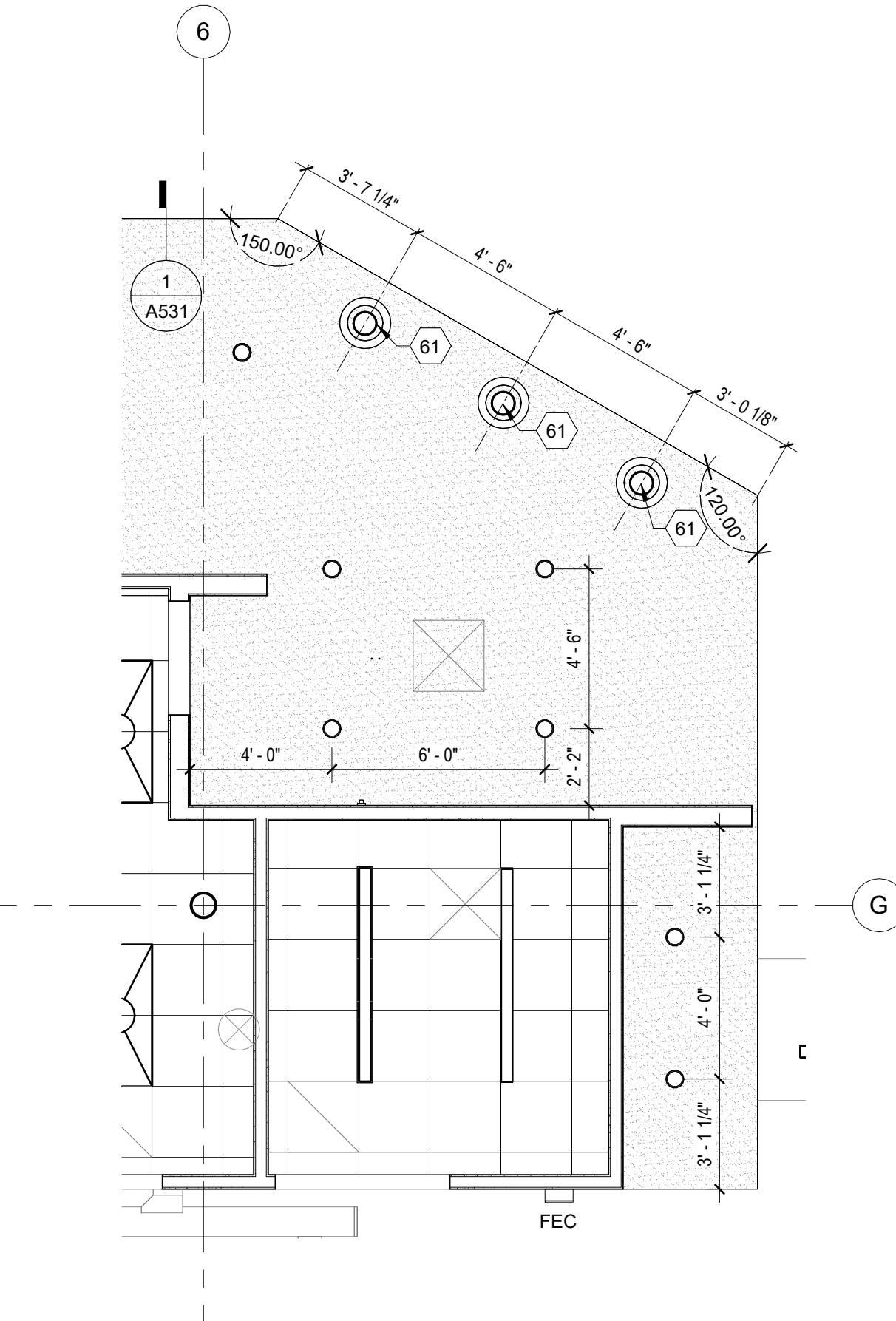
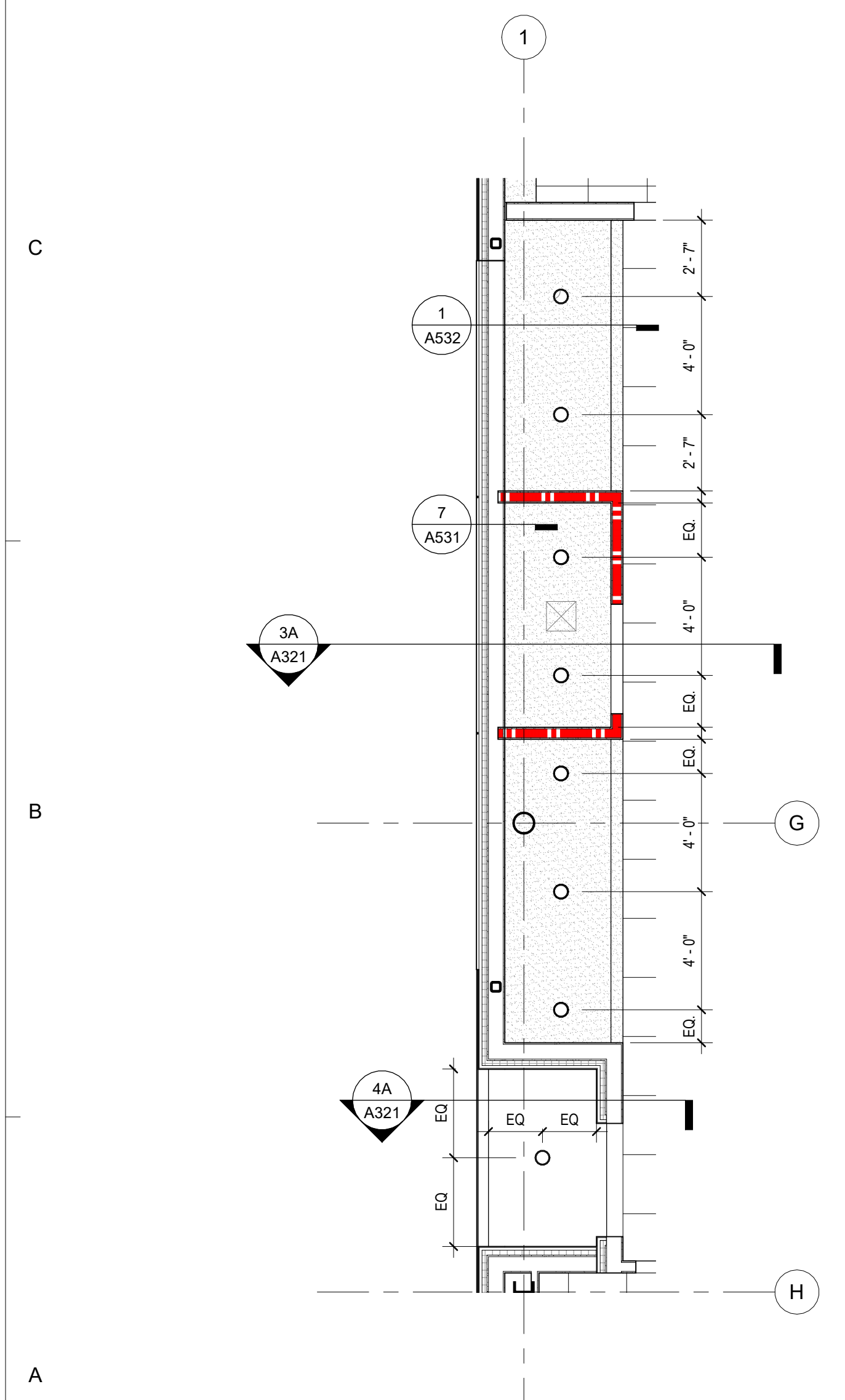
RATED WALLS AND PARTITIONS

1-HOUR		FIRE BARRIER	1-HOUR		FIRE & SMOKE BARRIER
2-HOUR		FIRE BARRIER	2-HOUR		FIRE & SMOKE BARRIER
3-HOUR		FIRE BARRIER	3-HOUR		FIRE & SMOKE BARRIER
2-HOUR		FIRE WALL	0.5-HOUR		FIRE PARTITION
3-HOUR		FIRE WALL	1-HOUR		FIRE PARTITION
4-HOUR		FIRE WALL			
0-HOUR		SMOKE PARTITION	1-HOUR		SMOKE BARRIER



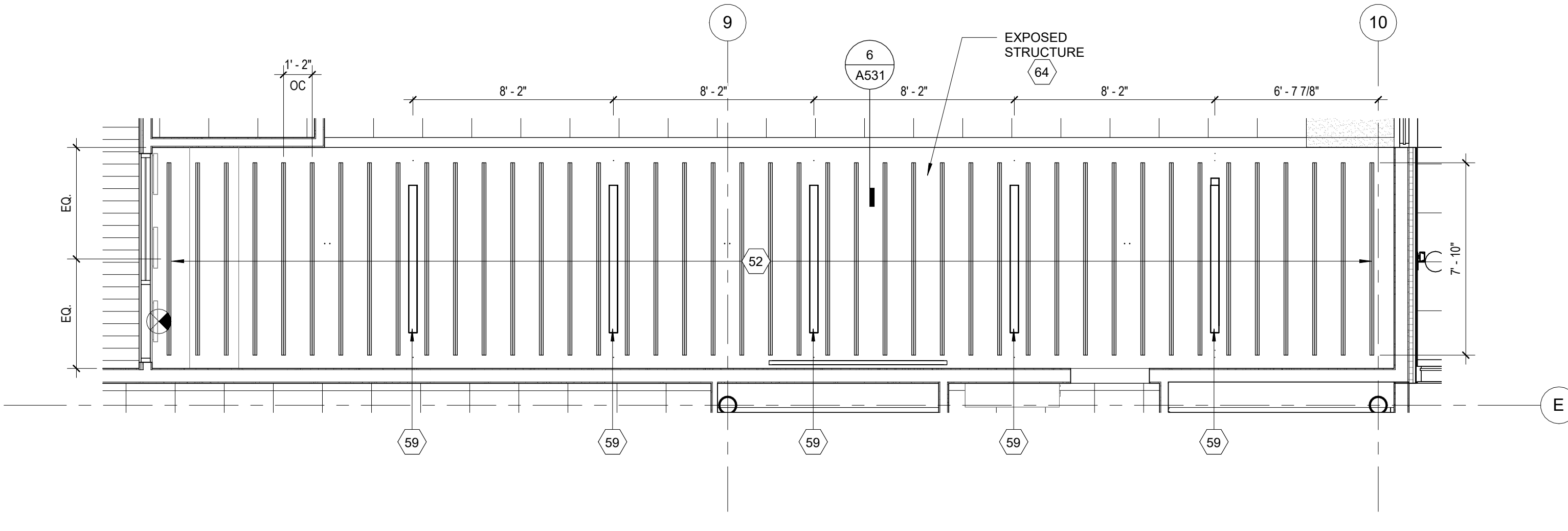
1D REFLECTED CEILING PLAN - ENTRY PORTAL
A122 1/4" = 1'-0"

4D REFLECTED CEILING PLAN - CHILDREN'S WING
A122 1/4" = 1'-0"



1A REFLECTED CEILING PLAN - WORK ROOM ENTRY AND BOOK DROP
A122 1/4" = 1'-0"

3A REFLECTED CEILING PLAN - MAIN CIRCULATION DESK
A122 1/4" = 1'-0"



4C REFLECTED CEILING PLAN - MULTI-PURPOSE ROOM
A122 1/4" = 1'-0"

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REVISIONS NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

NORTHCHASE BRANCH LIBRARY
4400 Northchase Parkway NE
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PROJECT NO.
514.18349.00

SHEET TITLE
ENLARGED REFLECTED CEILING PLANS

SHEET NUMBER
A122

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(X) SHEET KEYNOTES

- 18 AUTOMATIC SLIDING ALUMINUM STOREFRONT DOORS (MATCH STOREFRONT SYSTEM)
- 201 EXTERIOR WALL SCOSCE
- 202 OVERFLOW DRAIN OUTLET (CENTER BETWEEN WALL PANEL SEAMS AT WS04 WALL TYPE, COORDINATE WITH SHOP DRAWINGS PRIOR TO INSTALLATION)
- 204 EXPOSED STRUCTURAL STEEL COLUMN, PAINTED

(X) MATERIALS LEGEND

- AC ALUMINUM COPING
- CONC 5" DEEP PRECAST CONCRETE PANELS
- HPL HIGH PRESSURE LAMINATE WALL PANELS
- MCM METAL COMPOSITE MATERIAL PANELS
- SSMS STANDING SEAM METAL SYSTEM

BASIS OF DESIGN

HPL PRODUCT

- PARKLEX PRODEMA - NATURSIDING ONESIDING
- 8" x 96" PANEL SIZE
- 'CINDER' COLOR
- CONCEALED FASTENERS WITH ONESIDING CLIP

ACM AND COPING

MATCH TO STOREFRONT COLOR

SSMS WALL

- METAL ROOFING SYSTEMS: MRS S-2000 WALL PANEL
- 1.75" SNAP LOCK
- 'CHARCOAL GREY' COLOR

SSMS ROOF

- METAL ROOFING SYSTEMS: MRS S-2500 PANEL
- 2" DOUBLE LOCK SEAM
- 'CHARCOAL GREY' COLOR

ALUMINUM VERTICAL SOLAR FIN (VERTICAL FIN ASSEMBLY)

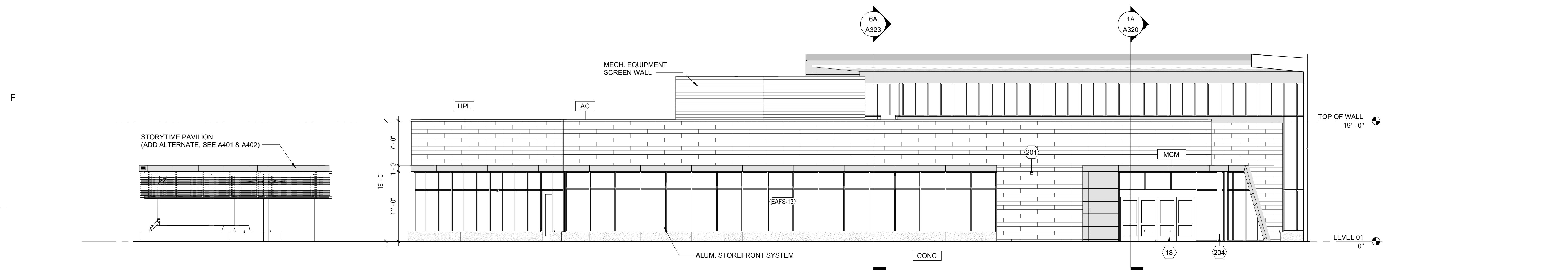
- OHIO GRATINGS, INC.
- 15" TALL, 8" AIRFOIL EXTRUSION
- CUSTOM KYMAR PAINT FINISH
- TOP AND BOTTOM MOUNTS

ALUMINUM HORIZONTAL SOLAR FIN (HORIZONTAL FIN ASSEMBLY)

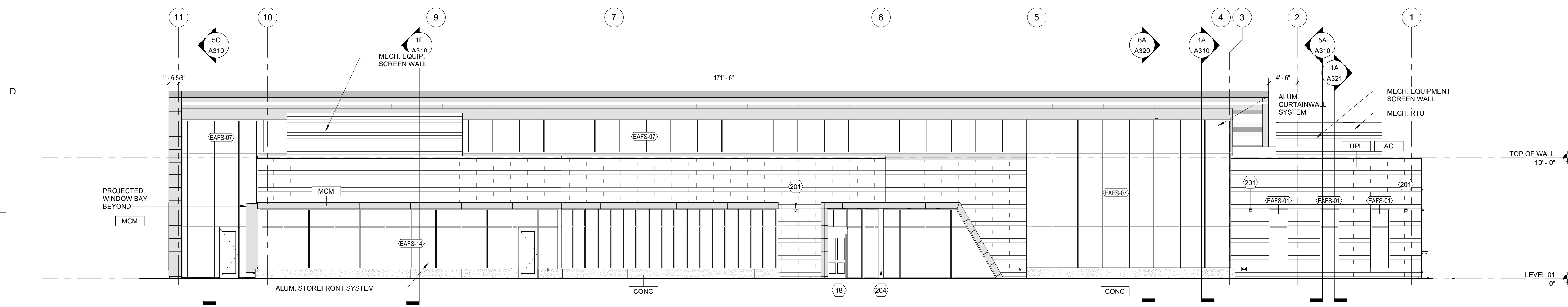
- OHIO GRATINGS, INC.
- 4" AIRFOIL EXTRUSION
- FACTORY MADE CORNERS
- END CAPS AT TERMINATIONS
- CUSTOM KYMAR PAINT FINISH
- ATTACHED TO ALLIGATOR CLIPS ON SUBSTRUCTURE

MECH SCREEN WALL / DUMPSTER WALL (LOUVERED EQUIPMENT ENCLOSURES)

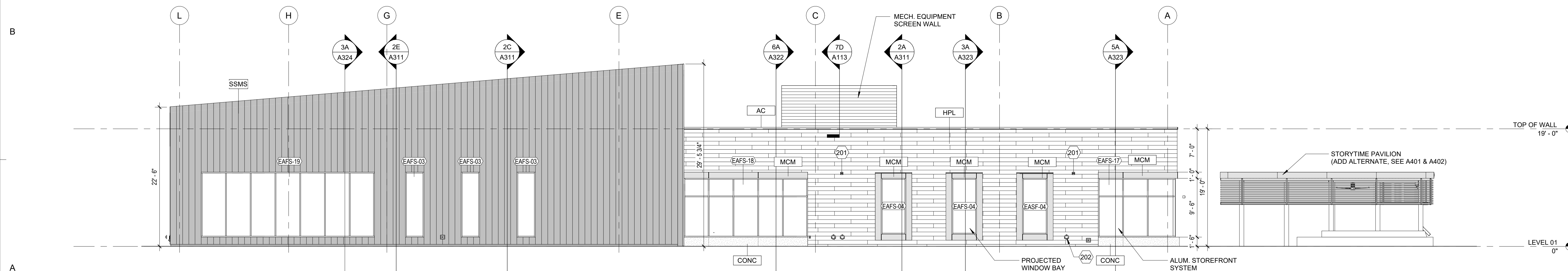
- ARCHITECTURAL LOUVERS
- FORMED ALUMINUM PANEL
- V2H5 SCREEN
- 5" OC BLADE SPACING
- COLOR TO MATCH MCM



1E ELEVATION - PLAN NORTHWEST (TRUE NORTH)
A210 1/8" = 1'-0"



1C ELEVATION - PLAN NORTH
A210 1/8" = 1'-0"



1A ELEVATION - PLAN EAST
A210 1/8" = 1'-0"

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PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

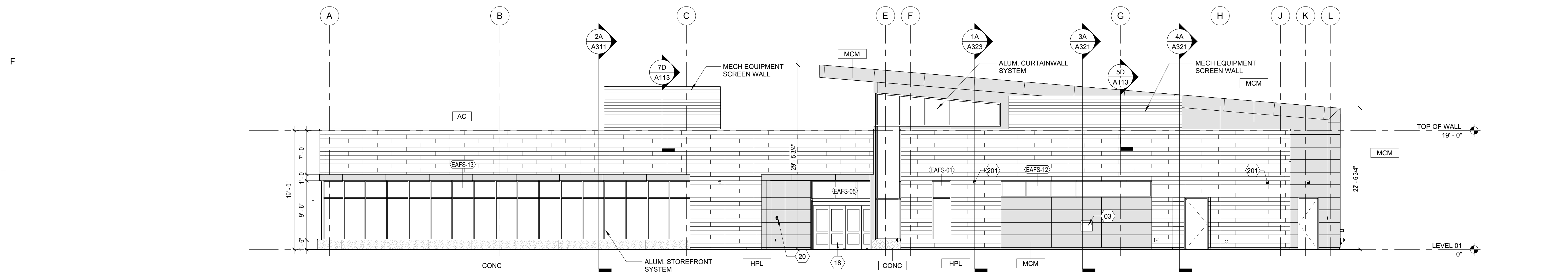
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SHEET TITLE
EXTERIOR ELEVATIONS

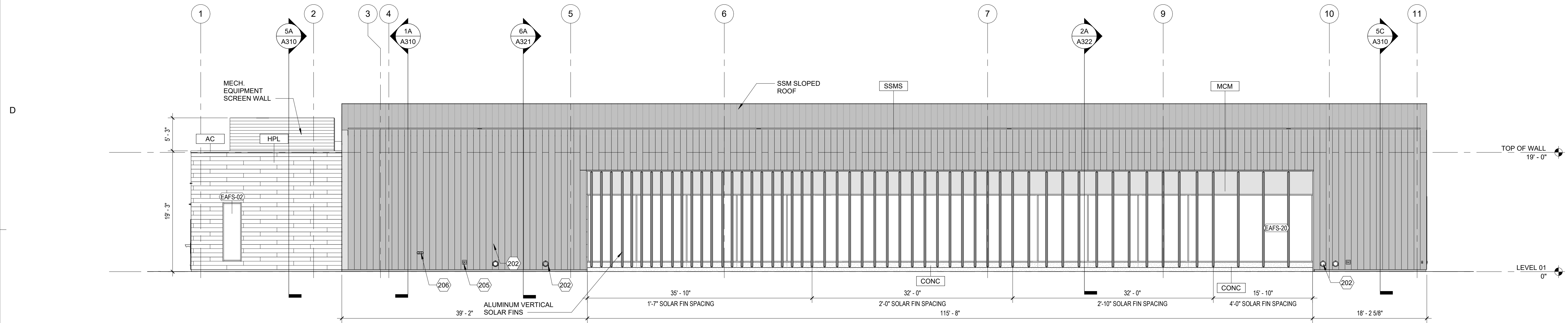
SHEET NUMBER
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1E ELEVATION - PLAN WEST

A211 1/8" = 1'-0"



1C ELEVATION - PLAN SOUTH

A211 1/8" = 1'-0"

SHEET KEYNOTES

- 03 STAINLESS STEEL THRU-WALL BOOK DROP WITH METAL BACK PLATE.
- 18 AUTOMATIC SLIDING ALUMINUM STOREFRONT DOORS (MATCH STOREFRONT SYSTEM).
- 20 RECESSED KNOX BOX AT 48" AFF.
- 201 EXTERIOR WALL SCONCE
- 202 OVERFLOW DRAIN OUTLET (CENTER BETWEEN WALL PANEL SEAMS AT WS04 WALL TYPE, COORDINATE WITH SHOP DRAWINGS PRIOR TO INSTALLATION)
- 205 HOSEBIB (CENTER BETWEEN WALL PANEL SEAMS AT WS04 WALL TYPE, COORDINATE WITH SHOP DRAWINGS PRIOR TO INSTALLATION)
- 206 FDC (CENTER BETWEEN WALL PANEL SEAMS AT WS04 WALL TYPE, COORDINATE WITH SHOP DRAWINGS PRIOR TO INSTALLATION)

MATERIALS LEGEND

- AC ALUMINUM COPING
- CONC 5" DEEP PRECAST CONCRETE PANELS
- HPL HIGH PRESSURE LAMINATE WALL PANELS
- MCM METAL COMPOSITE MATERIAL PANELS
- SSMS STANDING SEAM METAL SYSTEM

BASIS OF DESIGN

HPL PRODUCT

- PARKLEX PRODEMA - NATURSIDING ONESIDING
- 8' x 96" PANEL SIZE
- 'CINDER' COLOR
- CONCEALED FASTENERS WITH ONESIDING CLIP

ACM AND COPING

MATCH TO STOREFRONT COLOR

SSMS WALL

- METAL ROOFING SYSTEMS: MRS S-2000 WALL PANEL
- 1.75" SNAP LOCK
- 'CHARCOAL GREY' COLOR

SSMS ROOF

- METAL ROOFING SYSTEMS: MRS S-2500 PANEL
- 2" DOUBLE LOCK SEAM
- 'CHARCOAL GREY' COLOR

ALUMINUM VERTICAL SOLAR FIN (VERTICAL FIN ASSEMBLY)

- OHIO GRATINGS, INC.
- 15' TALL, 8" AIRFOIL EXTRUSION
- CUSTOM KYNAR PAINT FINISH
- TOP AND BOTTOM MOUNTS

ALUMINUM HORIZONTAL SOLAR FIN (HORIZONTAL FIN ASSEMBLY)

- OHIO GRATINGS, INC.
- 4" AIRFOIL EXTRUSION
- FACTORY MADE CORNERS
- END CAPS AT TERMINATIONS
- CUSTOM KYNAR PAINT FINISH
- ATTACHED TO ALLIGATOR CLIPS ON SUBSTRUCTURE

MECH SCREEN WALL / DUMPSTER WALL (LOUVERED EQUIPMENT ENCLOSURES)

- ARCHITECTURAL LOUVERS
- FORMED ALUMINUM PANEL
- V2H'S SCREEN
- 5" OC BLADE SPACING
- COLOR TO MATCH MCM

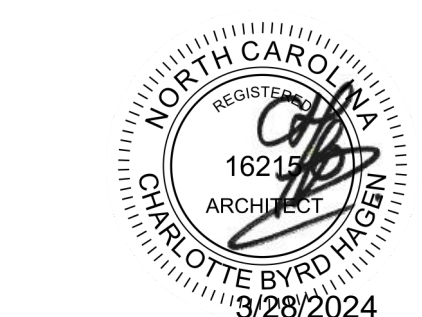
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PROJECT TEAM

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Jerry Guerrier, AIA

PROJECT MANAGER
Charlotte Hagen, AIA

DESIGN TEAM
Designer

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SHEET TITLE
EXTERIOR ELEVATIONS

SHEET NUMBER
A211

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GLAZING LEGEND

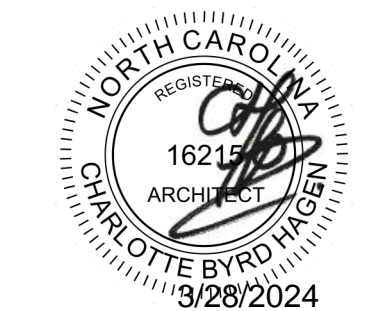
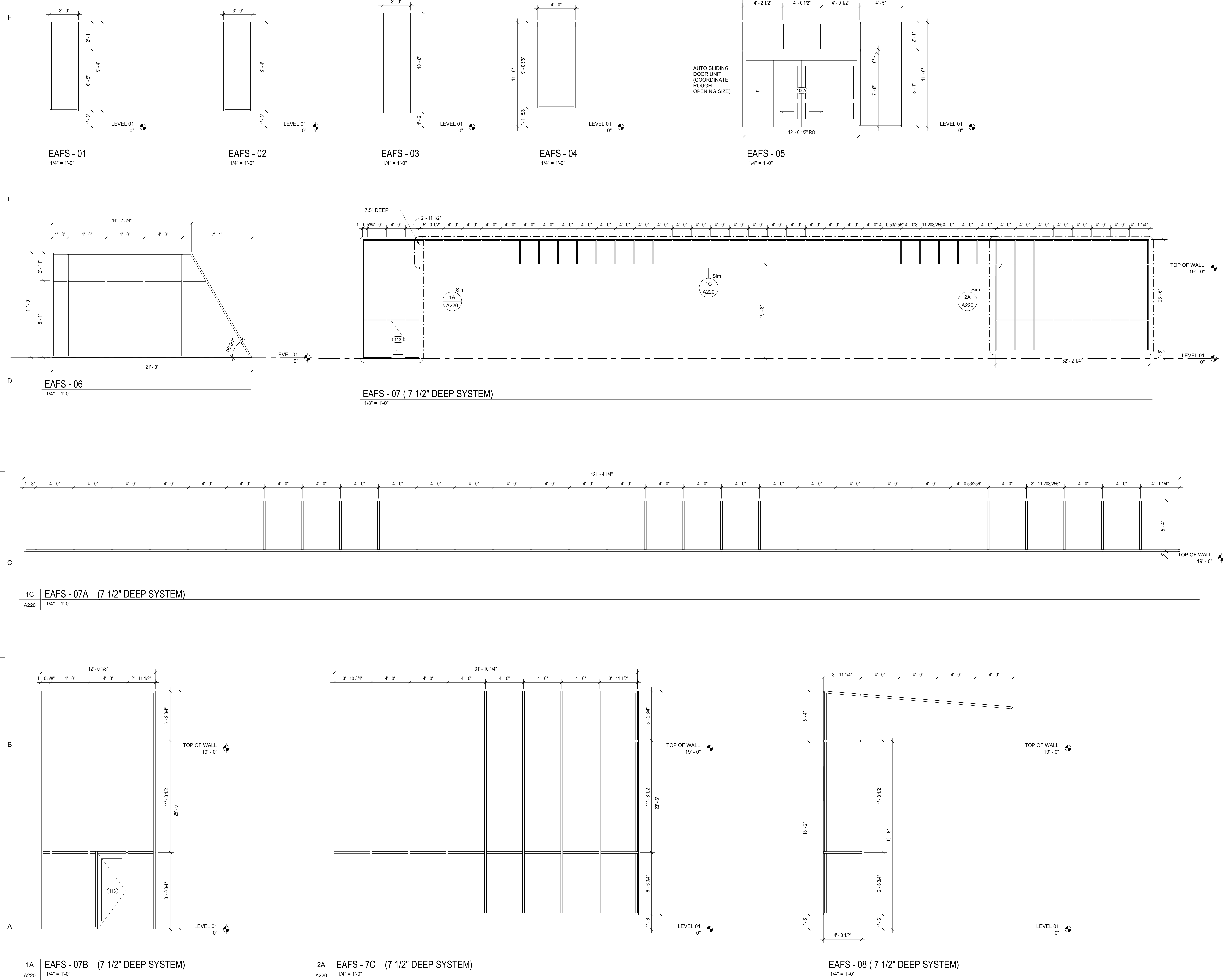
- IG 1 1/4" TEMPERED GLASS
- IG 2 1/4" TEMPERED GLASS (BACKPAINTED)
- IG 3 1/4" TEMPERED GLASS (FROSTED)
- IG 4 1/4" TEMPERED FIRE GLASS
- EG 1 1" TEMPERED INSULATED GLASS
- EG 2 1" TEMPERED INSULATED FIRE GLASS
- EG 3 1" TEMPERED SPANDREL GLASS
- EG 4 1" TEMPERED FRITTED GLASS

GENERAL NOTES

1. ALL ALUMINUM FRAMING SYSTEMS ARE 4 1/2" DEEP UNLESS INDICATED OTHERWISE
2. ALL ALUMINUM FRAMING SYSTEMS TO BE PREFINISHED.
3. ALL GLAZING TO BE EG 1 UNLESS NOTED OTHERWISE
4. ALL STRUCTURAL SUPPORTS FOR ALUMINUM FRAMING SYSTEM TO BE CONCEALED INSIDE MULLIONS OR ABOVE CEILING.
5. OVERALL DIMENSIONS OF ALUMINUM FRAMING SYSTEM TO BE ADJUSTED FOR REQUIRED ROUGH OPENING/CONSTRUCTION TOLERANCES.

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PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

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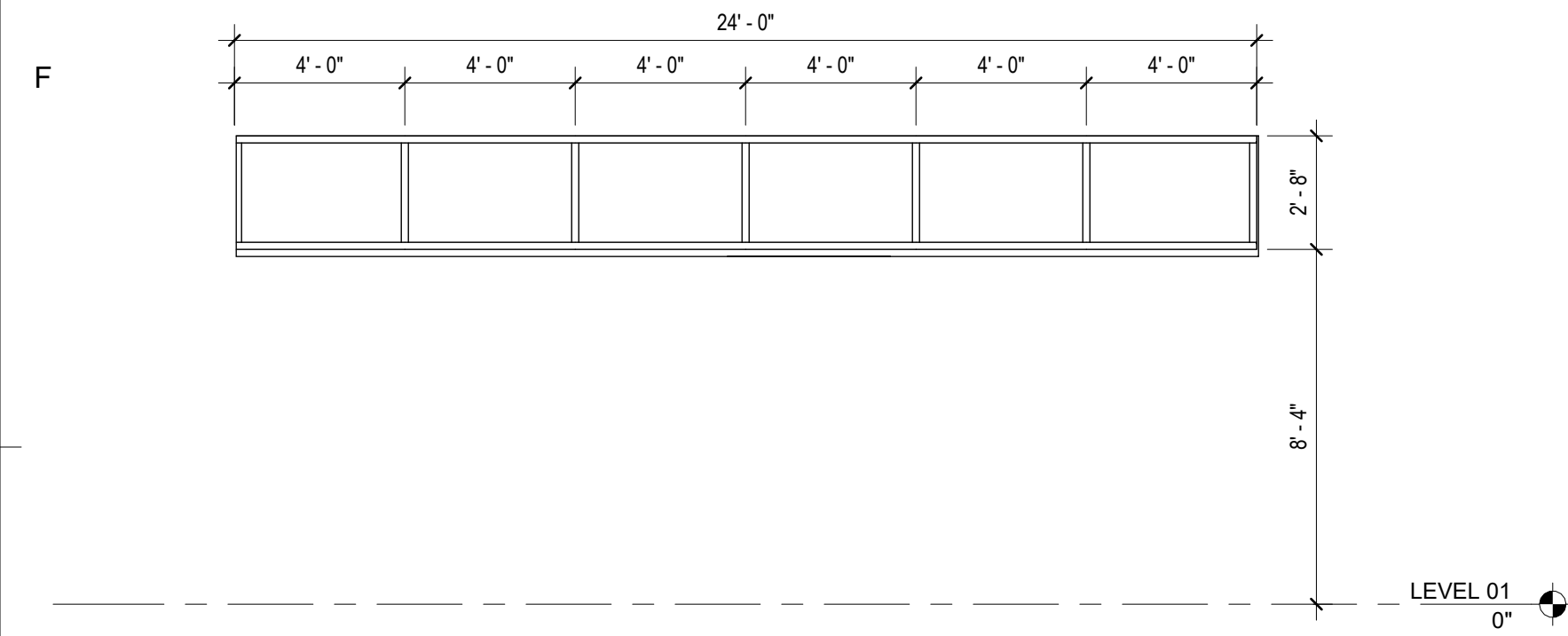
PROJECT NO.
514.18349.00

SHEET TITLE
EXTERIOR FRAMING SYSTEM ELEVATIONS

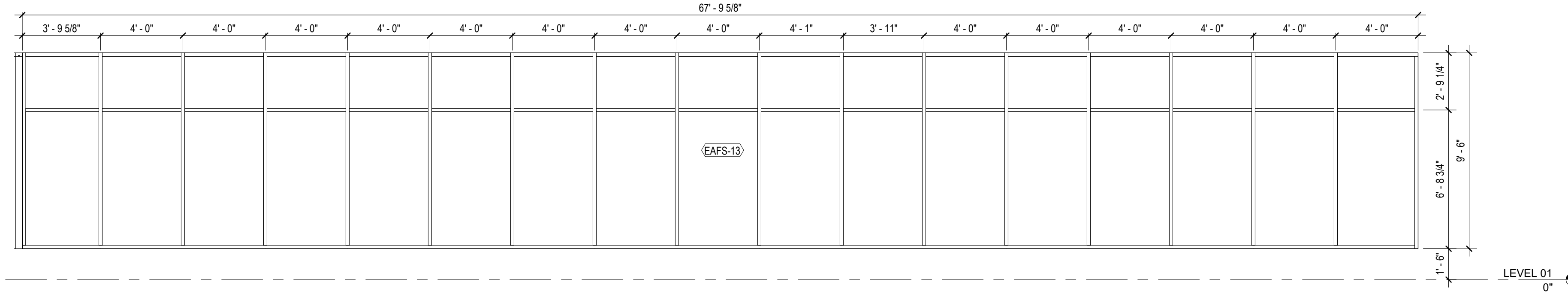
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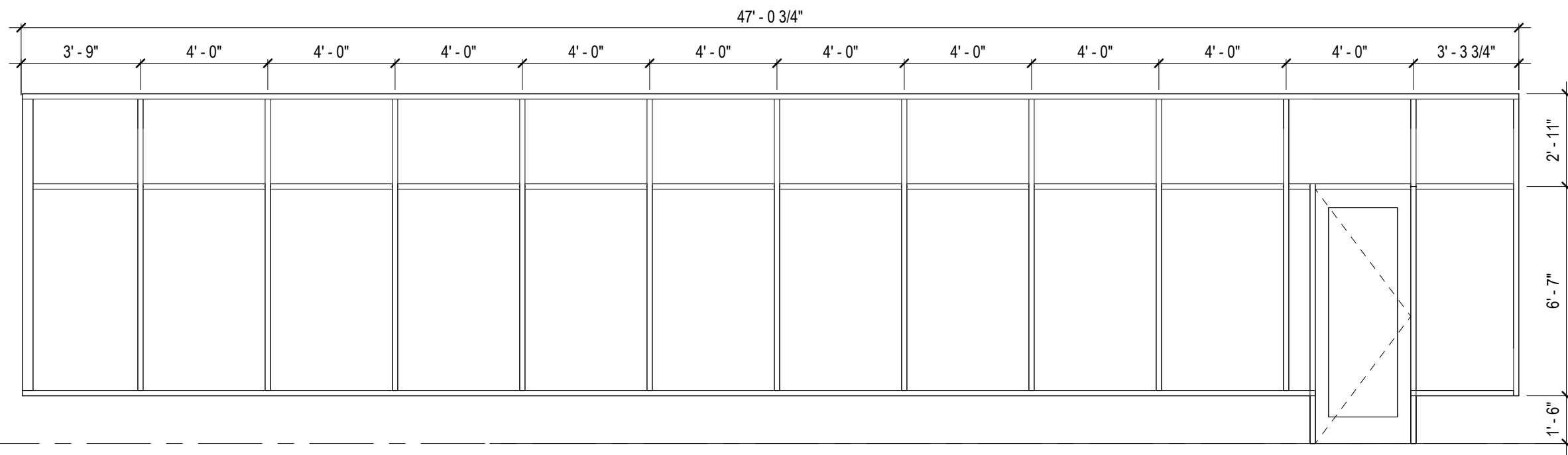
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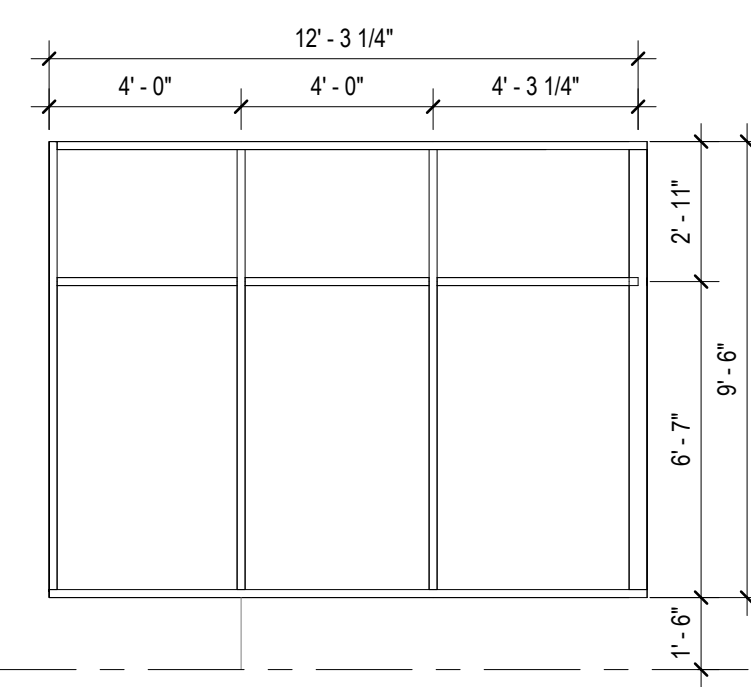
EAFS - 12
1/4" = 1'-0"



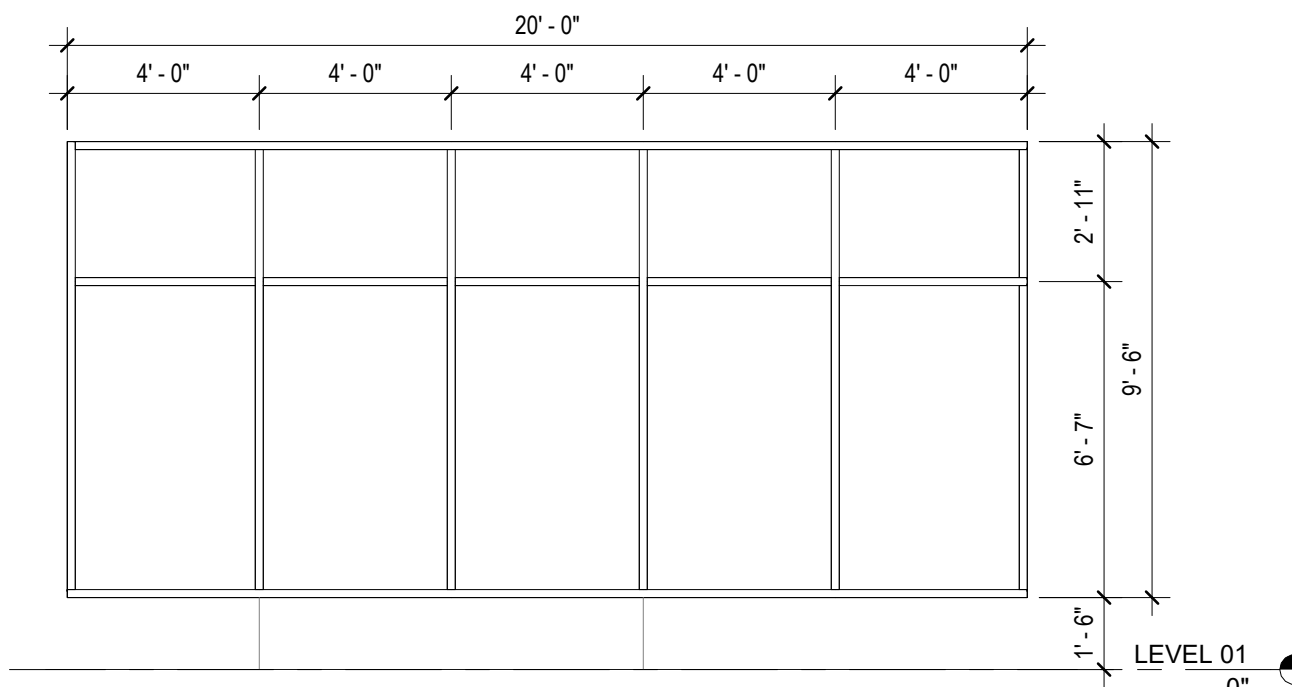
EAFS - 13
1/4" = 1'-0"



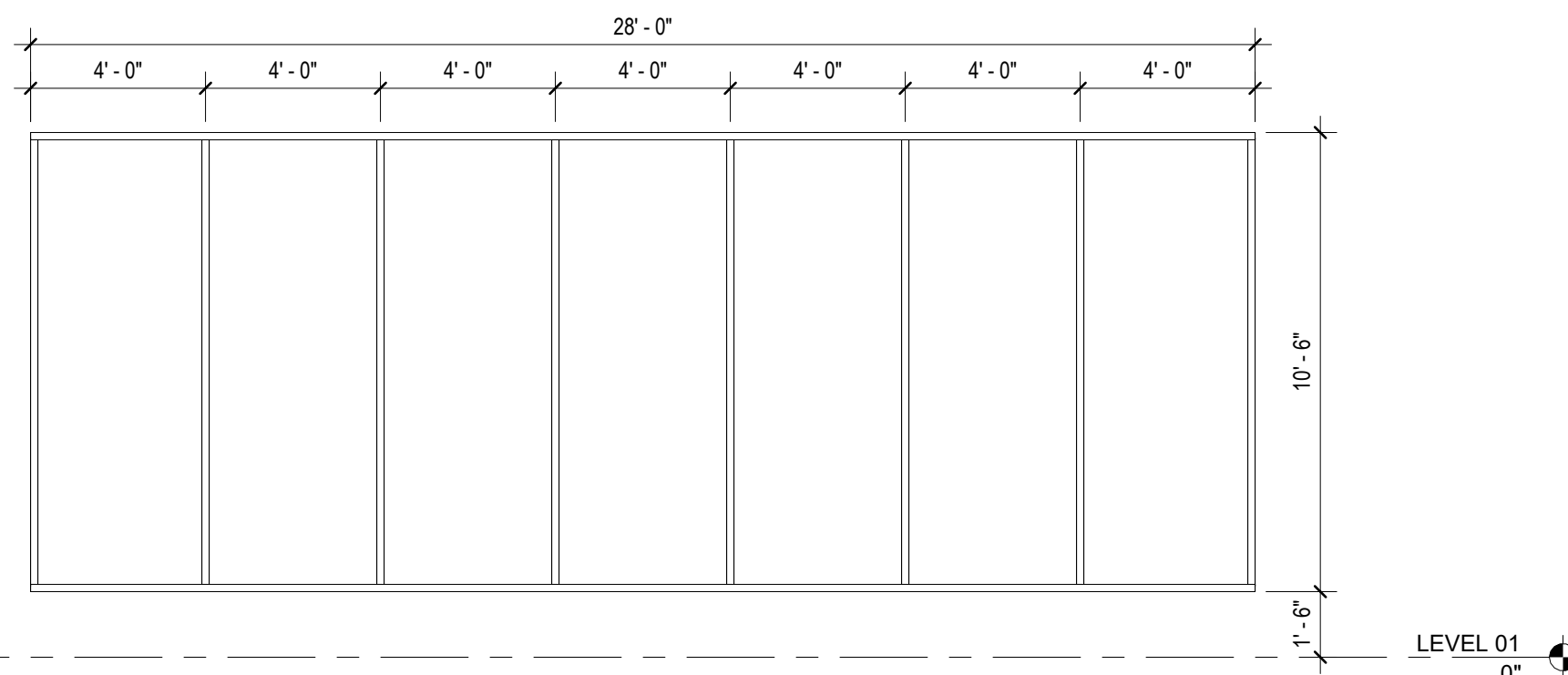
EAFS - 14
1/4" = 1'-0"



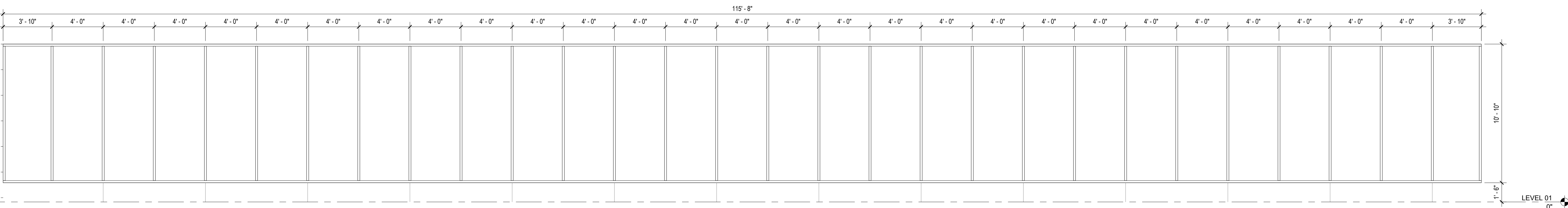
EAFS - 17
1/4" = 1'-0"



EAFS - 18
1/4" = 1'-0"



EAFS - 19
1/4" = 1'-0"



EAFS - 20
1/4" = 1'-0"

GLAZING LEGEND

- IG 1 1/4" TEMPERED GLASS
- IG 2 1/4" TEMPERED GLASS (BACKPAINTED)
- IG 3 1/4" TEMPERED GLASS (FROSTED)
- IG 4 1/4" TEMPERED FIRE GLASS
- EG 1 1" TEMPERED INSULATED GLASS
- EG 2 1" TEMPERED INSULATED FIRE GLASS
- EG 3 1" TEMPERED SPANDREL GLASS
- EG 4 1" TEMPERED FRITTED GLASS

GENERAL NOTES

1. ALL ALUMINUM FRAMING SYSTEMS ARE 4 1/2" DEEP UNLESS INDICATED OTHERWISE
2. ALL ALUMINUM FRAMING SYSTEMS TO BE PREFINISHED.
3. ALL GLAZING TO BE EG 1 UNLESS NOTED OTHERWISE
4. ALL STRUCTURAL SUPPORTS FOR ALUMINUM FRAMING SYSTEM TO BE CONCEALED INSIDE MULLIONS OR ABOVE CEILING.
5. OVERALL DIMENSIONS OF ALUMINUM FRAMING SYSTEM TO BE ADJUSTED FOR REQUIRED ROUGH OPENING/CONSTRUCTION TOLERANCES.

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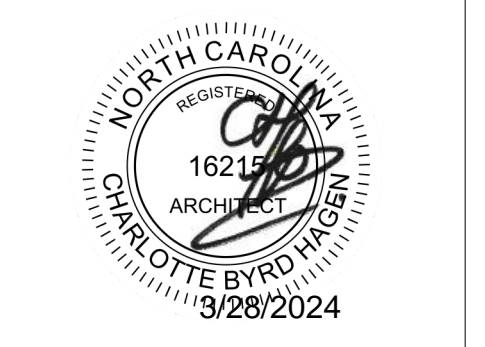
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Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

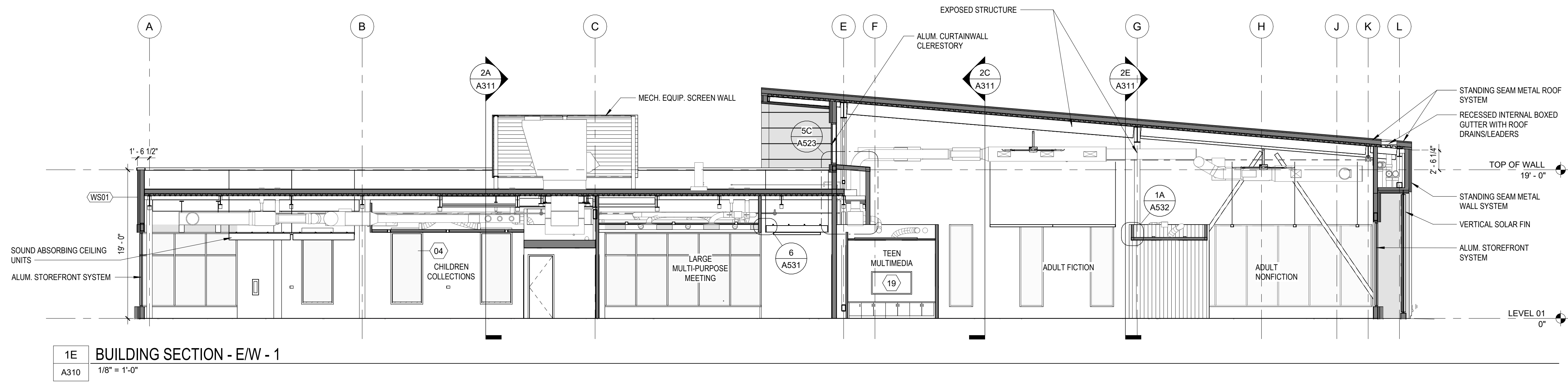
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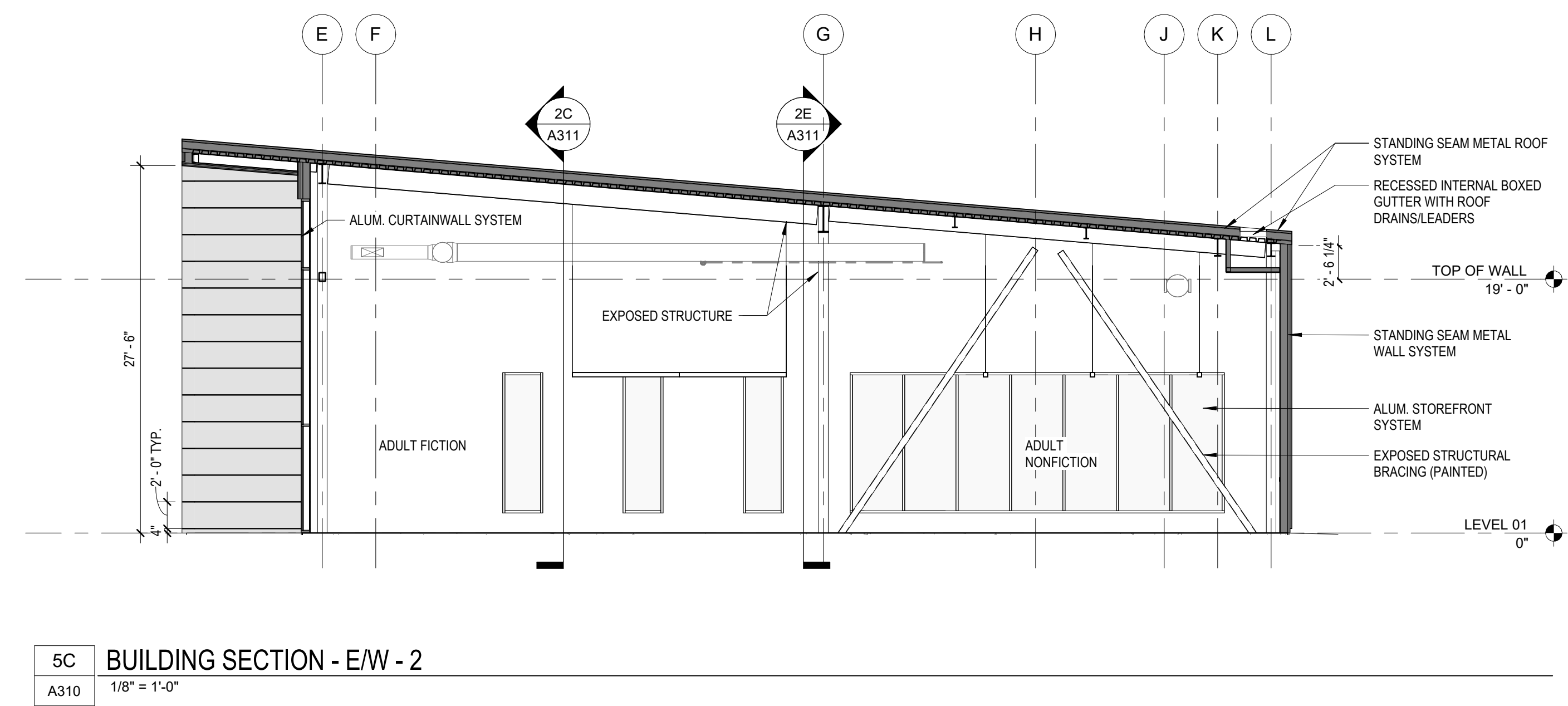
SHEET TITLE
EXTERIOR FRAMING SYSTEM ELEVATIONS

SHEET NUMBER
A221

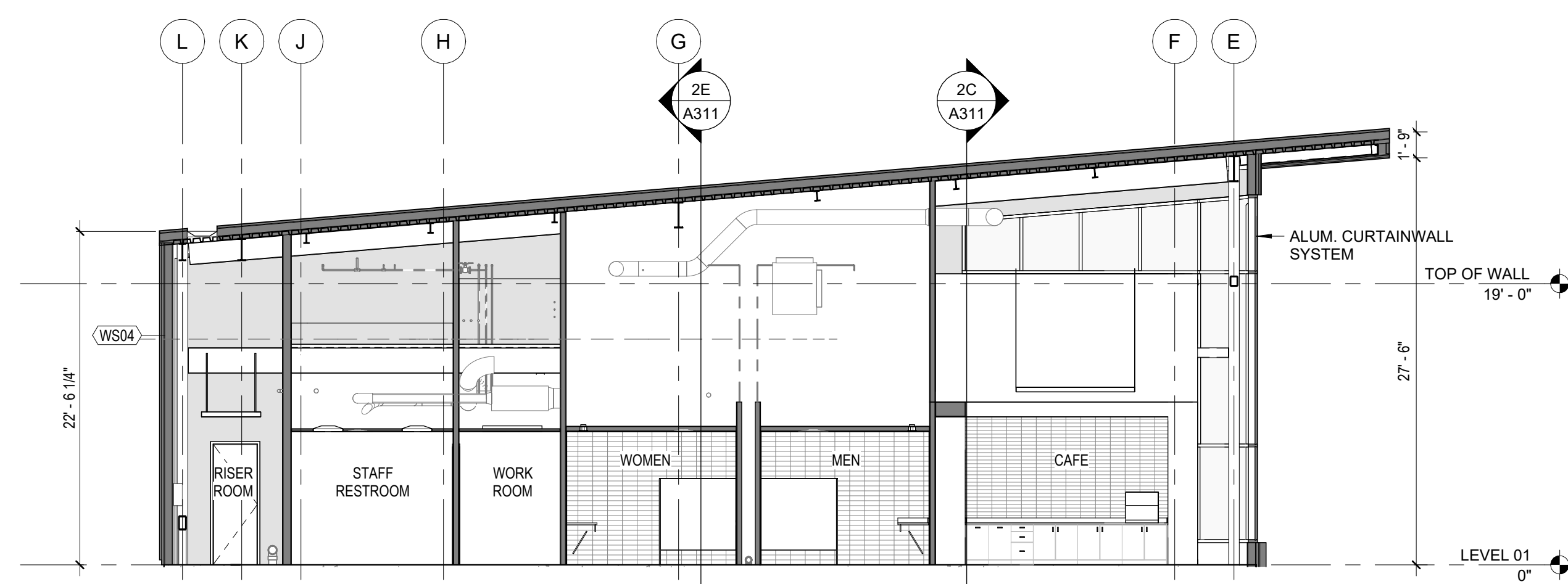
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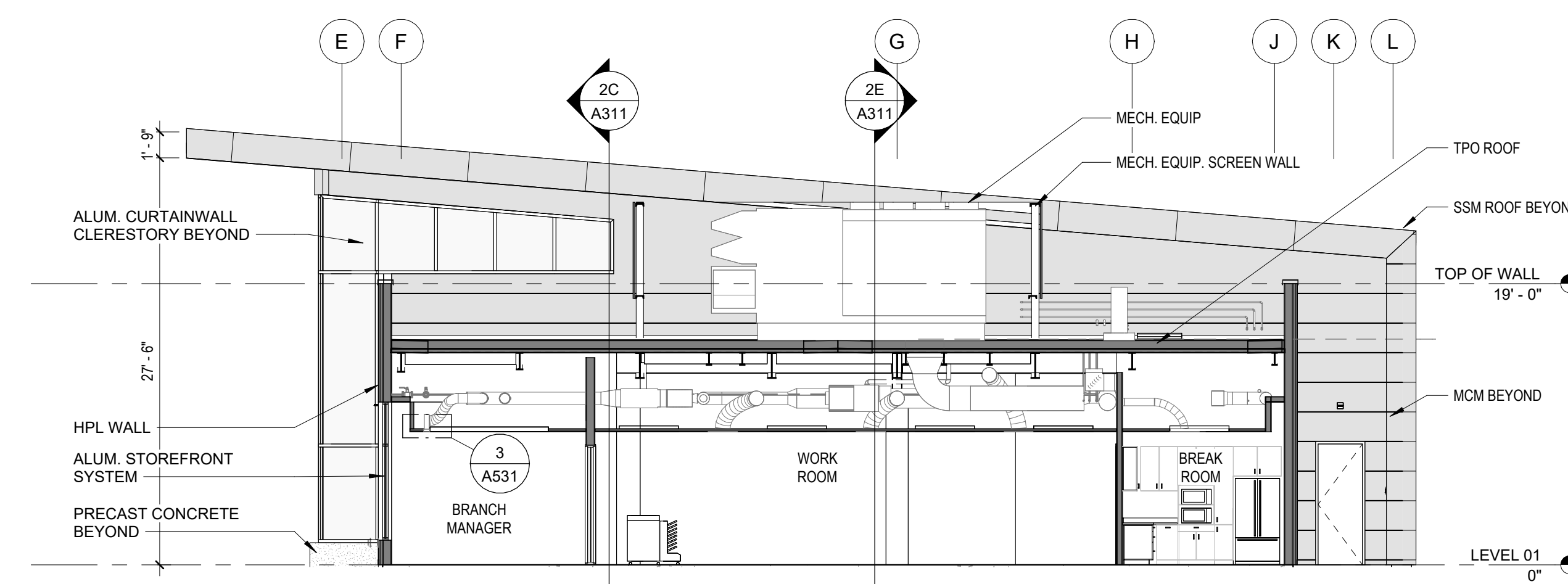
1E BUILDING SECTION - E/W - 1
A310 1/8" = 1'-0"



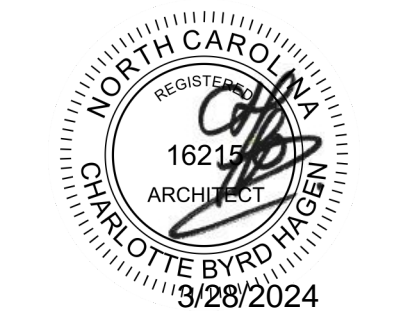
5C BUILDING SECTION - E/W - 2
A310 1/8" = 1'-0"



1A BUILDING SECTION - E/W CAFE RR
A310 1/8" = 1'-0"



5A BUILDING SECTION - E/W WORKROOM
A310 1/8" = 1'-0"



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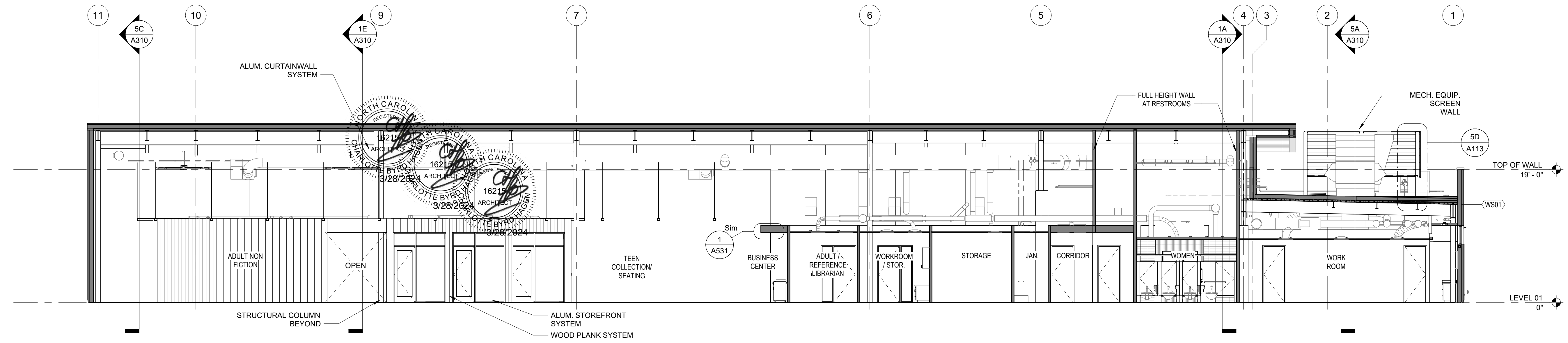
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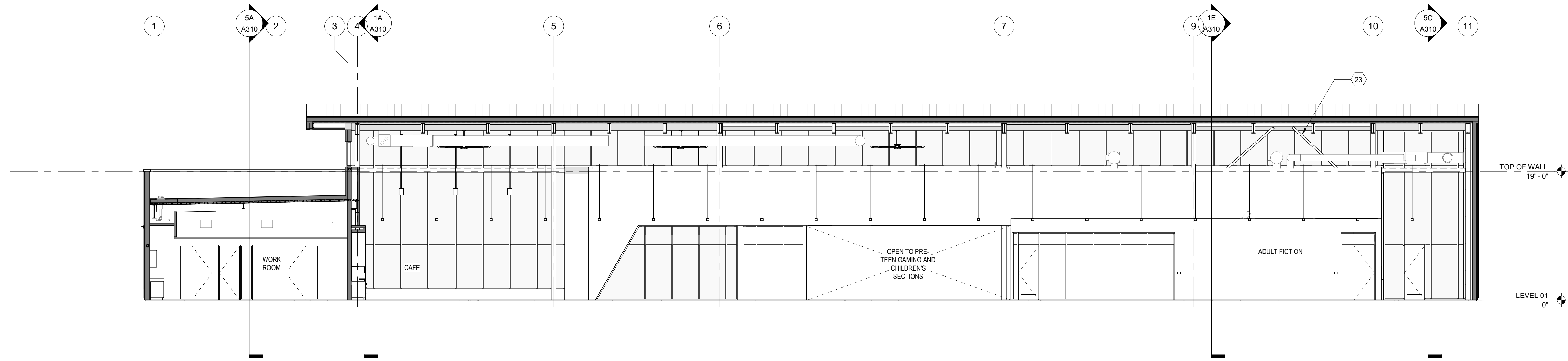
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SHEET TITLE
BUILDING SECTIONS E/W

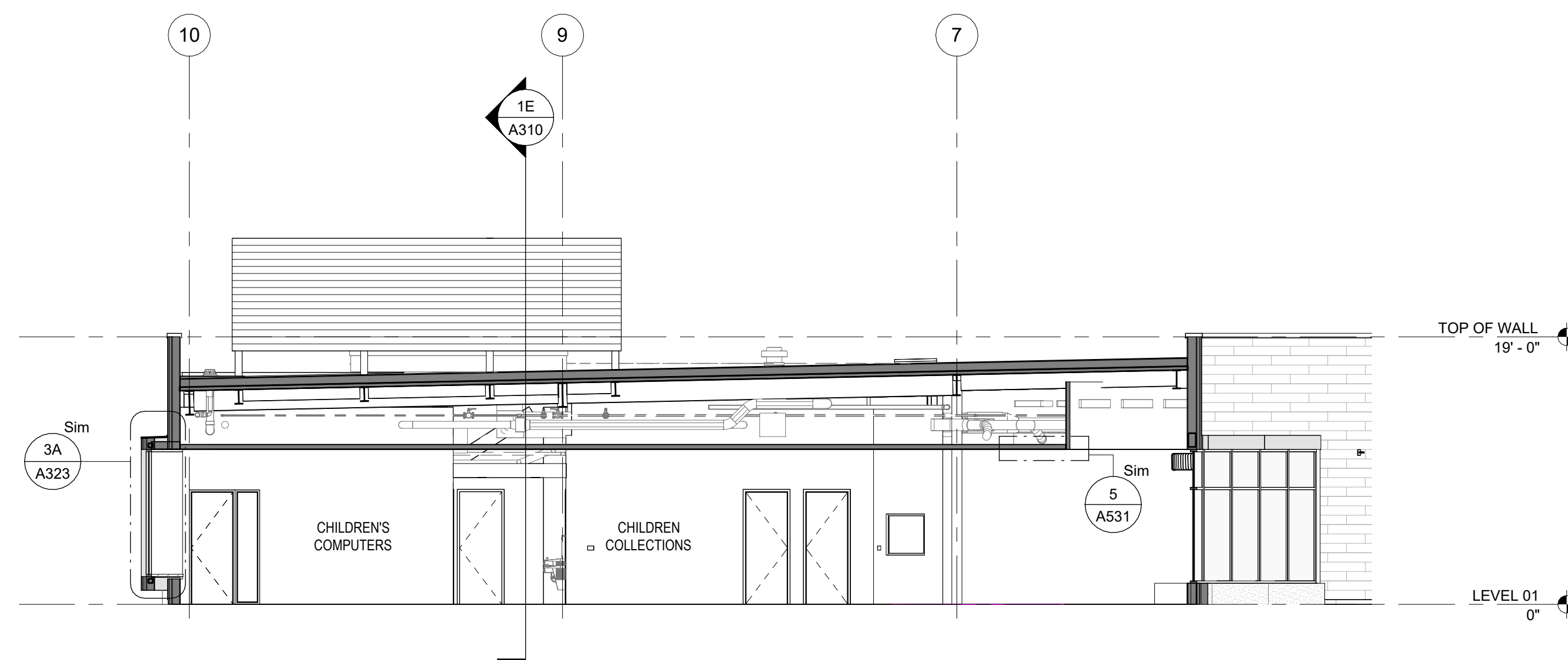
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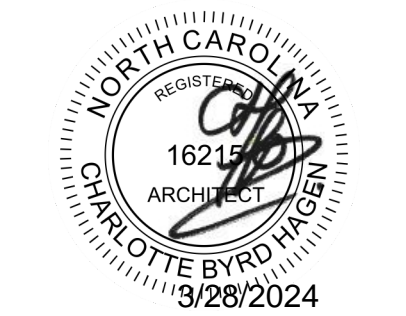
2E BUILDING SECTION - N/S -1
A311 1/8" = 1'-0"



2C BUILDING SECTION - N/S -2
A311 1/8" = 1'-0"



2A BUILDING SECTION - N/S -3
A311 1/8" = 1'-0"



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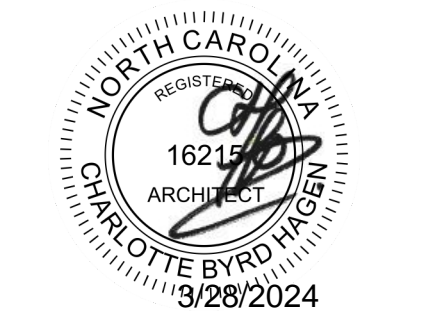
REVISIONS
NO. REASON DATE

PROJECT TEAM
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Charlotte Hagen, AIA
DESIGN TEAM
Designer

PROJECT NAME
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PROJECT NO.
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SHEET TITLE
BUILDING SECTIONS N/S

SHEET NUMBER
A311



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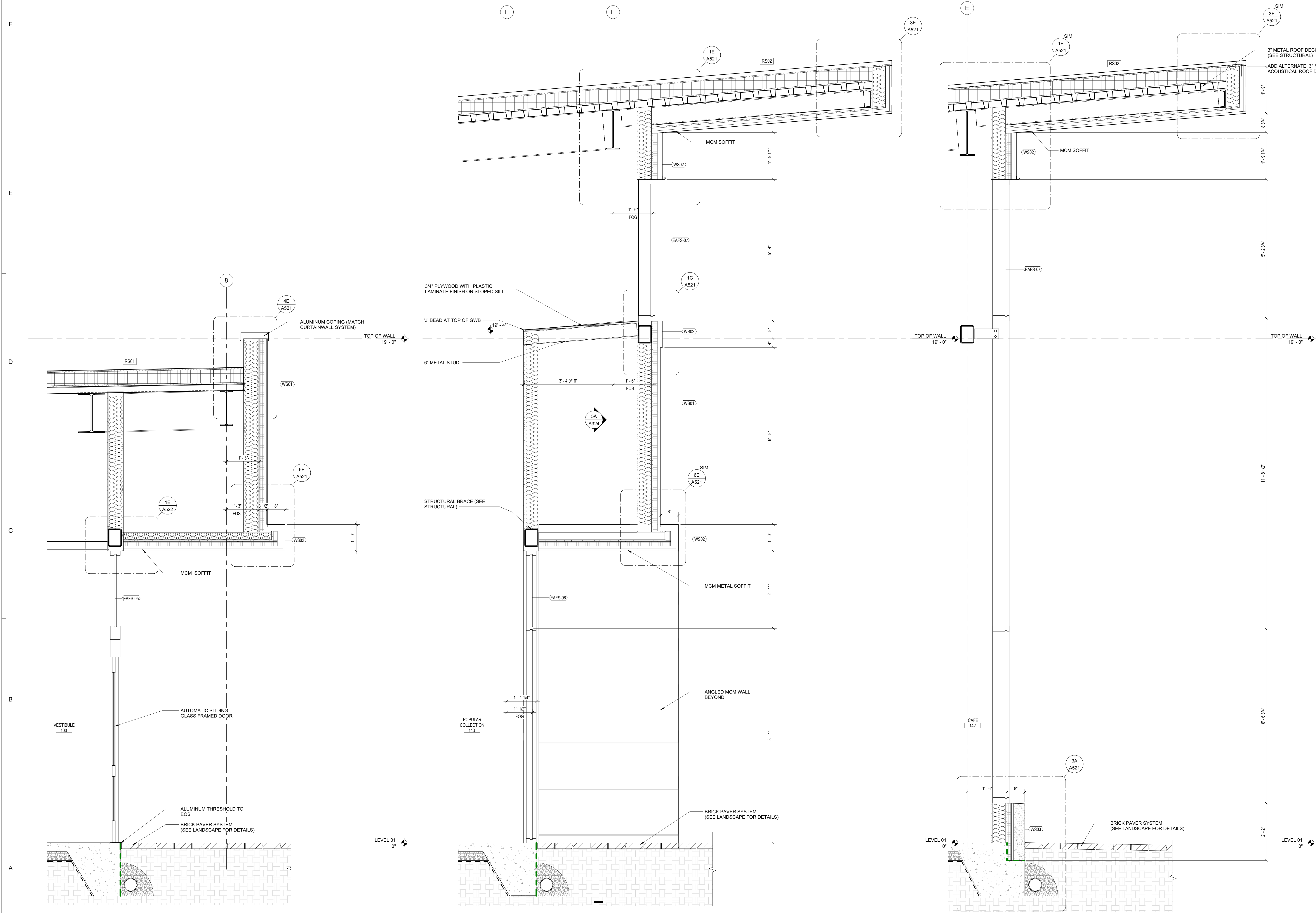
PROJECT TEAM
PRINCIPAL IN CHARGE
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PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

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PROJECT NO.
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SHEET TITLE
WALL SECTIONS

SHEET NUMBER
A320



1A WALL SECTION - VESTIBULE
A320 3/4" = 1'-0"

3A WALL SECTION - ADULT POPULAR
A320 3/4" = 1'-0"

6A WALL SECTION - CAFE
A320 3/4" = 1'-0"

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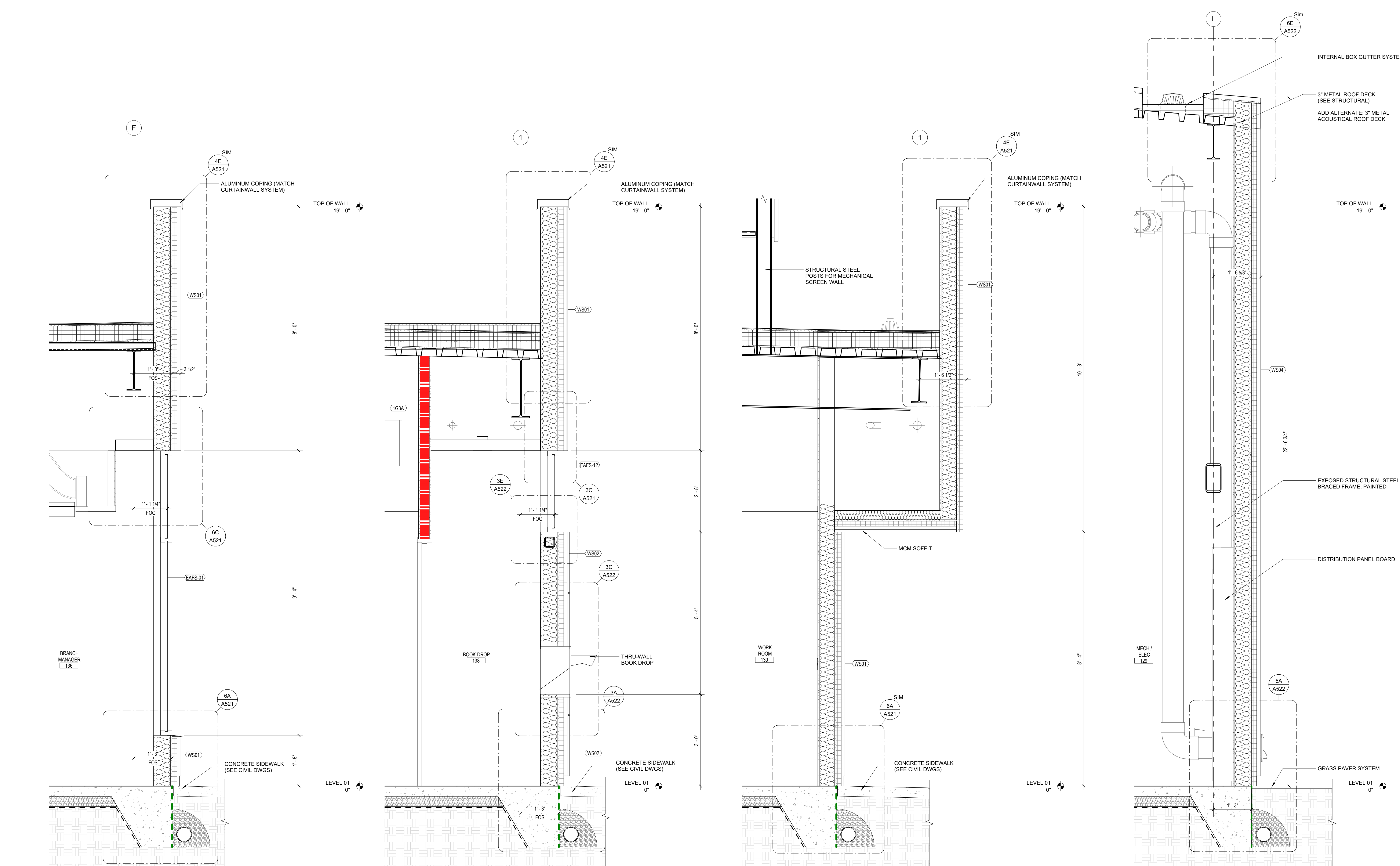
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Wilmington NC 28405

PROJECT NO.
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SHEET TITLE
WALL SECTIONS

SHEET NUMBER
A321

F
E
D
C
B
A



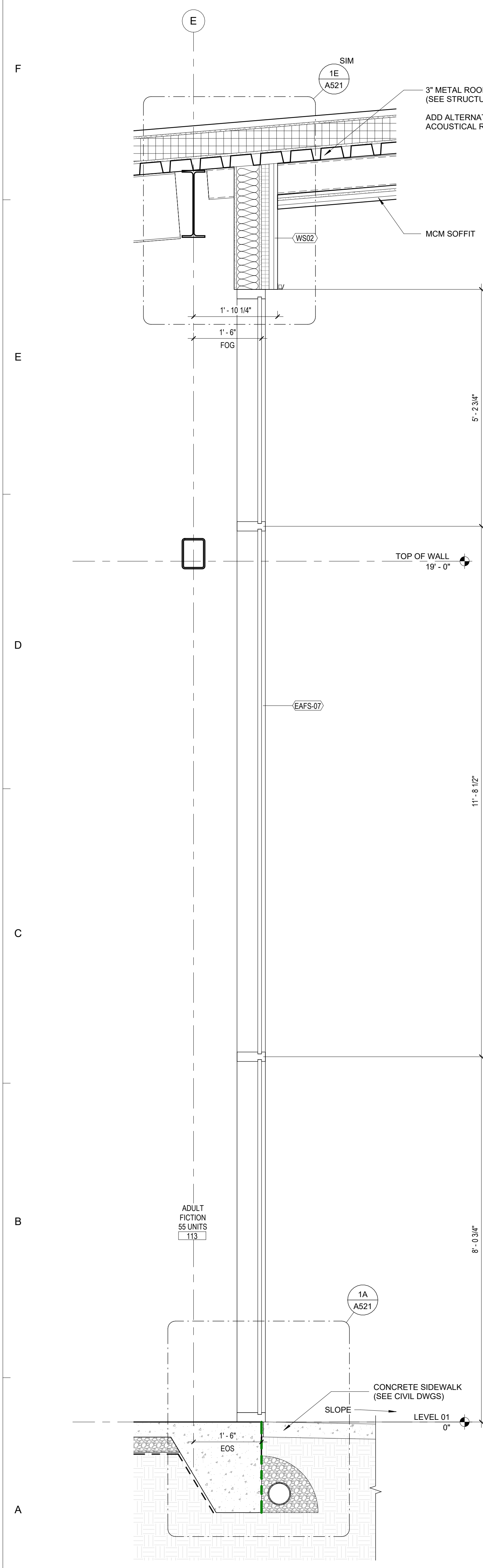
1A WALL SECTION - OFFICE
A321 3/4" = 1'-0"

3A WALL SECTION - BOOK DROP
A321 3/4" = 1'-0"

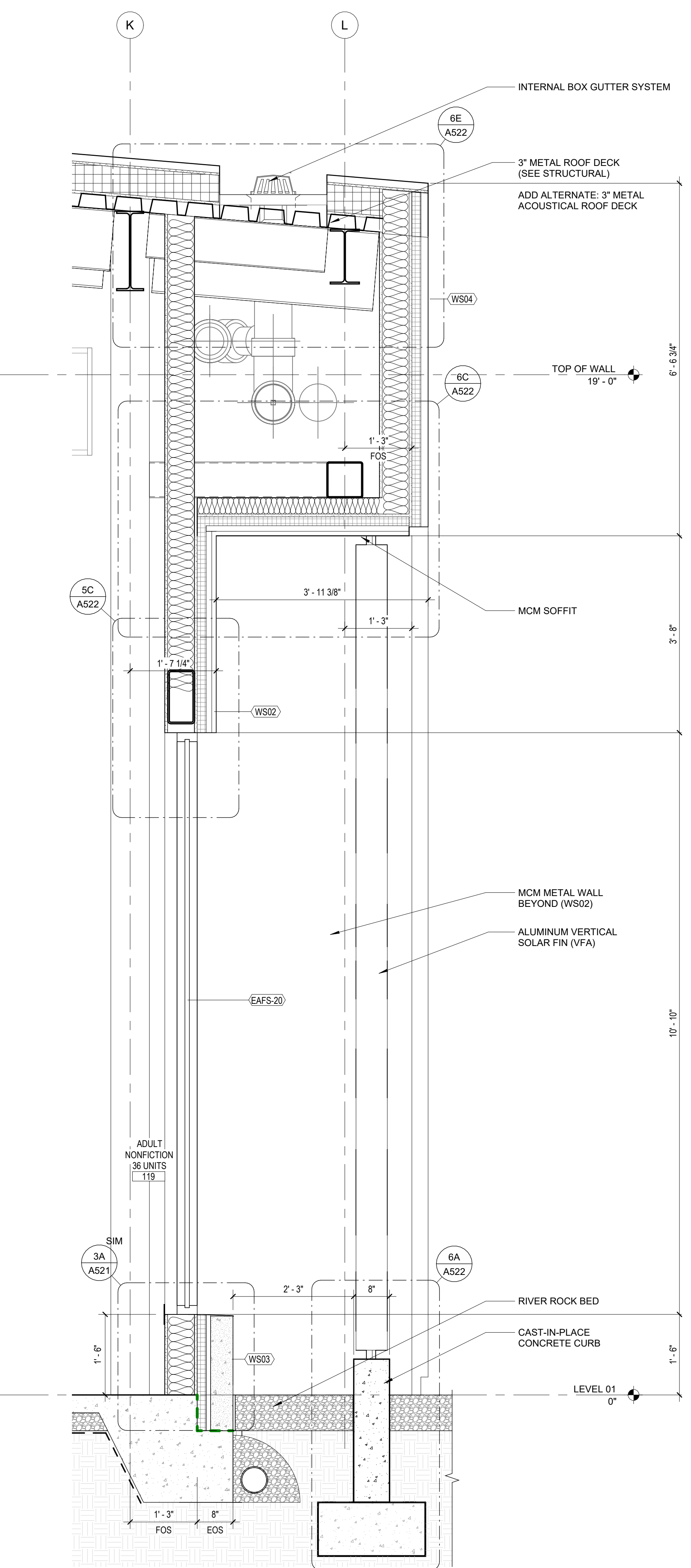
4A WALL SECTION - WORK ROOM ENTRY
A321 3/4" = 1'-0"

6A WALL SECTION - MECH / ELEC
A321 3/4" = 1'-0"

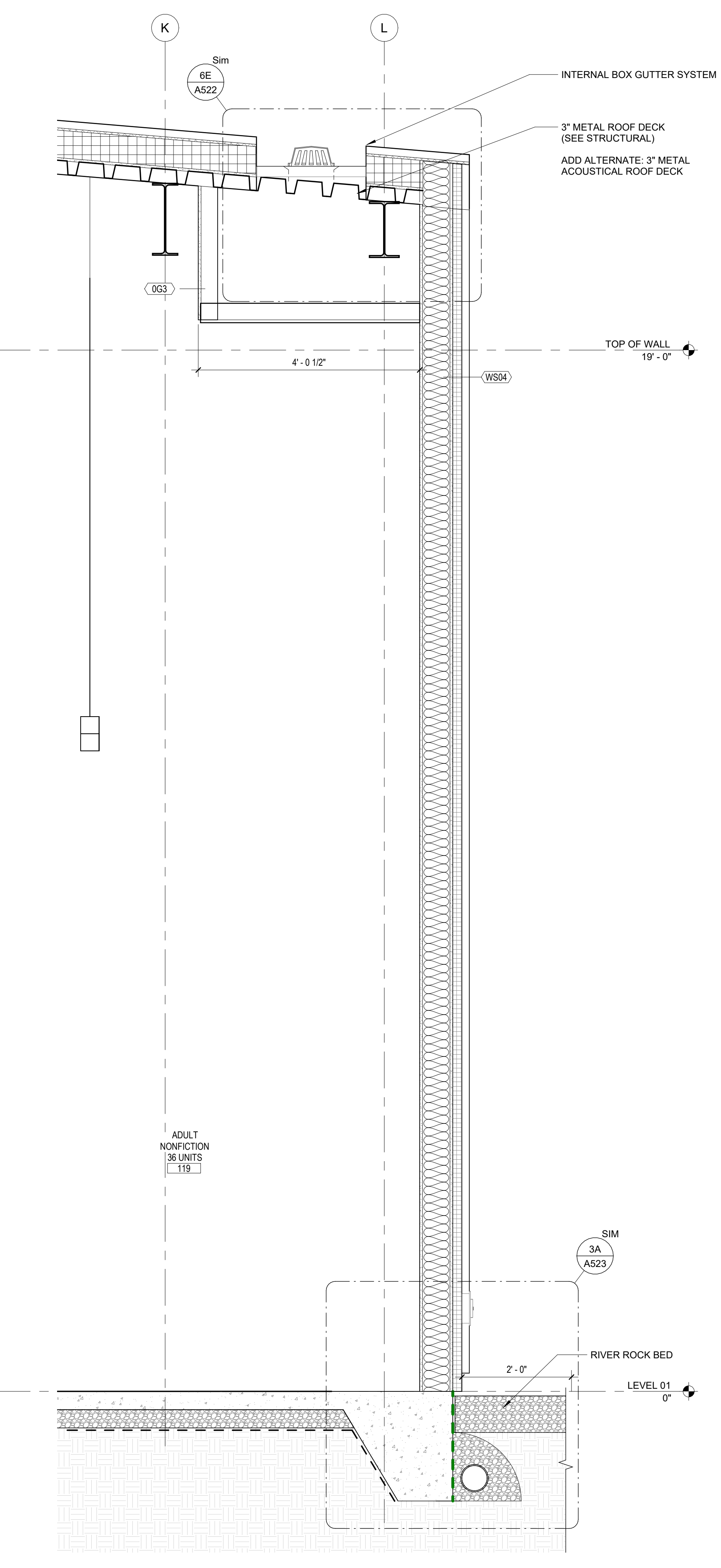
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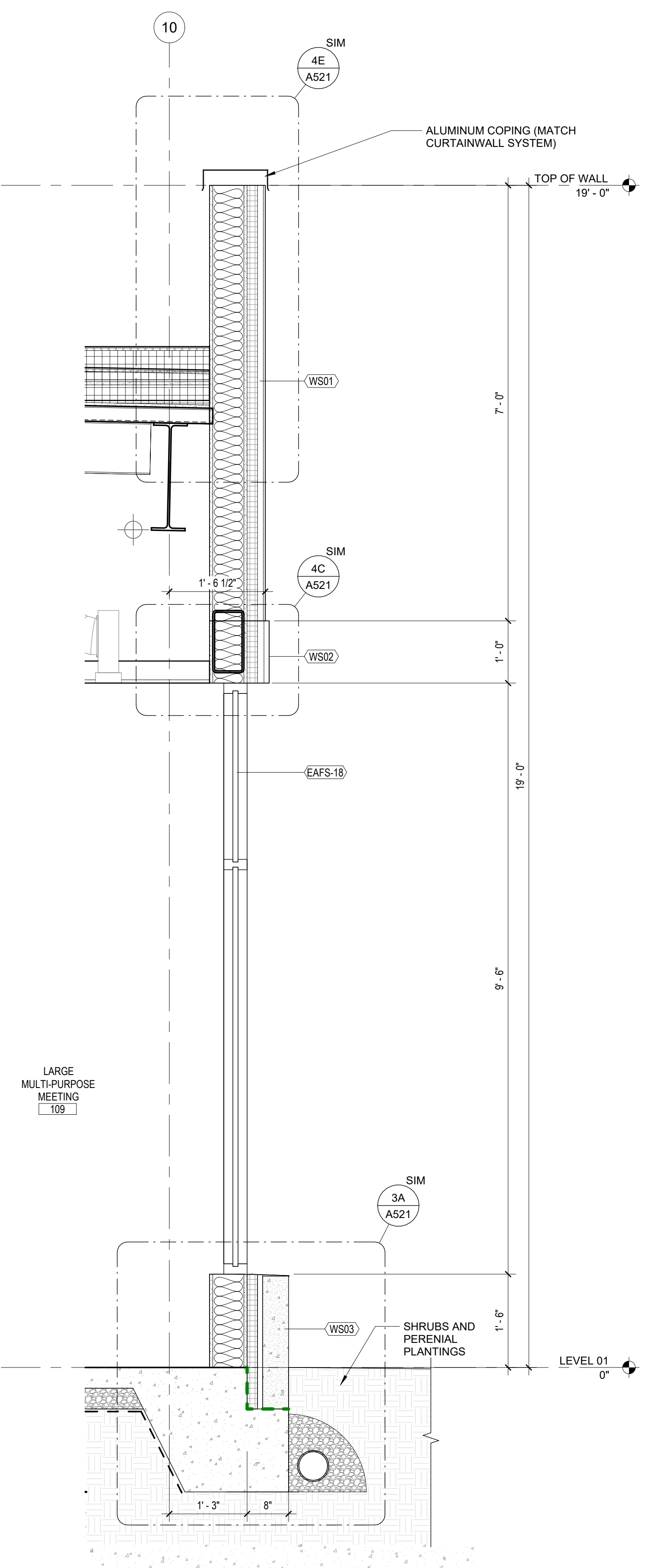
1A WALL SECTION - ADULT FICTION EXIT
A322 3/4" = 1'-0"



2A WALL SECTION - ADULT NONFICTION SOLAR FIN
A322 3/4" = 1'-0"



5A WALL SECTION - ADULT NON-FICTION
A322 3/4" = 1'-0"



6A WALL SECTION - MULTI-PURPOSE
A322 3/4" = 1'-0"



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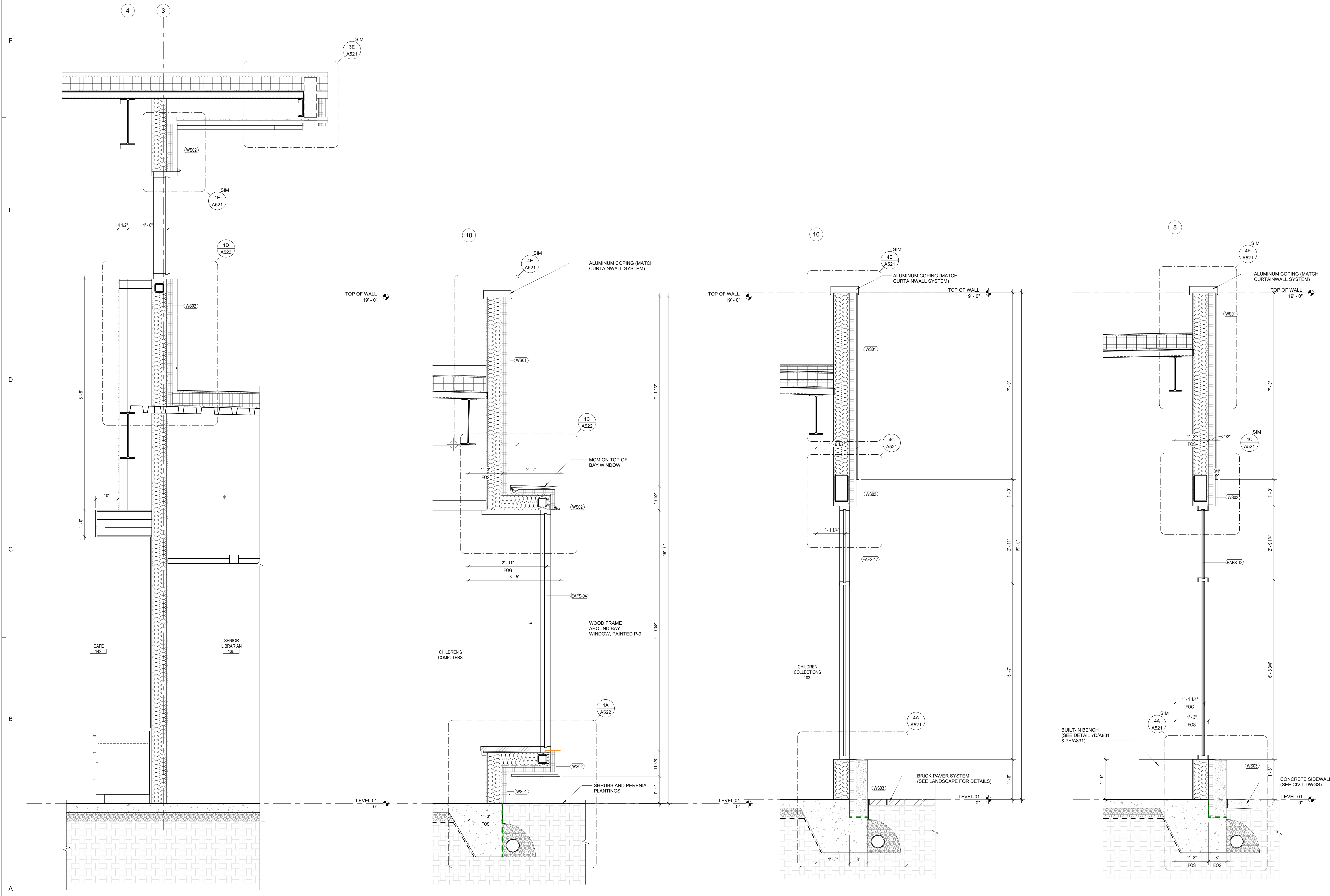
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SHEET TITLE
WALL SECTIONS

SHEET NUMBER
A322

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1A WALL SECTION - CAFE CLERESTORY
A323 3/4" = 1'-0"

3A WALL SECTION - BAY WINDOW
A323 3/4" = 1'-0"

5A WALL SECTION - PLAYZONE
A323 3/4" = 1'-0"

6A WALL SECTION - CHILDRENS BENCH
A323 3/4" = 1'-0"



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BID SET

ISSUE DATE
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REVISIONS
NO. REASON DATE

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

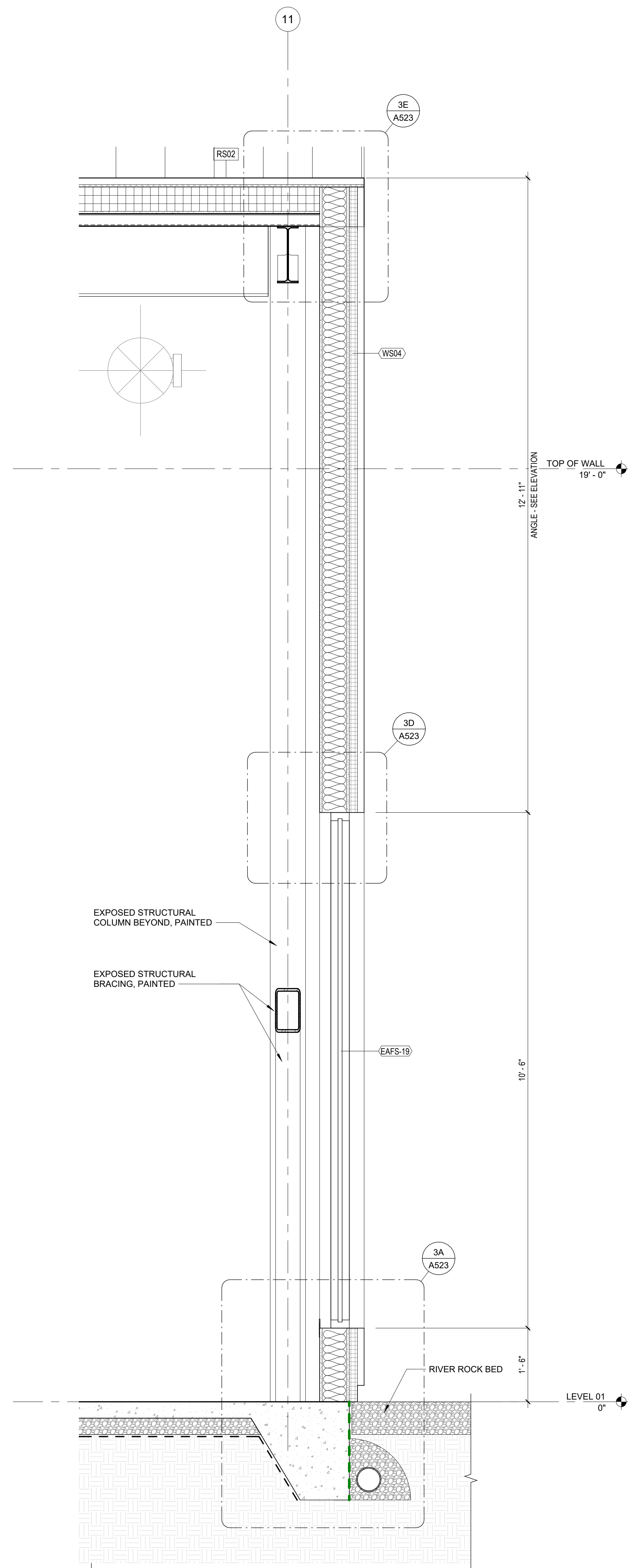
NORTHCHASE BRANCH
LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

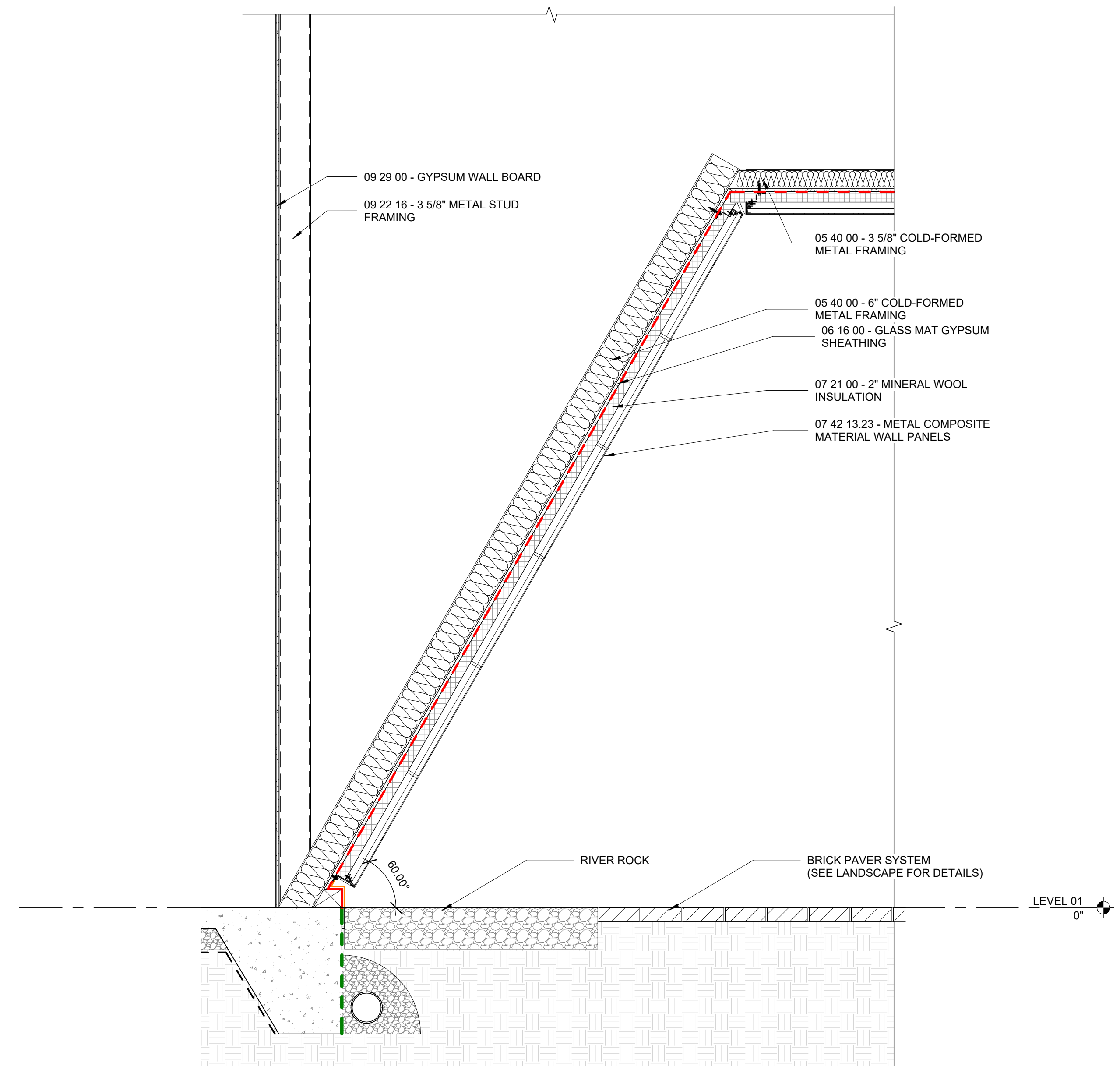
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WALL SECTIONS

SHEET NUMBER
A323

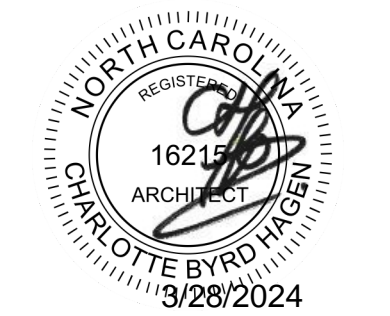
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3A WALL SECTION - ADULT NONFICTION STOREFRONT
A324 3/4" = 1'-0"



5A WALL SECTION - THRU ANGLED HPL WALL
A324 3/4" = 1'-0"



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Designer

NORTHCHASE BRANCH LIBRARY
4400 Northchase Parkway NE
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PROJECT NO.
514.18349.00

SHEET TITLE
WALL SECTIONS

SHEET NUMBER
A324

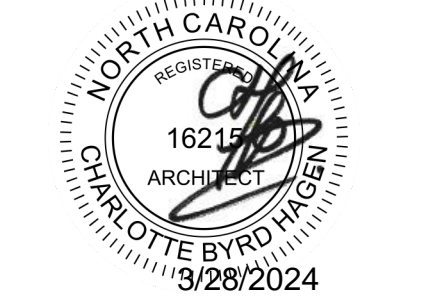


SHEET GENERAL NOTES

- PROVIDE LATCH ASSEMBLY FOR DOUBLE MECHANICAL SCREEN DOORS. PROVIDE CANE BOLT RELEASE AT FIXED DOOR. PROVIDE INTERIOR LATCH RELEASE. PULL HANDLE ON OPERABLE LEAF OF DOOR TO BE STAINLESS STEEL.
- PROVIDE HOLD BACKS WITH SLEEVES IN CONCRETE FOR DUMPSTER GATES.

BASIS OF DESIGN

- HPL PRODUCT**
- PARKLEX PRODEMA - NATURSIDING ONESIDING
 - 8' x 96" PANEL SIZE
 - CINDER COLOR
 - CONCEALED FASTENERS WITH ONESIDING CLIP
- ACM AND COPING**
- MATCH TO STOREFRONT COLOR
- SSMS WALL**
- METAL ROOFING SYSTEMS: MRS S-2000 WALL PANEL
 - 1.75" SNAP LOCK
 - CHARCOAL GREY COLOR
- SSMS ROOF**
- METAL ROOFING SYSTEMS: MRS S-2500 PANEL
 - 2" DOUBLE LOCK SEAM
 - CHARCOAL GREY COLOR
- ALUMINUM VERTICAL SOLAR FINS (VERTICAL FIN ASSEMBLY)**
- OHIO GRATINGS, INC.
 - 15" TALL, 8" AIRFOIL EXTRUSION
 - CUSTOM KYNAR PAINT FINISH
 - TOP AND BOTTOM MOUNTS
- ALUMINUM HORIZONTAL SOLAR FINS (HORIZONTAL FIN ASSEMBLY)**
- OHIO GRATINGS, INC.
 - 4" AIRFOIL EXTRUSION
 - FACTORY MADE CORNERS
 - END CAPS AT TERMINATIONS
 - CUSTOM KYNAR PAINT FINISH
 - ATTACHED TO ALLIGATOR CLIPS ON SUBSTRUCTURE
- MECH SCREEN WALL / DUMPSTER WALL (LOUVERED EQUIPMENT ENCLOSURES)**
- ARCHITECTURAL LOUVERS
 - FORMED ALUMINUM PANEL
 - V2THS SCREEN
 - 5" OC BLADE SPACING
 - COLOR TO MATCH MCM



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Charlotte Hagen, AIA

DESIGN TEAM
Designer

PROJECT NAME

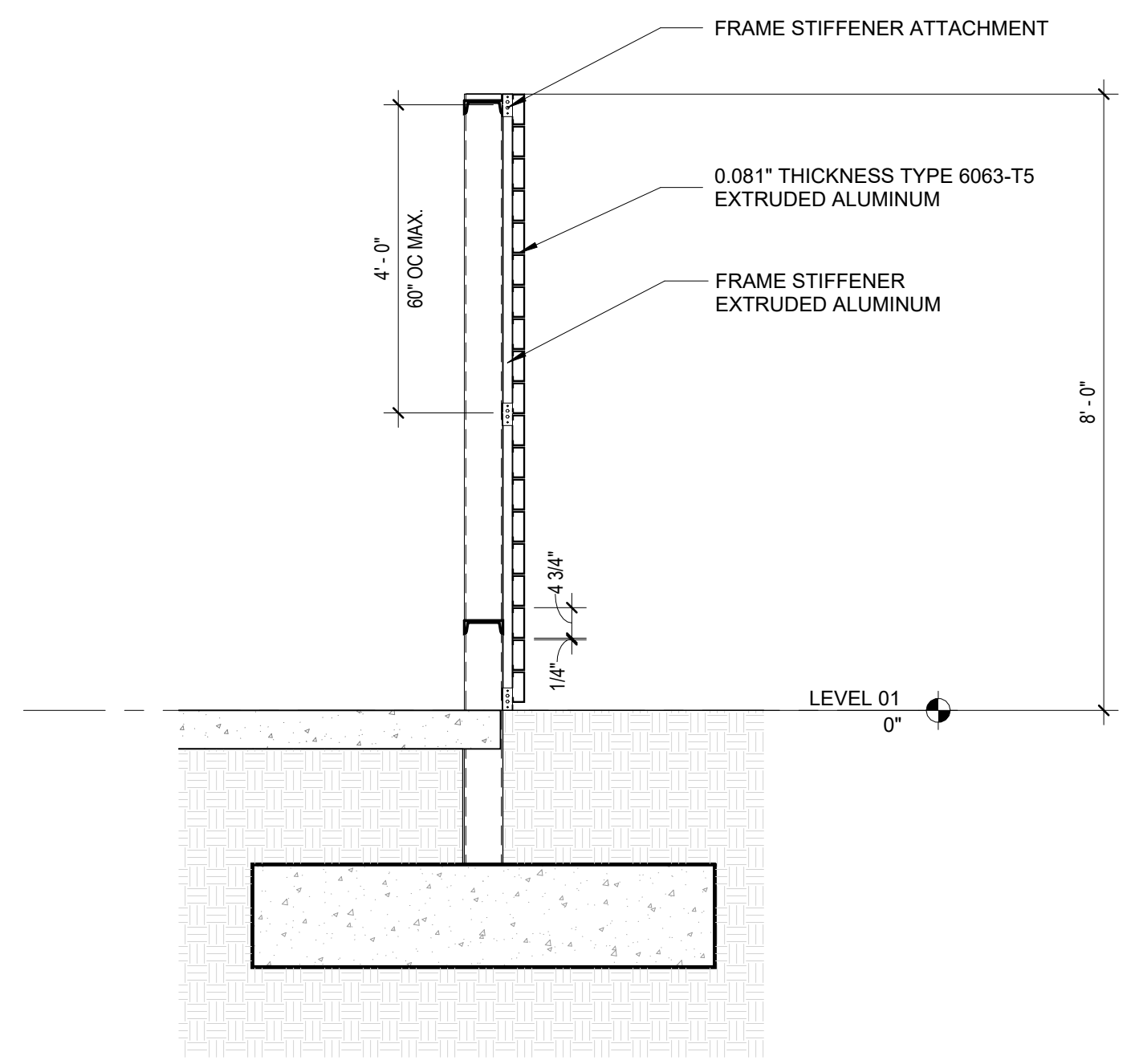
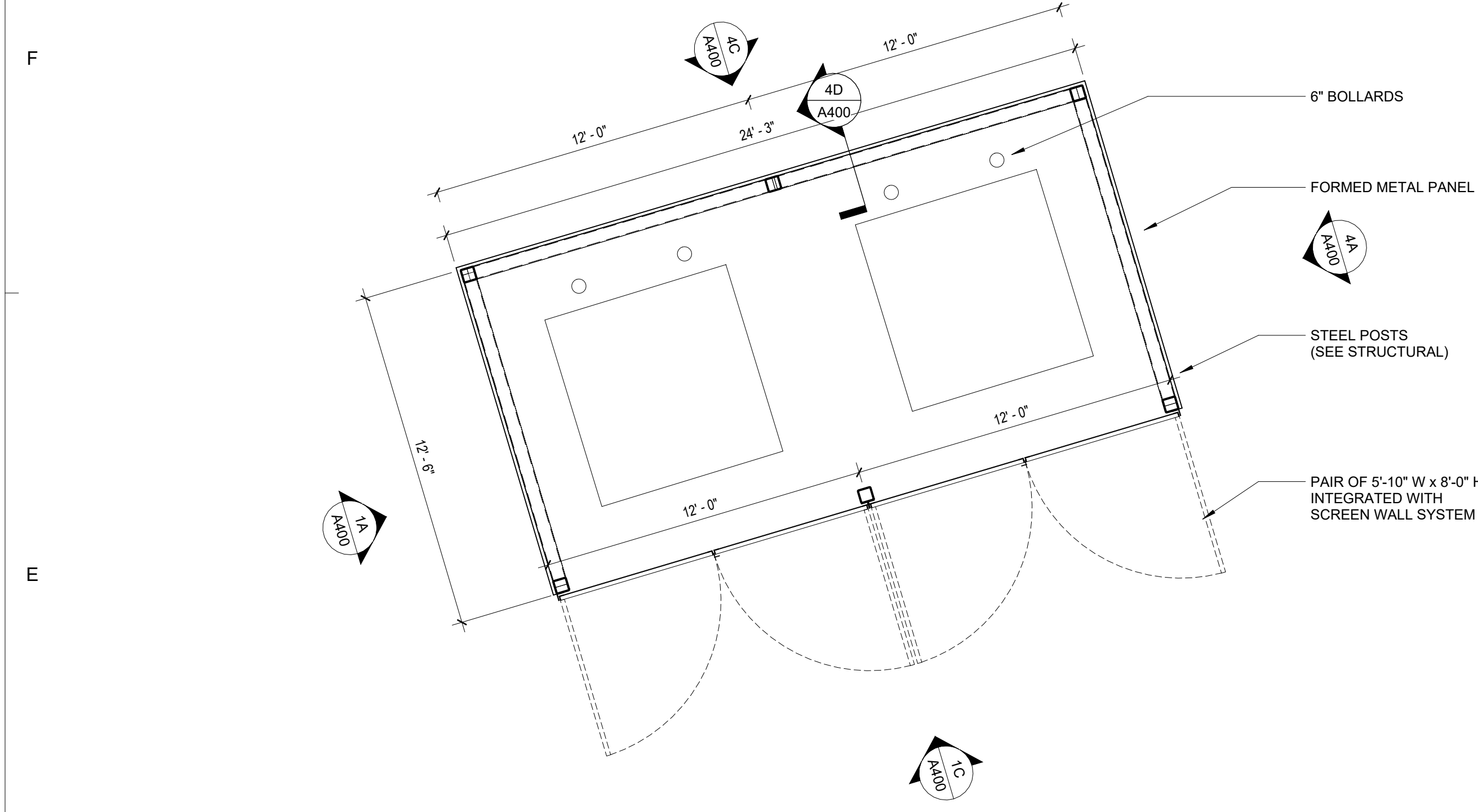
NORTHCHASE BRANCH LIBRARY

4400 Northchase Parkway NE
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PROJECT NO.
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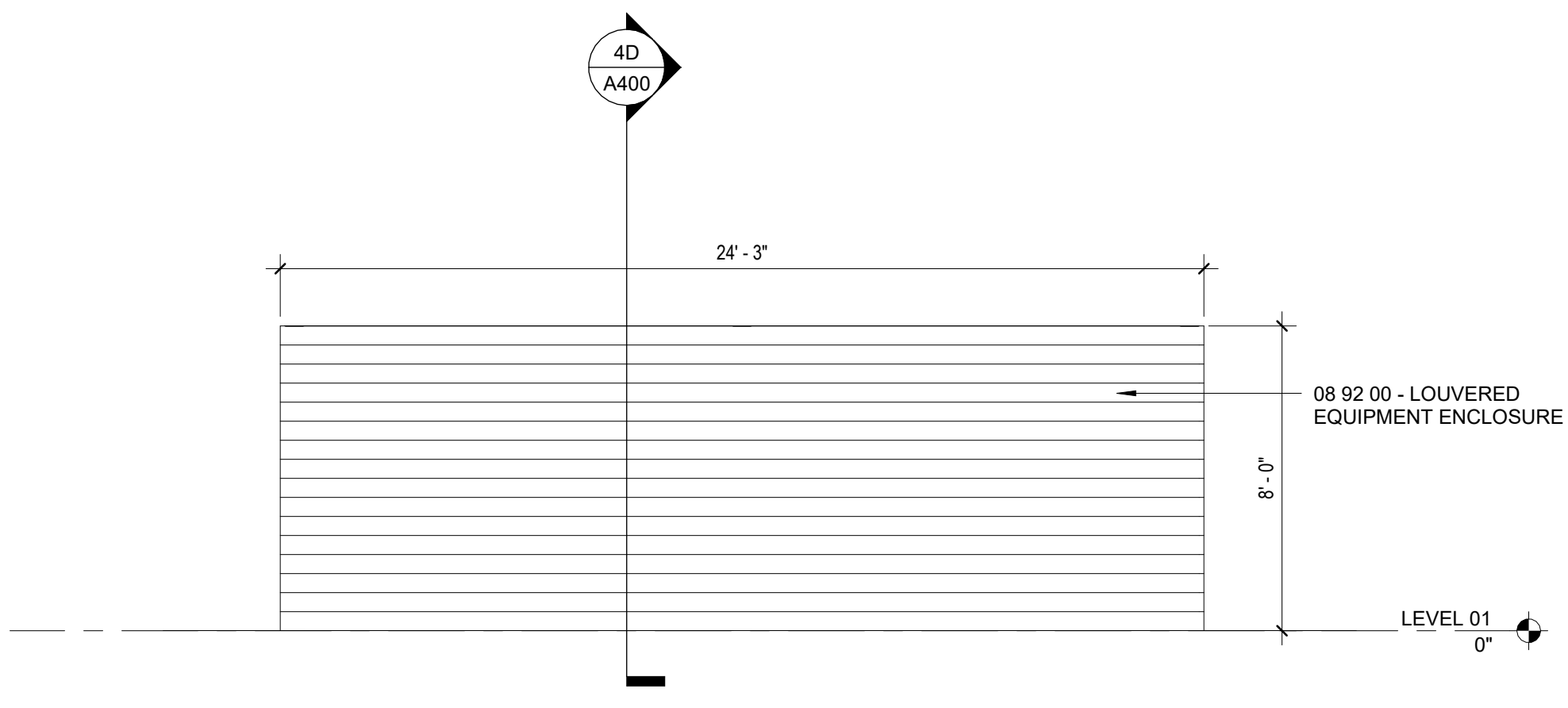
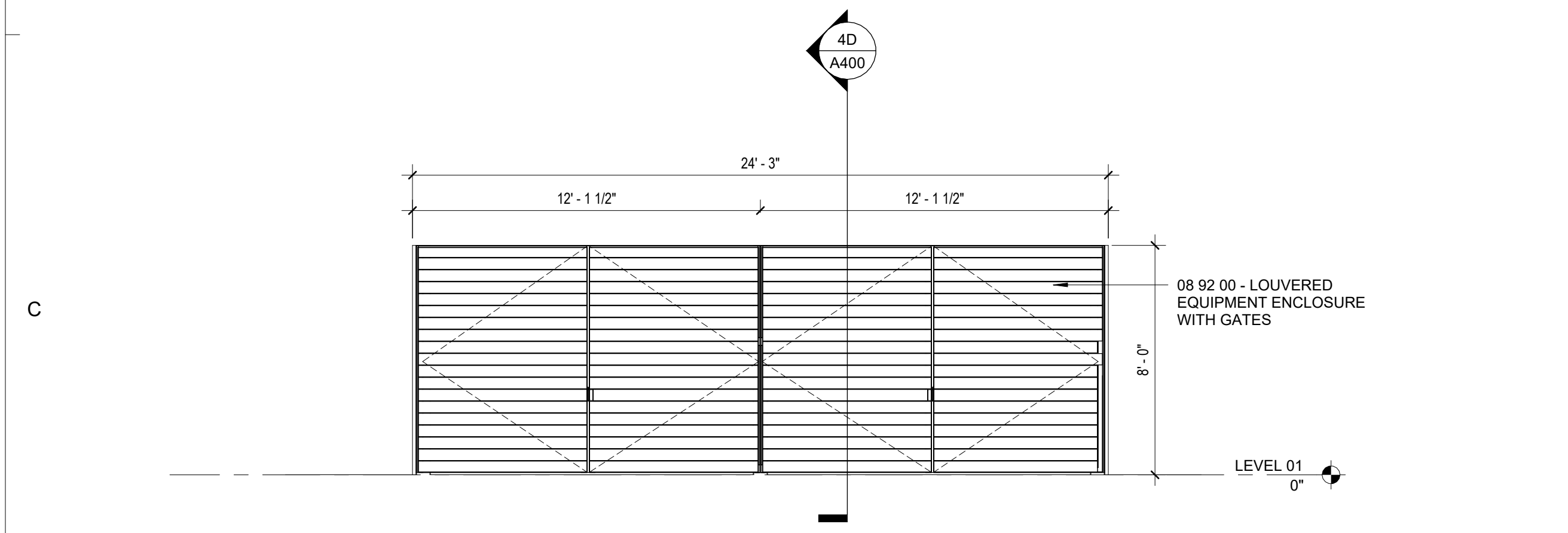
SHEET TITLE
ENLARGED DUMPSTER ENCLOSURE PLAN AND ELEVATIONS

SHEET NUMBER
A400



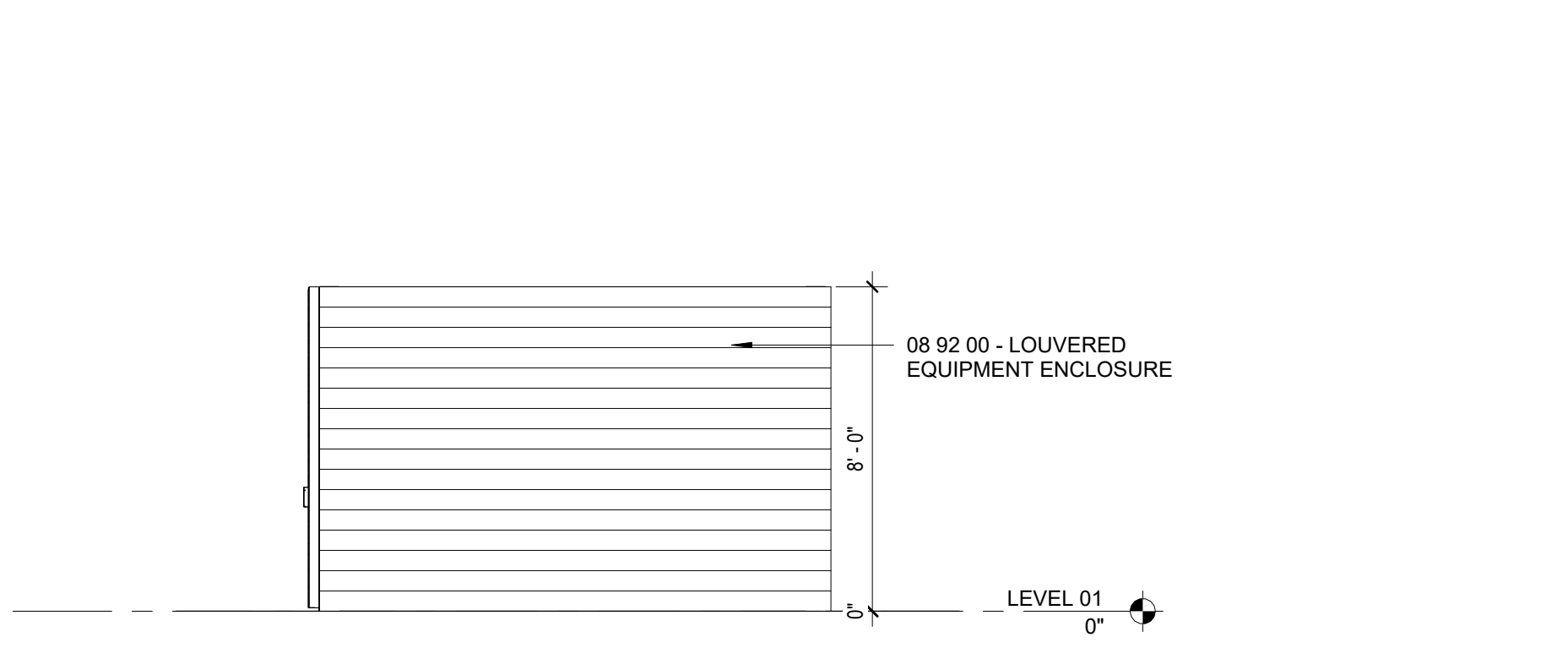
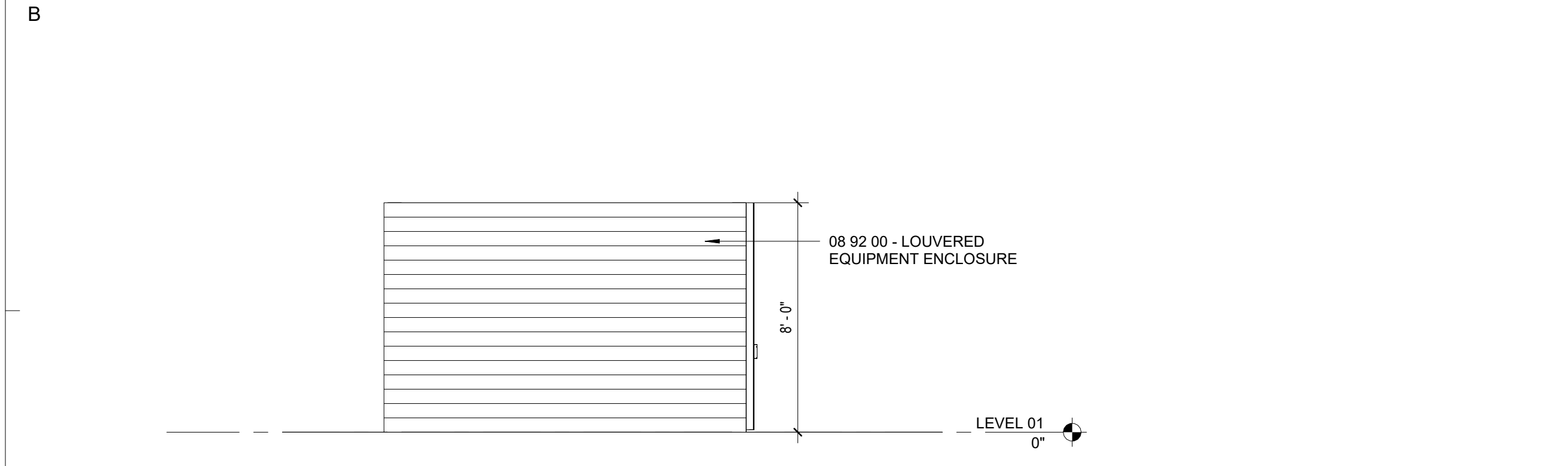
1E ENLARGED PLAN - DUMPSTER ENCLOSURE
A400 1/4" = 1'-0"

4D SECTION - DUMPSTER ENCLOSURE
A400 1/2" = 1'-0"



1C ELEVATION - DUMPSTER ENCLOSURE SOUTH
A400 1/4" = 1'-0"

4C ELEVATION - DUMPSTER ENCLOSURE NORTH
A400 1/4" = 1'-0"



1A ELEVATION - DUMPSTER ENCLOSURE WEST
A400 1/4" = 1'-0"

4A ELEVATION - DUMPSTER ENCLOSURE EAST
A400 1/4" = 1'-0"

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SHEET GENERAL NOTES

BASIS OF DESIGN

HPL PRODUCT

- PARKLEX PRODEMA - NATURSIDING ONESIDING
- 8' x 96" PANEL SIZE
- 'CINDER' COLOR
- 'CONCEALED FASTENERS WITH ONESIDING CLIP

ACM AND COPING

MATCH TO STOREFRONT COLOR

SSMS WALL

- METAL ROOFING SYSTEMS: MRS S-2000 WALL PANEL
- 1.75" SNAP LOCK
- 'CHARCOAL GREY' COLOR

SSMS ROOF

- METAL ROOFING SYSTEMS: MRS S-2500 PANEL
- 2" DOUBLE LOCK SEAM
- 'CHARCOAL GREY' COLOR

ALUMINUM VERTICAL SOLAR FINS (VERTICAL FIN ASSEMBLY)

- OHIO GRATINGS, INC.
- 15' TALL, 8" AIRFOIL EXTRUSION
- CUSTOM KYMAR PAINT FINISH
- TOP AND BOTTOM MOUNTS

ALUMINUM HORIZONTAL SOLAR FINS (HORIZONTAL FIN ASSEMBLY)

- OHIO GRATINGS, INC.
- 4" AIRFOIL EXTRUSION
- FACTORY MADE CORNERS
- END CAPS AT TERMINATIONS
- CUSTOM KYMAR PAINT FINISH
- ATTACHED TO ALLIGATOR CLIPS ON SUBSTRUCTURE

MECH SCREEN WALL / DUMPSTER WALL (LOUVERED EQUIPMENT ENCLOSURES)

- ARCHITECTURAL LOUVERS
- FORMED ALUMINUM PANEL
- V2H5 SCREEN
- 5" OC BLADE SPACING
- COLOR TO MATCH MCM



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PROJECT TEAM

PRINCIPAL IN CHARGE
Jerry Guerrier, AIA

PROJECT MANAGER
Charlotte Hagen, AIA

DESIGN TEAM
LITTLE

PROJECT NAME

NORTHCHASE BRANCH LIBRARY

4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.

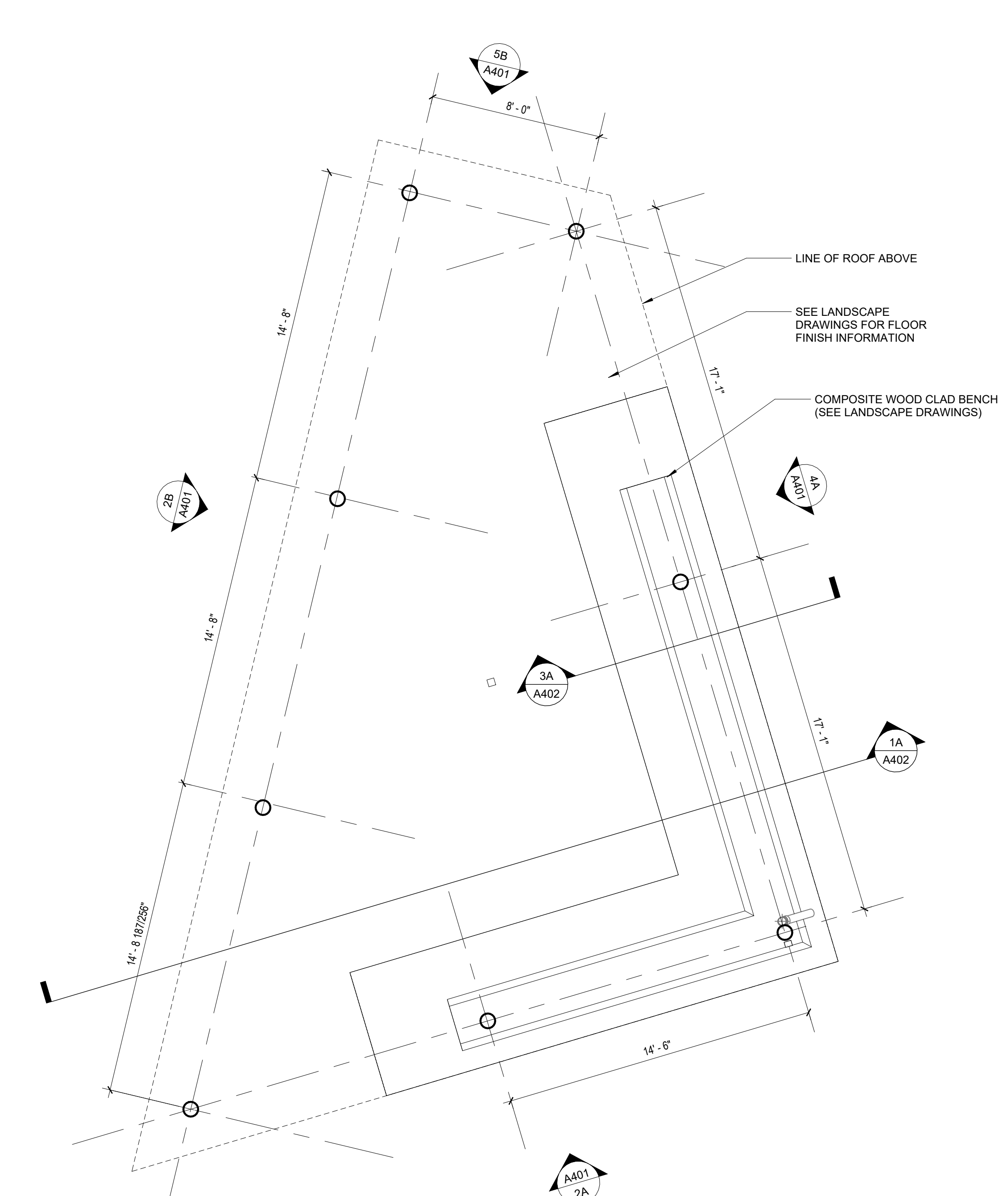
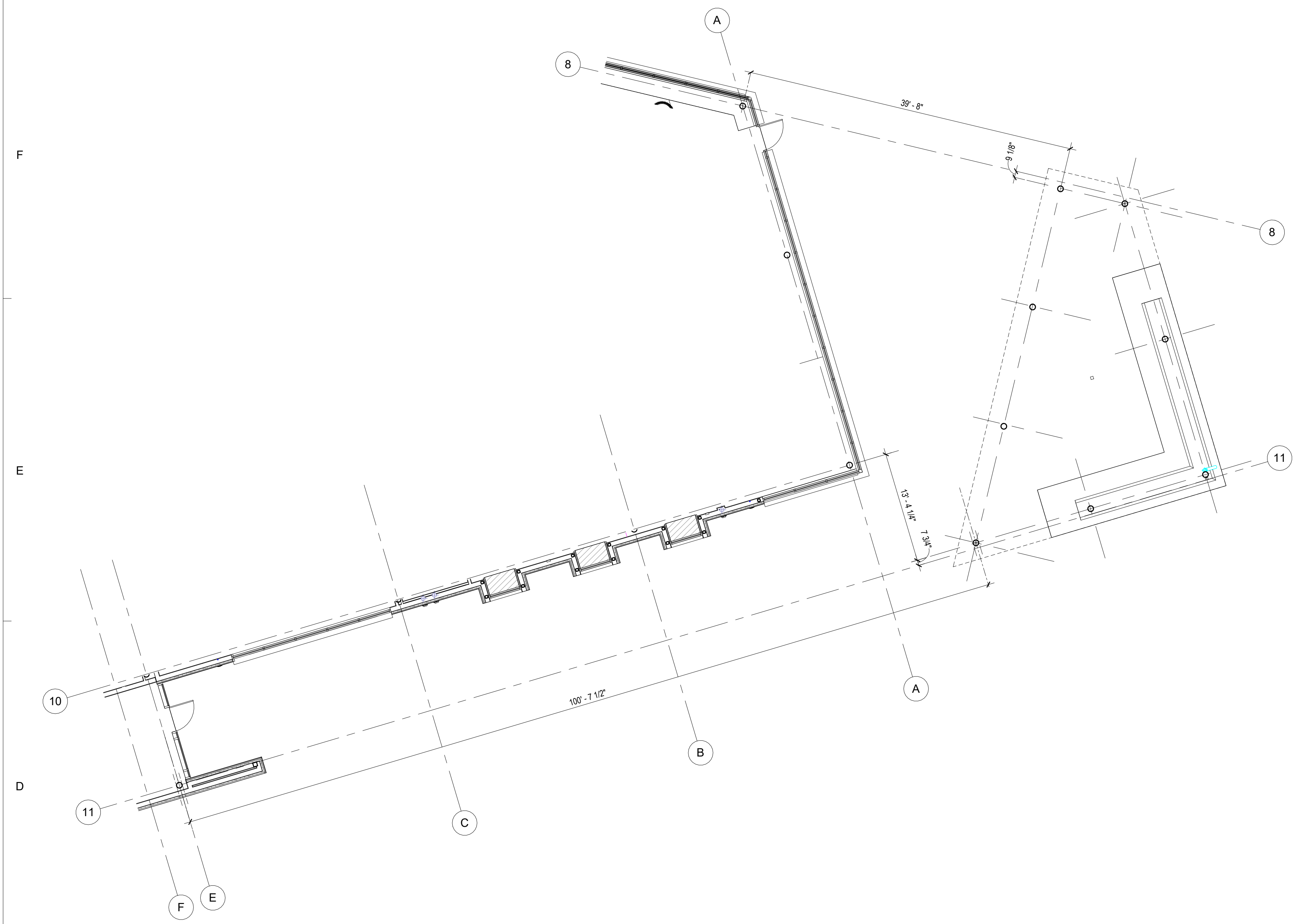
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SHEET TITLE

STORYTIME PAVILION-
ENLARGED PLAN AND
ELEVATIONS - ADD
ALTERNATE

SHEET NUMBER

A401

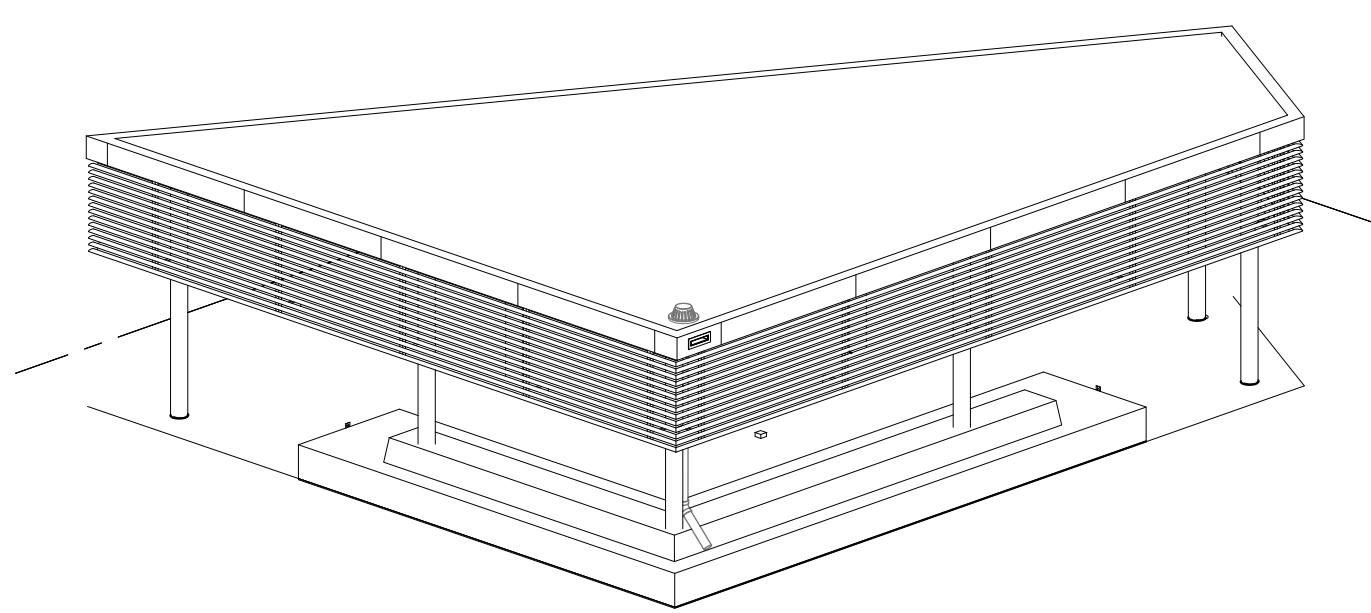


1C PLAN - STORYTIME PAVILION (ADD ALTERNATE)

A401 1/8" = 1'-0"

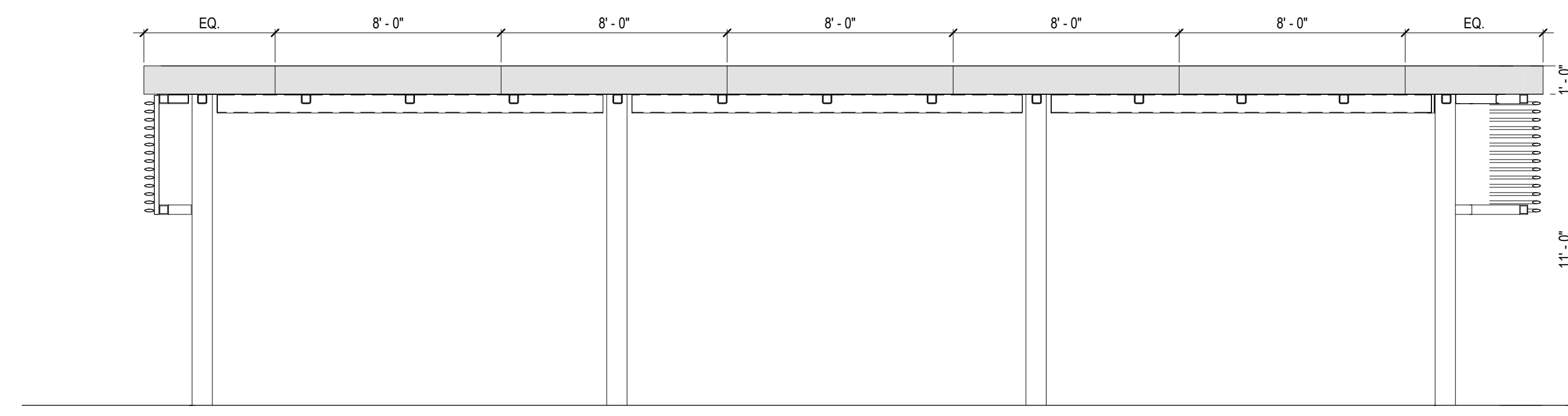
4C ENLARGED PLAN - STORYTIME PAVILION (ADD ALTERNATE)

A401 1/4" = 1'-0"



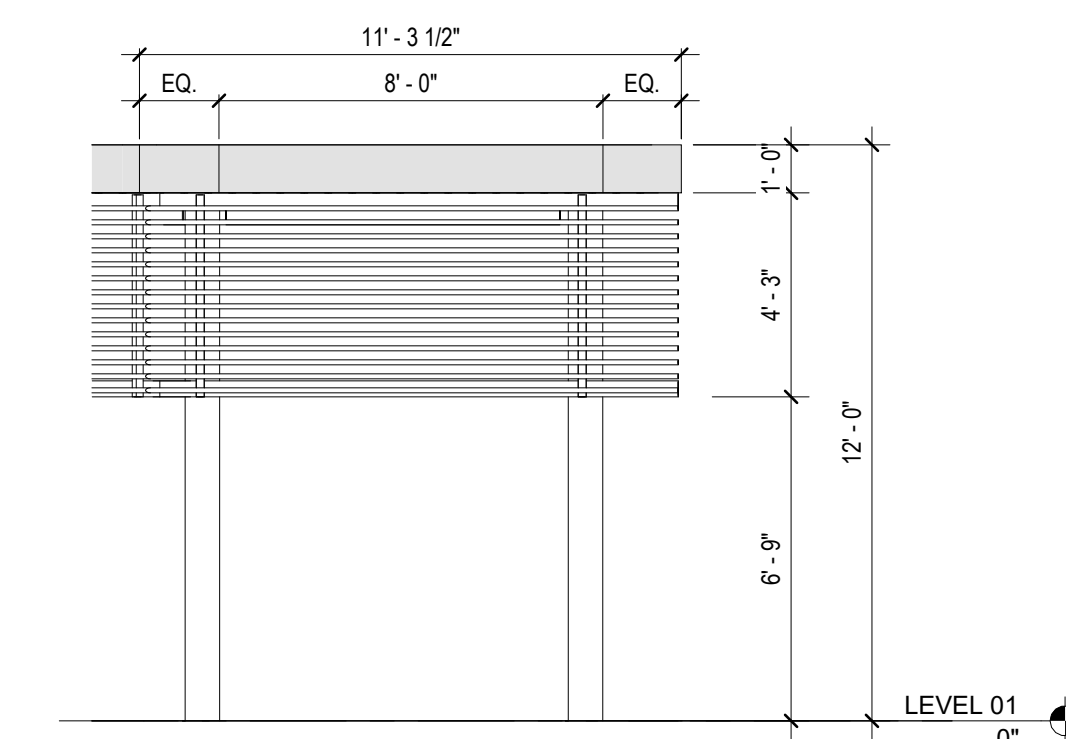
1B PAVILLION AXON BACK

A401



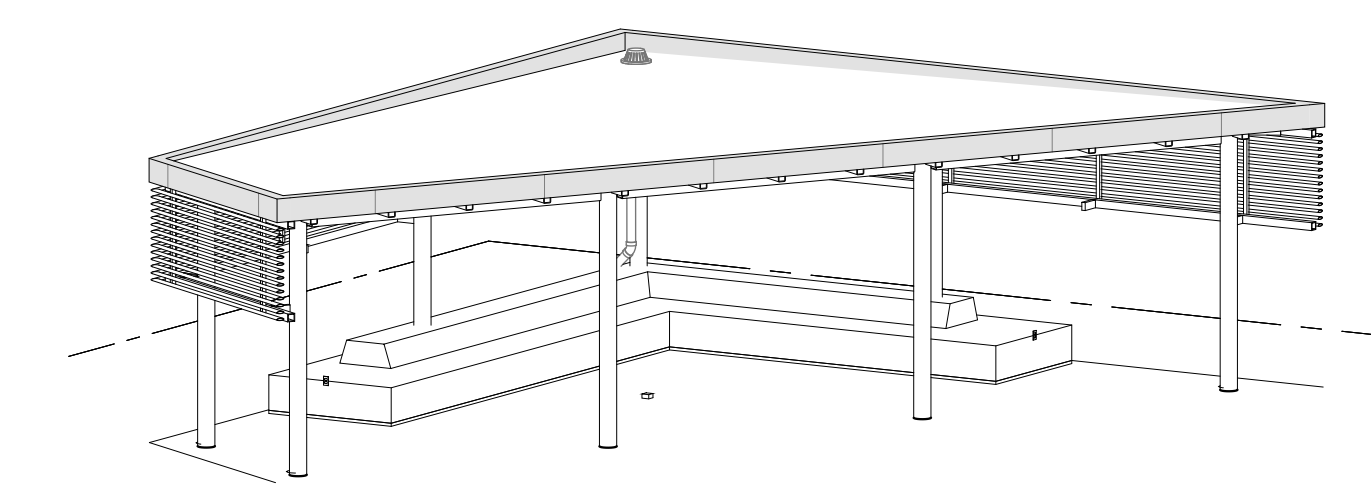
2B ELEVATION - PAVILION WEST

A401 1/4" = 1'-0"



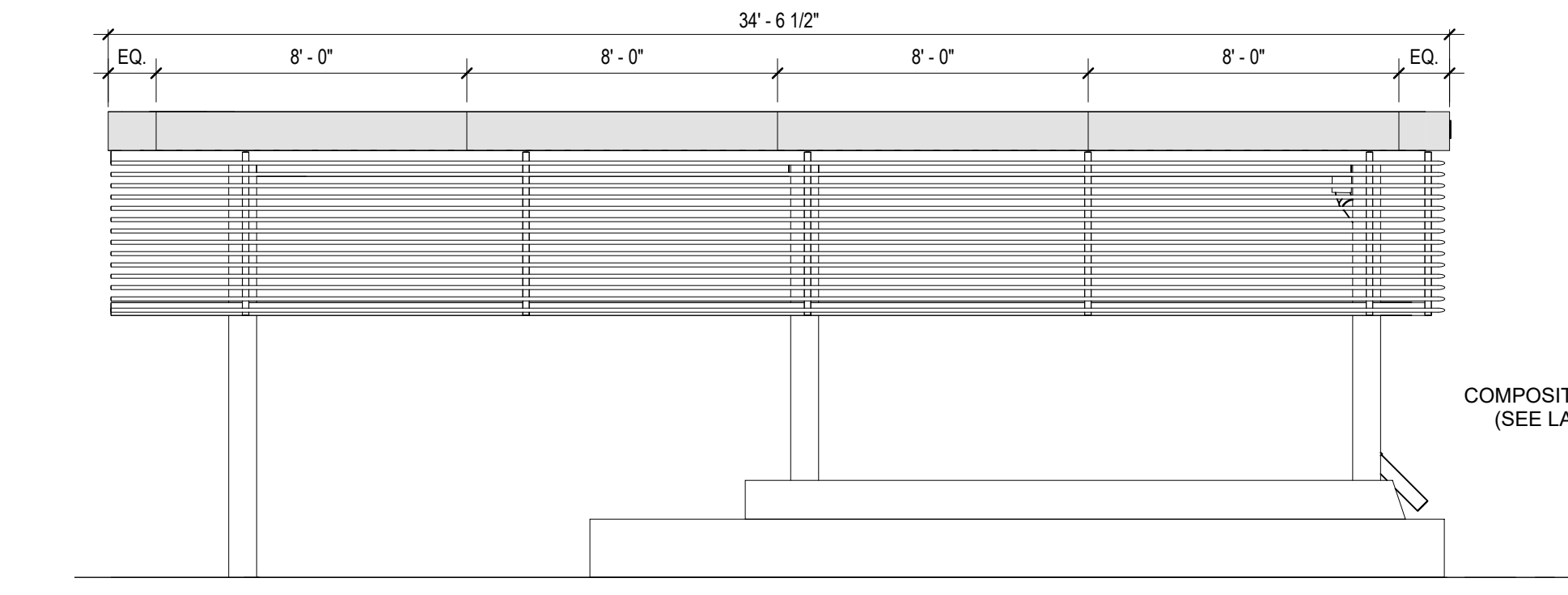
5B ELEVATION - PAVILION NORTH

A401 1/4" = 1'-0"



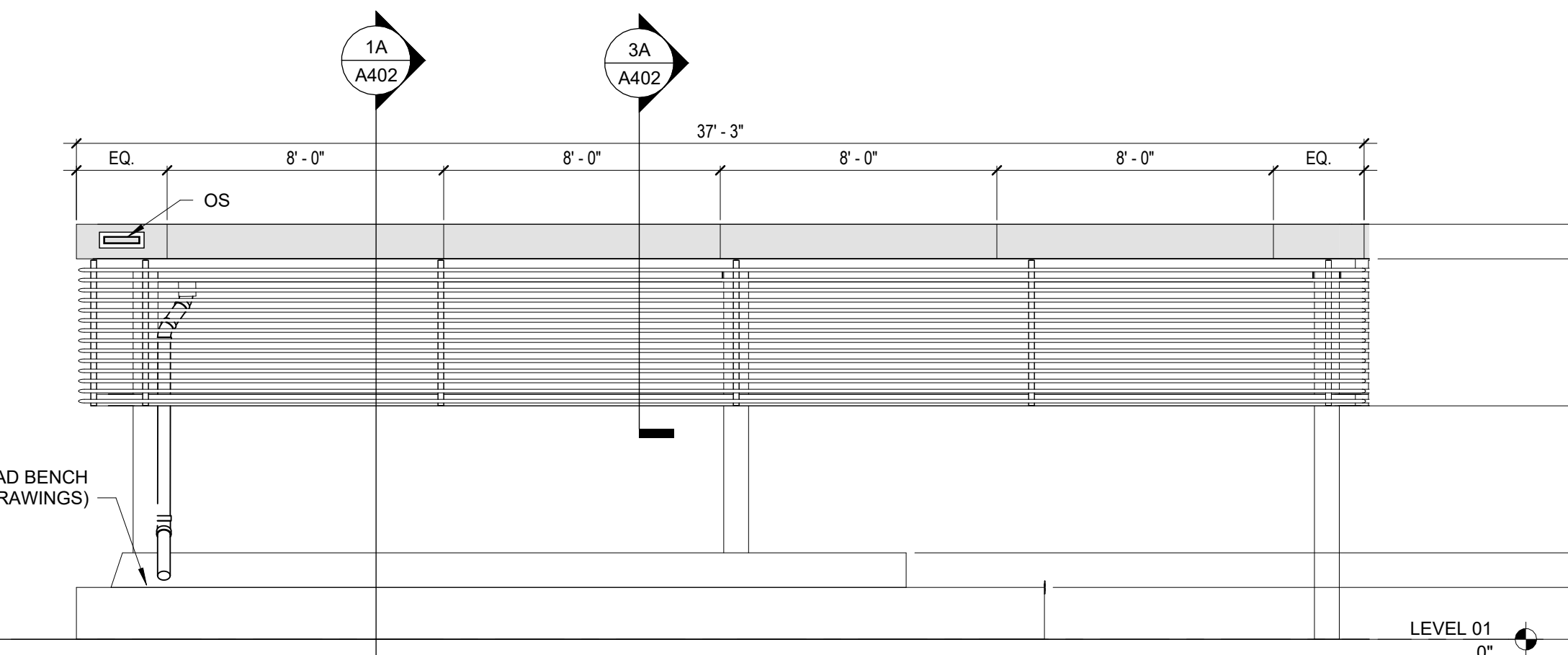
1A PAVILLION AXON FRONT

A401



2A ELEVATION - PAVILION SOUTH

A401 1/4" = 1'-0"



4A ELEVATION - PAVILION EAST

A401 1/4" = 1'-0"

X SHEET KEYNOTES

02 24" x 24" MOP SINK. PROVIDE 60" HIGH RFP PANELS & TRIM ALONG 2 SIDES AT WALL.

SHEET GENERAL NOTES

410 Blackwell Street, Suite 10
Durham, NC 27701
(919) 474-2500
www.littleonline.com
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RATED WALLS & PARTITIONS

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]

X TOILET ACCESSORIES LEGEND

A	TOILET TISSUE DISPENSER (BY OWNER)	-	-
B	WALL MOUNTED AUTOMATIC SOAP DISPENSER (BY OWNER)	-	-
D	GRAB BAR 18" VERTICAL	BOBRICK	5806 X 18
E	GRAB BAR 36"	BOBRICK	5806 X 36
F	GRAB BAR 42"	BOBRICK	5806 X 42
G	DIAPER CHANGING STATION, STAINLESS STEEL	KOALA KARE	KB300-SS
H	FRAMED MIRROR (24"W x 48"H)	BOBRICK	B165-24X48
J	FRAMED MIRROR (24"W x 36"H)	BOBRICK	B165-24X36
K	SURFACE-MTD. SANITARY NAPKIN DISPOSAL	BOBRICK	B-221
L	PARTITION-MTD. SANITARY NAPKIN DISPOSAL	BOBRICK	B-354
M	PAPER TOWEL DISPENSER (BY OWNER)	-	-
P	36" UTILITY SHELF WITH 4 MOP HOLDERS AND 3 RAG HOOKS	BOBRICK	B-224 X 36

APPLIANCE LEGEND

- E-01 MICROWAVE (BY OWNER)
- E-02 FRENCH DOOR REFRIGERATOR, STAINLESS STEEL, ADA COMPLIANT (BY OWNER)



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PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

PROJECT NO.

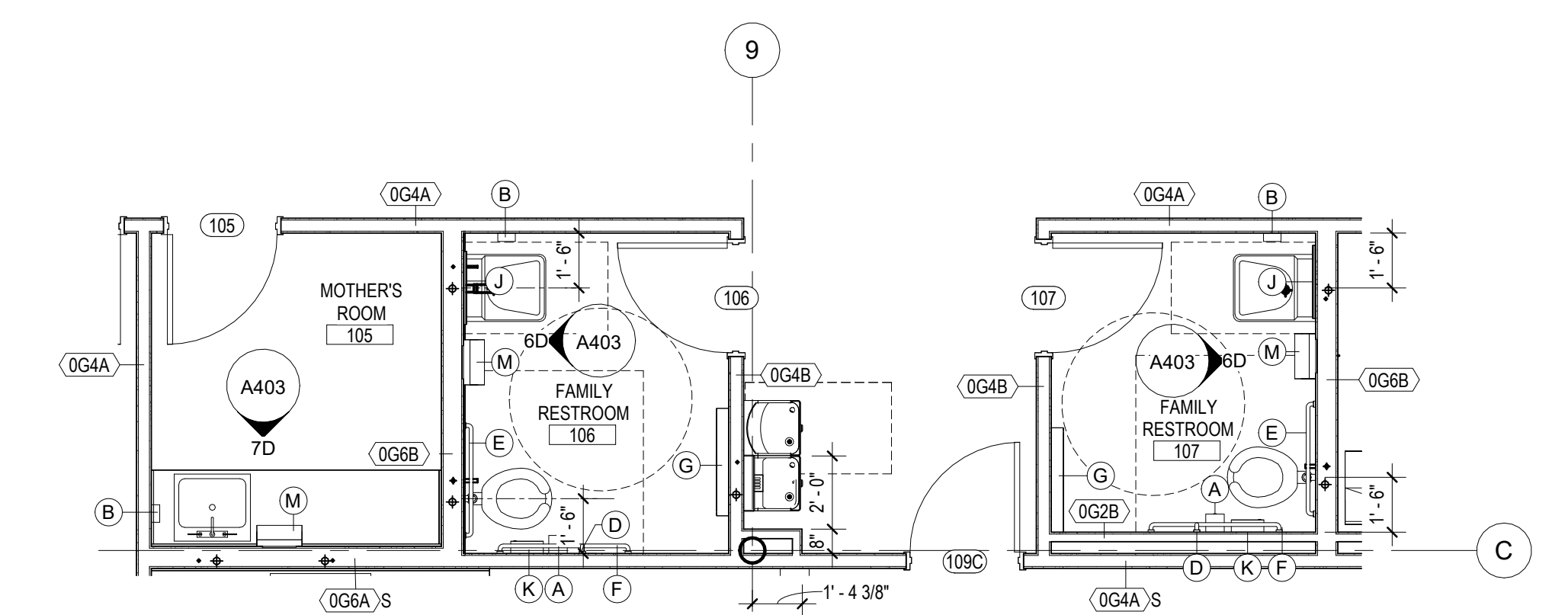
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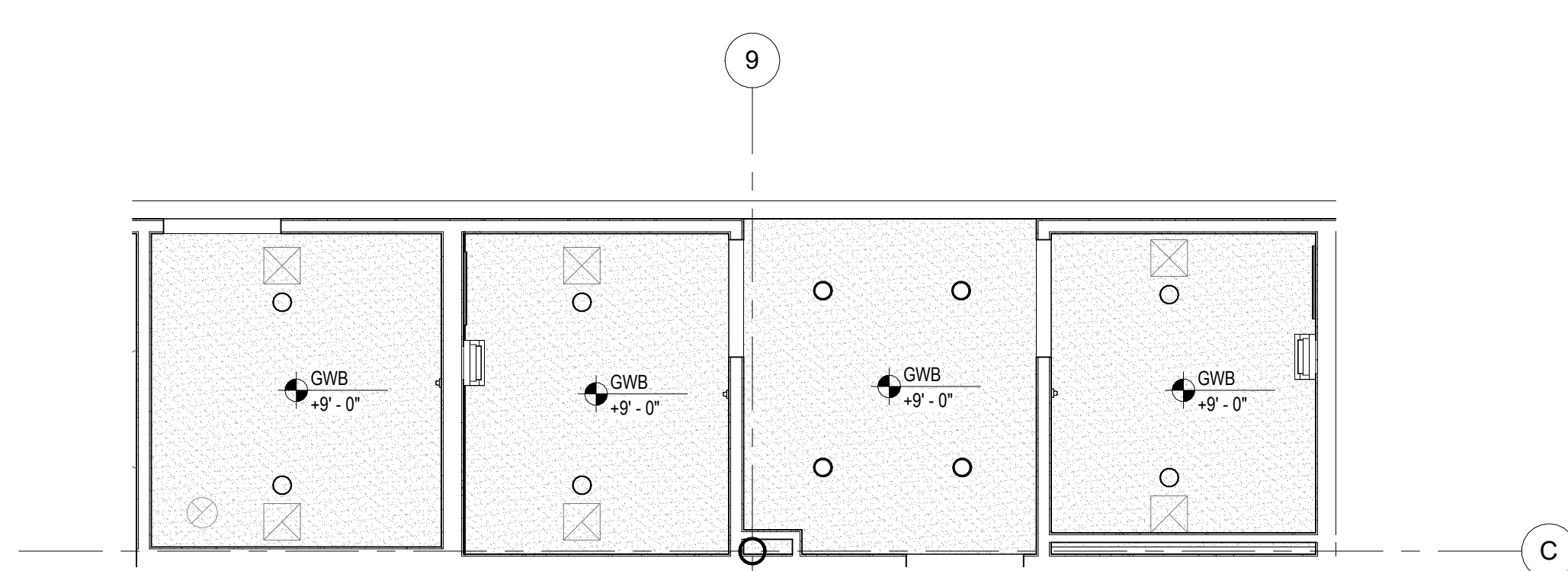
ENLARGED TOILET PLANS AND ELEVATIONS

SHEET NUMBER

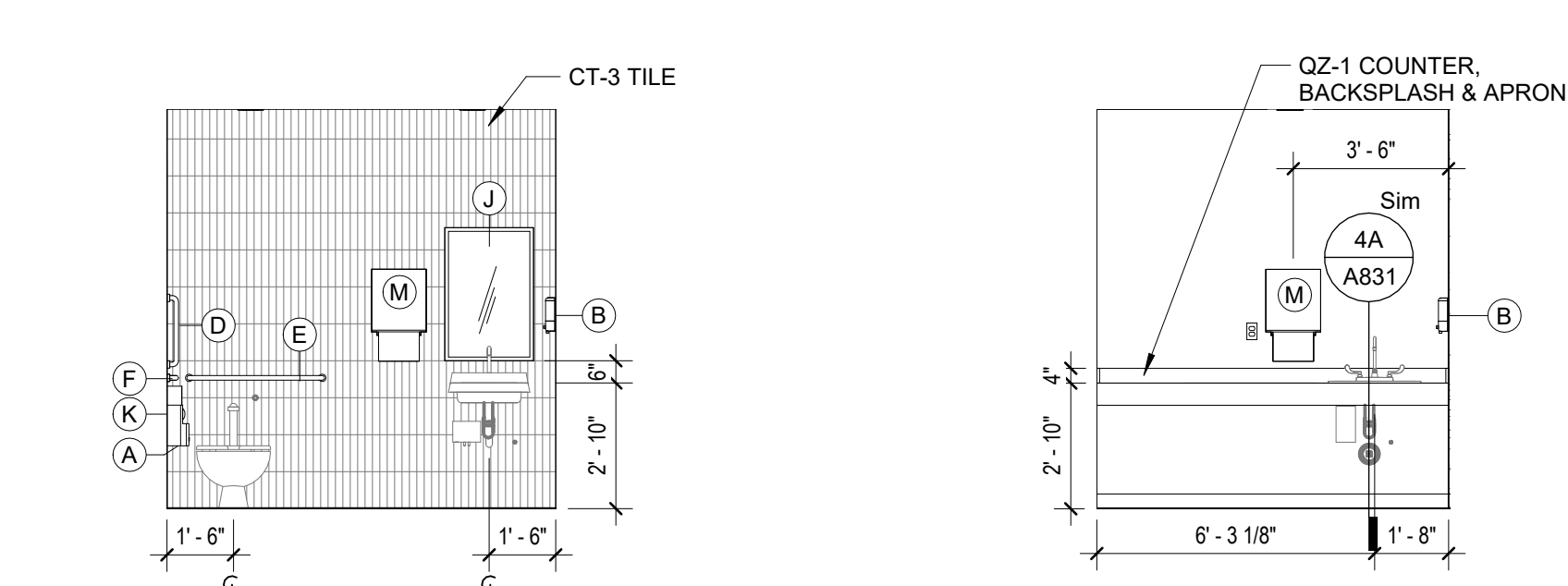
A403



6F ENLARGED PLAN - FAMILY RESTROOMS AND MOTHER'S ROOM
A403 1/4" = 1'-0"

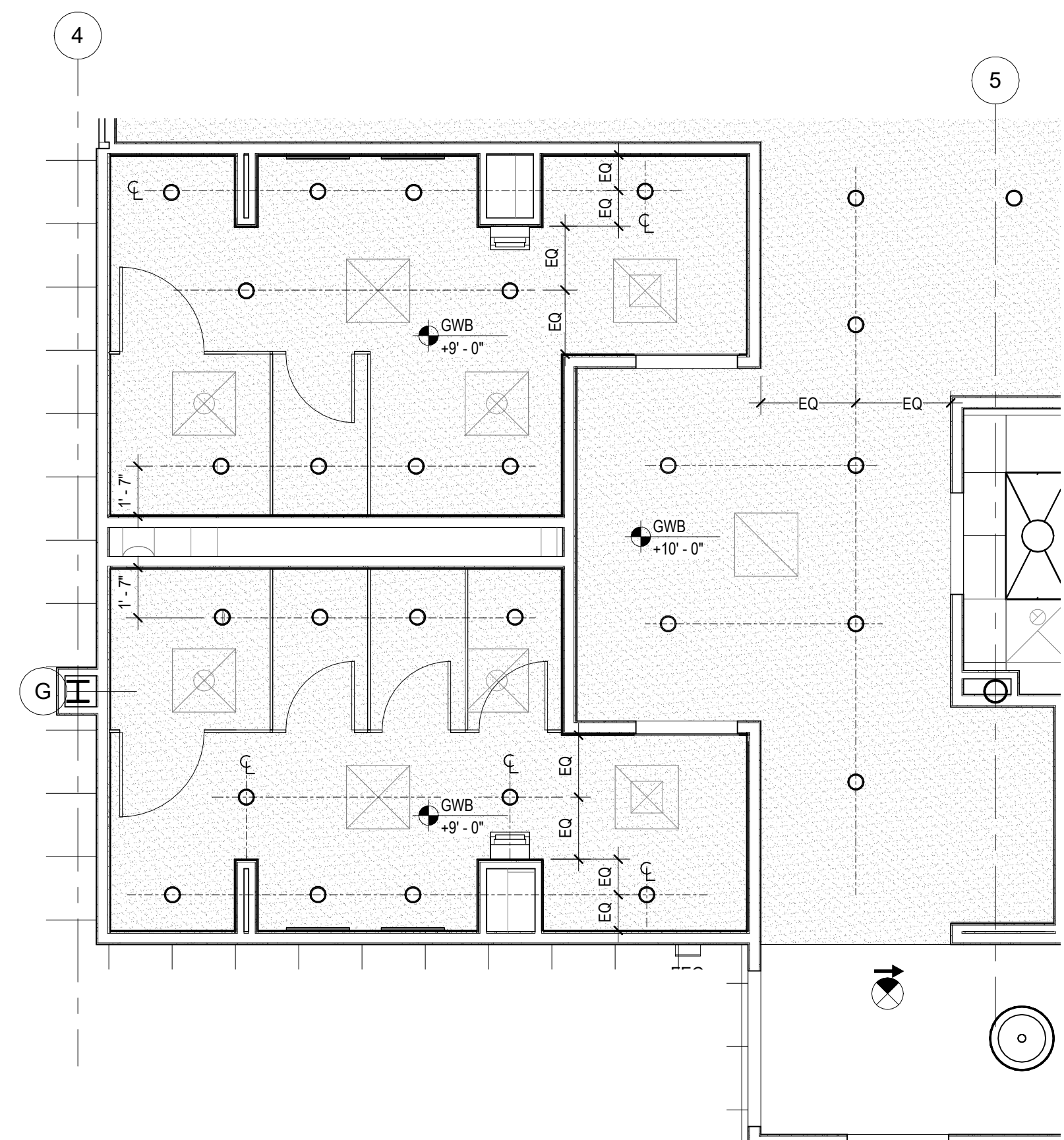


6E RCP - FAMILY RESTROOMS AND MOTHER'S ROOM
A403 1/4" = 1'-0"

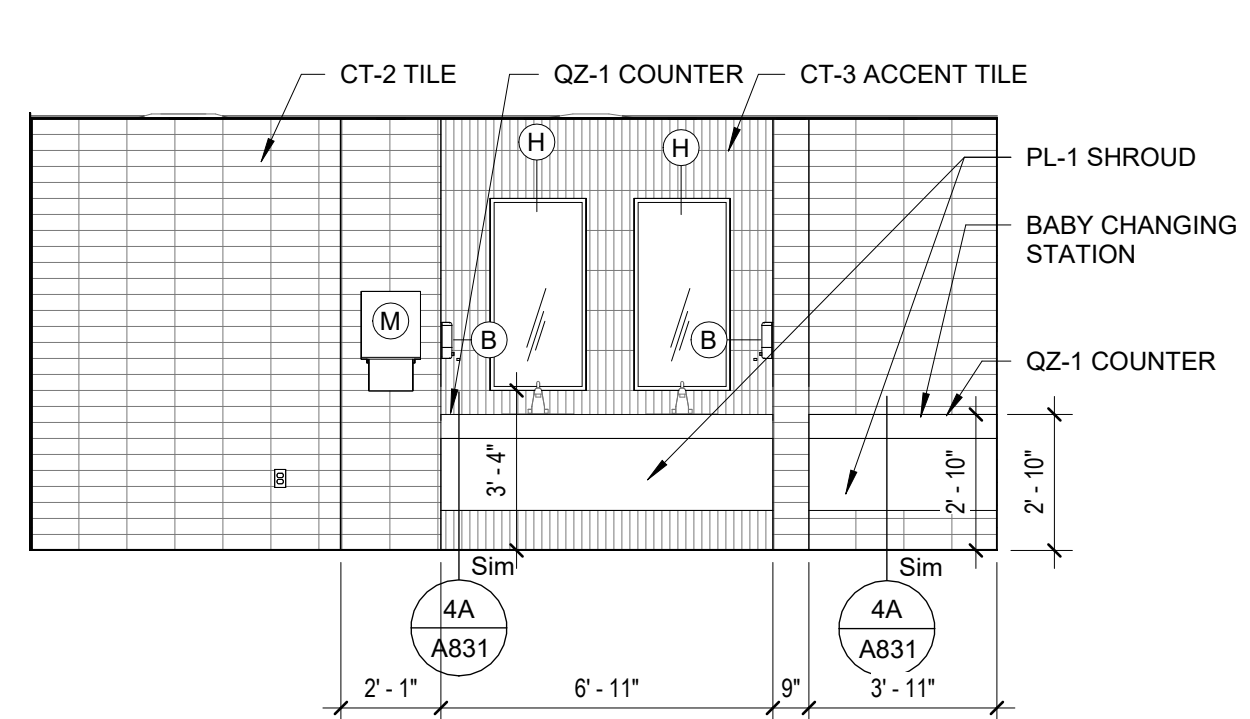


6D ELEVATION - FAMILY RESTROOM
A403 1/4" = 1'-0"

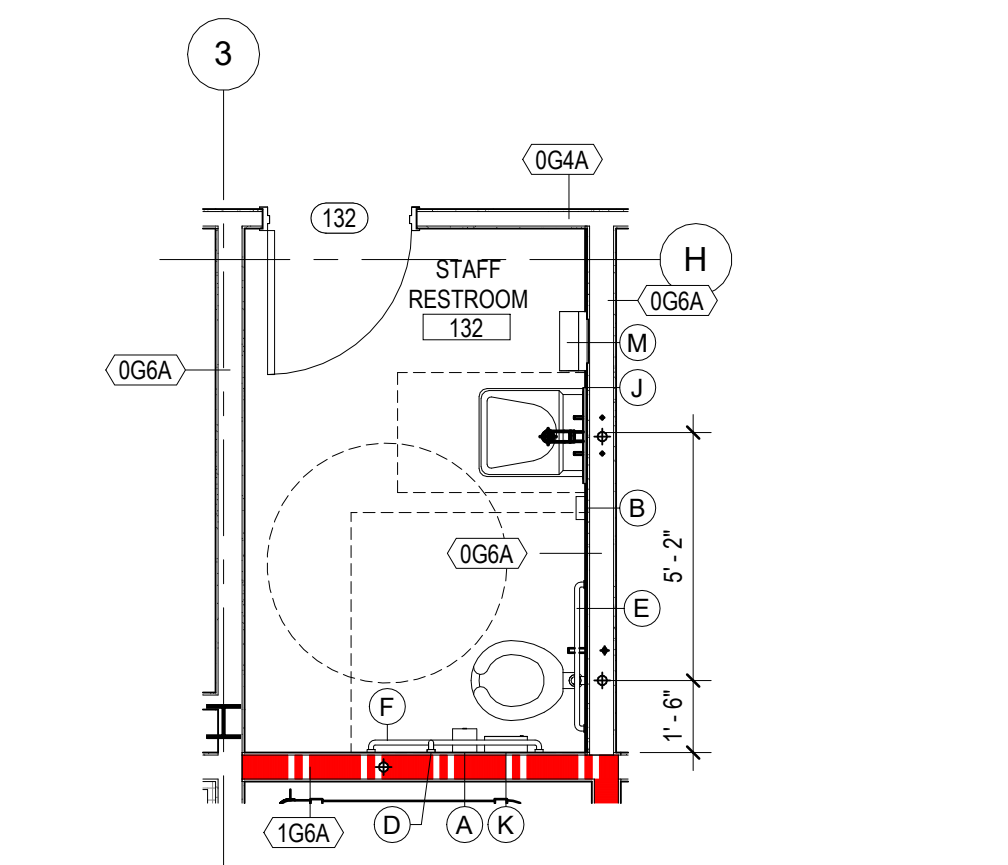
7D ELEVATION - MOTHER'S ROOM
A403 1/4" = 1'-0"



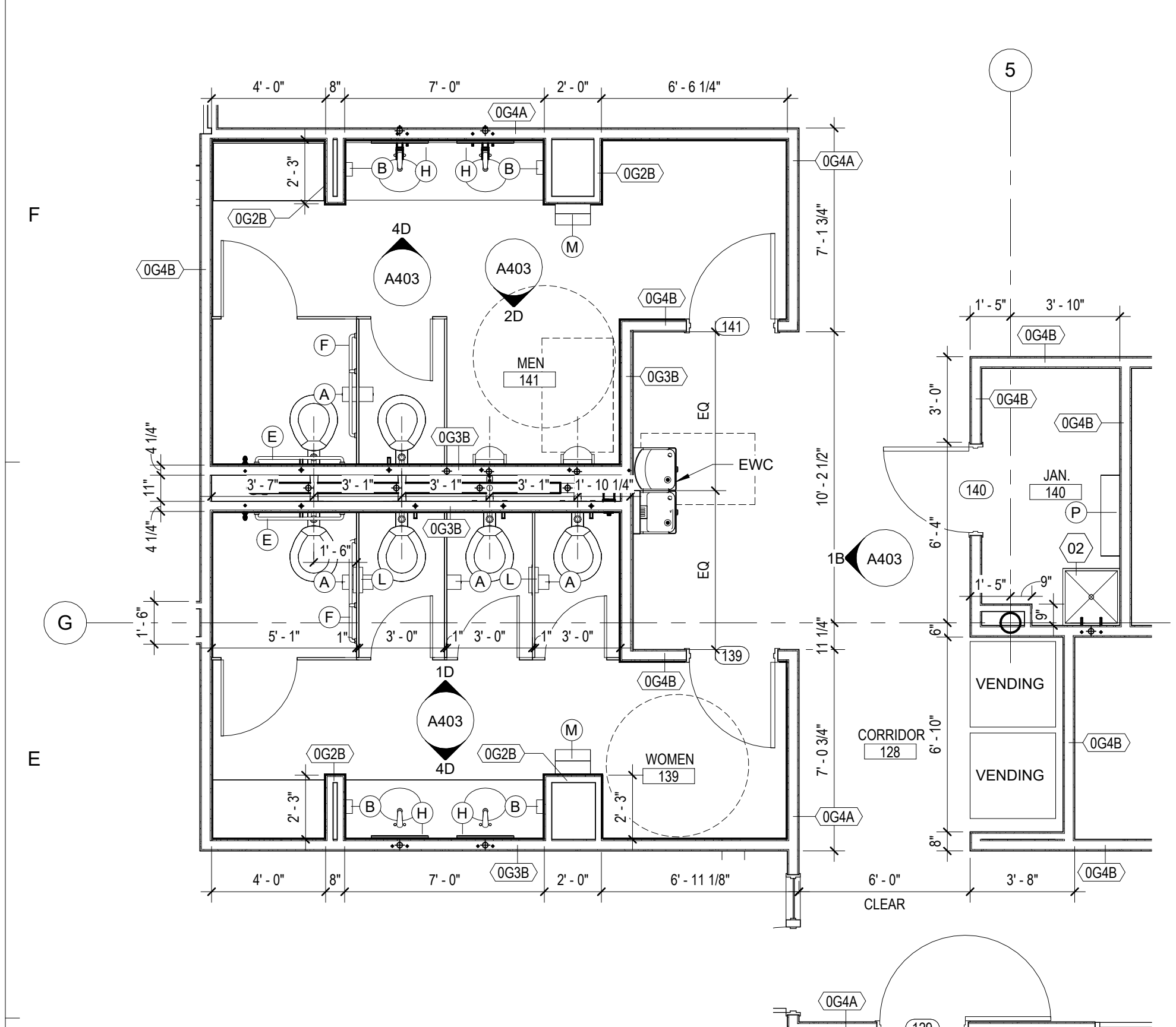
3E RCP - BATHROOMS
A403 1/4" = 1'-0"



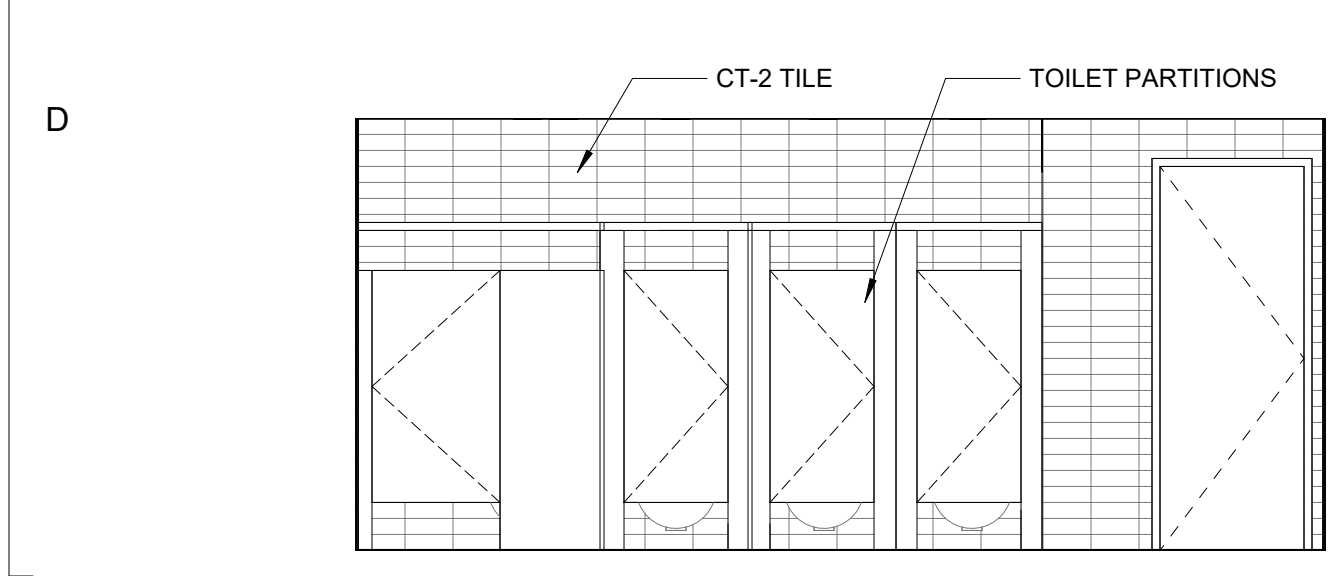
4D ELEVATION - WOMEN (MEN OPP. HAND)
A403 1/4" = 1'-0"



4B ENLARGED PLAN - STAFF RESTROOM
A403 1/4" = 1'-0"

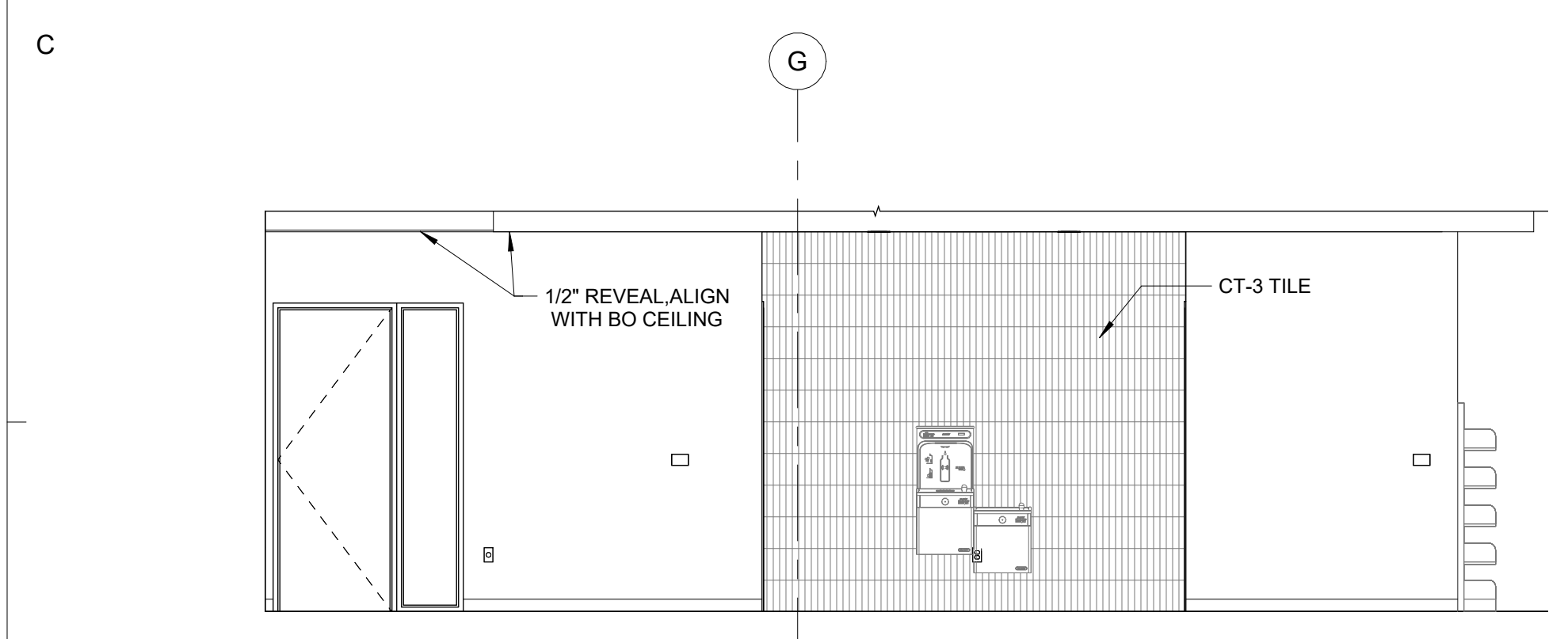


1E ENLARGED PLAN - RESTROOMS / JANITOR
A403 1/4" = 1'-0"

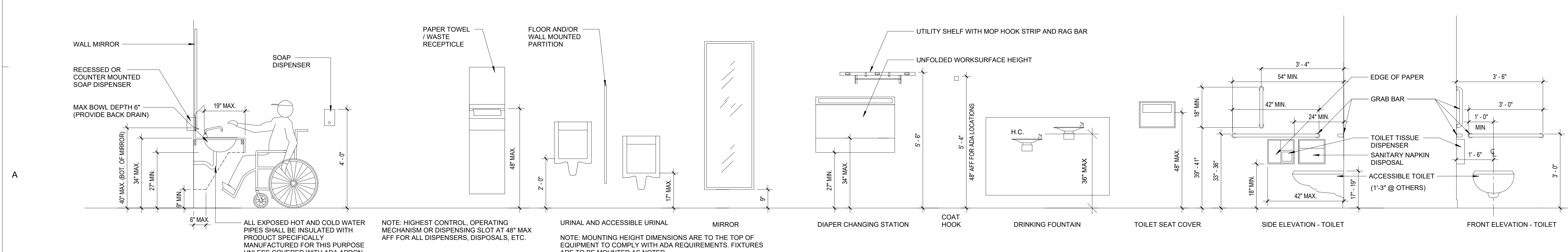


1D ELEVATION - WOMEN
A403 1/4" = 1'-0"

2D ELEVATION - MEN
A403 1/4" = 1'-0"

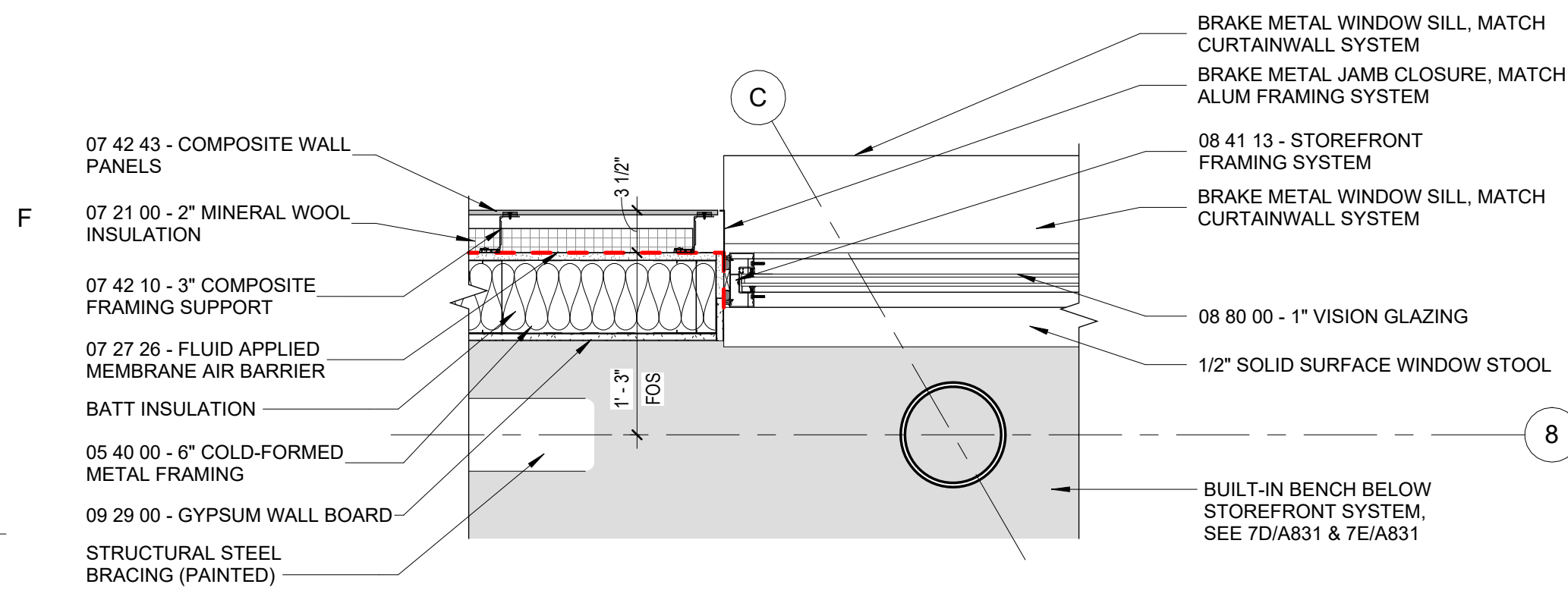


1B ELEVATION - RESTROOM AND BOH HALLWAY
A403 1/4" = 1'-0"

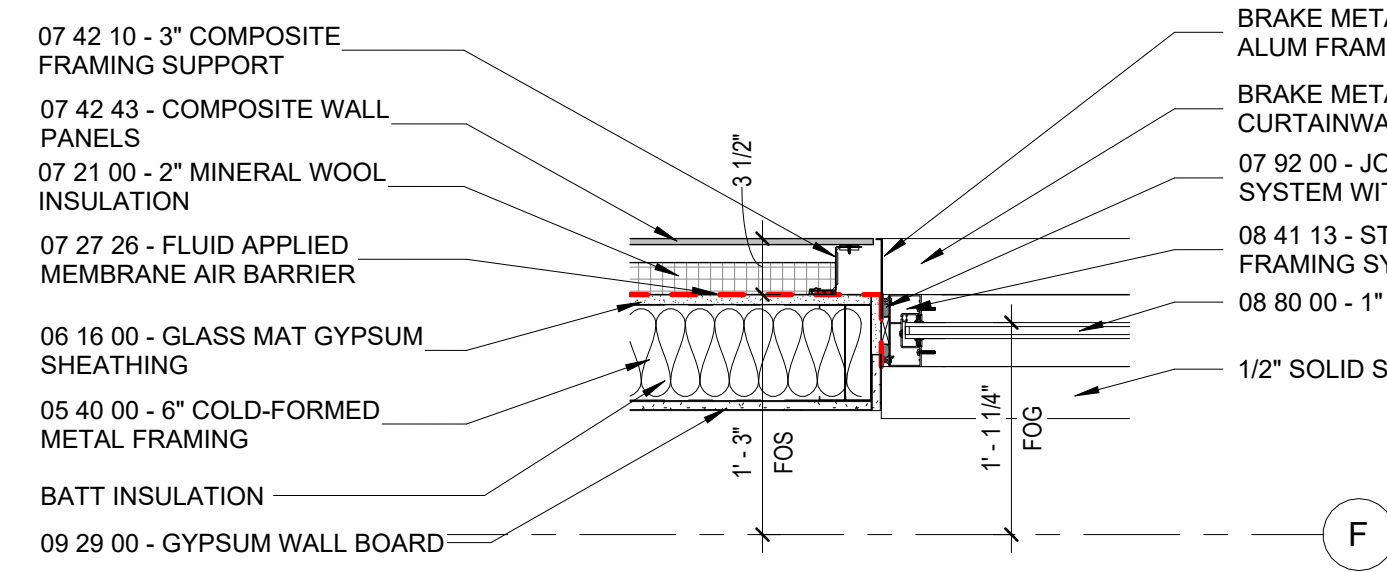


TYPICAL BATHROOM MOUNTING HEIGHTS
1/2" = 1'-0"

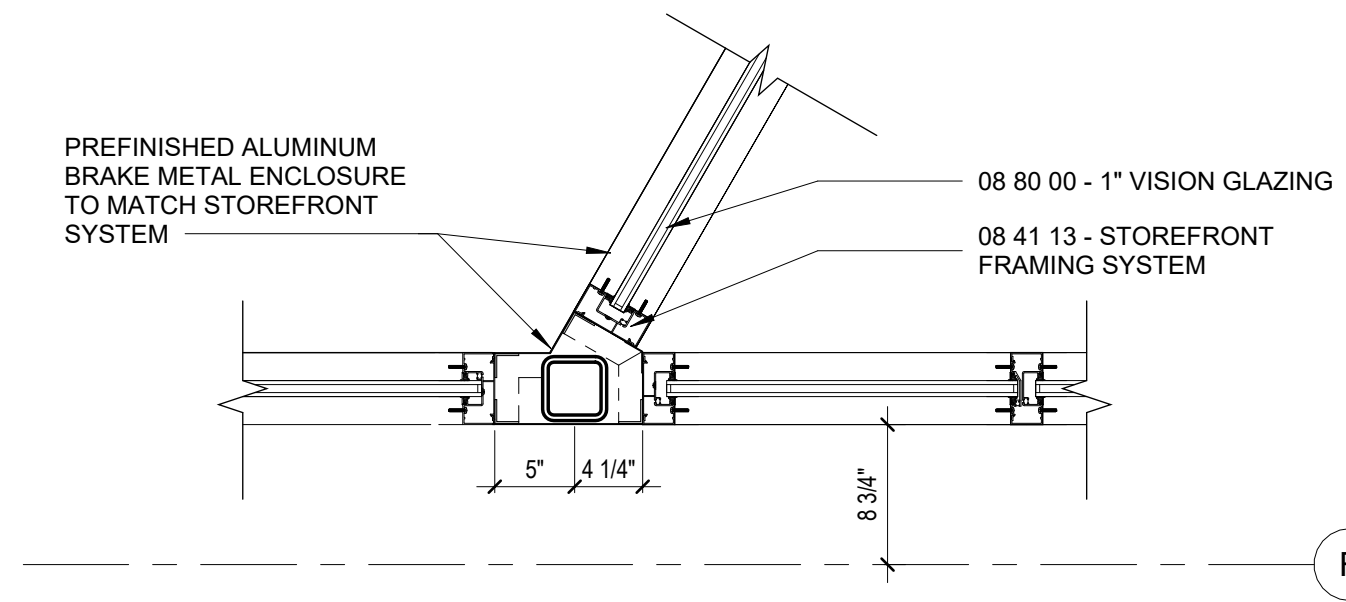
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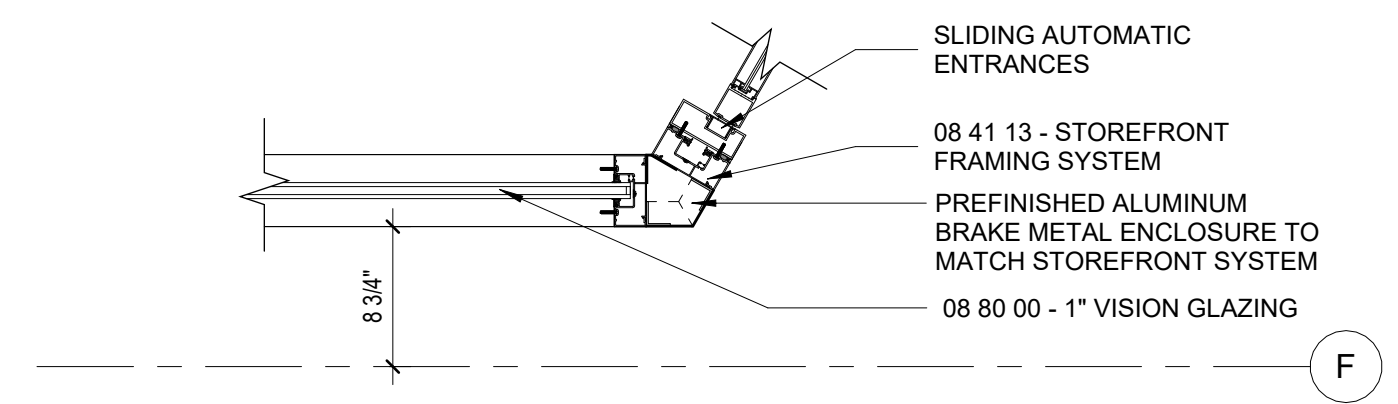
1E PLAN DETAIL - JAMB - HPL/CONCRETE AT STOREFRONT
A511 1" = 1'-0"



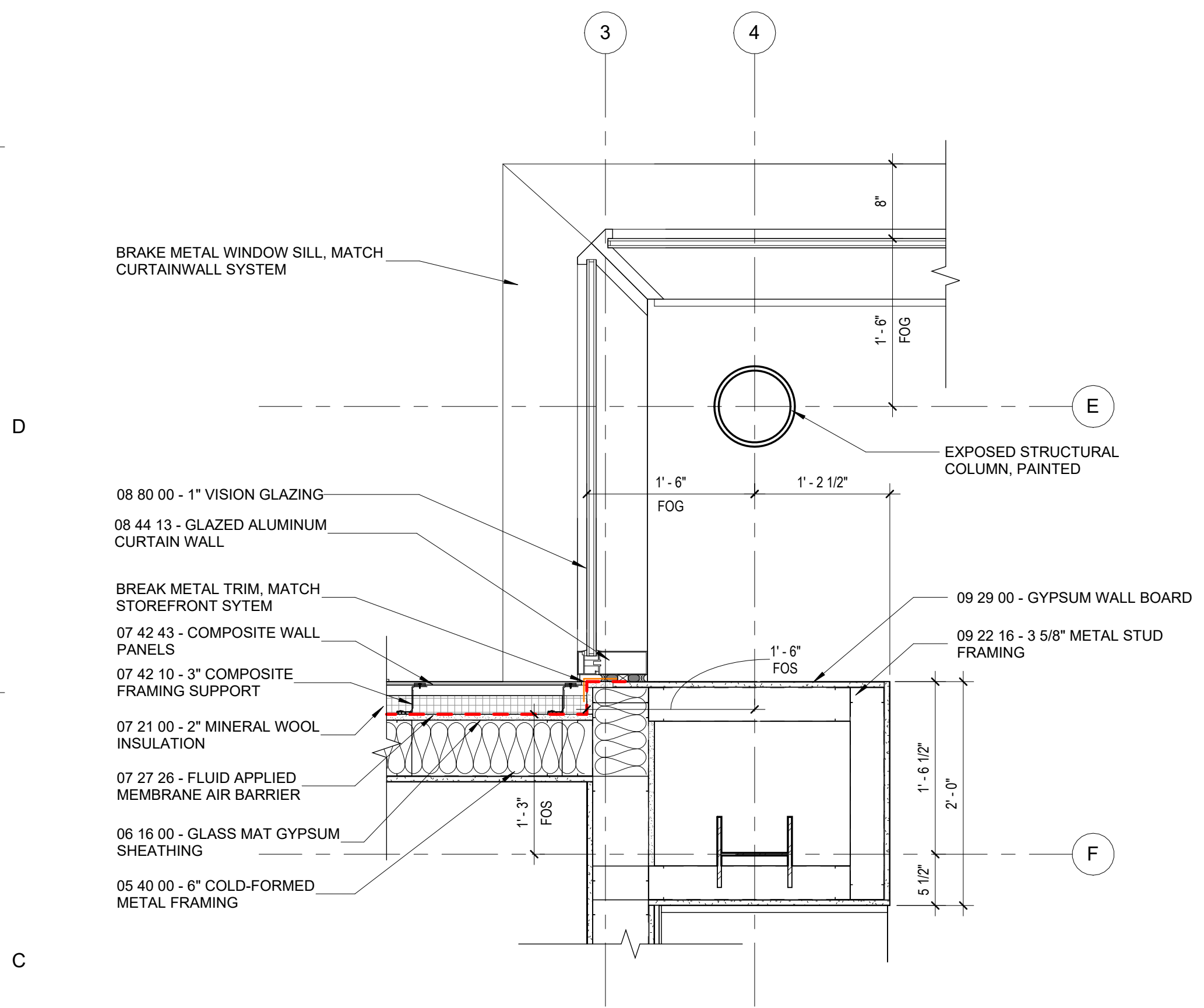
3E PLAN DETAIL - JAMB - HPL AT STOREFRONT
A511 1" = 1'-0"



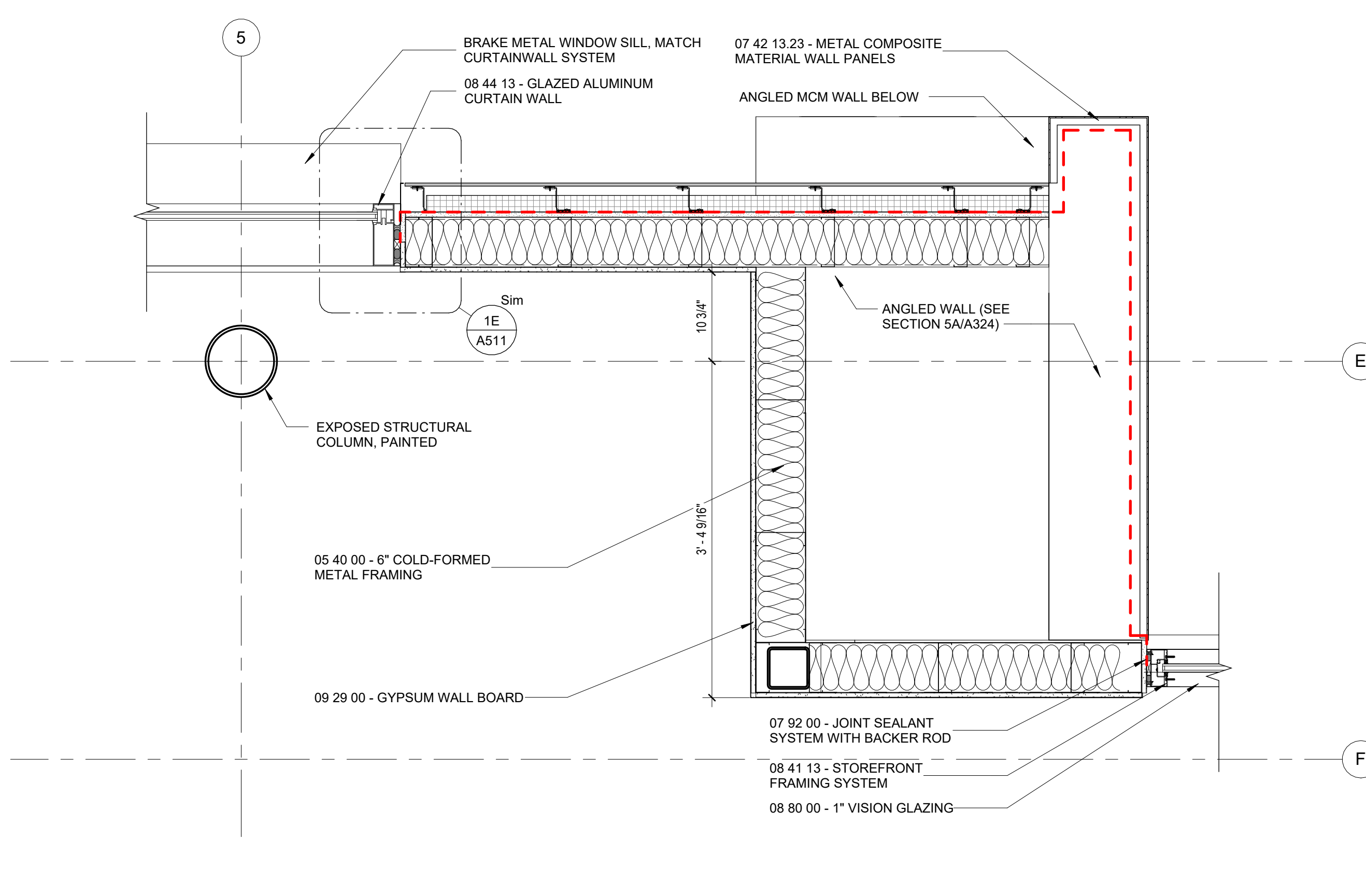
5E PLAN DETAIL - ENTRY VESTIBULE CORNER
A511 1" = 1'-0"



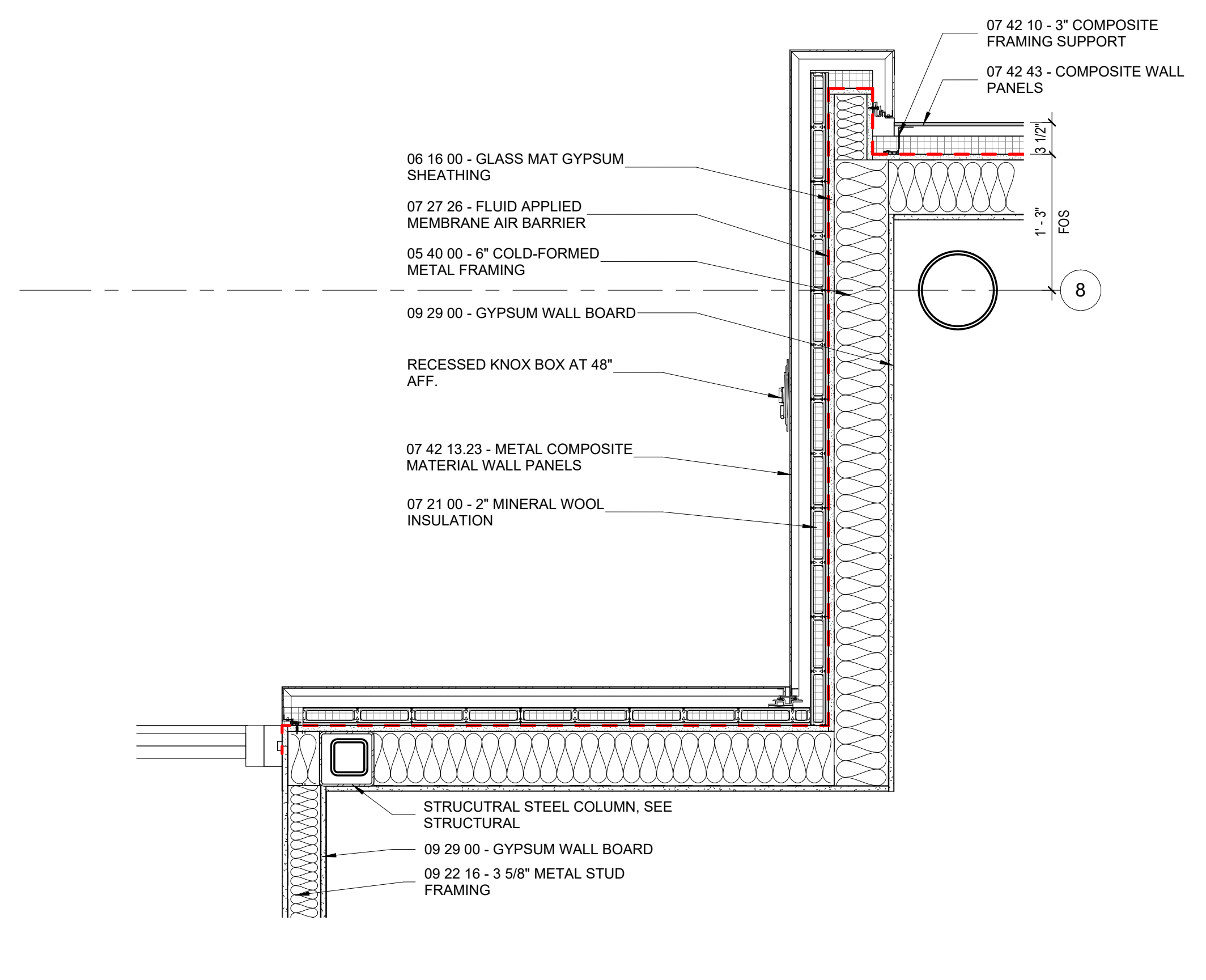
6E PLAN DETAIL - ENTRY VESTIBULE INTERIOR
A511 1" = 1'-0"



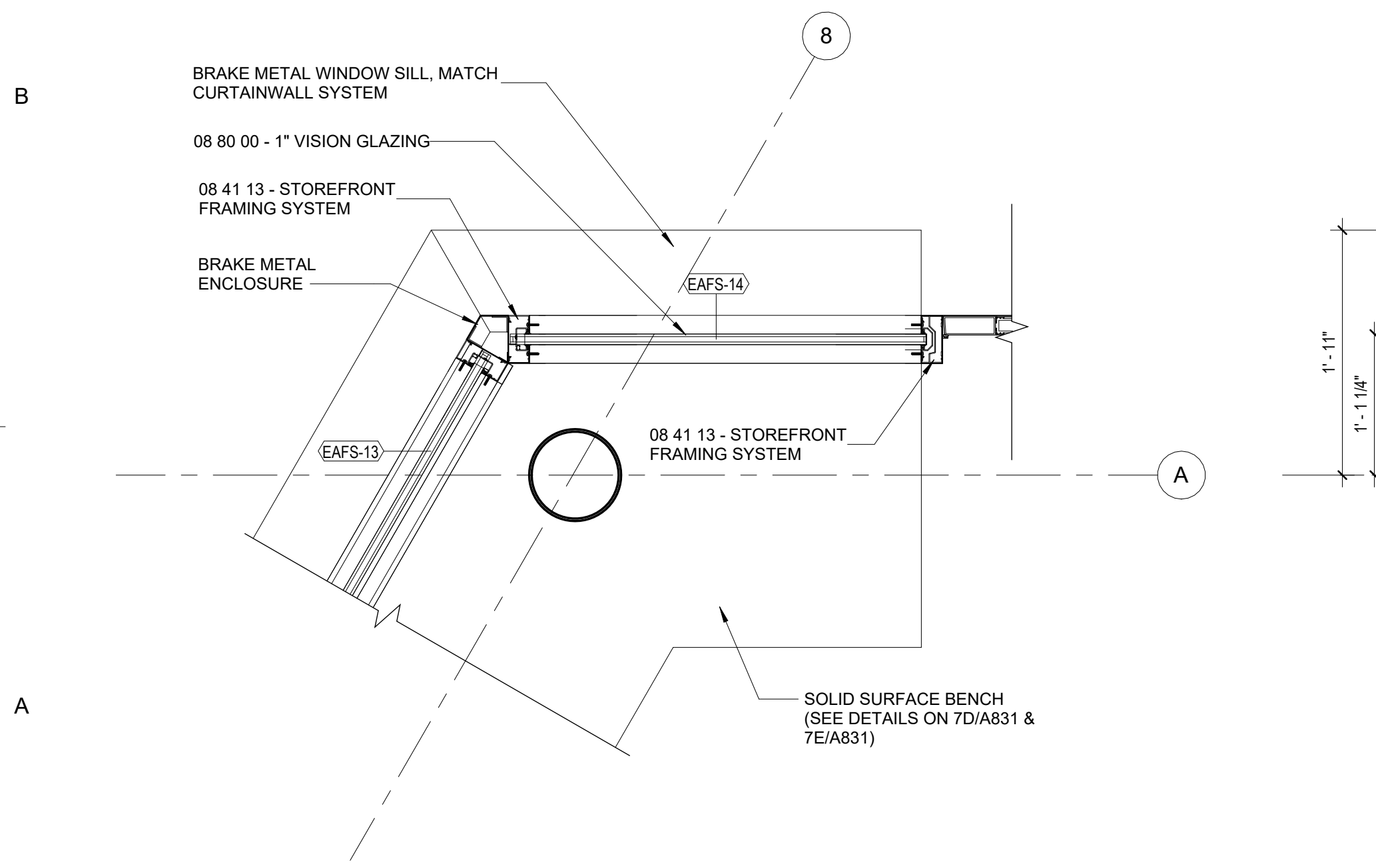
1C PLAN DETAIL - CAFE
A511 1" = 1'-0"



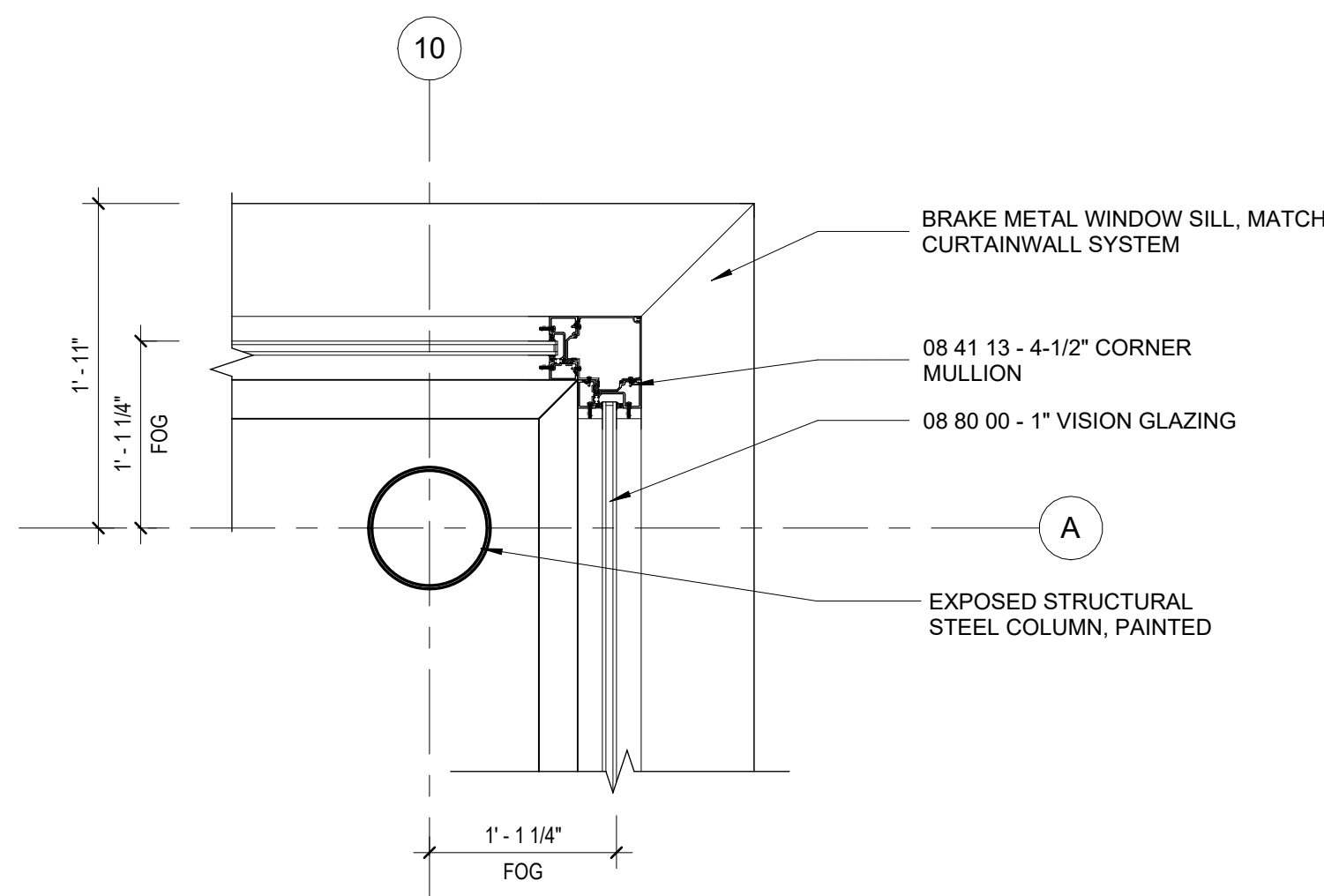
3C PLAN DETAIL - ANGLED WALL AT ENTRY
A511 1" = 1'-0"



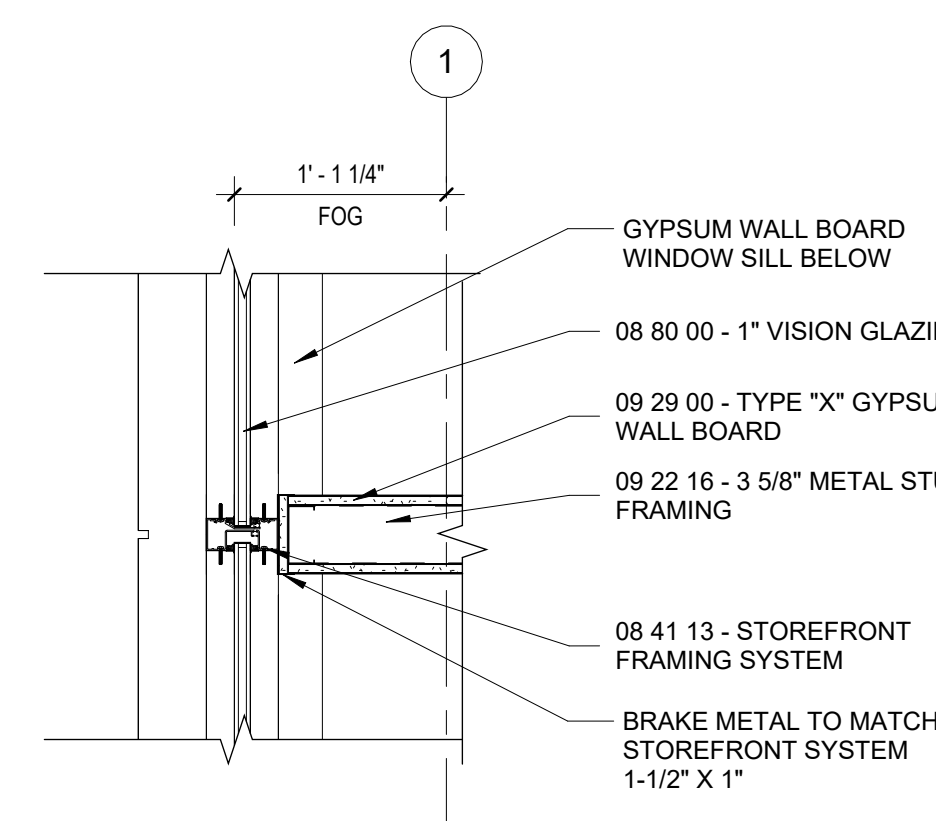
6C PLAN DETAIL - ENTRY VESTIBULE
A511 1" = 1'-0"



1A PLAN DETAIL - CHILDREN'S WING ENTRY
A511 1" = 1'-0"



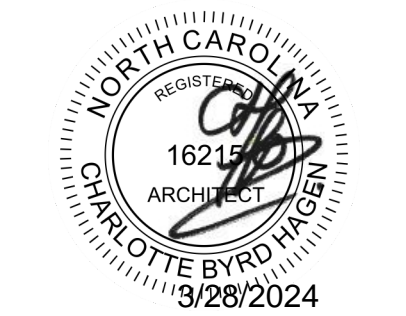
3A PLAN DETAIL - STOREFRONT CORNER AT CHILDREN'S
A511 1" = 1'-0"



4A PLAN DETAIL - RATED WALL AT MULLION - BOOK DROP
A511 1" = 1'-0"

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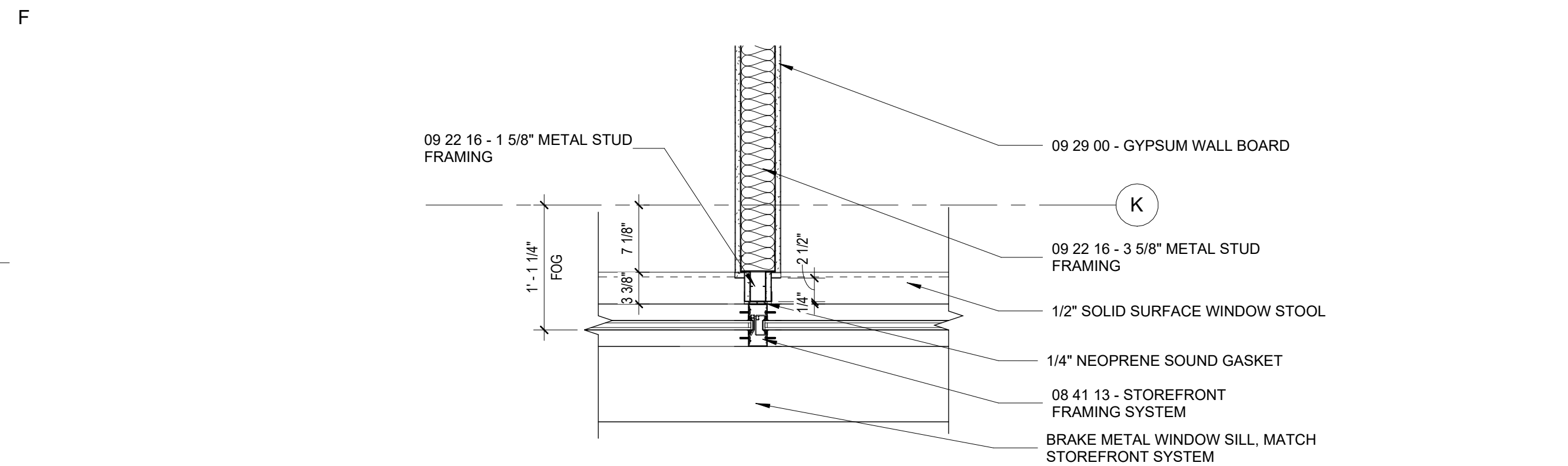
PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

NORTHCHASE BRANCH LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

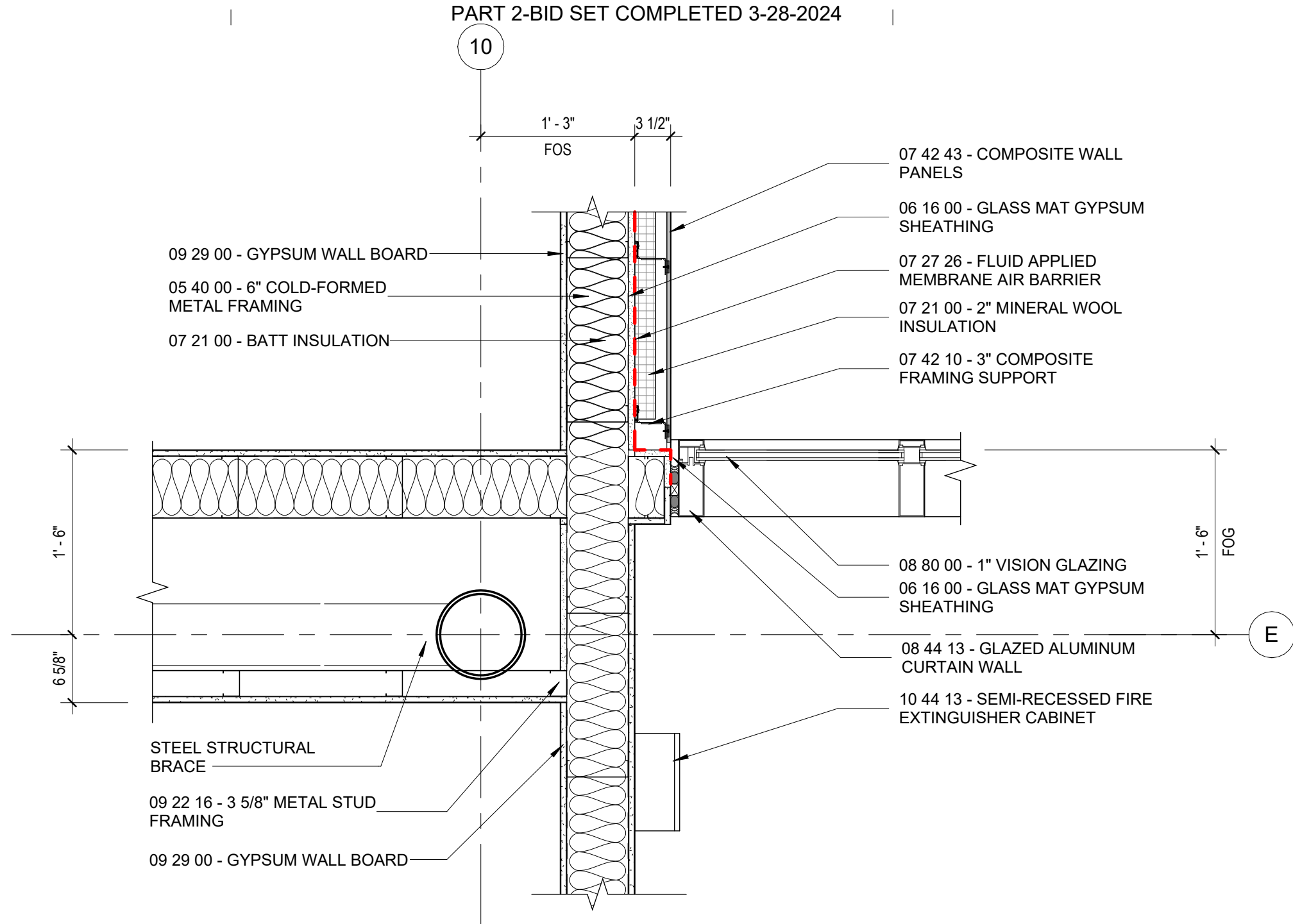
PROJECT NO.
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SHEET TITLE
PLAN DETAILS

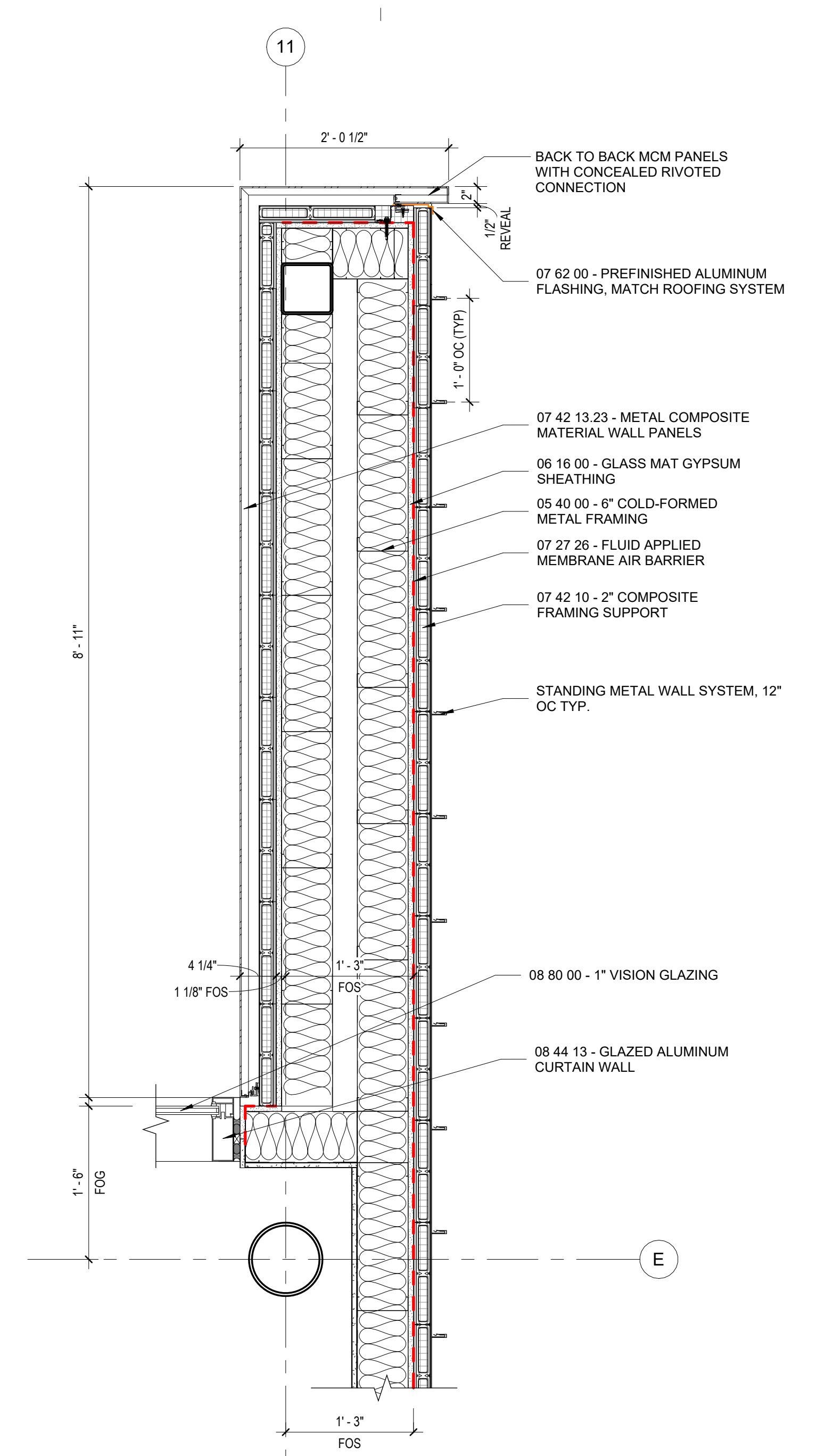
SHEET NUMBER
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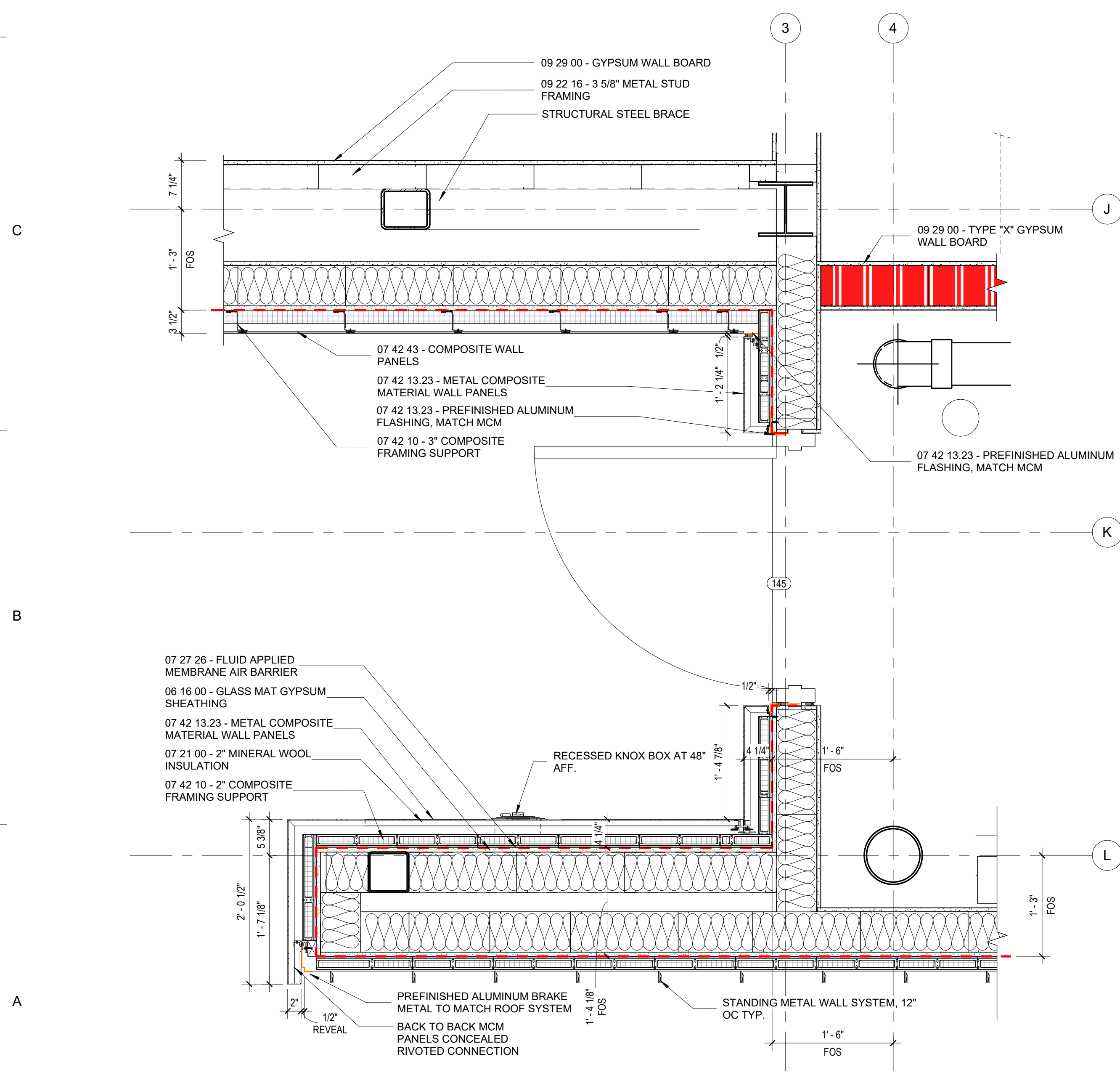
1E PLAN DETAIL - COLUMN 5J
A512 1" = 1'-0"



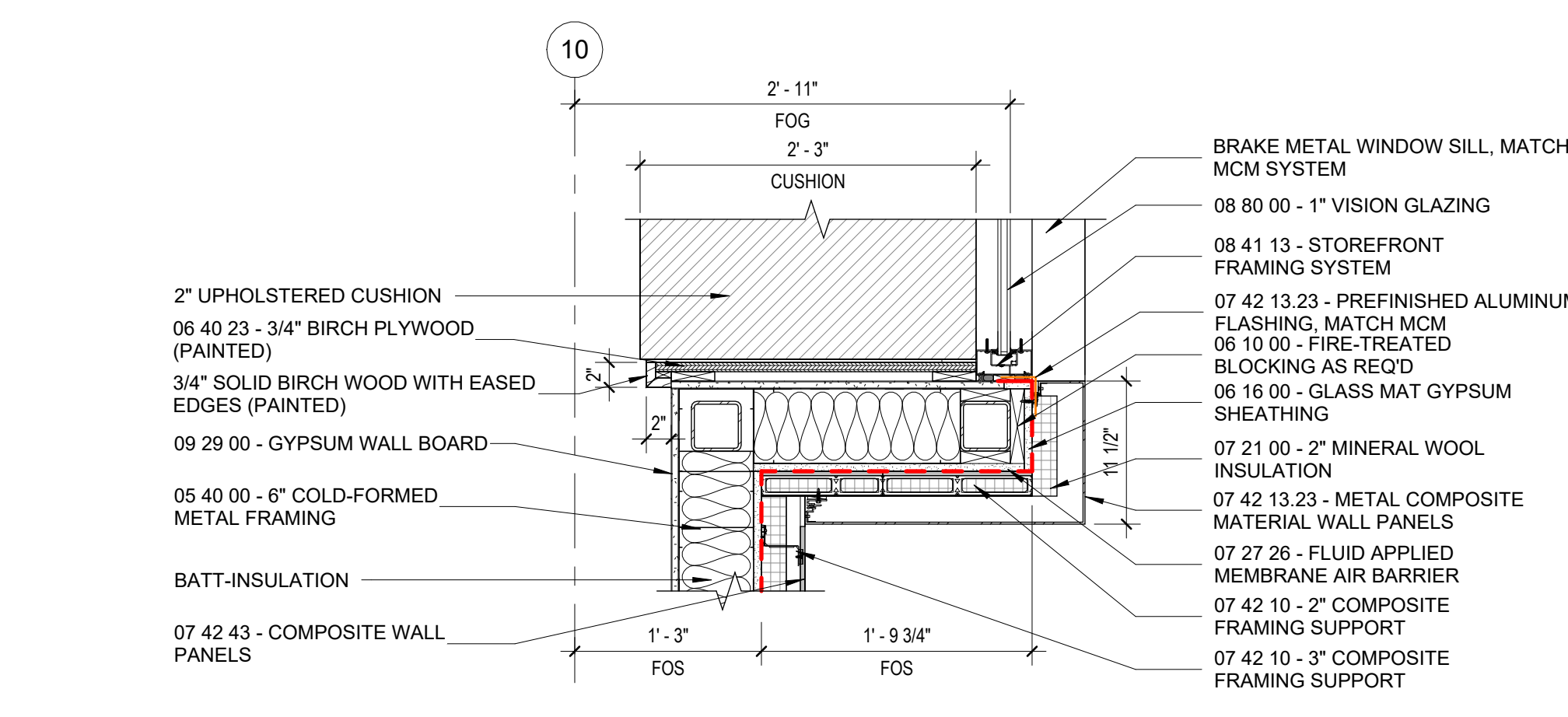
4E PLAN DETAIL - TEEN LIBRARIAN / EMERGENCY EXIT
A512 1" = 1'-0"



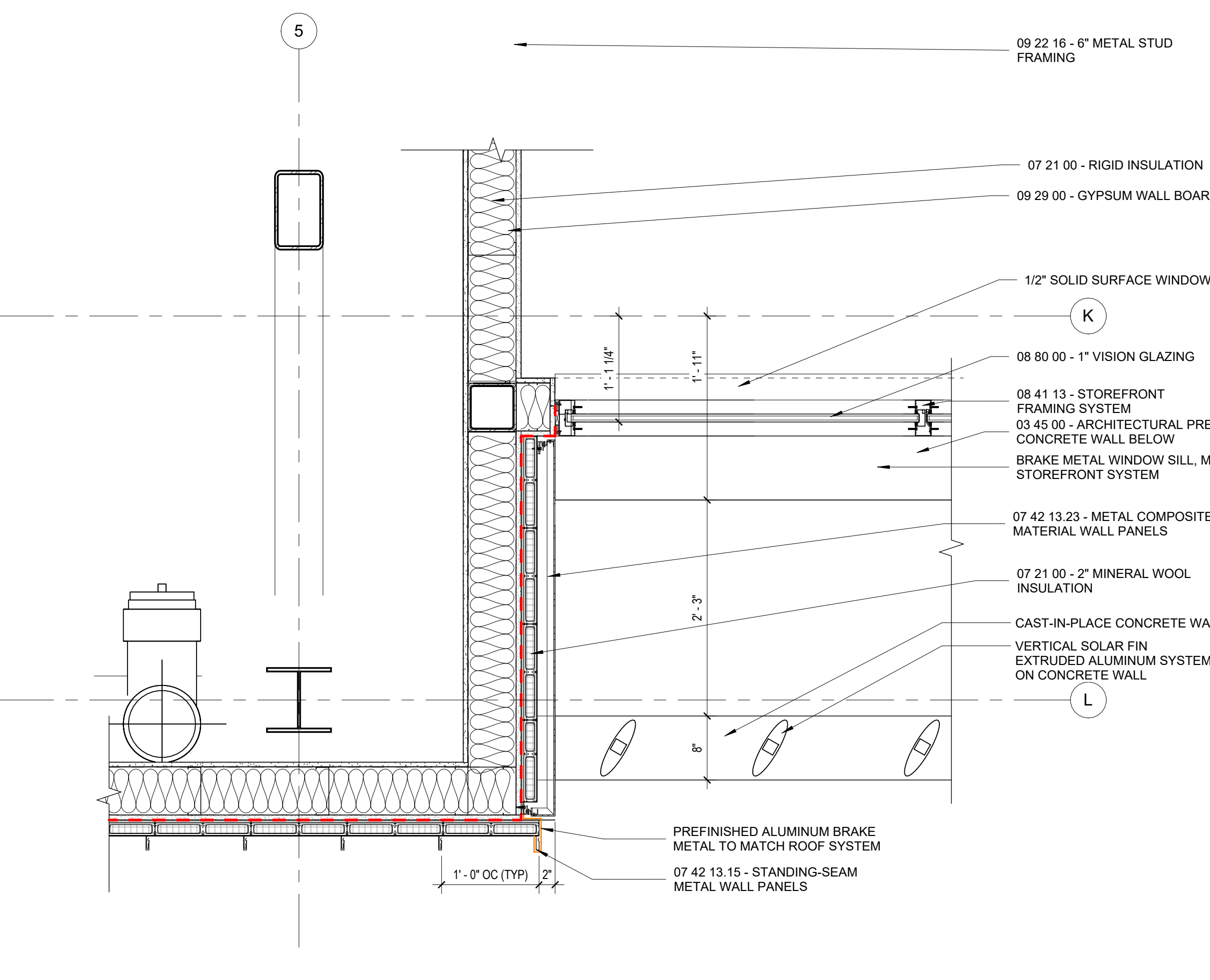
6C PLAN DETAIL - EXTENDED WALL AT ADULT FICTION
A512 1" = 1'-0"



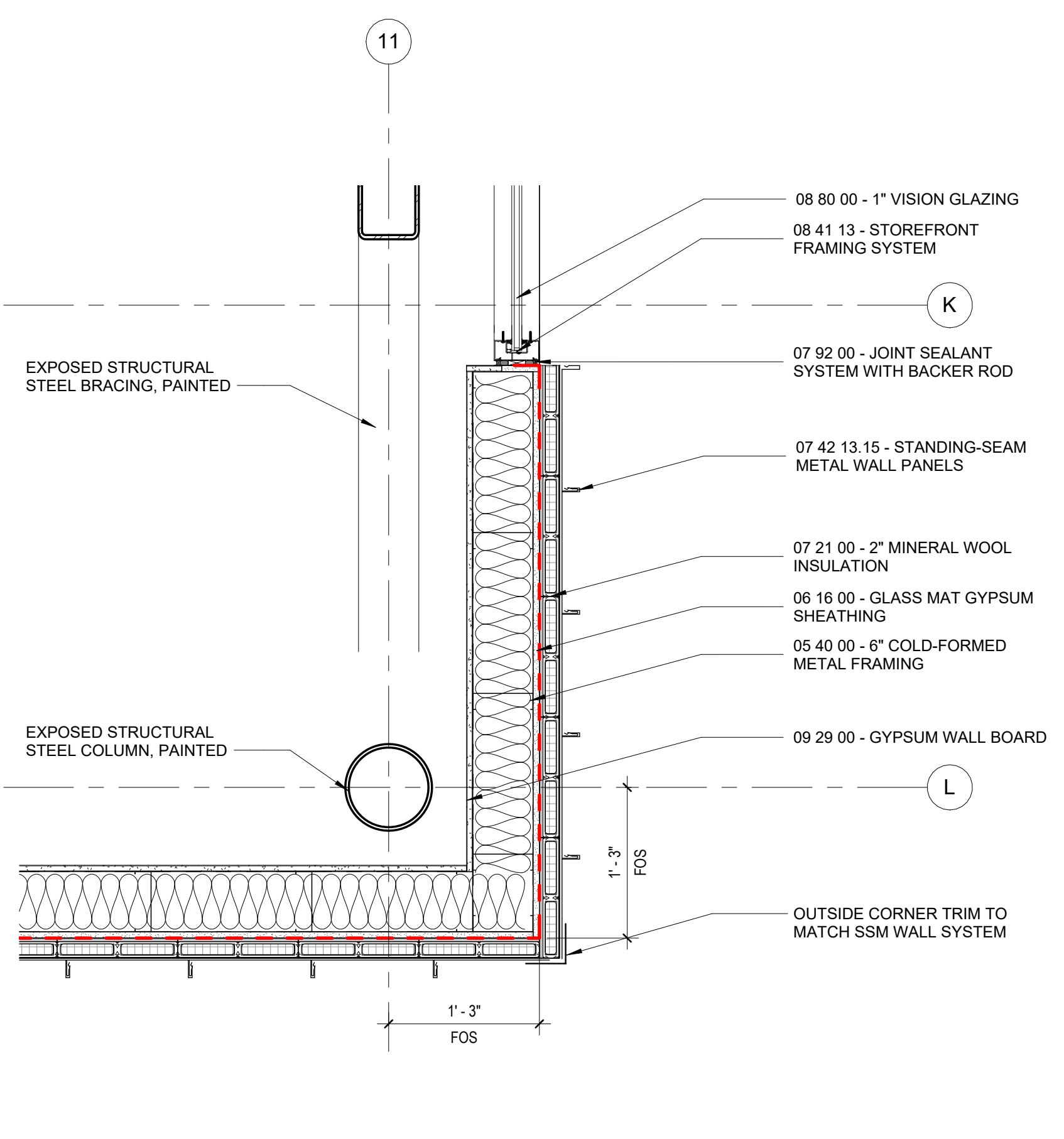
1B PLAN DETAIL - RISER ROOM
A512 1" = 1'-0"



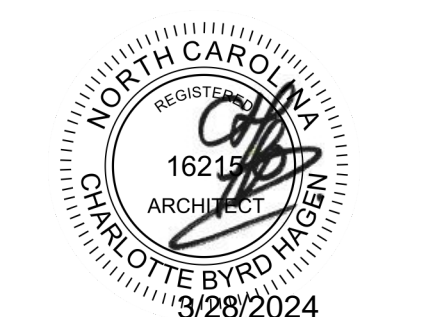
4C PLAN DETAIL - BAY WINDOW
A512 1" = 1'-0"



4B PLAN DETAIL - VERTICAL SOLAR FIN WALL
A512 1" = 1'-0"



6B PLAN DETAIL - SOUTHWEST CORNER
A512 1" = 1'-0"



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PROJECT TEAM
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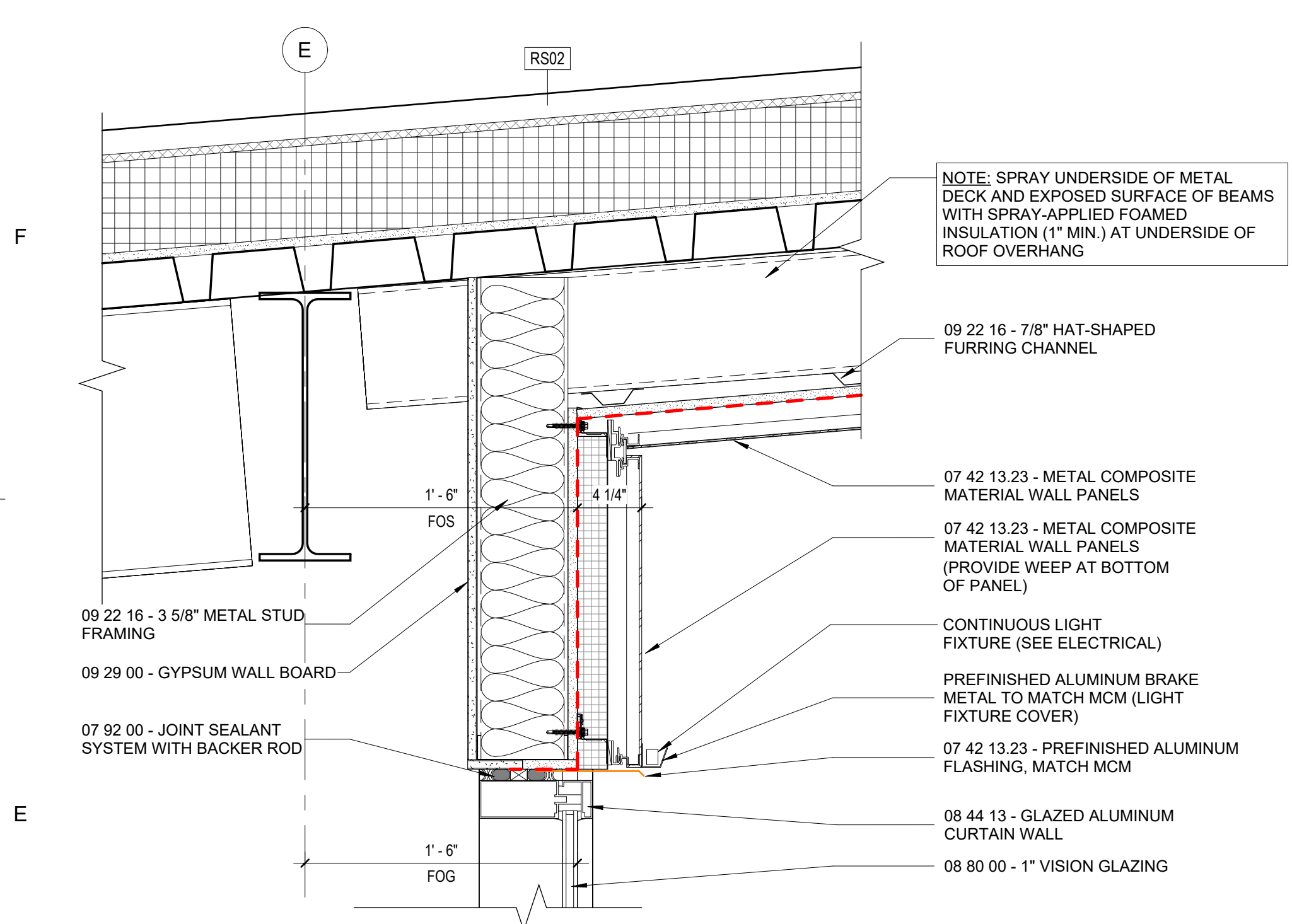
NORTHCHASE BRANCH LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

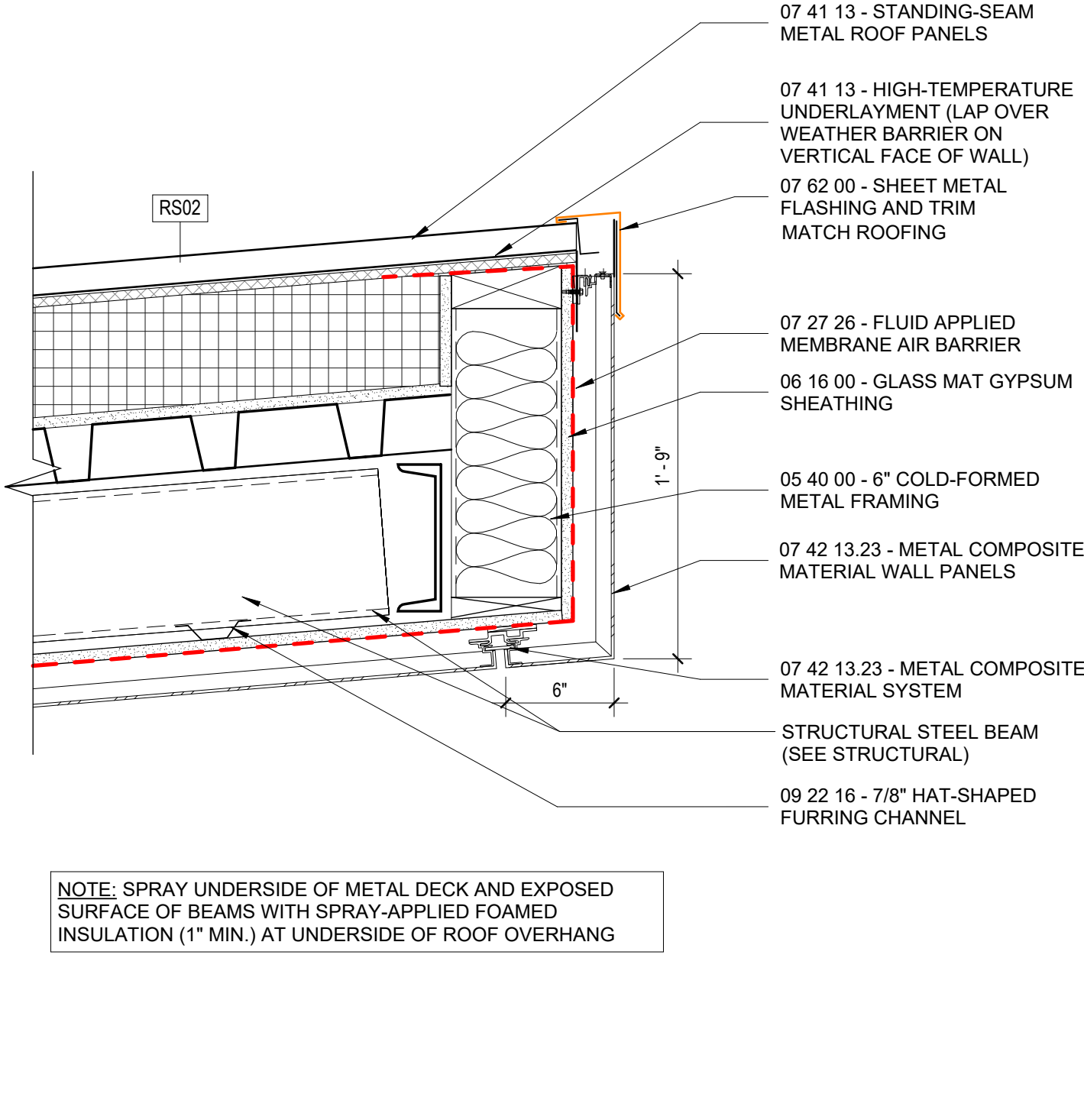
SHEET TITLE
PLAN DETAILS

SHEET NUMBER
A512

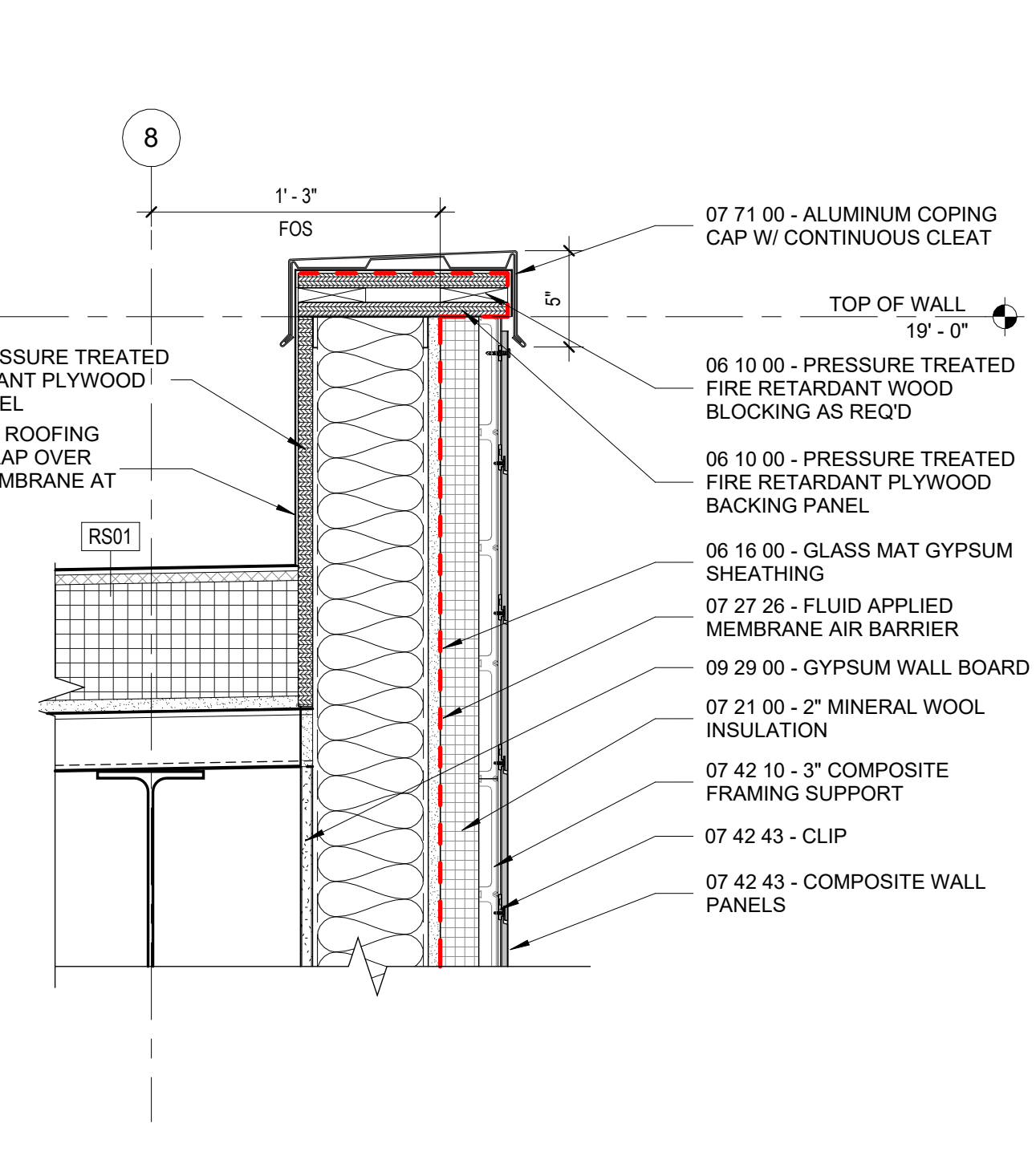
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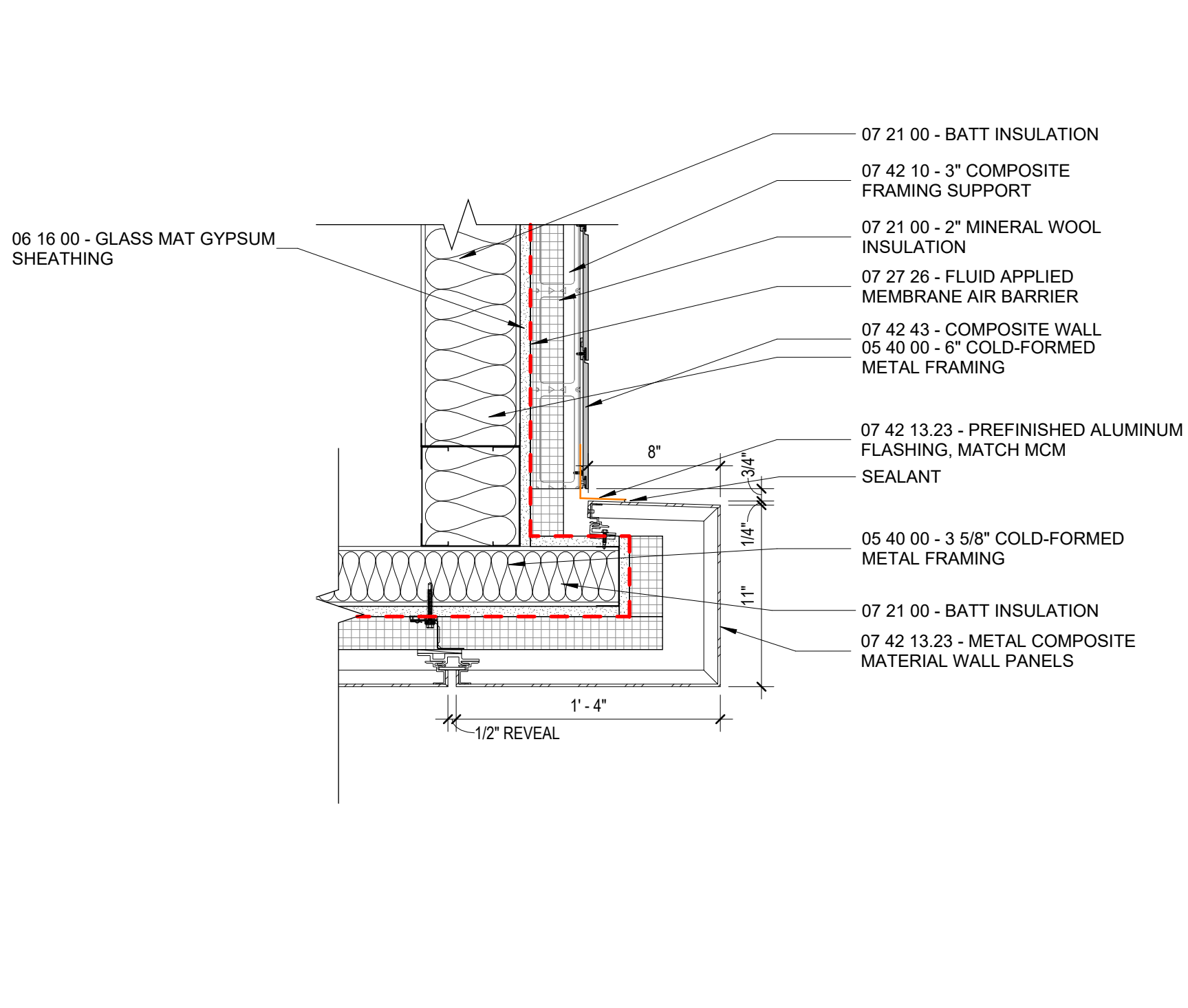
1E SECTION DETAIL - ROOF OVERHANG AT CURTAIN WALL
A521 1 1/2" = 1'-0"



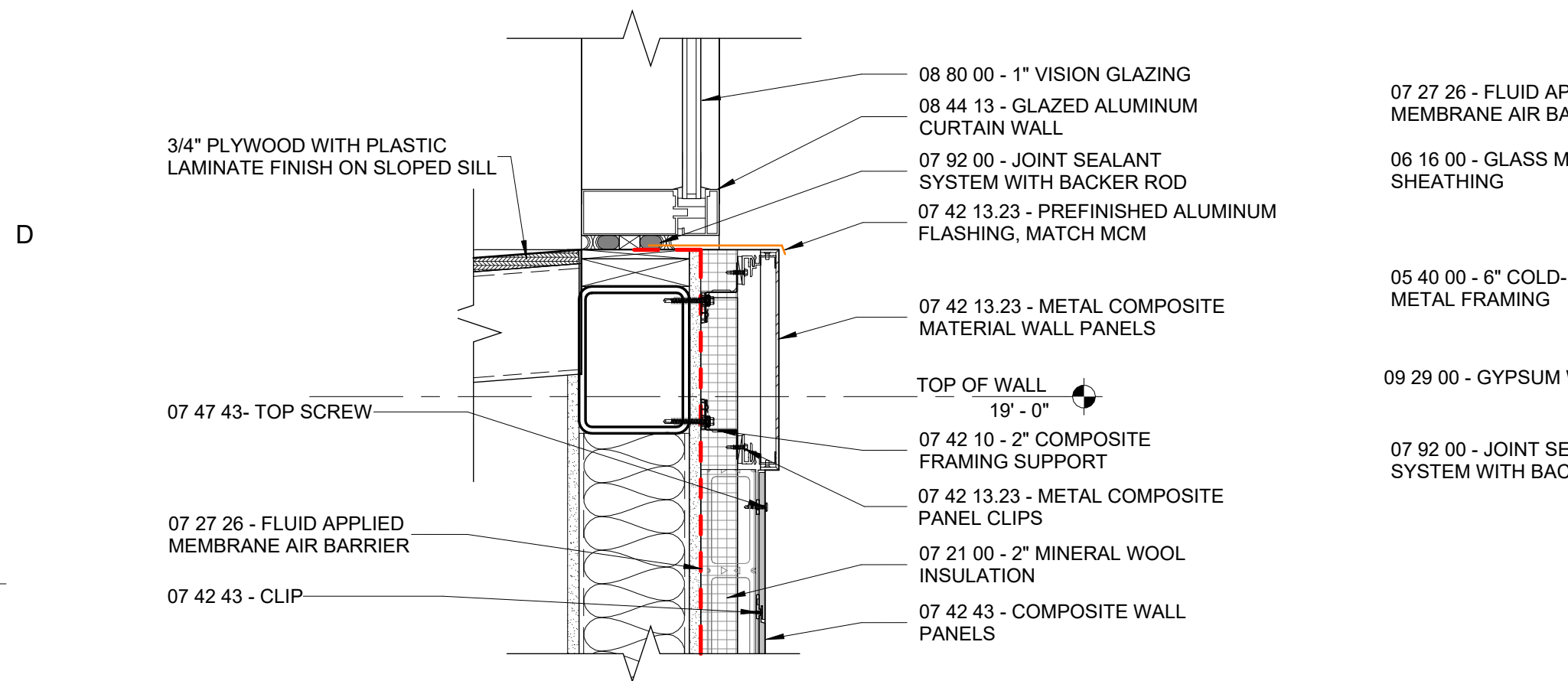
3E SECTION DETAIL - EDGE OF ROOF OVERHANG
A521 1 1/2" = 1'-0"



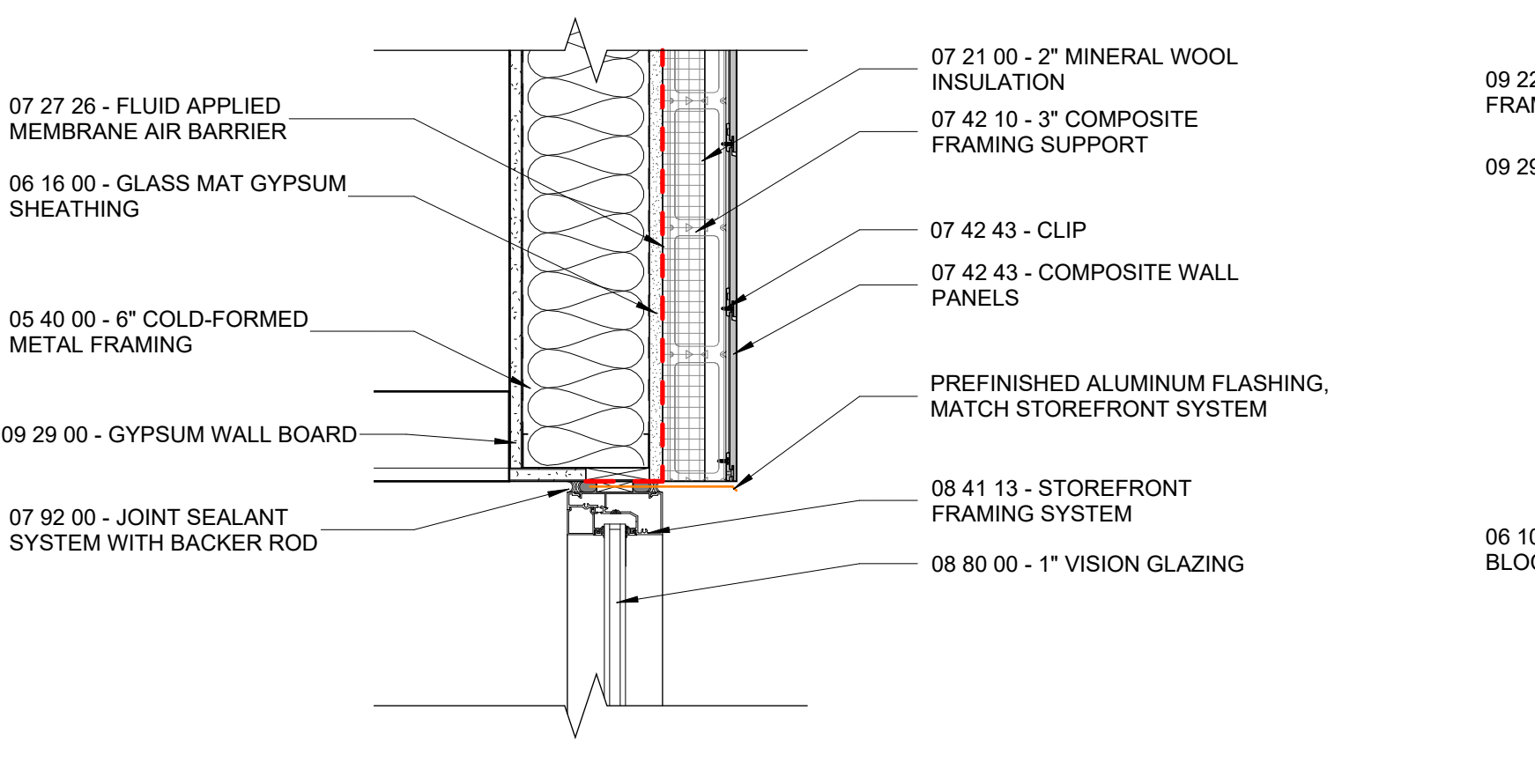
4E SECTION DETAIL - TYPICAL PARAPET AT HPL WALL
A521 1 1/2" = 1'-0"



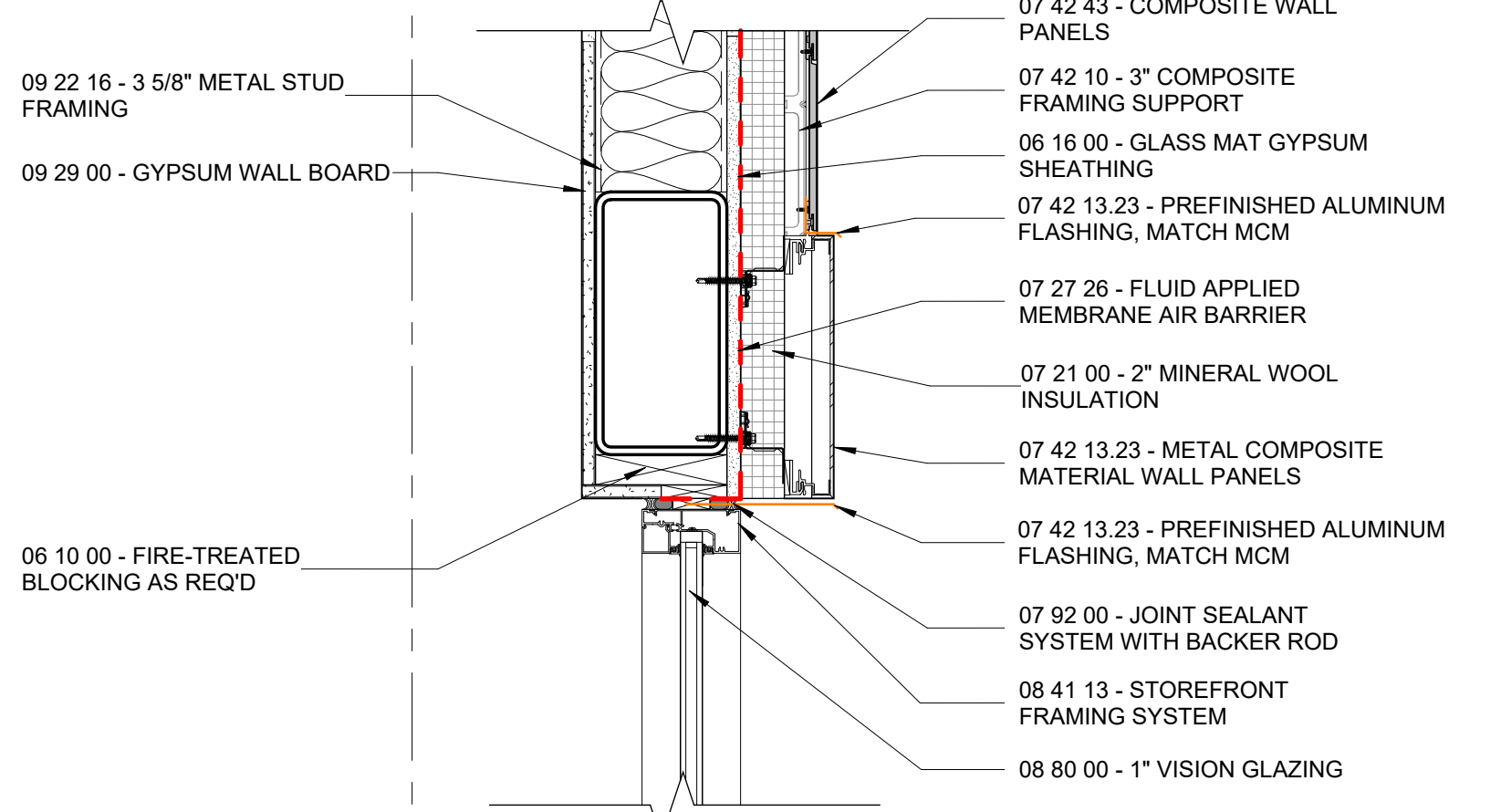
6E SECTION DETAIL - MCM BROW AT ENTRY
A521 1 1/2" = 1'-0"



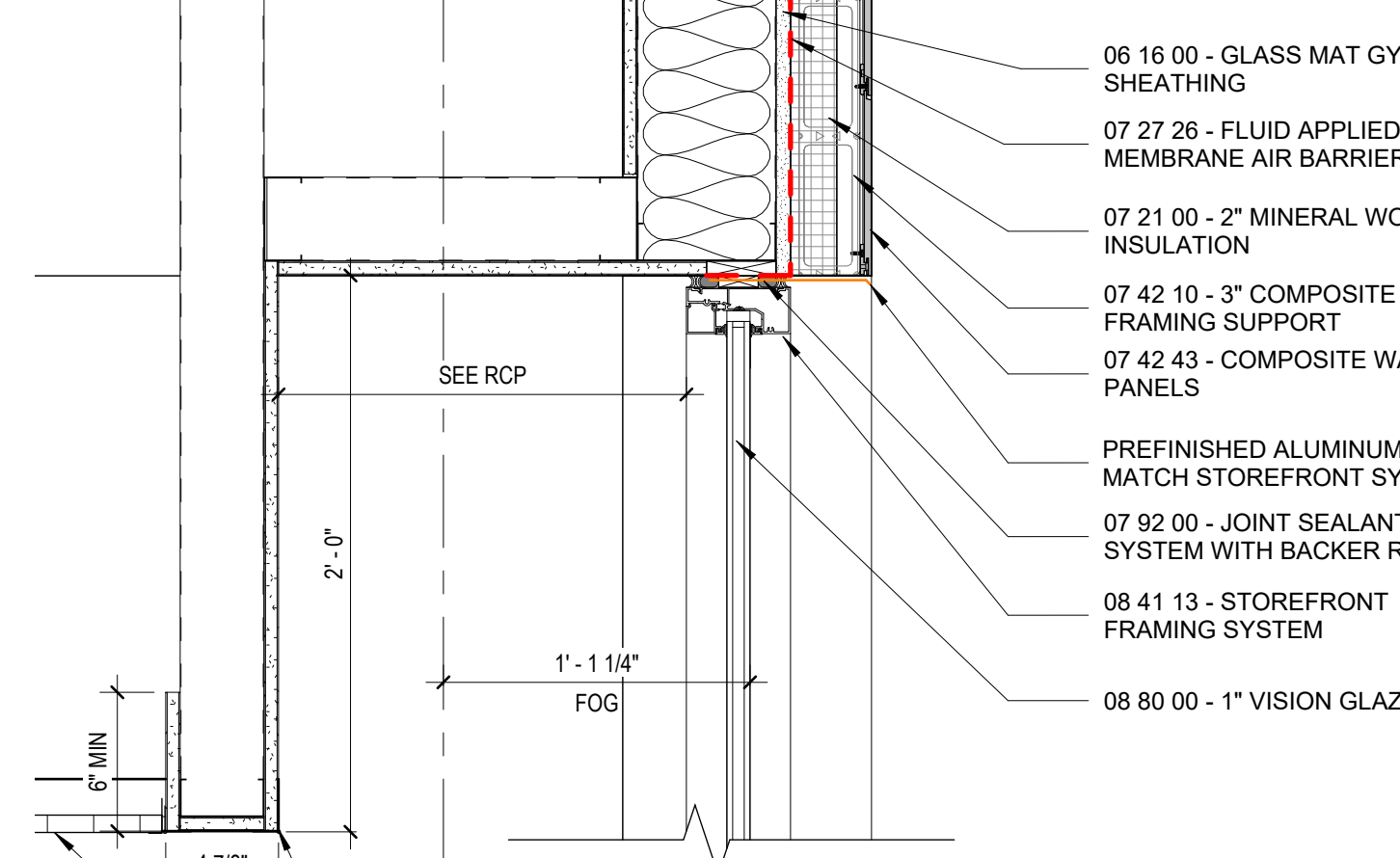
1C SECTION DETAIL - MCM BROW BELOW CLERESTORY
A521 1 1/2" = 1'-0"



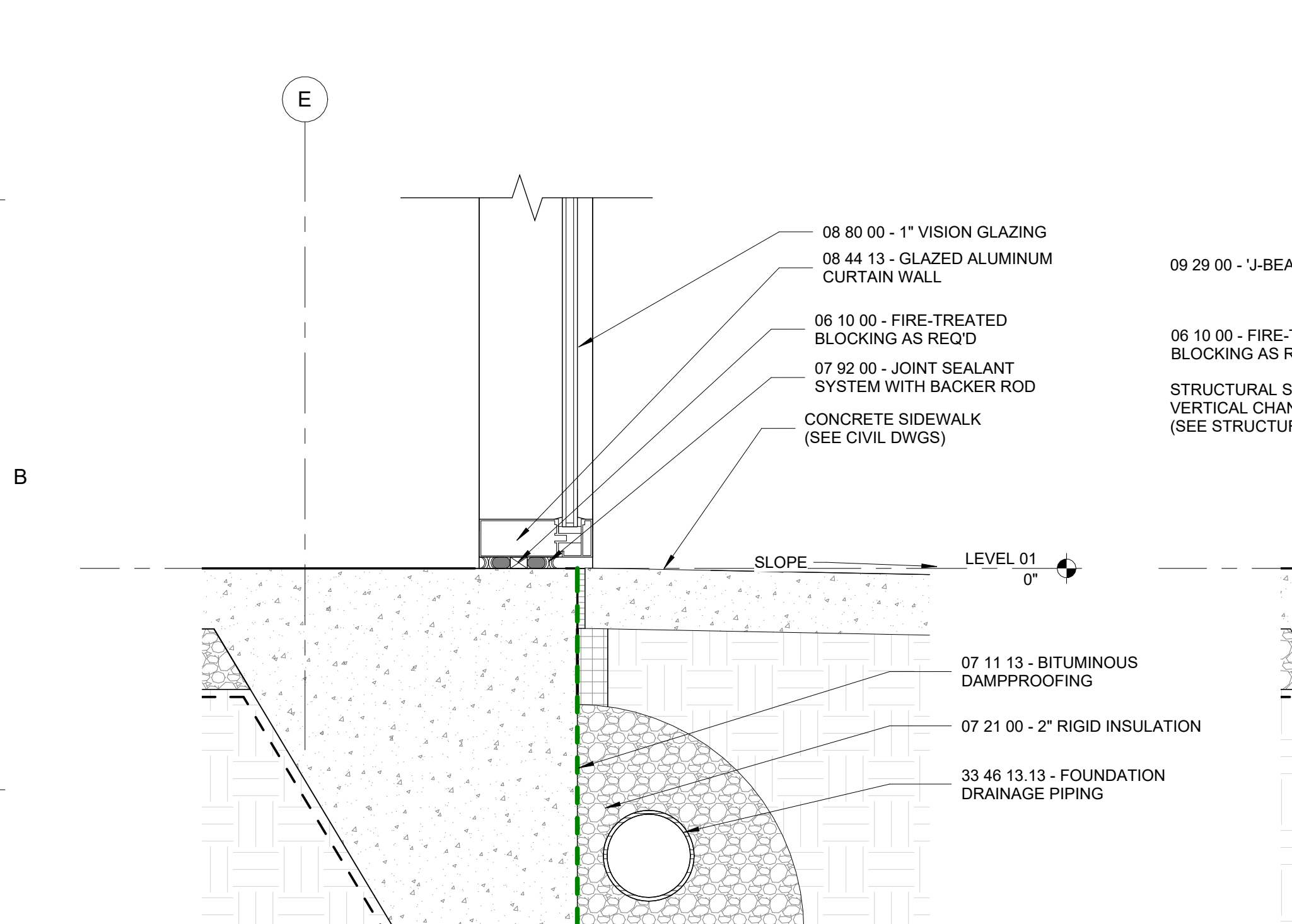
3C SECTION DETAIL - STOREFRONT HEAD AT HPL WALL
A521 1 1/2" = 1'-0"



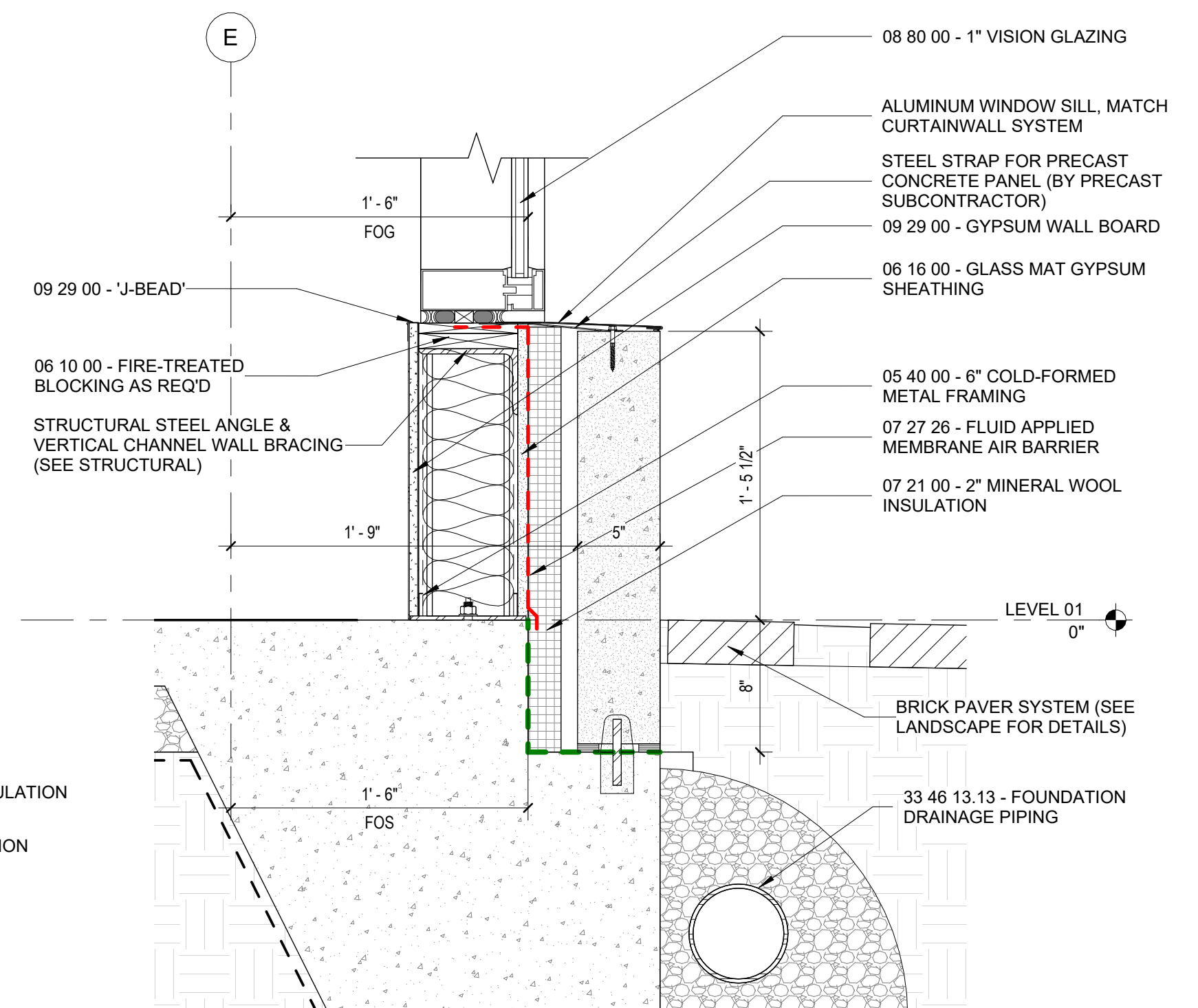
4C SECTION DETAIL - STOREFRONT HEAD MCM / HPL TRANSITION
A521 1 1/2" = 1'-0"



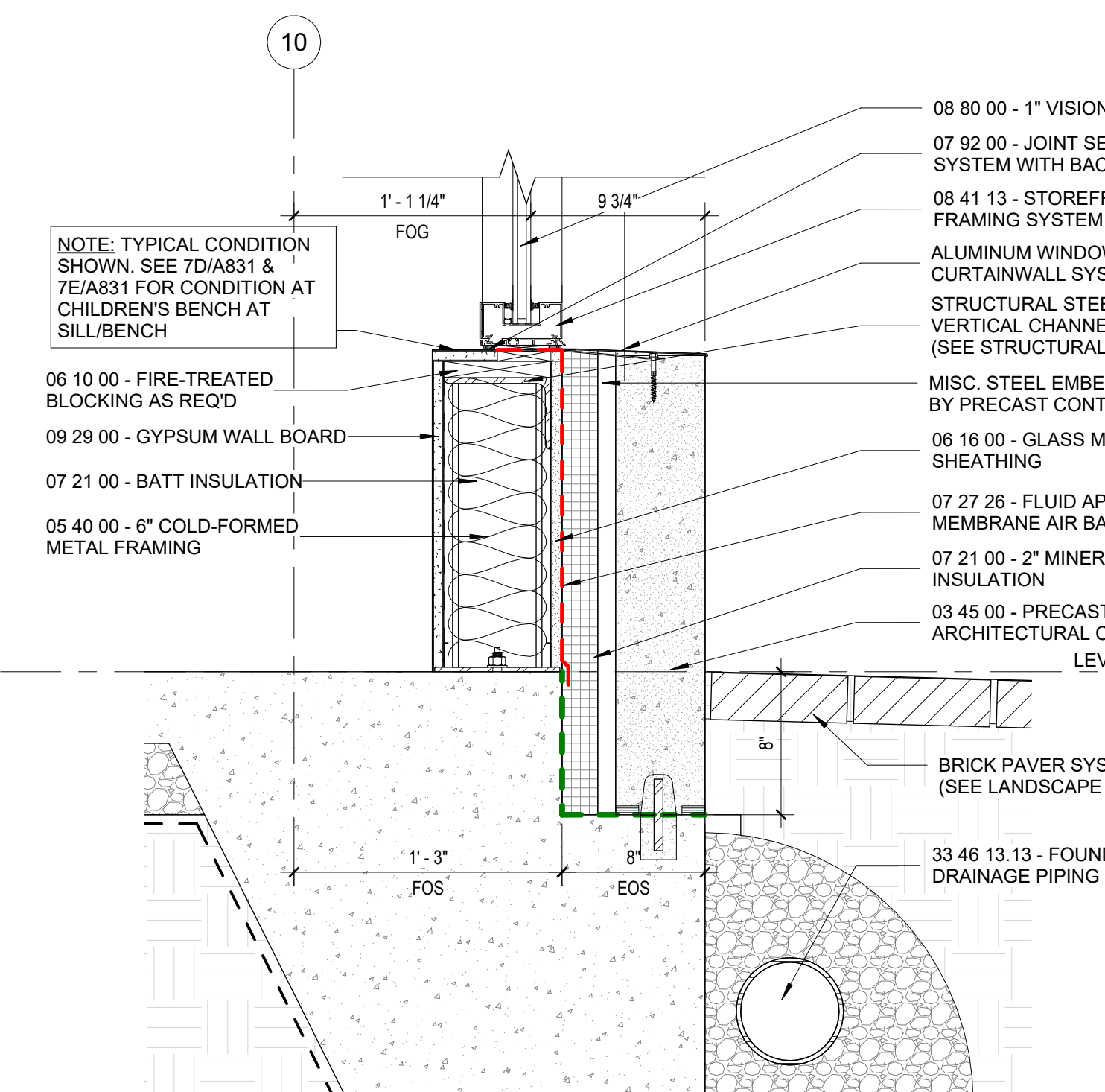
6C SECTION DETAIL - HEAD OF STOREFRONT AT HPL - OFFICE
A521 1 1/2" = 1'-0"



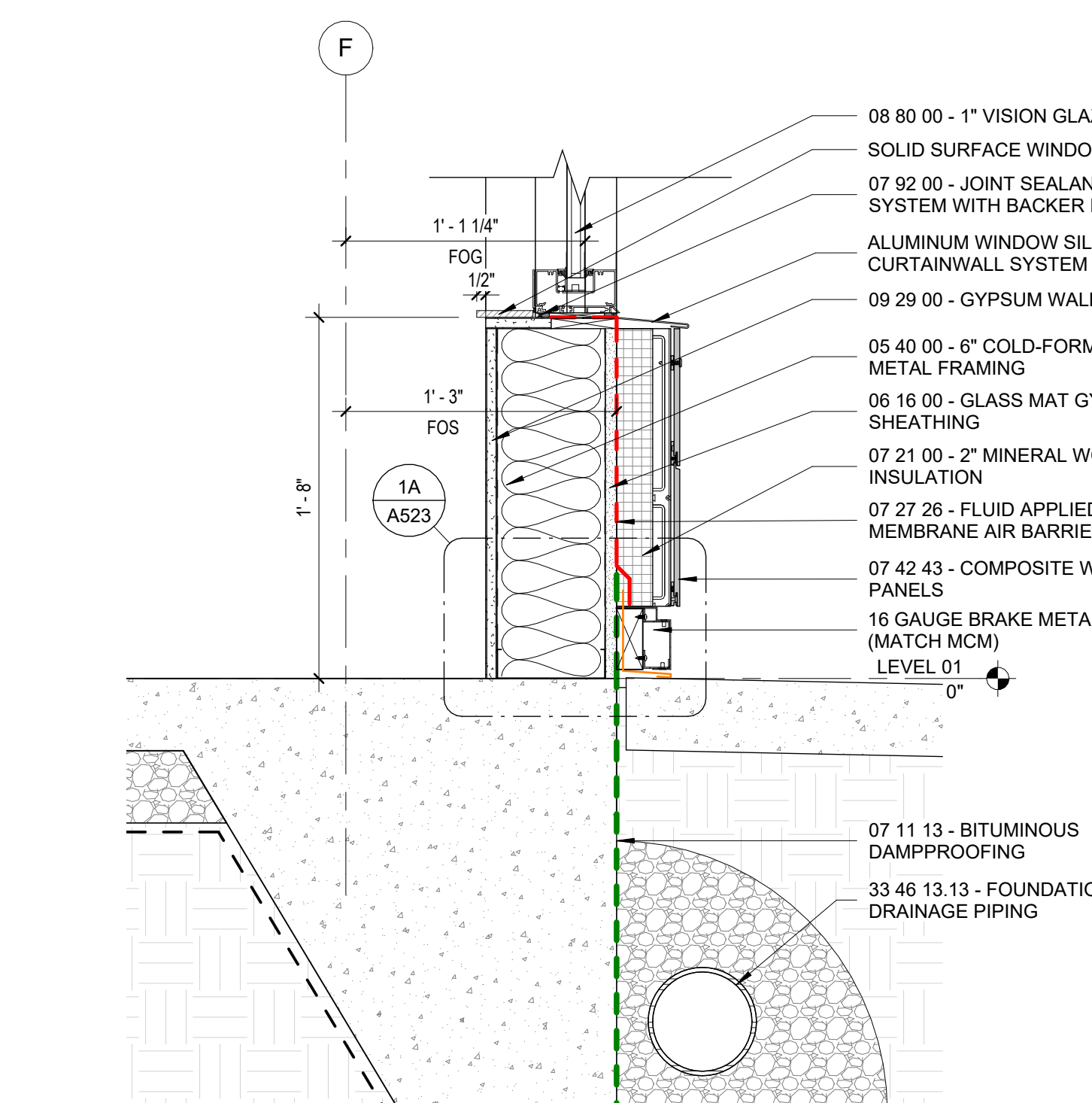
1A SECTION DETAIL - CURTAIN WALL BASE AT LEVEL 01
A521 1 1/2" = 1'-0"



3A SECTION DETAIL - CURTAIN WALL / SILL AT CONCRETE WALL BASE
A521 1 1/2" = 1'-0"



4A SECTION DETAIL - STOREFRONT / SILL AT CONCRETE WALL BASE
A521 1 1/2" = 1'-0"



6A SECTION DETAIL - STOREFRONT / SILL AT HPL WALL BASE
A521 1 1/2" = 1'-0"



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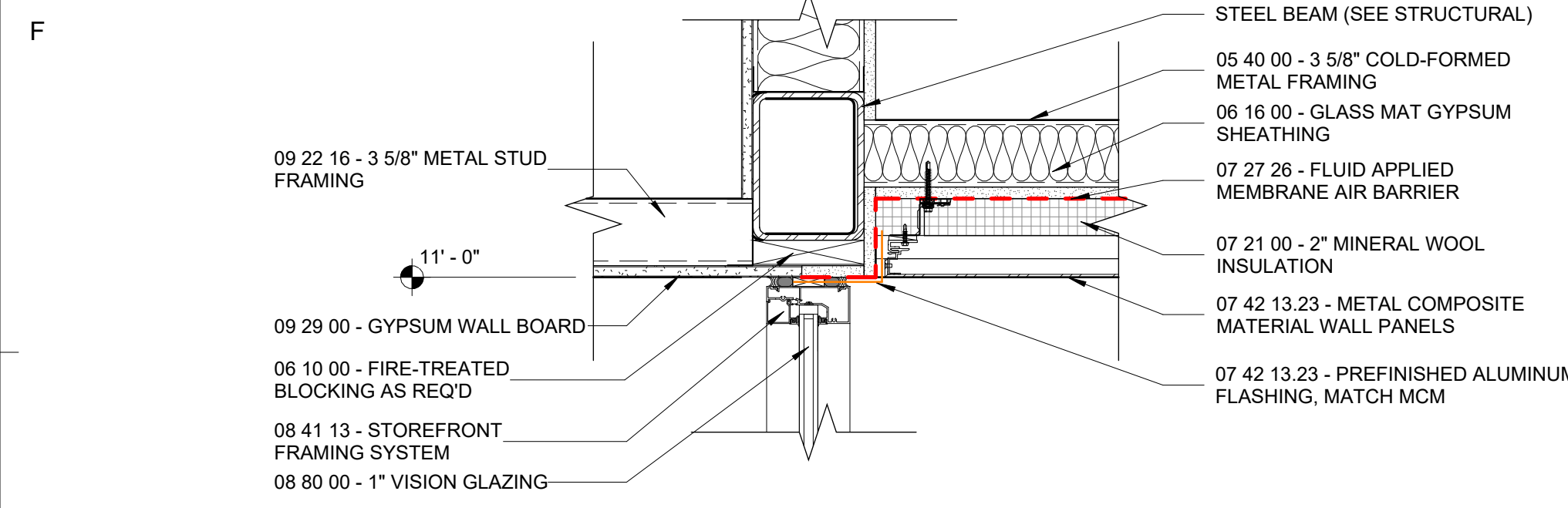
PROJECT TEAM
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Charlotte Hagen, AIA
DESIGN TEAM
Designer

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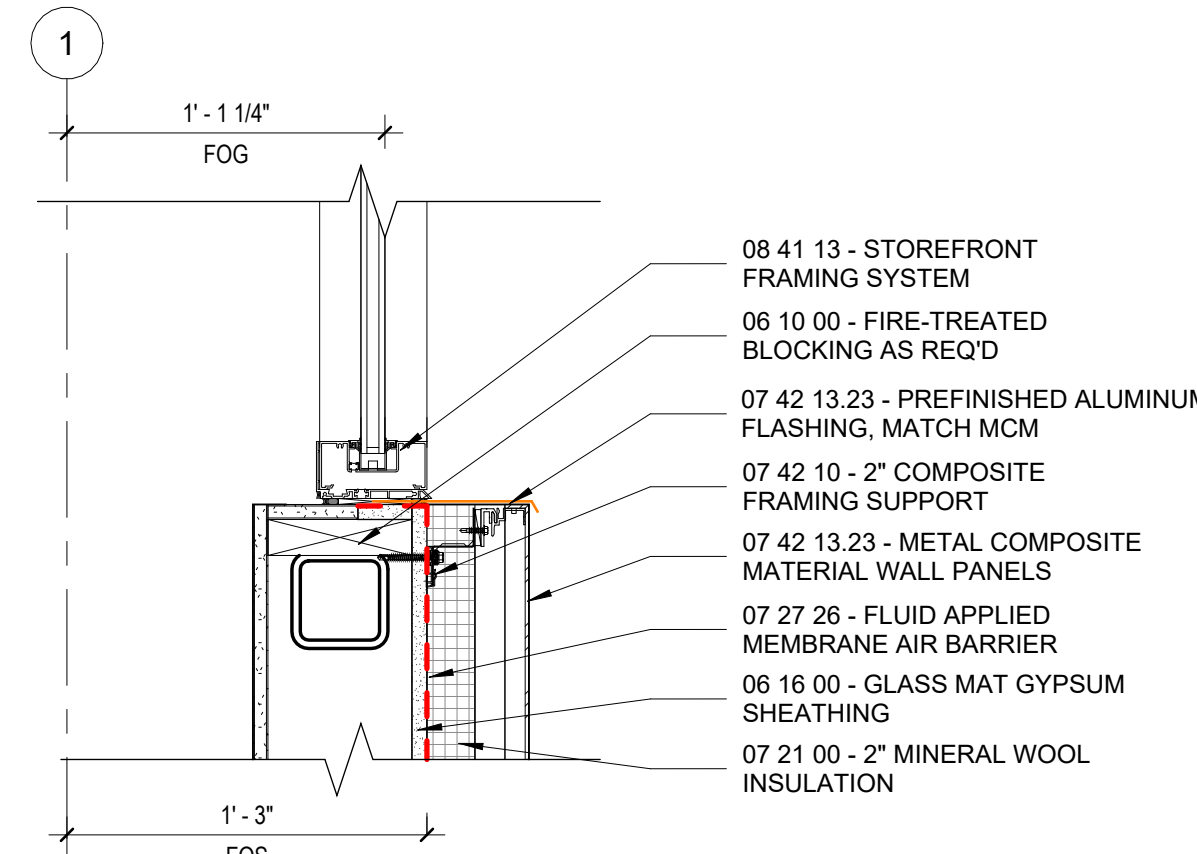
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SECTION DETAILS

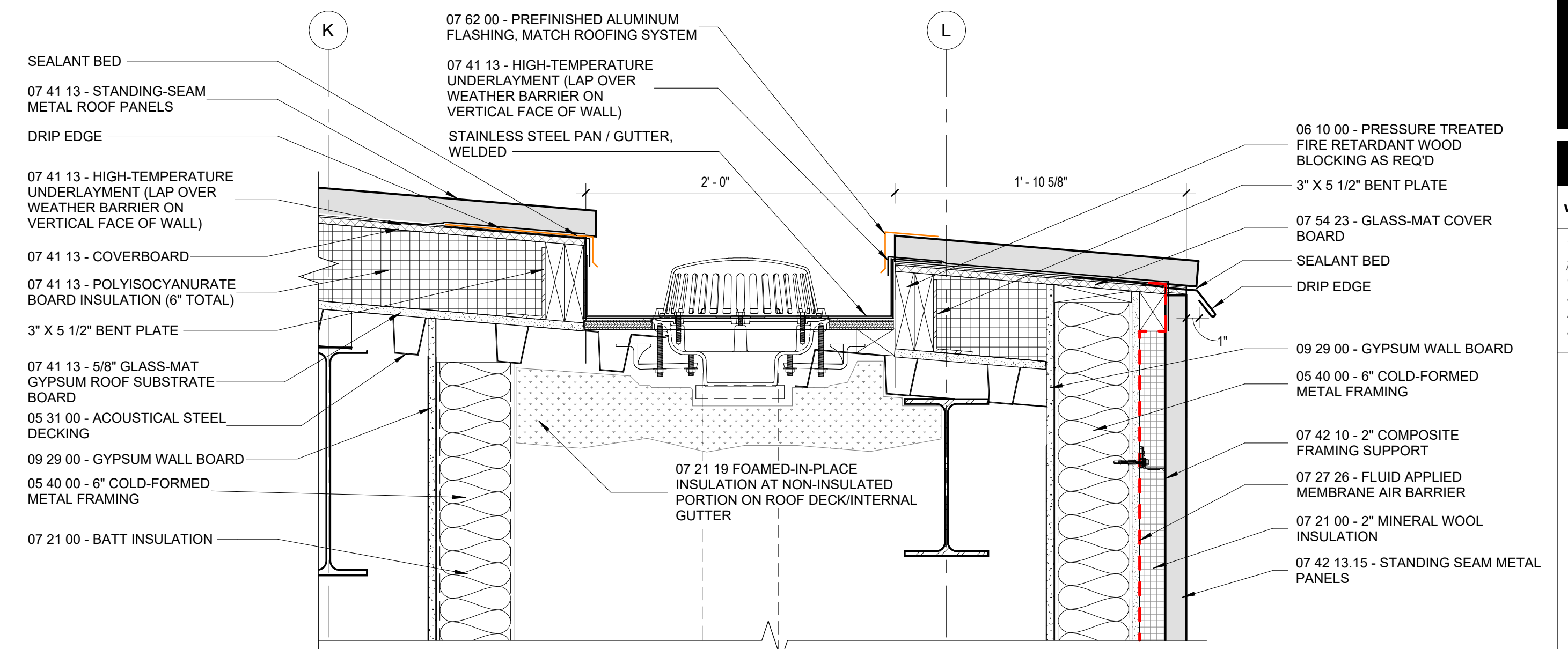
SHEET NUMBER
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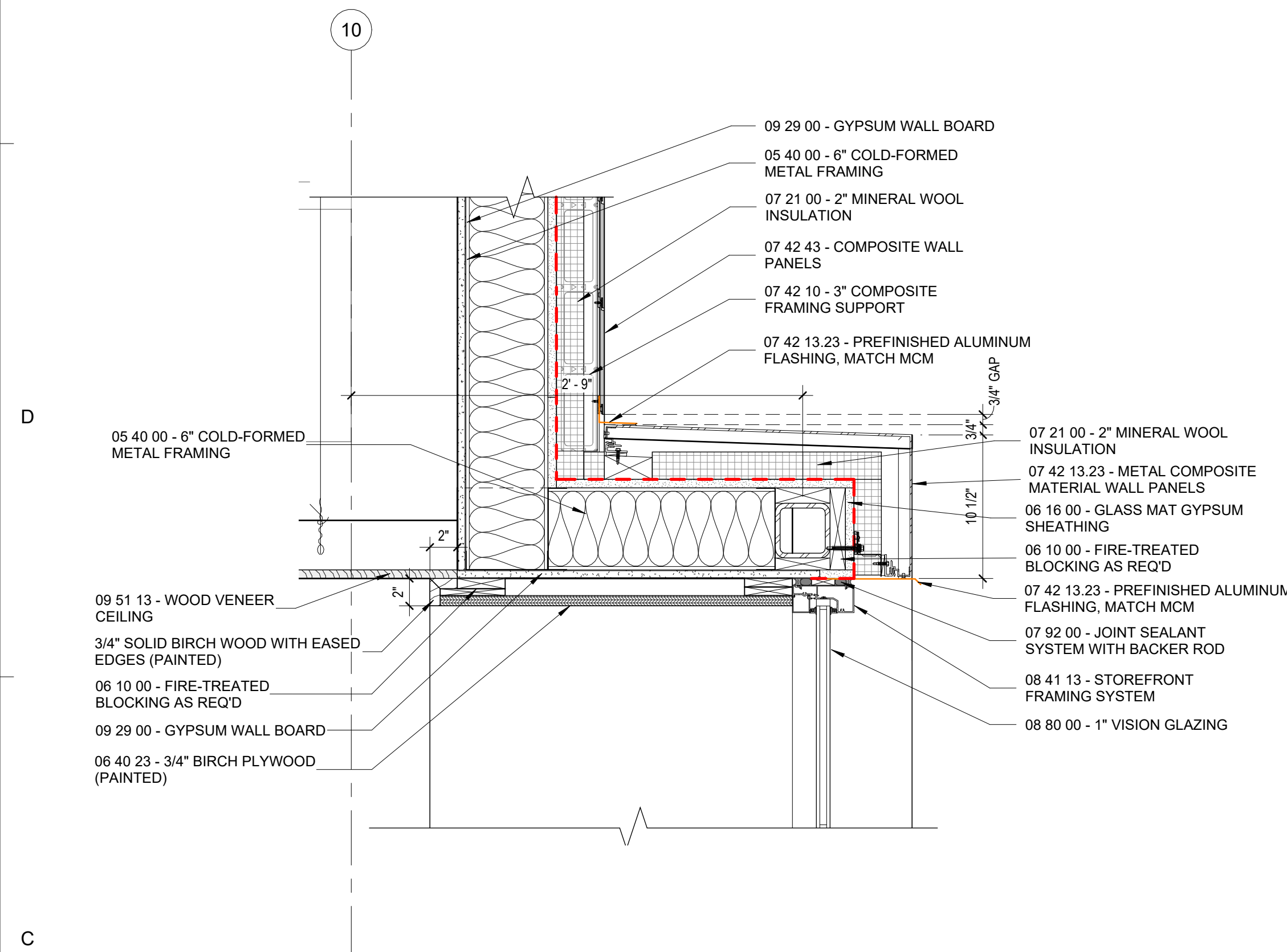
1E SECTION DETAIL - HEAD STOREFRONT / MCM SOFFIT
A522 1 1/2" = 1'-0"



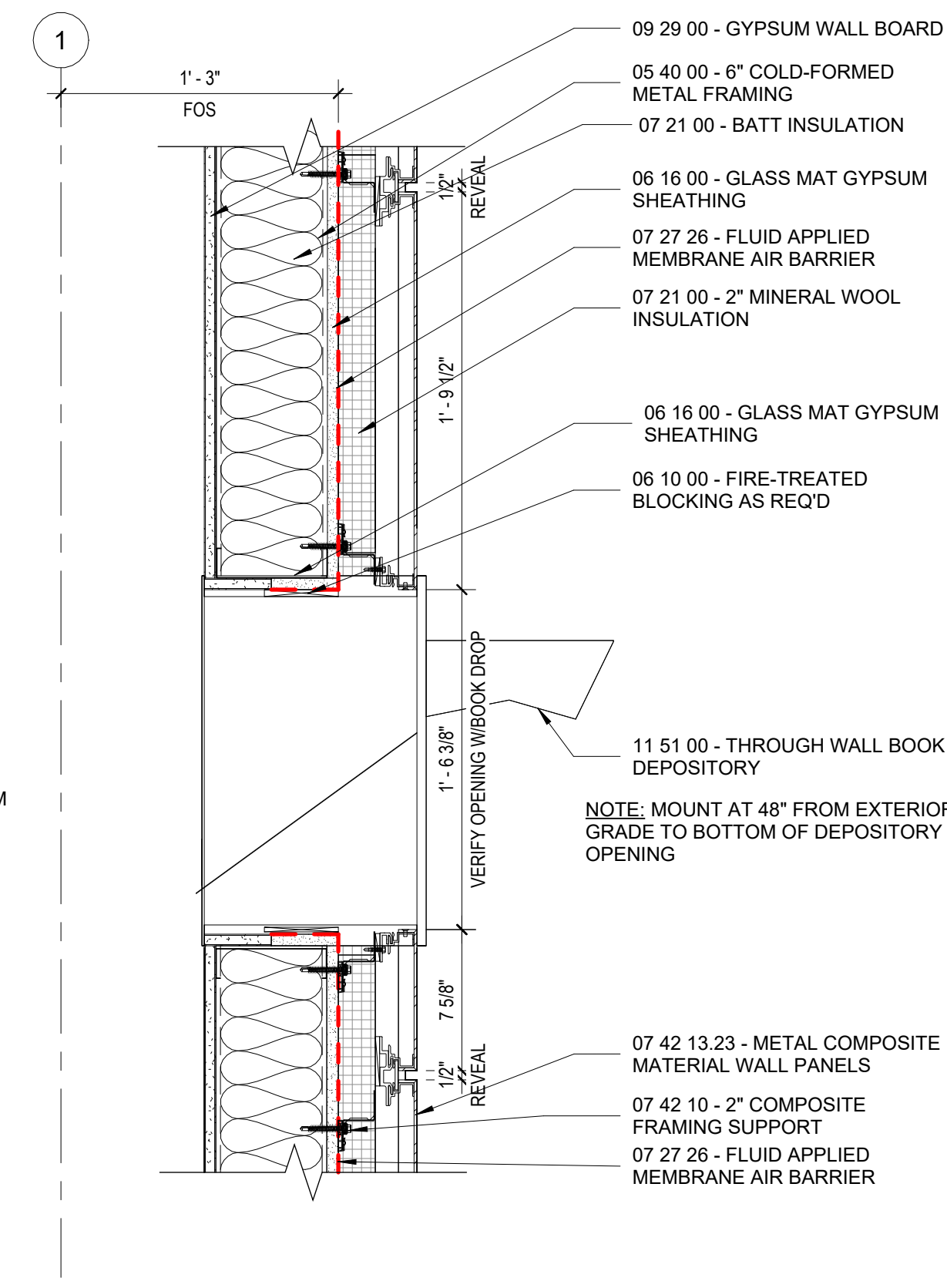
3E SECTION DETAIL - SILL AT MCM / STOREFRONT
A522 1 1/2" = 1'-0"



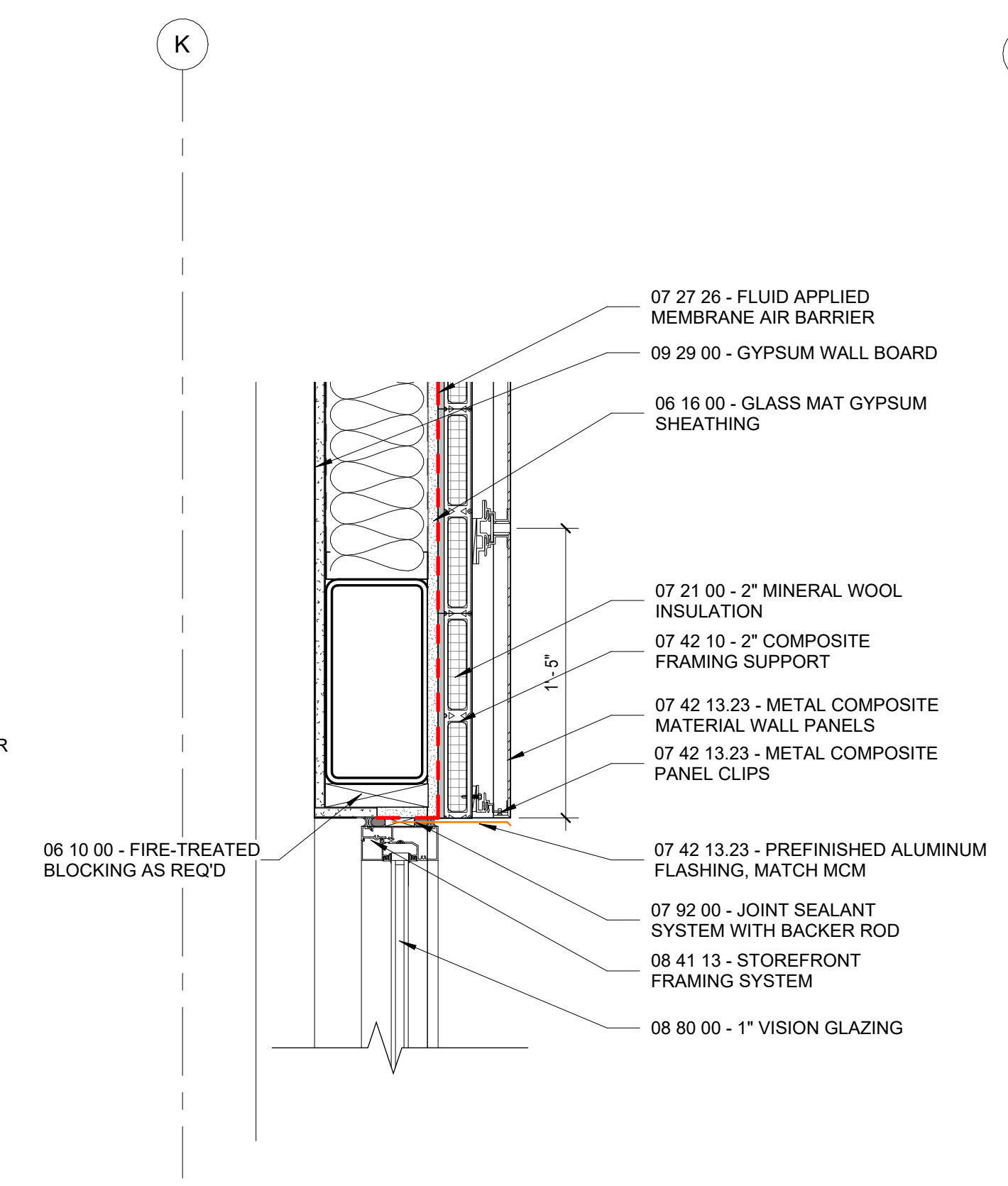
6E GUTTER SYSTEM @ SSM
A522 1 1/2" = 1'-0"



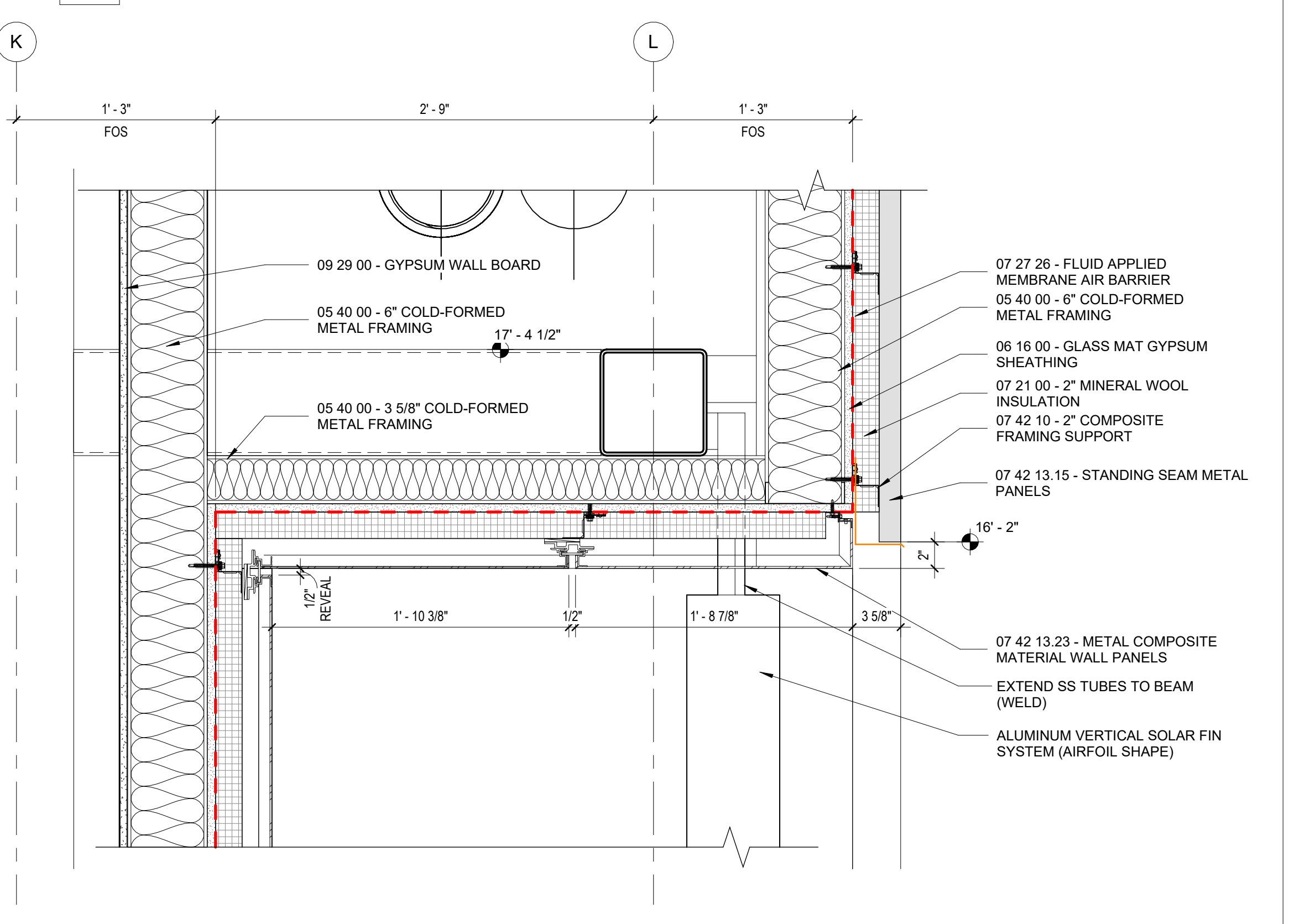
1C SECTION DETAIL - HEAD AT BAY WINDOW
A522 1 1/2" = 1'-0"



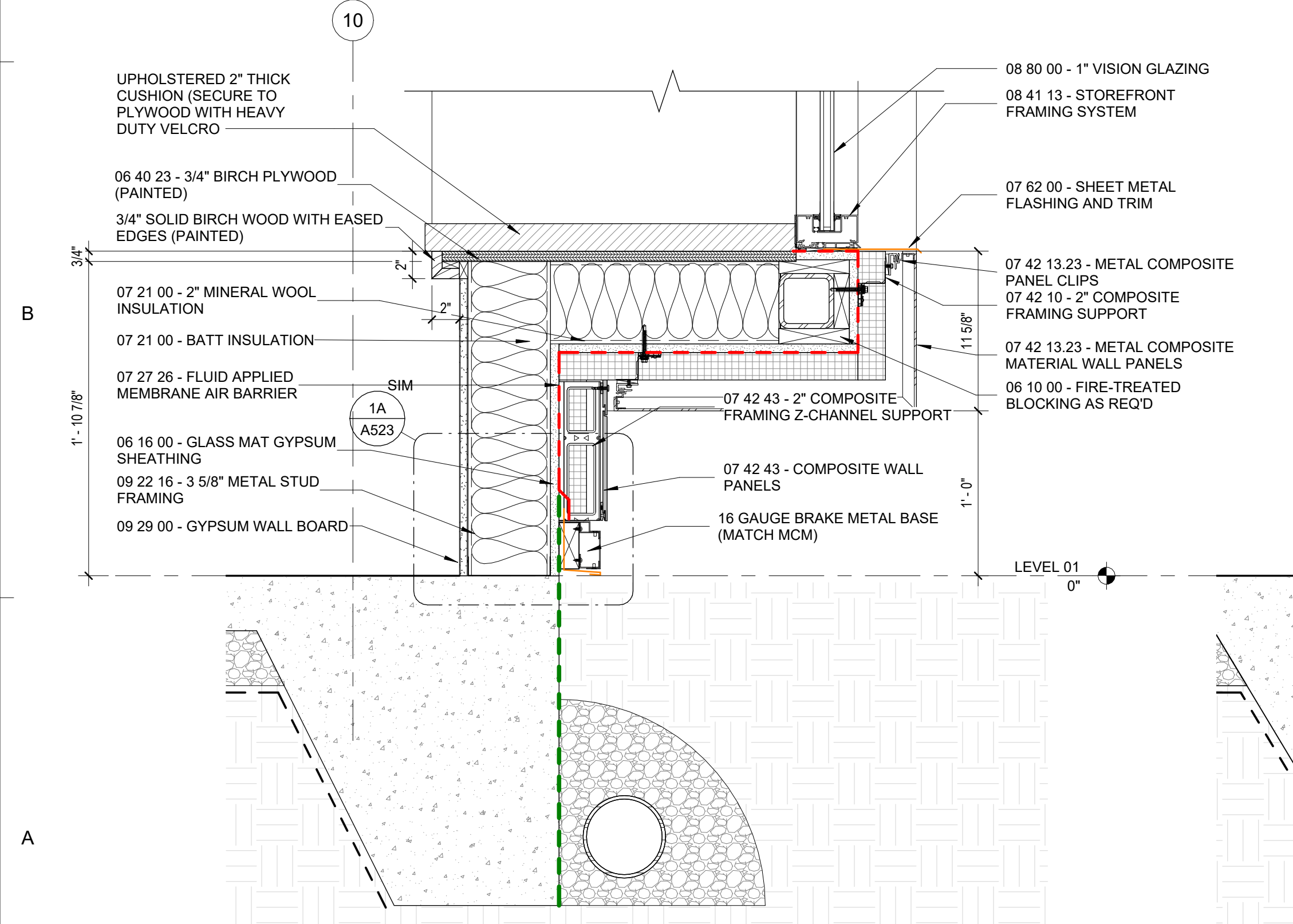
3C SECTION DETAIL - THRU-WALL BOOK DROP
A522 1 1/2" = 1'-0"



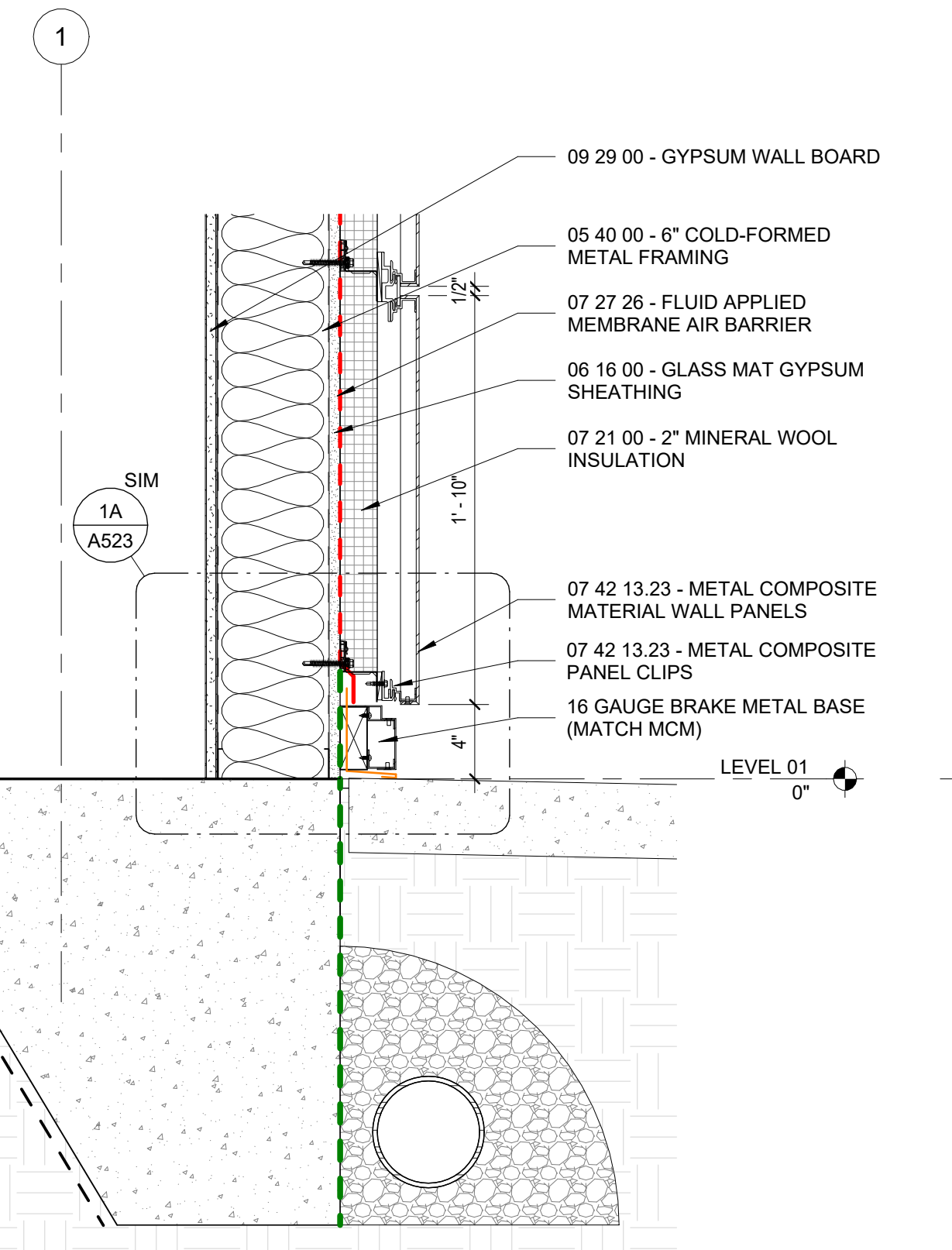
5C SECTION DETAIL - STOREFRONT HEAD HEAD AT MCM PANEL WALL UNDER SOFFIT
A522 1 1/2" = 1'-0"



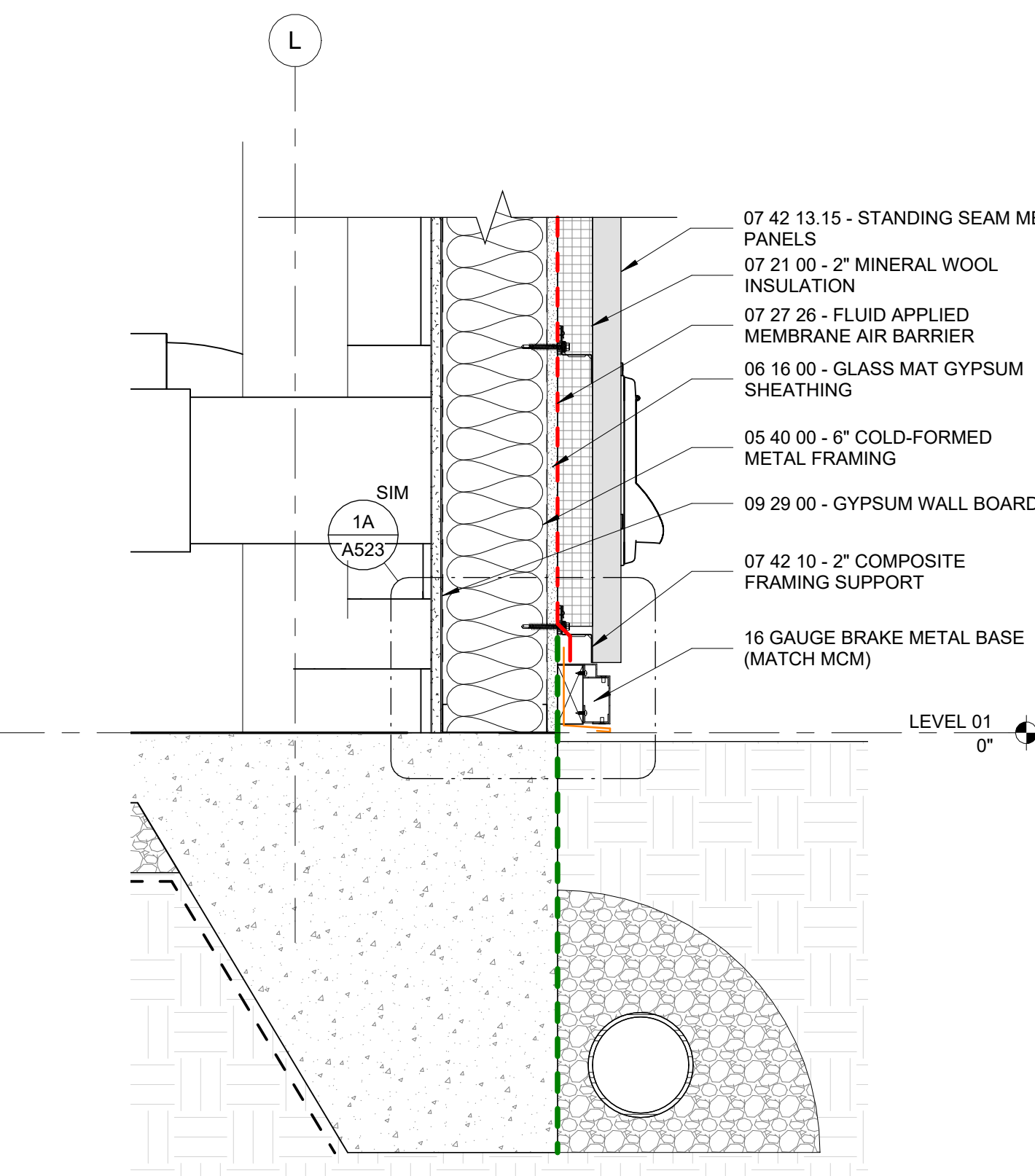
6C SECTION DETAIL - MCM SOFFIT TO VERTICAL SOLAR FIN
A522 1 1/2" = 1'-0"



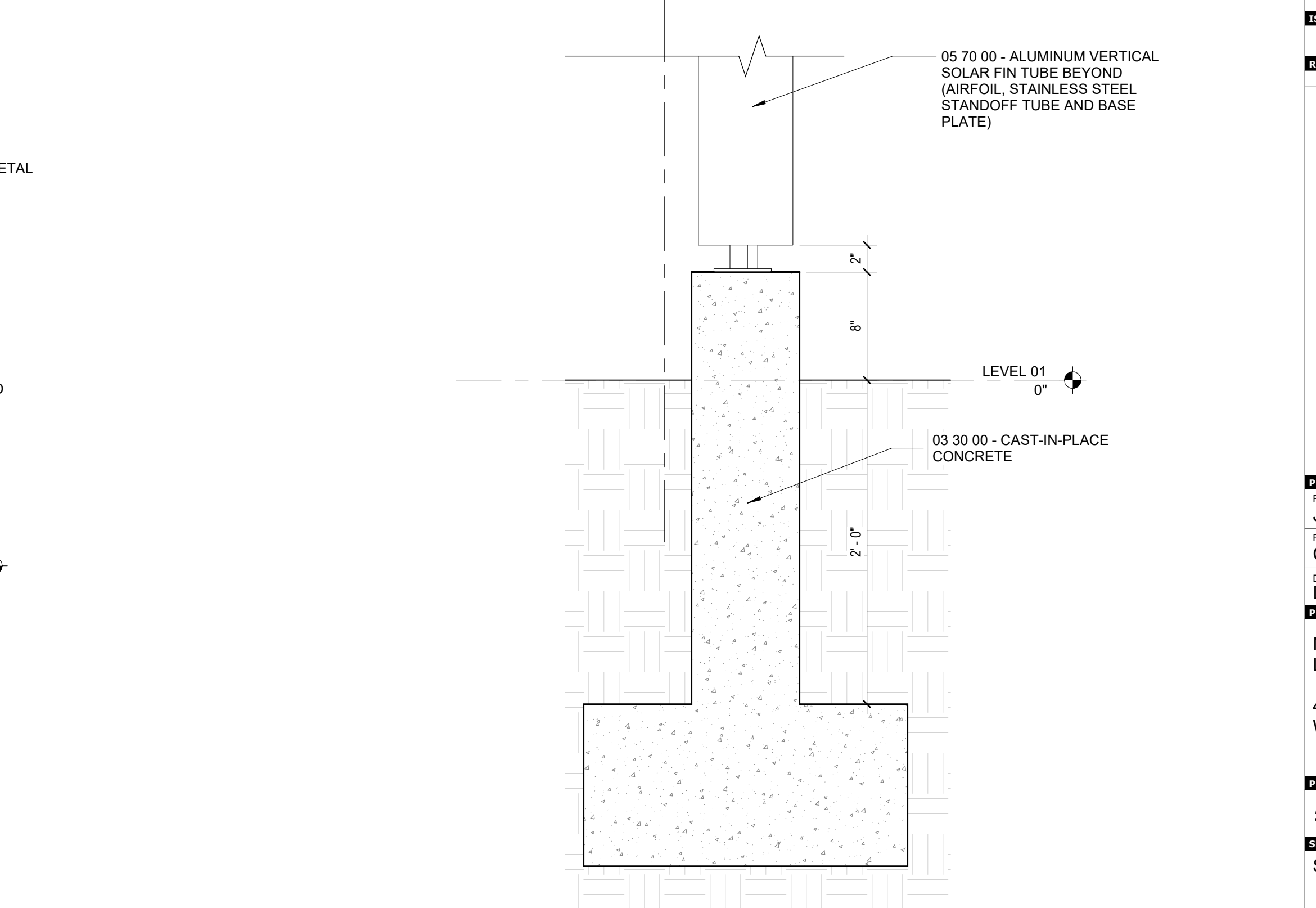
1A SECTION DETAIL - SILL AT BAY WINDOW
A522 1 1/2" = 1'-0"



3A SECTION DETAIL - MCM TO FOUNDATION
A522 1 1/2" = 1'-0"



5A SECTION DETAIL - BASE OF SSM WALL
A522 1 1/2" = 1'-0"



6A SECTION DETAIL - CONCRETE CURB WITH VERTICAL SOLAR FIN
A522 1 1/2" = 1'-0"



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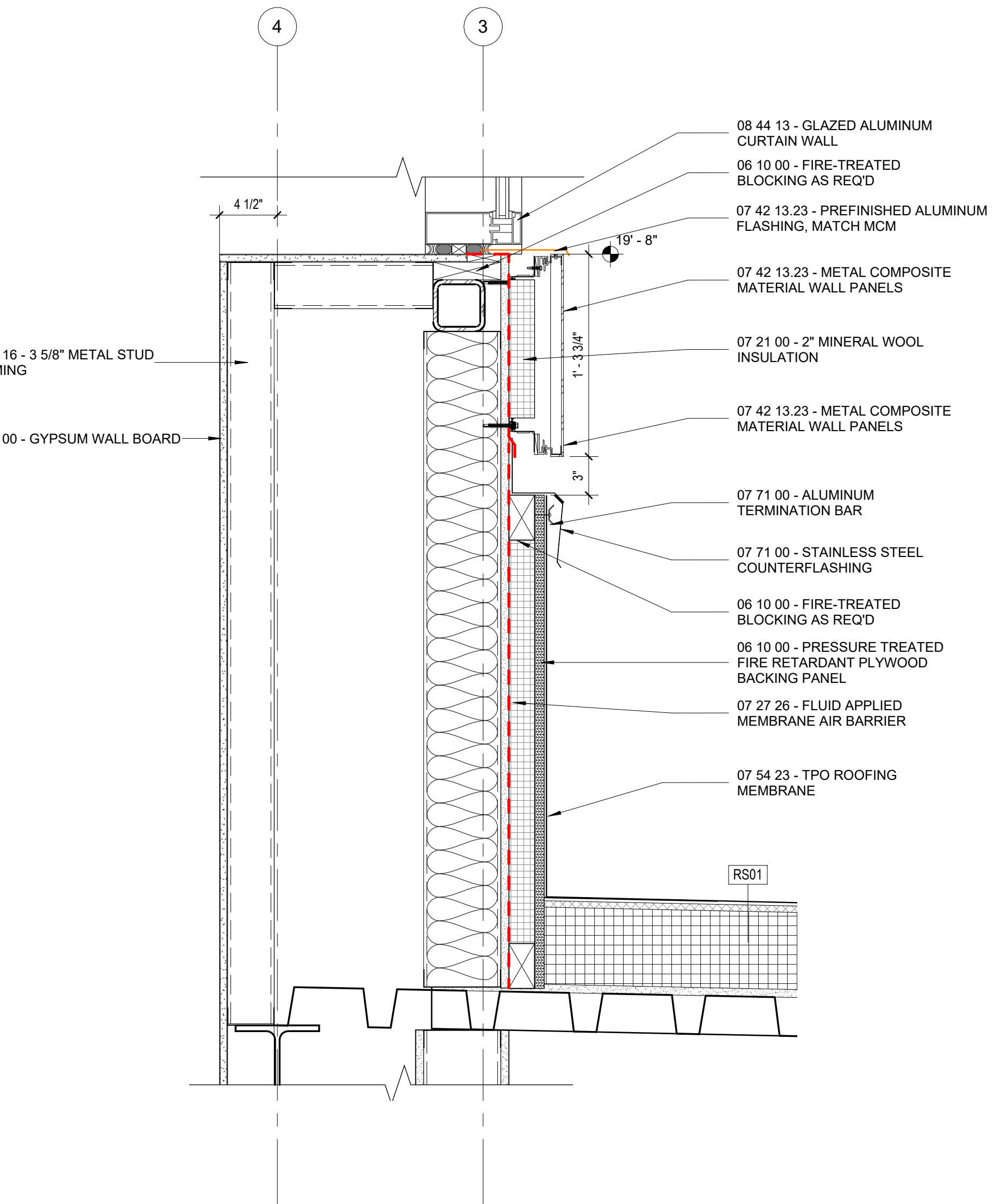
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Charlotte Hagen, AIA
DESIGN TEAM
Designer

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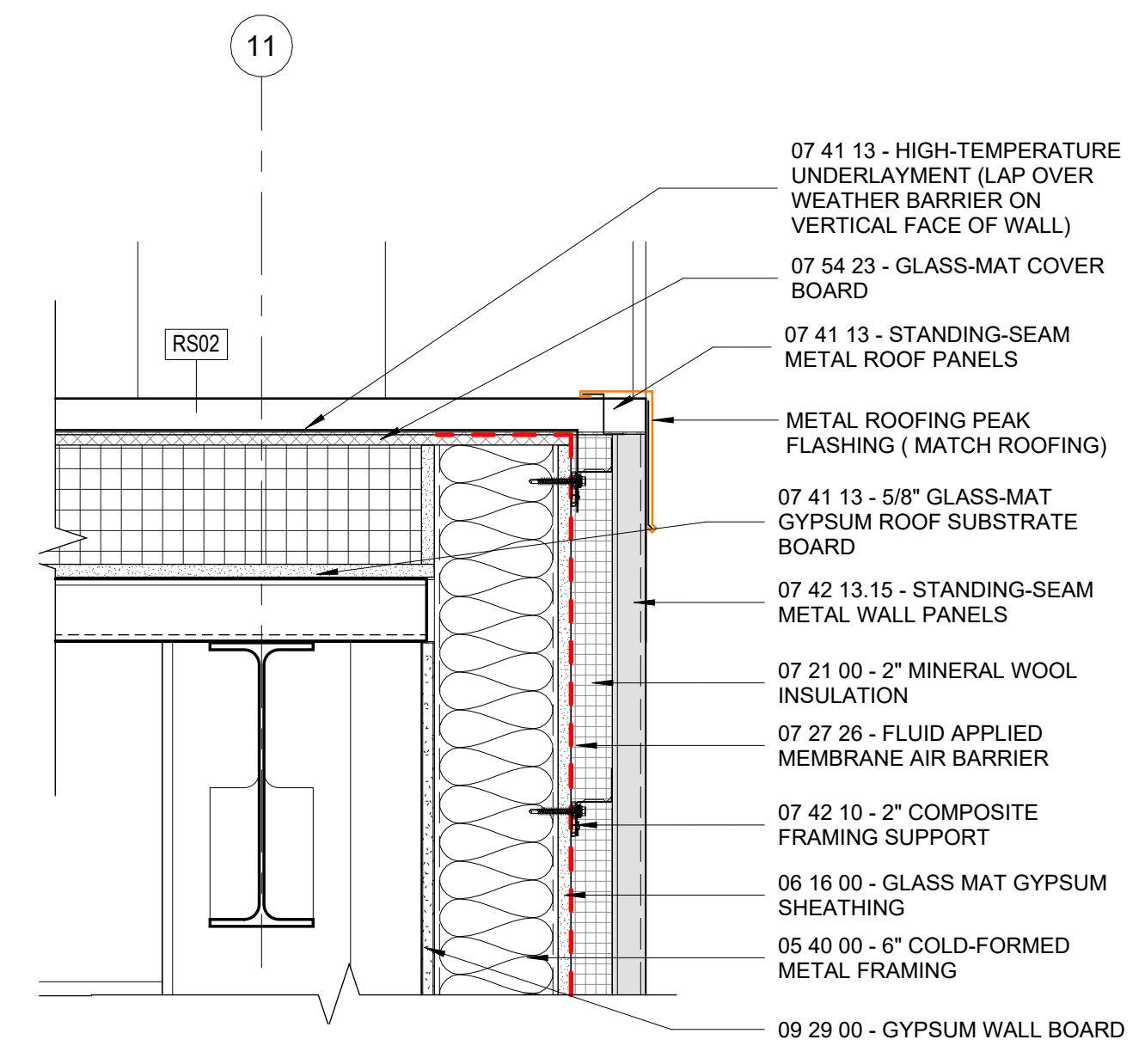
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514.18349.00
SHEET TITLE
SECTION DETAILS

SHEET NUMBER
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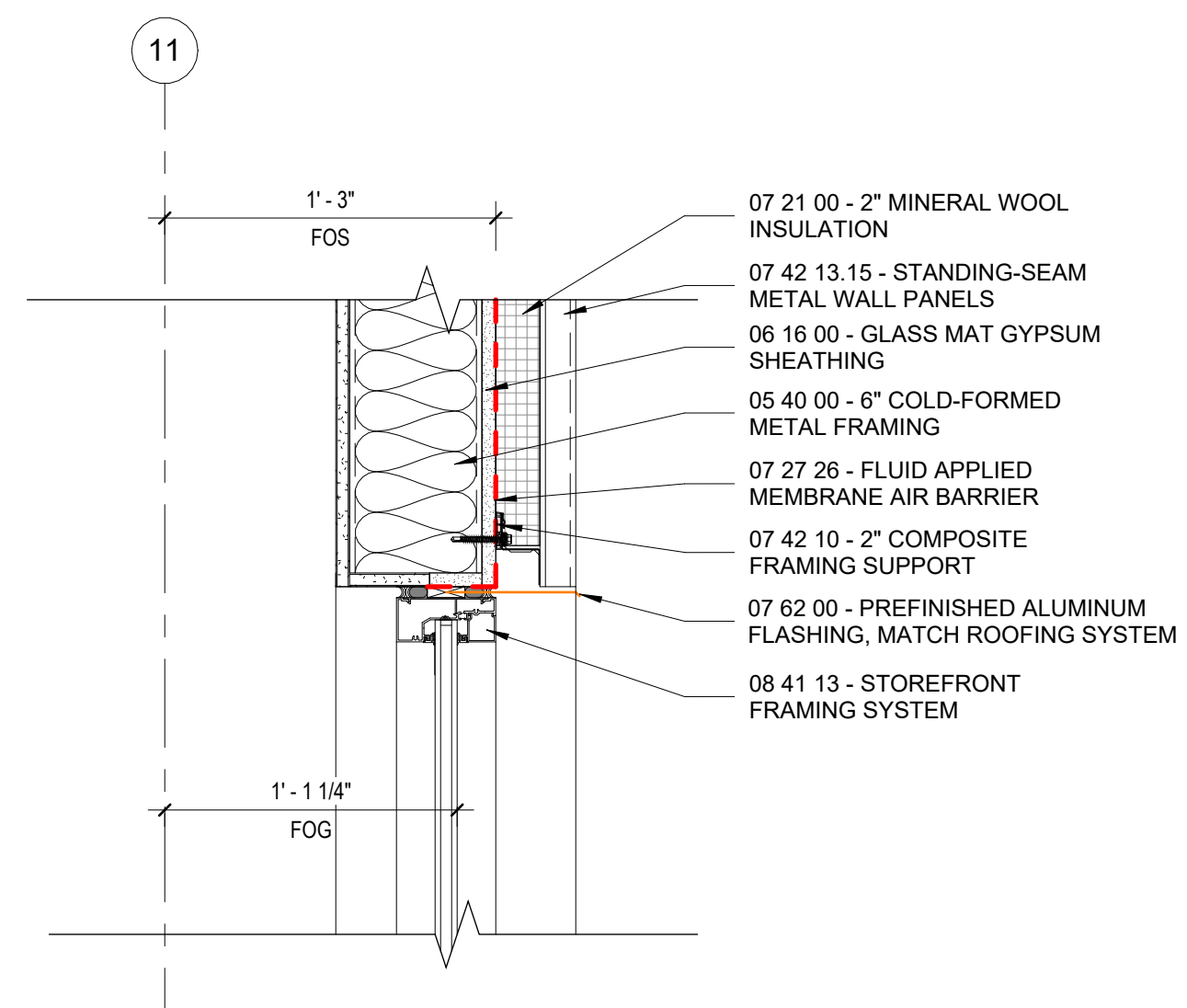
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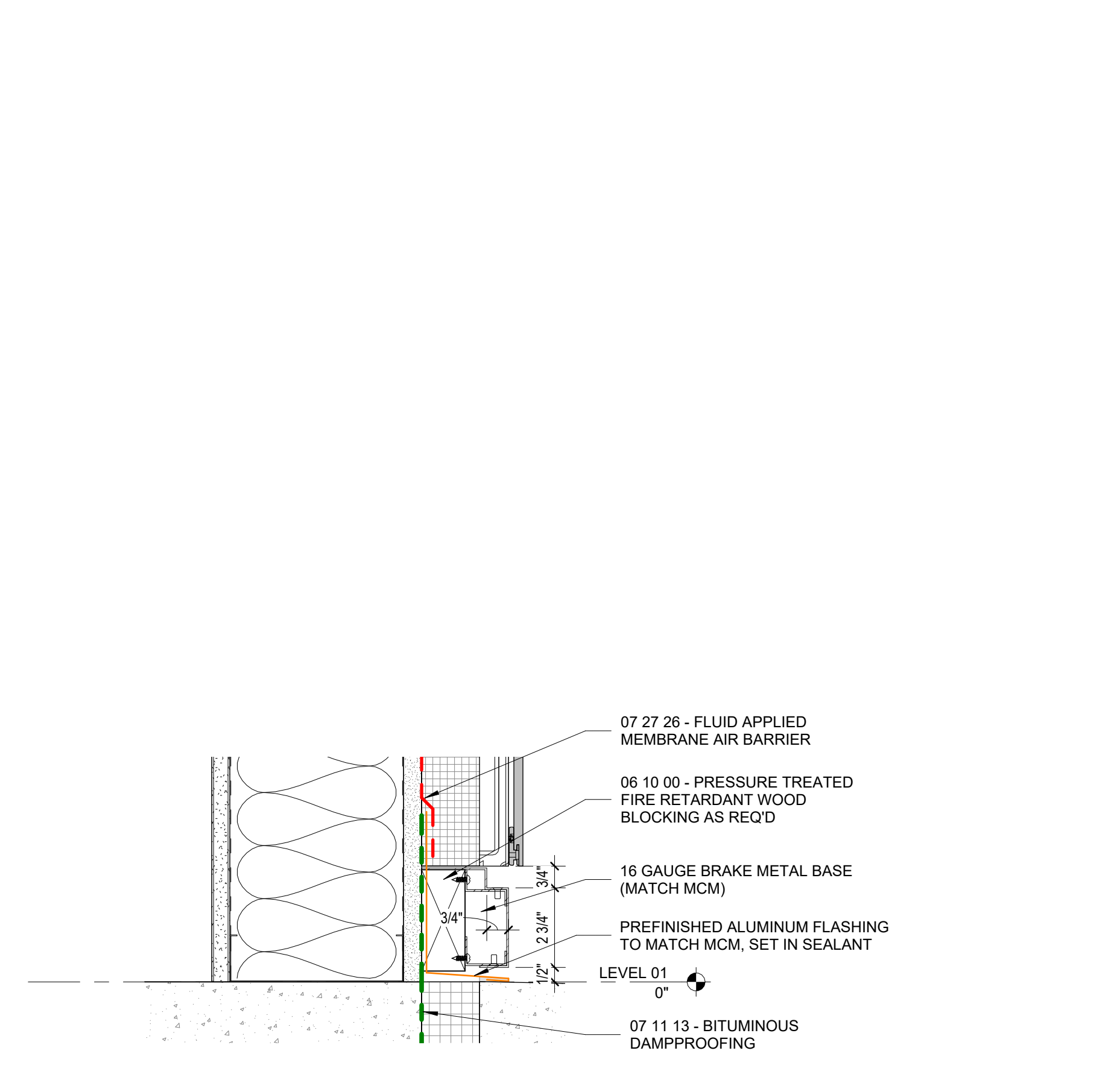
1D SECTION DETAIL - SILL AT CAFE CLERESTORY
A523 1 1/2" = 1'-0"



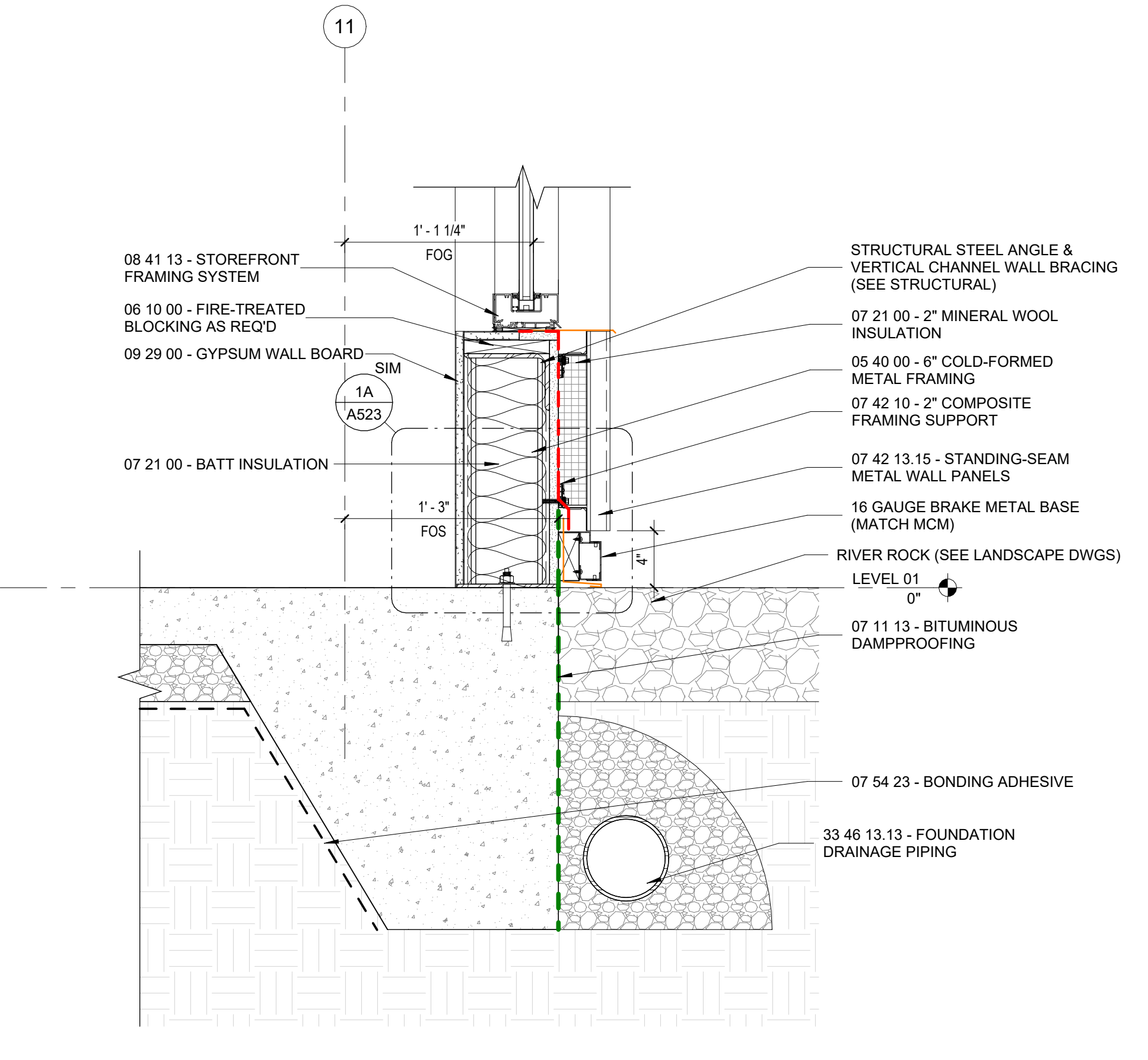
3E SECTION DETAIL - TOP OF SSM WALL & SSM ROOF SYSTEM
A523 1 1/2" = 1'-0"



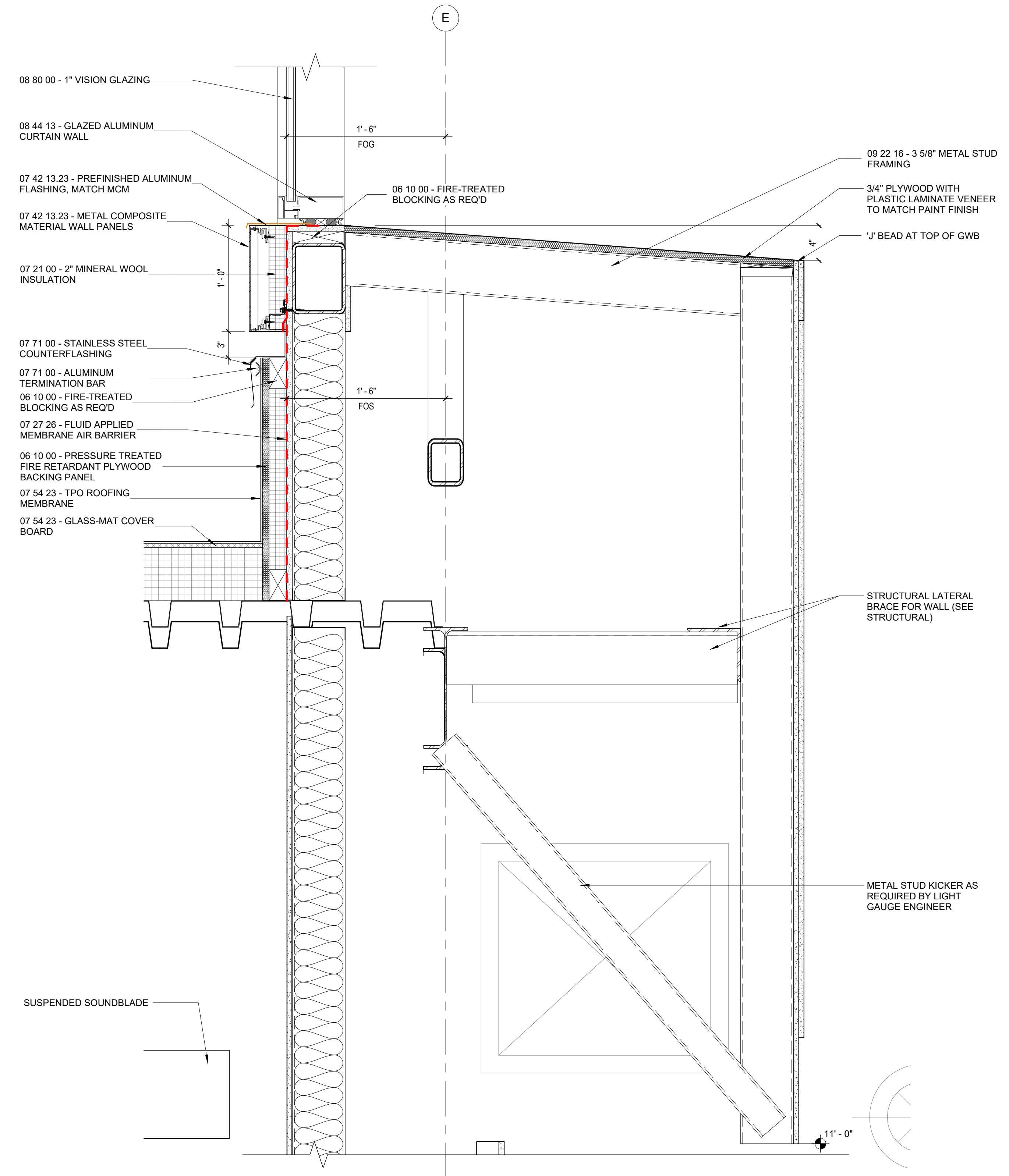
3D SECTION DETAIL - HEAD AT SSM PANEL
A523 1 1/2" = 1'-0"



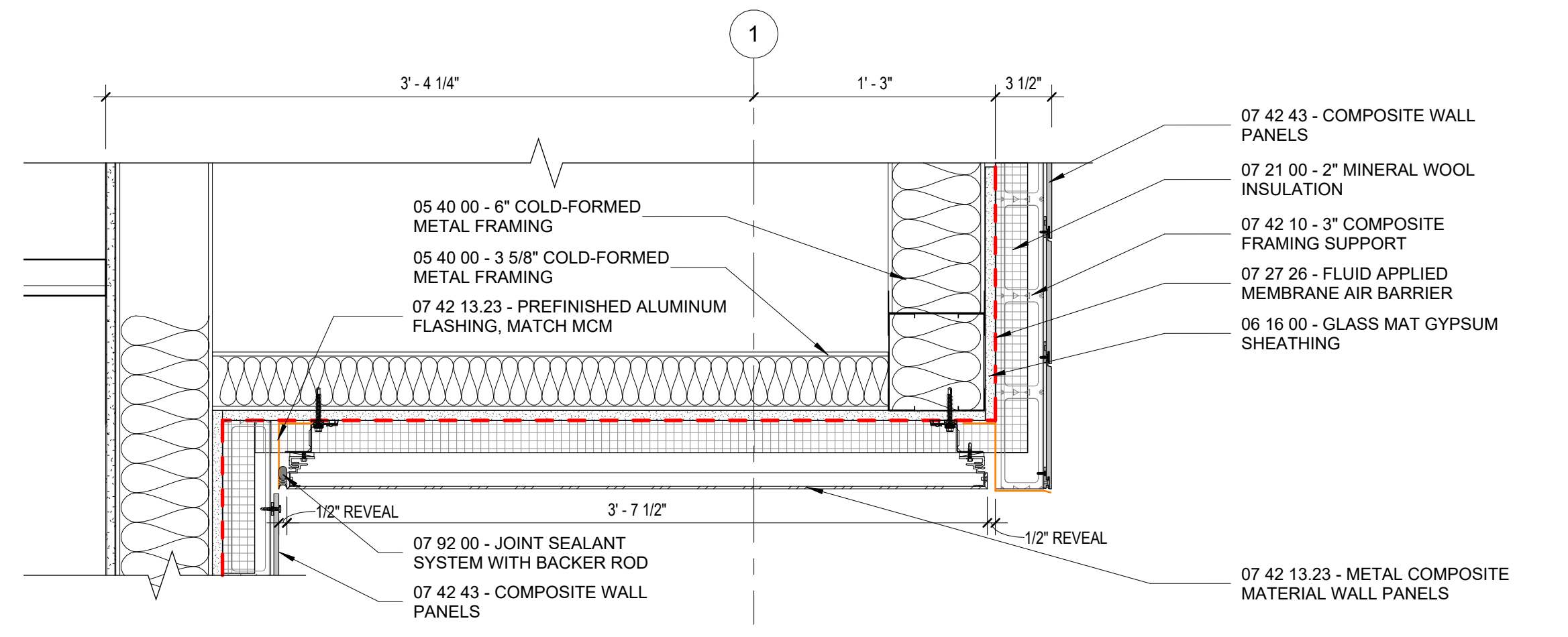
1A SECTION DETAIL - METAL BASE
A523 3" = 1'-0"



3A SECTION DETAIL - SILL AT SSM PANELS
A523 1 1/2" = 1'-0"



5C SECTION DETAIL - CLERESTORY LIGHT SHELF
A523 1 1/2" = 1'-0"



5A SECTION DETAIL - WORK ROOM SOFFIT
A523 1 1/2" = 1'-0"

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING

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NEW HANOVER COUNTY - NORTH CAROLINA
ESTABLISHED 1784

NEW HANOVER COUNTY
PUBLIC LIBRARY

NORTH CAROLINA
REGISTERED ARCHITECT
16212
CHARLOTTE BY STATE
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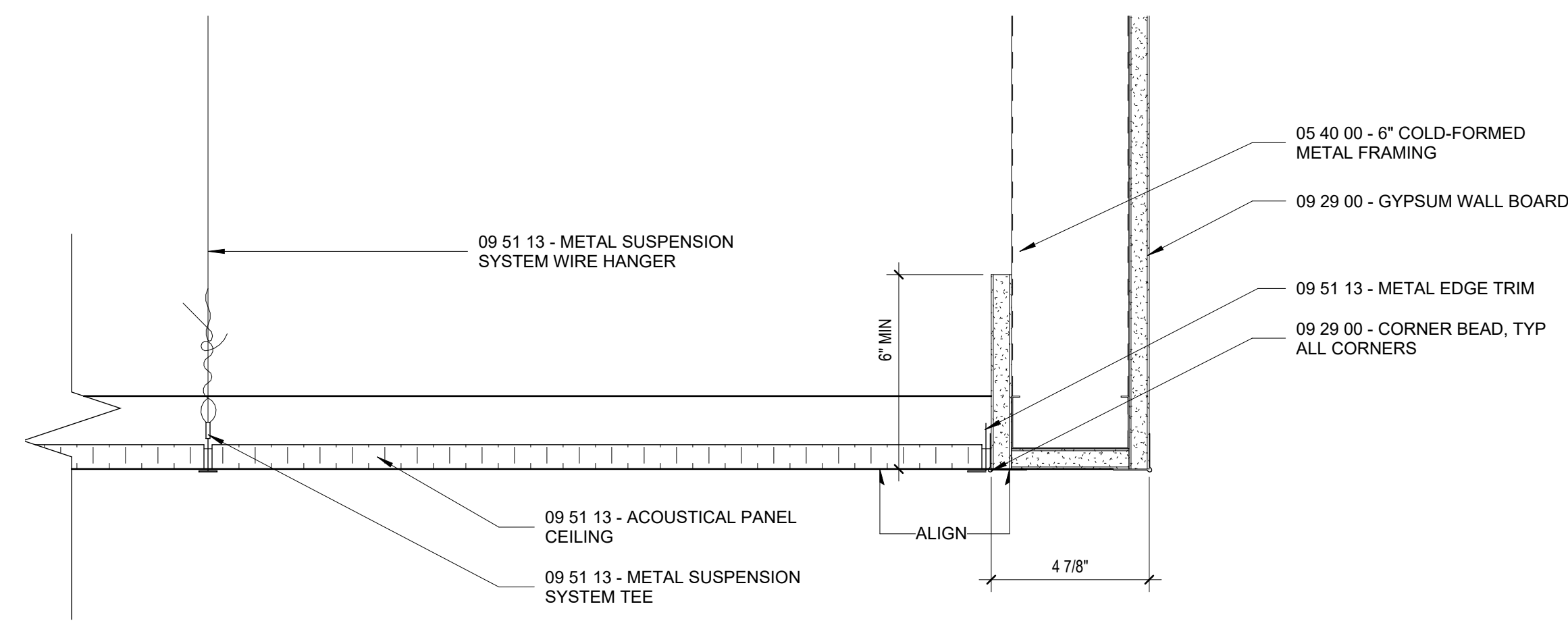
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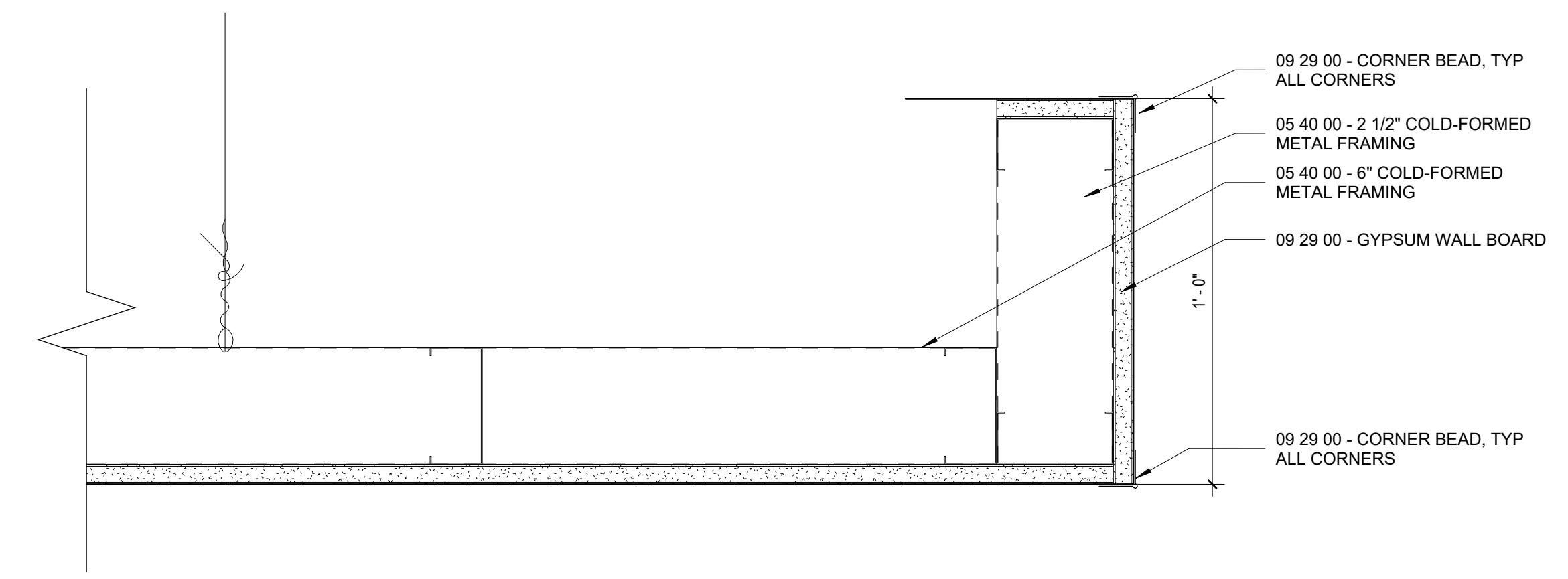
SHEET TITLE
SECTION DETAILS

SHEET NUMBER
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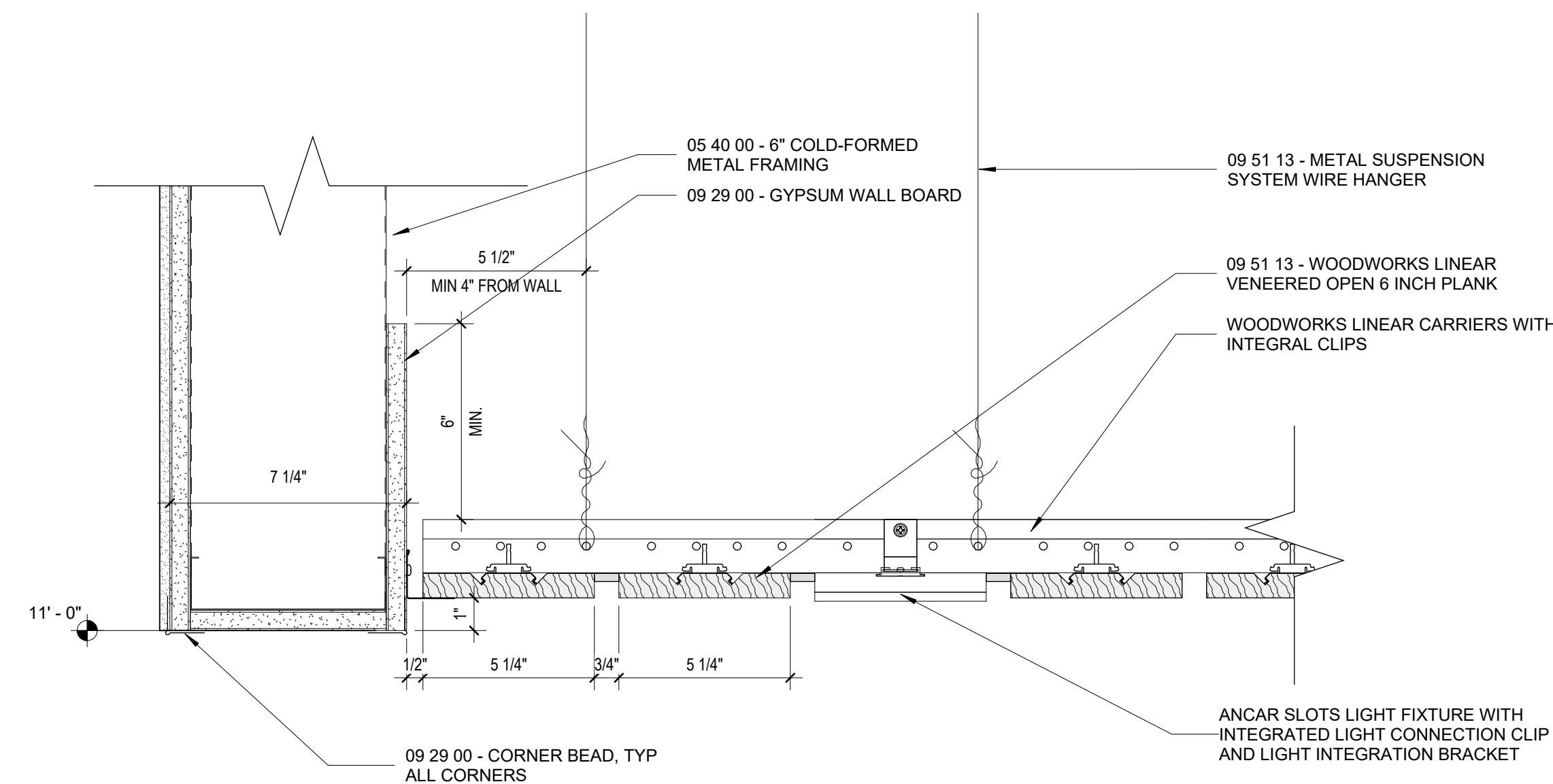
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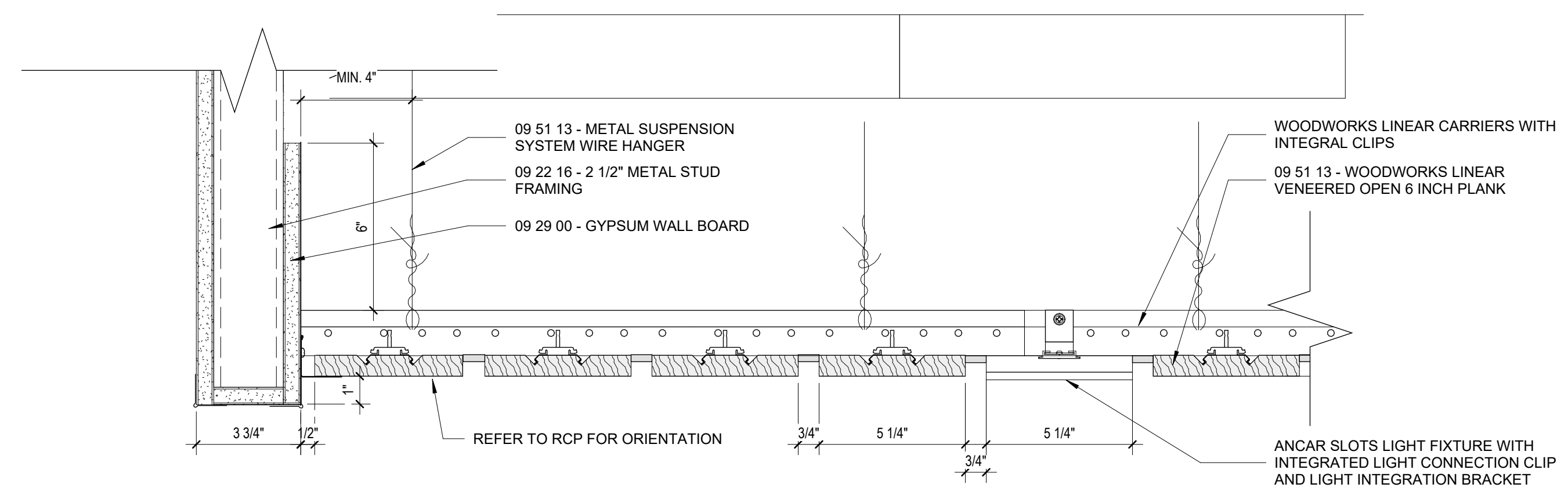
3 CEILING DETAIL - TYPICAL ACT TO GWB SOFFIT
A531 3" = 1'-0"



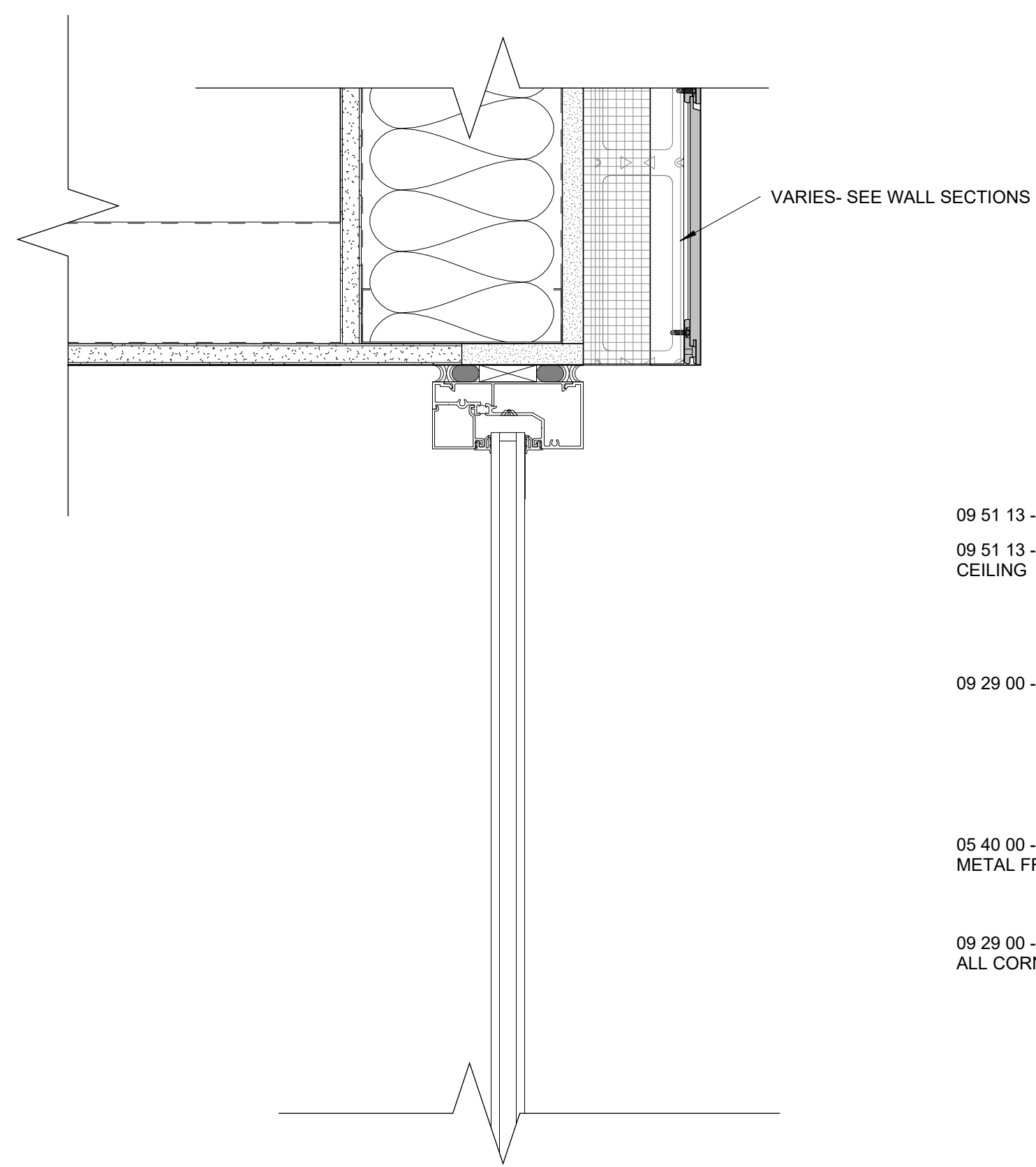
1 CEILING DETAIL - TYPICAL GYP SOFFIT EDGE
A531 3" = 1'-0"



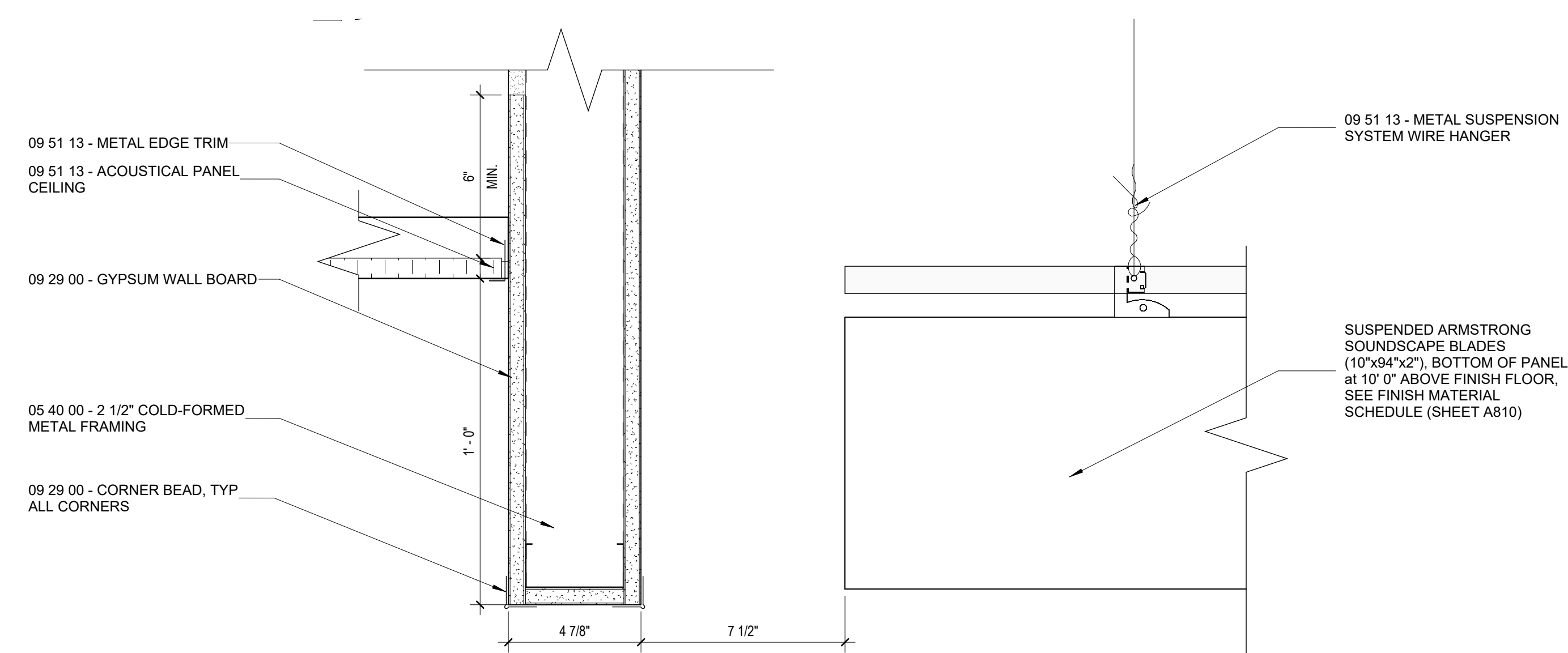
2 CEILING DETAIL - WOOD CEILING 6" EDGE W/ LIGHTING
A531 3" = 1'-0"



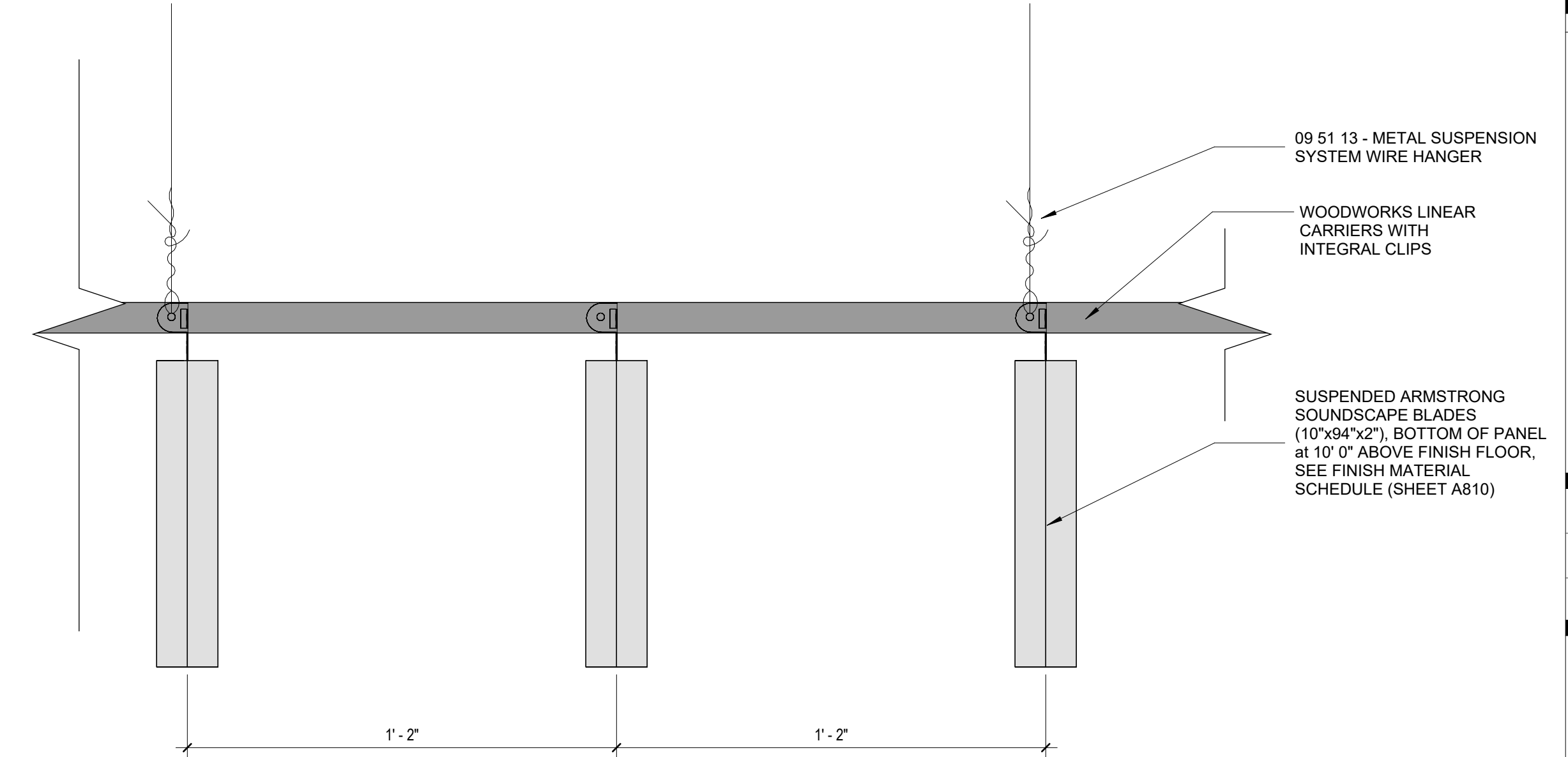
5 CEILING DETAIL - WOOD-LOOK CEILING 4" EDGE W/ LIGHTING
A531 3" = 1'-0"



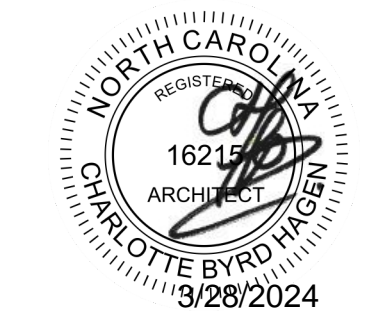
7 CEILING DETAIL - TYPICAL GYP ALIGNED WITH STOREFRONT HEAD
A531 3" = 1'-0"



6 CEILING DETAIL - MULTI-PURPOSE ROOM ACT TO BAFFLES
A531 3" = 1'-0"



4 CEILING DETAIL - TYPICAL SOUND BAFFLES
A531 3" = 1'-0"



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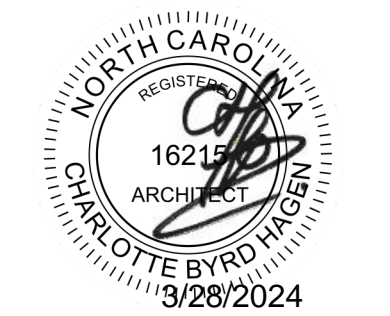
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Charlotte Hagen, AIA
DESIGN TEAM
Designer

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SHEET TITLE
CEILING DETAILS

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Charlotte Hagen, AIA

DESIGN TEAM
Designer

PROJECT NAME

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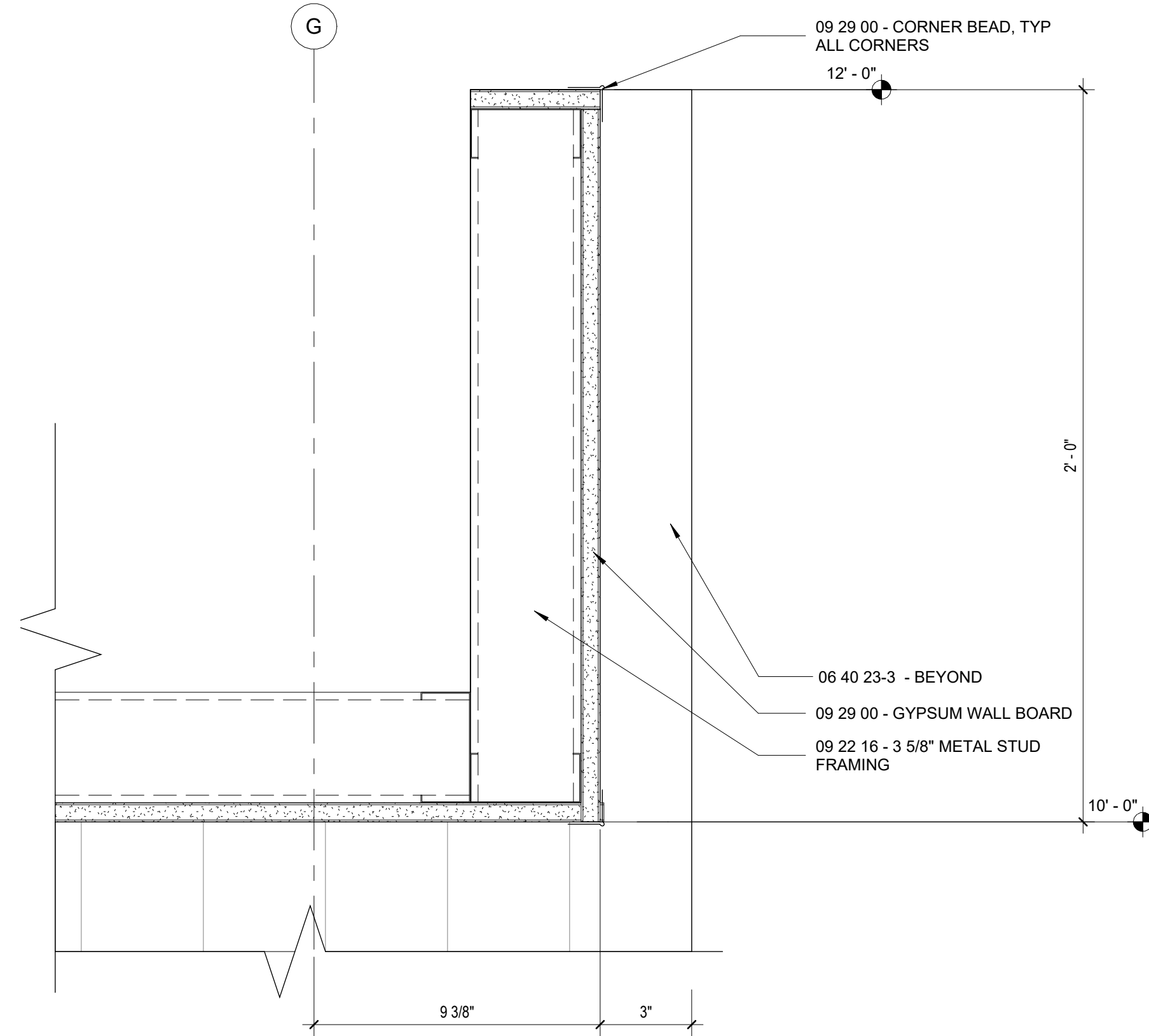
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CEILING DETAILS

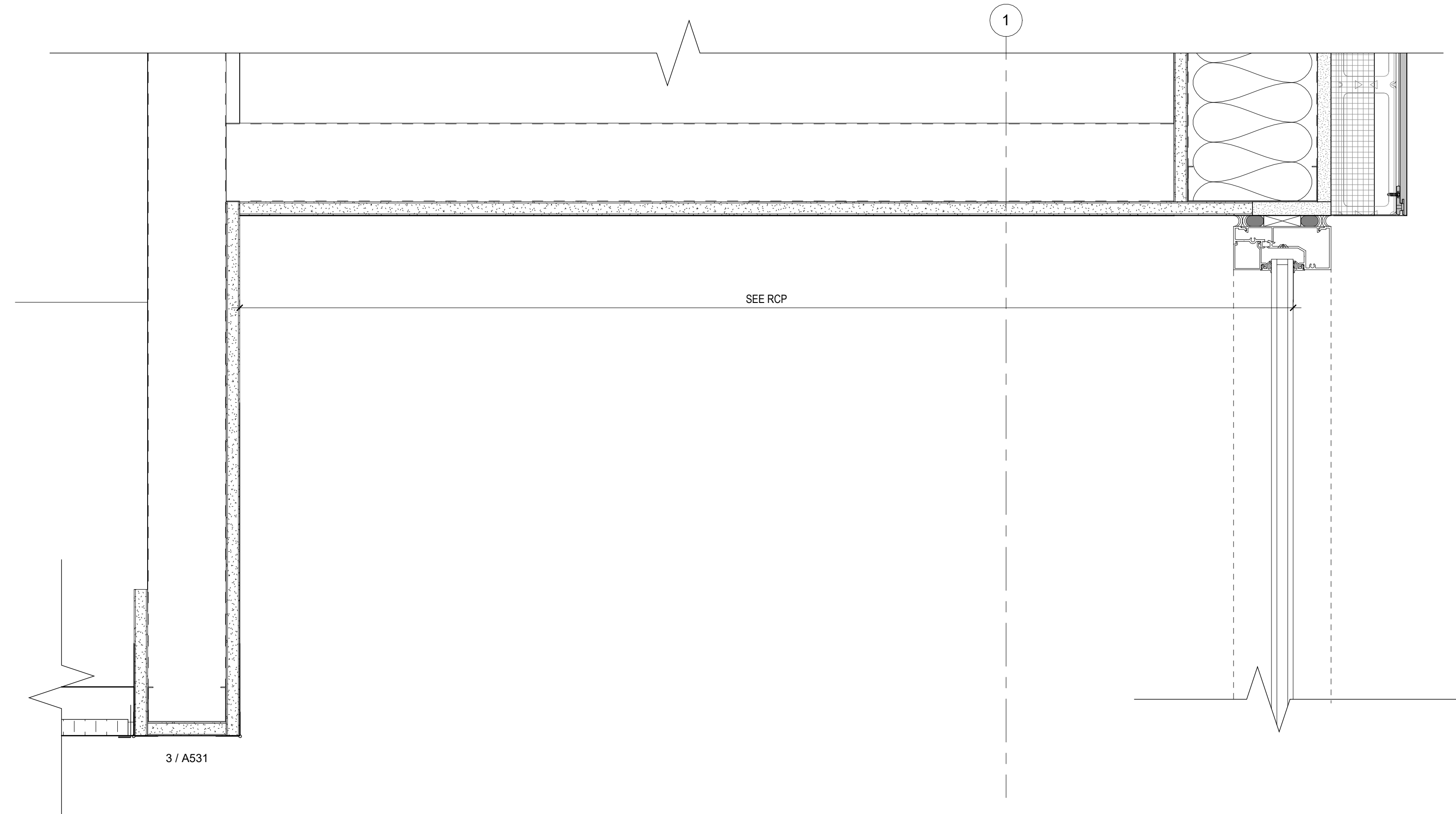
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A532

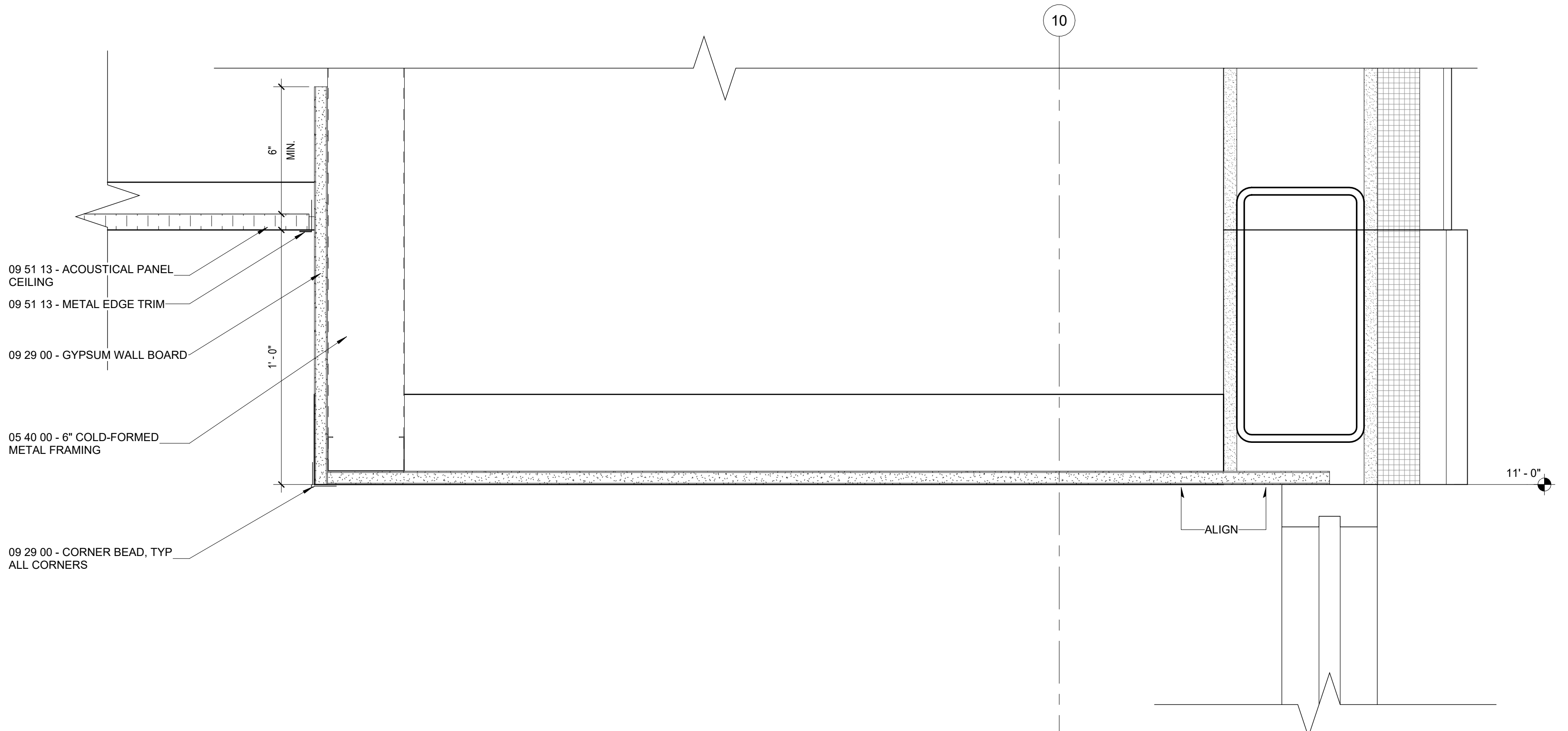
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1A CEILING DETAIL - HUDDLE/SM MEETING RM. PASSAGE
A532 3" = 1'-0"



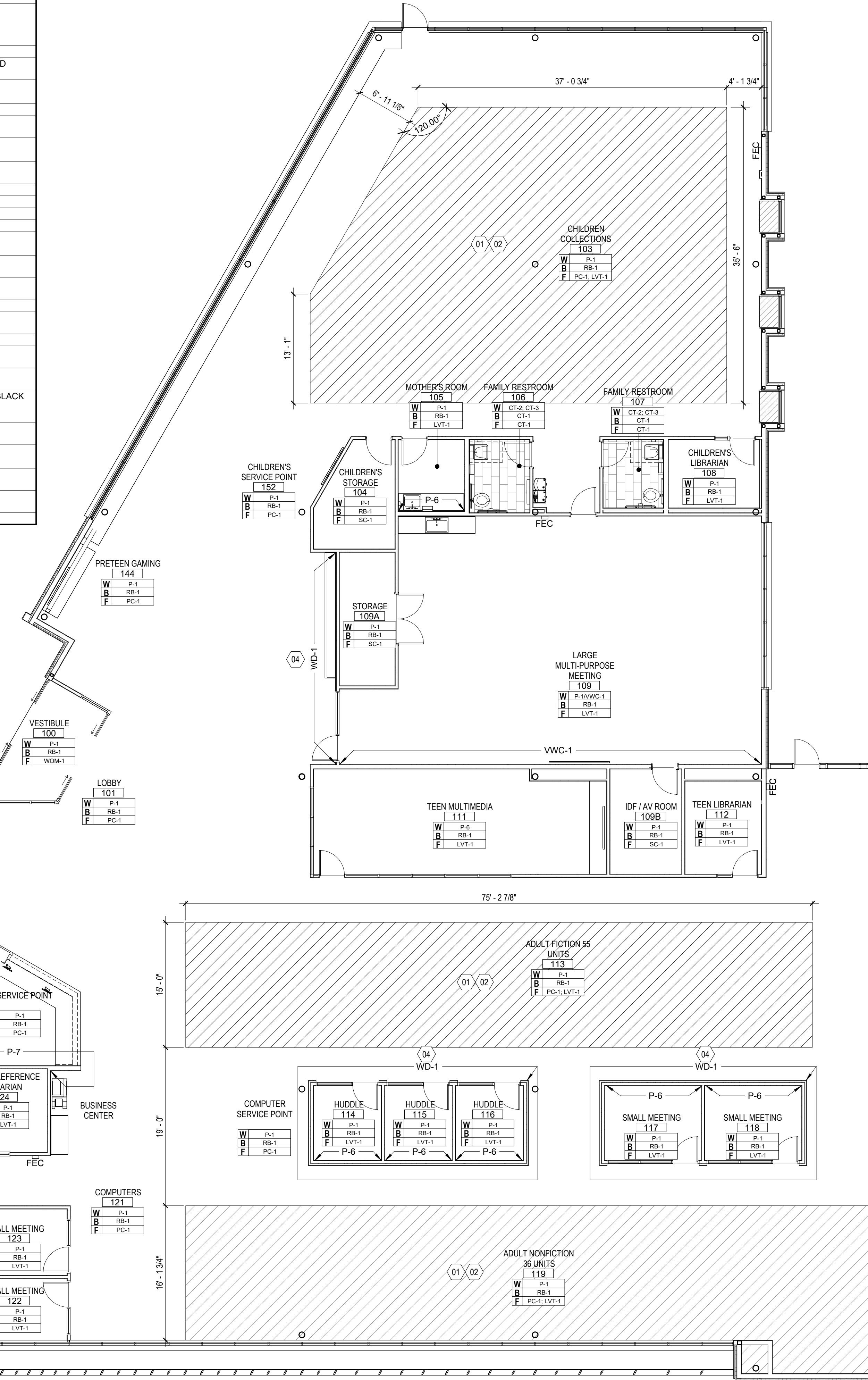
1 CEILING DETAIL - DROPPED CEILING AT STOREFRONT
A532 3" = 1'-0"



4E CEILING DETAIL - MULTI-PURPOSE ROOM ACT TO WINDOW SOFFIT
A532 3" = 1'-0"

FINISH MATERIAL SCHEDULE

Tag	Description	Manufacturer	Style	Size	Finish Description	Color	Install Notes	Location	Comments
WALL									
CT-2	CERAMIC WALL TILE	ROCA	COLOR COLLECTION	4"X12"	WHITE ICE, BRIGHT			RESTROOMS - FIELD	DISTRIBUTED BY BEST TILE, NANCY PETERS FOR PRICING; npeters@besttile.com
CT-3	CERAMIC WALL TILE	PLATFORM SURFACES	RELIC	2"X10"	BLUE, GLOSSY			RESTROOMS - BACKSPASH	
CT-4	CERAMIC WALL TILE	ROCA	COLOR COLLECTION	3"X12"	U725-312	BG DEEP BLUE, BRIGHT		CAFE	DISTRIBUTED BY BEST TILE, NANCY PETERS FOR PRICING; npeters@besttile.com
P-1	PAINT	SHERWIN WILLIAMS	EGGSHELL		PASSIVE SW7084			FIELD PAINT	
P-2	PAINT	SHERWIN WILLIAMS	FLAT		EXTRA WHITE SW7006			GYP CEILINGS	
P-4	PAINT	SHERWIN WILLIAMS	EGGSHELL		CITYSCAPE SW7067			ACCENT	
P-5	PAINT	SHERWIN WILLIAMS	SEMI-GLOSS		TRICORN BLACK SW6258		EXTERIOR GRADE	EXPOSED EXTERIOR METAL STRUCTURE	
P-6	PAINT	SHERWIN WILLIAMS	EGGSHELL		AQUA FRIA SW9053			ACCENT	
P-7	PAINT	SHERWIN WILLIAMS	EGGSHELL		SILKEN PEACOCK SW9059			ACCENT	
P-8	PAINT	SHERWIN WILLIAMS	EGGSHELL		MAREA BAJA S 9185			ACCENT	
P-9	PAINT	SHERWIN WILLIAMS	EGGSHELL		TIGEREYE SW6362			ACCENT	
P-10	PAINT	SHERWIN WILLIAMS	DRYFALL SYSTEM		EXTRA WHITE SW7006			EXPOSED CEILING	
P-11	PAINT	SHERWIN WILLIAMS	SEMI-GLOSS		EXTRA WHITE SW7006			EXPOSE INTERIOR METAL STRUCTURE	
P-12	PAINT	SHERWIN WILLIAMS	EGGSHELL		TRICORN BLACK SW6258			ACCENT	
WVC-1	VINYL WALLCOVERING	LEVEL	INFINITY		BLUES			MULTIPURPOSE	SEMI-CUSTOM WALLCOVERING, FINAL COLOR AND DESIGN TO BE DETERMINED BY ARCHITECT
BASE									
RB-1	RUBBER BASE - STRAIGHT	TARKETT/JOHNSONITE	SQUARE PROFILE	4"H ROLL		TBD			
WB-1	PAINTED WOOD BASE			4"H					PAINTED TO MATCH P-12
E									
FLOOR									
CT-1	CERAMIC/PORCELAIN TILE	CAESAR CERAMICS USA	LINK	12"X24"		CHAIN			DISTRIBUTED BY BEST TILE, NANCY PETERS FOR PRICING; npeters@besttile.com
LVT-1	LUXURY VINYL TILE (PLANK)	MANNINGTON	DRIFT	7.25"X48"	D109	BRISTOL ROSEWOOD ANTIQUED			
PC-1	POLISHED CONCRETE								
SC-1	SEALED CONCRETE								
WOM-1	WALK OFF MAT - TILE	SHAW	PACE TILE	24"X24"	5T413				VESTIBULE
MILLWORK									
MT-1	DECORATIVE METAL	CHEMETAL			908	SATIN BLACK ALUMINUM		MAIN CIRC DESK	
PL-1	PLASTIC LAMINATE	FORMICA			9283-NG	WALNUT RIFTWOOD		TYPICAL CABINETS	
PL-2	PLASTIC LAMINATE	FORMICA			961-58	FOG		BOH CABINETS	
PL-3	PLASTIC LAMINATE	FORMICA			8792-58	WINTER SKY		ACCENT LAMINATE	
QZ-1	QUARTZ SURFACE	SILESTONE				MIAMI WHITE, POLISHED		COUNTERS	
QZ-2	QUARTZ SURFACE	SILESTONE				GREY EXPO, POLISHED		BOH COUNTERS	
SSM-1	SOLID SURFACE MATERIAL	WILSONART			9119GS	ZEN GREY		WINDOW BENCH	
WD-1	WOOD PLANK SYSTEM	ARMSTRONG	WOODWORKS LINEAR VENEREED OPEN	6"X96"		CONSTANTS WALNUT	WPC-1 USED IN VERTICAL APPLICATIONS		USE RIGID REVEAL (WOOD OR EQUAL) PAINTED BLACK
WD-2	WOOD WALL PANEL	PIONEER MILLWORKS	ENGINEERED PANELING	6"X12"		RAKED WALNUT, UNFINISHED		CIRCULATION DESK	
D									
MISC.									
FB-1	FABRIC	TINSON	WATERCOLOR GRID	WTG-1	MULTI			CHILDREN'S COLLECTIONS	BAY WINDOW SEAT UPHOLSTERED BENCH
SHADE-1	MANUAL ROLLER SHADE	SWF CONTRACT	R SERIES MANUAL SOLAR SHADES	SUMMIT U300	SLATE C7612				3% OPENING SHADE FABRIC
TS-1	TACKABLE SURFACE	FORBO	BULLETIN BOARD	48" ROLL	2166	NUTMEG SPICE		WORKROOM	



SHEET KEYED NOTES

- 01 BASE PRICE PC-1
- 02 ALTERNATE 1 LVT-1 IN ALL AREAS DESIGNATED ON PLAN
- 04 USE WOOD BASE WB-1 WITH WD-1 WALL APPLICATIONS
- 05 PAINT EXTERIOR COLUMN P-5

SHEET GENERAL NOTES

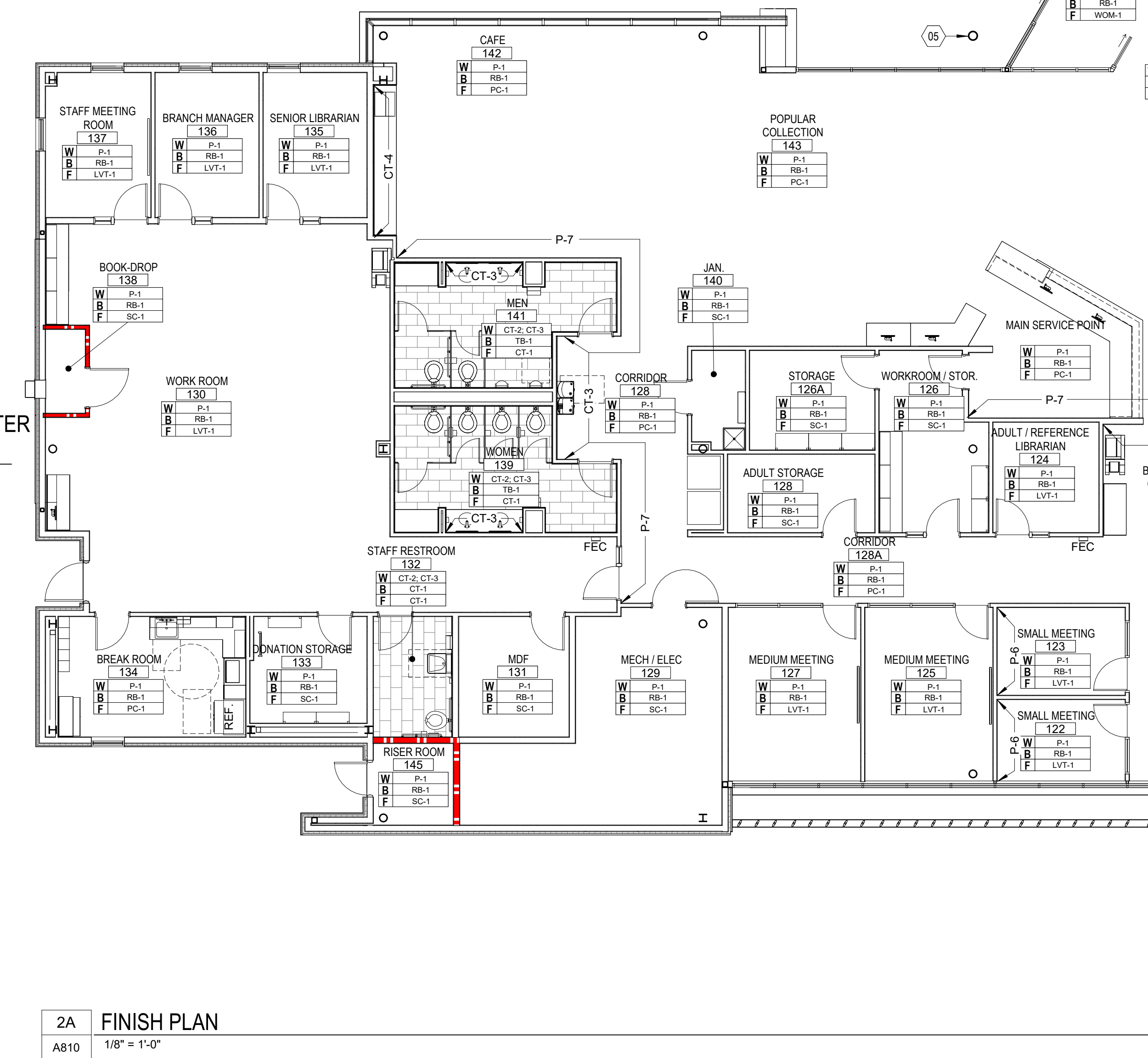
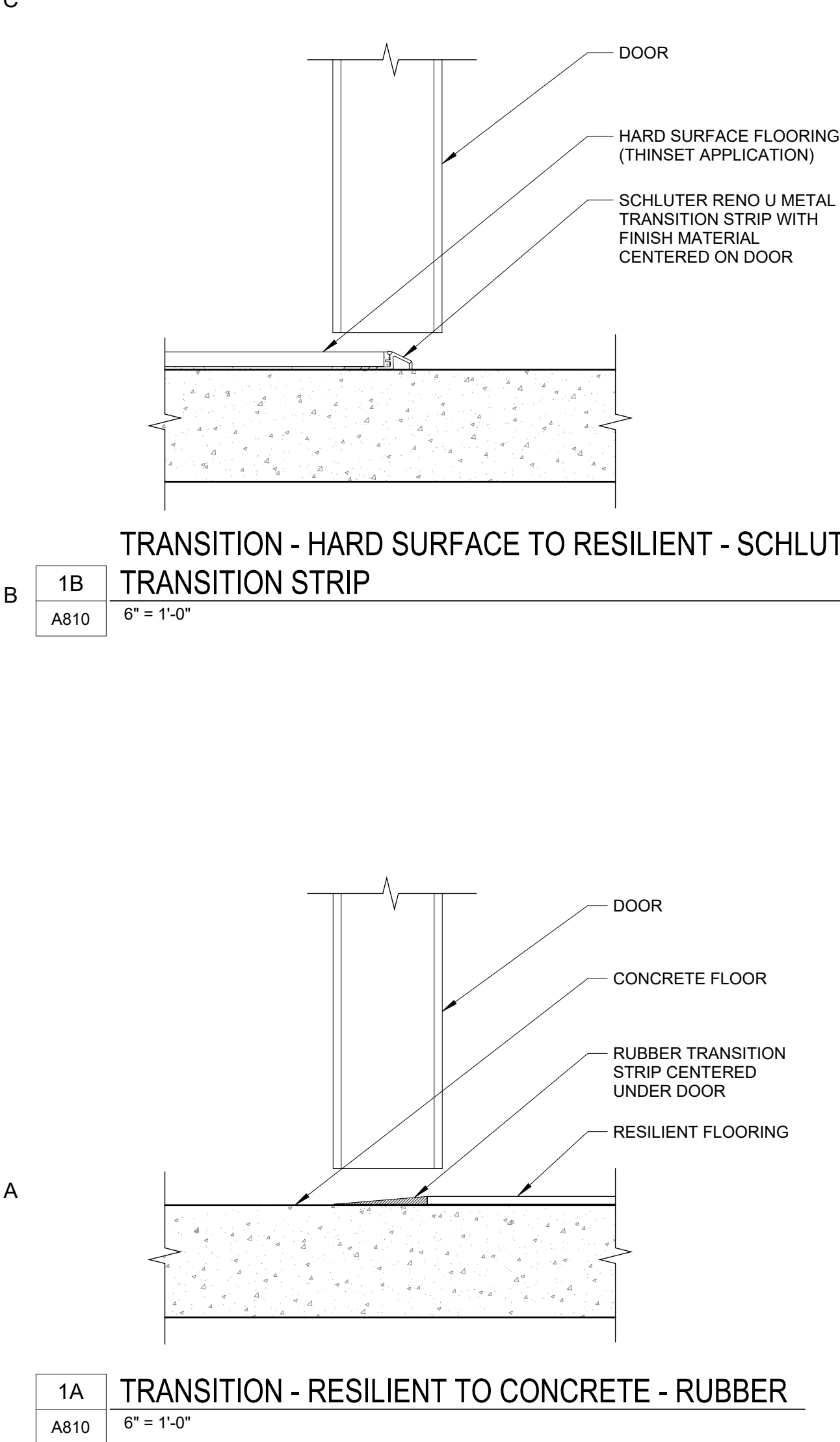
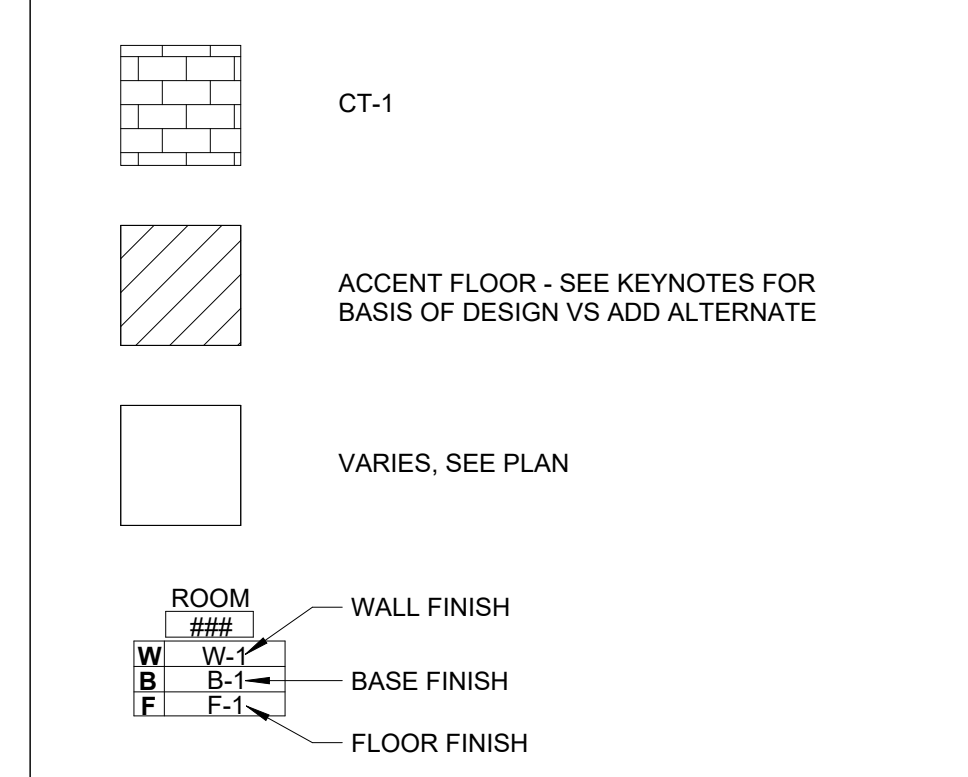
- A. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY OF MEASUREMENTS AND TOTAL YARDAGE REQUIREMENTS TO BE FURNISHED.
- B. VARIATIONS IN FLOOR LEVEL IN EXCESS OF 1/4" FOR EVERY 10'-0" SHALL BE LEVELED BY CONTRACTOR. LEVELING SHALL BE COMPLETED WITH FLOOR READY TO RECEIVE NEW FINISHES AS SPECIFIED.
- C. ALL ACCESS PANELS, LOUVERS, EXPOSED DUCT WORK, VENTILATION COVERS, AND ANY EQUIPMENT NOT FACTORY FINISHED SHALL BE PAINTED TO MATCH ADJACENT SURFACE ON WHICH IT OCCURS UNO. CLEAN BUT DO NOT PAINT HVAC DIFFUSERS, WINDOW SHADE HOUSING, FIRE EXTINGUISHER CABINETS, AND SPEAKERS. NOTIFY ARCHITECT OF ANY ITEM FOR WHICH IT IS UNCLEAR WHETHER OR NOT IT SHOULD RECEIVE PAINT.
- D. UNO PROVIDE MIN 1 COAT PRIMER 2 COATS SPECIFIED PAINT FOR EACH SUBSTRATE.
- E. PREPARE ALL FLOOR AND WALL SUBSTRATES TO RECEIVE NEW FINISHES AS REQ'D.
- F. TEST CONCRETE SLAB PRIOR TO FLOORING INSTALLATION. CONCRETE SLAB TO MEET MOISTURE/RH REQUIREMENTS PER FLOORING MANUFACTURER'S RECOMMENDED GUIDELINES AND ASTM F2170.
- G. ALL FLOORING TRANSITIONS TO OCCUR AT CENTERLINE OF DOOR.
- H. PRE-PLAN FLOORING SEAMING TO PROVIDE UNIFORM DIRECTION OF PATTERN AND LAY OF PILE. LOCATION OF SEAMS SHALL BE CENTERED UNDER DOORS AND WITHOUT SEAMS IN THE DIRECTION OF TRAVEL.
- I. FLOORING SHOULD BE INSTALLED UNIDIRECTIONALLY UNO.
- J. ROOM FINISH TAGS INDICATE TYPICAL ROOM FINISHES. REFER TO MATERIAL TAGS ON FINISH PLAN FOR LOCATIONS OF ACCENT FINISHES, FINISH PATTERNS, AND ATYPICAL FINISH TYPES AND LOCATIONS.
- K. PROVIDE ATTIC STOCK AS INDICATED IN PROJECT MANUAL.
- L. WHERE SOFFITS OCCUR, PAINT UNDERSIDE OF SOFFIT SAME COLOR AS FACE OF SOFFIT UNO. REFER TO FINISH PLAN, ELEVATIONS, AND RCP FOR MORE INFORMATION.
- M. PAINT ALL HOLLOW METAL DOOR FRAMES TO MATCH ADJACENT WALLS IN SEMI-GLOSS FINISH.
- N. PAINT ALL EXPOSED METAL STRUCTURE, DUCTS, CONDUIT AND PIPES IN PUBLIC LIBRARY AREAS WITH EXPOSED STRUCTURE UNLESS NOTED OTHERWISE.

FINISH ABBREVIATIONS

- ACT ACOUSTICAL PANEL CEILING
- CT CERAMIC OR PORCELAIN TILE
- FB FABRIC
- GB GLASS BOARD
- GL GLASS
- LVT LUXURY VINYL TILE/PLANK
- MB MARKERBOARD
- MT DECORATIVE METAL
- P PAINT
- PC POLISHED CONCRETE
- PL PLASTIC LAMINATE
- QZ QUARTZ SURFACE
- RB RUBBER BASE
- SC SEALED CONCRETE
- SS STAINLESS STEEL
- SSM SOLID SURFACE MATERIAL
- TS TACKABLE SURFACE
- WVC WALLCOVERING
- WB WOOD BASE
- WD WOOD
- WOM WALK-OFF FLOORING/MAT

SEE FINISH MATERIAL SCHEDULE FOR MORE INFORMATION
SEE ELEVATIONS FOR DESIGNATIONS MARKED WITH *

FINISH LEGEND



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ARCHITECT
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ISSUE FOR BID SET

ISSUE DATE
03.28.2024

REVISIONS NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

NORTHCHASE BRANCH LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
FINISH PLAN & SCHEDULE

SHEET NUMBER
A810



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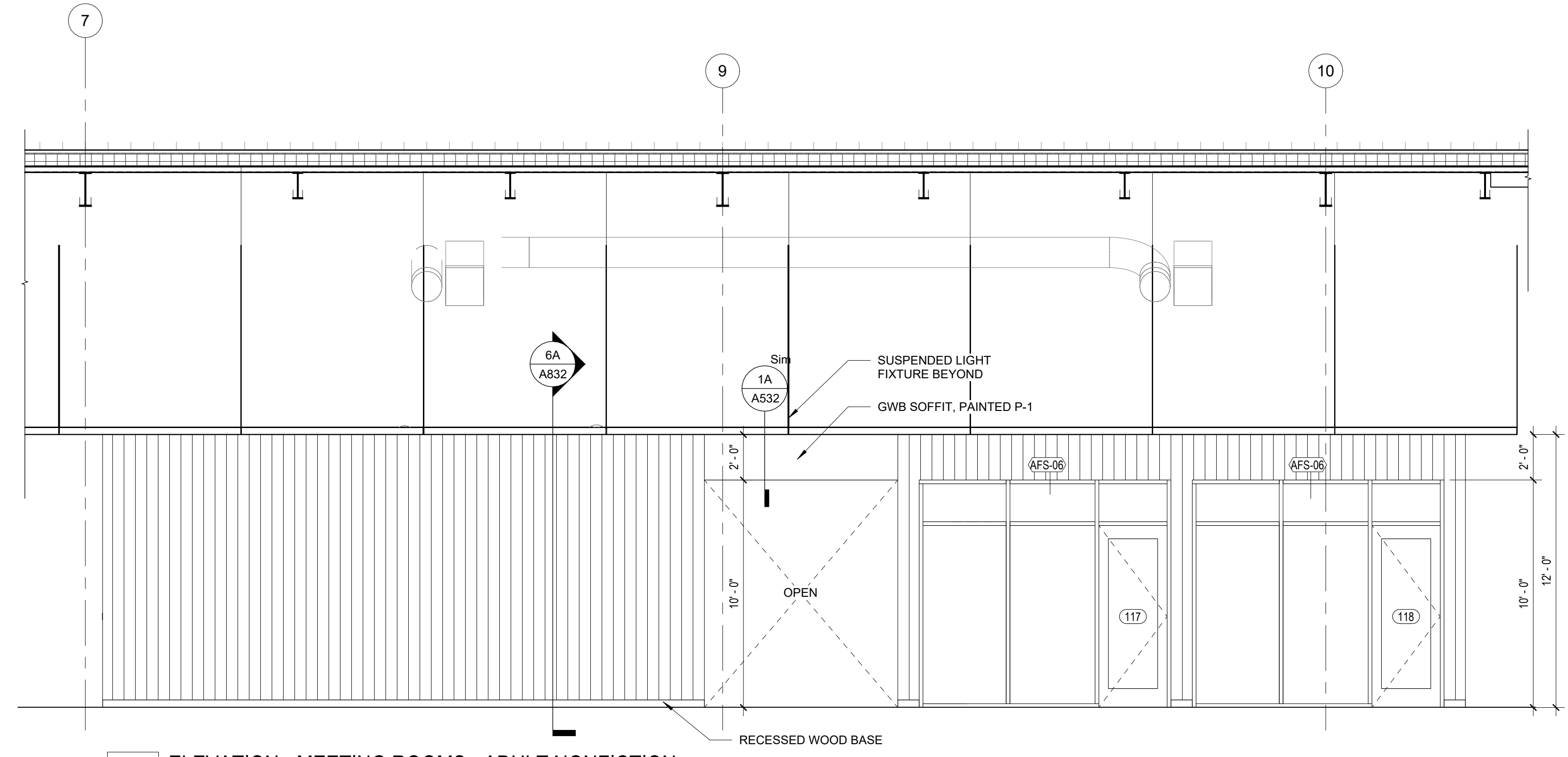
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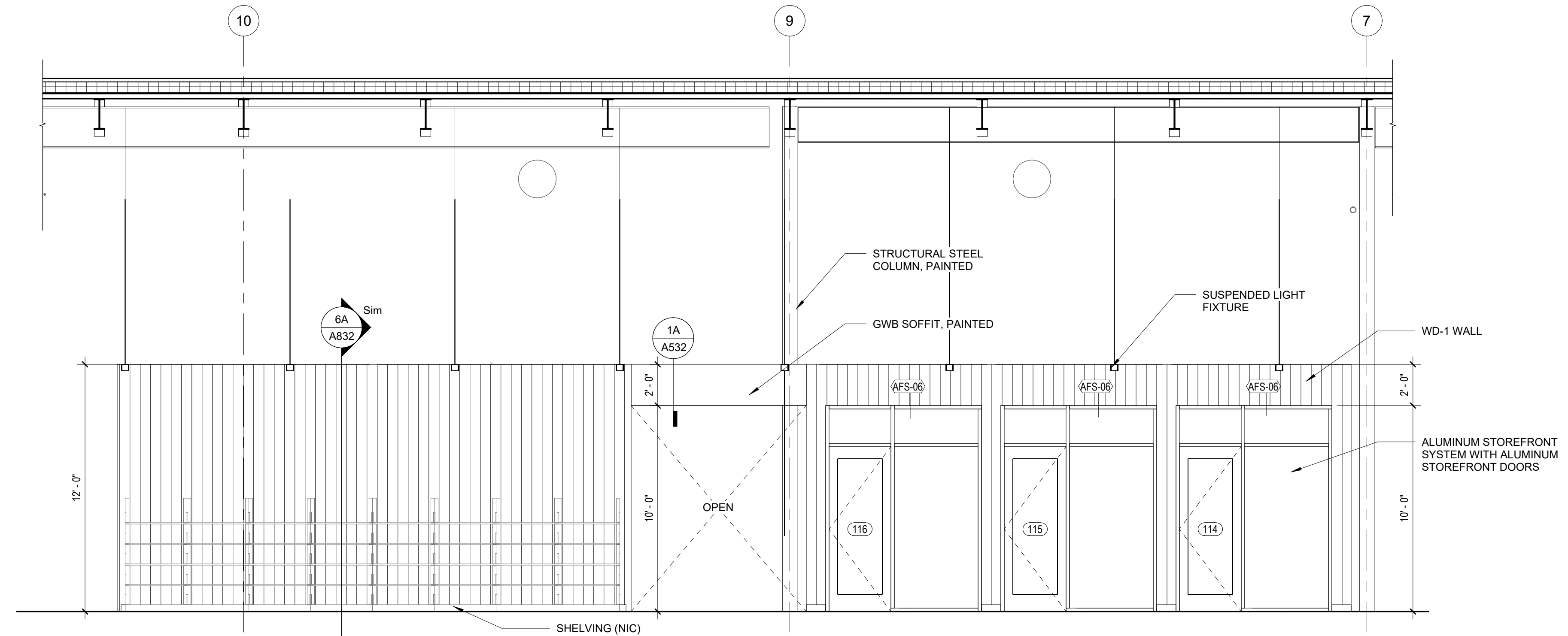
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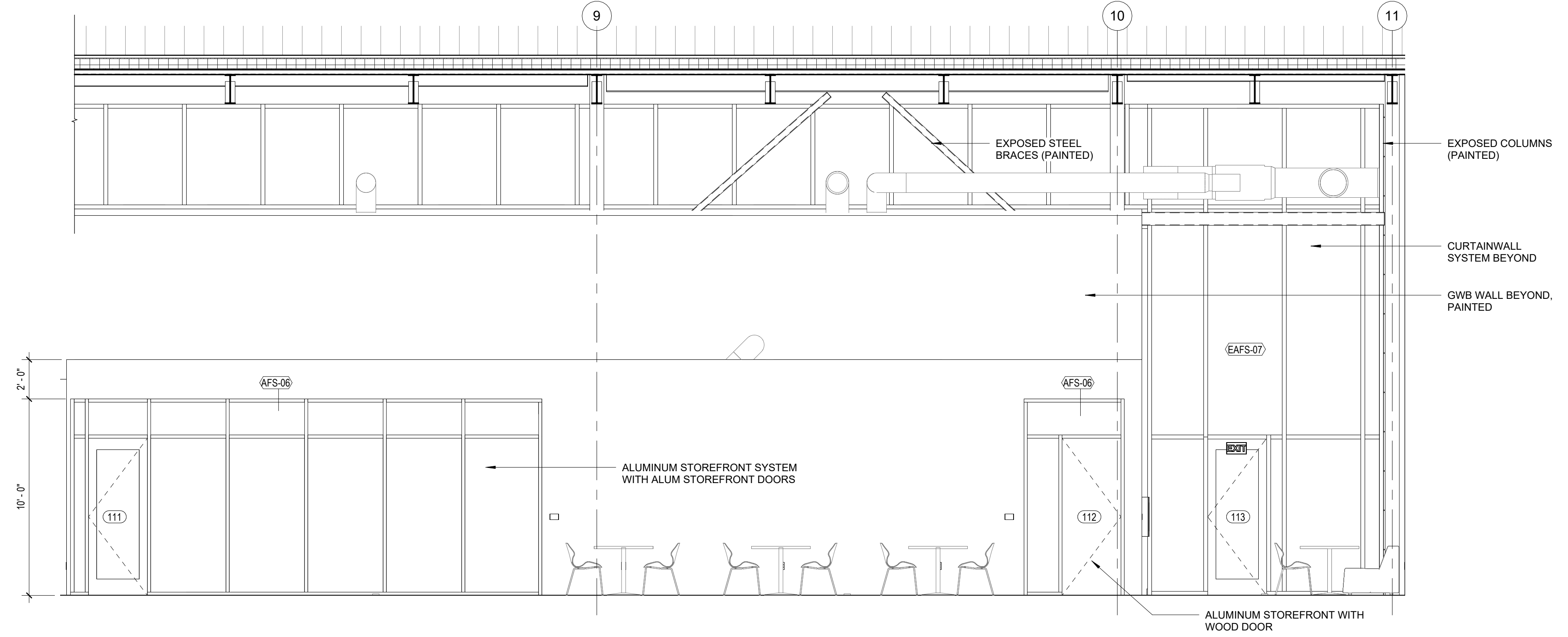
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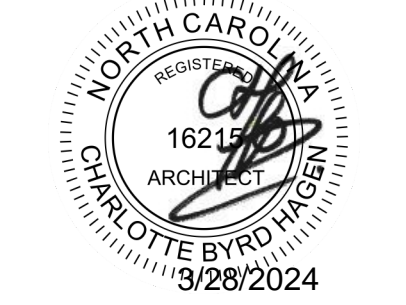
4E ELEVATION - MEETING ROOMS - ADULT NONFICTION
A821 1/4" = 1'-0"



4C ELEVATION - MEETING ROOMS - ADULT FICTION
A821 1/4" = 1'-0"



4A ELEVATION - TEEN
A821 1/4" = 1'-0"



ISSUE FOR

BID SET

ISSUE DATE

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REVISIONS

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PROJECT TEAM

PRINCIPAL IN CHARGE
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PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer

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4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.

514.18349.00

SHEET TITLE

INTERIOR ELEVATIONS

SHEET NUMBER

A821

(X) SHEET KEYNOTES

- 13 2-TIER LOCKERS.
- 19 WALL MOUNTED TV.

SHEET GENERAL NOTES

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RATED WALLS & PARTITIONS

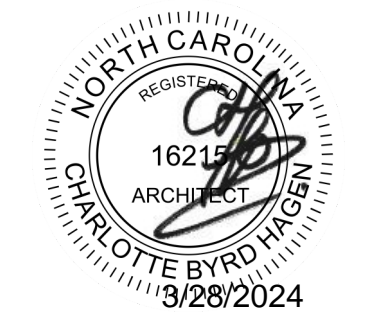
FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]

(X) TOILET ACCESSORIES LEGEND

A	TOILET TISSUE DISPENSER (BY OWNER)	-	-
B	WALL MOUNTED AUTOMATIC SOAP DISPENSER (BY OWNER)	-	-
D	GRAB BAR 18" VERTICAL	BOBRICK	5806 X 18
E	GRAB BAR 36"	BOBRICK	5806 X 36
F	GRAB BAR 42"	BOBRICK	5806 X 42
G	DIAPER CHANGING STATION, STAINLESS STEEL	KOALA KARE	KB300-SS
H	FRAMED MIRROR (24"W x 48"H)	BOBRICK	B165-24X48
J	FRAMED MIRROR (24"W x 36"H)	BOBRICK	B165-24X36
K	SURFACE-MTD. SANITARY NAPKIN DISPOSAL	BOBRICK	B-221
L	PARTITION-MTD. SANITARY NAPKIN DISPOSAL	BOBRICK	B-354
M	PAPER TOWEL DISPENSER (BY OWNER)	-	-
P	36" UTILITY SHELF WITH 4 MOP HOLDERS AND 3 RAG HOOKS	BOBRICK	B-224 X 36

(X) APPLIANCE LEGEND

- E-01 MICROWAVE (BY OWNER)
- E-02 FRENCH DOOR REFRIGERATOR, STAINLESS STEEL, ADA COMPLIANT (BY OWNER)



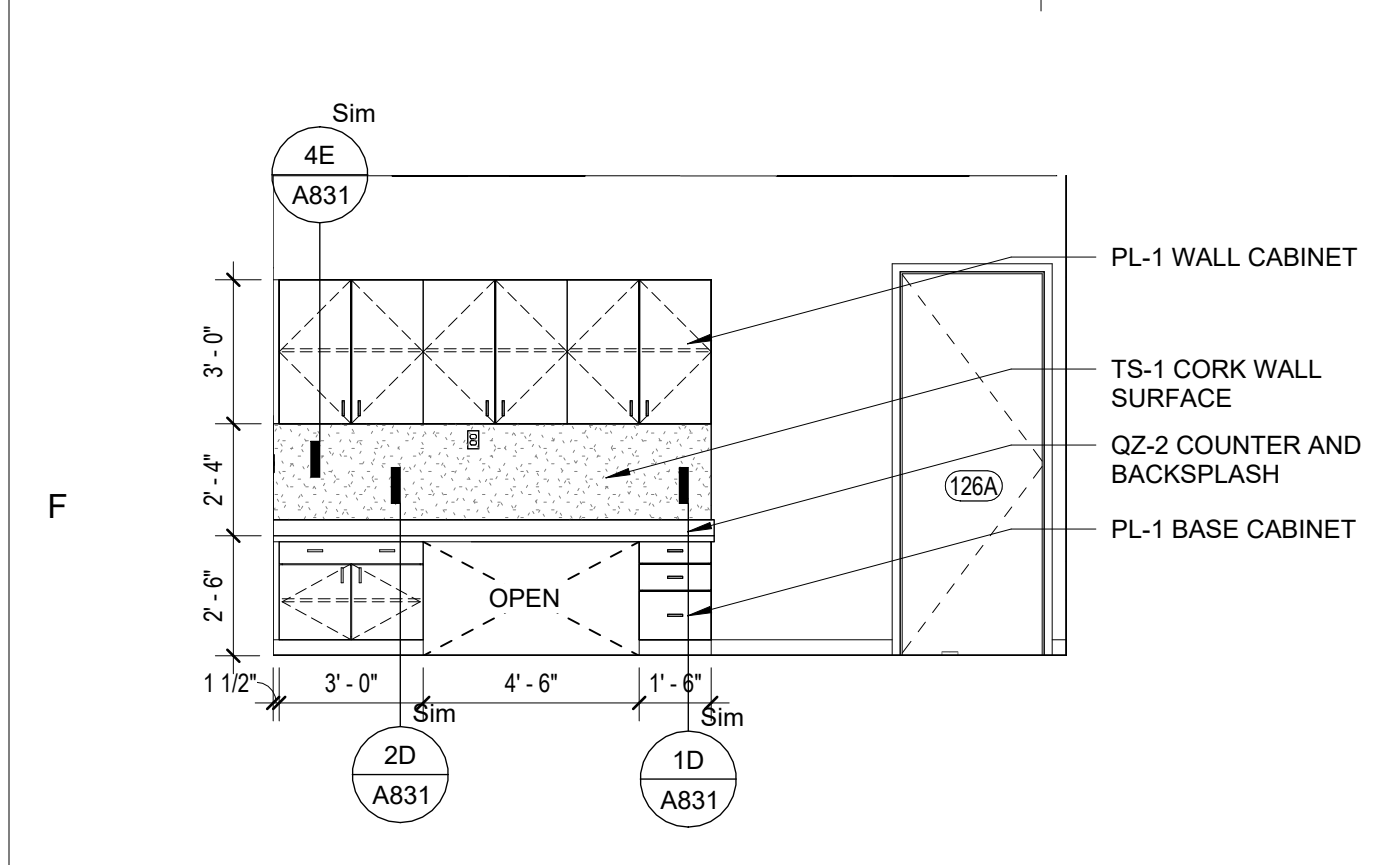
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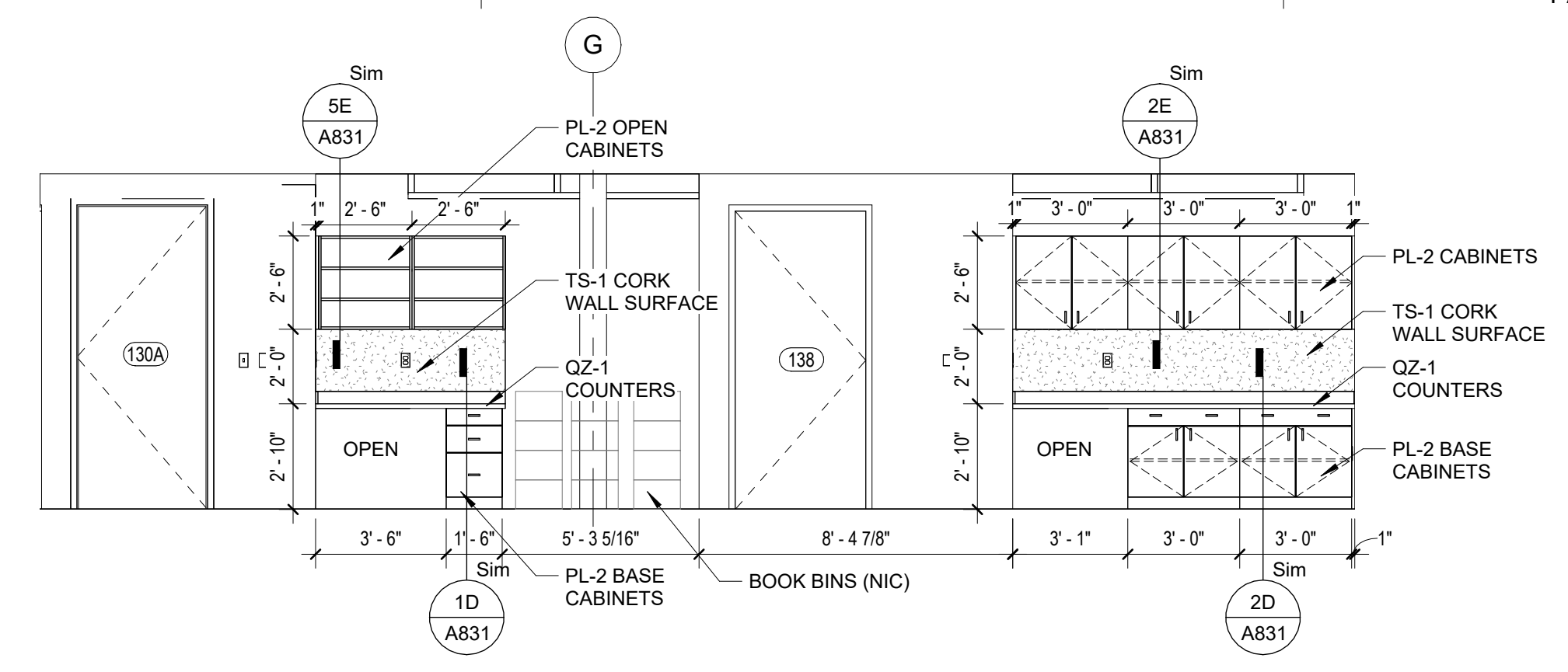
REVISIONS

NO.	REASON	DATE

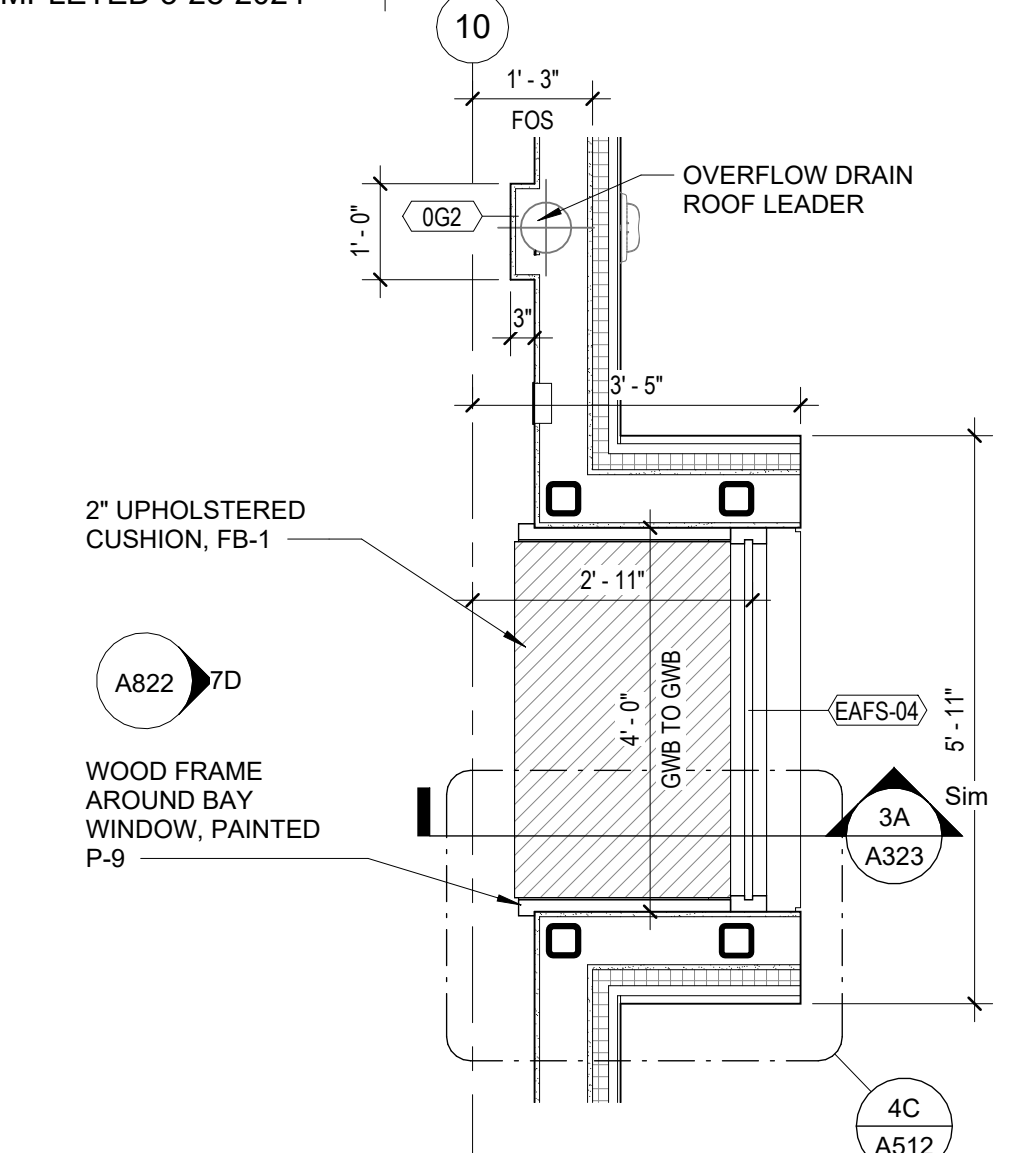
PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Designer
PROJECT NUMBER
514.18349.00
SHEET TITLE
INTERIOR ELEVATIONS
PROJECT NO.
514.18349.00
SHEET TITLE
INTERIOR ELEVATIONS
SHEET NUMBER
A822



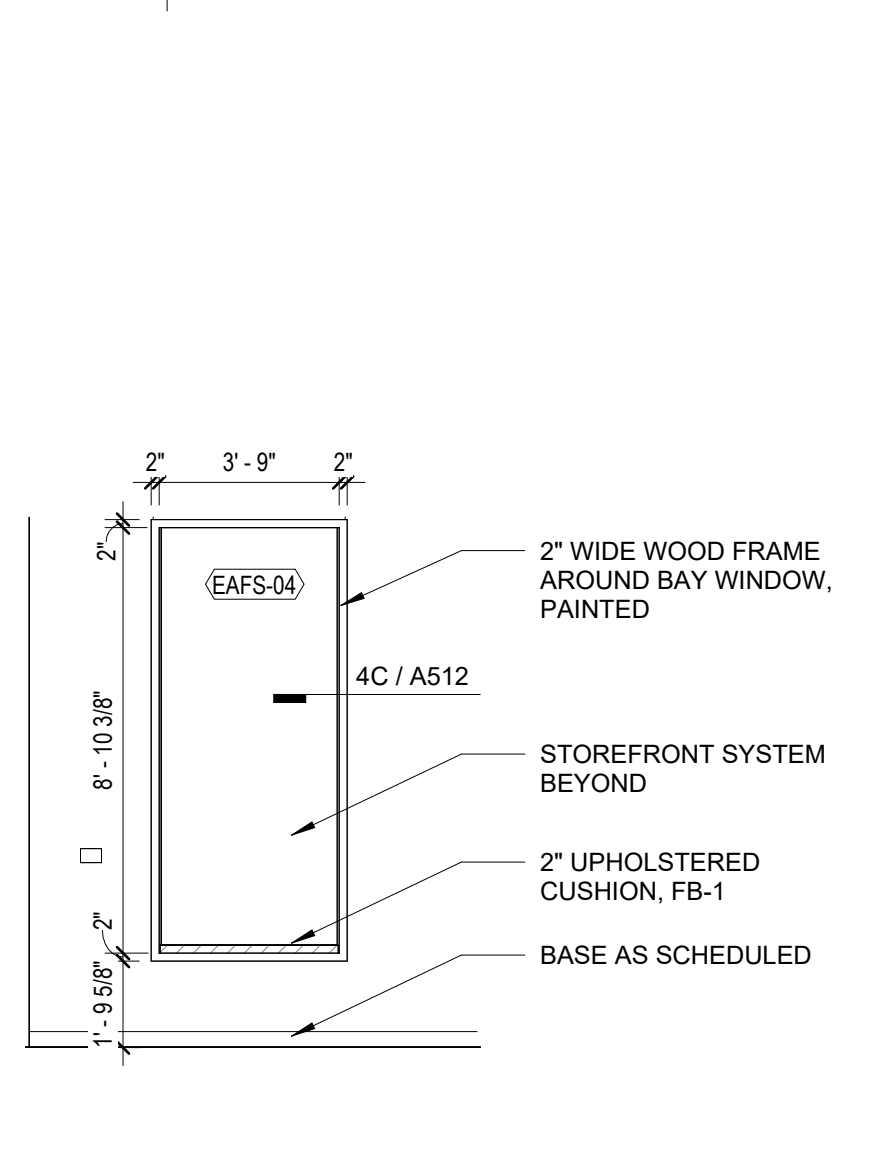
1F ELEVATION - WORK ROOM / STORAGE
A822 1/4" = 1'-0"



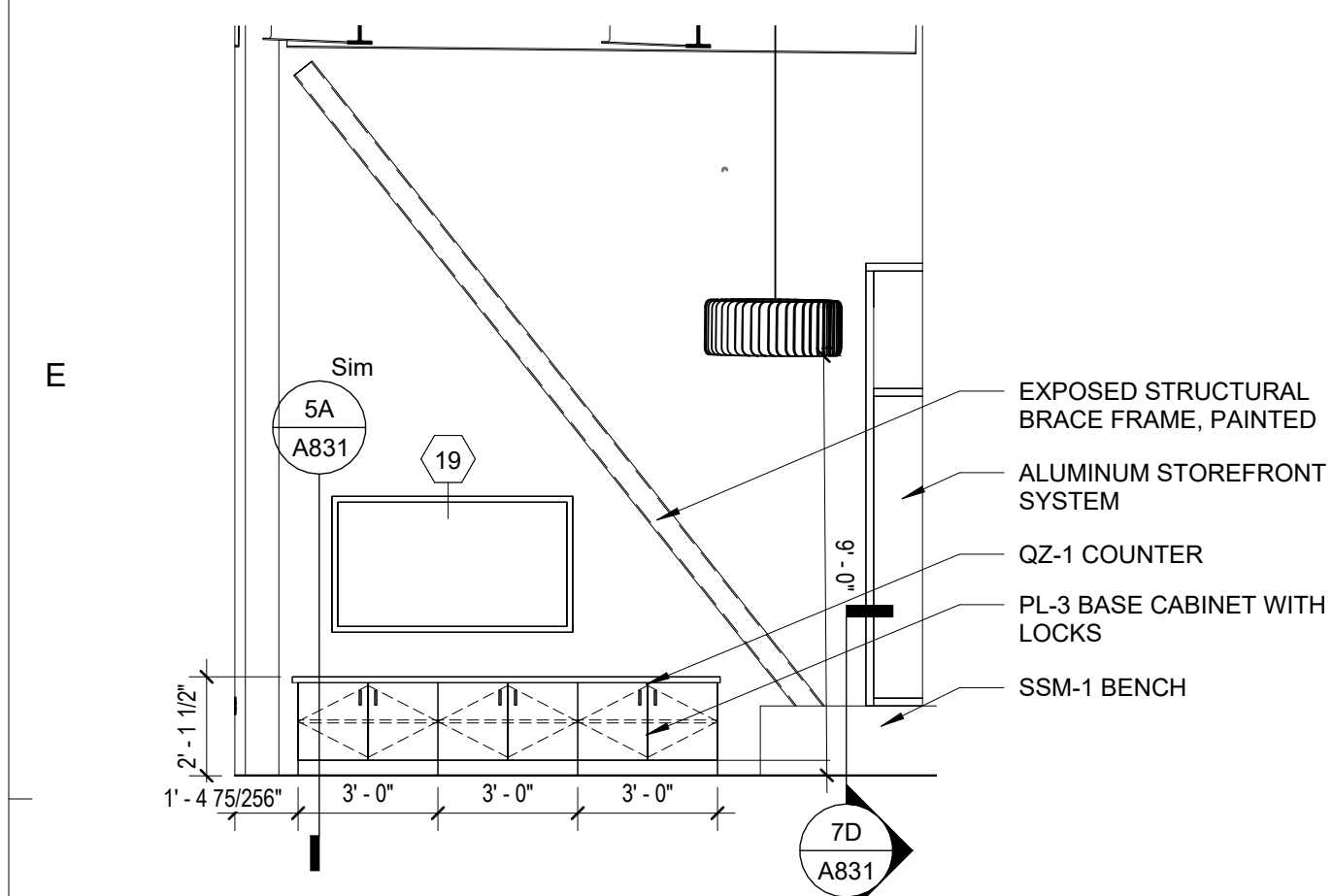
2F ELEVATION - WORK ROOM
A822 1/4" = 1'-0"



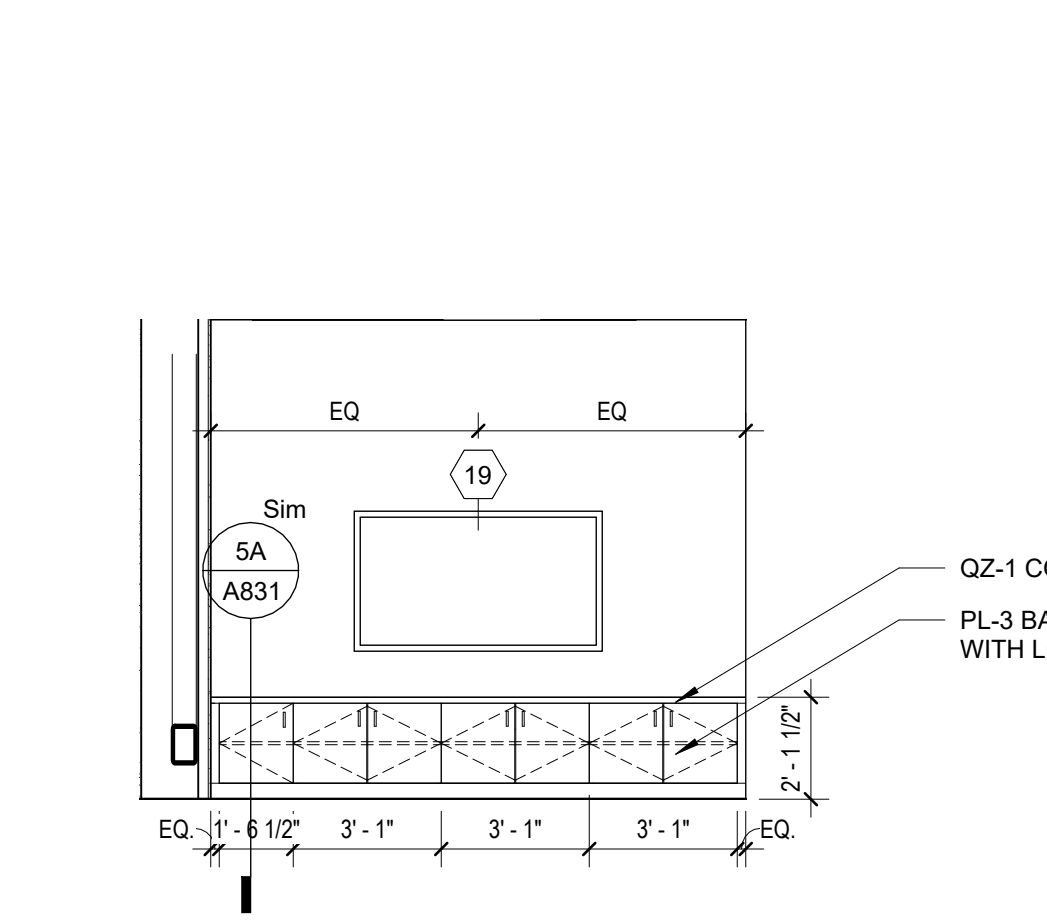
5D ENLARGED PLAN - READING BAY WINDOW
A822 1/2" = 1'-0"



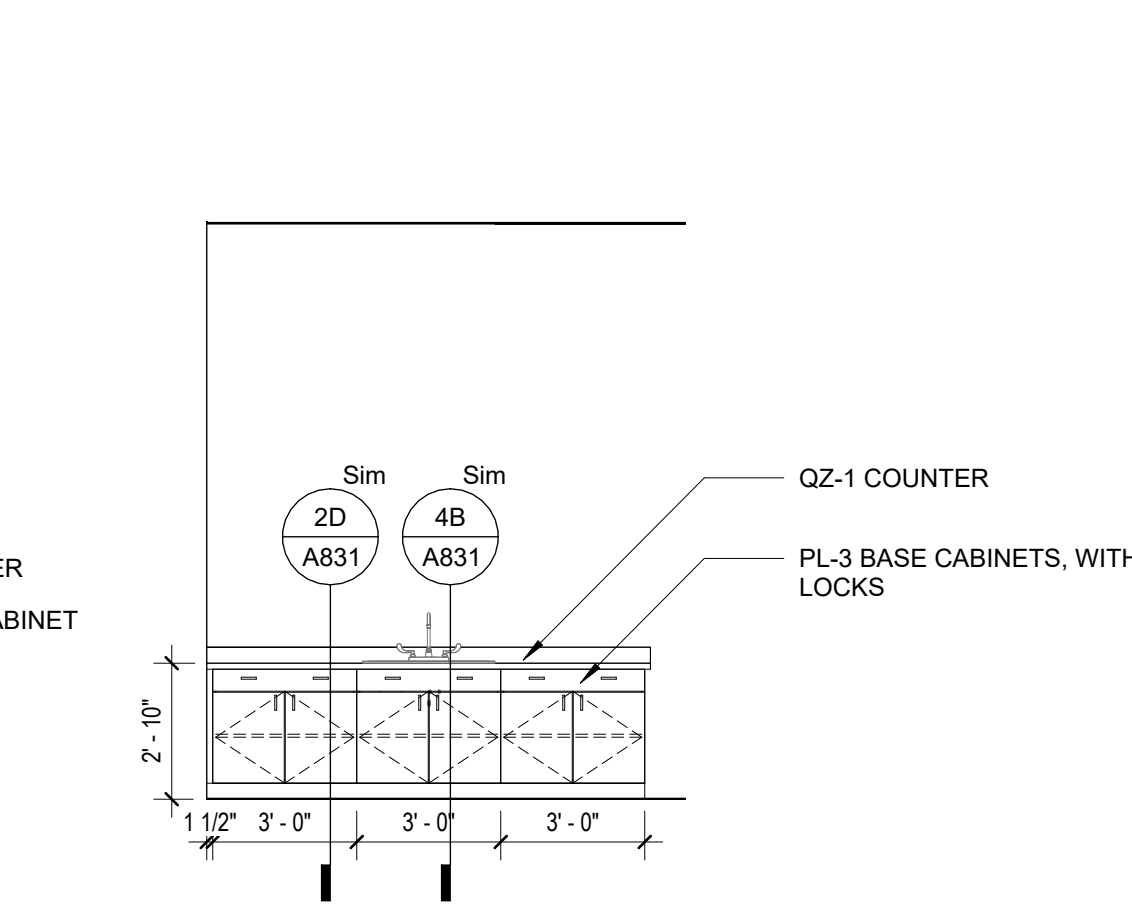
7D ELEVATION - BAY WINDOW
A822 1/4" = 1'-0"



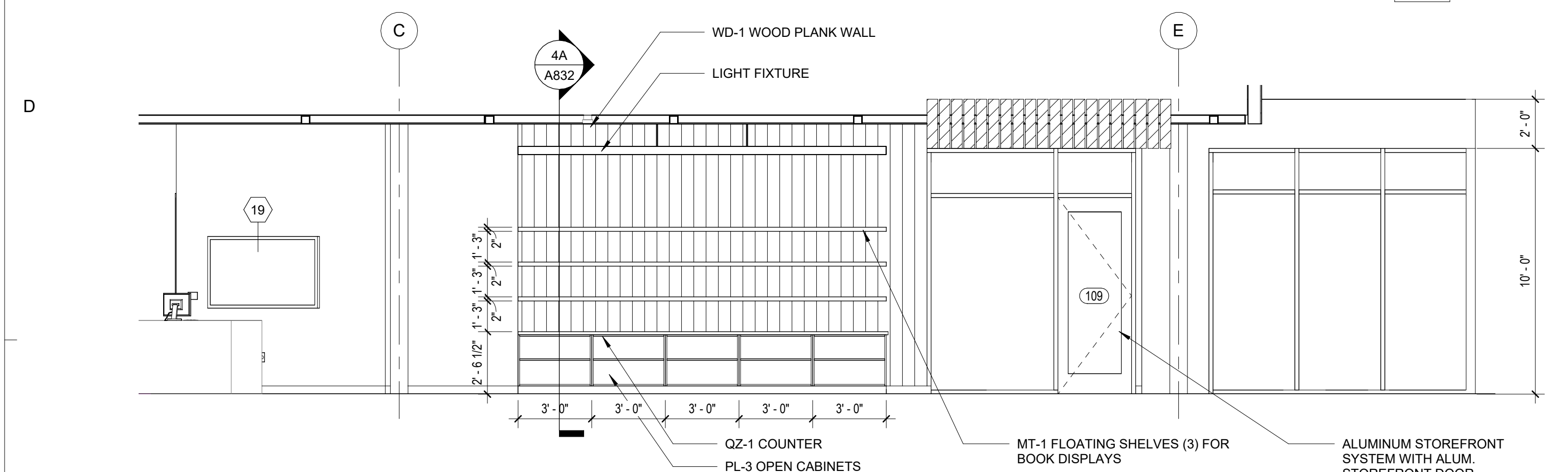
1D ELEVATION - CHILDREN'S GAMING
A822 1/4" = 1'-0"



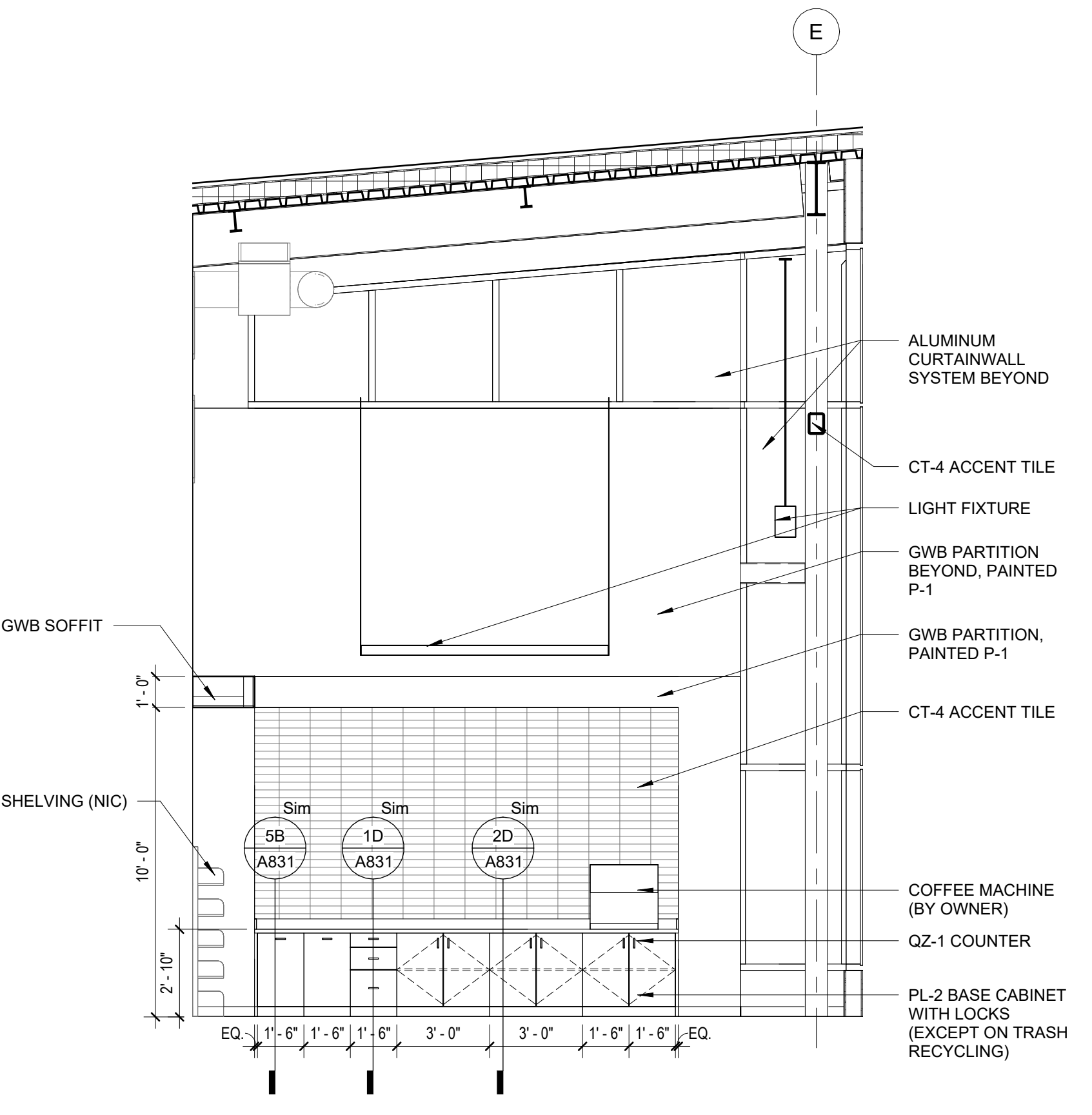
2D ELEVATION - TEEN GAMING
A822 1/4" = 1'-0"



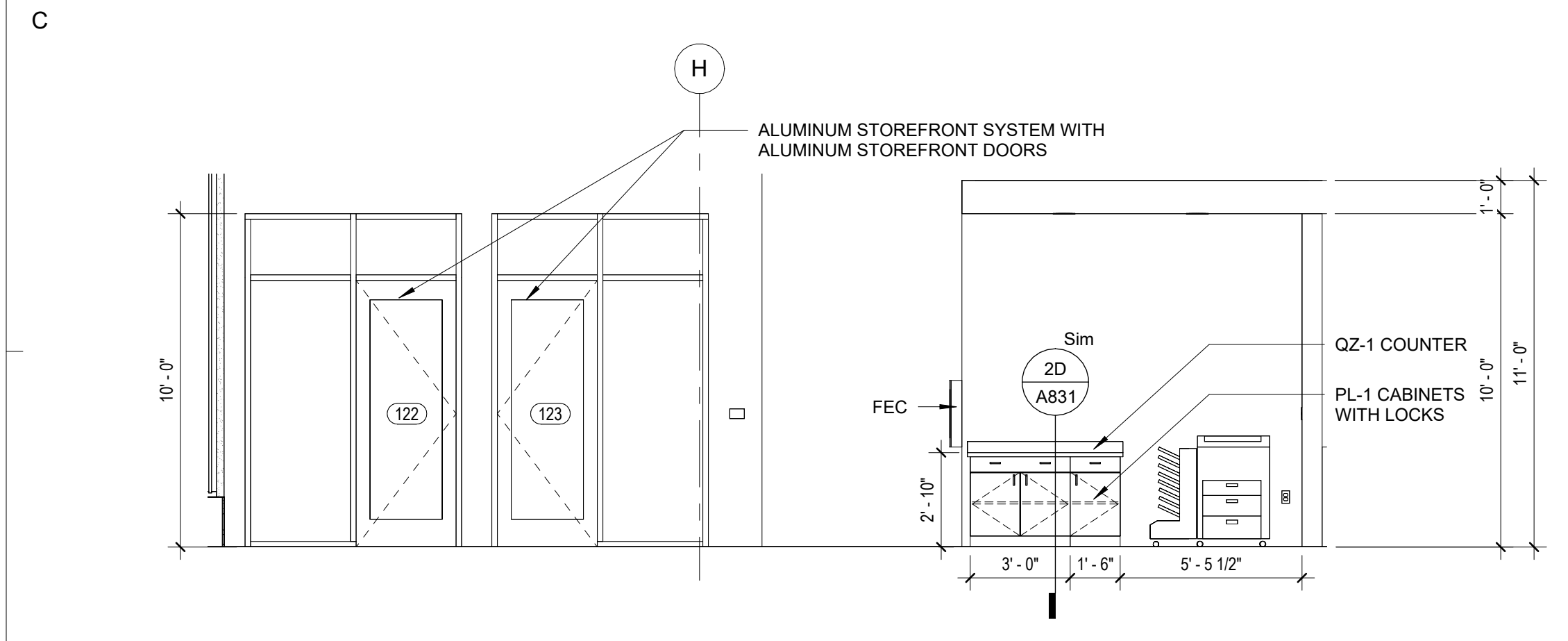
4D ELEVATION - MULTI-PURPOSE
A822 1/4" = 1'-0"



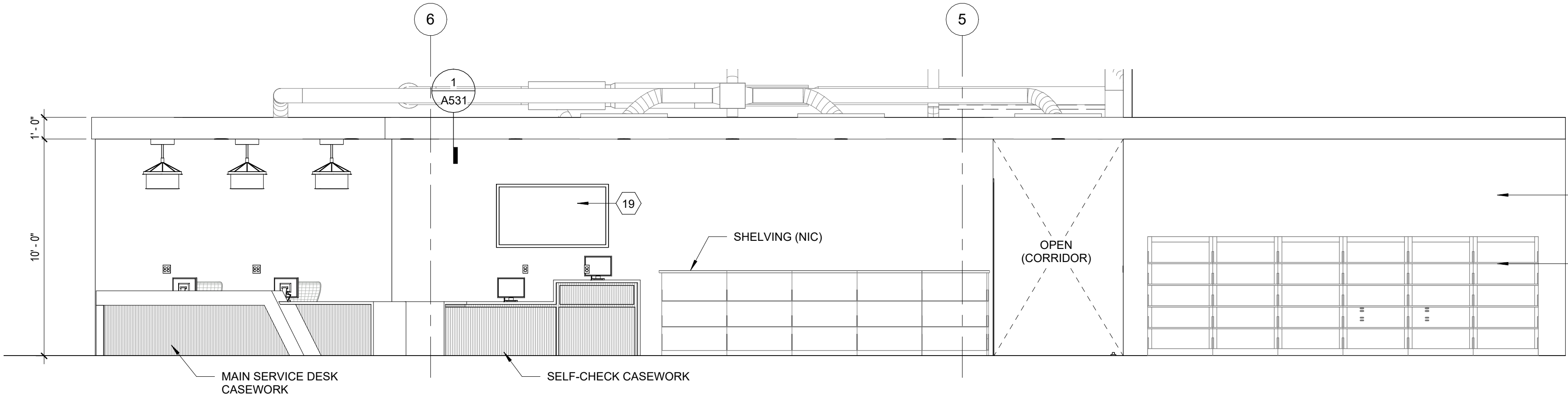
1C ELEVATION - NEW BOOKS
A822 1/4" = 1'-0"



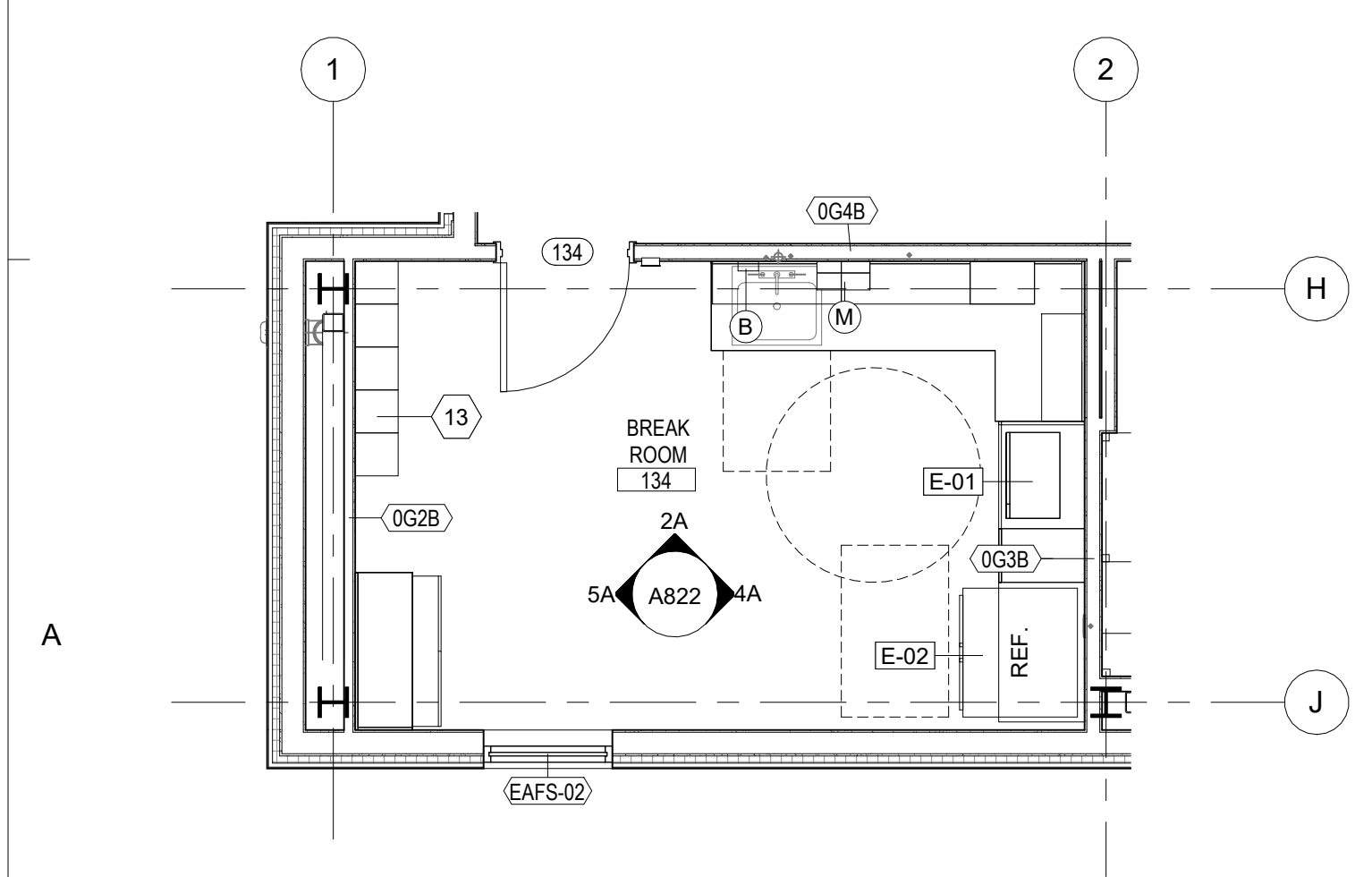
4C ELEVATION - CAFE
A822 1/4" = 1'-0"



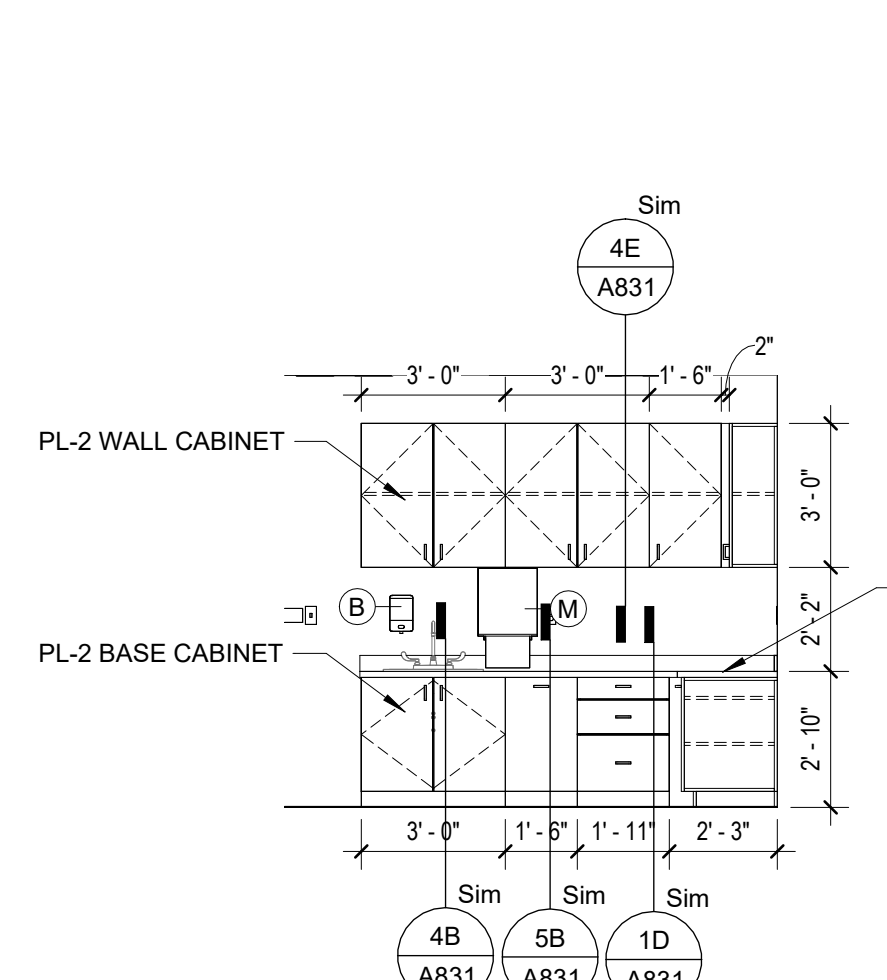
1B ELEVATION - BUSINESS CENTER / MEETING ROOMS
A822 1/4" = 1'-0"



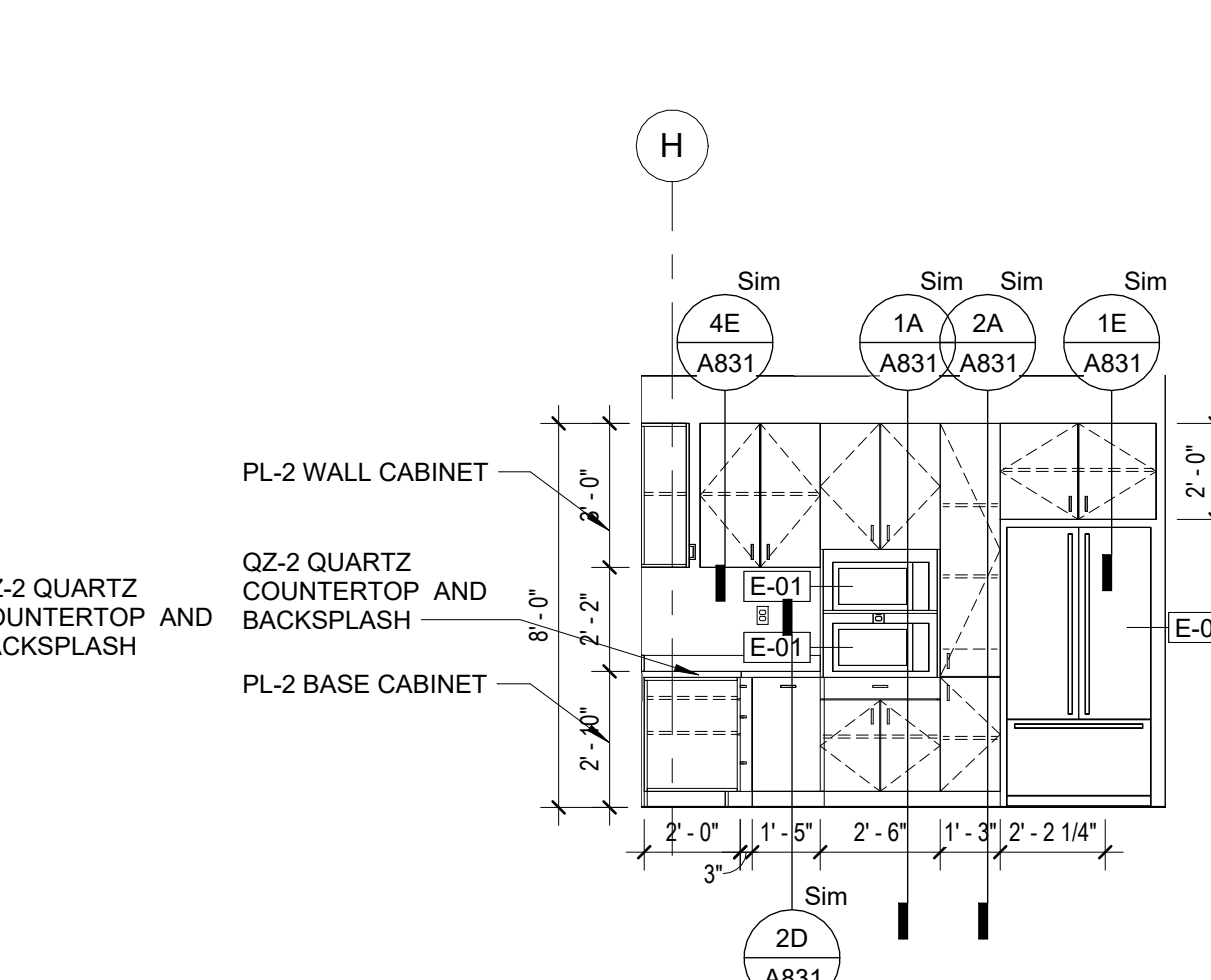
3B ELEVATION - FRONT DESK, SELF-CHECK & PERIODICALS
A822 1/4" = 1'-0"



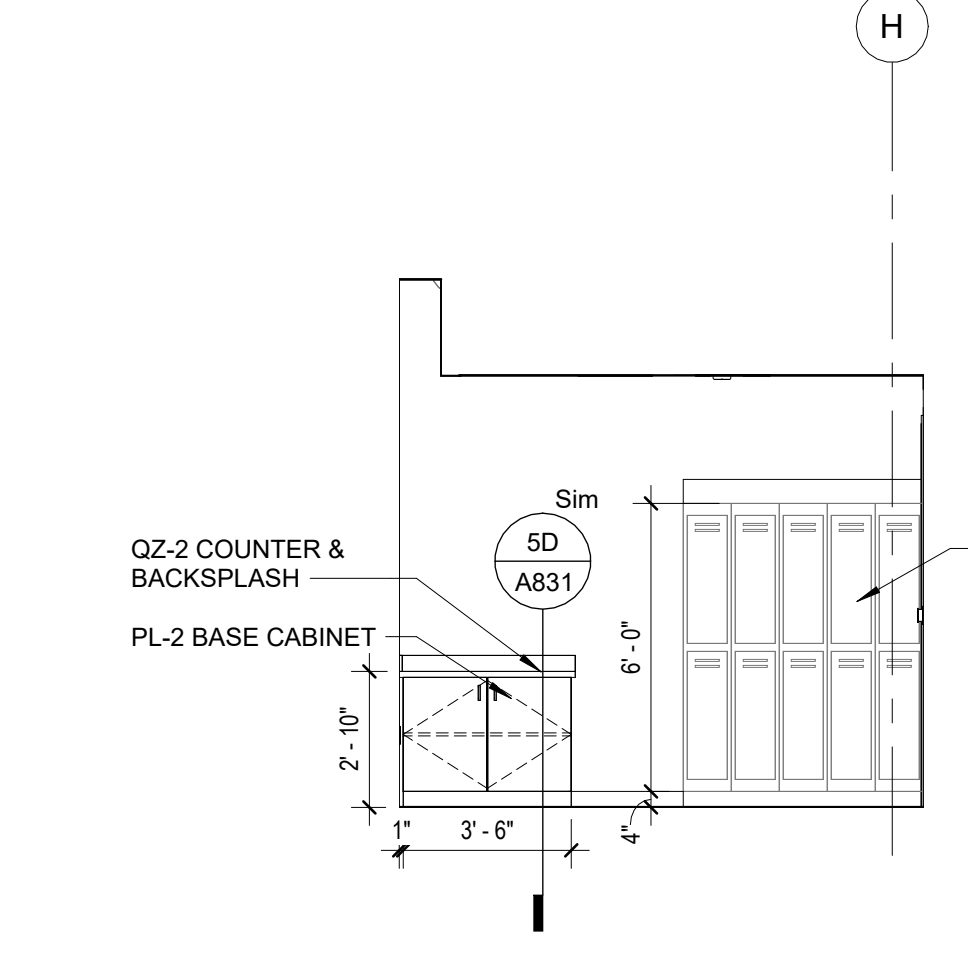
1A ENLARGED PLAN - BREAK ROOM
A822 1/4" = 1'-0"



2A ELEVATION - BREAK ROOM - 1
A822 1/4" = 1'-0"

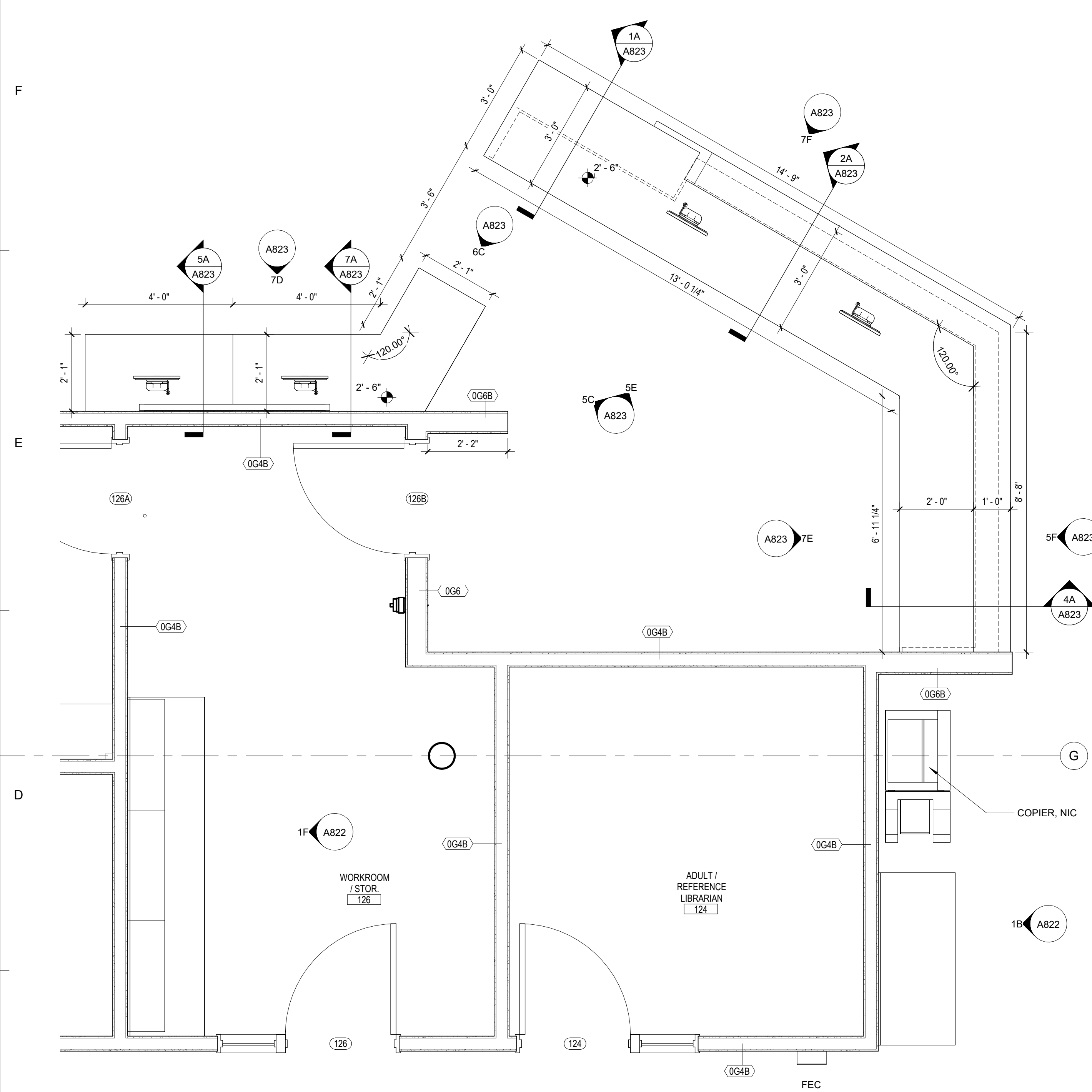


4A ELEVATION - BREAK ROOM - 2
A822 1/4" = 1'-0"

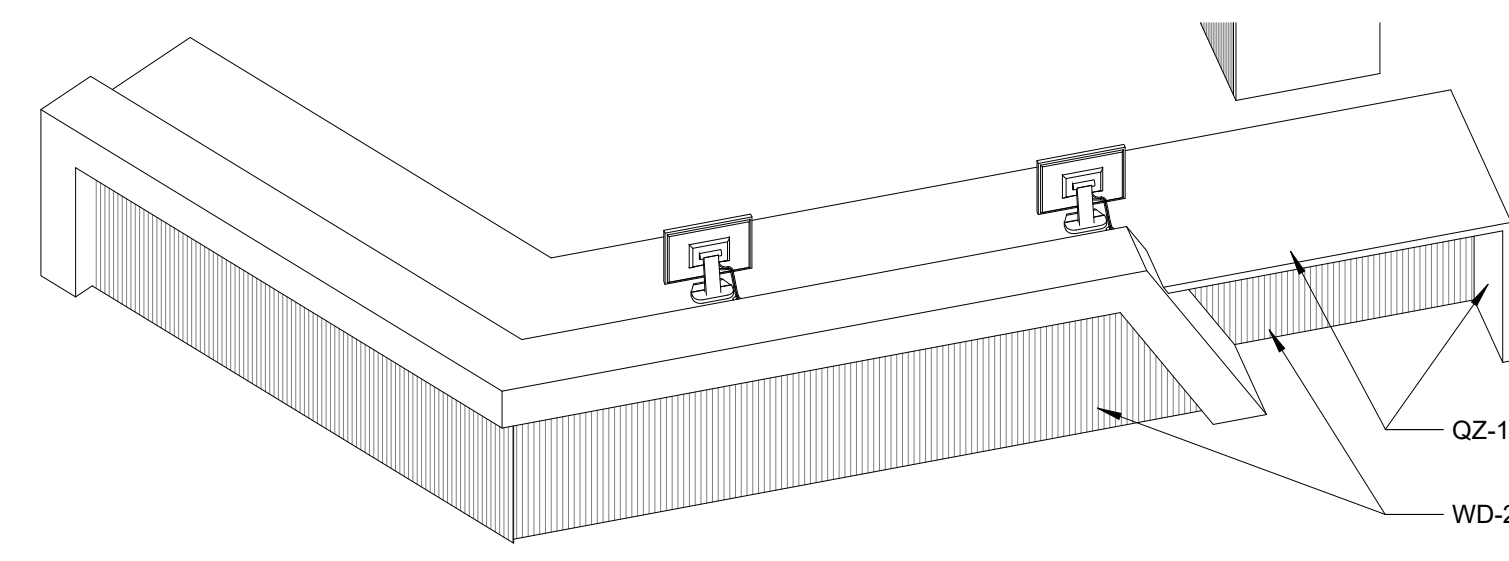


5A ELEVATION - BREAK ROOM - 3
A822 1/4" = 1'-0"

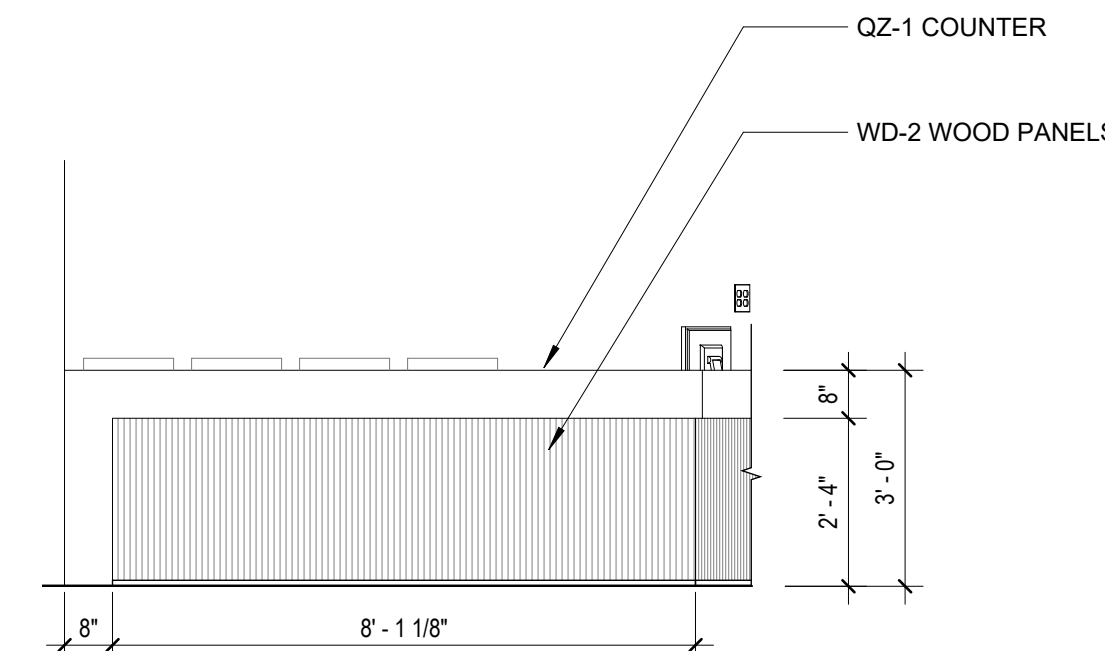
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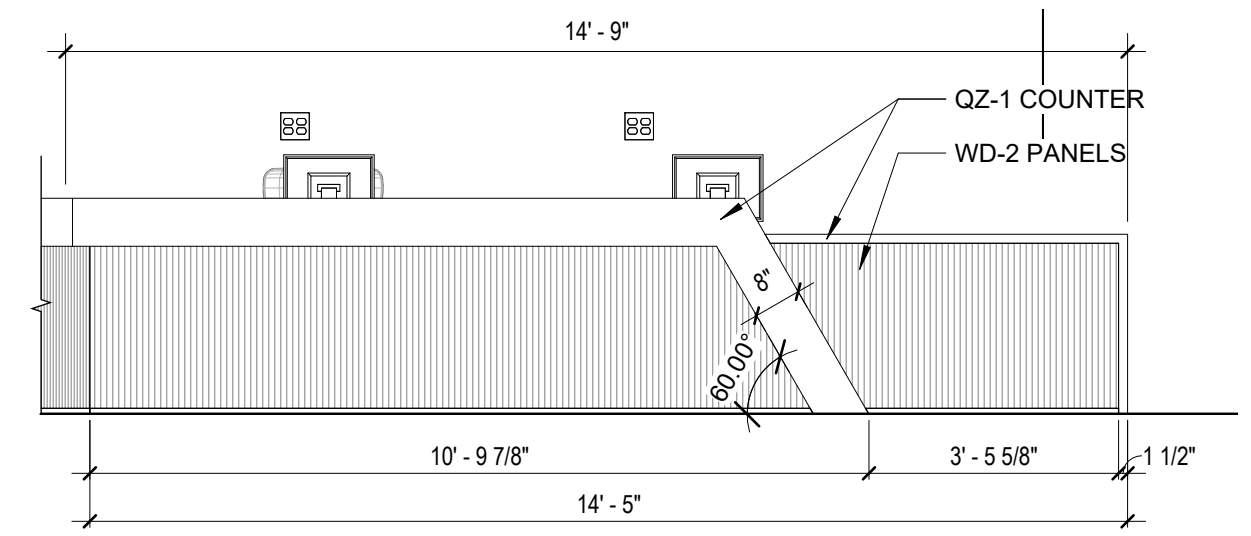
1D ENLARGED PLAN - MAIN SERVICE POINT
A823 1/2" = 1'-0"



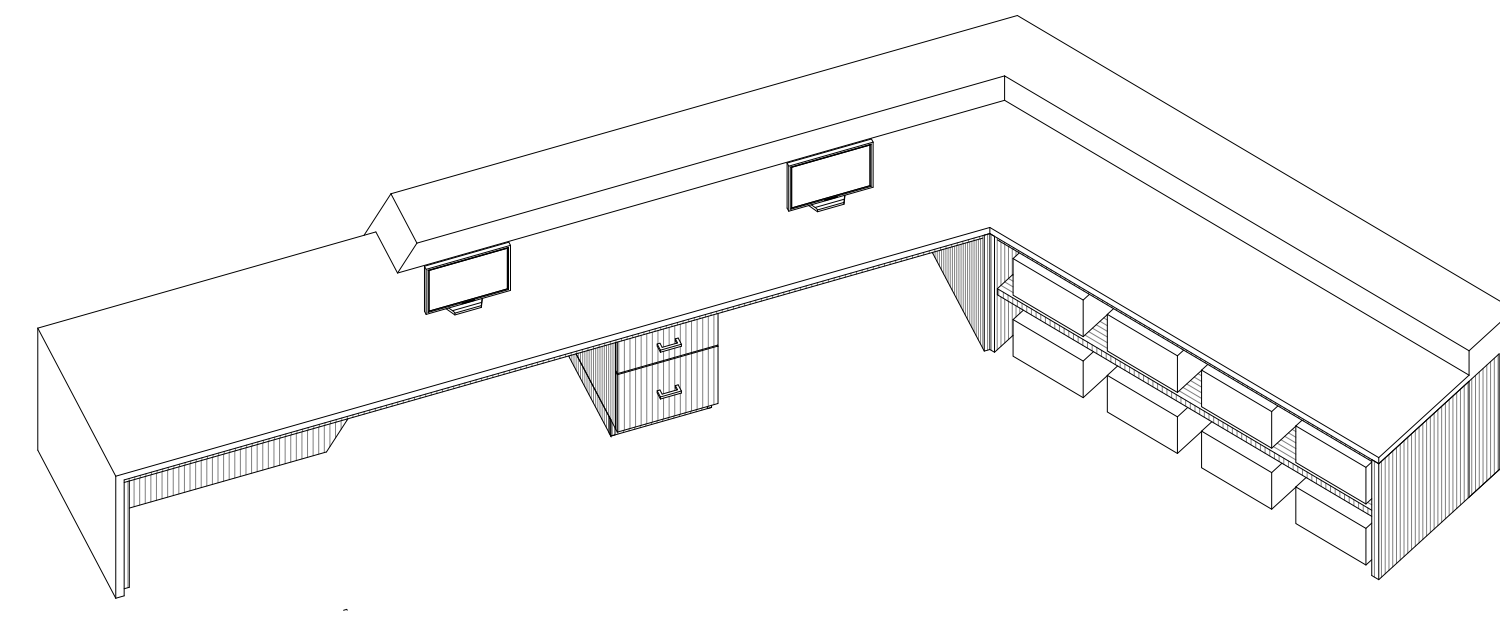
3F CIRCULATION DESK FRONT AXON
A823 NOT TO SCALE



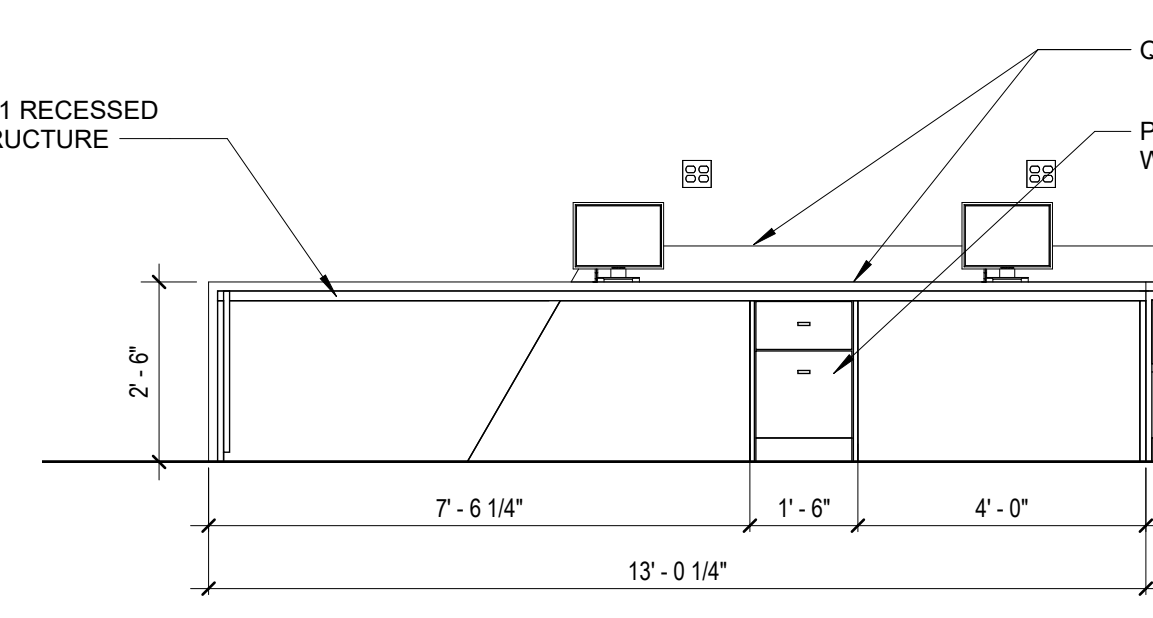
5F CIRC. DESK - FRONT LEFT
A823 3/8" = 1'-0"



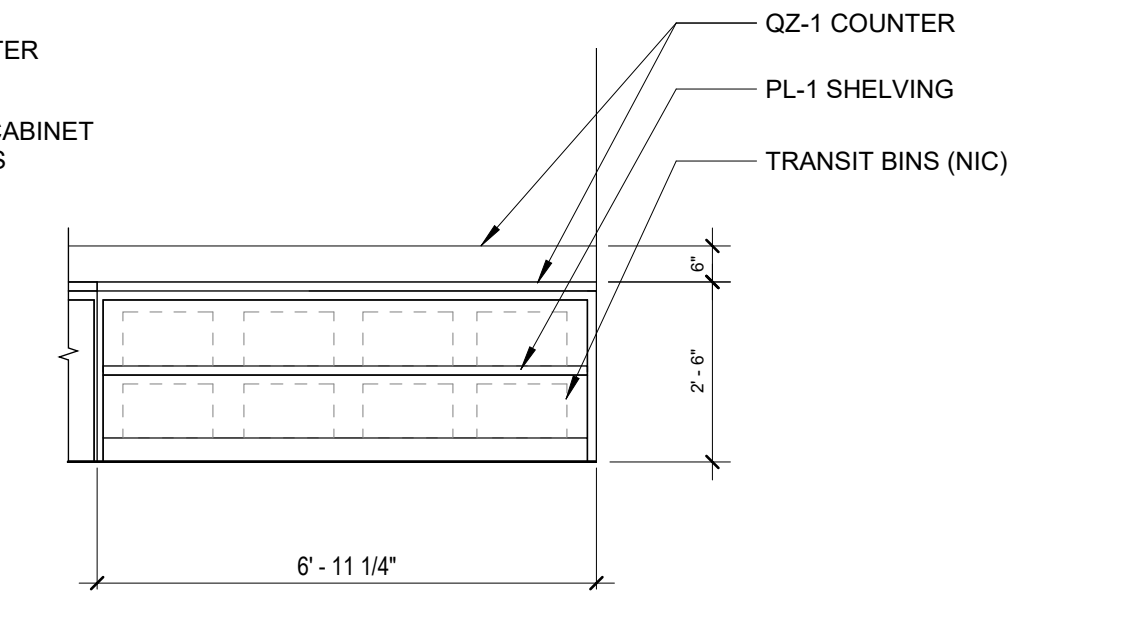
7F CIRC. DESK - FRONT RIGHT
A823 3/8" = 1'-0"



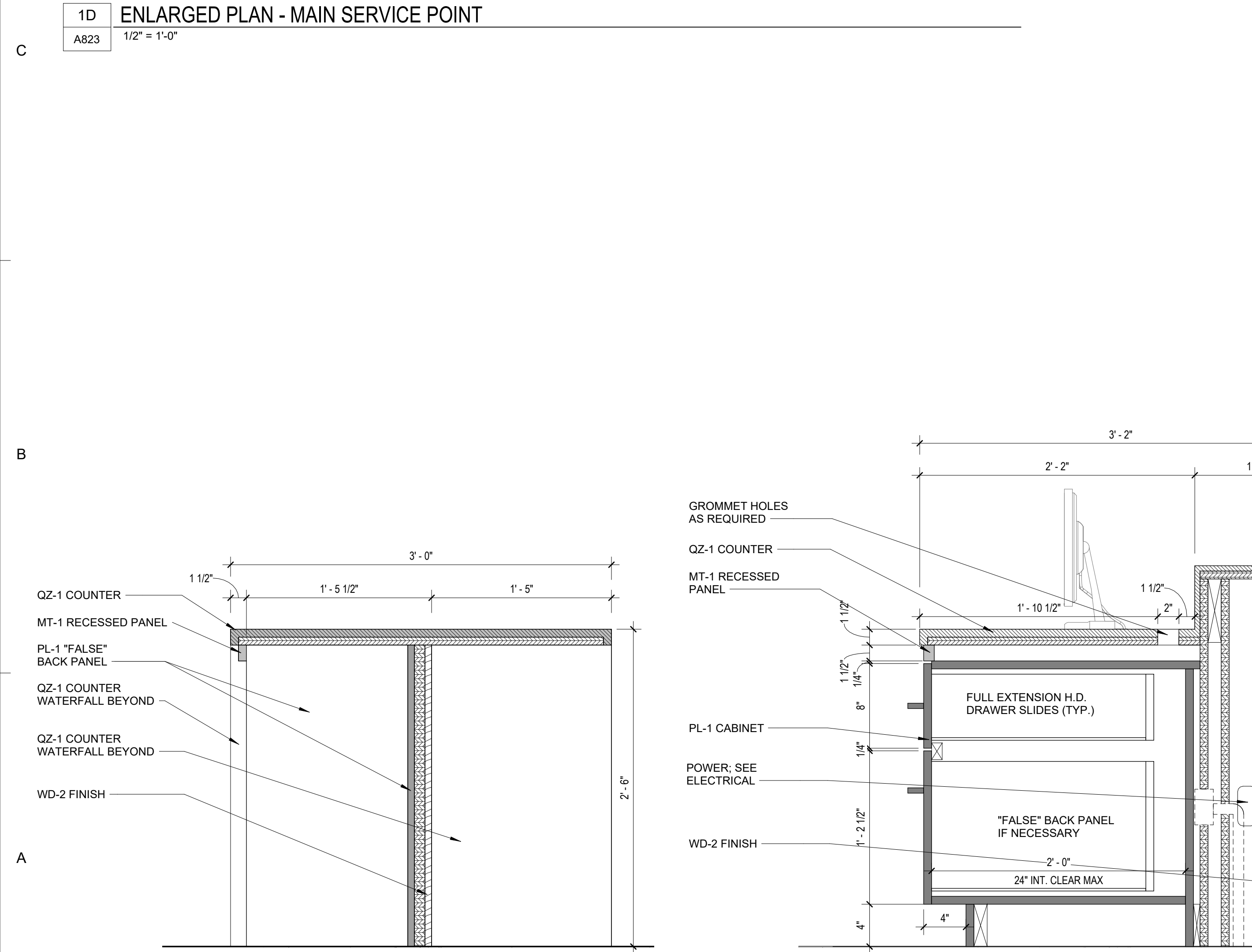
3E CIRCULATION DESK INTERIOR AXON
A823 NOT TO SCALE



5E CIRC. DESK - INTERIOR LEFT
A823 3/8" = 1'-0"

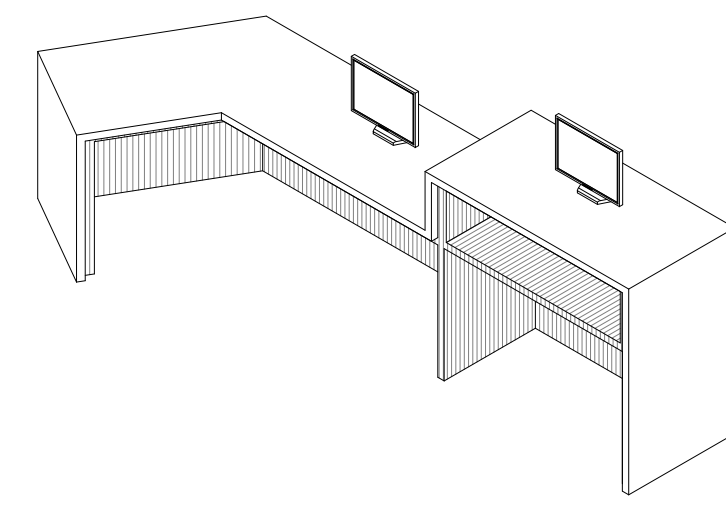


7E CIRC. DESK - INTERIOR RIGHT
A823 3/8" = 1'-0"

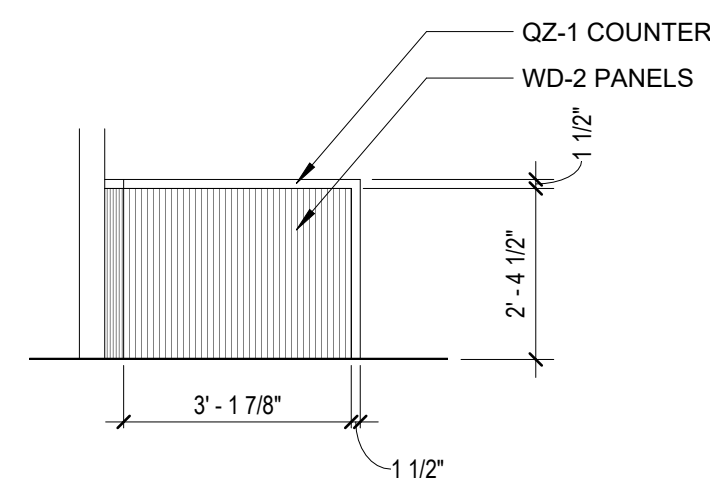


1A MAIN CIRC. DESK ADA HEIGHT
A823 1 1/2" = 1'-0"

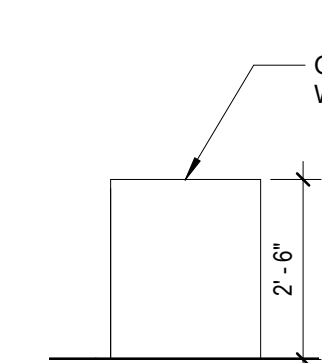
2A MAIN CIRC. TRANSACTION HEIGHT AND CABINET
A823 1 1/2" = 1'-0"



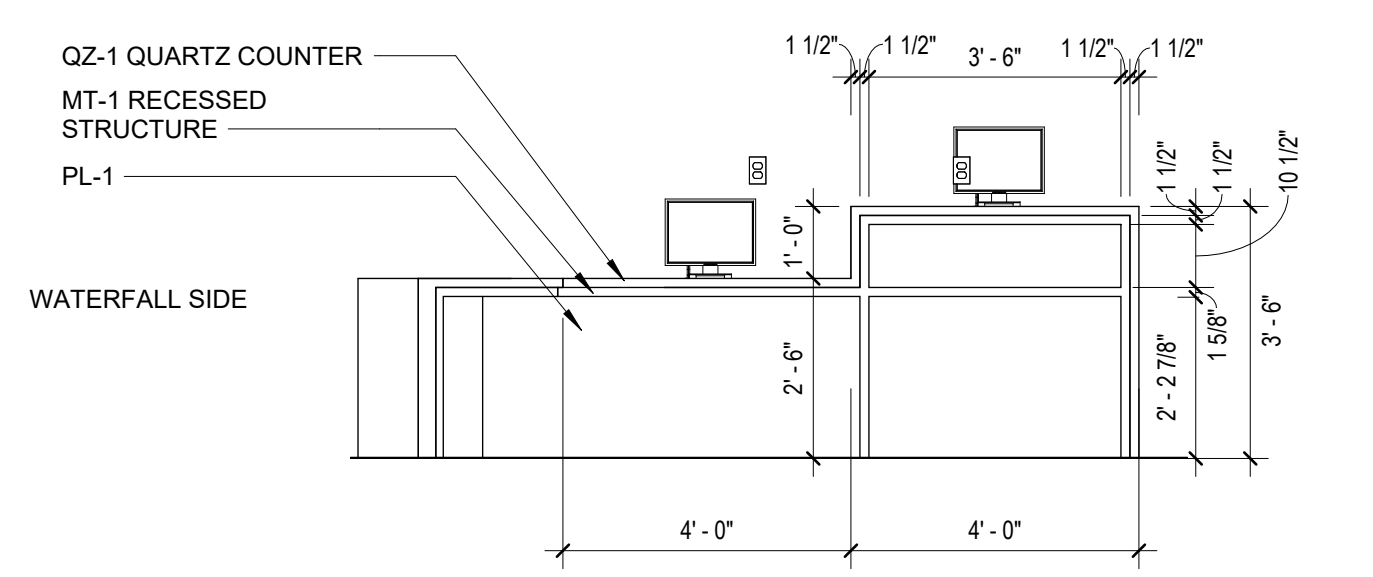
3C SELF CHECK OUT AXON
A823 NOT TO SCALE



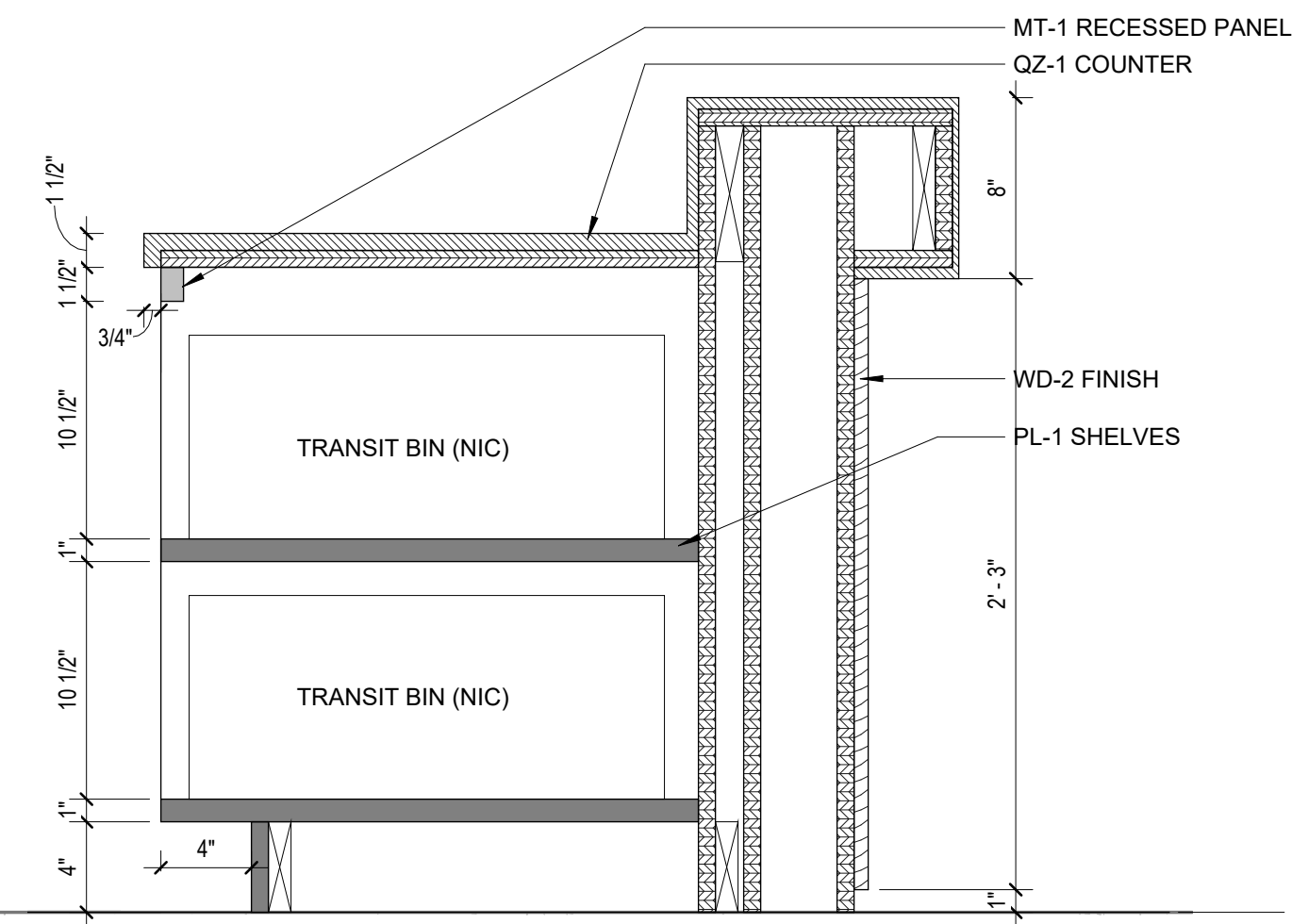
5C SELF CHECK OUT - BACK
A823 3/8" = 1'-0"



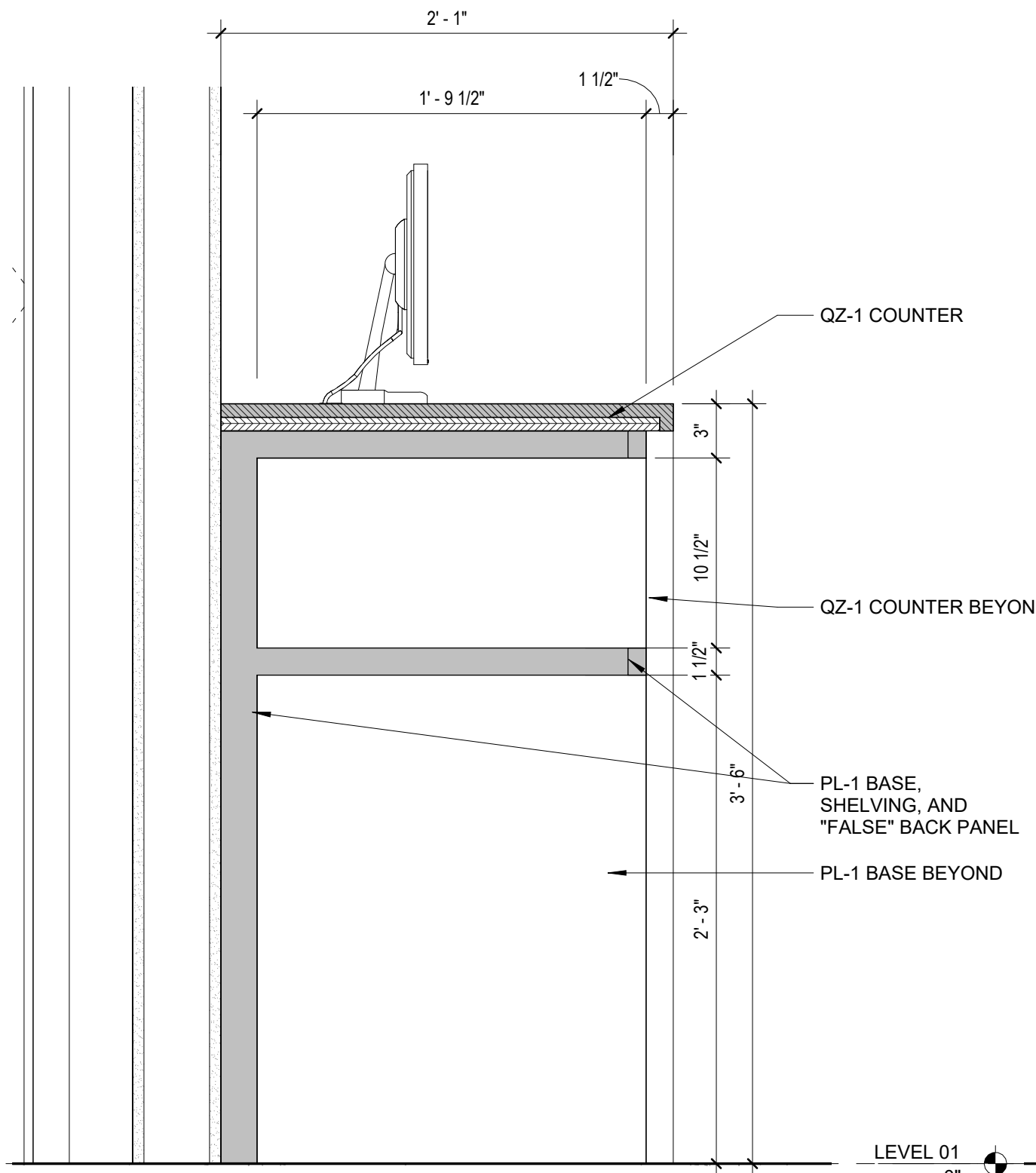
6C SELF CHECK OUT - SIDE
A823 3/8" = 1'-0"



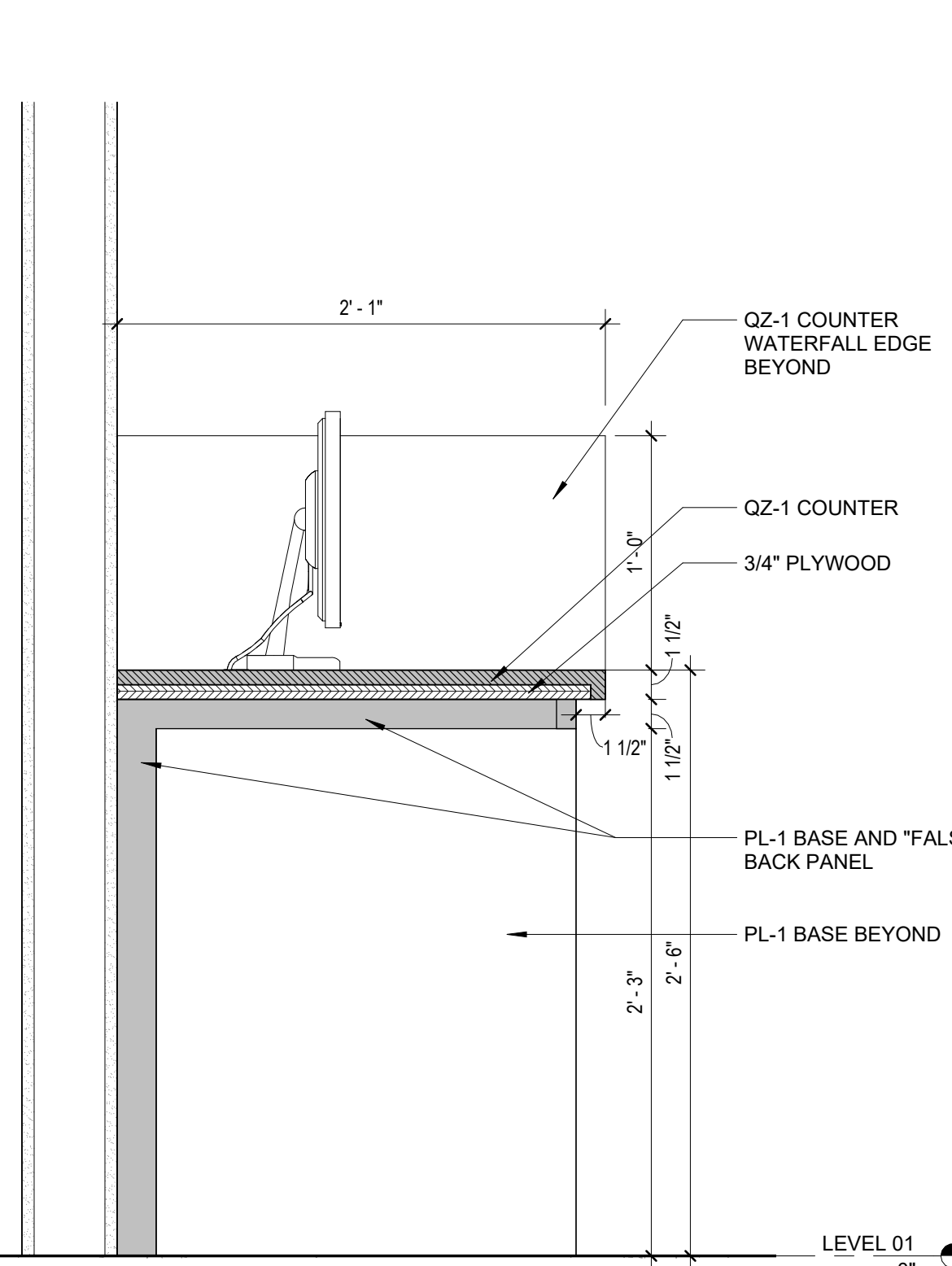
7D SELF CHECK OUT - FRONT
A823 3/8" = 1'-0"



4A MAIN CIRC. DESK TRANSACTION HEIGHT AND SHELVES
A823 1 1/2" = 1'-0"



5A SELF-CHECK DESK STANDING HEIGHT
A823 1 1/2" = 1'-0"



7A SELF-CHECK DESK ADA HEIGHT
A823 1 1/2" = 1'-0"

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PROJECT TEAM
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PROJECT MANAGER
Charlotte Hagen, AIA
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Designer
PROJECT ENGINEER

NORTHCHASE BRANCH
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4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00
SHEET TITLE
INTERIOR ELEVATIONS
SHEET NUMBER
A823

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BID SET

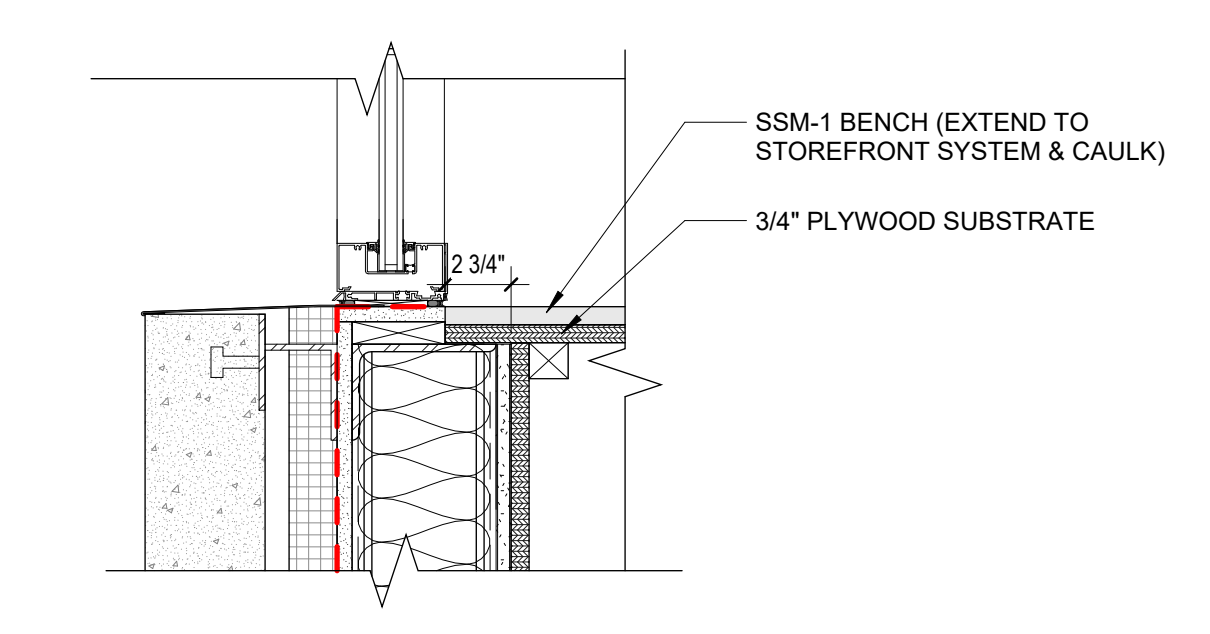
ISSUE DATE
03.28.2024

REVISIONS NO.	REASON	DATE

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SHEET GENERAL NOTES

1. TYPICAL CABINET PULLS: HAFELE BLACK BAR HANDLE (155.99.017)
2. ALL WOOD GRAIN TO RUN VERTICALLY.
3. NO EXPOSED FASTENERS.
4. PROVIDE CONTINUOUS MATCHING TOEKICK ON BASE CABINETS UNLESS NOTED OTHERWISE.
5. ALL EDGES OF SHELVING TO BE EDGEBANDED TO MATCH PLASTIC LAMINATE, UNLESS NOTED OTHERWISE.
6. ALL EXPOSED CABINET SURFACES ON OPEN CABINETS TO HAVE MATCHING PLASTIC LAMINATE FINISH UNLESS NOTED OTHERWISE.



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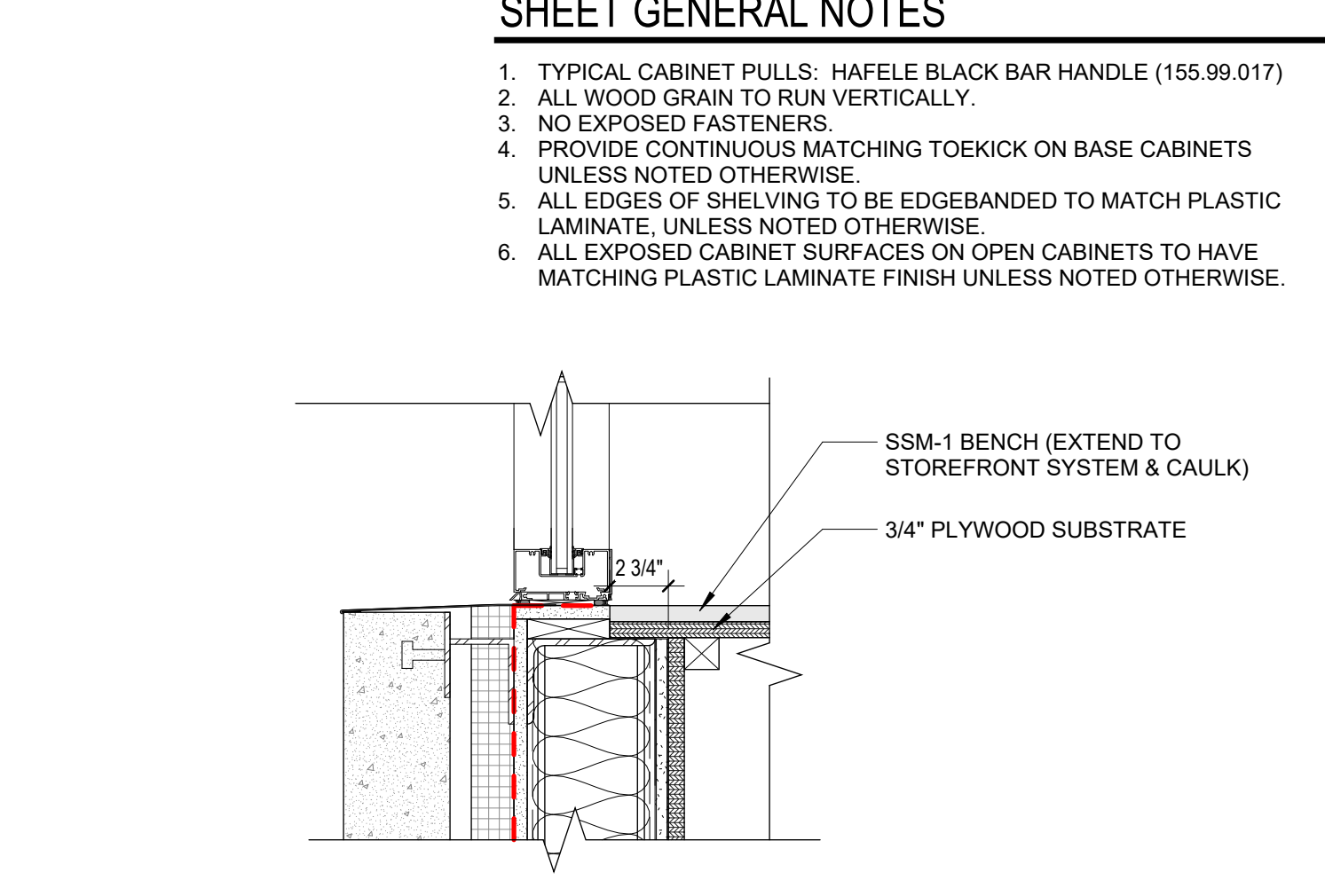
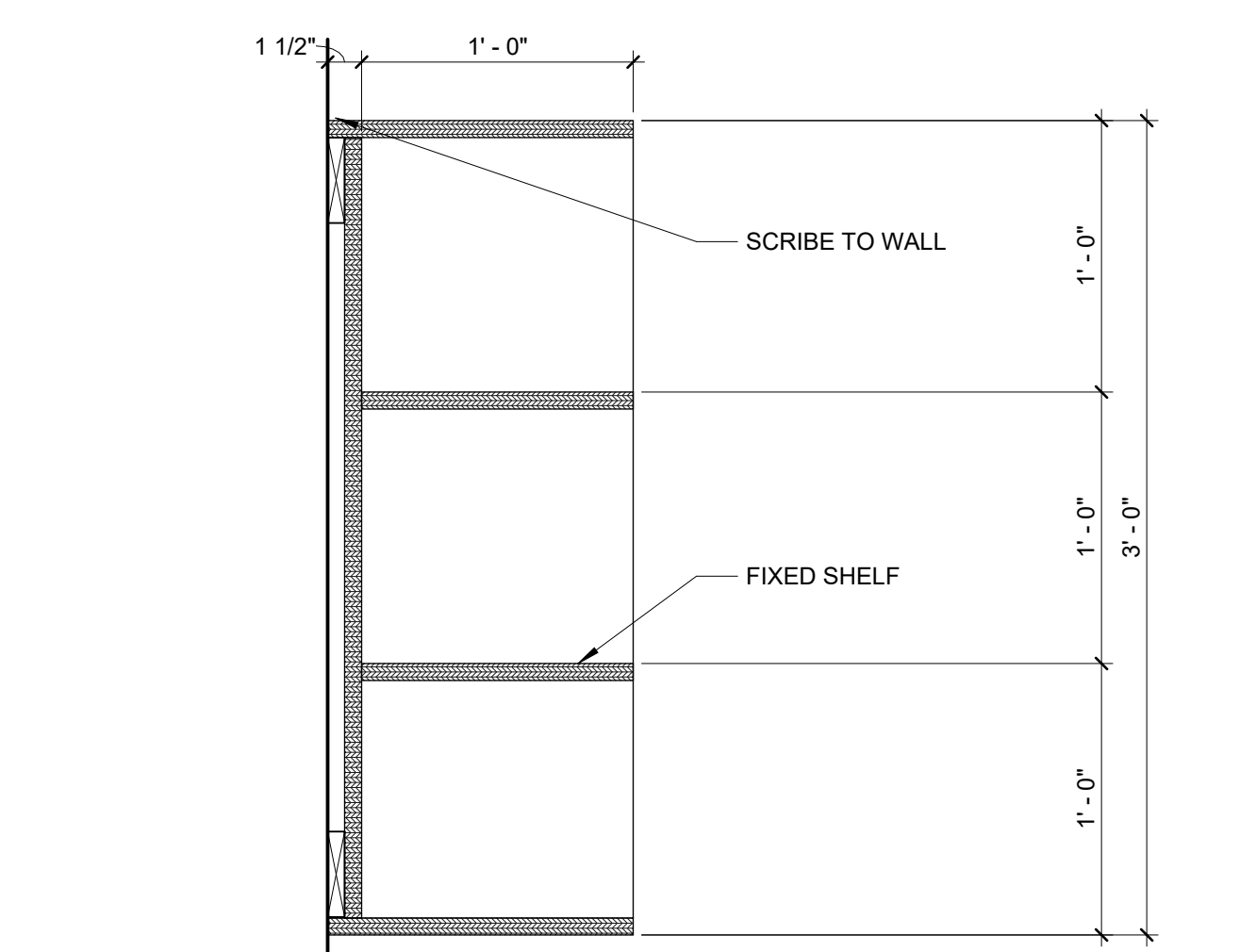
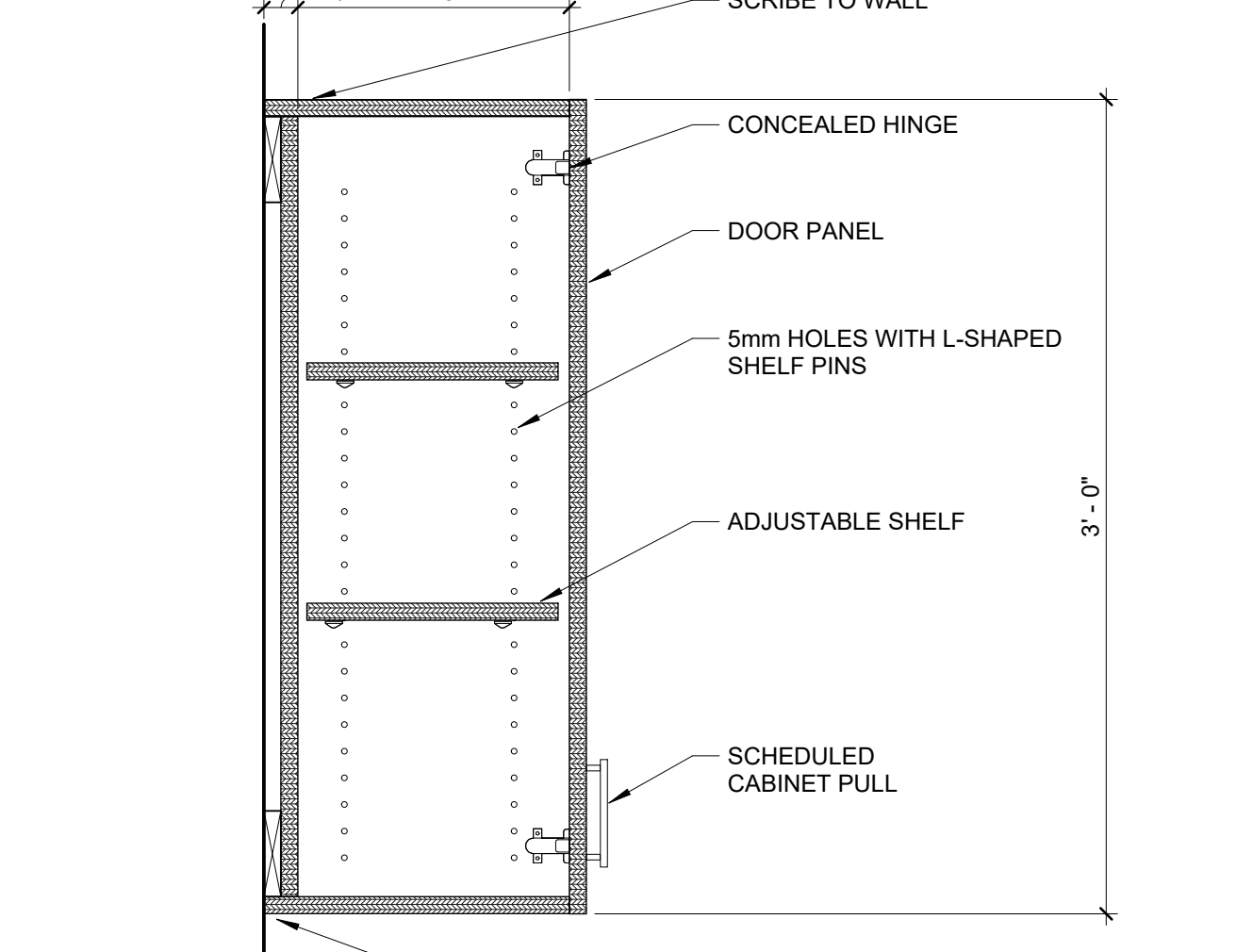
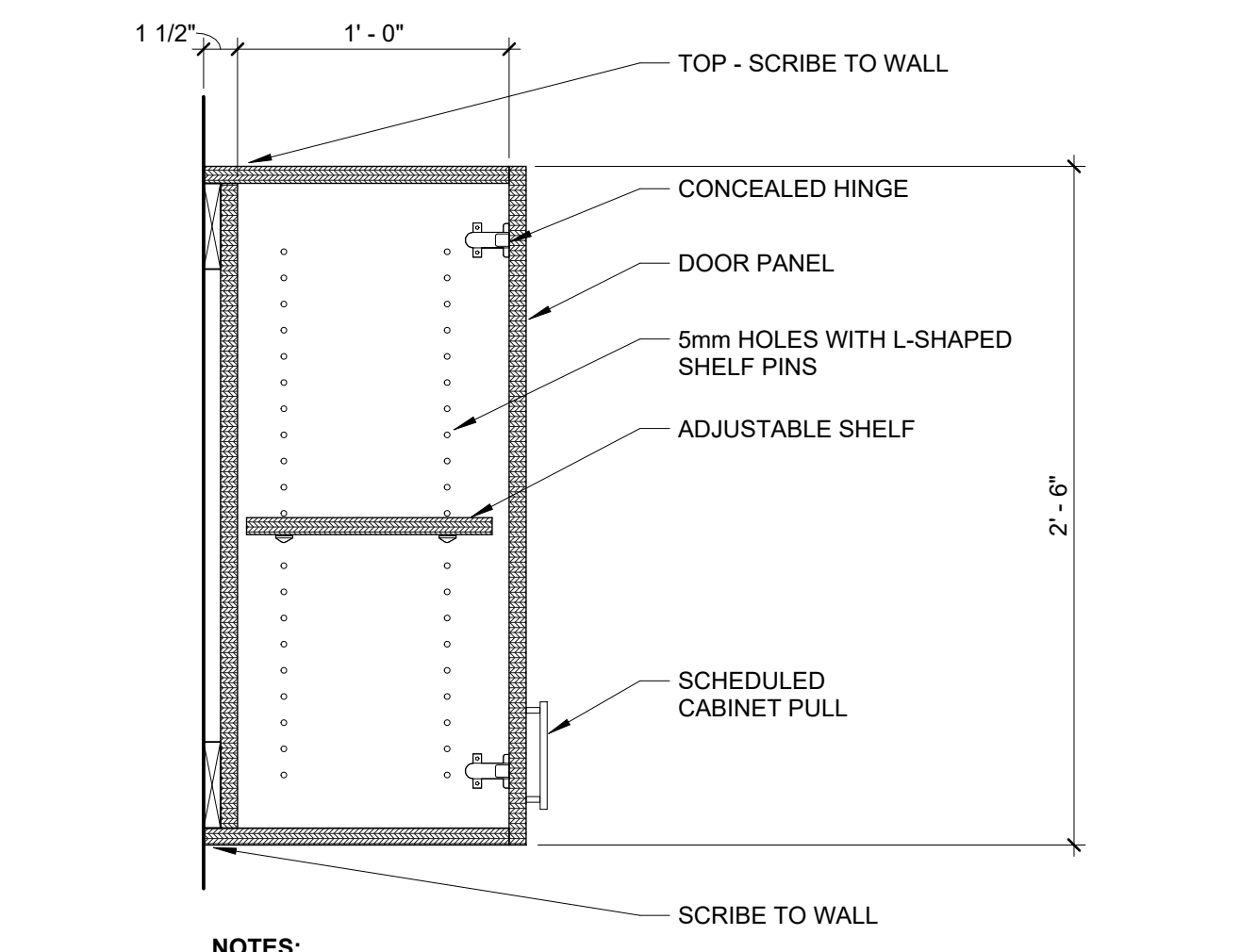
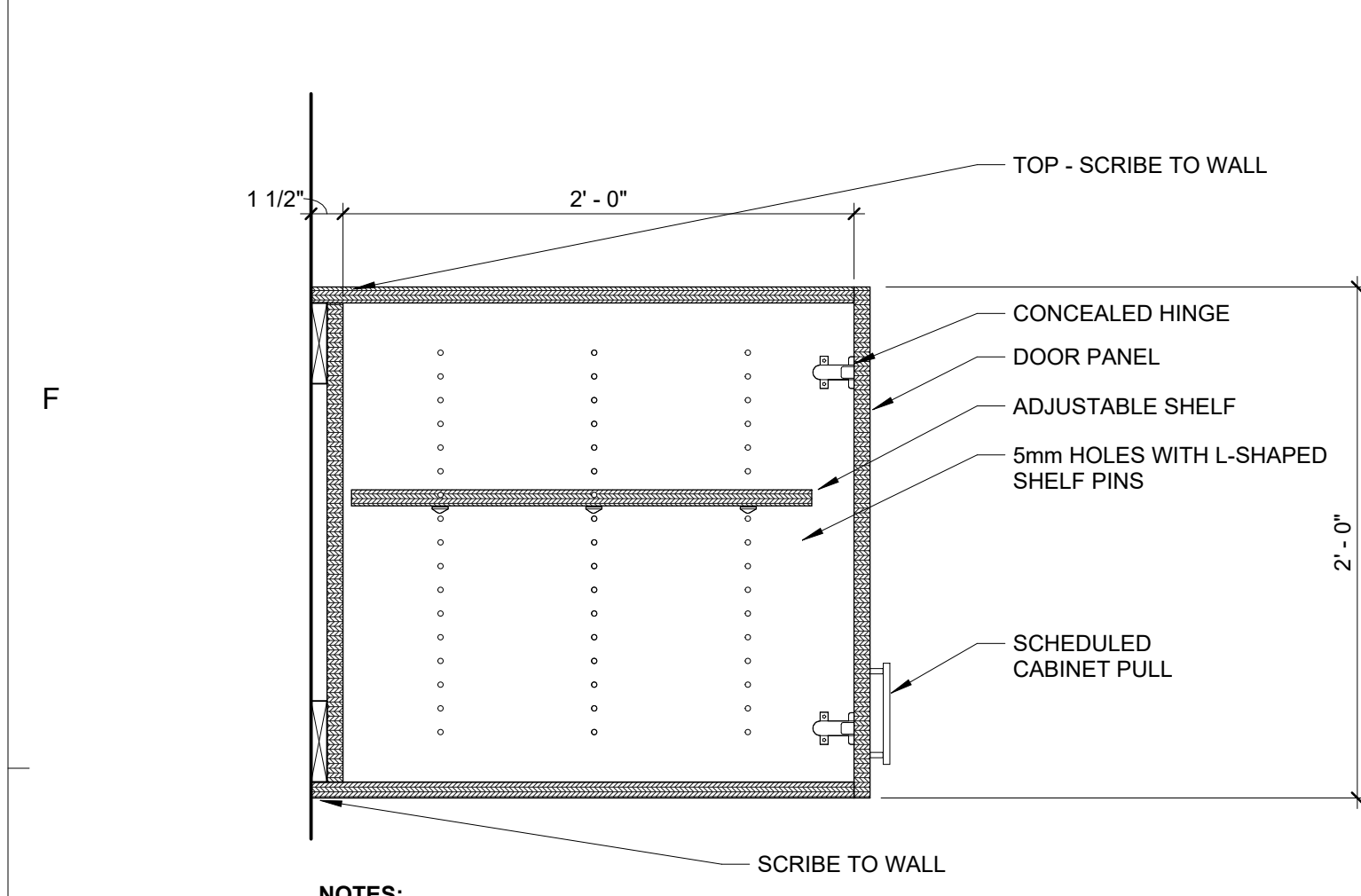
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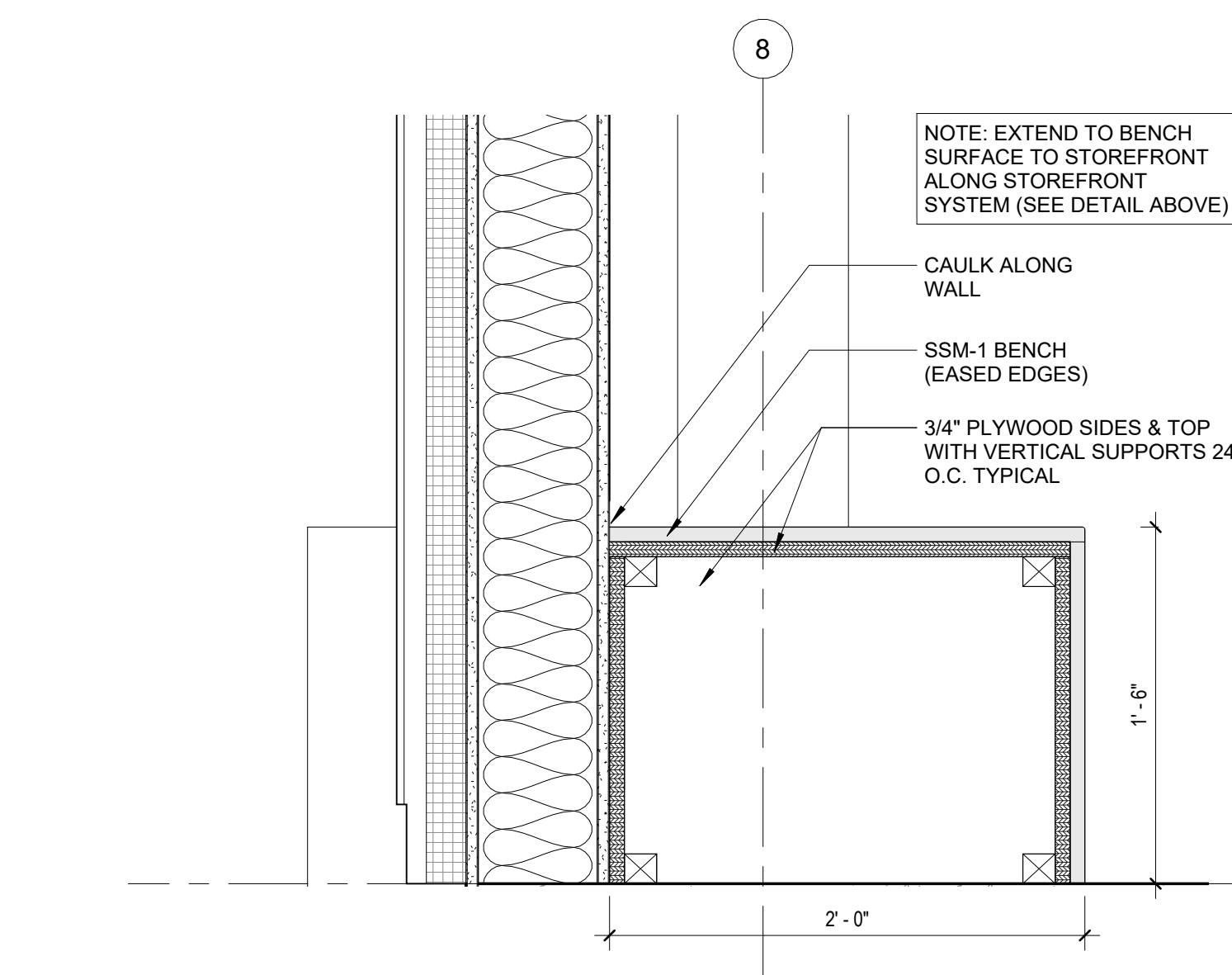
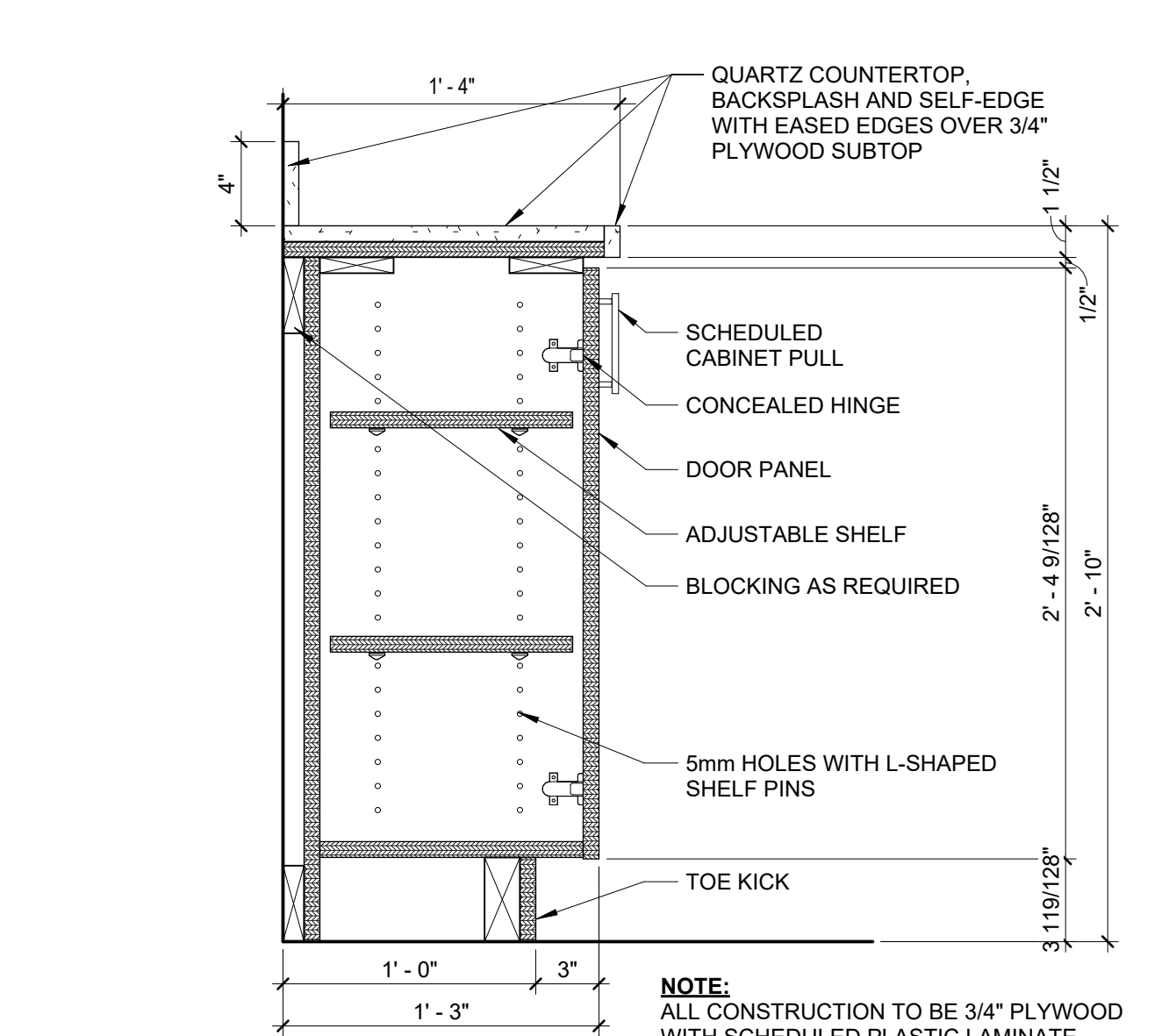
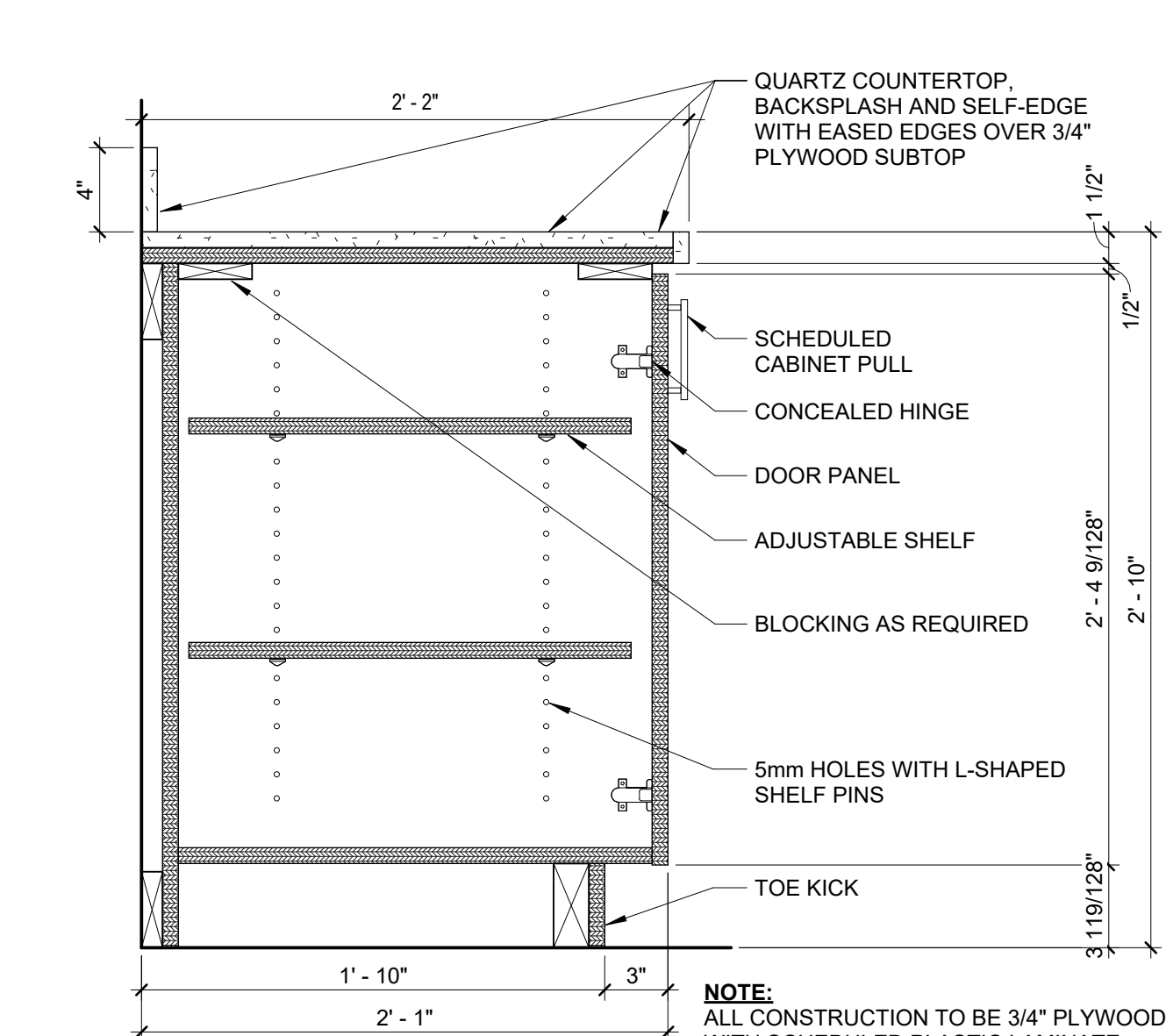
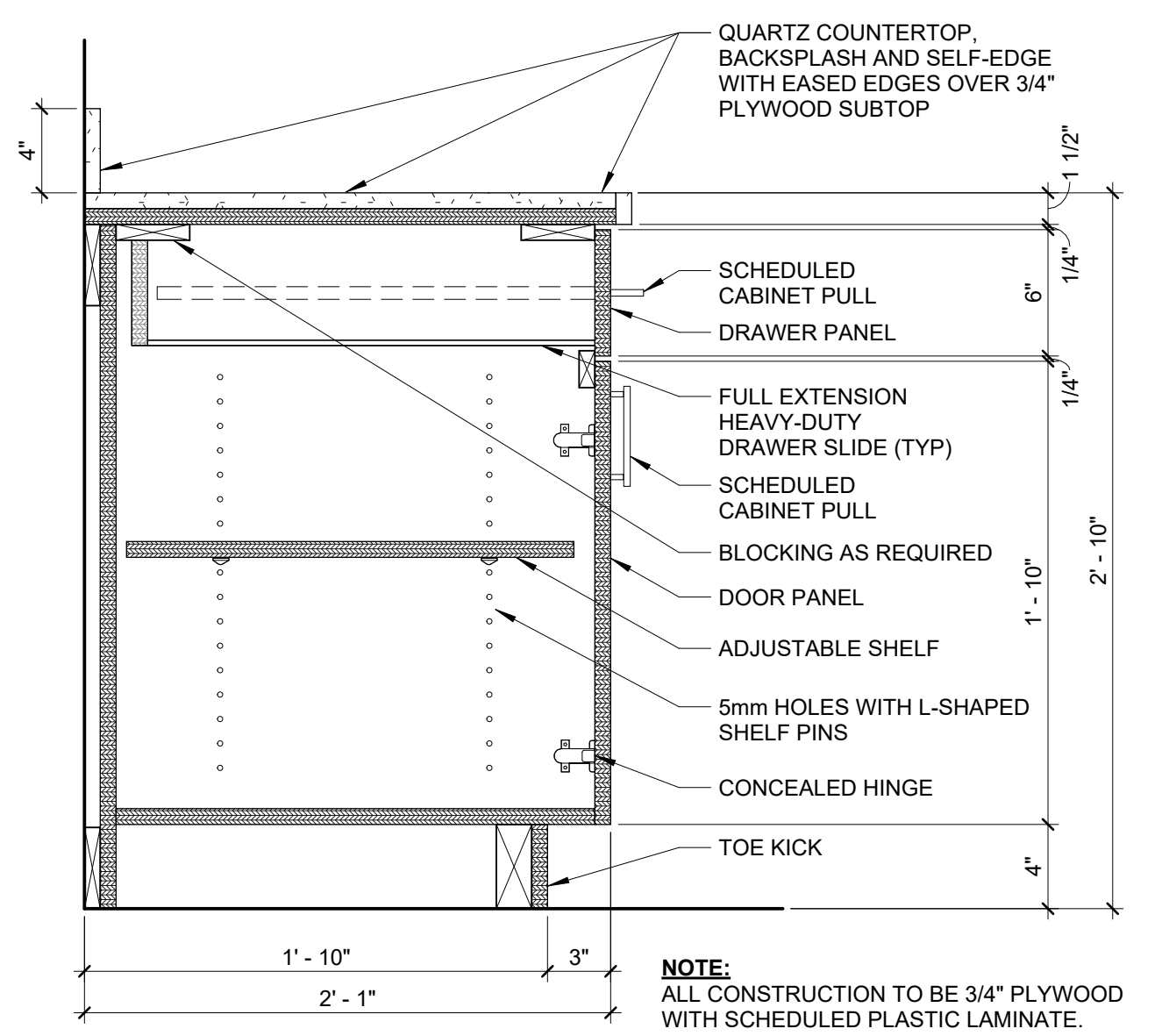
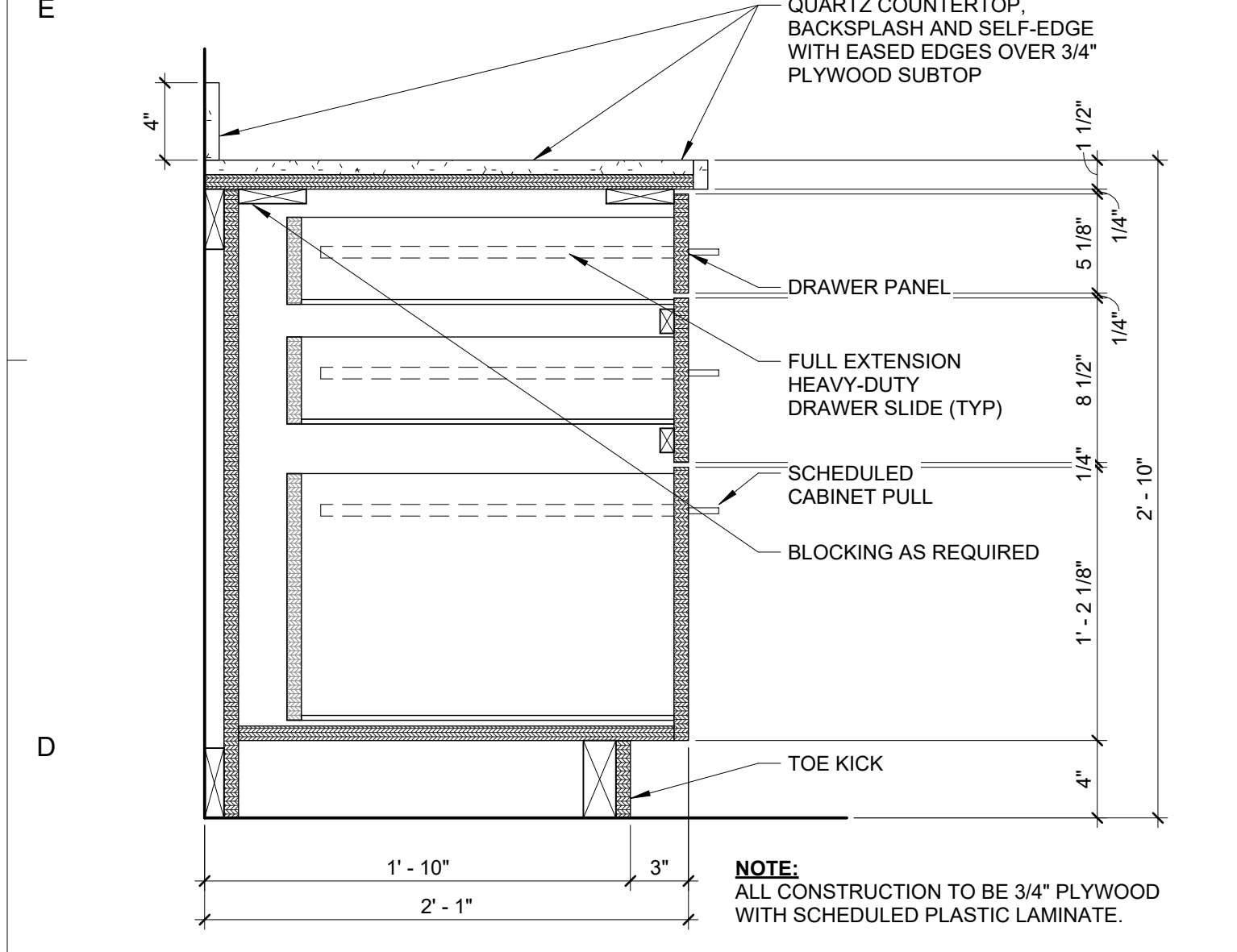
1E WALL CABINET - 24"H

2E WALL CABINET - 30"H

4E WALL CABINET - 36"H

5E WALL CABINET - OPEN FIXED SHELVES 36"H

7E SECTION - AT CHILDREN'S AREA BENCH - AT STOREFRONT



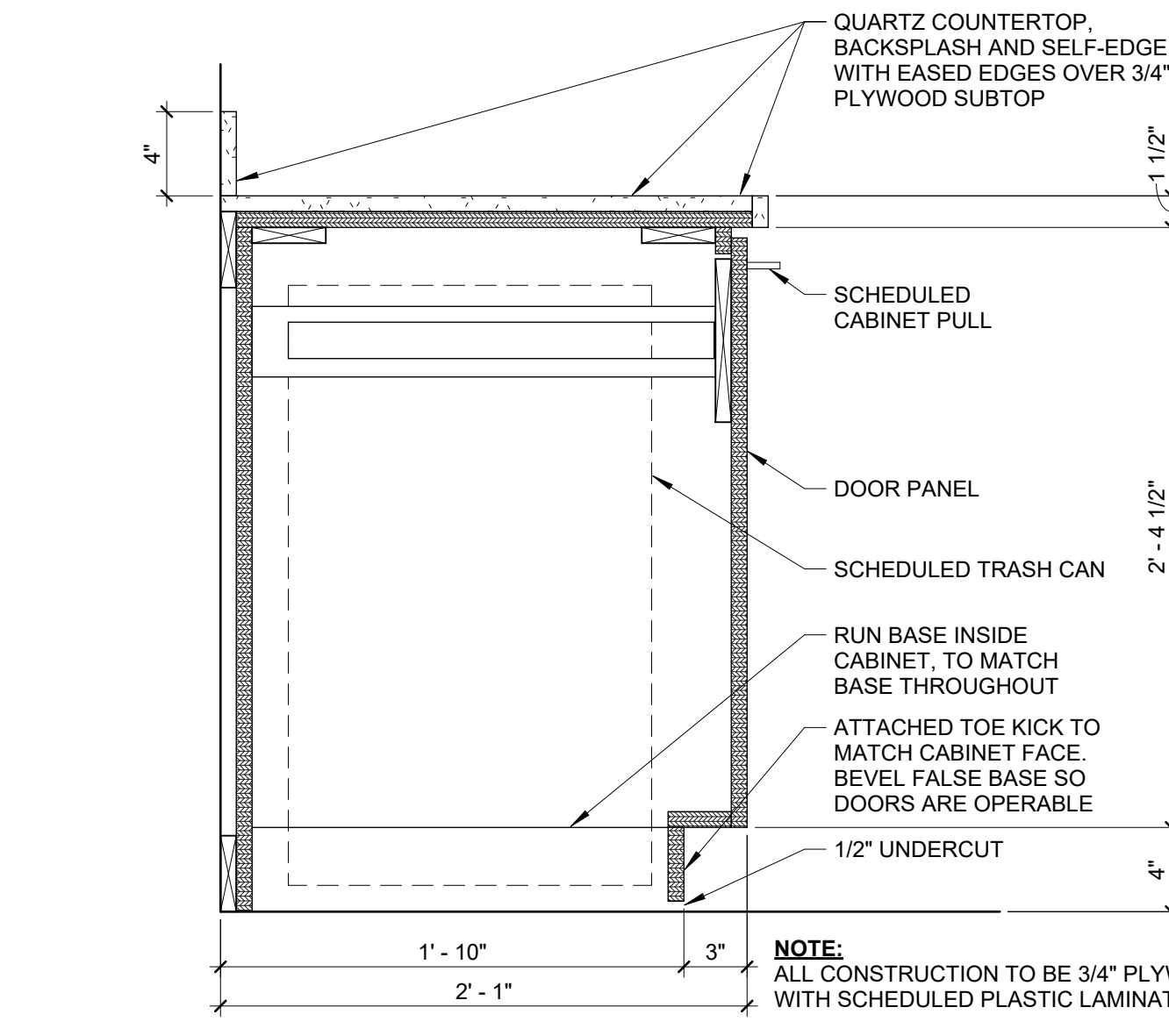
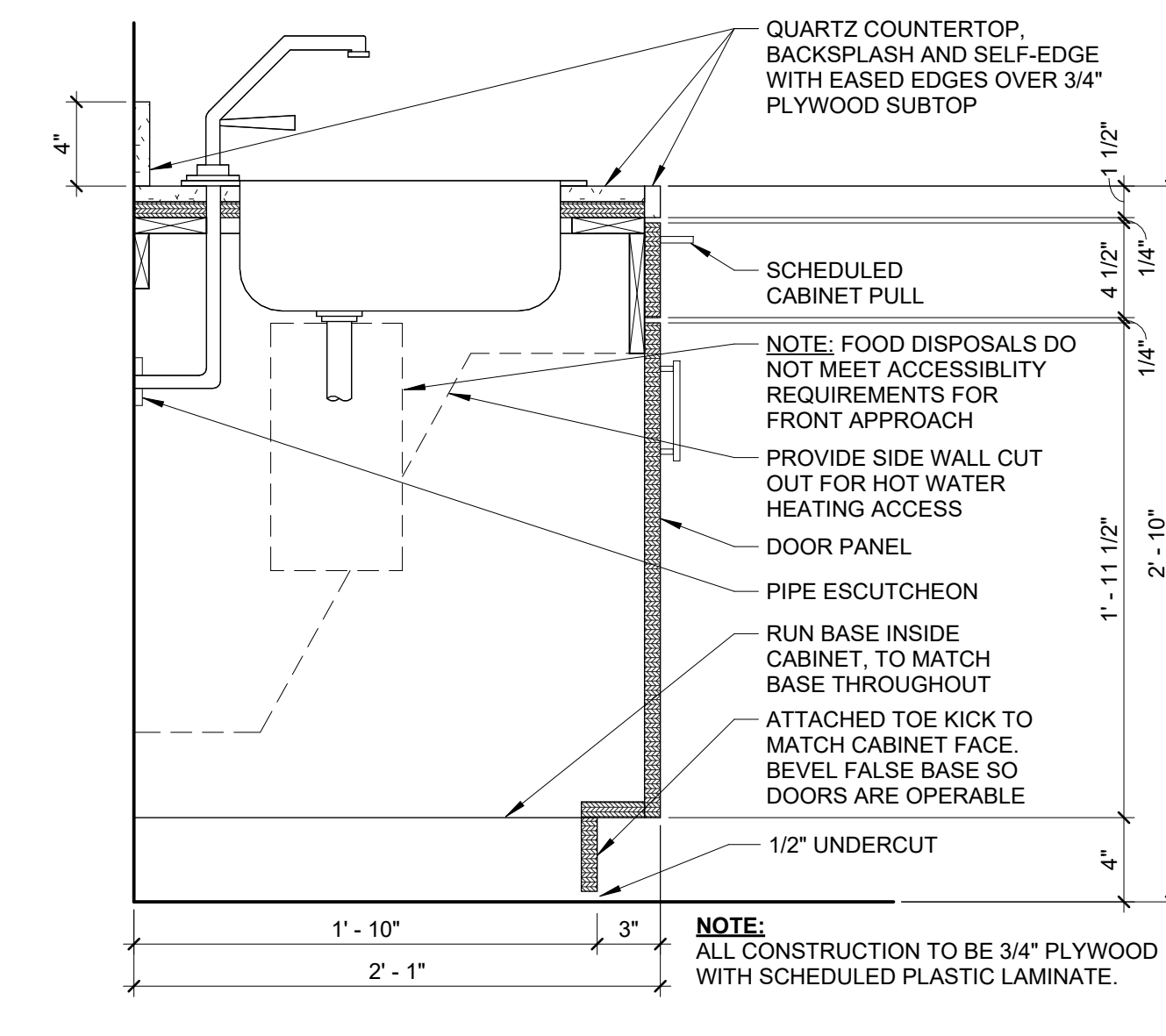
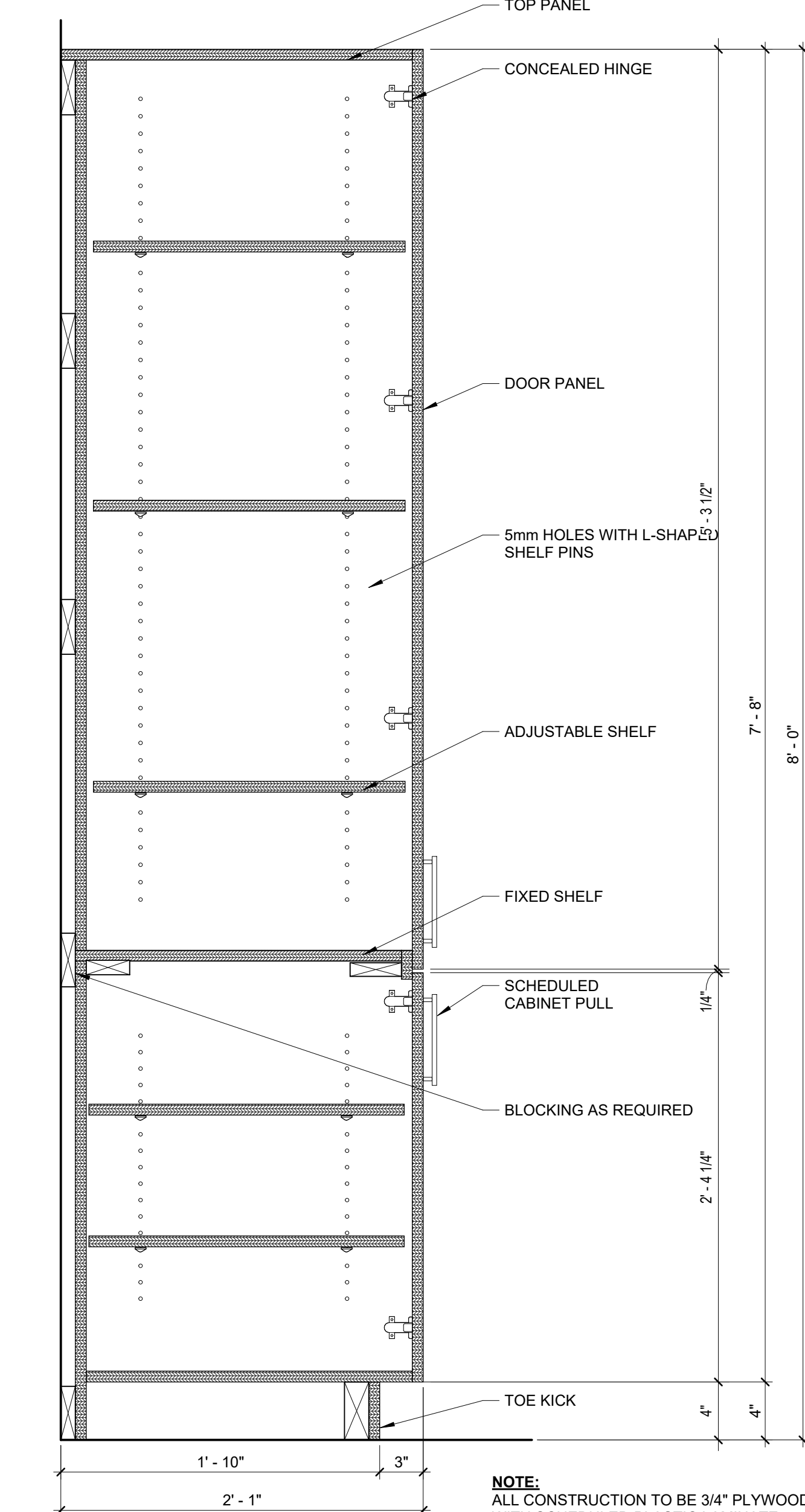
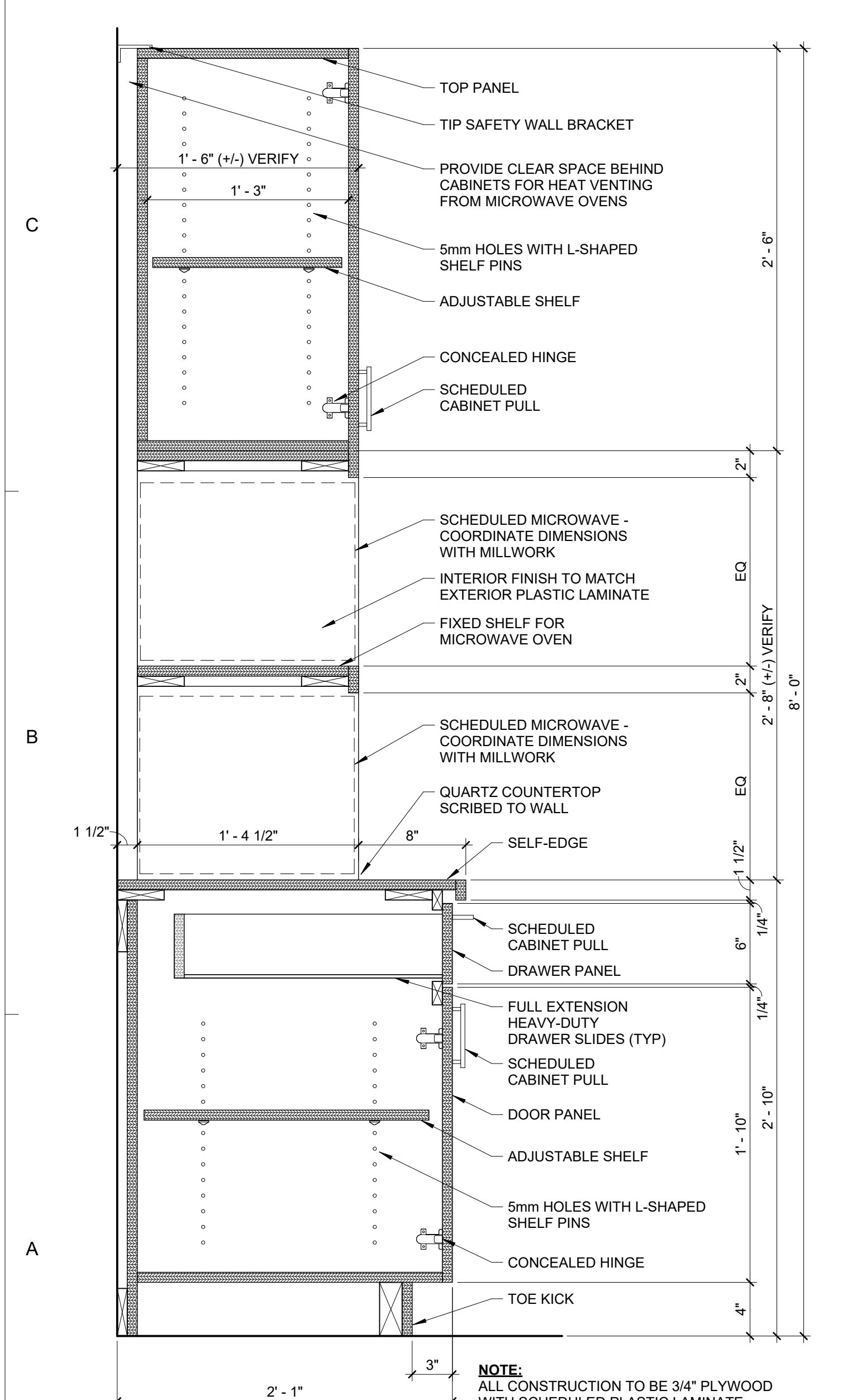
1D BASE CABINET - 3 DRAWER W/ QUARTZ TOP

2D BASE CABINET - 1 DRAWER W/ QUARTZ TOP

4D BASE CABINET - DOOR W/ QUARTZ TOP 25"D

5D BASE CABINET - DOOR W/ QUARTZ TOP 15"D

7D SECTION - CHILDREN'S AREA BENCH - AT GWB WALL



4B BASE CABINET - SINK AND QUARTZ TOP

5B BASE CABINET - TRASH DRW W/ QUARTZ TOP

1A BASE CABINET - MICROWAVE HUTCH & CABINET

2A BASE CABINET - TALL - UPPER/LOWER DOOR

4A BASE CABINET - LAVATORY W/ QUARTZ TOP

5A BASE CABINET - AUDIO-VISUAL W/ QUARTZ TOP

ISSUE FOR BID SET

ISSUE DATE 03.28.2024

NO.	REASON	DATE

PROJECT TEAM

PRINCIPAL IN CHARGE
Jerry Guerrier, AIA

PROJECT MANAGER
Charlotte Hagen, AIA

DESIGN TEAM
Designer

NORTHCHASE BRANCH LIBRARY

4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
CASEWORK SECTIONS

SHEET NUMBER
A831

SHEET GENERAL NOTES

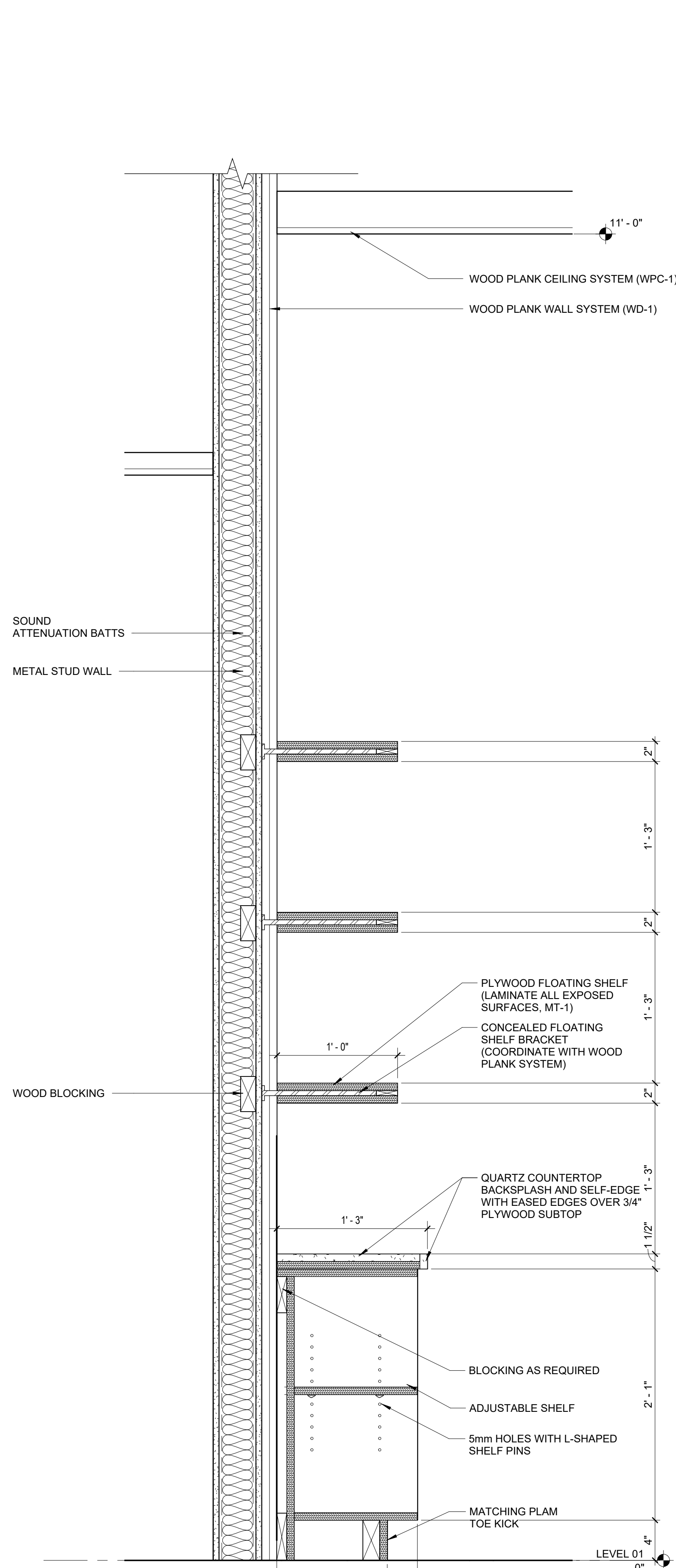
1. TYPICAL CABINET PULLS: HAFELE BLACK BAR HANDLE (155.99.017)
2. ALL WOOD GRAIN TO RUN VERTICALLY.
3. NO EXPOSED FASTENERS.
4. PROVIDE CONTINUOUS MATCHING TOEKICK ON BASE CABINETS UNLESS NOTED OTHERWISE.
5. ALL EDGES OF SHELVING TO BE EDGEBANDED TO MATCH PLASTIC LAMINATE, UNLESS NOTED OTHERWISE.
6. ALL EXPOSED CABINET SURFACES ON OPEN CABINETS TO HAVE MATCHING PLASTIC LAMINATE FINISH UNLESS NOTED OTHERWISE.

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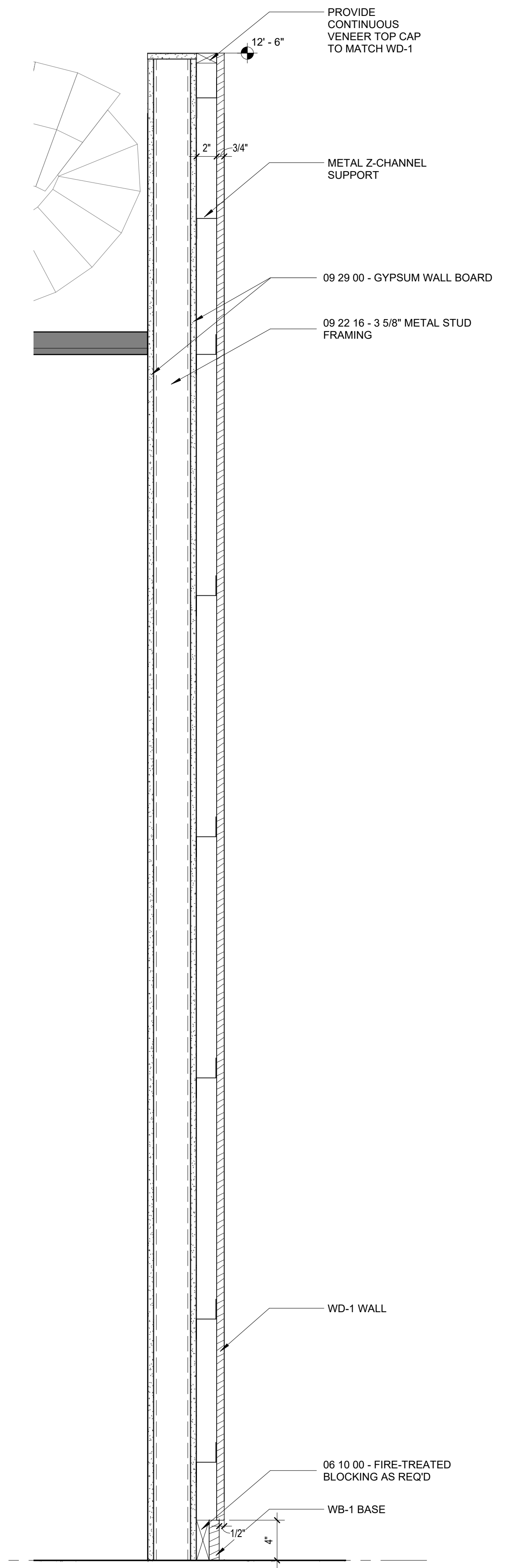


F
E
D
C
B
A

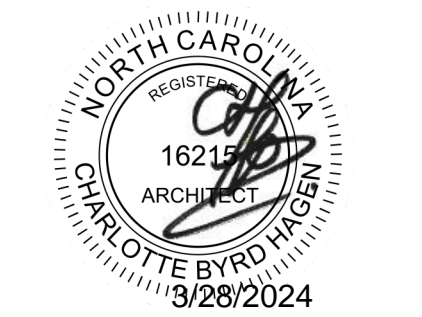


4A SECTION - WOOD PLANK WALL AT POPULAR BOOKS
A832 1 1/2" = 1'-0"

NOTE:
ALL CONSTRUCTION TO BE 3/4" PLYWOOD WITH SCHEDULED PLASTIC LAMINATE



6A WALL SECTION - WOOD PLANK WALL AND BASE
A832 1 1/2" = 1'-0"



ISSUE FOR
BID SET

ISSUE DATE
03.28.2024

NO.	REASON	DATE

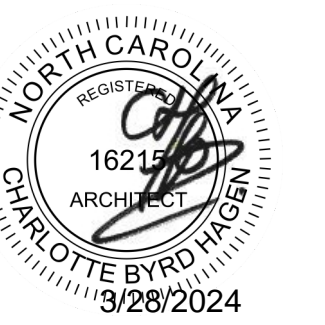
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PRINCIPAL IN CHARGE
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Charlotte Hagen, AIA

DESIGN TEAM
Designer
PROVIDING
NORTHCHASE BRANCH LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
CASEWORK SECTIONS

SHEET NUMBER
A832



ISSUE FOR
BID SET

ISSUE DATE
03.28.2024

REVISIONS

NO. REASON DATE

NO.	REASON	DATE

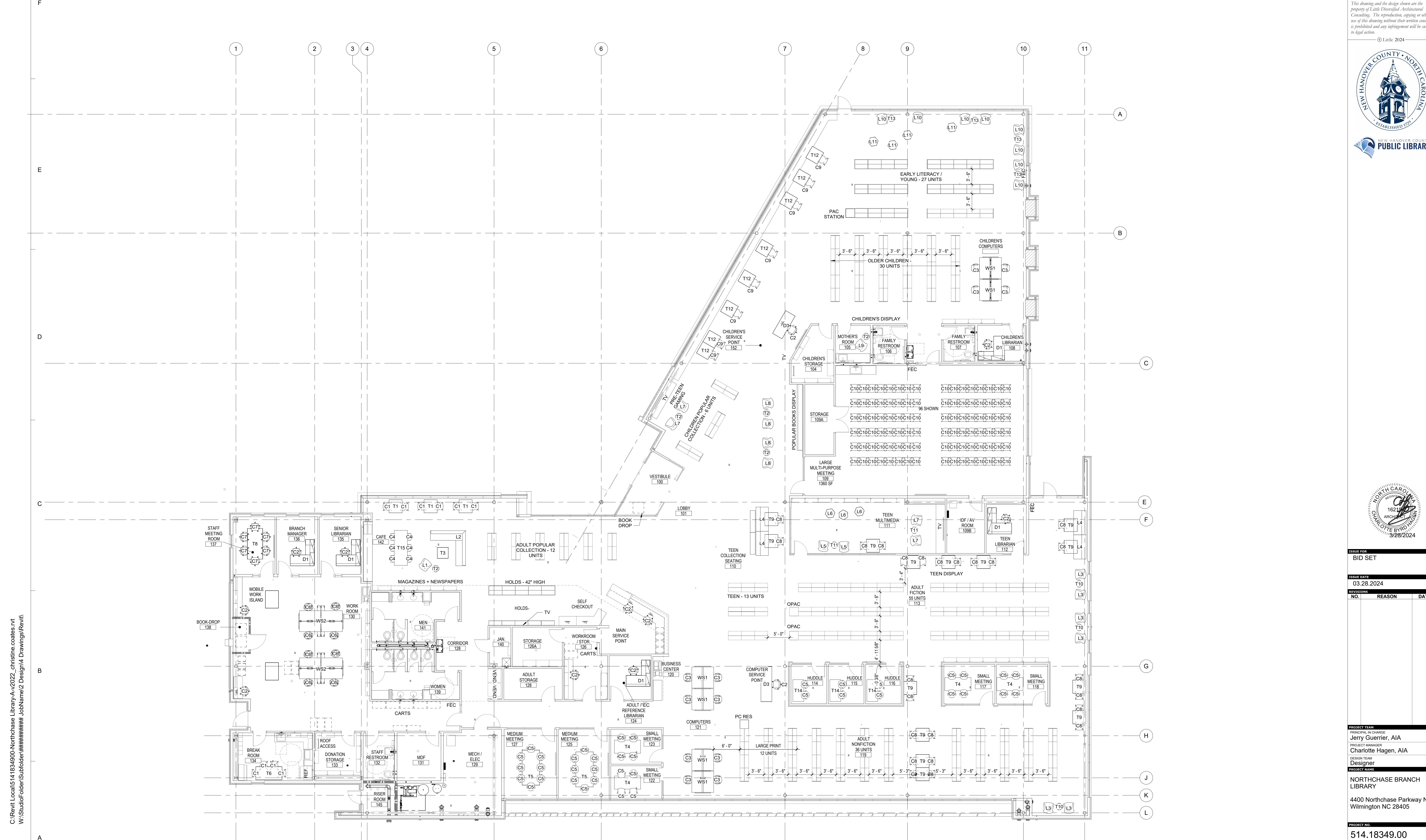
PROJECT TEAM
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PROJECT MANAGER
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DESIGN TEAM
Designer

NORTHCHASE BRANCH
LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
FURNITURE PLAN

SHEET NUMBER
A851



1A FURNITURE PLAN_W/ TAGS
A851 1/8" = 1'-0"

NOTE:
FOR INFORMATION AND
COORDINATION PURPOSES ONLY.

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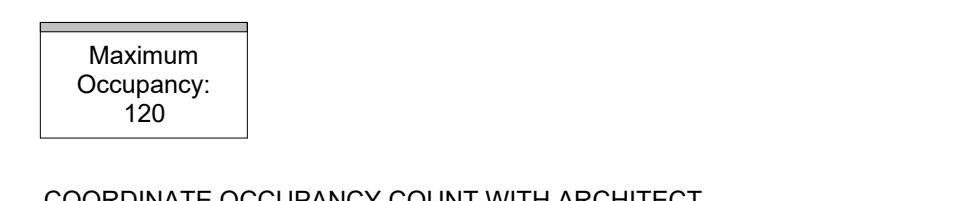
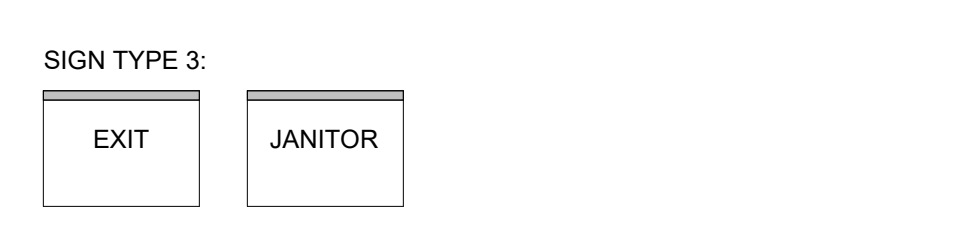
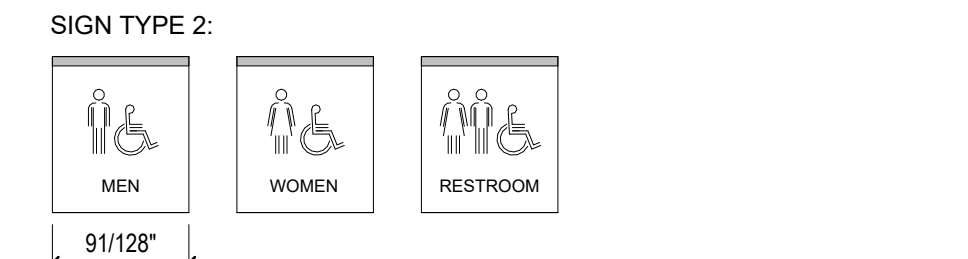
INTERIOR SIGNAGE

*CODE-REQUIRED SIGNAGE ONLY

SIGN:	LOCATION:	TYPE:
MEN	(TOILET ROOMS)	2
WOMEN	(TOILET ROOMS)	2
FAMILY	(TOILET ROOMS)	2
JANITOR	(JANITOR CLOSETS)	3
ELECTRICAL	(ELECTRICAL ROOMS)	3
MECHANICAL	(MECHANICAL ROOMS)	3
IN CASE OF EMERGENCY	(FLOOR IDENTIFICATION SIGNS IN STAIRS)	3
LUMINOUS EGRESS	(ROOF IDENTIFICATION SIGNS IN STAIRS)	3
ROOF	(ROOF IDENTIFICATION SIGNS IN STAIRS)	3
MAXIMUM OCCUPANCY LOAD	(ASSEMBLY AREAS)	5

SIGN TYPES

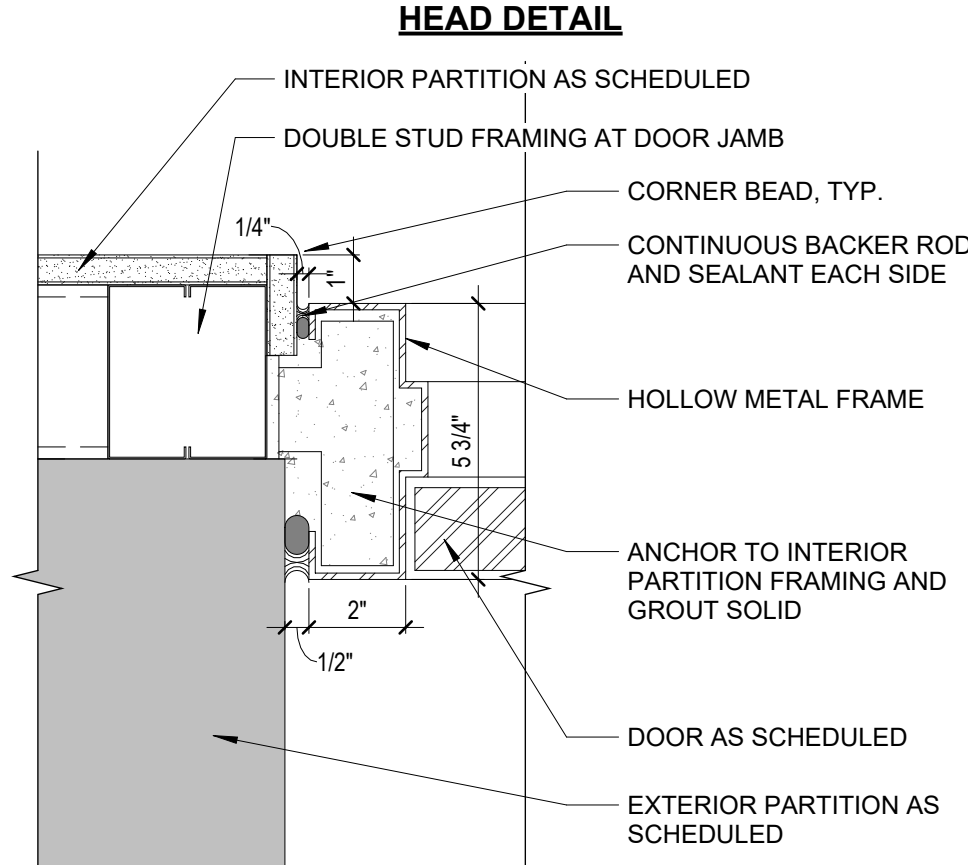
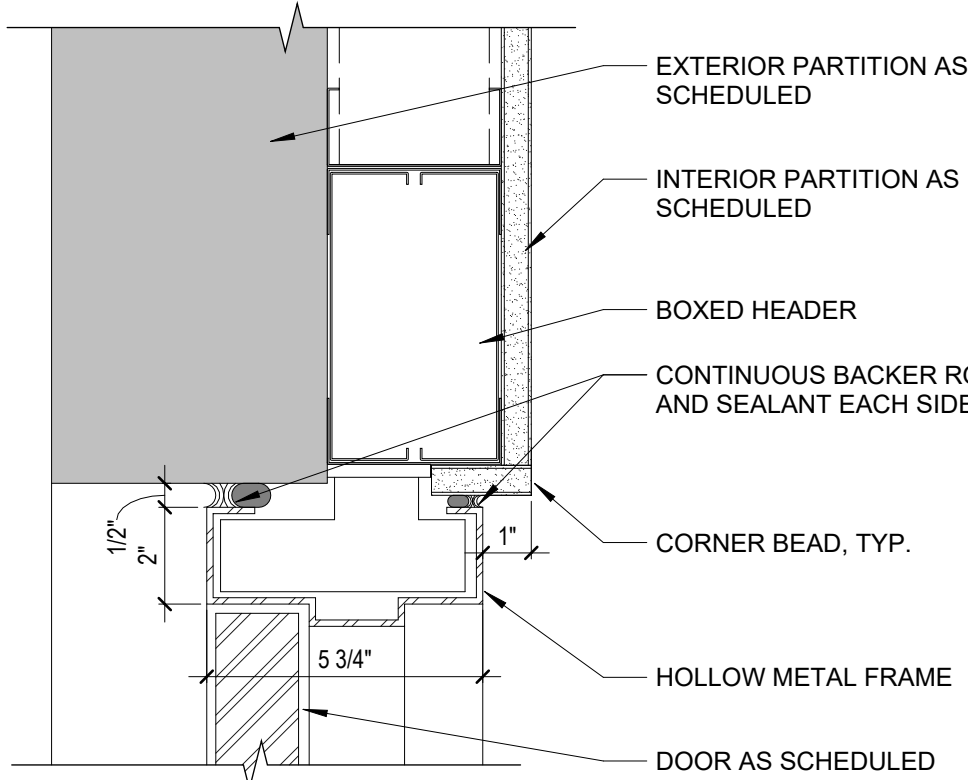
- SIGN TYPE 1: 8-1/4" x 7" ACRYLIC SIGN
- SIGN TYPE 1A: 8-1/4" x 7" ACRYLIC SIGN
- SIGN TYPE 2: 8-1/4" x 7" ACRYLIC SIGN
- SIGN TYPE 2A: 17-1/2" x 15-1/2" ACRYLIC SIGN
- SIGN TYPE 3: 6" x 8" ACRYLIC SIGN
- SIGN TYPE 4: 6" x 8" ACRYLIC SIGN
- SIGN TYPE 5: 6" x 8" ACRYLIC SIGN



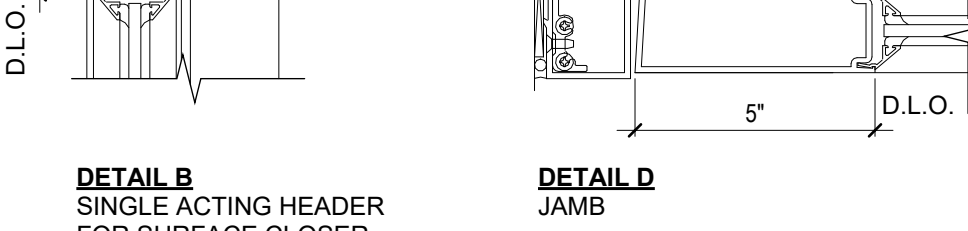
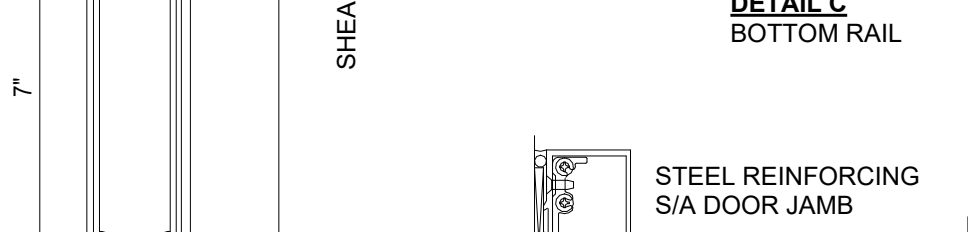
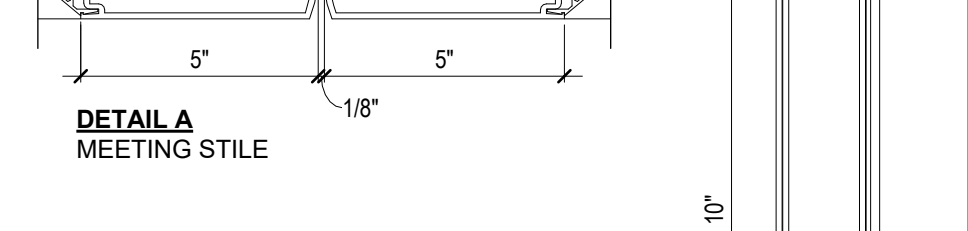
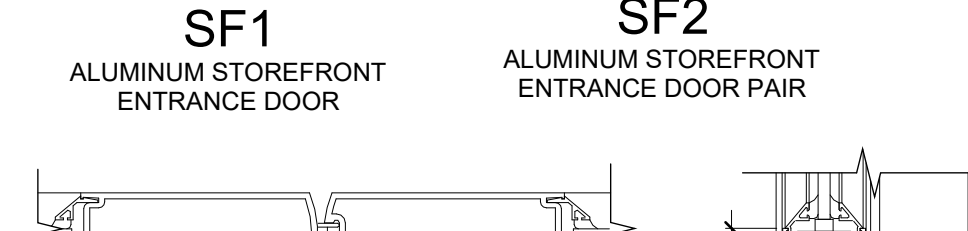
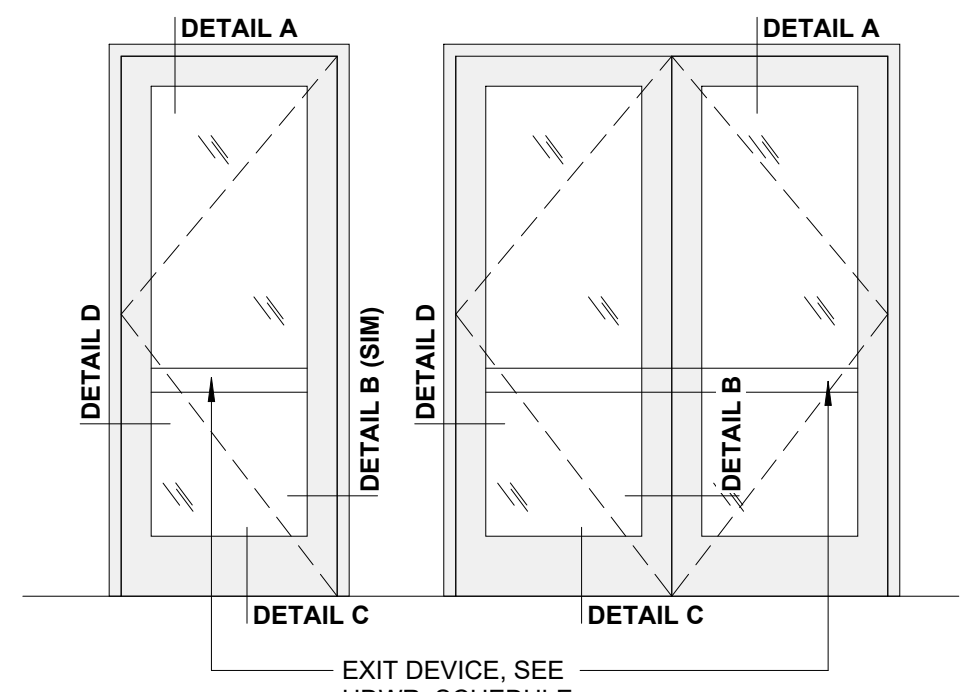
COORDINATE OCCUPANCY COUNT WITH ARCHITECT
 POST OCCUPANCY LOAD IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE OF ASSEMBLY AREAS (PER CODE REQUIREMENTS)

- SIGNAGE NOTES:**
- ALL ELECTRICAL ROOMS, FIRE SPRINKLER ROOMS, FIRE ALARM ROOMS SHOULD BE LABELED ACCORDING TO THE GOVERNING FIRE CODE WITH RECD MINIMUM CHARACTER SIZES.
 - CHARACTERS AND TACTILE CHARACTERS OF SIGNS SHALL MEET THE REQUIREMENTS OF APPLICABLE ACCESSIBILITY CODES.
 - REFER TO SPECIFICATIONS FOR PANEL SIGNAGE FINISH(ES).
 - PROVIDE MOCKUPS OF ALL SIGNS FOR AHJ REVIEW BEFORE FABRICATION.

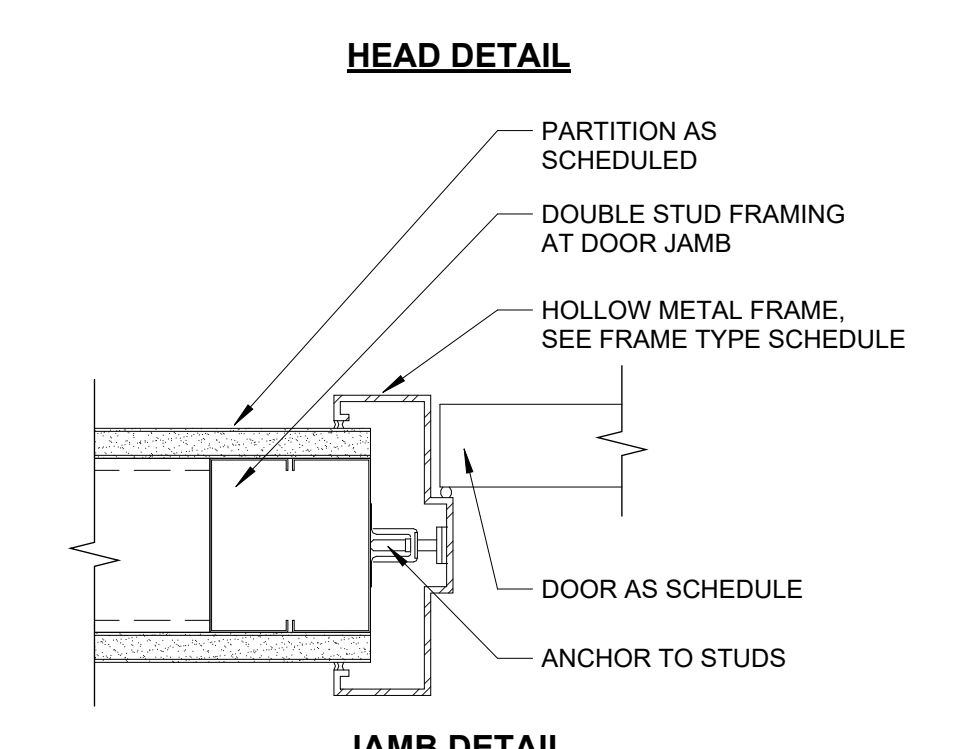
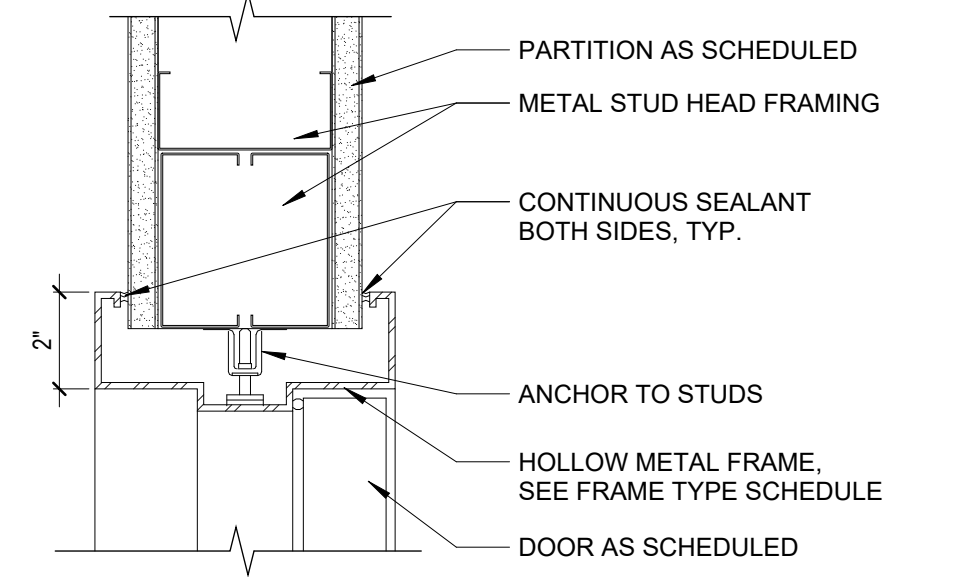
EXTERIOR HOLLOW METAL FRAME



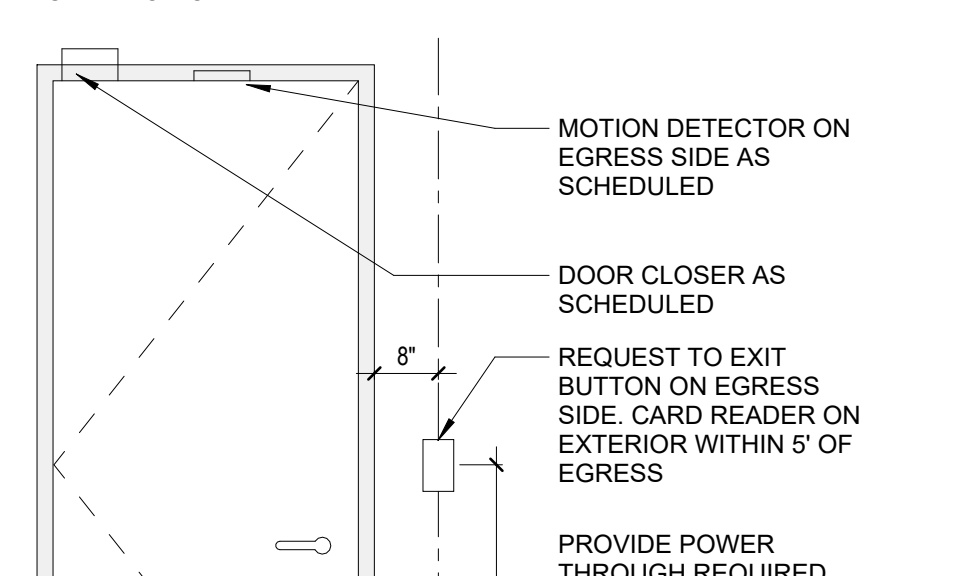
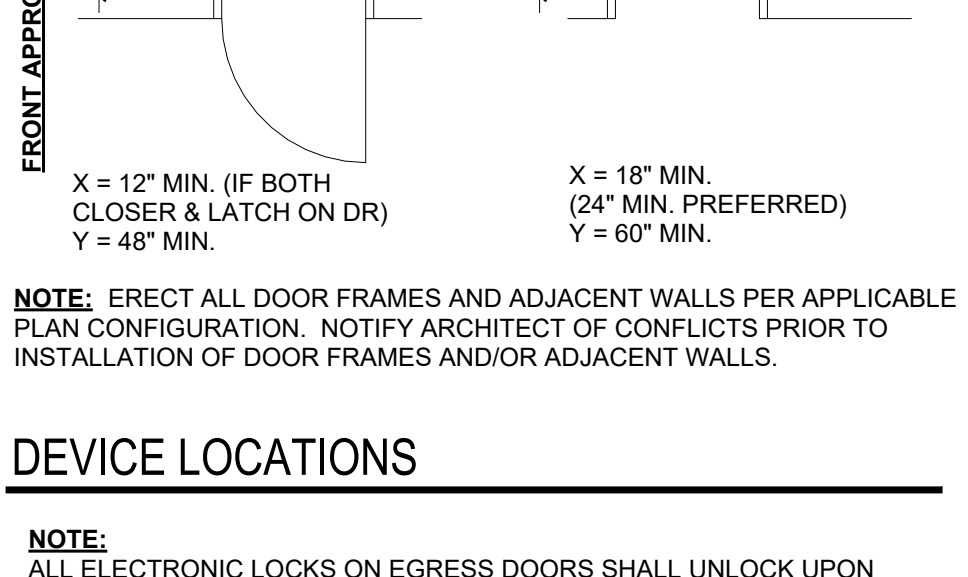
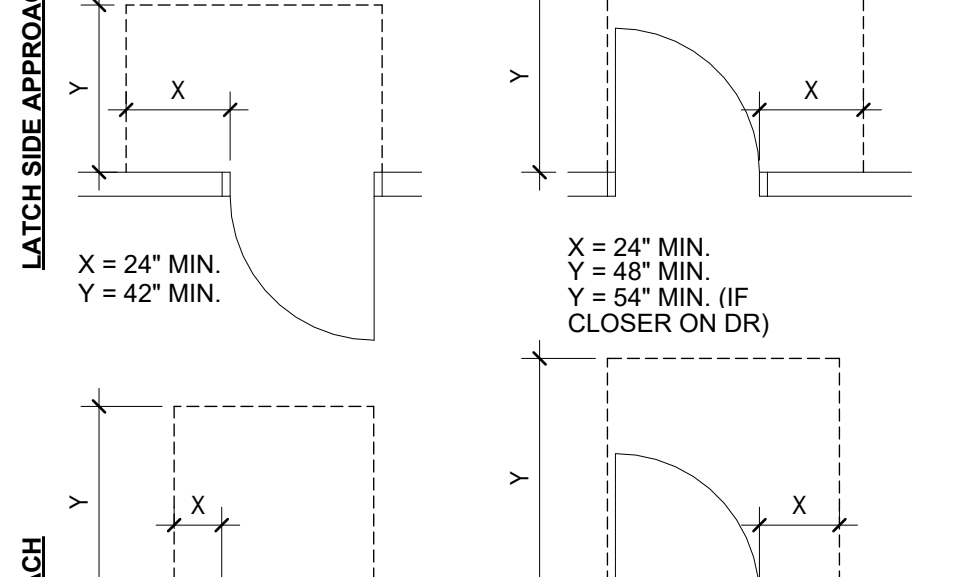
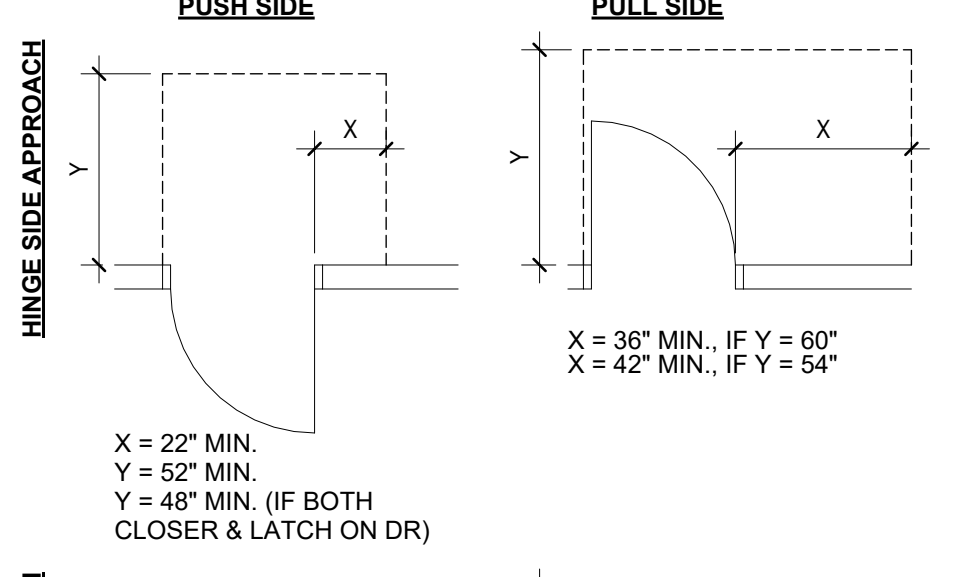
ALUMINUM STOREFRONT



INTERIOR HOLLOW METAL FRAME

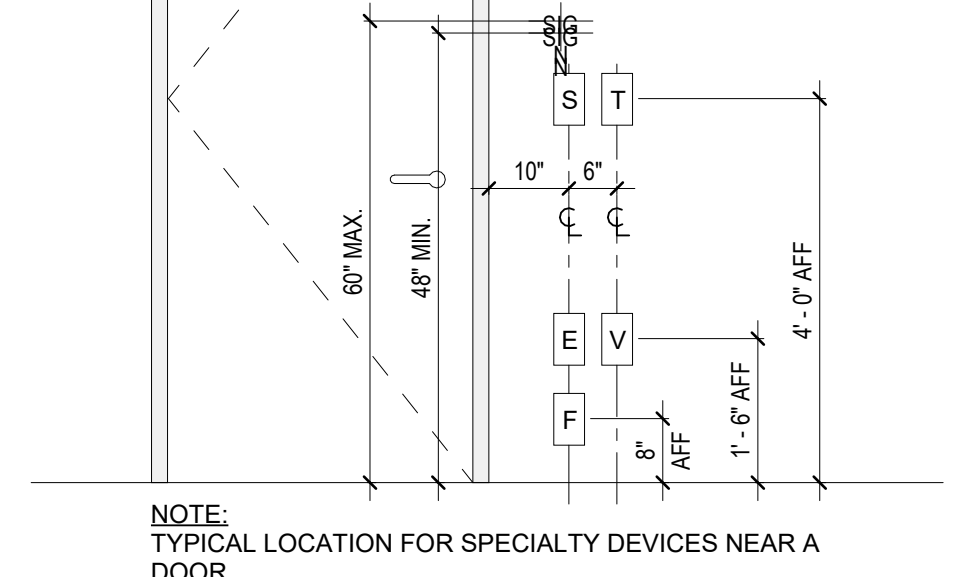
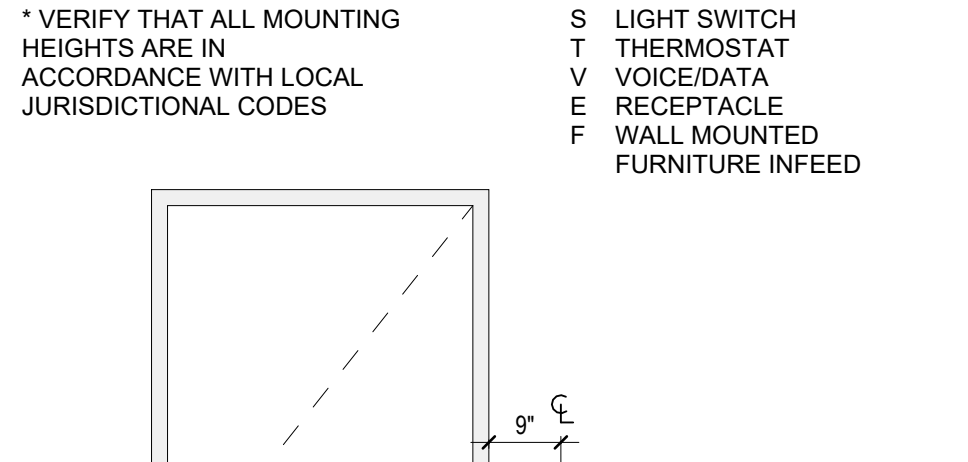


ACCESSIBLE CLEARANCES - DOORS

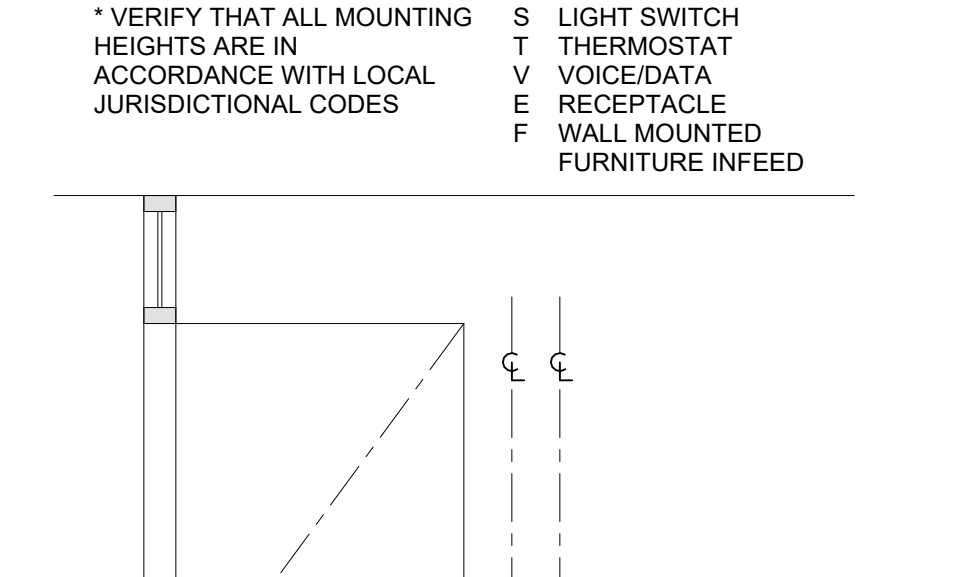


NOTE: ERECT ALL DOOR FRAMES AND ADJACENT WALLS PER APPLICABLE PLAN CONFIGURATION. NOTIFY ARCHITECT OF CONFLICTS PRIOR TO INSTALLATION OF DOOR FRAMES AND/OR ADJACENT WALLS.

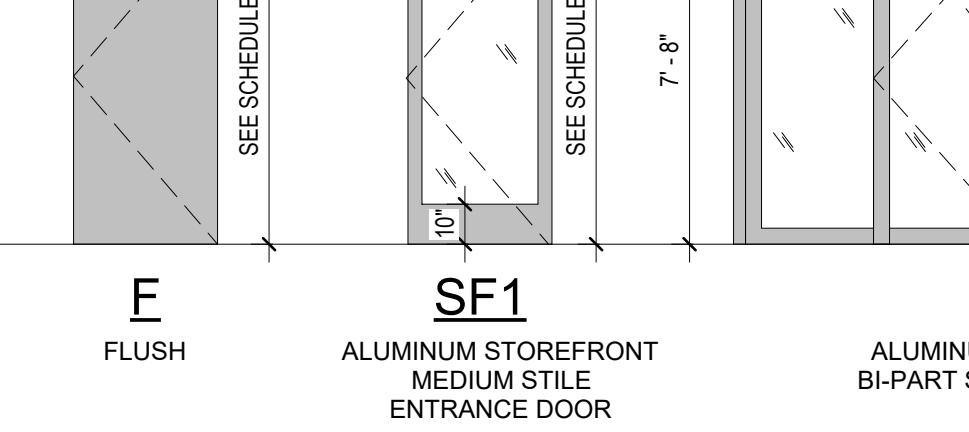
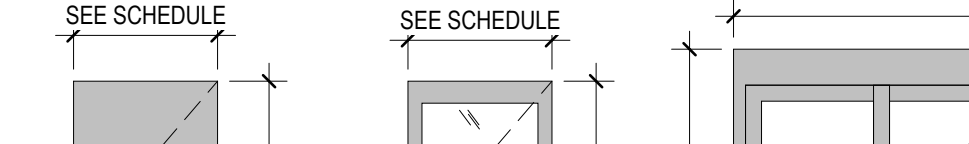
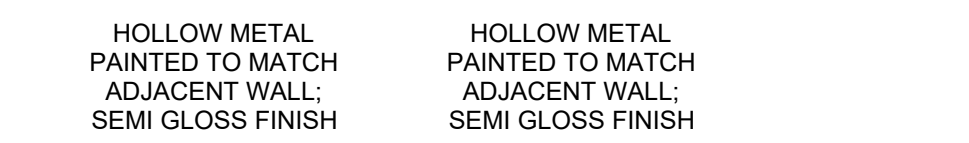
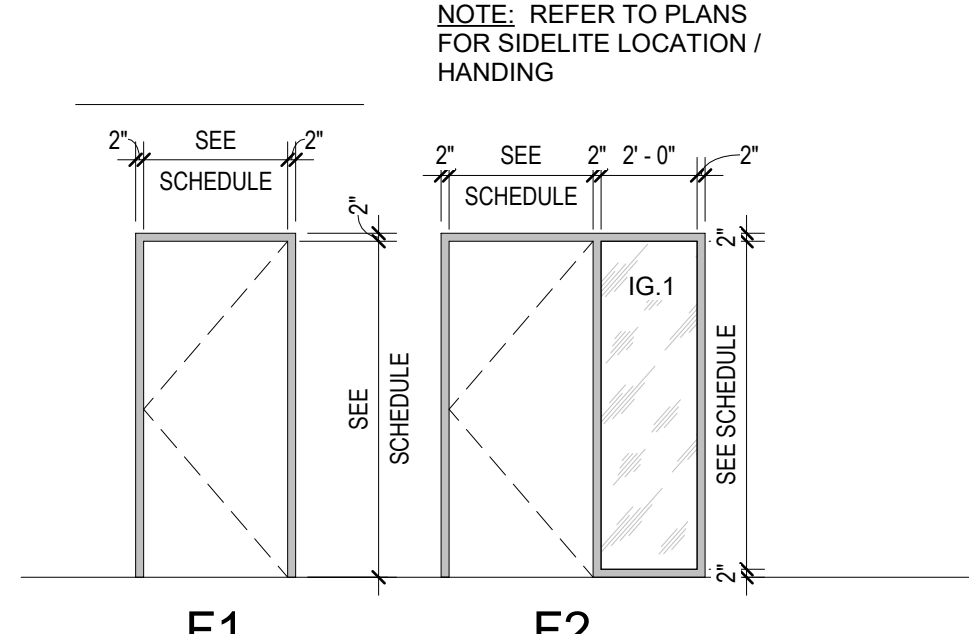
DEVICE LOCATIONS



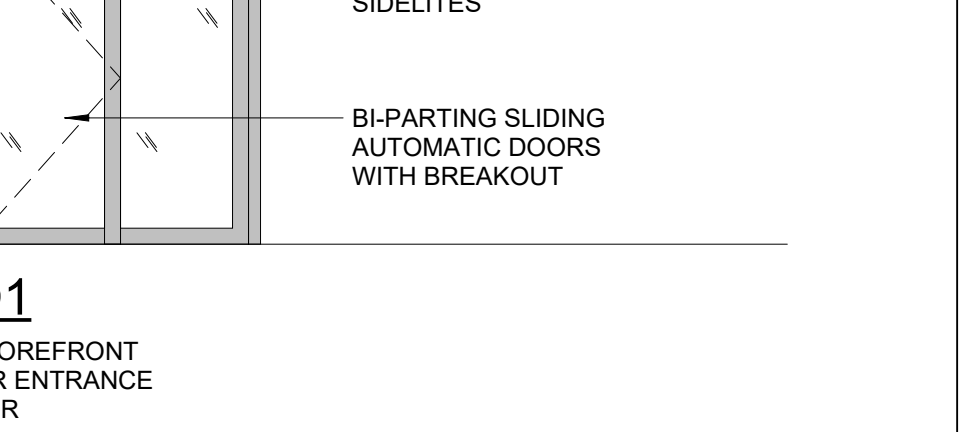
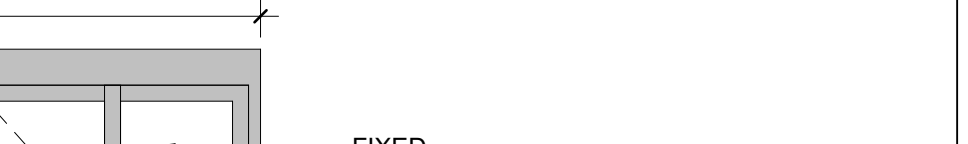
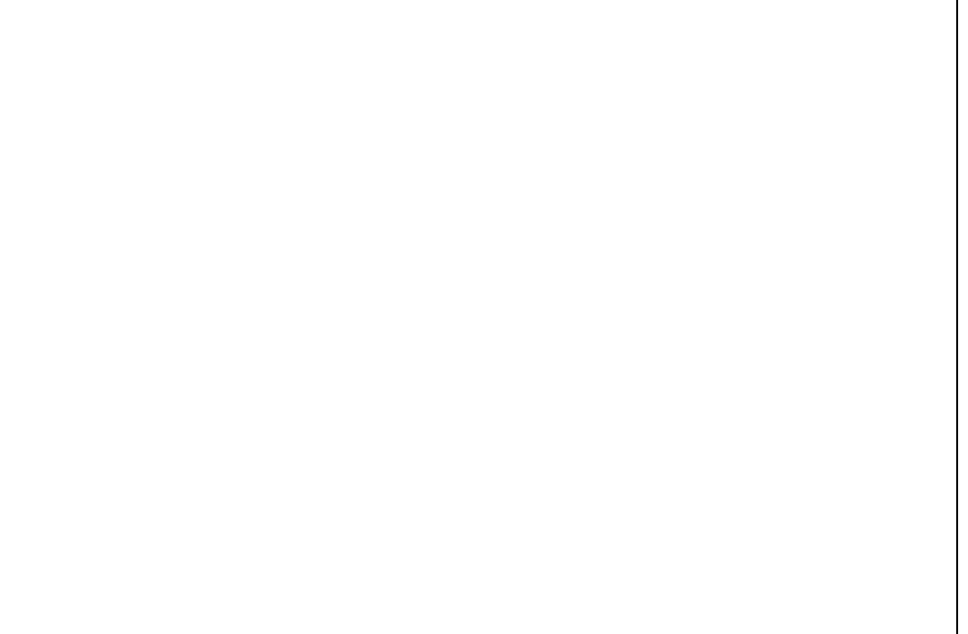
DEVICE ACCESS CONTROL - PERPENDICULAR



FRAME TYPES



DOOR TYPES



GENERAL NOTES - DOORS

- CAULK DOOR JAMBS AND HEADS AT ALL SOUND RATED WALLS AND ANYWHERE THAT GAPS BETWEEN WALL AND FRAME EXCEEDS 1/16" TYP.
- ALL DOORS TO RECEIVE BUILDING STANDARD DOME DOOR STOP IN BRUSHED CHROME, UNO.
- INSTALLATION OF ALL DOORS AND HARDWARE SHALL MEET APPLICABLE ACCESSIBILITY REQUIREMENTS. REPORT CONFLICTS TO ARCHITECTS PRIOR TO PURCHASING HARDWARE.
- CAULK DOOR JAMBS AND HEADS AT DOORS TO SOUND INSULATED ROOMS.
- CAULK DOOR JAMBS AND HEADS BETWEEN WALL AND FRAME.
- DOORS TO BE LOCATED 4" FROM FACE OF WALL INCLUDING DOOR FRAME, UNLESS OTHERWISE NOTED.

DOOR SCHEDULE

NUMBER	TYPE	HEIGHT	WIDTH	THICKNESS	# PANELS	DOOR				FRAME			COMMENTS	
						MATERIAL	FINISH	RATING	HARDWARE	TYPE	MATERIAL	FINISH		
100A	SD1	7'-0"	2'-11 5/8"	1 3/8"	4	ALUM/GLASS	PREFINISHED	-	23.0	-	ALUM	PREFINISHED	AUTOMATIC SLIDING DOORS	
100B	SD1	7'-0"	2'-11 5/8"	1 3/8"	4	ALUM/GLASS	PREFINISHED	-	23.0	-	ALUM	PREFINISHED	AUTOMATIC SLIDING DOORS	
102	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	1.0	-	ALUM	PREFINISHED	CARD READER	
104	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	13.0	F1	HM	-	-	
105	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	18.0	F1	HM	-	-	
106	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	18.0	F1	HM	-	-	
107	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	18.0	F1	HM	-	-	
108	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	16.0	F2	HM	-	-	
109	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	7.0	-	ALUM	PREFINISHED	-	
109A	F	8'-0"	3'-0"	1 3/4"	2	WD	STAIN	-	15.0	F1	HM	-	-	
109B	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	10.0	F1	HM	-	CARD READER	
109C	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	8.0	F1	HM	-	-	
111	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	5.0	-	ALUM	PREFINISHED	-	
112	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	16.0	-	ALUM	PREFINISHED	-	
113	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	3.0	-	ALUM	PREFINISHED	-	
114	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	6.0	-	ALUM	PREFINISHED	-	
115	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	6.0	-	ALUM	PREFINISHED	-	
116	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	6.0	-	ALUM	PREFINISHED	-	
117	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	6.0	-	ALUM	PREFINISHED	-	
118	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	6.0	-	ALUM	PREFINISHED	-	
122	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	6.0	-	ALUM	PREFINISHED	-	
123	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	6.0	-	ALUM	PREFINISHED	-	
124	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	16.0	F2	HM	-	-	
125	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	6.0	-	ALUM	PREFINISHED	-	
126	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	11.0	F2	HM	-	CARD READER	
126A	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	17.0	F1	HM	-	-	
126B	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	10.0	F1	HM	-	CARD READER	
127	SF1	8'-0"	3'-0"	1 3/8"	1	ALUM/GLASS	PREFINISHED	-	6.0	-	ALUM	PREFINISHED	-	
128	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	14.0	F1	HM	-	-	
129	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	9.0	F1	HM	-	-	
130	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	10.0	F2	HM	-	-	
130A	F	8'-2"	3'-6"	1 3/4"	1	HM	PAINT	-	2.0	F1	HM	-	CARD READER	
131	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	10.0	F1	HM	-	CARD READER	
132	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	18.0	F1	HM	-	-	
133	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	17.0	F1	HM	-	-	
134	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	20.0	F1	HM	-	-	
135	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	16.0	F2	HM	-	-	
136	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	16.0	F2	HM	-	-	
137	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	19.0	F2	HM	-	-	
138	F	8'-0"	3'-6"	1 3/4"	1	WD	STAIN	-	45 MIN.	21.0	F1	HM	-	-
139	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	22.0	F1	HM	-	-	
140	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	12.0	F1	HM	-	-	
141	F	8'-0"	3'-0"	1 3/4"	1	WD	STAIN	-	22.0	F1	HM	-	-	
145	F	8'-2"	3'-0"	1 3/4"	1	HM	PAINT	-	4.0	F1	HM	-	-	

LITTLE
 OVERSEEN ARCHITECTURAL CONSULTING

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 Durham, NC 27701
 (919) 474-2500
 www.littleonline.com

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NEW HANOVER COUNTY
 PUBLIC LIBRARY

PROJECT TEAM
 PRINCIPAL IN CHARGE: Jerry Guerrier, AIA
 PROJECT MANAGER: Charlotte Hagen, AIA

DESIGN TEAM
 Designer

PROJECT NAME
 NORTHCHASE BRANCH LIBRARY

4400 Northchase Parkway NE
 Wilmington NC 28405

PROJECT NO.
 514.18349.00

SHEET TITLE
 DOOR SCHEDULE, DOOR AND FRAME TYPES

SHEET NUMBER
 A900

ISSUE FOR
 BID SET

ISSUE DATE
 03.28.2024

REVISIONS
 NO. REASON DATE

GLAZING LEGEND

- IG.1 1/4" TEMPERED GLASS
- IG.2 1/4" TEMPERED GLASS (BACKPAINTED)
- IG.3 1/4" TEMPERED GLASS (FROSTED)
- IG.4 1/4" TEMPERED FIRE GLASS
- EG.1 1" TEMPERED INSULATED GLASS
- EG.2 1" TEMPERED INSULATED FIRE GLASS
- EG.3 1" TEMPERED SPANDREL GLASS
- EG.4 1" TEMPERED FRITTED GLASS

GENERAL NOTES

1. ALL ALUMINUM FRAMING SYSTEMS ARE 4 1/2" DEEP UNLESS INDICATED OTHERWISE
2. ALL ALUMINUM FRAMING SYSTEMS TO BE PREFINISHED.
3. ALL GLAZING TO BE EG.1 UNLESS NOTED OTHERWISE
4. ALL STRUCTURAL SUPPORTS FOR ALUMINUM FRAMING SYSTEM TO BE CONCEALED INSIDE MULLIONS OR ABOVE CEILING.
5. OVERALL DIMENSIONS OF ALUMINUM FRAMING SYSTEM TO BE ADJUSTED FOR REQUIRED ROUGH OPENING/CONSTRUCTION TOLERANCES.

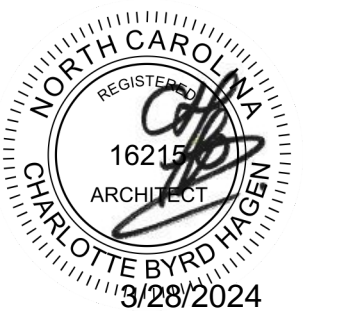
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DESIGN TEAM
Designer

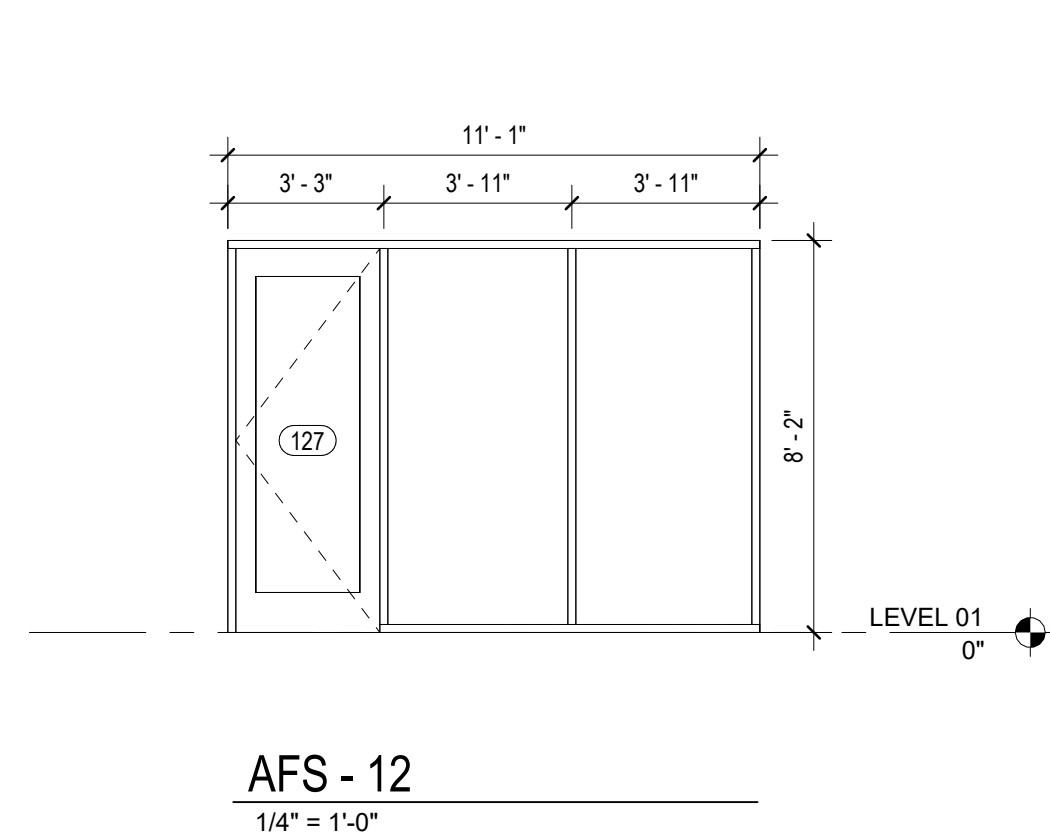
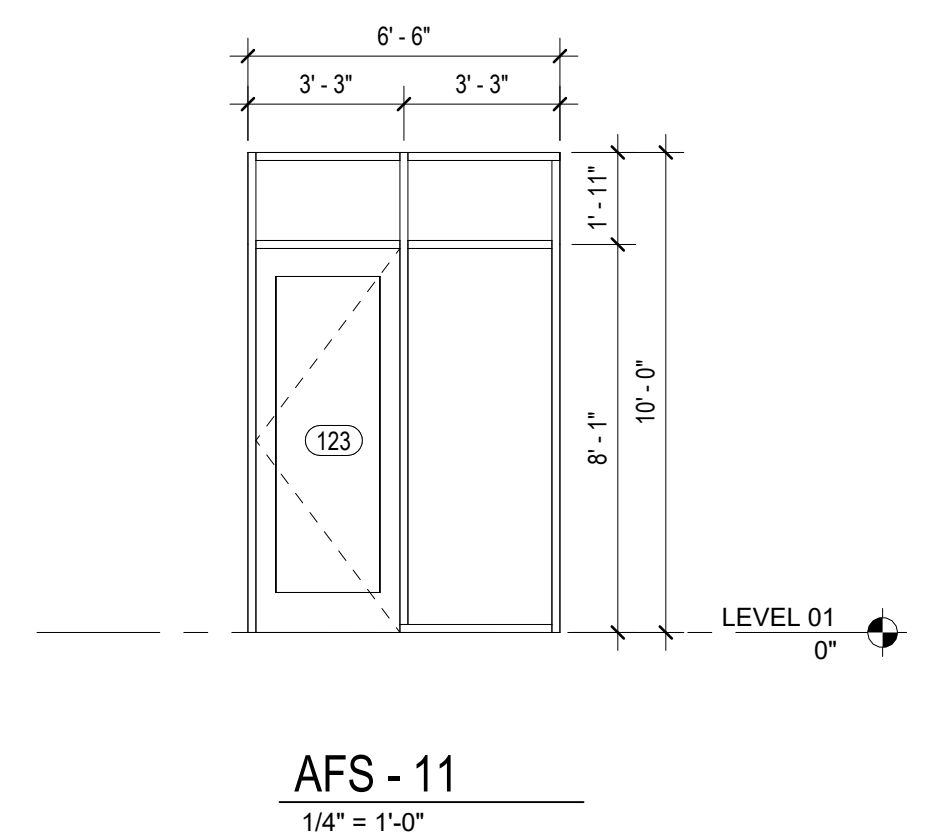
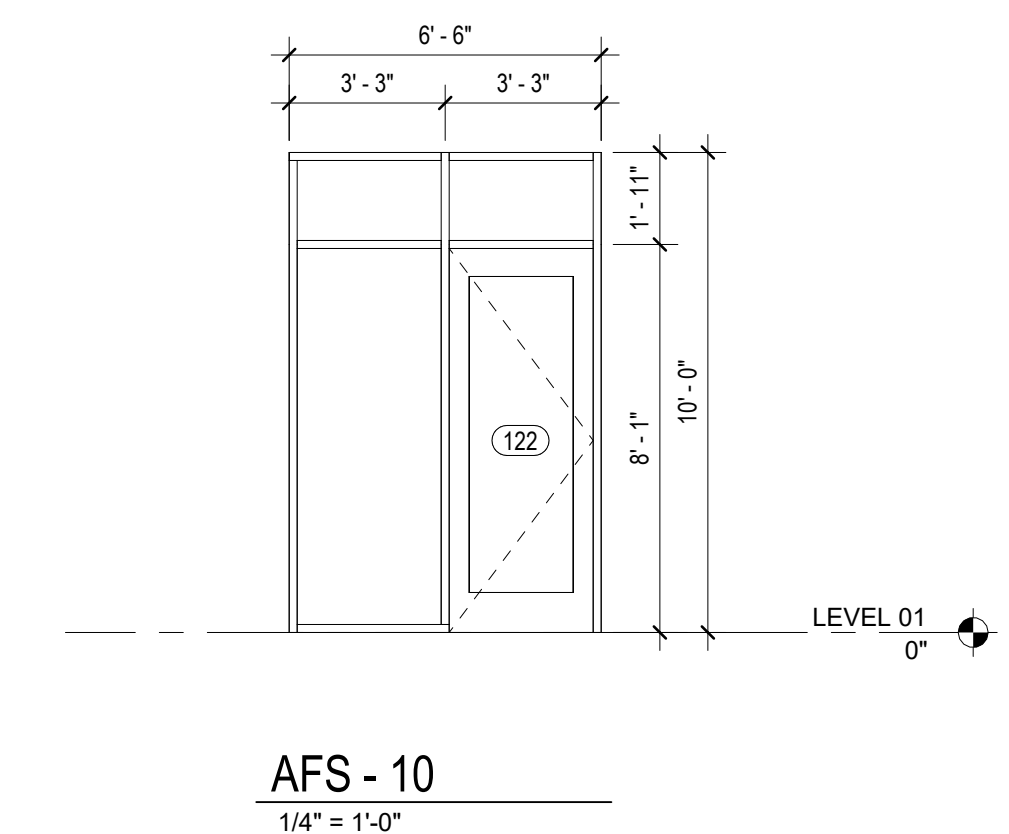
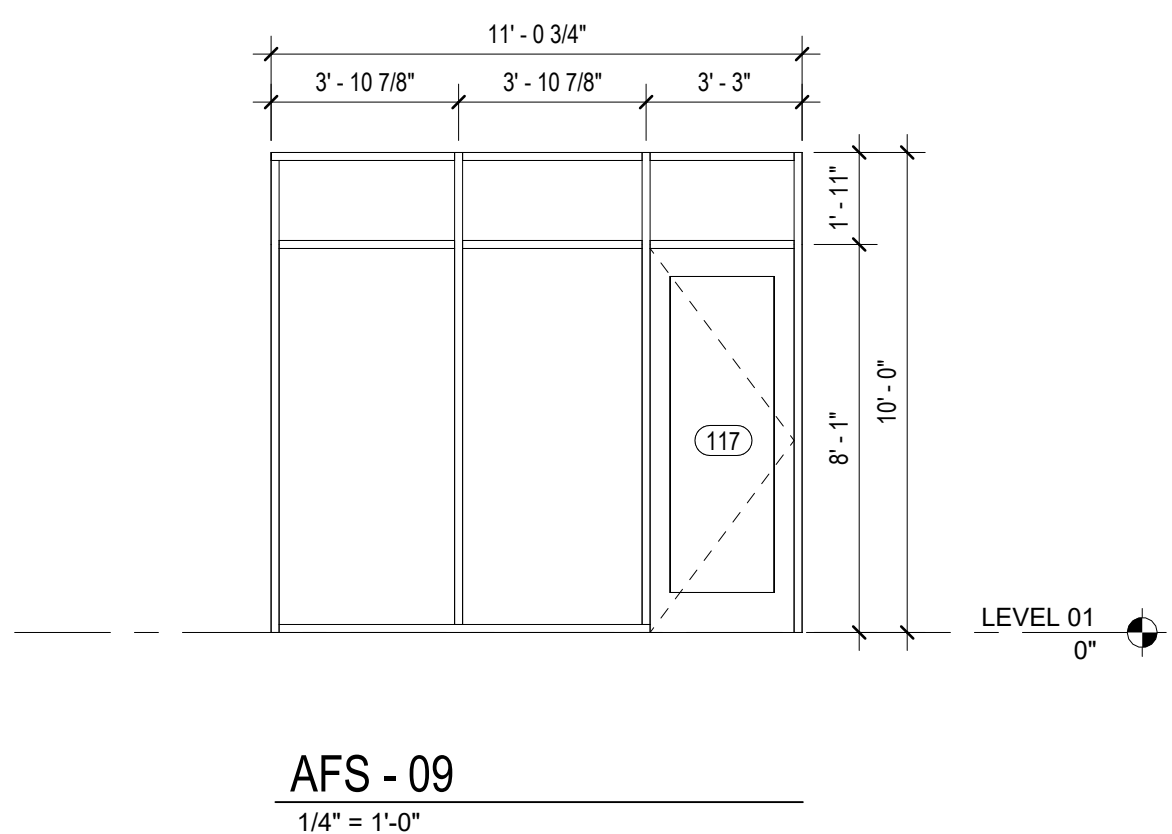
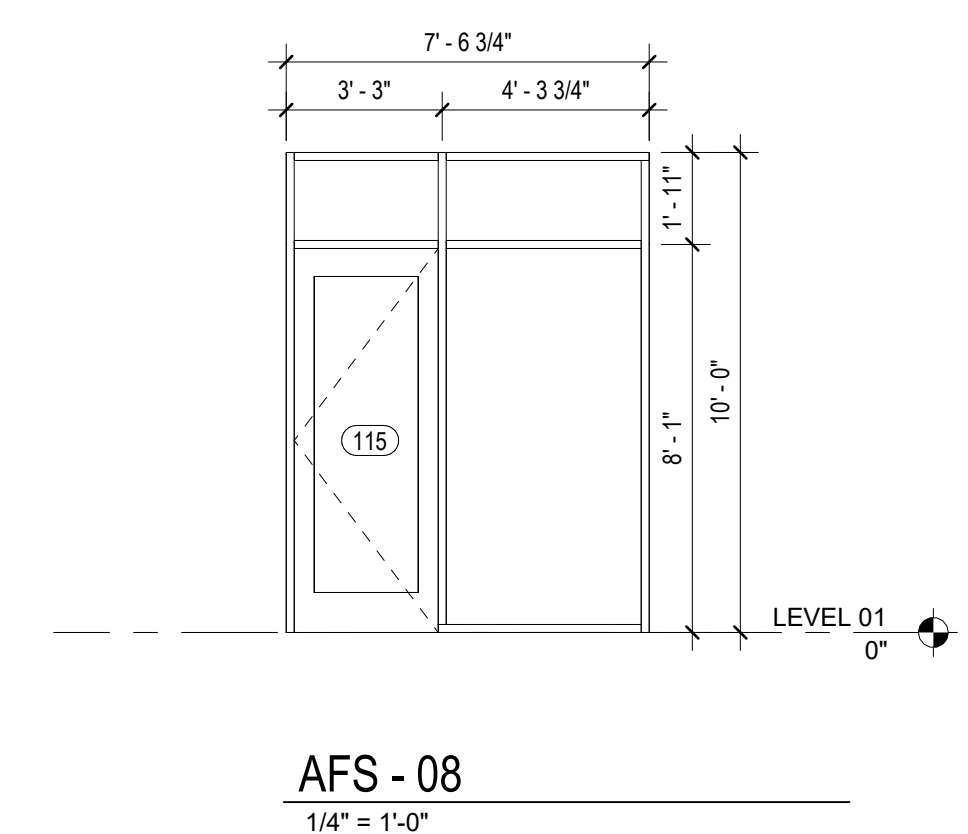
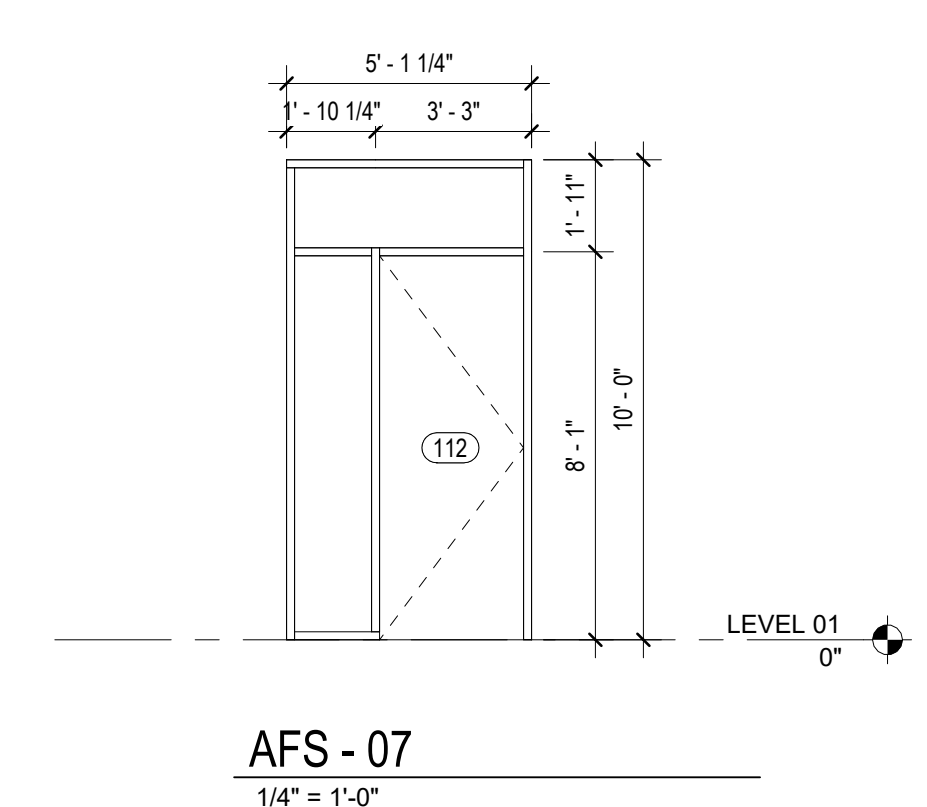
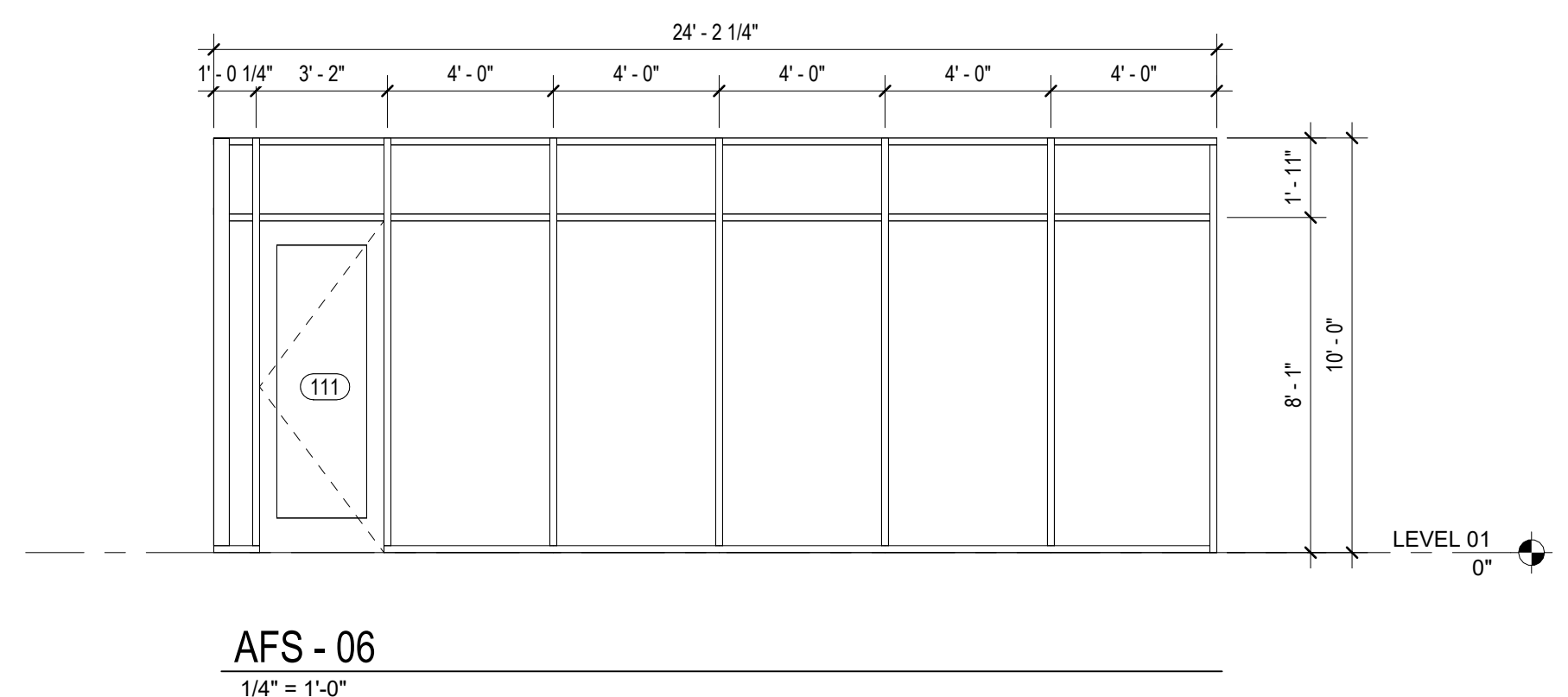
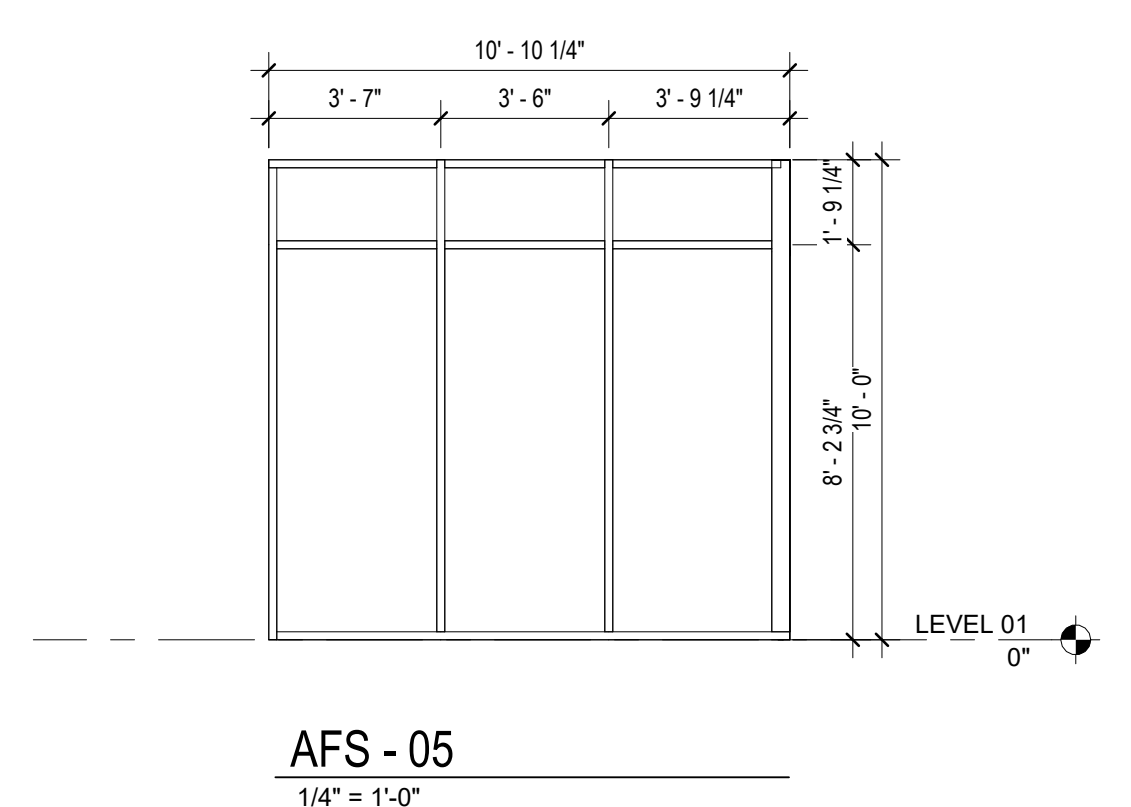
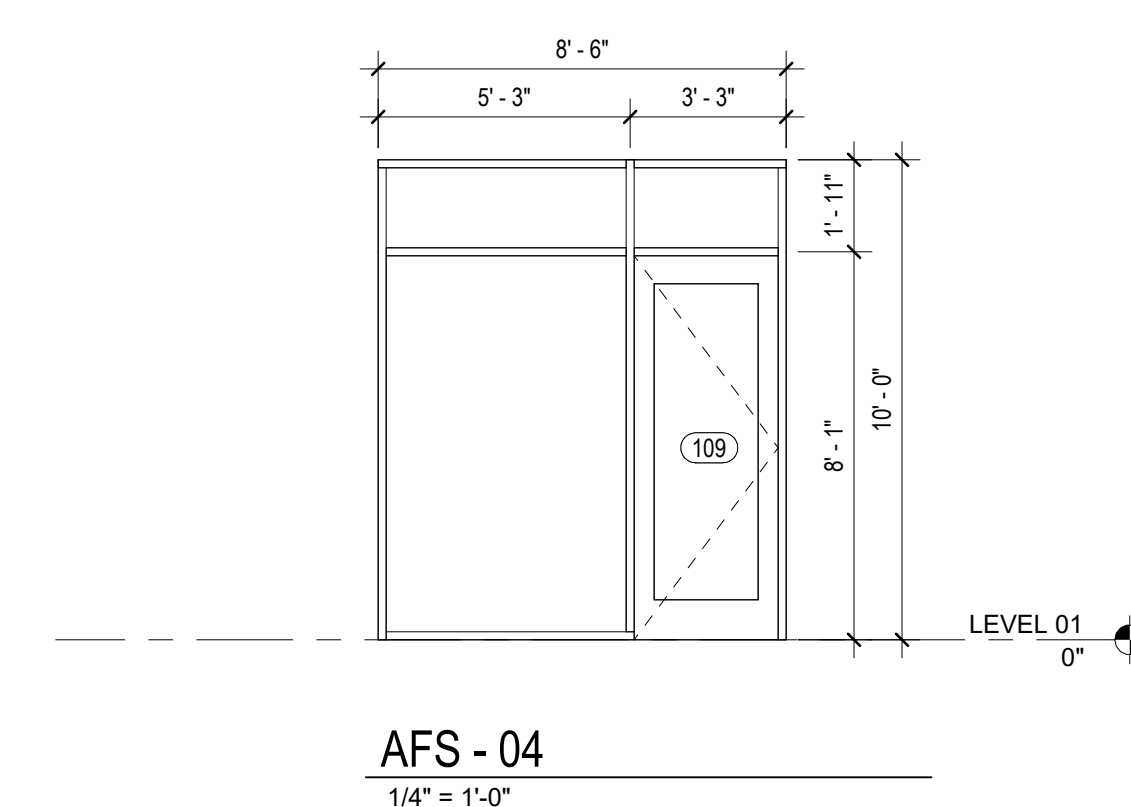
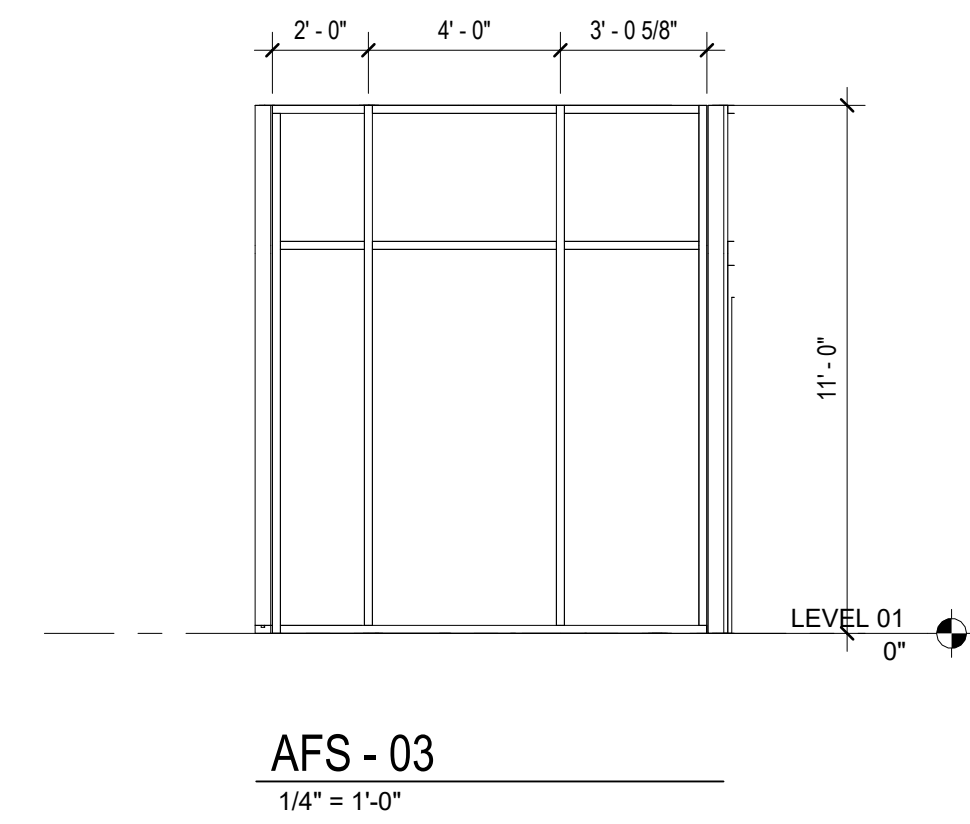
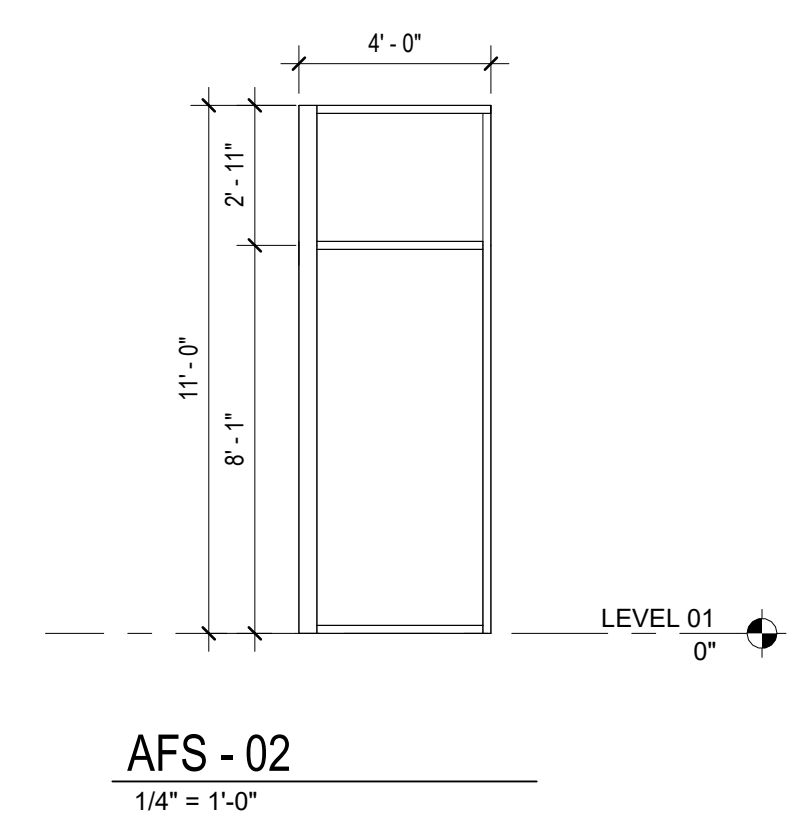
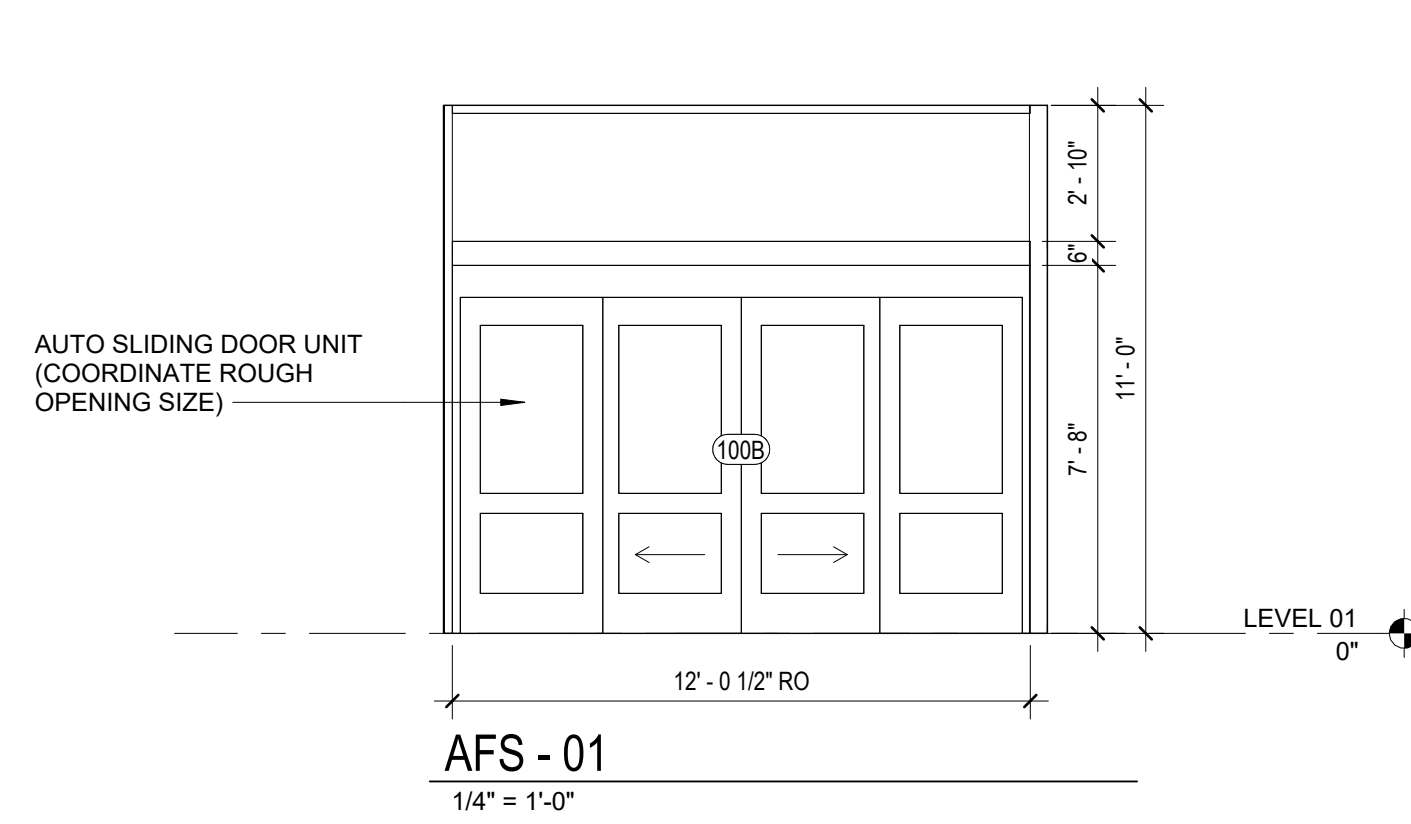
PROJECT NAME
NORTHCHASE BRANCH
LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
INTERIOR FRAMING
SYSTEM ELEVATIONS

SHEET NUMBER
A920

F
E
D
C
B
A



GENERAL CONDITIONS AND STATEMENTS

- THESE NOTES SHALL APPLY UNLESS INDICATED OTHERWISE BY DRAWINGS OR SPECIFICATIONS. IN THE EVENT THAT CONFLICTS OCCUR BETWEEN THESE NOTES, DRAWINGS OR SPECIFICATIONS NOTIFY THE STRUCTURAL ENGINEER FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
- STRUCTURAL DRAWINGS INDICATE TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY. SHOP DRAWINGS SHALL DETAIL ALL CONDITIONS IN ACCORDANCE WITH THE SPECIFIED STANDARDS AND THE SPECIFIC REQUIREMENTS OF THIS PROJECT.
- SUBMIT SHOP DRAWINGS ON ALL STRUCTURAL MATERIALS FOR APPROVAL BEFORE FABRICATION. CONTRACTOR SHALL REVIEW AND APPROVE SHOP DRAWINGS PRIOR TO SUBMISSION.
- THE STRUCTURE INDICATED BY THE DRAWINGS AND SPECIFICATIONS IS STRUCTURALLY STABLE ONLY IN ITS COMPLETED FORM. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, SEQUENCES AND OPERATIONS OF CONSTRUCTION AND SHALL PROVIDE TEMPORARY BRACING AS REQUIRED TO MAINTAIN THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
- ALL DETAILS, SECTIONS, AND NOTES INDICATED ON THE DRAWINGS SHALL APPLY AT ALL LOCATIONS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY THE DETAIL, SECTION, OR NOTE.
- CENTERLINES OF COLUMNS AND FOUNDATIONS SHALL COINCIDE WITH GRID LINE INTERSECTIONS UNLESS NOTED OTHERWISE.
- CENTERLINES OF FLOOR AND ROOF FRAMING MEMBERS SHALL COINCIDE WITH GRID LINES UNLESS NOTED OTHERWISE.
- EQUALLY SPACE FLOOR AND ROOF FRAMING MEMBERS BETWEEN GRID LINES UNLESS NOTED OTHERWISE.
- USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE THE DRAWINGS OR USE ANY DIMENSIONS TAKEN FROM ELECTRONIC DATA FILES.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE STRUCTURAL WORK WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS AND ALL OTHER RELEVANT TRADES. IN CASE OF CONFLICT BETWEEN STRUCTURAL WORK AND DRAWINGS RELATED TO OTHER TRADES THE CONTRACTOR SHALL MAKE IN THEIR BID ALLOWANCE FOR THE MORE SEVERE REQUIREMENTS. CONFLICTS BETWEEN THE STRUCTURAL WORK AND THE DRAWINGS OF OTHER TRADES SHALL NOT BE A REASON FOR ANY ADDITIONAL COST OR DELAY IN EXECUTION OF THE WORK.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DOCUMENTS AND ANY OTHER DOCUMENTS OR EXISTING CONDITIONS FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.

ABBREVIATIONS

ADDL	ADDITIONAL	EL	ELEVATION	LLV	LONG LEG VERTICAL
ADH	ADHESIVE	ELEC	ELECTRICAL	LSH	LONG SIDE HORIZONTAL
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	ELEV	ELEVATOR	LTV	LONG SIDE VERTICAL
AFF	ABOVE FINISHED FLOOR	EDG	EDGE OF DECK	LTS	TENSION LAP SPlice LENGTH
ALT	ALTERNATE	EQ	EQUAL	LSW	LIGHT WEIGHT
ARCH	ARCHITECT	EQUIP	EQUIPMENT	MAX	MAXIMUM
B	BOTTOM OF	MECH	MECHANICAL	MFR	MANUFACTURER
BCB	BOTTOM CHORD BRACING	EXP	EXPANSION	MIN	MINIMUM
BCX	BOTTOM CHORD EXTENSION	EXT	EXTERIOR	MOW	MIDDLE OF WALL
BFF	BELOW FINISHED FLOOR	EXIST, E	EXISTING	NS	NON-SHRINK
BLDG	BUILDING	FFE	FINISHED FLOOR ELEVATION	NTS	NOT TO SCALE
BOTT	BOTTOM	FIN	FINISHED	NW	NORMAL WEIGHT
BP	BASE PL	FLR	FLOOR	OC	ON CENTER
BRG	BEARING	FOM	FACE OF BRICK	OH	OPPOSITE HAND
BTWN	BETWEEN	FOS	FACE OF MASONRY	OPNG	OPENING
CB	CAST IN PLACE	FSTUD	FACE OF STUD	PAF	POWDER/POWER ACTUATED FASTENER
CL	CONTRACTION OR CONSTRUCTION JOINT	FRTW	FIRE RETARDANT TREATED WOOD	PC	PRECAST or PILE CAP
CLR	CLEAR	FTG	FOOTING	PJF	PRE-MOLDED JOINT FILLER
CMU	CONCRETE MASONRY UNIT	GA	GAGE	PL	PLATE
COL	COLUMN	GALV	GALVANIZED	PLB	PLUMBING
CONC	CONCRETE	GB	GRADE BEAM	OC	ON CENTER
CONN	CONNECTION	GC	GENERAL CONTRACTOR	PT	TENSIONED
CONT	CONTINUOUS	GLB	GLULAM BEAM	QTY	QUANTITY
COORD	COORDINATE	HD	HEADED	REF	REFERENCE
CTR	CENTER	HK	HOKED	REF	REQUIRED
DBA	DEFORMED BAR ANCHOR	HORIZ, H	HORIZONTAL	SCHD	SCHEDULE
DBL	DOUBLE	JBE	JOIST BEARING ELEVATION	SIM	SIMILAR
DCL	DOWELED CONSTRUCTION	JT	JOINT	SOG	SLAB ON GRADE
DEFL	DEFLECTION	JNT	JOINT	SPEC	SPECIFICATIONS
DEMO	DEMOLISH or DEMOLITION	KLF, PLF	KIPS/POUND PER LINEAR FOOT	STD	STANDARD
DIA, Ø	DIAMETER	KSI, PSI	KIPS/POUND PER SQUARE INCH	T	TOP OF
DIM	DIMENSION	KSI, PSI	KIPS/POUND PER SQUARE INCH	TCX	TOP CHORD EXTENSION
DWG	DRAWING	KSF, PSF	KIPS/POUND PER SQUARE FOOT	TYP	TYPICAL
DWL	DOWEL			UNO	UNLESS NOTED OTHERWISE
EA	EACH	LB	POUND	VERT, V	VERTICAL
EJ	EXPANSION JOINT	LG	LONG	VIF	VERIFY IN FIELD
		LONG	LONG	w/	WITH
		LLH	LONG LEG HORIZONTAL	WP	WORK POINT
				WWF	WELDED WIRE FABRIC

DESIGN CRITERIA

DESIGN CODES

- BUILDING CODE 2018 NORTH CAROLINA BUILDING CODE BASED ON THE 2015 INTERNATIONAL BUILDING CODE
- DESIGN LOADS ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- STEEL AISC 360-10 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS
- CONCRETE ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- COLD FORMED STEEL AISI S100-12 NORTH AMERICAN SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS

DESIGN LOADS

- BUILDING RISK CATEGORY III
- LIVE LOAD

ROOF	20 PSF
SLAB ON GRADE	100 PSF
- SNOW LOAD

GROUND SNOW LOAD (Pg)	10 PSF
Is	1.1
Ct	1.0
Ce	1.0
Pf	11 PSF
RAIN-ON-SNOW	5 PSF
- SEISMIC LOAD

Ie	1.25
SITE CLASSIFICATION	D
Sds	0.223
Sd1	0.143
SEISMIC DESIGN CATEGORY	C
SEISMIC FORCE RESISTING SYSTEM	STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE, R=3
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
SEISMIC BASE SHEAR	20 KIPS
- WIND LOAD

WIND SPEED	153 MPH
EXPOSURE	B
Iw	1.0
Kd	0.85
Kz	0.70
kzt	1.0
Gcpi	+/- 0.18
WIND BASE SHEAR NS	131 KIPS
WIND BASE SHEAR EW	90 KIPS

COMPONENTS AND CLADDING PRESSURES IN ACCORDANCE WITH ASCE 7

BUILDING ZONES ARE DEFINED IN ASCE 7
- DEFLECTION (SERVICEABILITY) DESIGN BASED ON 10-YEAR MEAN RECURRENCE INTERVAL

DELEGATED DESIGN / DEFERRED SUBMITTALS

THE FOLLOWING ITEMS SHALL BE DESIGNED BY A SPECIALTY ENGINEER FOR THE CONTRACTOR. DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW, SEALED AND SIGNED BY NORTH CAROLINA STATE STRUCTURAL ENGINEER.

- LIGHT GAGE METAL FRAMING
- MECHANICAL, PLUMBING, ELECTRICAL, DUCTWORK, AND SPRINKLER SEISMIC BRACING
- EQUIPMENT ANCHORAGE AND CALCULATIONS

SOIL AND SUBSURFACE CONDITIONS

- SOIL BEARING CAPACITY SHALL BE VERIFIED BY NORTH CAROLINA STATE GEOTECHNICAL ENGINEER.
- THE FOUNDATION HAS BEEN DESIGNED IN ACCORDANCE WITH THE REPORT OF GEOTECHNICAL EXPLORATION PREPARED BY SMSE PROJECT NO. 22080142 DATED 07/25/2023.
- THE FOUNDATIONS HAVE BEEN DESIGNED BASED ON THE FOLLOWING DESIGN VALUES FROM THE GEOTECHNICAL REPORT: SPREAD FOOTING BEARING PRESSURE ON SOIL 2,000 PSF
- SEE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS AND INFORMATION.
- THE CONTRACTOR SHALL VERIFY WITH THE GEOTECHNICAL ENGINEER THAT THE FOLLOWING ARE IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT:
 - THE BEARING STRATUM AT EACH FOUNDATION IS AS ASSUMED IN THE REPORT
 - THE ALLOWABLE BEARING PRESSURE MEETS OR EXCEEDS THE REQUIRED VALUE
 - ENGINEERED FILL IS INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE REPORT
 - THE INSTALLATION OF THE FOUNDATION IS AS ASSUMED IN THE REPORT
- ALL FILL MATERIALS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. ALL FILL WITHIN 10' - 0" OF THE BUILDING FOUNDATION PERIMETER SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR. THE TOP 12" BELOW FLOOR SLABS AND FOOTINGS SHALL BE COMPACTED TO 98% OF STANDARD PROCTOR.
- FOOTING BEARING ELEVATIONS SHALL BE ADJUSTED AT TIME OF EXCAVATION TO ACHIEVE THE REQUIRED BEARING CAPACITY IF SO REQUIRED.
- PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATIONS BOTH DURING CONSTRUCTION AND PERMANENTLY. MAINTAIN STABILITY OF EXCAVATIONS UNTIL PROPERLY BACKFILLED. KEEP EXCAVATIONS FREE OF LOOSE MATERIAL. DEWATER EXCAVATIONS AND REMOVE ANY WET MATERIAL PRIOR TO PLACING CONCRETE.
- PLACE A 3" THICKNESS "MUDMAT" OF CONCRETE IN THE BOTTOM OF FOOTINGS THAT WILL BE EXPOSED TO RAIN OR LEFT OPEN OVER NIGHT.
- HEAVY EQUIPMENT USED FOR PLACING OR COMPACTING BACKFILL SHALL NOT BE OPERATED WITHIN A DISTANCE EQUAL TO THE HEIGHT OF THE BACKFILL ABOVE THE TOP OF FOOTING, (1 HORIZONTAL TO 1 VERTICAL). HAND OPERATED COMPACTION EQUIPMENT SHALL BE USED FOR COMPACTION OPERATIONS IN THIS AREA.
- GRADE SHALL BE SUCH THAT THE THICKNESS OF ANY FOUNDATION OR SLAB ON GRADE IS NOT REDUCED BY MORE THAN 5% OF THAT INDICATED.
- EXCAVATION BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. EXCAVATION BRACING SHALL BE DESIGNED FOR LATERAL LOADING RESULTING FROM AN EQUIVALENT FLUID PRESSURE OF 60 PCF AND A SURFACE SURCHARGE OF 250 PSF.

CAST IN PLACE STRUCTURAL CONCRETE

- SUBMIT MIX DESIGNS FOR EACH TYPE OF CONCRETE SPECIFIED.
- SUBMIT DATA FOR ALL ADMIXTURES, CURING COMPOUNDS AND HARDENERS THAT ARE INTENDED FOR USE.
- CONCRETE SHALL HAVE THE MINIMUM 28 DAY COMPRESSIVE STRENGTH AND WEIGHTS:

LOCATION	28 DAY STRENGTH	UNIT WEIGHT
FOUNDATIONS	3,000 PSI	145 PCF
SLAB ON GRADE	3,500 PSI	145 PCF
- CONCRETE WORK SHALL CONFORM TO ACI 318.
- CONCRETE SHALL CONFORM TO ASTM A615 GRADE 60.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A62 AND A185. PROVIDE MATERIAL IN SHEETS. LAP ALL WELDED WIRE FABRIC ONE FULL SQUARE PLUS 2" AT ALL SHEET EDGES.
- SLAB ON GRADE DOWELS SHALL BE SMOOTH RODS CONFORMING TO ASTM A36 WITH ENDS SMOOTH CUT.
- REINFORCING BAR SUPPORT DEVICES SHALL CONFORM TO CRSI MANUAL OF STANDARD PRACTICE.
- CONCRETE CLEAR COVER ON EMBEDDED REINFORCING SHALL BE AS FOLLOWS:

LOCATION	BAR SIZE	MINIMUM CLEAR COVER
FOOTINGS	ALL	3" BOTTOM AND SIDES,
		2" TOP
CONCRETE EXPOSED TO EARTH OR WEATHER	#5 AND SMALLER	1 1/2"
	#6 THROUGH #18	2"
- CONCRETE NOT EXPOSED TO EARTH OR WEATHER

SLABS, WALLS	#11 AND SMALLER	3/4"
	#14 AND #18	1 1/2"
- ALL CONTINUOUS BARS SHALL HAVE A CLASS B TENSION LAP SPlice AT ALL SPlices UNO. PROVIDE CORNER BARS FOR ALL CONTINUOUS BARS AT ALL FOUNDATION AND WALL CORNERS AND INTERSECTIONS. LAP CORNER BARS 48 BAR DIAMETERS EACH END.
- PROVIDE (2) #5 x4' - 0" LONG TOP DIAGONAL BARS AT ALL REINFRANT CORNERS IN ALL SLABS ON GRADE.
- PROVIDE DOWELS TO FOOTINGS TO MATCH ALL WALL. EMBED DOWELS IN FOOTING WITH HOOK TO WITHIN 3" OF BOTTOM OF FOOTING. EXTEND DOWELS ABOVE FOOTING FOR 48 BAR DIAMETER LAP SPlice WITH VERTICAL REINFORCING UNO.
- CONSTRUCTION OR CONTRACTION JOINTS SHALL BE INSTALLED IN SLABS ON GRADE AT A SPACING NOT TO EXCEED 12' - 0". OC EACH DIRECTION UNO ON FOUNDATION PLAN. ASPECT RATIO OF SLAB AREAS BETWEEN JOINTS (RATIO OF LONG SIDE TO SHORT SIDE) SHALL NOT EXCEED 1.5. SAW CUT JOINTS SHALL BE MADE AS SOON AS SLABS WILL SUPPORT MEN AND EQUIPMENT. EMBEDDED EDGE ANGLES SHALL BE DISCONTINUOUS AT SLAB JOINT LOCATIONS.
- CONSTRUCTION AND CONTRACTION JOINTS IN WALLS SHALL BE LOCATED AT 25' - 0" OC MAXIMUM AND 25' - 0" MAXIMUM FROM WALL CORNERS. ALIGN JOINTS IN WALLS WITH JOINTS IN SLABS AT LOCATIONS WHERE SLABS ARE CONNECTED TO WALLS.
- CONFORM TO ACI 308 FOR COLD WEATHER CONCRETE AND ACI 305 FOR HOT WEATHER CONCRETE WORK WHEN ANY COMBINATION OF TEMPERATURE, HUMIDITY OR WIND SPEED RESULTS IN CONDITIONS THAT WOULD IMPAIR THE QUALITY OF CONCRETE. CONCRETE IS TO BE REJECTED IF ITS TEMPERATURE AT TIME OF PLACEMENT IS 95 DEGREES F OR ABOVE. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNO. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL EMBEDDED ITEMS IN CONCRETE WORK. COORDINATE WITH THE FOLLOWING: CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS, PRECAST SHOP DRAWINGS, MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT AND FIXTURE REQUIREMENTS.

STRUCTURAL STEEL

- STRUCTURAL STEEL CONSTRUCTION DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
 - STRUCTURAL STEEL MEMBERS SHALL CONFORM TO THE FOLLOWING STANDARDS:

WIDE FLANGE SHAPES	ASTM A992
ANGLE, CHANNELS AND PLATES	ASTM A36
ANCHOR RODS <= 3/4"	ASTM F1554 GRADE 36
ANCHOR RODS >= 7/8"	ASTM F1554 GRADE 55
RECTANGULAR HSS	ASTM A500 GRADE C, 50 ksi
- ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.
- SPlices OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER FOR THE LOCATION AND TYPE OF SPlice.
- CAMBER BEAMS WHERE INDICATED, WHERE NO CAMBER IS INDICATED, BEAMS SHALL BE FABRICATED SO THAT AFTER ERECTION, ANY NATURAL CAMBER IS UPWARD.
- ALL COPES, HOLES, OPENINGS AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES SHALL BE INDICATED ON THE SHOP DRAWINGS AT TIME OF SUBMITTAL FOR REVIEW.
- FIELD MODIFICATION OF STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
- SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL STEEL AND SHALL INDICATE COMPLETE CONNECTION INFORMATION, BOTH SHOP AND FIELD.
- PROVIDE A SHOP COAT OF FABRICATOR'S STANDARD RUST INHIBITIVE PRIMER TO ALL STEEL UNO.
- SEE ARCHITECTURAL DRAWINGS FOR FIRE PROTECTIVE MATERIAL APPLIED TO STRUCTURAL STEEL. DO NOT PRIME STEEL WHICH IS TO RECEIVE SPRAY APPLIED FIRE PROTECTIVE MATERIAL. DO PRIME STEEL WHICH IS TO RECEIVE INTUMESCENT FIRE PROTECTIVE COATING.
- FILL SOLID WITH NON-SHRINK GROUT UNDER ALL BASE AND BEARING PLATES.
- CONNECTION NOTES:
 - STRUCTURAL STEEL CONNECTIONS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY THE CONTRACTOR. PROVIDE A CONNECTION DESIGNED TO SUPPORT A VERTICAL SHEAR REACTION OF 80% OF THE MAXIMUM TOTAL UNIFORM LOAD FOR THE APPROPRIATE BEAM SECTION AND SPAN AS DETERMINED PER THE MAXIMUM TOTAL UNIFORM LOAD TABLES IN THE AISC MANUAL.
 - CONNECTION MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES:

ANGLES	ASTM A36
WT	ASTM A992
LSH	ASTM A36
BOLTS	ASTM A325 OR ASTM A490
NUTS	ASTM A663
WASHERS	ASTM F436
WELDING ELECTRODES	E70XX
- STANDARD SHEAR CONNECTIONS SHALL BE DETAILED AS DOUBLE ANGLE OR SINGLE PLATE CONNECTIONS IN ACCORDANCE WITH THE CONNECTION TABLES IN THE AISC "STEEL CONSTRUCTION MANUAL". BOLTED CONNECTIONS SHALL BE DETAILED USING TYPE N BOLTS INSTALLED IN SMUG TIGHTENED JOINTS UNO.
- BRACED FRAME CONNECTIONS, MOMENT CONNECTIONS AND COLLECTOR ELEMENT CONNECTIONS SHALL BE DESIGNED BY A NORTH CAROLINA STATE ENGINEER. STRUCTURAL CALCULATIONS FOR THESE CONNECTIONS SHALL BE SUBMITTED AND SHALL BE SEALED BY THE ENGINEER RESPONSIBLE FOR THE DESIGN.
- PROVIDE STIFFENERS, CONTINUITY PLATES, DOUBLER PLATES OR OTHER ADDITIONAL MEMBER LOCAL STRENGTHENING MEASURES AS REQUIRED FOR THE CONNECTION DESIGN.
- BOLTED CONNECTIONS SHALL BE MADE WITH A MINIMUM OF (2) 3/4" BOLTS AND HAVE A MINIMUM SHEAR CAPACITY OF 10 KIPS.
- BOLTED CONNECTIONS SHALL CONFORM TO THE PROVISIONS OF THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS."
- WELDED CONNECTIONS SHALL BE MADE WITH CONTINUOUS FILLET WELDS UNO. MINIMUM WELD SIZE SHALL BE 1/4" OR AS REQUIRED BY AISC SPECIFICATION, WHICHEVER IS LARGER. MINIMUM WELD LENGTH SHALL BE 2".
- ALL WELDS SHALL BE MADE BY CERTIFIED WELDERS.
- BOLTED CONNECTIONS OF MOMENT CONNECTIONS, TENSION CONNECTIONS, BRACED FRAME CONNECTIONS, MOMENT FRAME CONNECTIONS, COLLECTOR ELEMENT CONNECTIONS AND AS INDICATED SHALL BE SLIP-CRITICAL.

LIGHT GAGE METAL FRAMING

- LIGHT GAGE METAL FRAMING INDICATED ON THE DRAWINGS INDICATES TYPICAL CONDITIONS AND MINIMUM REQUIREMENTS.
- LIGHT GAGE METAL FRAMING SHALL BE DESIGNED BY A NORTH CAROLINA STATE STRUCTURAL ENGINEER. DESIGN CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER OF RECORD FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE LAYOUT OF ALL LIGHT GAGE METAL FRAMING INCLUDING ARRANGEMENT, DIMENSIONS, MATERIALS, STRESS VALUES, CONNECTORS, ANCHORAGE, AND RELATION TO ADJACENT WORK.
- LIGHT GAGE METAL FRAMING DESIGN AND CONSTRUCTION SHALL CONFORM TO THE AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
- MINIMUM YIELD STRENGTH (Fy) FOR LIGHT GAGE METAL FRAMING MEMBERS SHALL BE 33,000 PSI FOR 18 GAGE (43 MILS) AND THINNER. MINIMUM YIELD STRENGTH (Fy) FOR MEMBERS SHALL BE 50,000 PSI FOR 16 GAGE (54 MILS) AND THICKER.
- ALL LIGHT GAGE METAL STUDS, TRACK, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A G-60 GALVANIZED COATING CONFORMING TO ASTM A653 AND C955.
- A MINIMUM OF 10" LENGTH OF UN-PUNCHED STEEL IS REQUIRED AT ENDS OF STUDS AND AT ALL BEARING POINTS AND CONCENTRATED LOADS (NO PUNCHING HOLES OF ANY SIZE IS PERMITTED IN THESE 10 INCHES). NO CUTTINGS OF THE STUD FLANGES IS PERMITTED.
- SPICES IN LOAD BEARING STUDS ARE NOT PERMITTED.
- LOAD BEARING STUDS SHALL HAVE FULL BEARINGS AGAINST THE INSIDE TRACK WEB TOP AND BOTTOM. STUD ENDS SHALL BE CUT SQUARE.
- LATERAL BRIDGING SHALL BE USED TO PROVIDE LATERAL STABILITY OF LOAD BEARING STUDS. BRIDGING SHALL BE (2) 1 1/2" x 18 GA (43 MILS) FLAT STRAP (ONE EACH SIDE OF WALL). FASTEN BRIDGING TO EACH STUD FLANGE WITH (1) #10 SCREW. PROVIDE TRACK BLOCKING BETWEEN STUDS IN LINE WITH BRIDGING SPACED AT 10'-0" MAXIMUM ALONG LENGTH OF ALL BRIDGING LINES AND EACH SIDE OF WALL OPENINGS.
- BRIDGING IS TO BE SPACED AT 4'-0" OC VERTICALLY.
- MINIMUM TRACK FASTENING AT FOUNDATION SHALL BE 0.177" POWER ACTUATED FASTENERS (PAF) SPACED AT 8" OC. WITH 1 1/2" MINIMUM PENETRATION INTO CONCRETE.
- CUTTING OF LOAD BEARING METAL STUDS, TRACK, BRIDGING OR BRACING IS NOT PERMITTED WITHOUT SPECIFIC APPROVAL FROM THE ENGINEER OF RECORD.

METAL ROOF DECK

- THE DESIGN, MANUFACTURE AND ERECTION OF STEEL ROOF DECK AND ITS ANCHORAGE SHALL BE IN ACCORDANCE WITH THE AISI/SI "STANDARD FOR STEEL ROOF DECK".
- PROVIDE ROOF DECK OF TYPE, DEPTH AND MINIMUM THICKNESS INDICATED ON PLANS.
- ROOF DECK SHALL BE INSTALLED IN LENGTHS TO PROVIDE 3 CONTINUOUS SPANS MINIMUM.
- INSTALL ROOF DECK WITH A MINIMUM END BEARING LENGTH OF 1 1/2'.
- ROOF DECK SHALL BE FASTENED TO SUPPORTS AS INDICATED ON THE DRAWINGS.

POST-INSTALLED ANCHORS

- EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC. CONTACT HILTI AT (800) 879-8000 FOR PRODUCT RELATED QUESTIONS.
 - ANCHORAGE TO CONCRETE
 - ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - HILTI HIT-HY 200V3 SAFE SET SYSTEM WITH HILTI HIT-Z ROD PER ICC ESR-3187.
 - HILTI HIT-HY 200V3 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 150/300 VACUUM (VC 150 OR VC 300) SYSTEM WITH HAS-E THREADED ROD PER ICC ESR-3187.
 - HILTI HIT-RE 500-V3 SAFE SET EPOXY ADHESIVE ANCHORING SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 150/300 VACUUM (VC 150 OR VC 300) WITH HAS-E THREADED ROD PER ICC ESR-3814 FOR SLOW CURE APPLICATIONS.
 - HILTI HIT-RE 500 V3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (TE-YRT) WITH HAS-E THREADED ROD PER ICC ESR-3814 FOR DIAMOND CORED HOLES.
 - MEDIUM DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - HILTI KWIK HUS-EZ AND KWIK HUS EZ-1 SCREW ANCHORS PER ICC ESR-3027.
 - HEAVY DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - HILTI HDA UNDERCUT ANCHORS PER ICC ESR 1546
 - HILTI EXPANSION ANCHORS PER ICC ESR
 - REBAR DOWELING INTO CONCRETE
 - ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
 - HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC150/300 VACUUM (VC150 OR VC 300) SYSTEM WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3187
 - HILTI HIT-RE 500-V3 SAFE SET EPOXY ANCHORING SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC150/300 VACUUM (VC 150 OR VC 300) SYSTEM WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3814
 - HILTI HIT-RE 500 V3 SAFE SET SYSTEM WITH HILTI ROUGHENING TOOL (TE-YRT) WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3814 IN DIAMOND CORED HOLES.
 - ANCHORAGE TO SOLID GROUTED MASONRY
 - ADHESIVE ANCHORS USE:
 - HILTI HIT-HY 270 MASONRY ADHESIVE ANCHORING SYSTEM PER ICC ESR-4143
 - ADHESIVE ANCHORS USE:
 - HILTI HIT-HY 270 MASONRY ADHESIVE ANCHORING SYSTEM PER ICC ESR-4144
 - STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
 - HILTI HIT-HY 270 MASONRY ADHESIVE ANCHORING SYSTEM PER ICC ESR-4144
 - STEEL ANCHOR ELEMENT SHALL BE HILTI HAS-E CONTINUOUSLY THREADED ROD OR CONTINUOUSLY DEFORMED STEEL REBAR
 - THE APPROPRIATE SIZE SCREEN TUBE SHALL BE USED PER ADHESIVE MANUFACTURER'S RECOMMENDATION
- DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON CRACKED CONCRETE IN WATER-SATURATED CONDITION WITH A BASE MATERIAL TEMPERATURE OF 23-104 DEGREES FAHRENHEIT INSTALLED USING HAMMER-DRILL, HOLLOW DRILL BIT SYSTEM, AND CORE-DRILLING METHODS.
- ANCHOR BASE PLATES, PRESSURE TREATED WOOD SILLS, OR EXTERIOR APPLICATIONS SHALL BE GALVANIZED OR STAINLESS STEEL.
- ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CRACK, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.
- INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
- OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING THE HILTI PROFIS SYSTEM.
- THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.
- ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON DRAWINGS.



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REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Sohan Shetty, P.E.

NORTHCHASE BRANCH
LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
S001

STATEMENT OF SPECIAL INSPECTIONS

Project: **NORTHCHASE BRANCH LIBRARY**
 Location: 4400 NORTHCHASE PARKWAY NE, WILMINGTON, NC
 Owner's Representative: KEVIN GANSON, NEW HANOVER COUNTY-FACILITIES MANAGEMENT
 Owner's Address: 200 DIVISION DRIVE, WILMINGTON, NC 28401
 Architect of Record: CHARLOTTE HAGEN, AIA
 Structural Engineer of Record: SOHAN SHETTY, P.E.

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection requirements (Chapter 17) of the International Building Code. The Statement includes a Schedule of Special Inspections applicable to this project as well as the required qualifications for the Special Inspector and Agents of the Special Inspector to perform on this project.

The Special Inspector shall keep records of all inspections, furnish inspection reports, and identify discrepancies as detailed by project specifications and RFP.

A Final Report of Special Inspections, documenting the completion of all required Special Inspections and confirming the correction of any discrepancies, will be submitted prior to issuance of a Certificate of Use and Occupancy.

The Special Inspections program does not relieve the Contractor of his or her responsibilities. Job Site safety and means and methods of construction are solely the responsibility of the Contractor.

SCHEDULE OF SPECIAL INSPECTION

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows.

- Soils
- Special Foundations
- Cast-in-Place Concrete
- Structural Load Bearing Precast Concrete
- Post Tensioned Concrete
- Structural Masonry - Level 1
- Wood Shear Walls
- Structural Steel
- Site Retaining Walls
- Cold-Formed Steel Framed "X" Bracing / Seismic Resisting Systems
- Wall Panels and Veneers
- Sprayed Fire Resistant Materials
- Exterior Insulation & Finish System (EIFS)
- Progressive Collapse
- Blast Resistance
- Quality Assurance for Progressive Collapse
- Wind Resistance

Seismic Design Category: C
 Basic Wind Speed: 153
 Wind Exposure Category: B

Statement of Special Inspections Prepared by (Structural Engineer of Record):

Signature _____ Date _____
 Owner's Authorization _____ Accepted for the Building Official by: _____
 Signature _____ Date _____ Signature _____ Date _____

QUALIFICATIONS OF INSPECTORS AND AGENTS OF SPECIAL INSPECTORS

The qualifications of all personnel performing Special Inspection activities are subject to the approval of the Building Official. The credentials of all inspectors shall be provided if requested. When the Structural Engineer of Record deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation will appear on the Schedule of Special Inspections.

The Special Inspector (SI) shall be a licensed Professional Engineer with a minimum of 3 years of experience as a Special Inspector.

1. SE Structural Engineer: A licensed PE or SE specializing in the design of building structures.
2. GE Geotechnical Engineer: A licensed PE specializing in soil mechanics and foundations.
3. S-EIT Structural Engineer-in-Training: A graduate engineer who has passed the Fundamentals of Engineering examination, with experience in the design of building structures and working under the supervision of a licensed structural PE or SE.
4. G-EIT Geotechnical Engineer-in-Training: A graduate engineer who has passed the Fundamentals of Engineering examination, with experience in soil mechanics and foundations and working under the supervision of a licensed geotechnical PE or SE.
5. G-TECH 1 Geotechnical Technician 1: An experienced technician with National Institute for Certification in Engineering Technologies: Level 2 – Soils certification.
6. G-TECH 2 Geotechnical Technician 2: An experienced technician with National Institute for Certification in Engineering Technologies: Level 2 – Geotechnical Engineering certification.
7. C-TECH 1 Concrete Technician 1: An experienced technician with American Concrete Institute – Grade I Concrete Field Testing Technician or Grade I Concrete Laboratory Testing Technician certification.
8. C-TECH 2 Concrete Technician 2: An experienced technician with American Concrete Institute – Grade II Concrete Laboratory Testing Technician or ICBO Reinforced Concrete Special Inspector certification.
9. S-TECH 1 Steel Technician 1: An experienced American Welding Society – Certified Associate Welding Inspector (CAWI) or Non-destructive Testing Technician ASNT-TC-1A Level I.
10. S-TECH 2 Steel Technician 2: An experienced American Welding Society – Certified Welding Inspector (CWI) or Non-destructive Testing Technician ASNT-TC-1A Level II or ICBO Certified Structural Steel and Bolting Special Inspector.
11. S-TECH 3 Steel Technician 3: A technician who is an American Welding Society – Certified Welding Inspector (CWI) with a minimum of 10 years of weld inspection experience or a Non-destructive Testing Technician ASNT-TC-1A Level II or ICBO Certified Structural Welding Special Inspector.
12. SMSI Structural Masonry Special Inspector: An experienced masonry inspector who is an ICBO Certified Structural Masonry Special Inspector.
13. SFSI ICBO Certified Spray-Applied Fireproofing Special Inspector.
14. PCSI ICBO Certified Prestressed Concrete Special Inspector.
15. PTI Concrete technician with Post Tensioning Institute – Level 2 Certification.
16. SCSI Inspection/Testing company with fire protection engineering experience, mechanical engineering experience, and certification as air balancers.

SOILS

(Special Inspection of soils is only required for subgrade and fill placement under structures requiring Special Inspections.)

Item	Qualifications	Scope
1. Site Preparation	SI, G-TECH, S-EIT, G-EIT, GE, SE	<ul style="list-style-type: none"> Collect testing agency's field and laboratory test reports during site preparation and verify the following complies with the project specifications/geotechnical report: <ul style="list-style-type: none"> Site stripping and subgrade preparation Fill material (on-site and/or imported) classification Fill material placement (lift thickness, moisture content and compaction) Allowable bearing capacity for footings and foundations Periodic inspection of testing of fill material placement including periodic observation of testing agency's density testing methods and frequency of testing to verify compliance with project specifications/geotechnical report Continuous inspection of density and lift thicknesses during placement and compaction of controlled fills within the building footprint. Continuous verification for the use of proper fill materials during placement within the building footprint.

CAST-IN-PLACE CONCRETE

Item	Qualifications	Scope
1. Mix Design Verification	SI, C-TECH 1, C-TECH 2, S-EIT, SE	<ul style="list-style-type: none"> Collect accepted mix designs and verify appropriate mix is used during specific installation
2. Reinforcement Installation	SI, C-TECH 2, S-EIT, SE	<ul style="list-style-type: none"> Periodic inspection of reinforcing steel and welded wire fabric to confirm size, spacing and details conform to contract documents at the following minimum frequency, distributed throughout construction: <ul style="list-style-type: none"> Footings and foundations – 50% Pile caps and grade beams – 75% Foundation walls, basement walls, and pedestals – 75% Slabs on metal deck – 50% Columns and shearwalls – 75% Elevated slabs, joists, and beams – 75%
3. Welding Reinforcing	SI, S-TECH 1, S-TECH 2, S-TECH 3	<ul style="list-style-type: none"> Continuous inspection of all reinforcing, noted to be welded Verify reinforcing meets ASTM requirements for weldability
4. Concrete Placement/Monitoring Fresh Concrete, Sampling & prep of test samples	SI, C-TECH 2, S-EIT, SE	<ul style="list-style-type: none"> Continuous inspection of cast-in-place concrete placement Continuous monitoring of sampling of fresh concrete, slump test, air content test, temperature of concrete and creation of strength test specimens Periodic (min. 10%, distributed throughout construction) inspection of formwork for shape location and dimensions of the concrete member being formed
5. Bolting	SI, C-TECH 2, S-EIT, SE	<ul style="list-style-type: none"> Continuous inspection of bolts placed or cast into concrete Periodic (min. 20%, distributed throughout construction) inspection of expansion anchor installation or other type anchor Periodic (min. 75%, distributed throughout construction) inspection of epoxy anchor installation
6. Curing & Protection	SI, C-TECH 2, S-EIT, SE	<ul style="list-style-type: none"> Periodic inspections of curing techniques Periodic inspections of cold and hot weather concreting techniques
7. Concrete Strength Verification	SI, C-TECH 2, S-EIT, SE	<ul style="list-style-type: none"> Verify with testing agency reports in-situ concrete strength of elevated beams and slabs prior to removal of shores and forms

STRUCTURAL STEEL

Item	Qualifications	Scope
1. Fabricator Certification/Quality Control Procedures	S-TECH 1, S-TECH 2, S-TECH 3, S-EIT, SE, SI	<ul style="list-style-type: none"> Ensure fabricator is AISC certified per contract documents to satisfy requirements of IBC 1704.2.2 Collect Certificate of Compliance from fabricator at completion of fabrication
2. Welding	S-TECH 1, S-TECH 2, S-TECH 3, S-EIT, SE, SI	<ul style="list-style-type: none"> Collect certificate of compliance for weld filler material and confirm compliance with contract documents Confirm weld filler material identification markings conform to AWS specification in the contract documents Continuous visual inspection of all complete and partial penetration welds Continuous visual inspection of all multiple pass fillet welds Continuous visual inspection of all plug and slot welds. Continuous visual inspection of all single fillet welds greater than 5/16" Periodic (min 25%, distributed throughout construction) visual inspection of fillet welds 5/16" or smaller Periodic (min 25%, distributed throughout construction) visual inspection of roof and floor deck welds Periodic (min 50%, distributed throughout construction) visual inspection of welded reinforcing steel
3. Structural Details	S-TECH 1, S-TECH 2, S-TECH 3, S-EIT, SE, SI	<ul style="list-style-type: none"> Periodic inspection of steel framing joint details to confirm member sizes and connection details at the following minimum frequency, distributed throughout construction: <ul style="list-style-type: none"> 10% of all beam to beam connections 25% of all beam to column connections 50% of all column splice connections 100% of all connections of members within lateral resisting system
4. Bolting	S-TECH 1, S-TECH 2, S-TECH 3, S-EIT, SE, SI	<ul style="list-style-type: none"> Collect material data sheets for A325 and A490 bolts, nuts, and washers, and confirm compliance with contract documents Collect certificate of compliance from bolt supplier at completion of fabrication Periodic (min 10%, distributed throughout construction) inspection of bolted connections to confirm bolt markings conform to ASTM standards Periodic (min 50%, distributed throughout construction) inspection of A325/A490 bolted (bearing type) connections Continuous inspection of installation of A325/A490 bolted (slip critical) connections Continuous inspection of all pre-tensioned bolts to confirm tensioning conforms to contract documents
5. Material Certification	S-TECH 1, S-TECH 2, S-TECH 3, S-EIT, SE, SI	<ul style="list-style-type: none"> Collect Certified mill test reports for all types of structural steel specified in the contract documents and confirm compliance with contract documents Periodic (min 5%, distributed throughout construction) inspection of steel identification markings to comply with applicable material standards.
6. Connectors	S-TECH 1, S-TECH 2, S-TECH 3, S-EIT, SE, SI	<ul style="list-style-type: none"> Periodic (min 25%, distributed throughout construction) visual inspection of shear stud welds to confirm 360° flash Periodic (min 10%, distributed throughout construction) inspection of shear stud welds by 15° bend test Periodic (min 25%, distributed throughout construction) inspection of composite beams to confirm number of shear studs installed conforms to contract documents

WIND RESISTANCE

Item	Qualifications	Scope
1. Wind Resisting Components	S-TECH 1, S-TECH 2, S-TECH 3, S-EIT, SE, SI	<ul style="list-style-type: none"> Roof covering, roof deck, and roof framing connections Exterior wall covering and wall connections to roof and floor diaphragms and framing

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PROJECT NO.

NORTHCHASE BRANCH LIBRARY

4400 Northchase Parkway NE
 Wilmington NC 28405

SHEET NUMBER

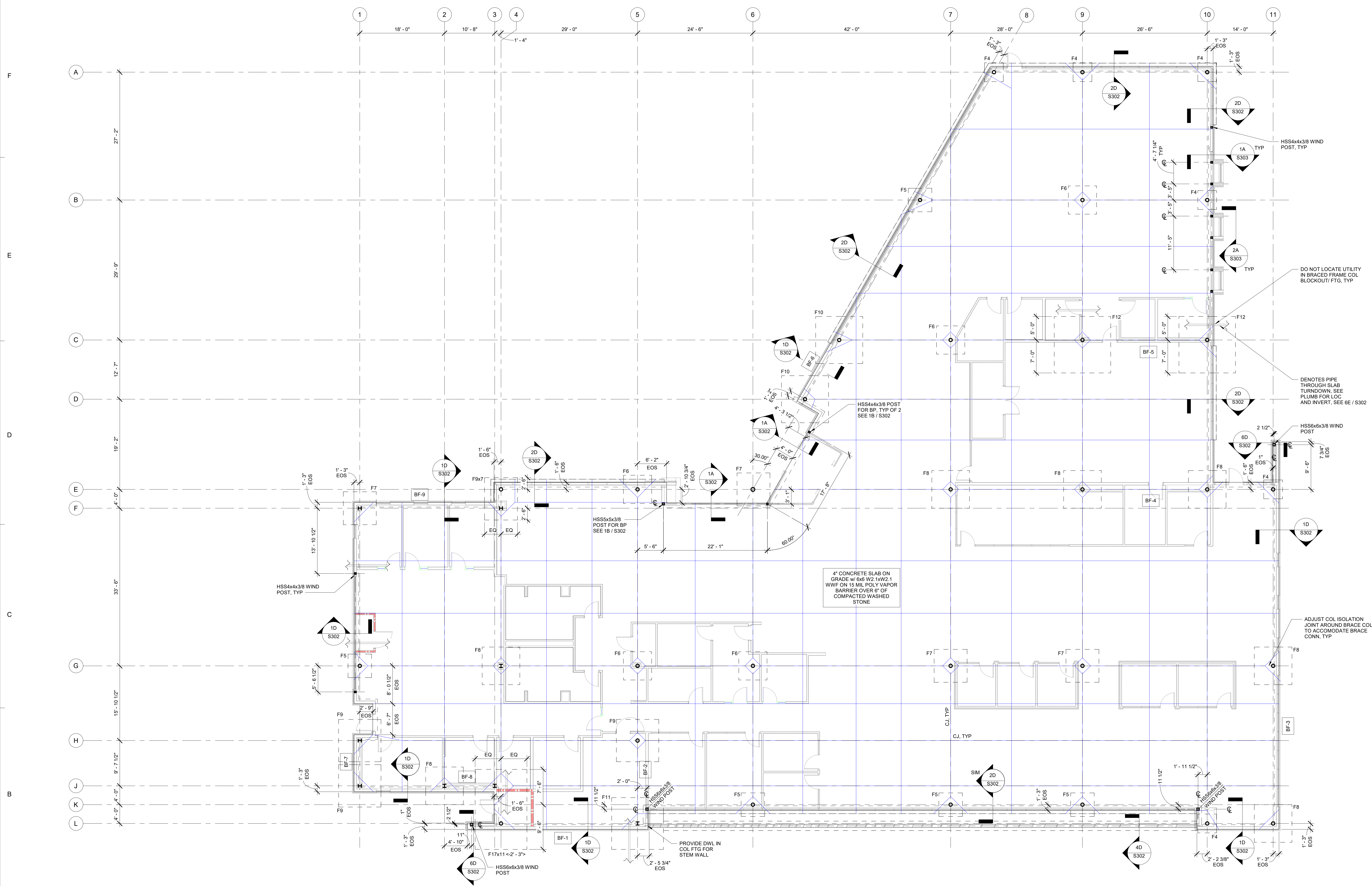
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SHEET TITLE

STATEMENT OF SPECIAL INSPECTIONS

SHEET NUMBER

S002



1A FOUNDATION PLAN

S101 1/8" = 1'-0"

NOTES:

1. SEE S001 FOR GENERAL NOTES AND ABBREVIATIONS.
2. FINISHED FLOOR ELEVATION 35.50, UNO. REFERENCE ELEVATION 0' - 0'. DATUM.
3. TOP OF FOOTING Z - 0' BELOW FINISHED FLOOR ELEVATION, UNO. <No> INDICATES TOP OF FOOTING ELEVATION. SEE PLAN.
4. "F#" INDICATES FOOTING TYPE. SEE S301.
5. "BF#" INDICATES BRACED FRAME TYPE. SEE S201 FOR ELEVATIONS AND DETAILS.
6. SEE S301 FOR COLUMN SCHEDULE.
7. SEE S301 FOR TYPICAL SLAB CONSTRUCTION DETAILS.
8. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.
9. WIND POST BASE PLATE CONNECTION, SEE 1B / S302.

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DO NOT LOCATE UTILITY IN BRACED FRAME COL BLOCKOUT/FTG. TYP

DENOTES PIPE THROUGH SLAB TURNDOWN. SEE PLUMB FOR LOC AND INVERT. SEE 6E / S302

ADJUST COL ISOLATION JOINT AROUND BRACE COL TO ACCOMMODATE BRACE CONN. TYP



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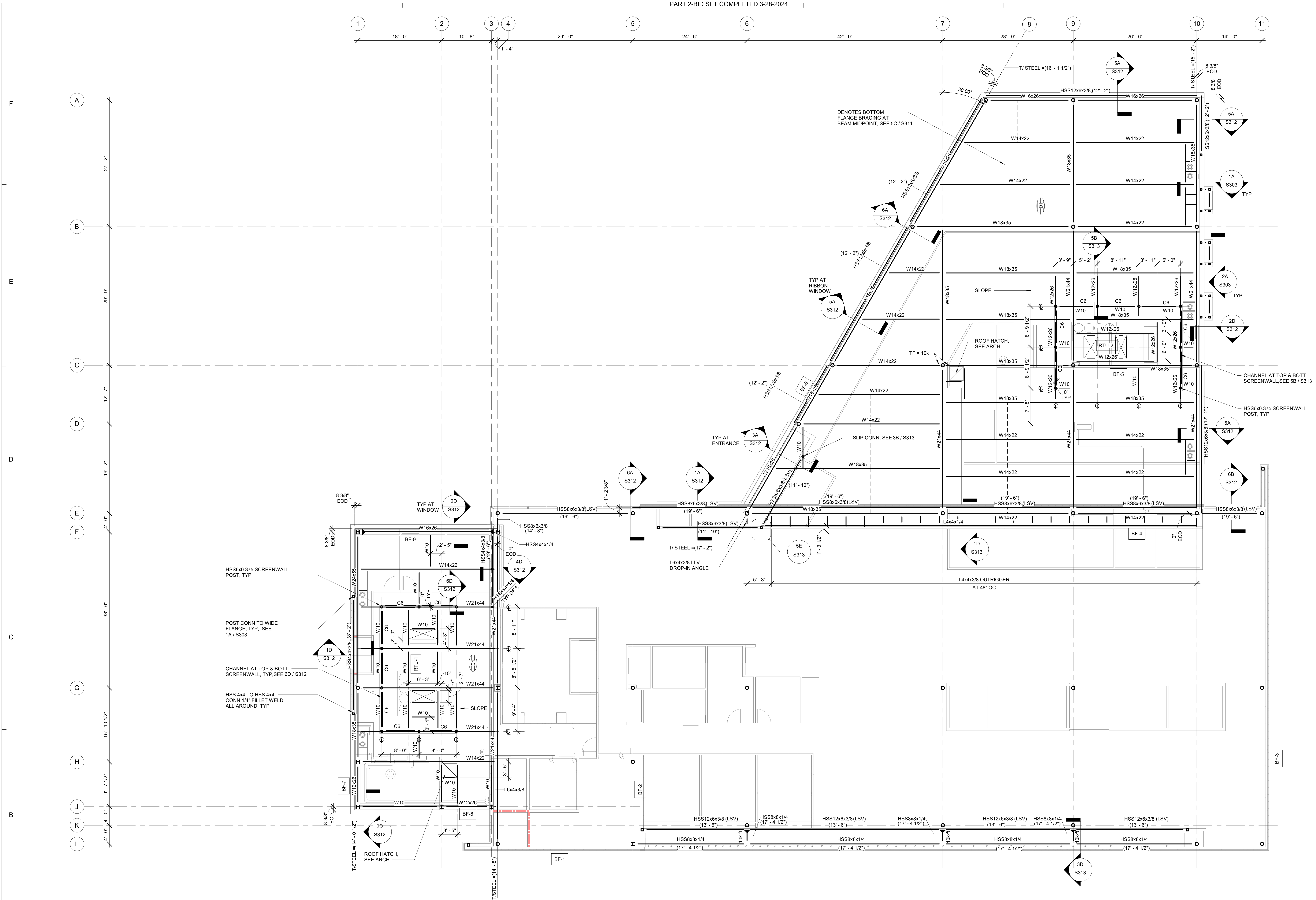
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SHEET TITLE
FOUNDATION PLAN

SHEET NUMBER
S101

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1A LOW ROOF FRAMING PLAN
S102 1/8" = 1'-0"

- NOTES:**
- SEE S001 FOR GENERAL NOTES AND ABBREVIATIONS.
 - (NS) INDICATES TOP OF STEEL ELEVATION ABOVE REFERENCE DATUM ELEVATION.
 - "BF#" INDICATES BRACED FRAME TYPE. SEE S201 FOR ELEVATIONS AND DETAILS.
 - SEE S311 FOR TYPICAL ROOF FRAMING DETAILS.
 - SEE S301 FOR COLUMN SCHEDULE.
 - MAXIMUM WEIGHTS FOR RTUs = 7,000 LBS. CONTRACTOR TO NOTIFY EOR IF RTU WEIGHTS ARE HIGHER THAN INDICATED. RTU SUPPORTS LOCATIONS BASED ON BASIS OF DESIGN MECH UNIT. FINAL LOCATIONS TO BE DETERMINED ONCE FINAL SELECTION IS MADE.
 - W10 INDICATES W10x15
 - C6 INDICATES C6x10.5

(D1) METAL ROOF DECK, 3" TYPE "NA" ACOUSTICAL, 18 GA. GALV G60 FINISH. SEE S311 FOR ATTACHMENT. BASE BID TO BE 3" ACOUSTICAL METAL DECK. ALTERNATE TO BE 3" TYPE "NPA" CELLULAR ACOUSTICAL METAL DECK SYSTEM.

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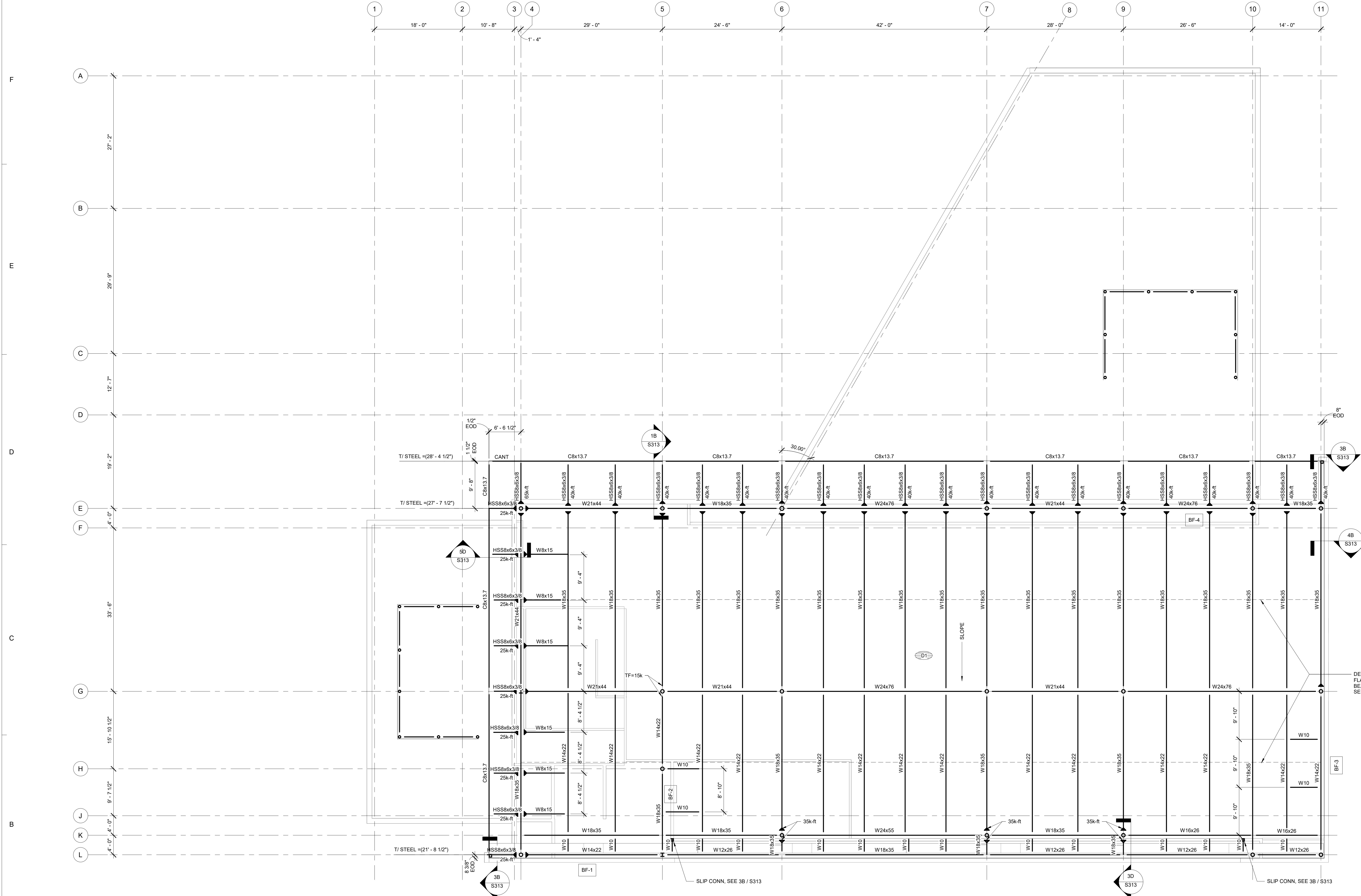
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SHEET TITLE
LOW ROOF FRAMING PLAN

SHEET NUMBER
S102

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1A HIGH ROOF FRAMING PLAN
S103
1/8" = 1'-0"

- NOTES:**
- SEE S001 FOR GENERAL NOTES AND ABBREVIATIONS.
 - (NS) INDICATES TOP OF STEEL ELEVATION ABOVE REFERENCE DATUM ELEVATION.
 - BF# INDICATES BRACED FRAME TYPE. SEE S201 FOR ELEVATIONS AND DETAILS.
 - SEE S311 FOR TYPICAL ROOF DECK FRAMING DETAILS.
 - SEE S301 FOR COLUMN SCHEDULE.
 - INDICATES MOMENT CONNECTION, SEE PLAN

(ED1) METAL ROOF DECK, 3" TYPE "NA" ACOUSTICAL, 15 GA. GALV G90 FINISH, SEE S311 FOR ATTACHMENT. BASE BID TO BE 3" ACOUSTICAL METAL DECK. ALTERNATE TO BE 3" TYPE "NPA" CELLULAR ACOUSTICAL METAL DECK SYSTEM.

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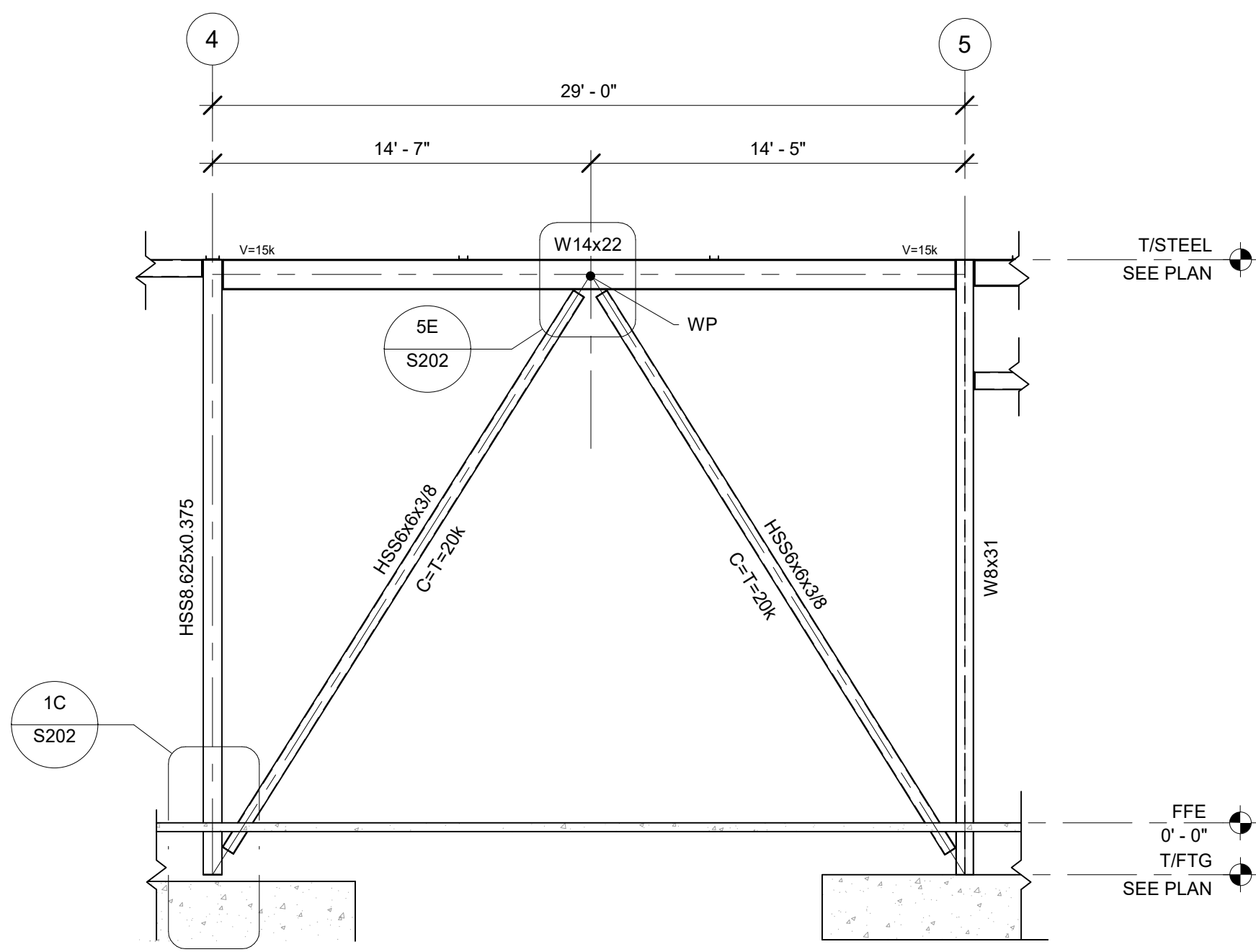
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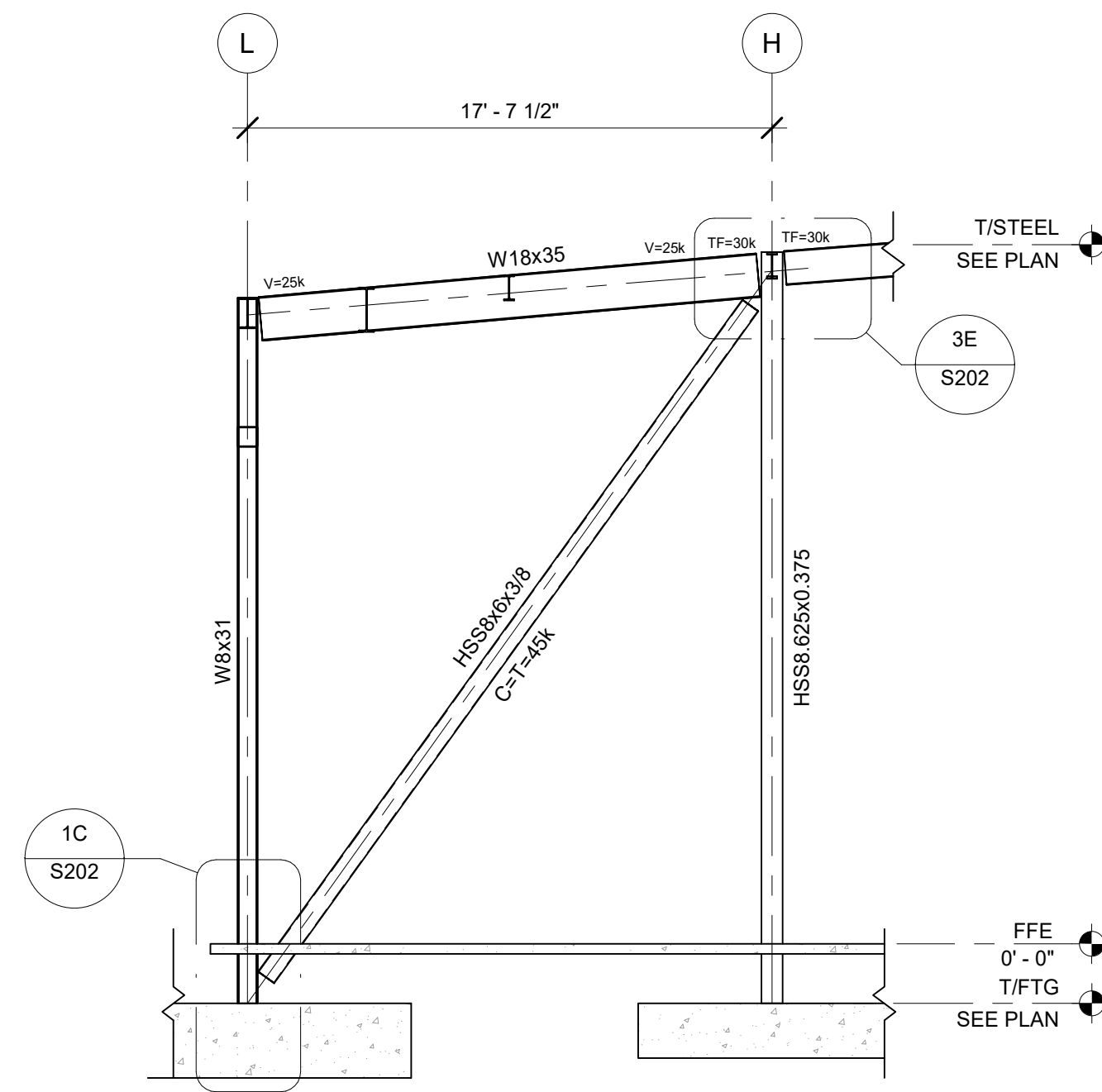
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HIGH ROOF FRAMING PLAN

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S103

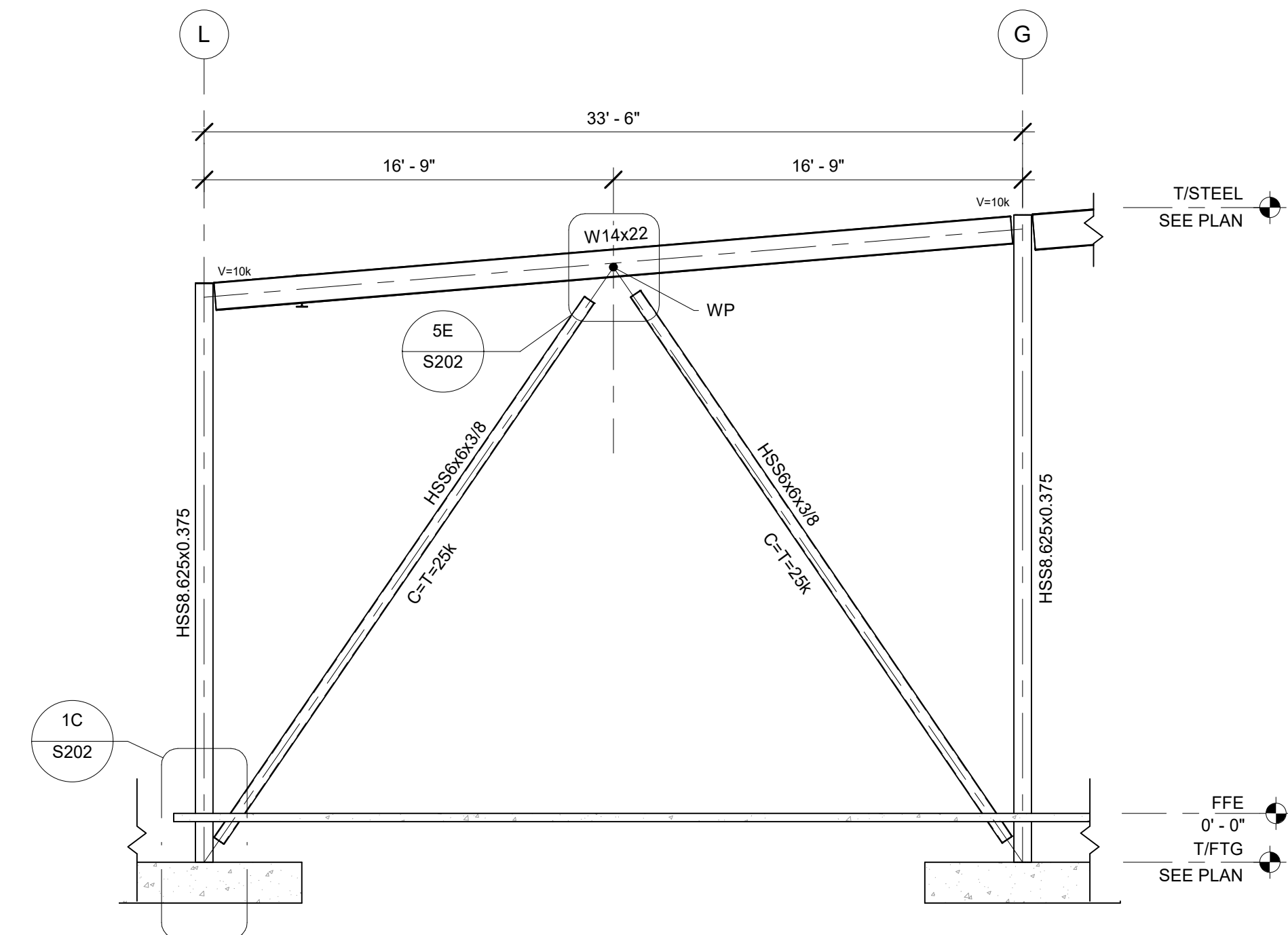
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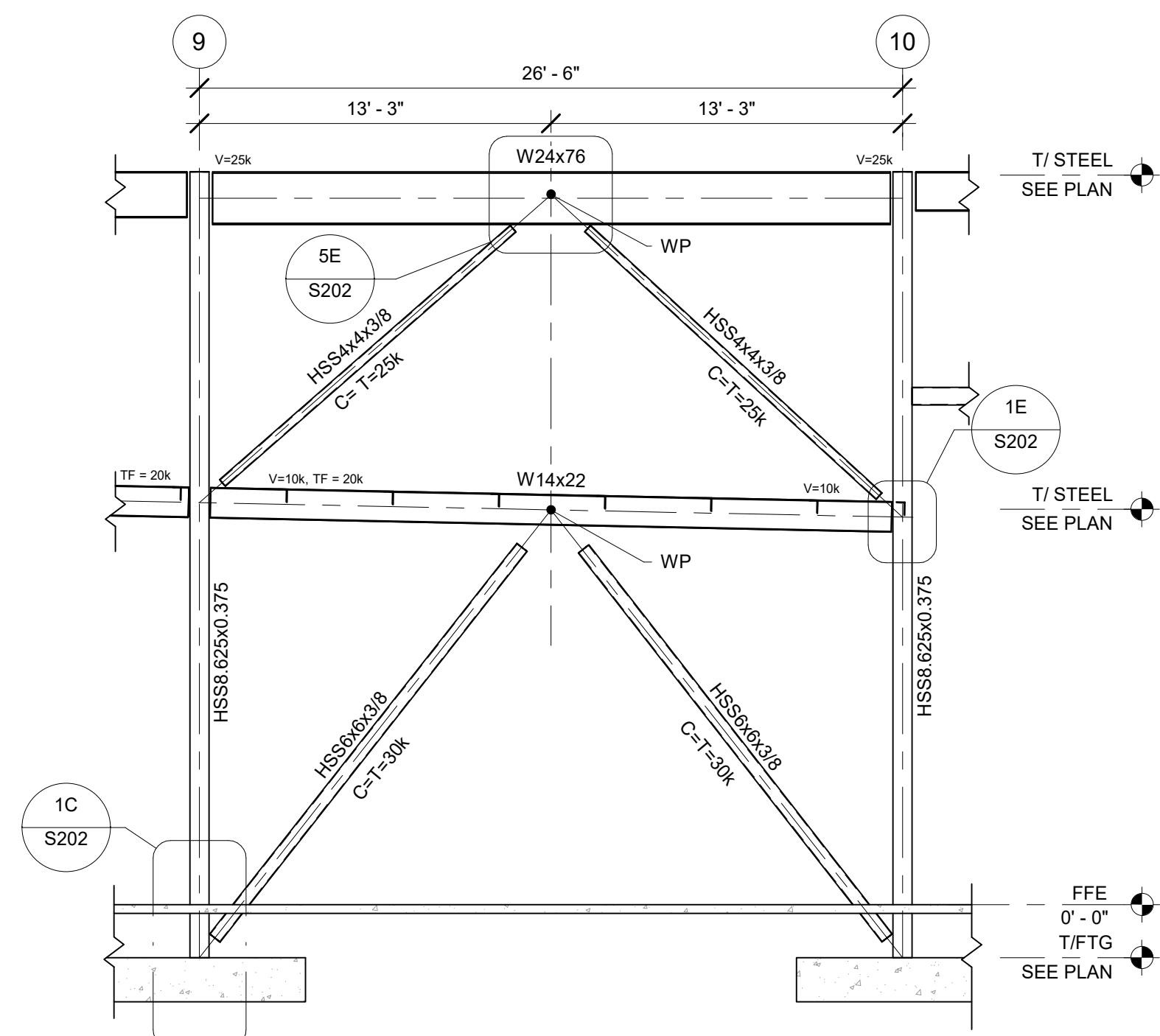
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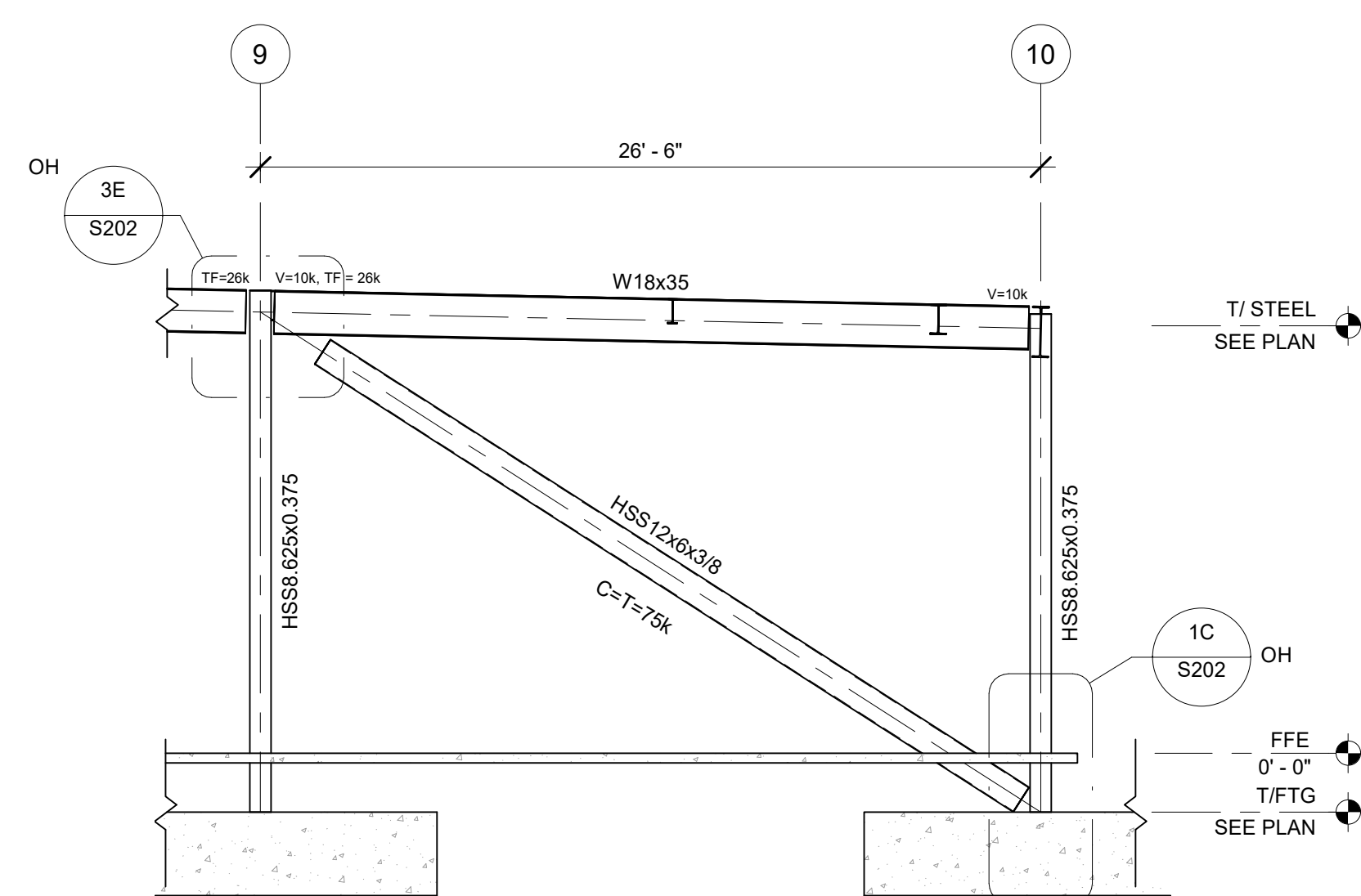
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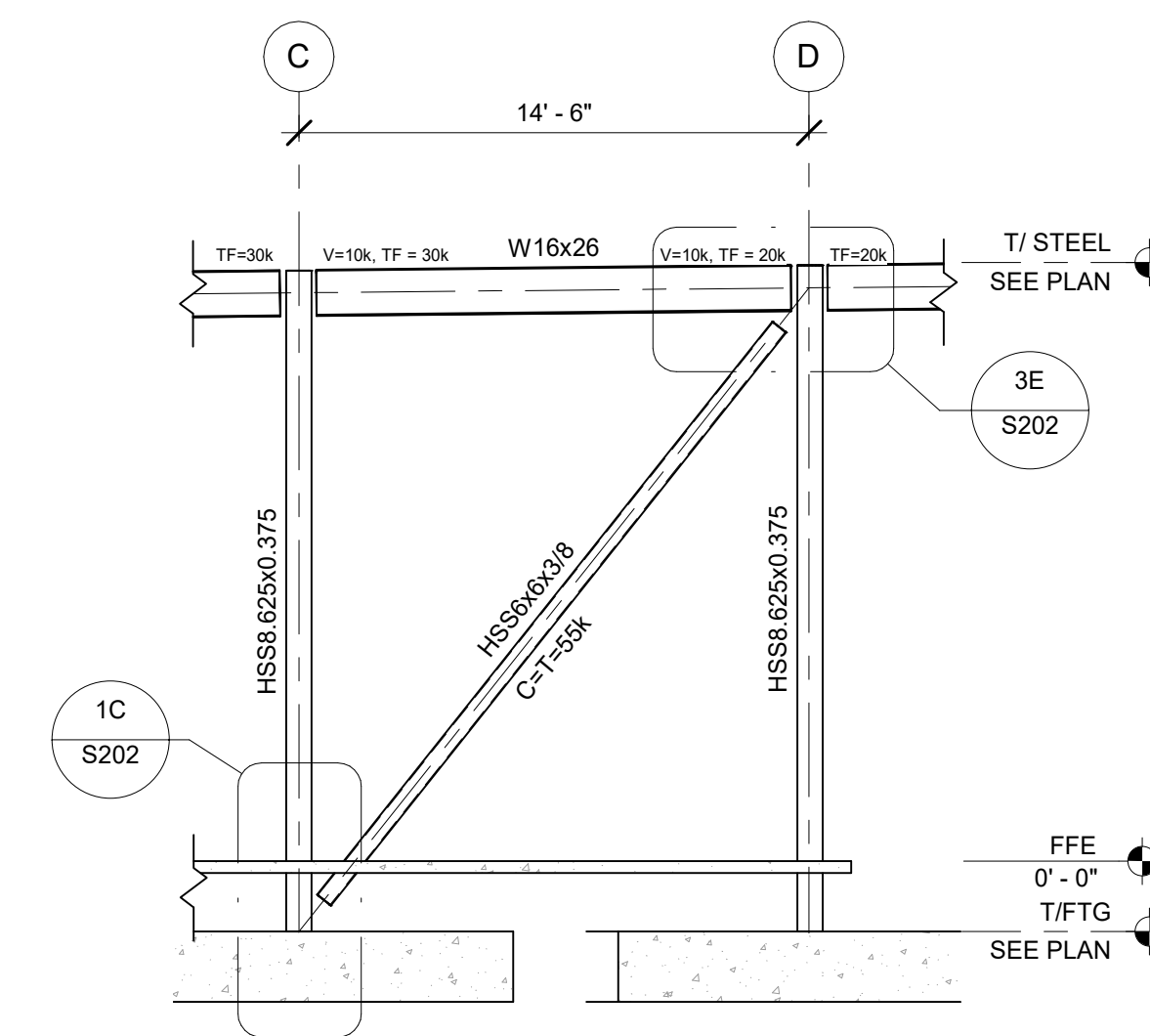
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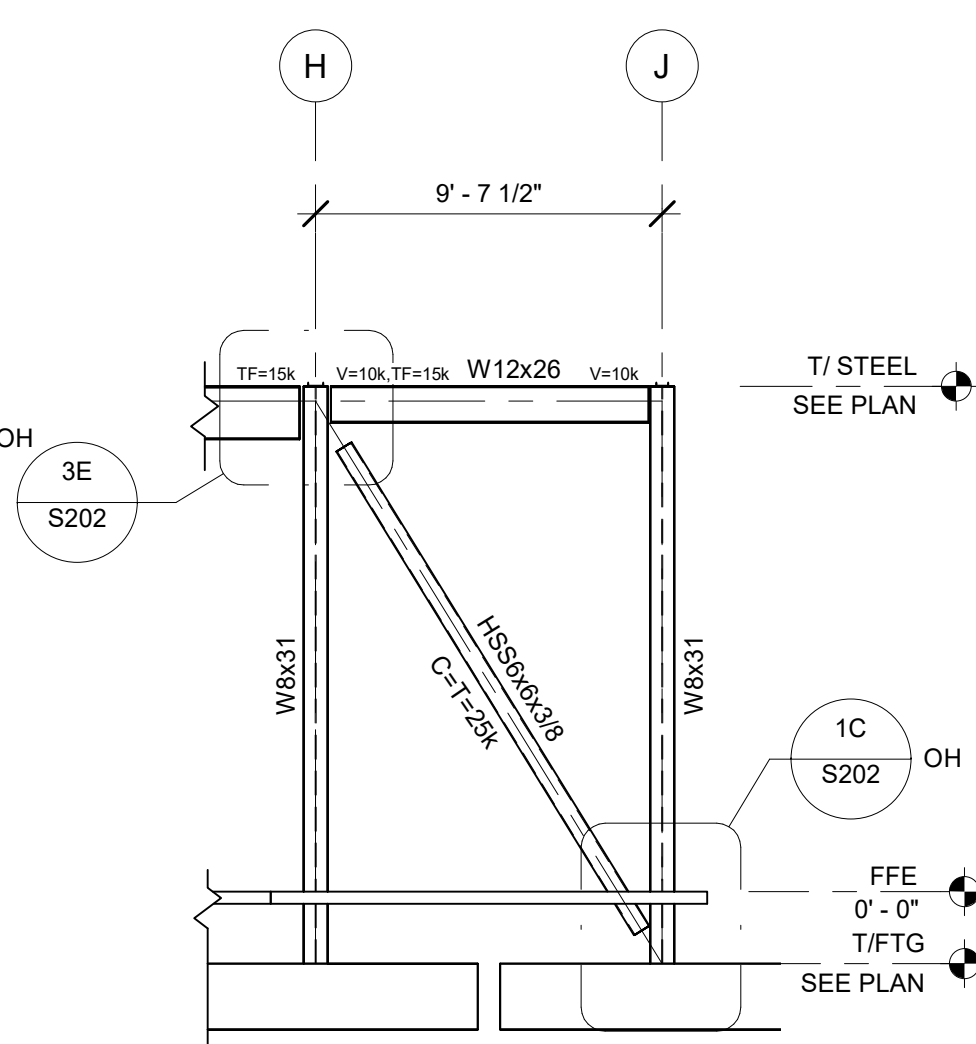
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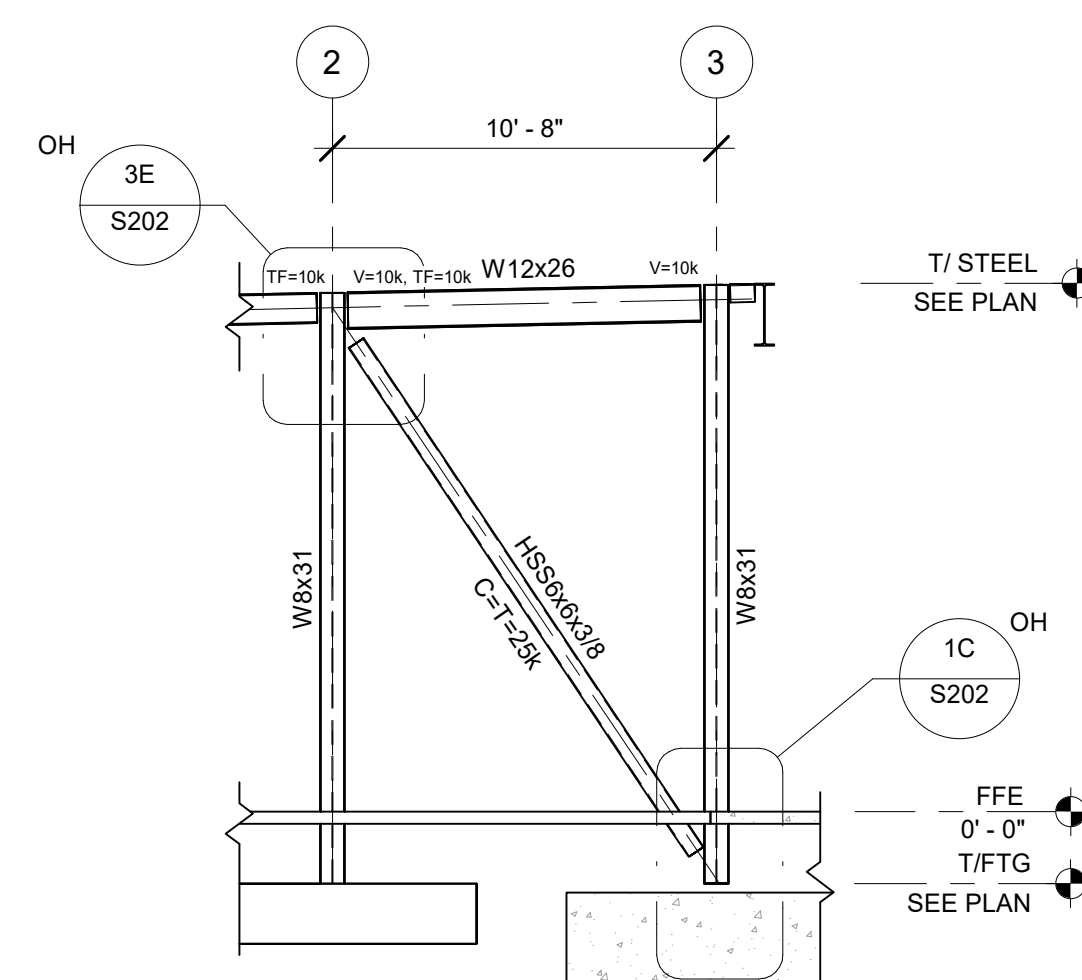
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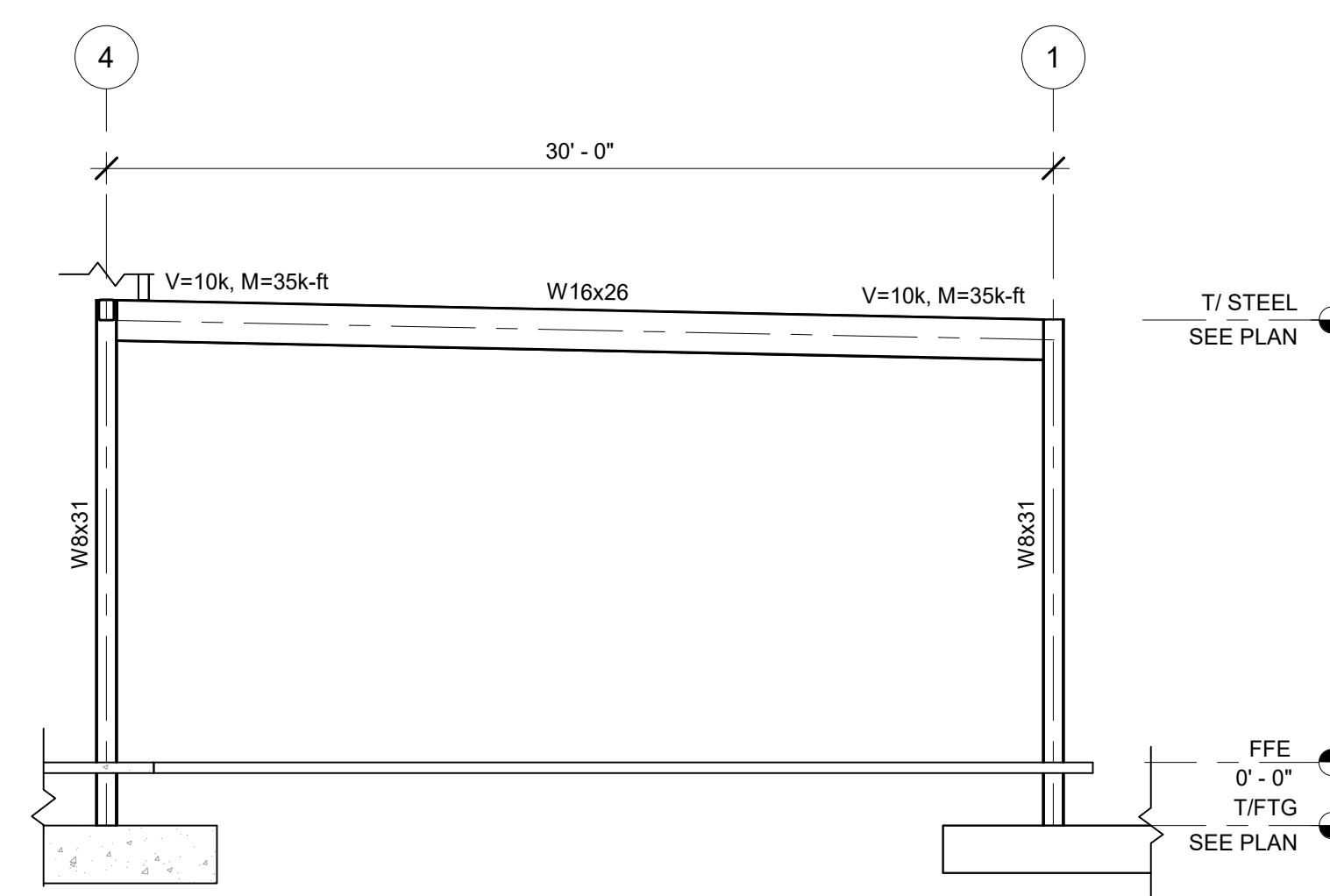
BF-6



BF-7



BF-8



BF-9

1A BRACE & MOMENT FRAME ELEVATIONS

S201 3/4" = 1'-0"

NOTES:

1. CENTRIDS OF MEMBERS SHALL COINCIDE, UNO
2. (N) INDICATES BRACE FRAME AXIAL FORCE (IN KIPS). *T* DENOTES THE BRACE IS IN TENSION. *C* DENOTES THE BRACE IS IN COMPRESSION. *V* INDICATES SHEAR FORCE (IN KIPS). *M* INDICATES MOMENT
3. *TF* INDICATES TRANSFER FORCE (IN KIPS) FROM ADJACENT BEAM.
4. FABRICATOR SHALL DESIGN ALL BEAM TO COLUMN CONNECTIONS WITHIN BRACE FRAME TO SUPPORT THE HORIZONTAL AND VERTICAL COMPONENTS OF THE BRACE FORCE PLUS BEAM SHEAR SHOWN ON THE ELEVATION. ALLOWABLE STRESS INCREASES OR LOAD REDUCTION ARE NOT PERMITTED.
5. CONNECTIONS TO BE DESIGNED BASED ON AISC SEISMIC DETAILING REQUIREMENTS.
6. SEE STEEL GENERAL NOTES FOR DESIGN METHOD, ASD OR LRFD



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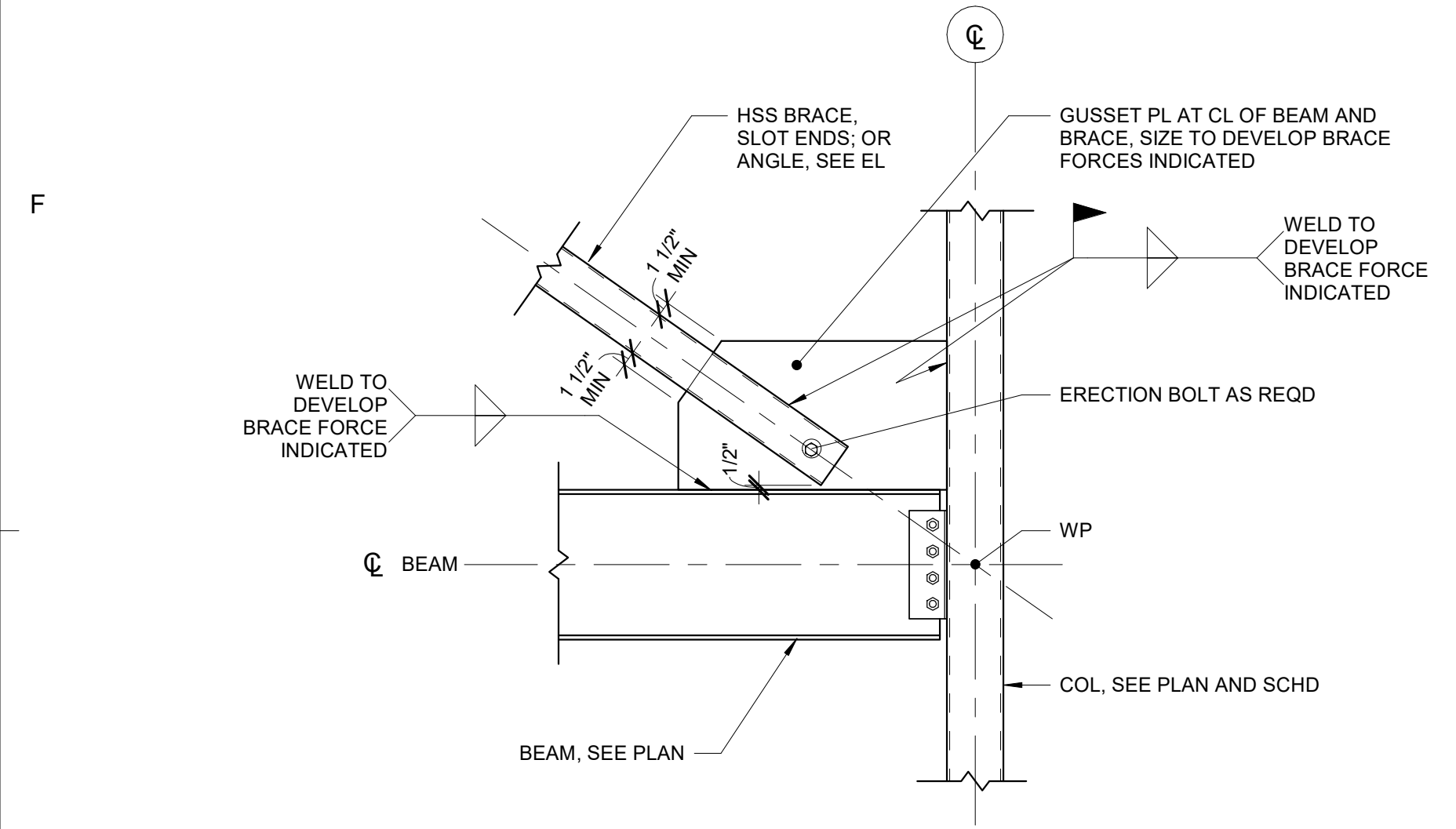
PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Sohan Shetty, P.E.

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LIBRARY
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Wilmington NC 28405

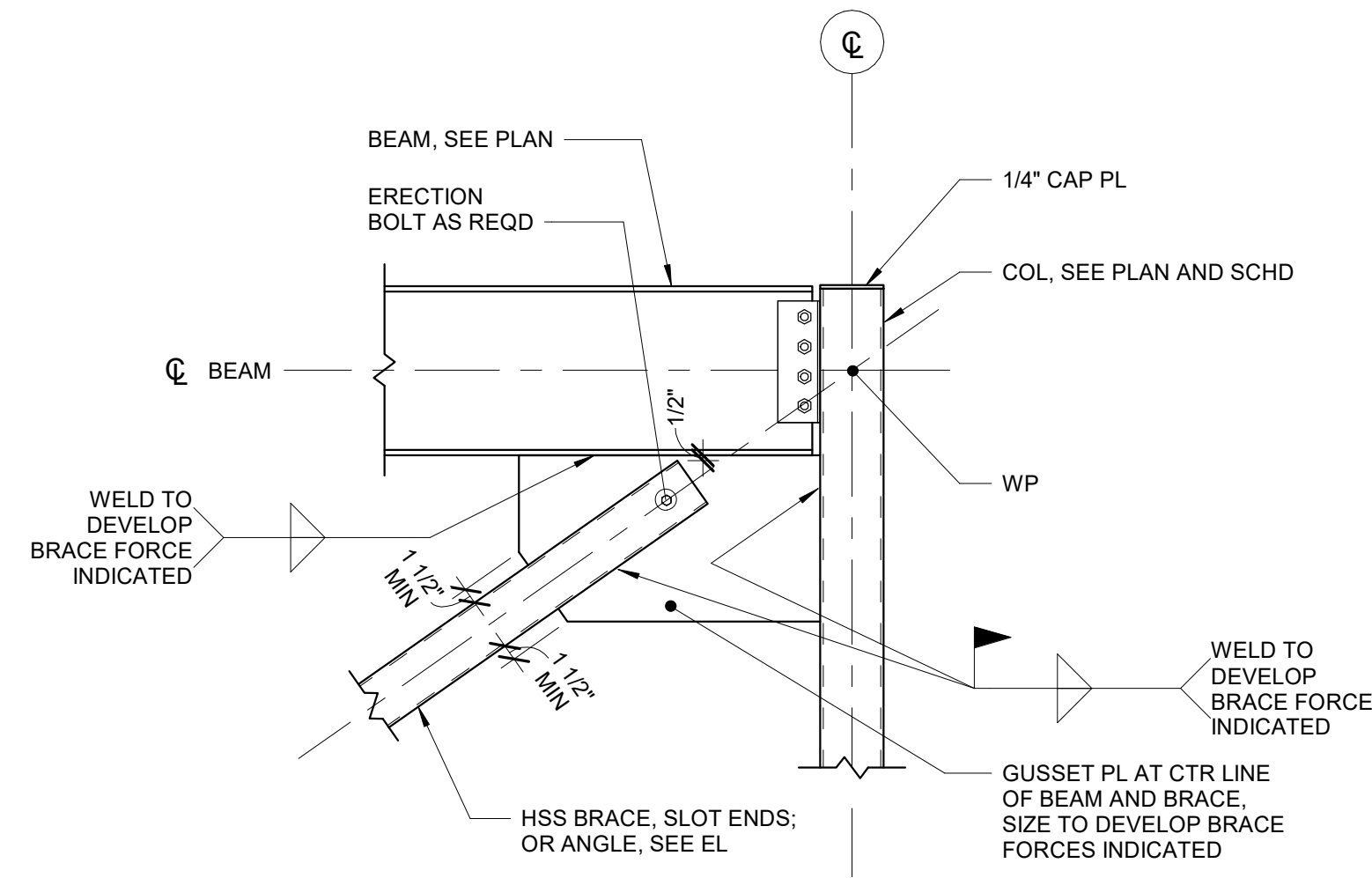
PROJECT NO.
514.18349.00

SHEET TITLE
BRACE FRAME
ELEVATIONS

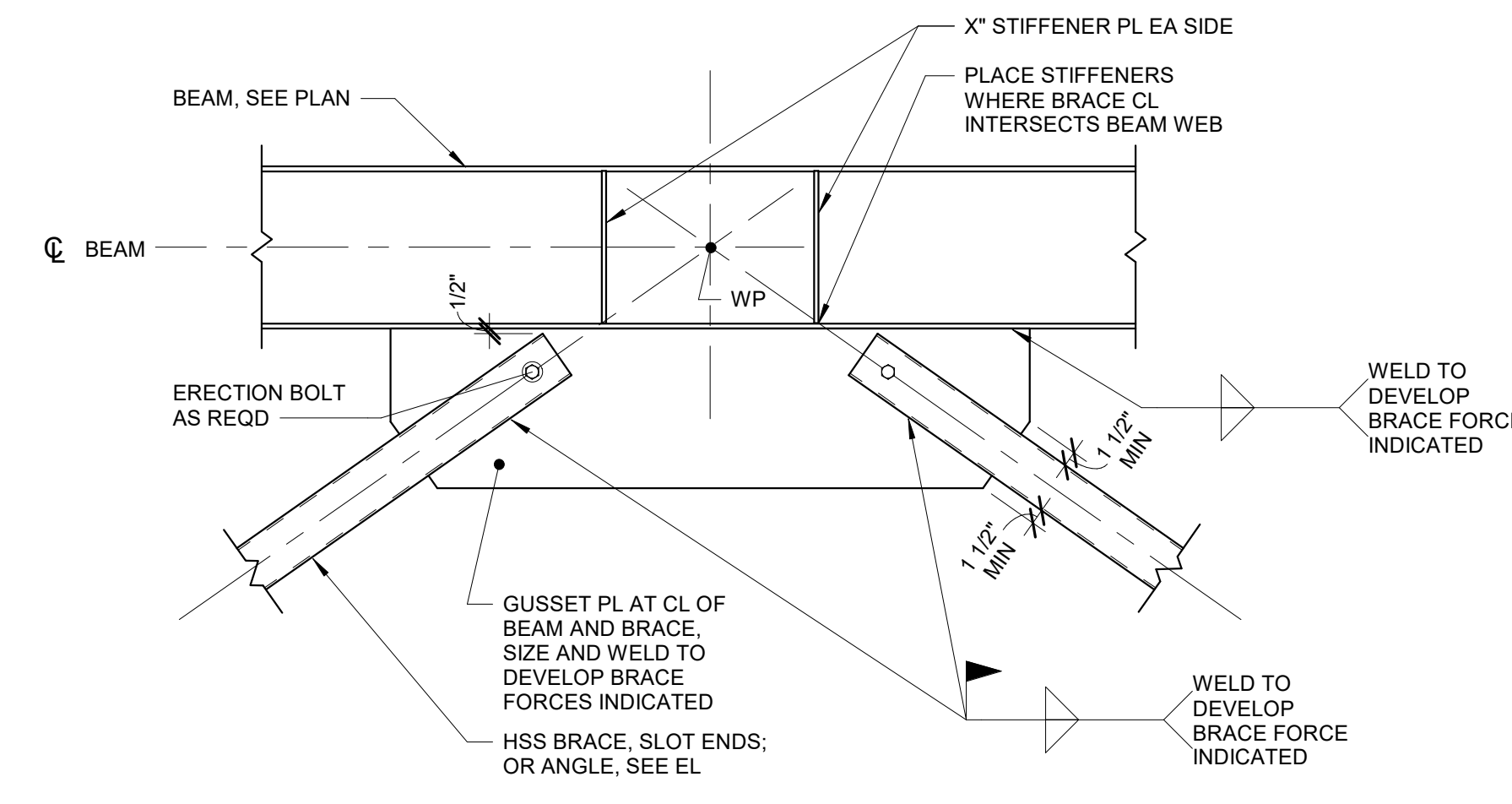
SHEET NUMBER
S201



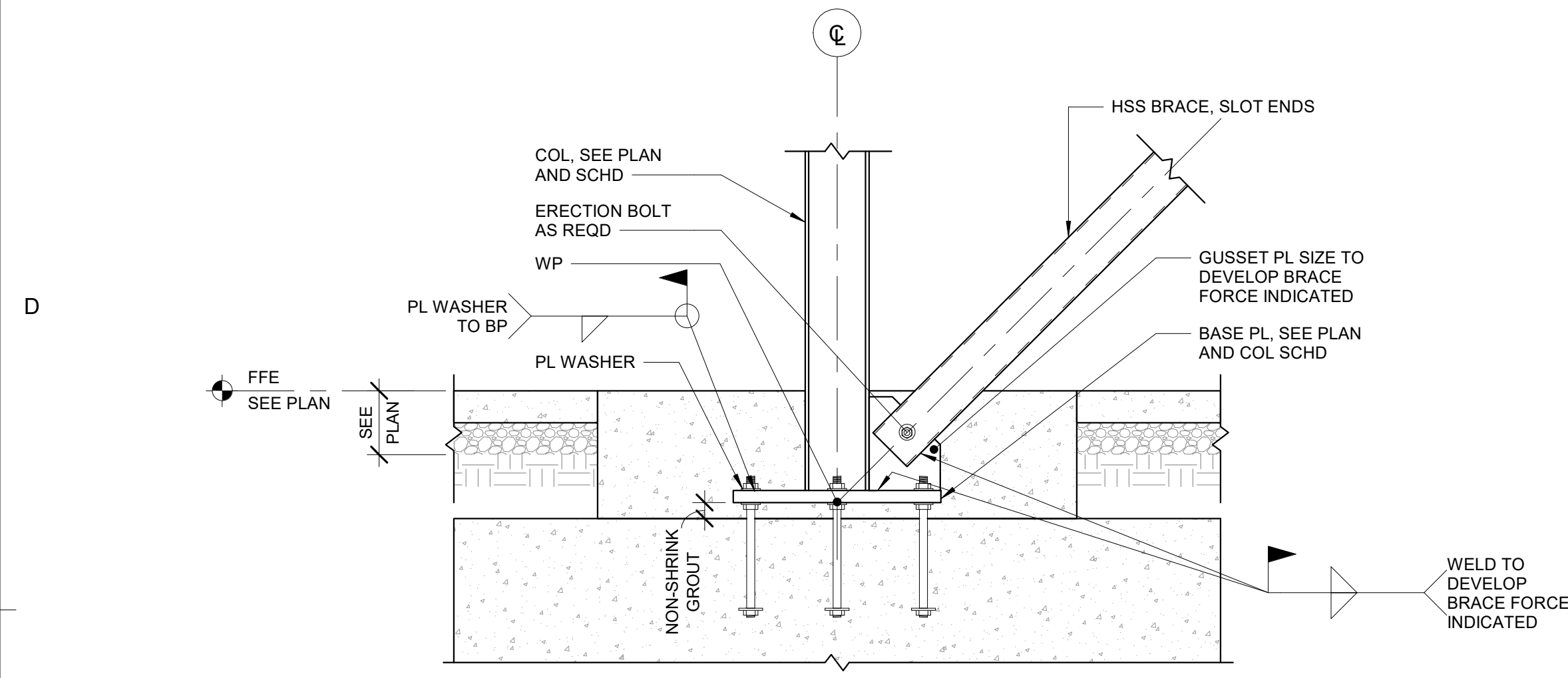
1E HSS BRACE TO BEAM BOTTOM DETAIL
S202 NOT TO SCALE



3E HSS BRACE TO HSS COLUMN TOP DETAIL
S202 3/4" = 1'-0"

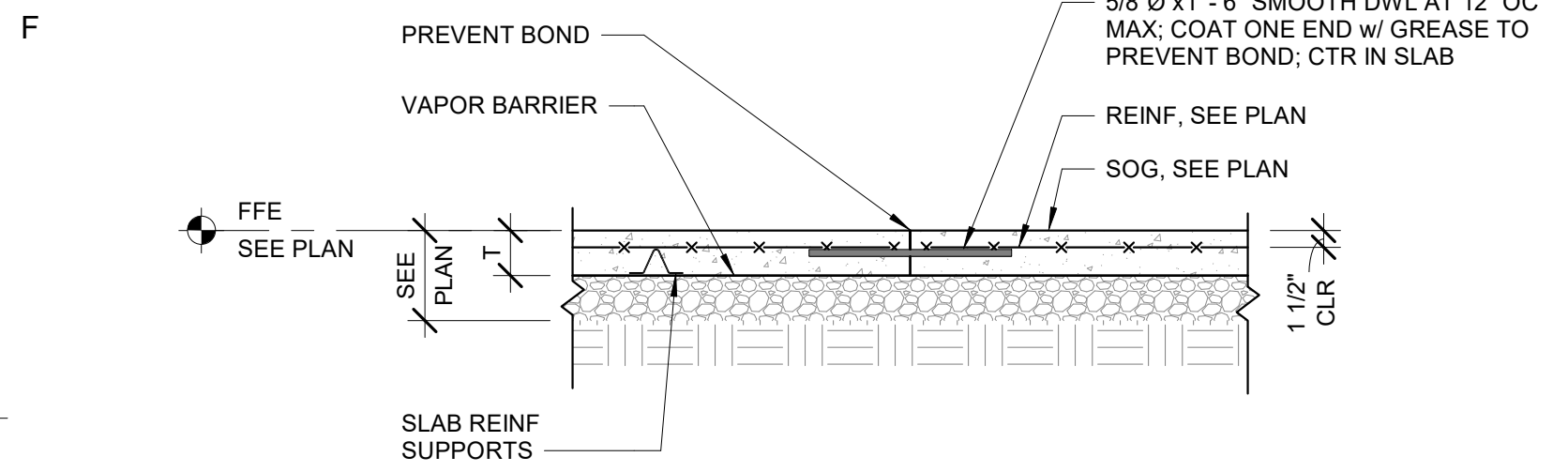


5E HSS BRACE CHEVRON TOP DETAIL
S202 3/4" = 1'-0"

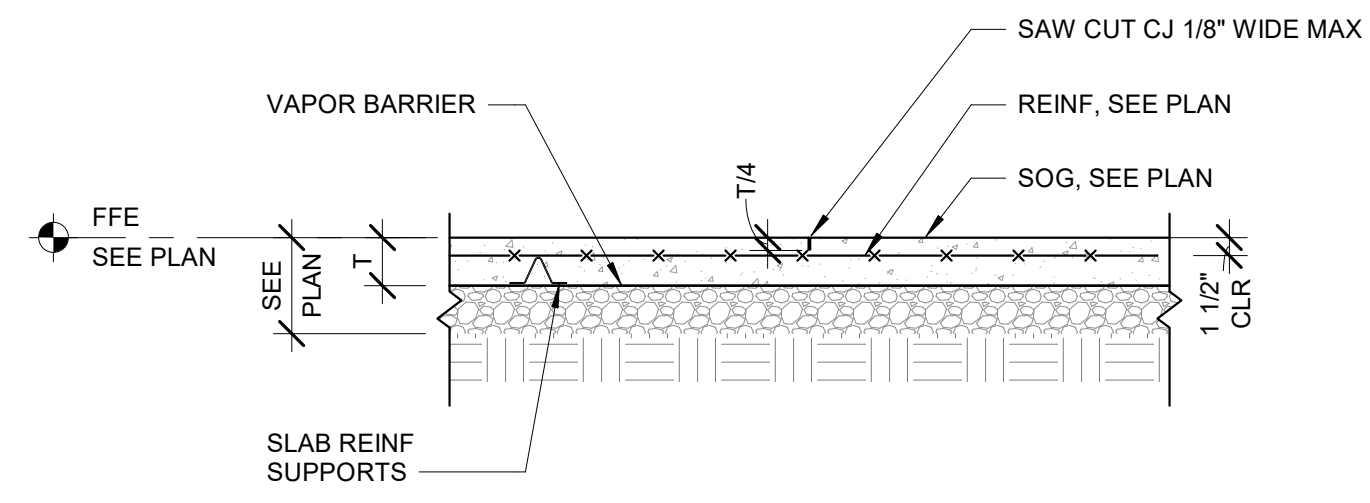


1C SECTION AT BRACED FRAME COLUMN BASE PLATE
S202 3/4" = 1'-0"

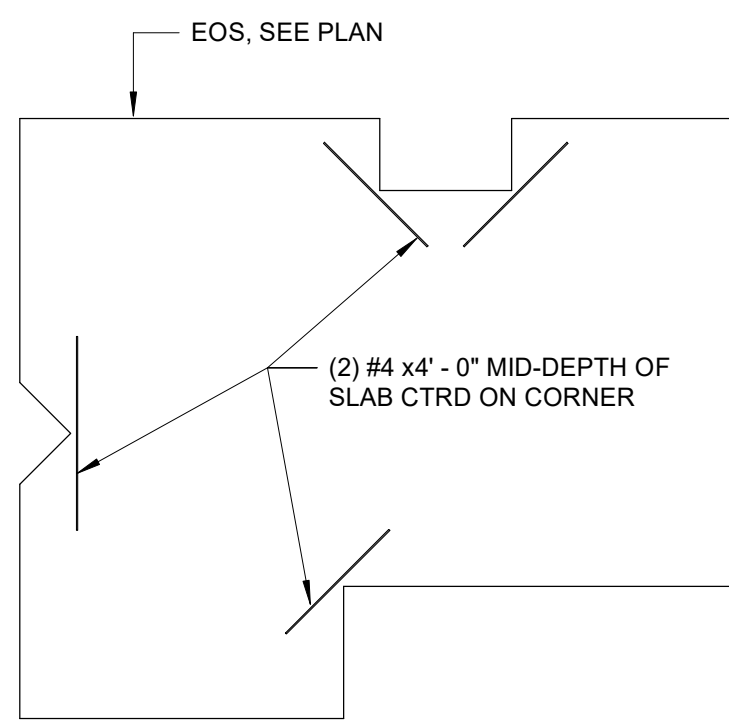




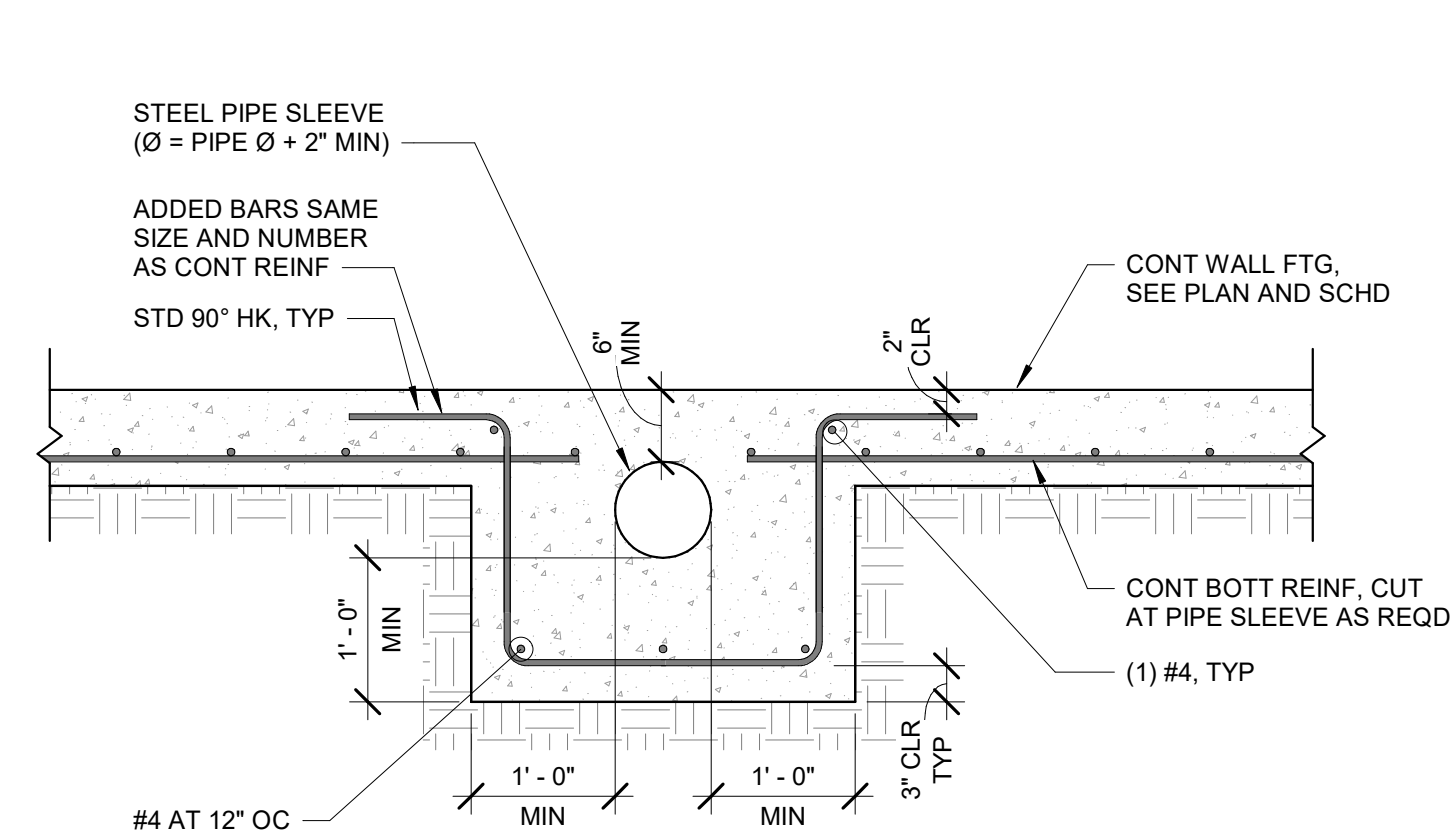
1E SLAB ON GRADE CONSTRUCTION JOINT DETAIL
S302 3/4" = 1'-0"
NOTES:
1. DO NOT RUN WWF THROUGH CONSTRUCTION JOINT.



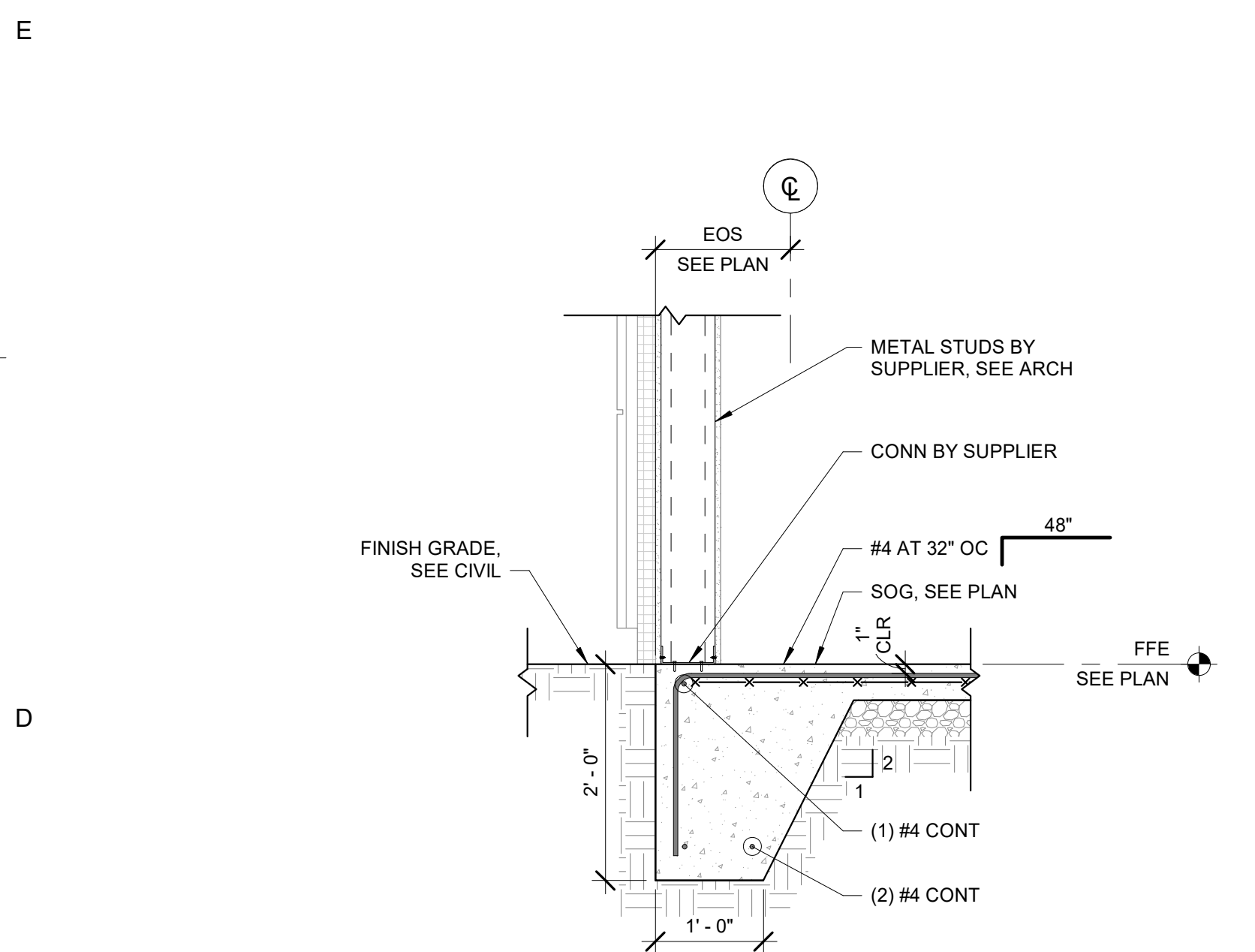
2E SLAB ON GRADE CONTRACTION JOINT DETAIL
S302 3/4" = 1'-0"
NOTES:
1. CUT EVERY OTHER WIRE WHERE CONTRACTION JOINTS ARE TO BE CUT.
2. SAW CUT SLAB WITHIN 8 HOURS OF CONCRETE POUR.



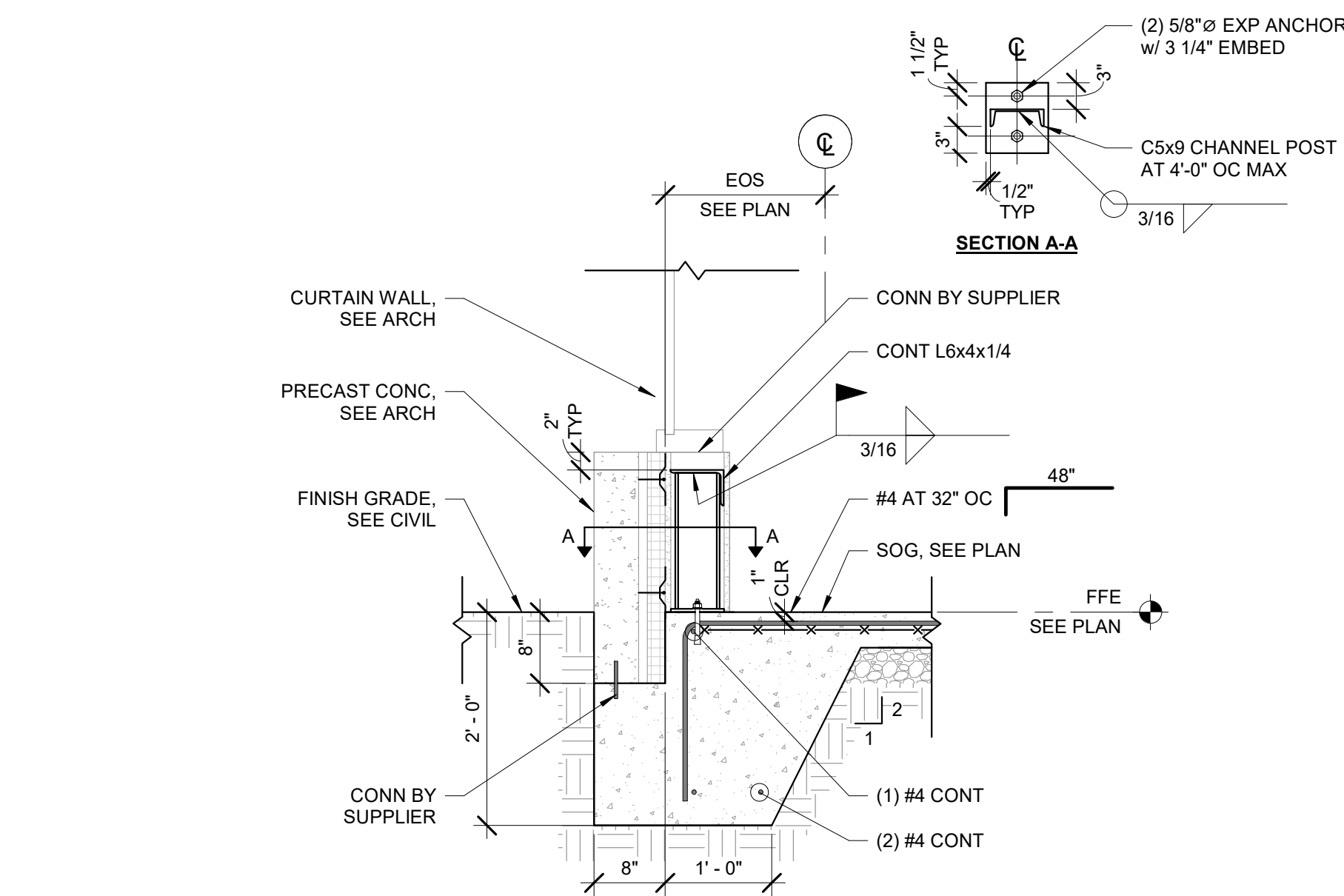
4E SLAB RE-ENTRANT CORNER REINFORCING
S302 NOT TO SCALE
NOTES:
1. WHERE SLAB CONTRACTION JOINT INTERSECTS RE-ENTRANT CORNER ADDED SLAB REINFORCING IS NOT REQUIRED. SEE PLAN FOR JOINT LOCATIONS.



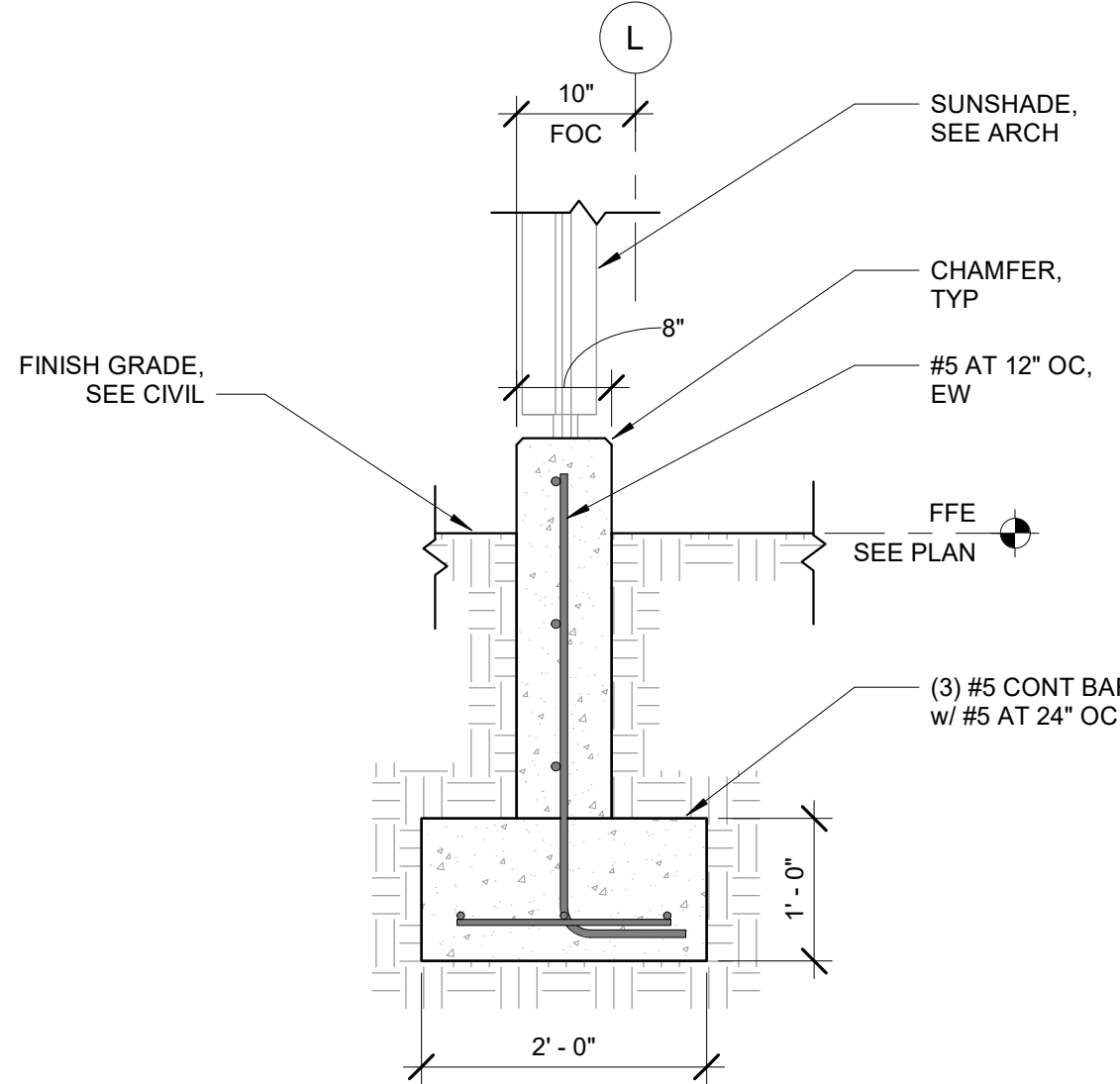
6E TYPICAL PIPE SLEEVE THROUGH FOOTING
S302 3/4" = 1'-0"



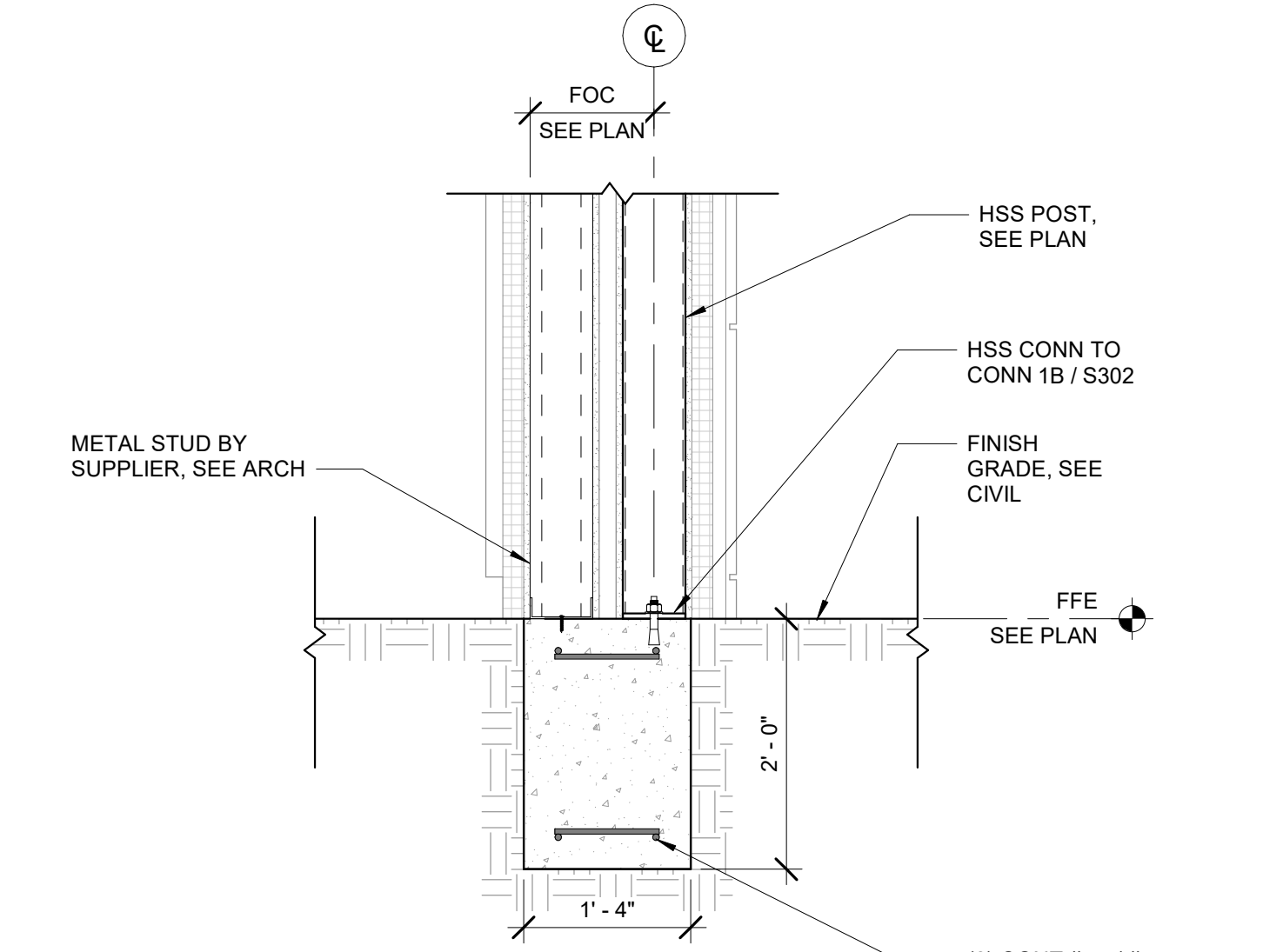
1D SECTION
S302 3/4" = 1'-0"



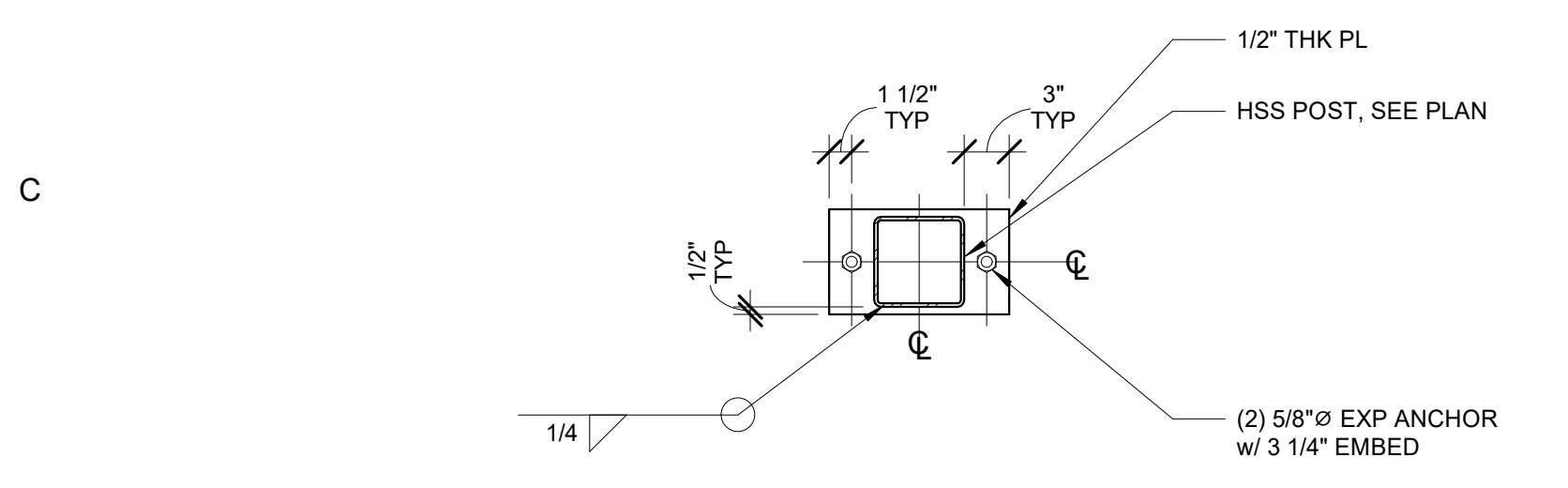
2D SECTION
S302 3/4" = 1'-0"
NOTE: AT SIM SECTION LOCATION THE SUNSHADE FOUNDATION IS NOT SHOWN, SEE 4D/S302 FOR SUNSHADE FOUNDATION



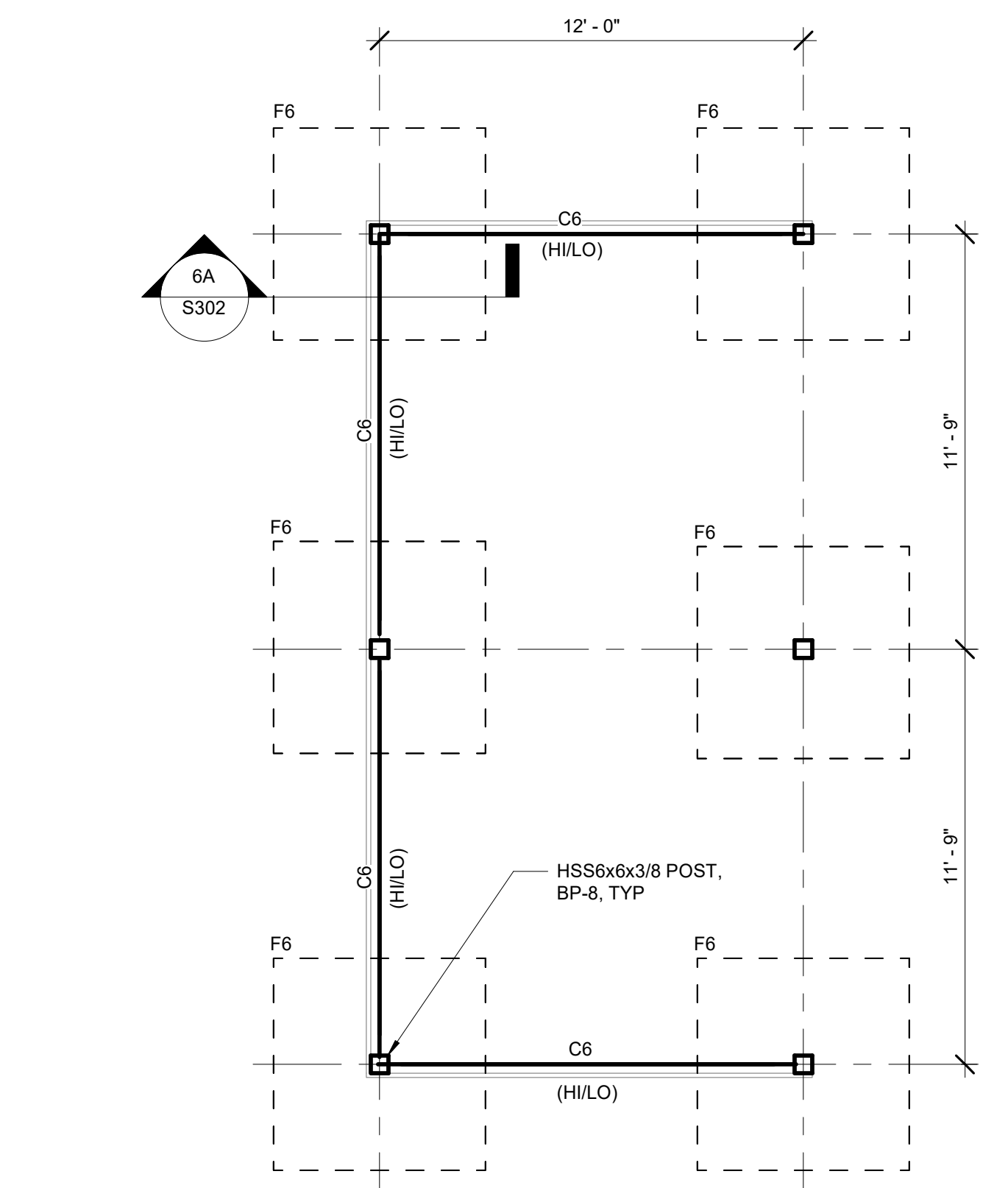
4D SECTION
S302 3/4" = 1'-0"



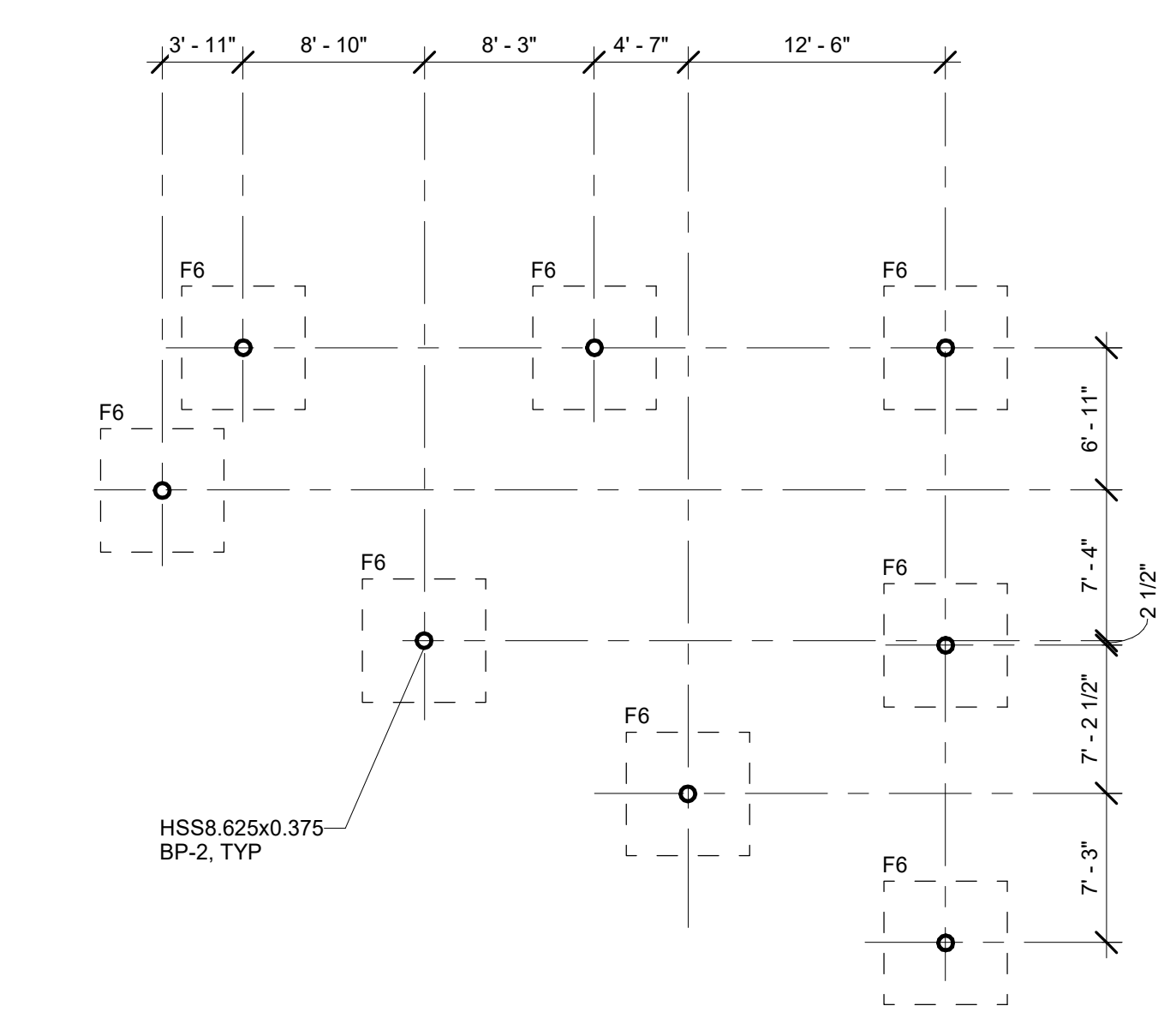
6D SECTION
S302 3/4" = 1'-0"
NOTES:
1. EXTEND CONTINUOUS BARS INTO TURNED DOWN SLAB EDGE FOR CLASS B LAP LENGTH MINIMUM



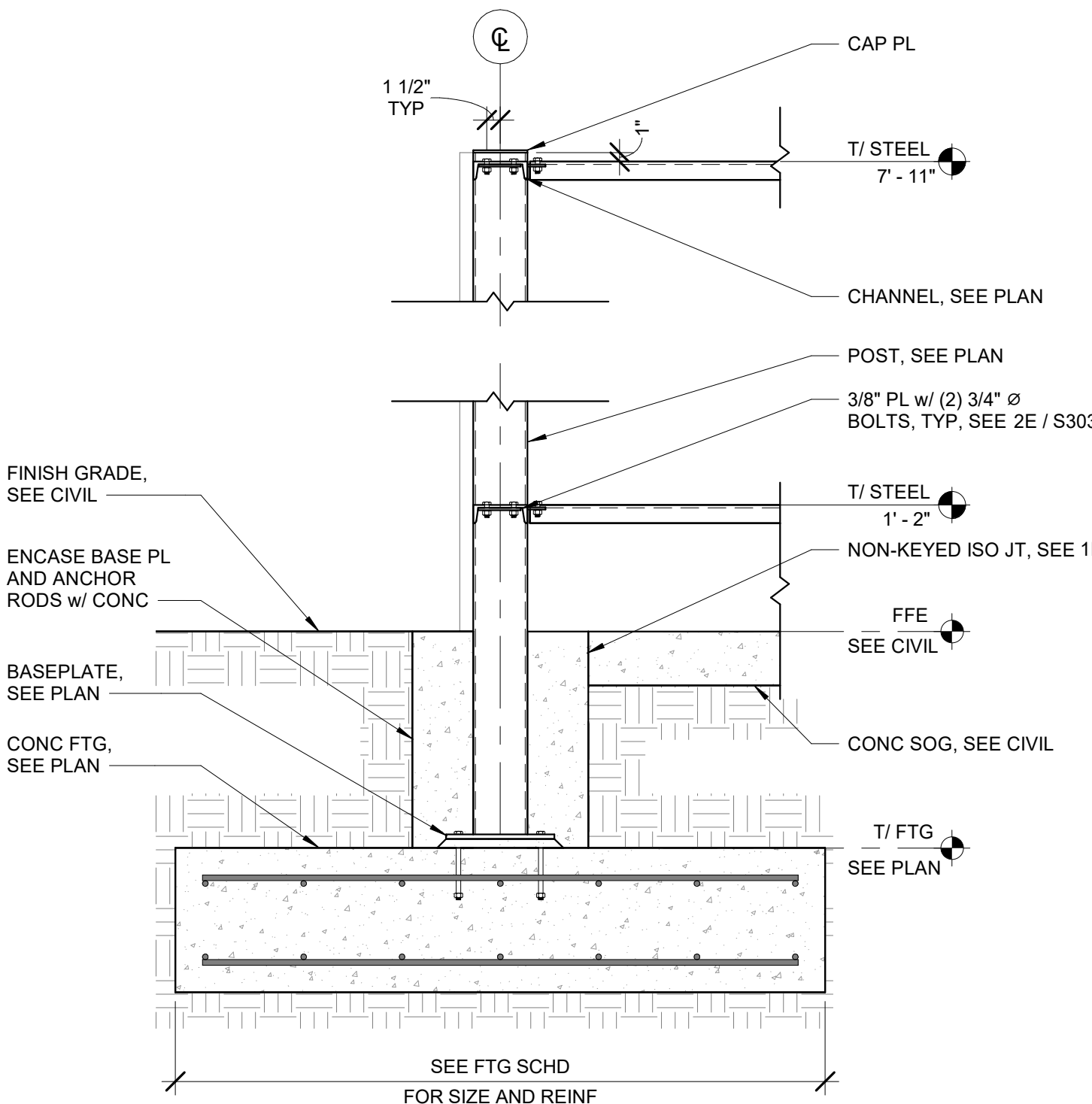
1B WINDPOST BASE PLATE DETAIL
S302 1" = 1'-0"



3A DUMPSTER SCREEN WALL PLAN
S302 1/4" = 1'-0"
NOTES:
1. SEE S001 FOR GENERAL NOTES AND ABBREVIATIONS.
2. FINISHED FLOOR ELEVATION 35.50', UNO. REFERENCE ELEVATION 0' - 0', DATUM.
3. TOP OF FOOTING 2' - 0" BELOW FINISHED FLOOR ELEVATION. UNO. <No> INDICATES TOP OF FOOTING ELEVATION. SEE PLAN.
4. "F#" INDICATES FOOTING TYPE. SEE S301.
5. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF DUMPSTER STRUCTURE.
6. C6 DENOTES C&H10.5



4A ADD ALTERNATE - STORYTIME AREA FND PLAN
S302 1/8" = 1'-0"
NOTES:
1. SEE S001 FOR GENERAL NOTES AND ABBREVIATIONS.
2. FINISHED FLOOR ELEVATION 35.50', UNO. REFERENCE ELEVATION 0' - 0', DATUM.
3. TOP OF FOOTING 2' - 0" BELOW FINISHED FLOOR ELEVATION. UNO. <No> INDICATES TOP OF FOOTING ELEVATION. SEE PLAN.
4. "F#" INDICATES FOOTING TYPE. SEE S301.
5. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF STORY TIME STRUCTURE.



6A SECTION
S302 3/4" = 1'-0"



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PROJECT TEAM

PRINCIPAL IN CHARGE

Jerry Guerrier, AIA

PROJECT MANAGER

Charlotte Hagen, AIA

DESIGN TEAM

Sohan Shetty, P.E.

PROJECT NO.

514.18349.00

SHEET TITLE

FOUNDATION DETAILS-II

PROJECT NO.

514.18349.00

SHEET TITLE

FOUNDATION DETAILS-II

PROJECT NO.

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FOUNDATION DETAILS-II

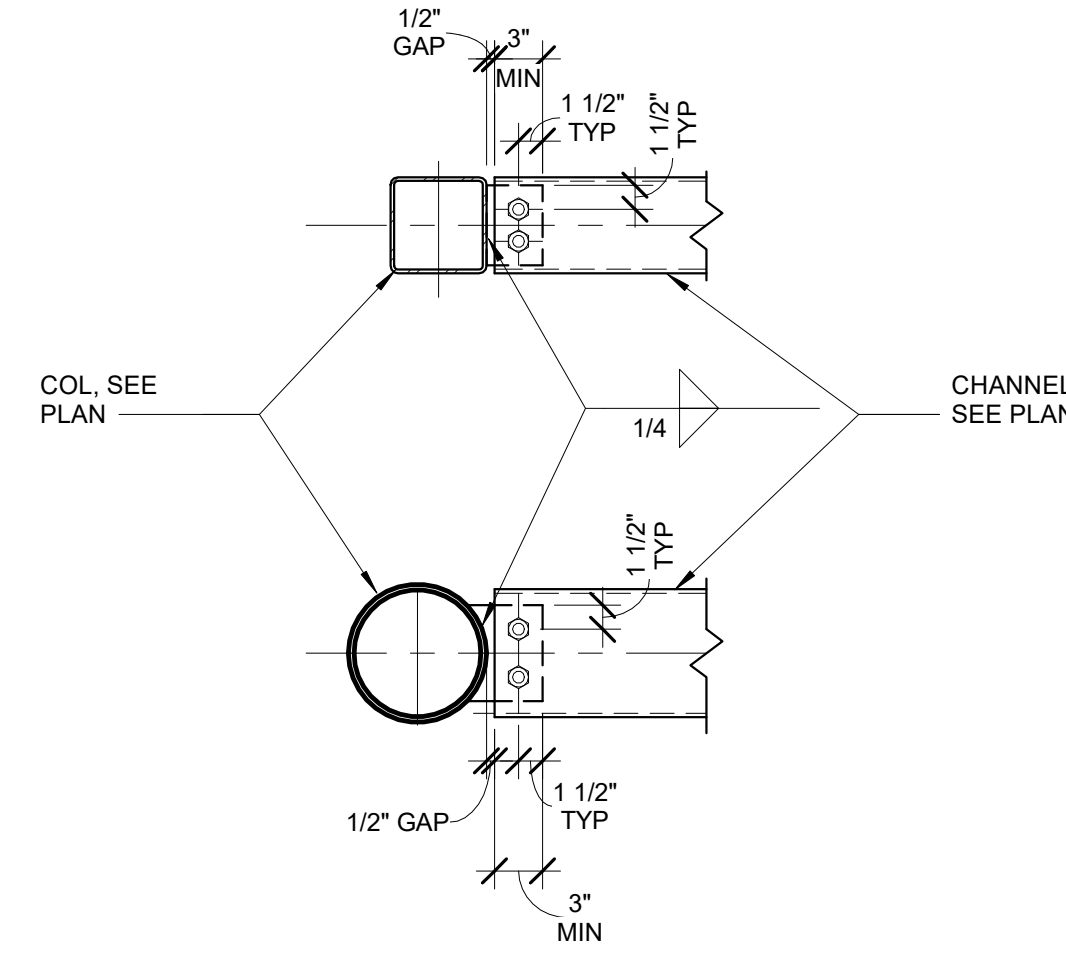
PROJECT NO.

514.18349.00

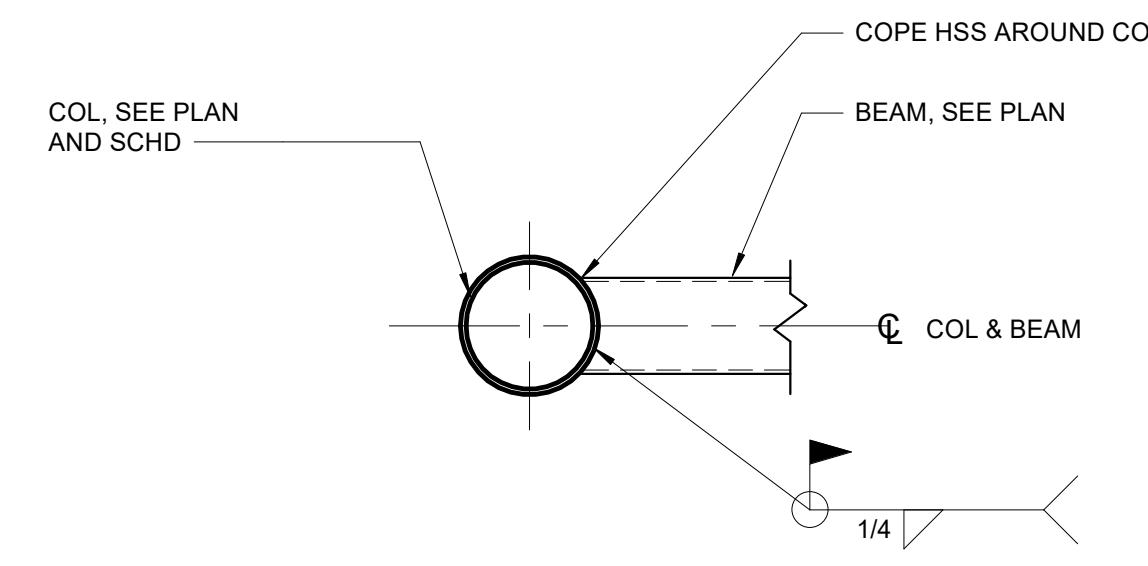
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FOUNDATION DETAILS-II

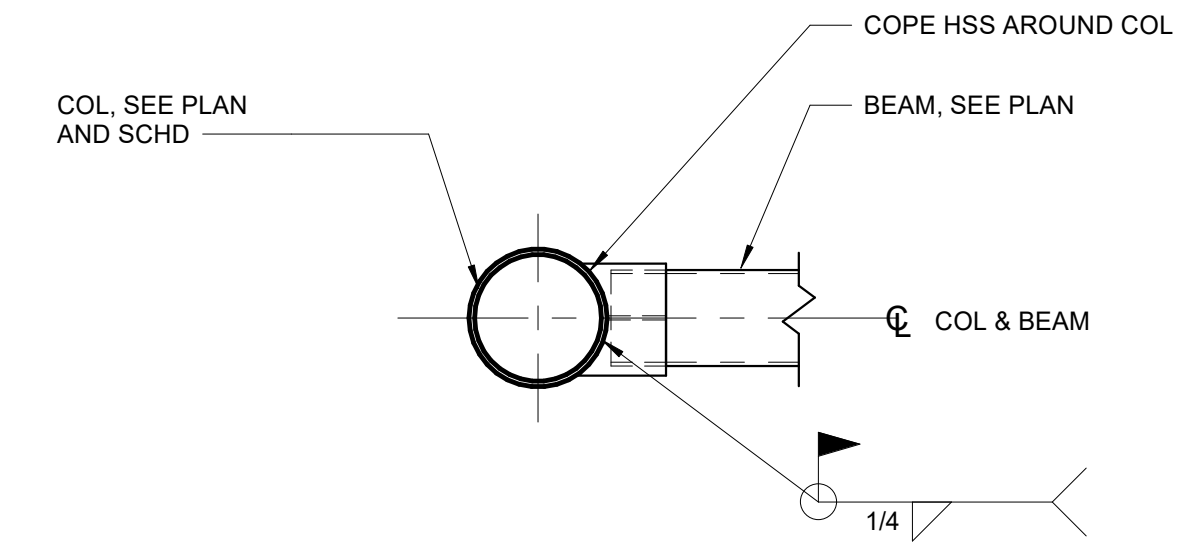
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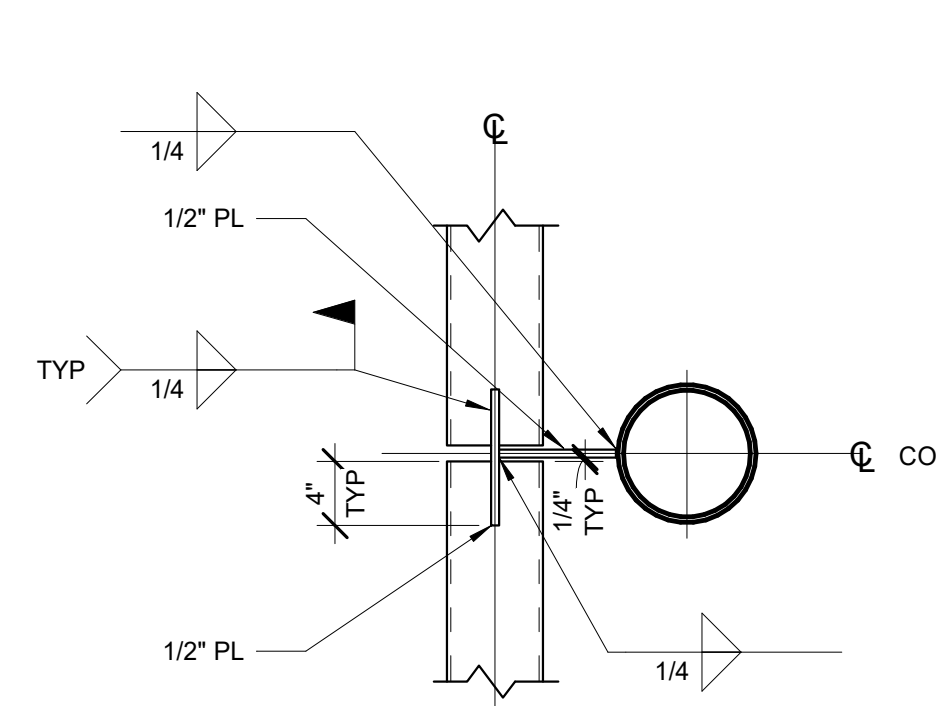
2E SCREEN WALL POST TO CHANNEL CONN
S303 1" = 1'-0"



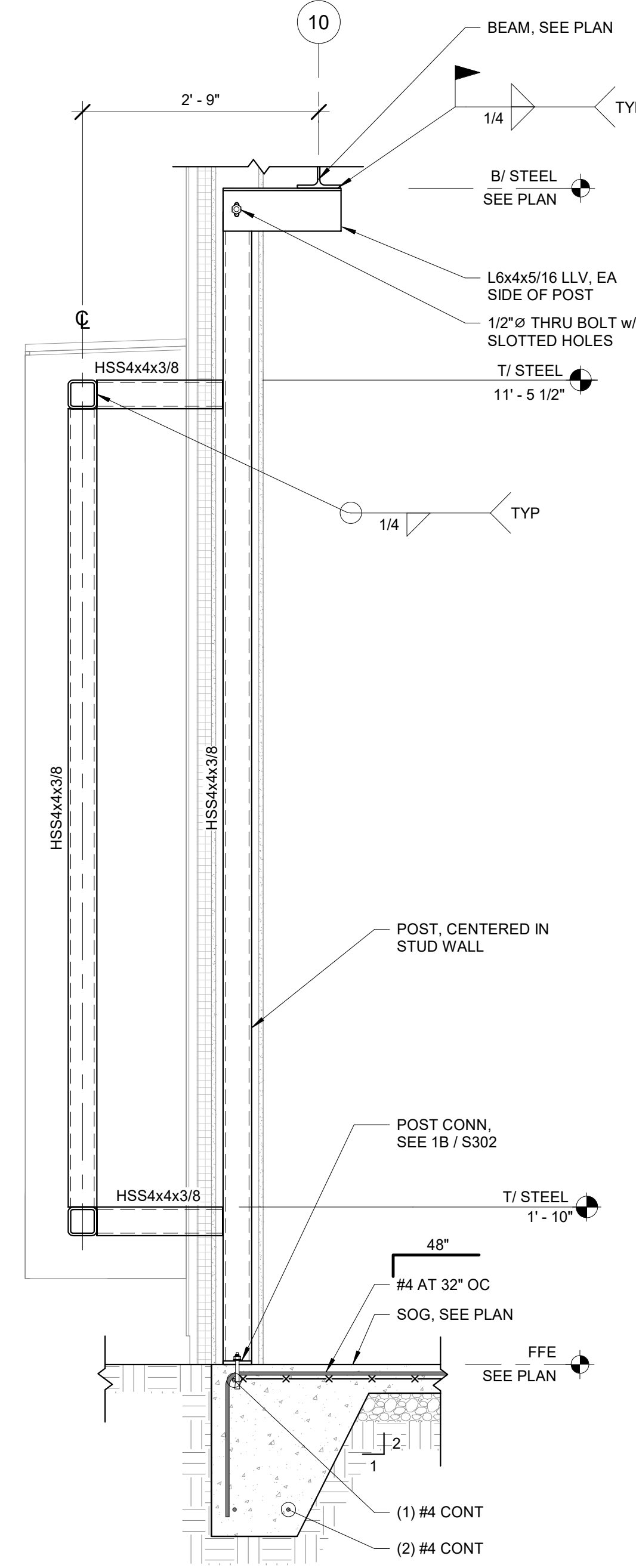
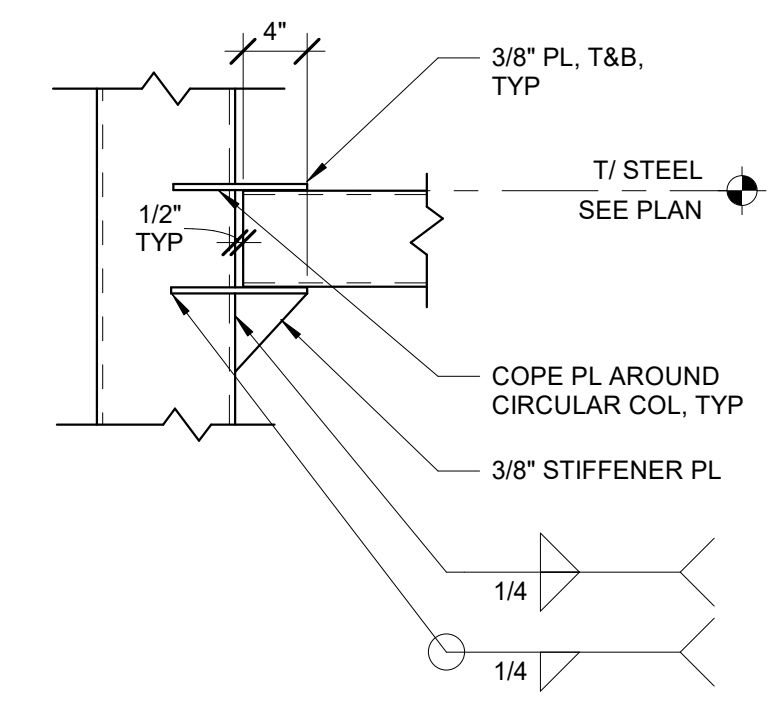
4E EXPOSED HSS CIRCULAR COL TO HSS BEAM CONN DETAIL
S303 1" = 1'-0"



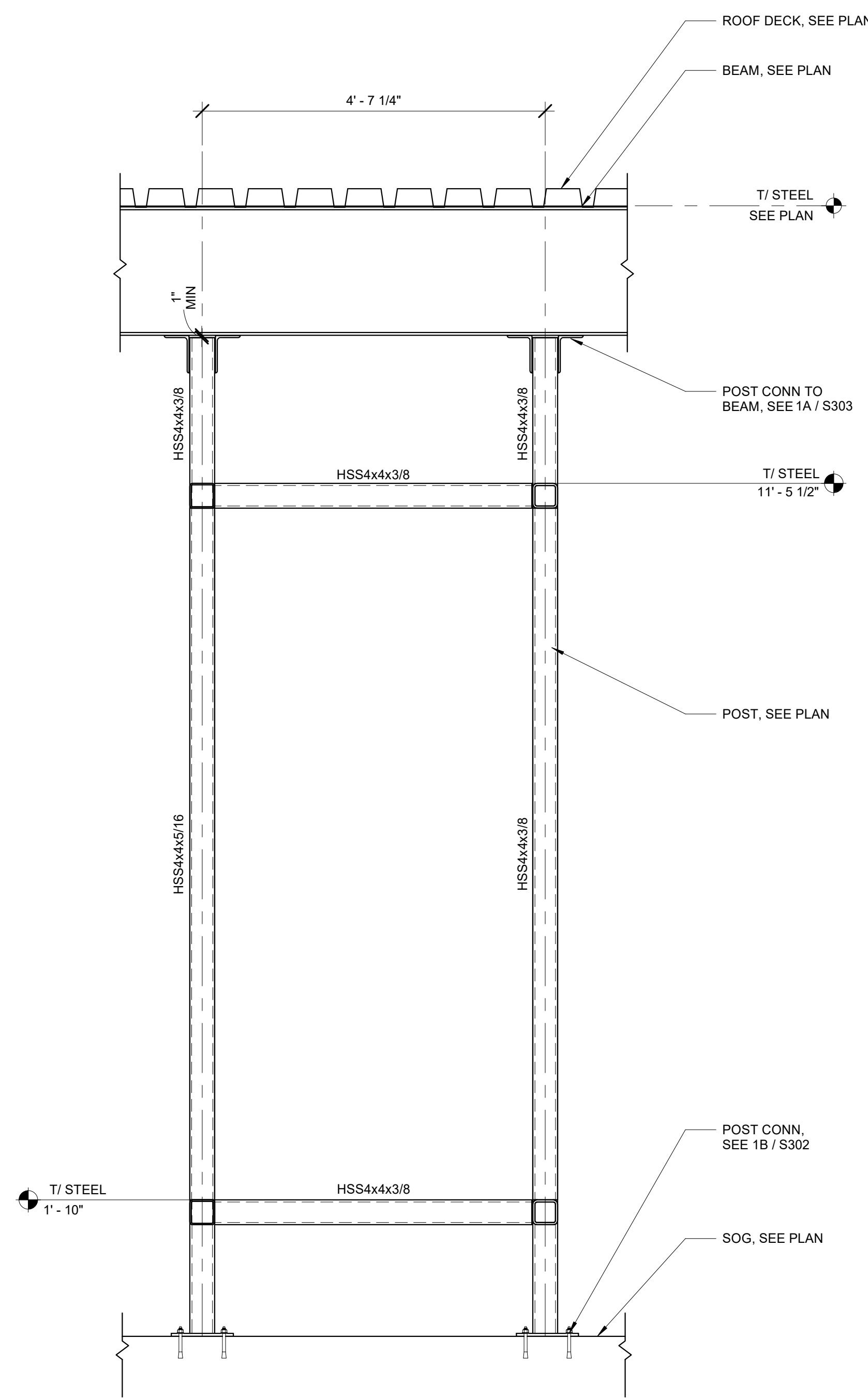
6D HSS CIRCULAR COL TO HSS BEAM CONN DETAIL
S303 1" = 1'-0"



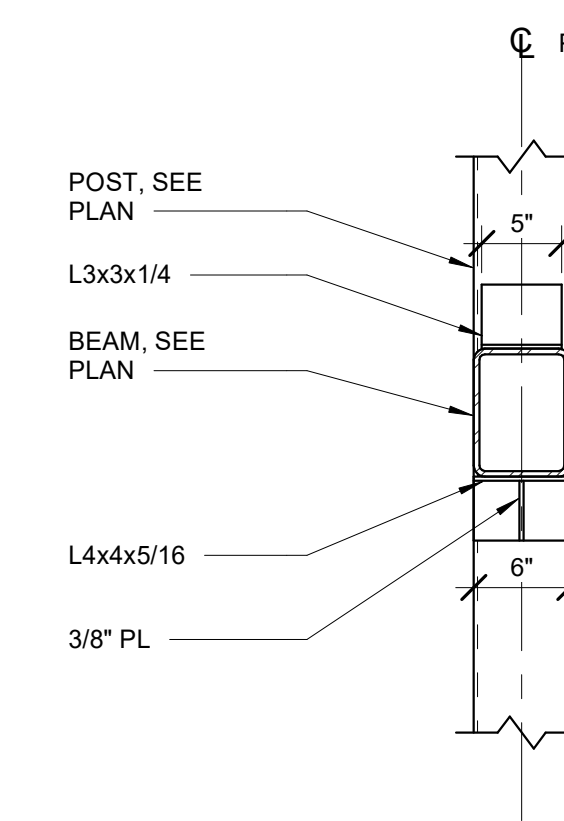
4D HSS WIND GIRT TO HSS CIRCULAR COL CONN DETAIL
S303 1" = 1'-0"



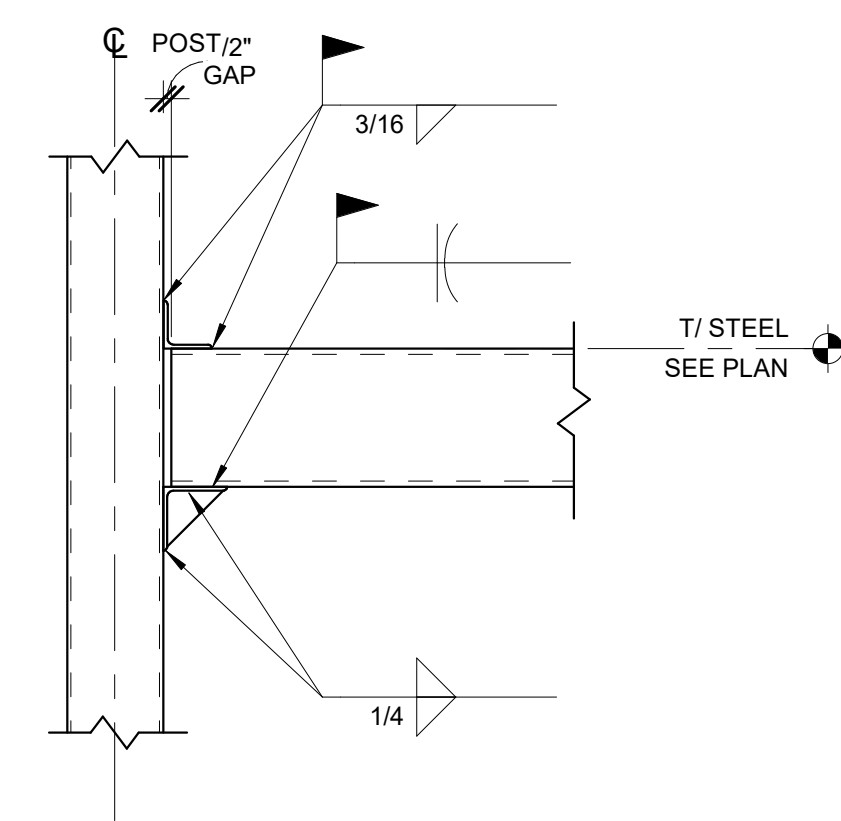
1A SECTION
S303 3/4" = 1'-0"



2A SECTION
S303 3/4" = 1'-0"



4A HSS WIND GIRT TO HSS COL CONN DETAIL
S303 1" = 1'-0"



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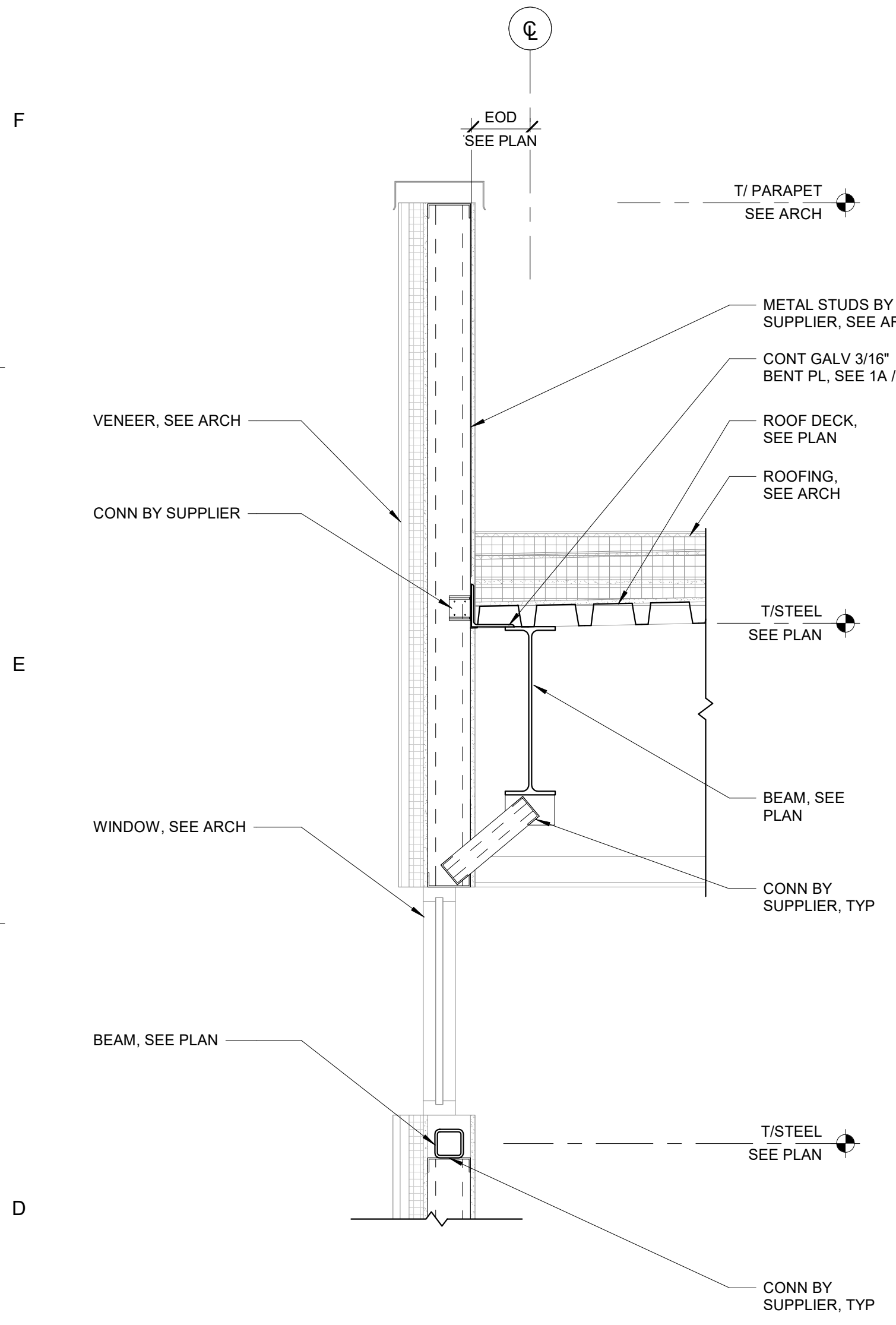
PROJECT TEAM
PRINCIPAL IN CHARGE
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PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Sohan Shetty, P.E.

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4400 Northchase Parkway NE
Wilmington NC 28405

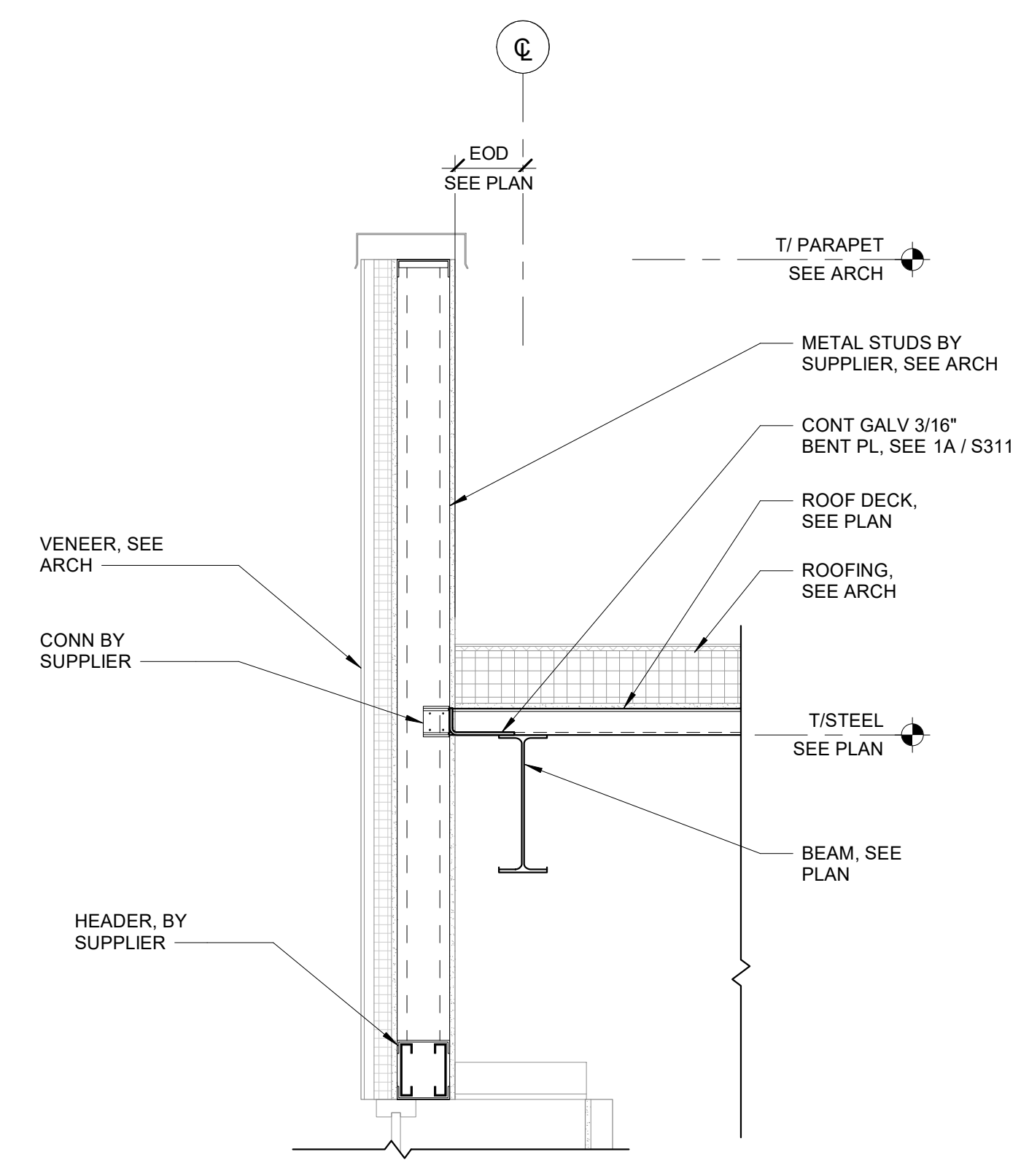
PROJECT NO.
514.18349.00

SHEET TITLE
FOUNDATION DETAILS-III & TYP CONN DETAILS

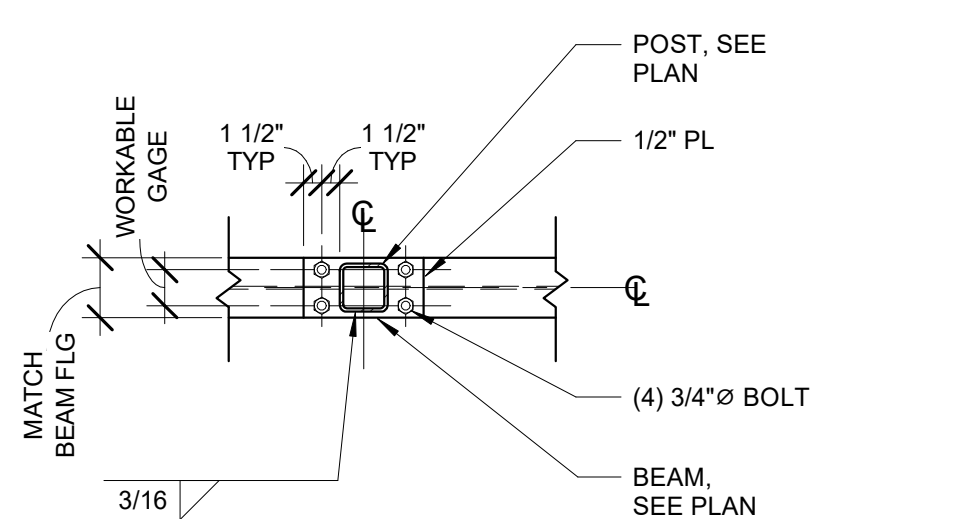
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S303



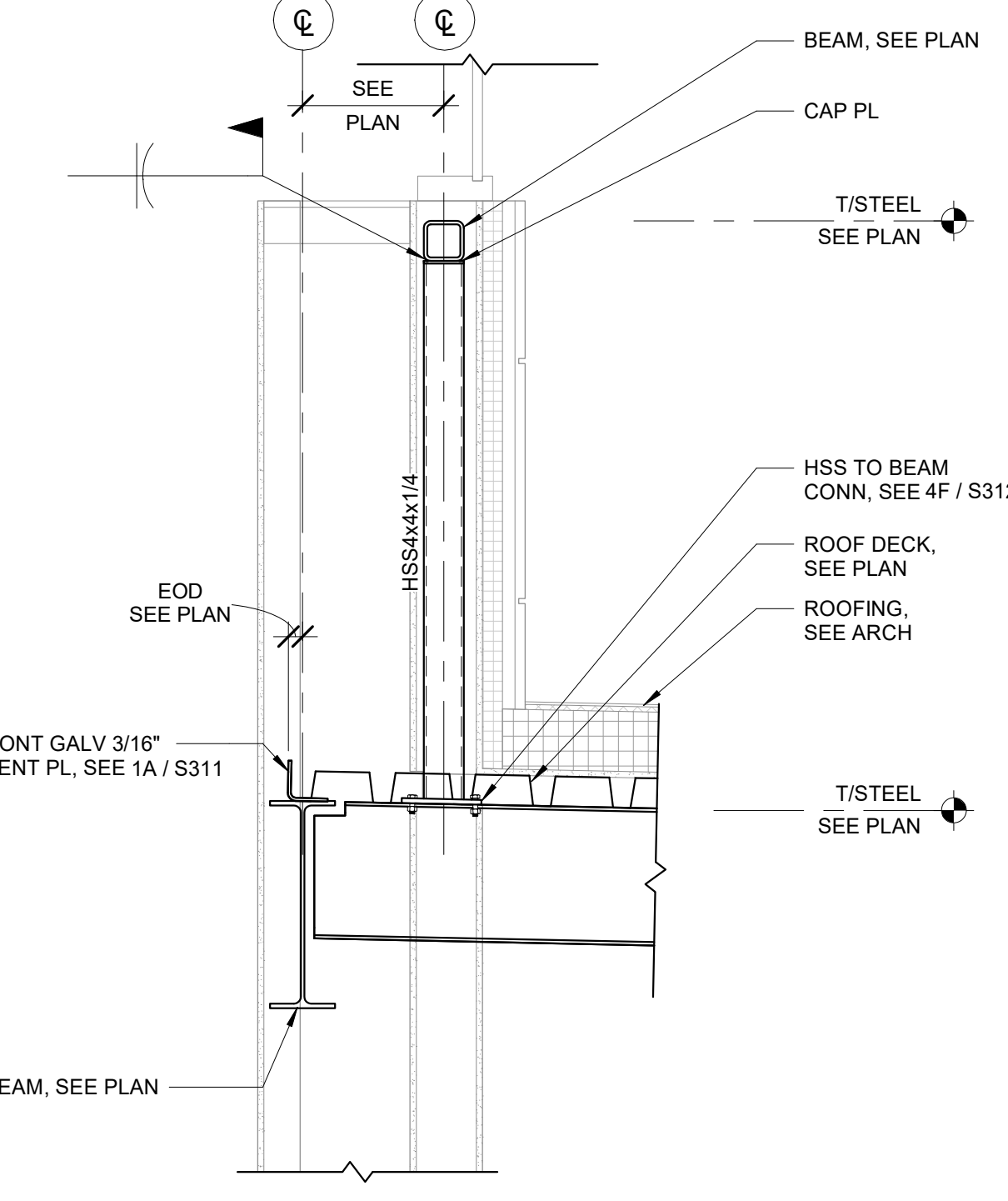
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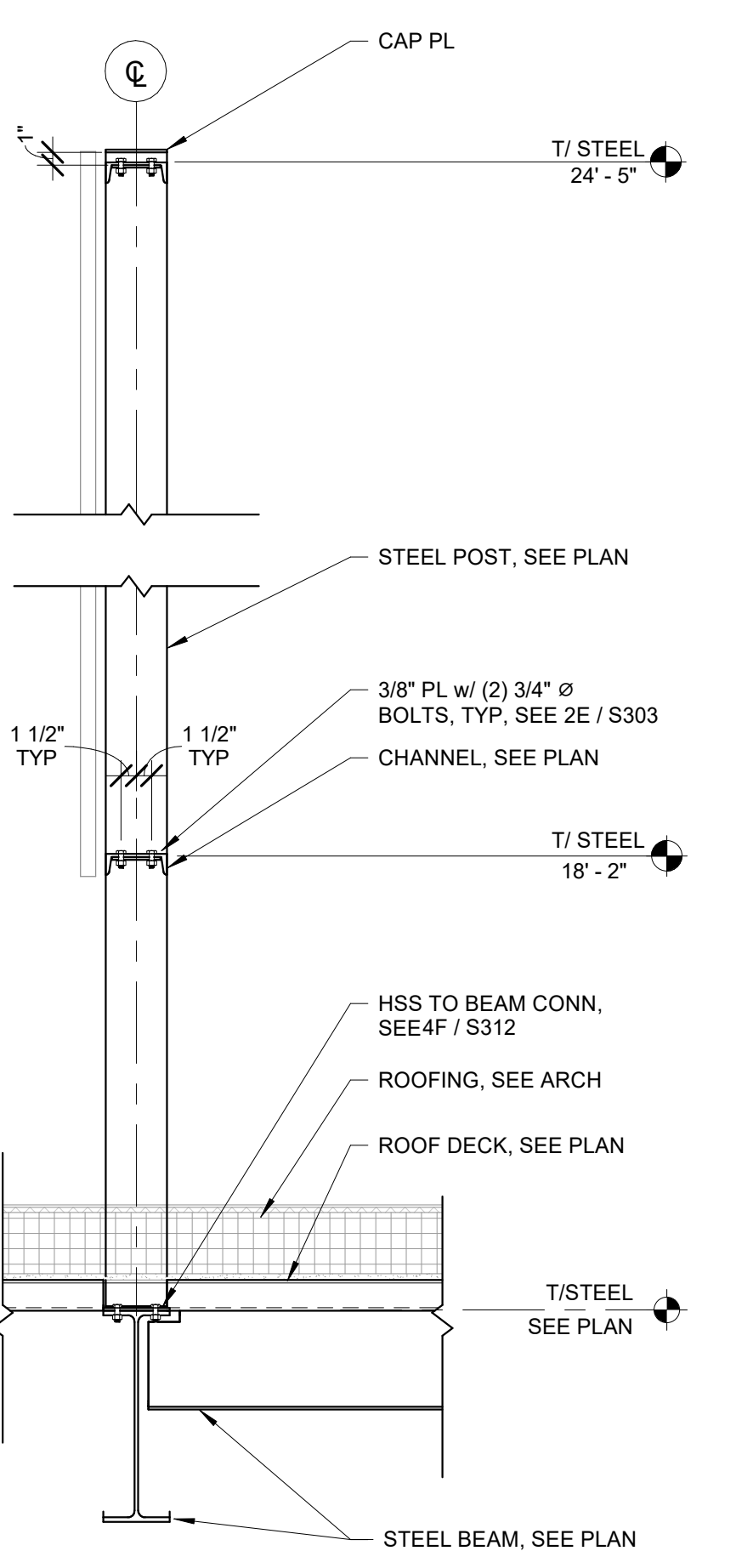
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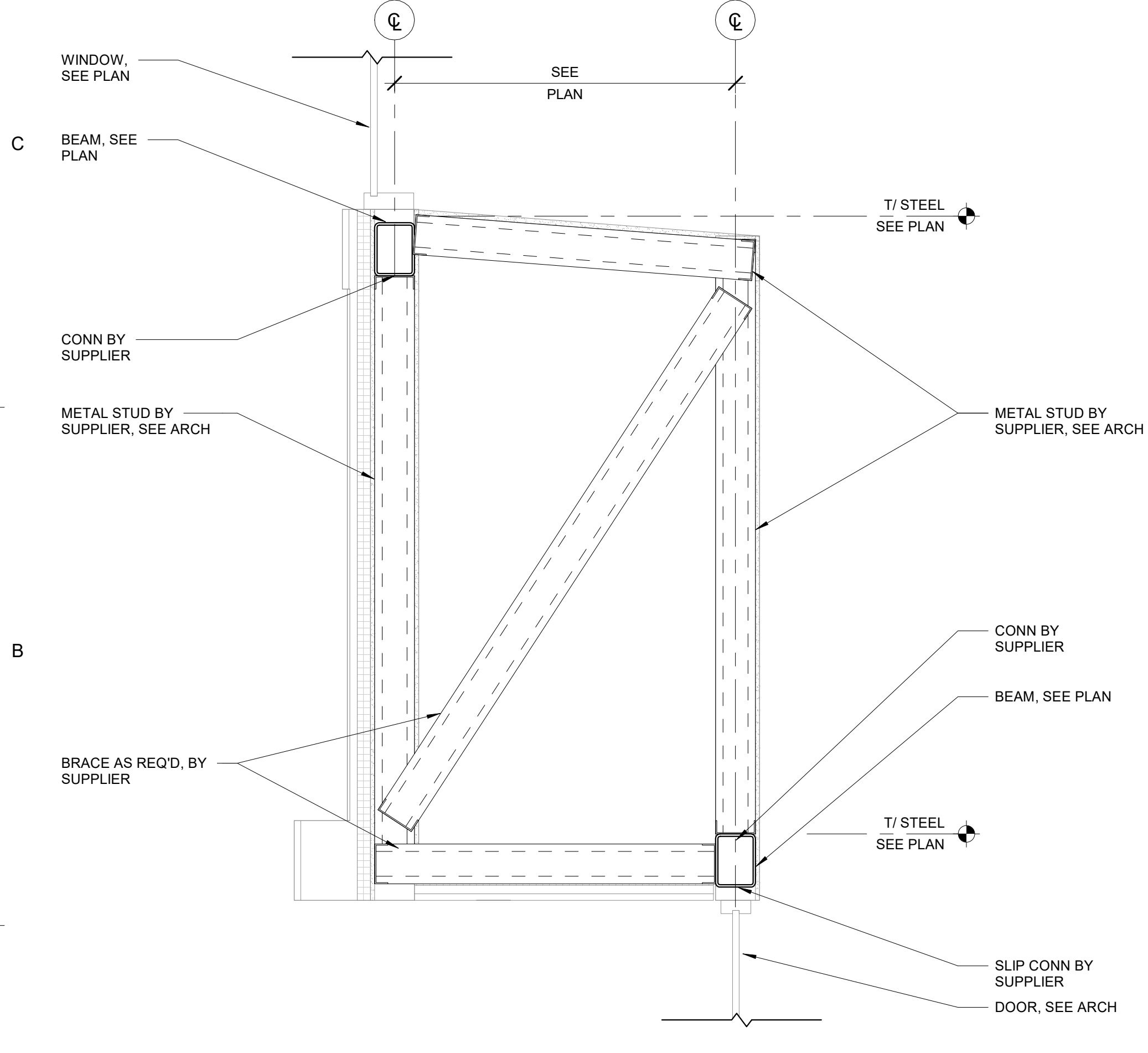
4F HSS POST TO STEEL BEAM
S312 3/4\"/>



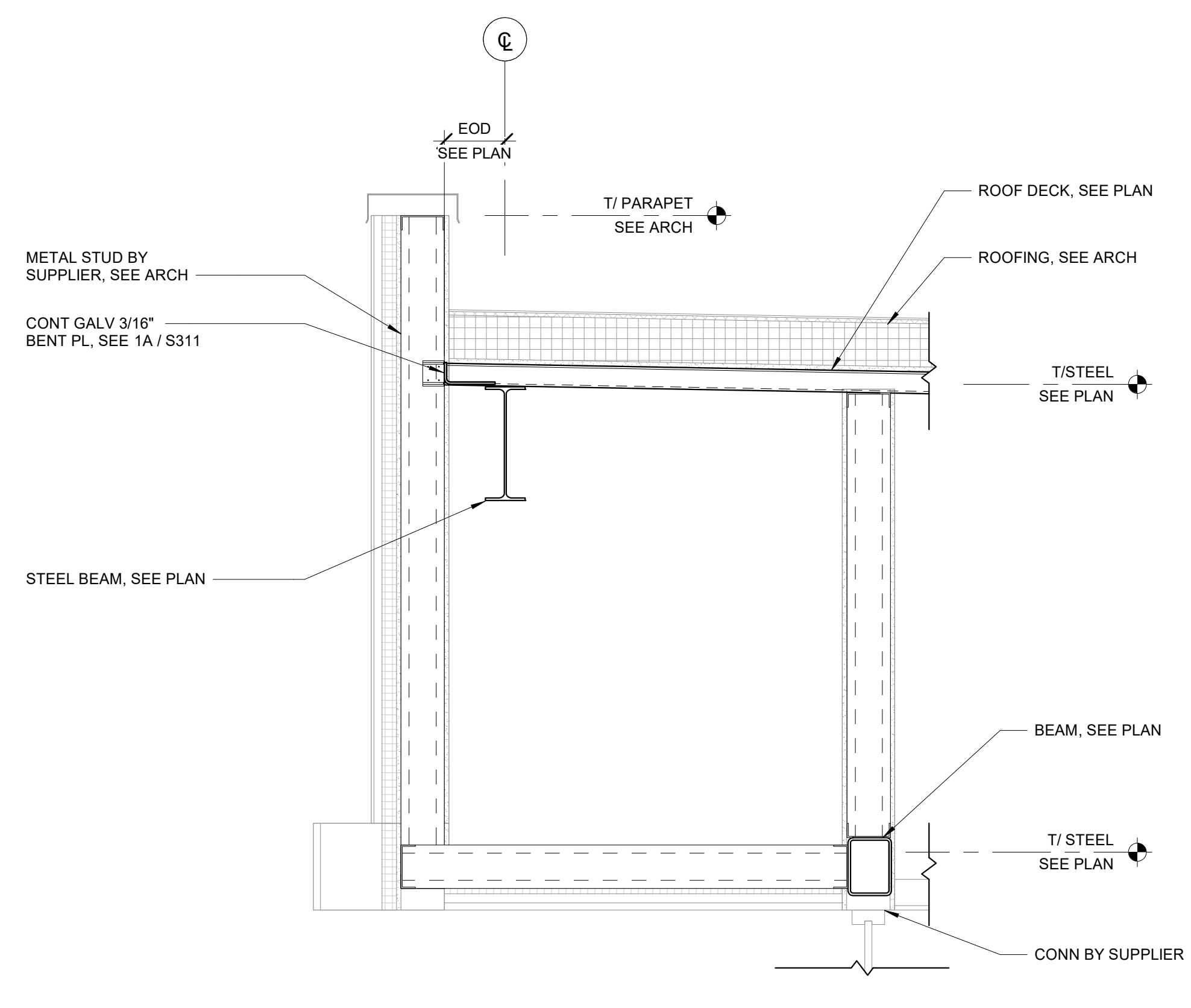
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S312 3/4\"/>



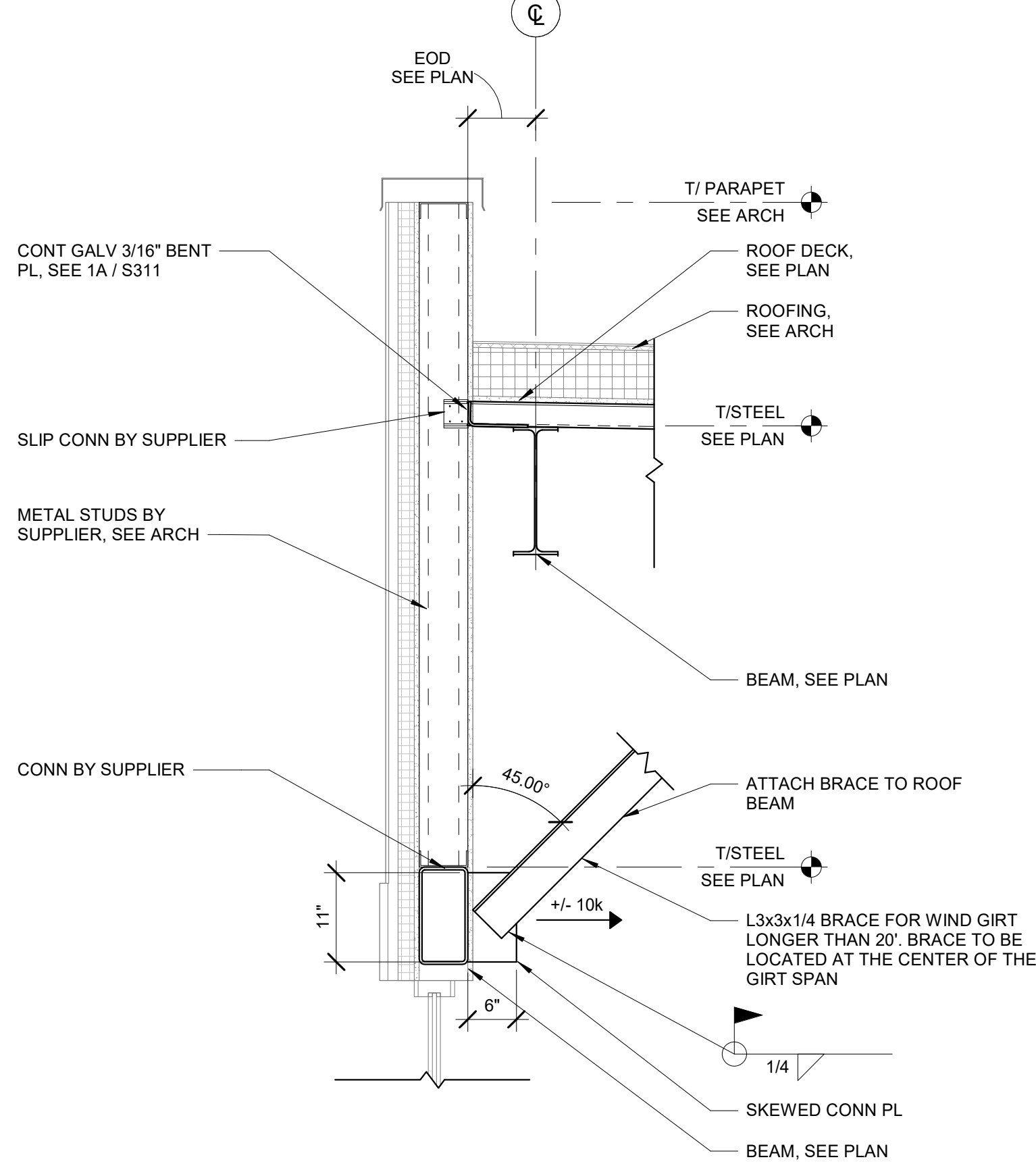
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S312 3/4\"/>



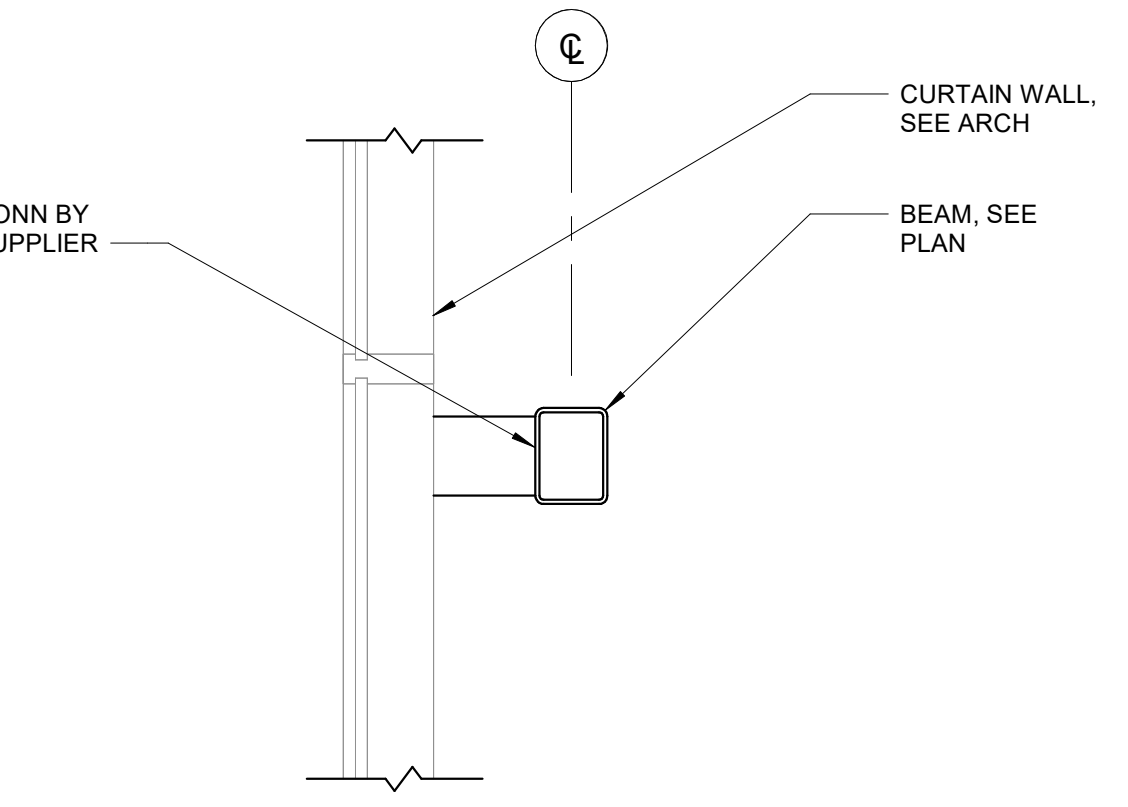
1A SECTION
S312 3/4\"/>



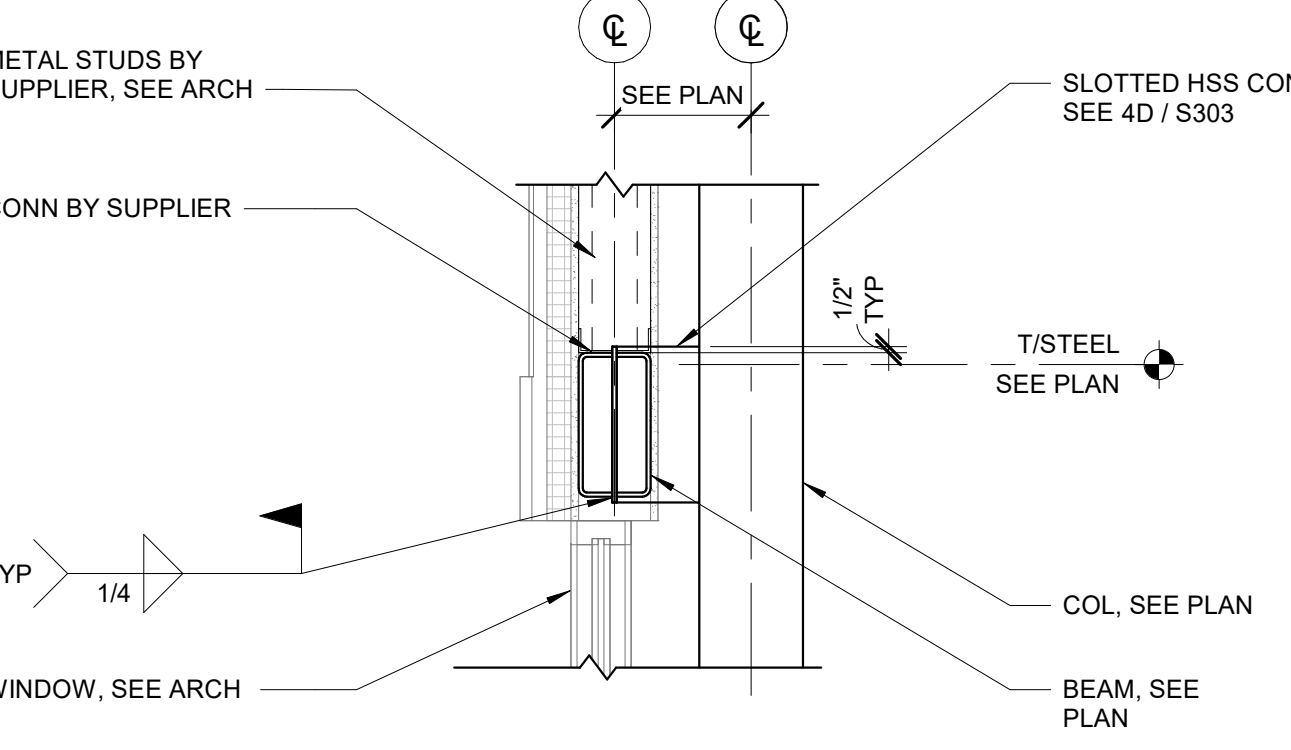
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S312 3/4\"/>



5A SECTION
S312 3/4\"/>



6B SECTION
S312 3/4\"/>



6A SECTION
S312 3/4\"/>



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Sohan Shetty, P.E.

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Wilmington NC 28405

PROJECT NO.

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SHEET TITLE

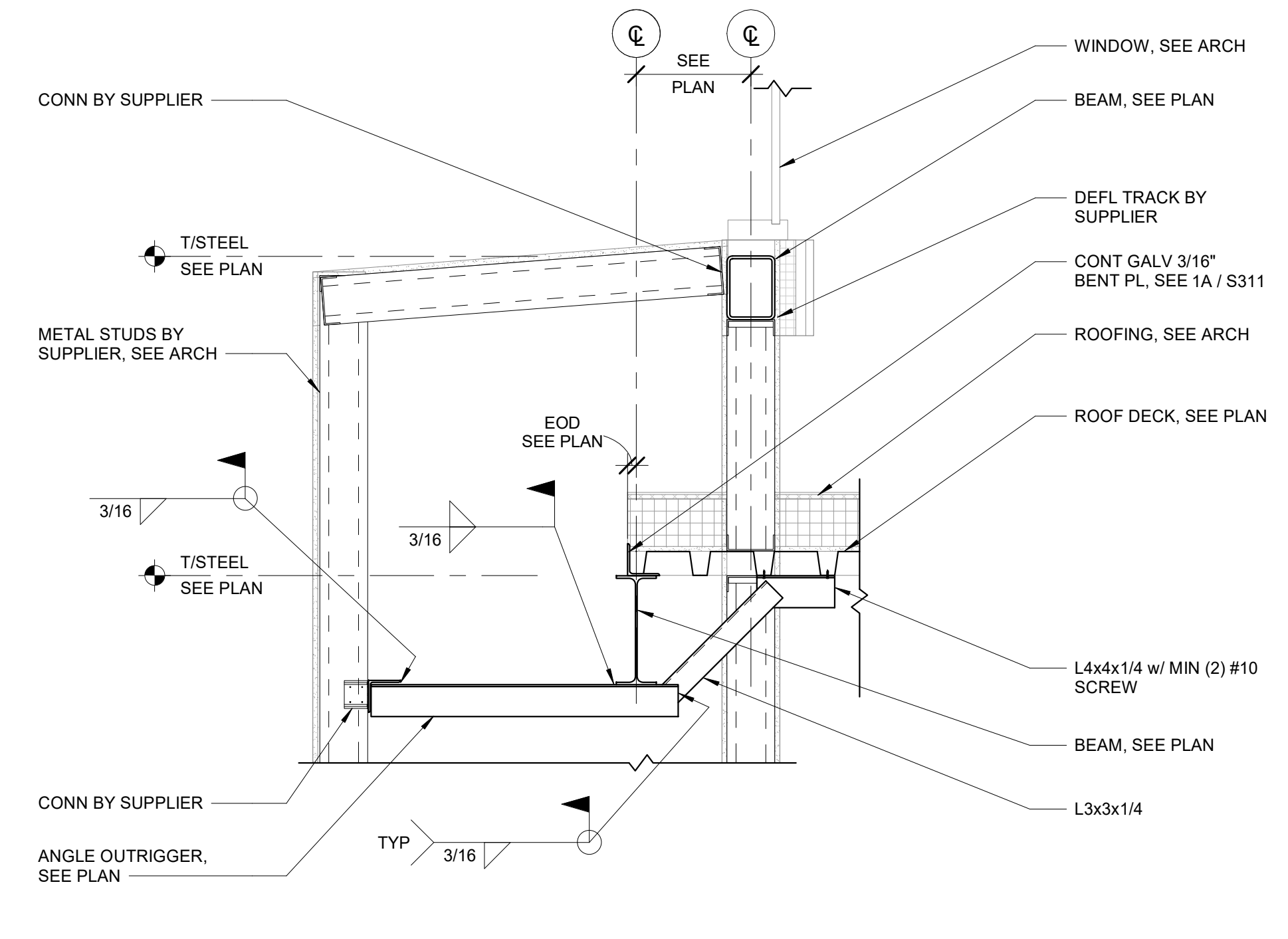
ROOF FRAMING DETAILS-II

SHEET NUMBER

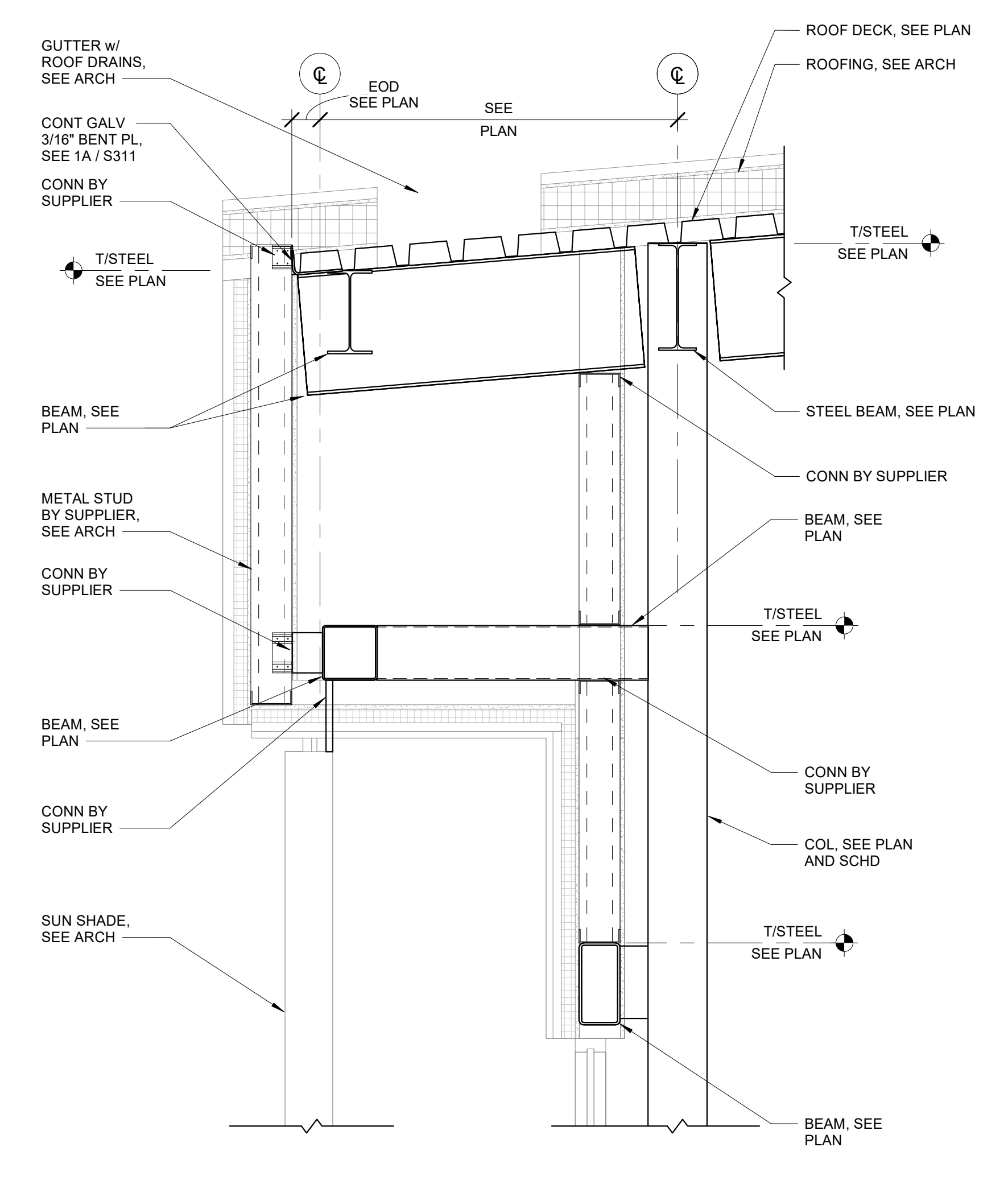
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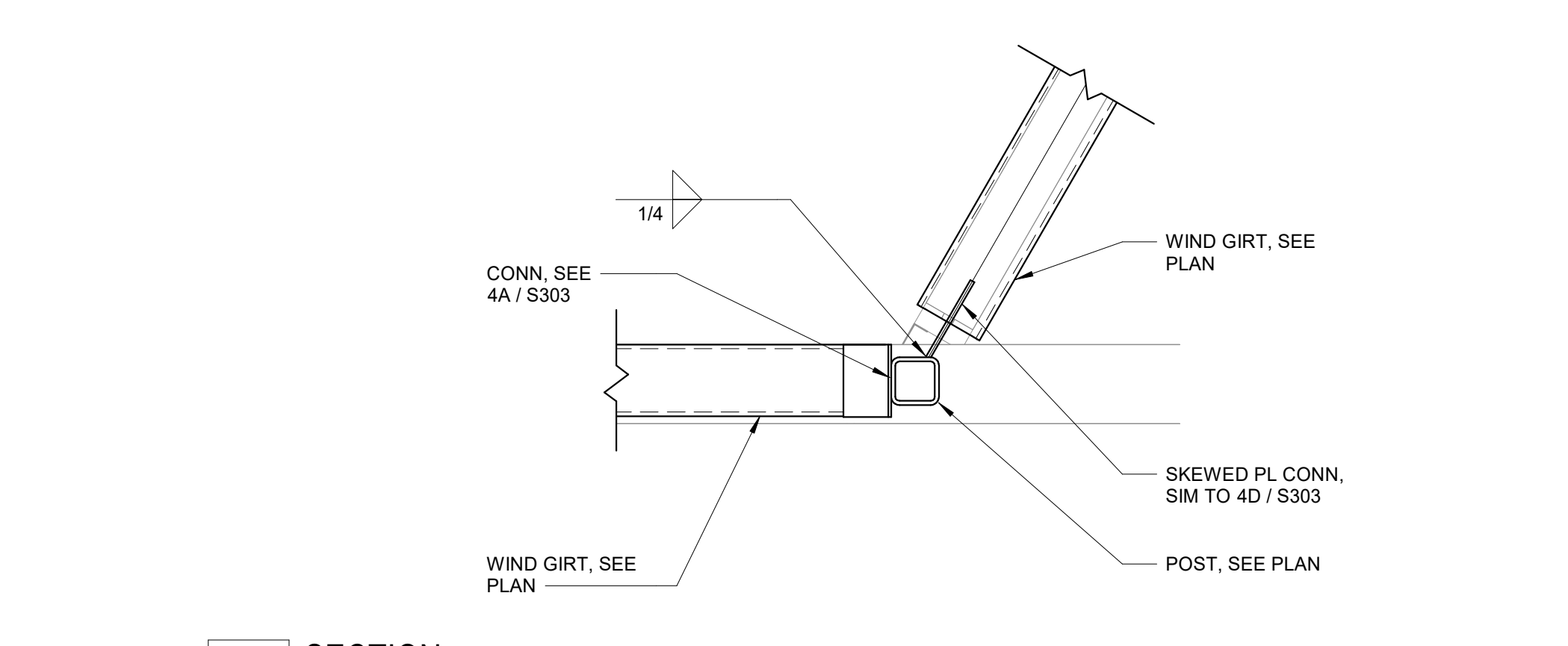
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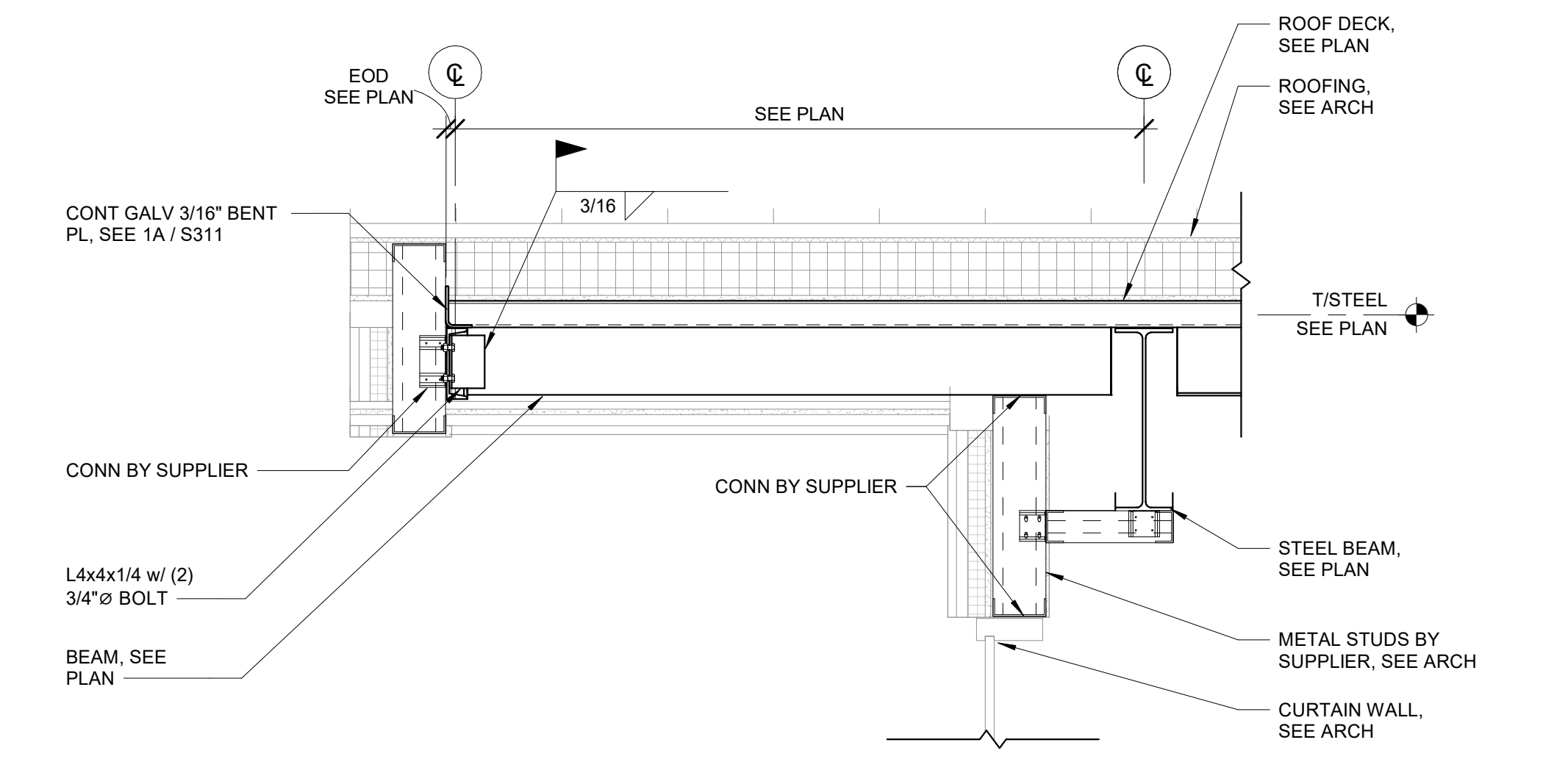
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S313 3/4" = 1'-0"



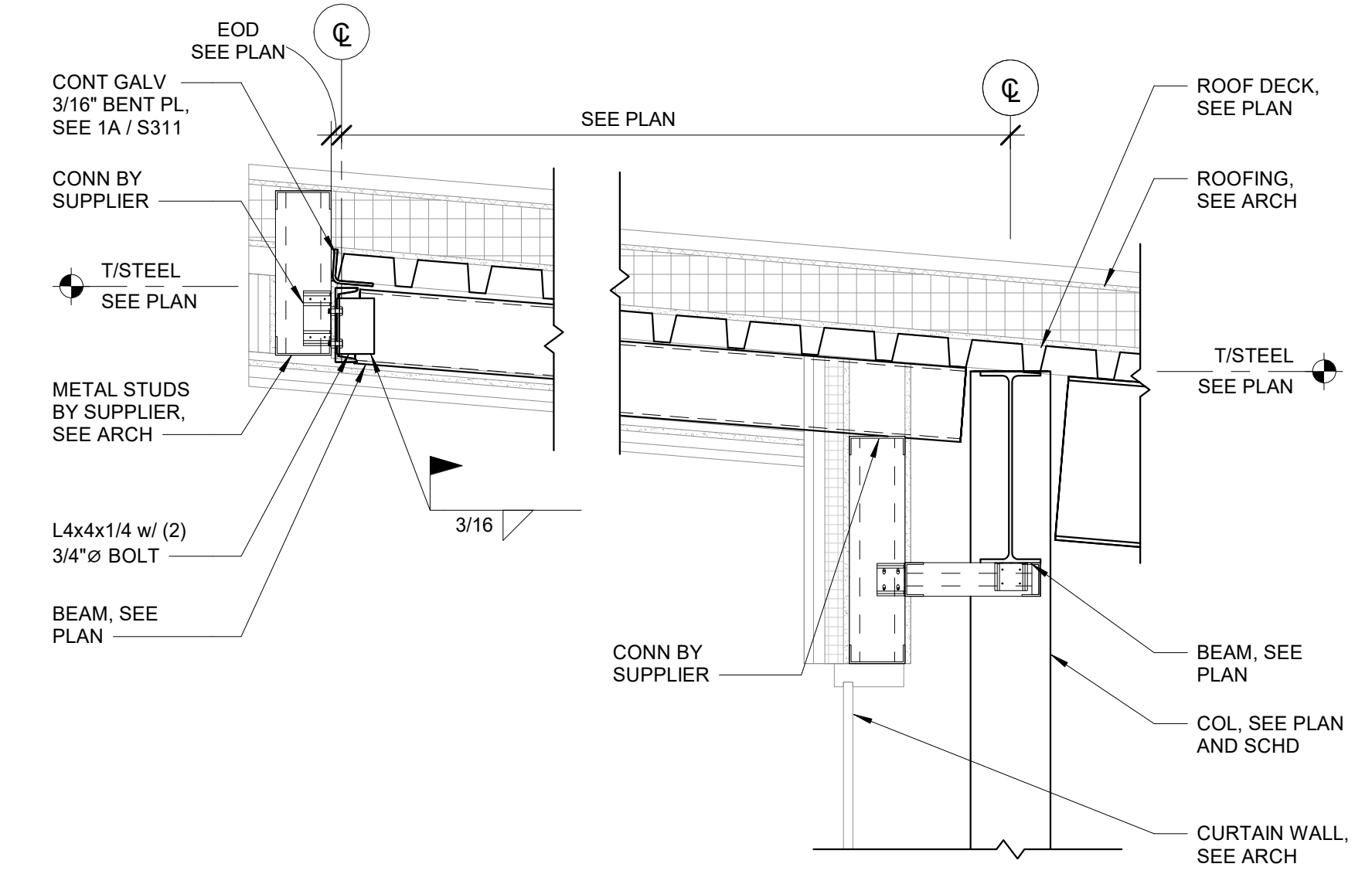
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S313 3/4" = 1'-0"



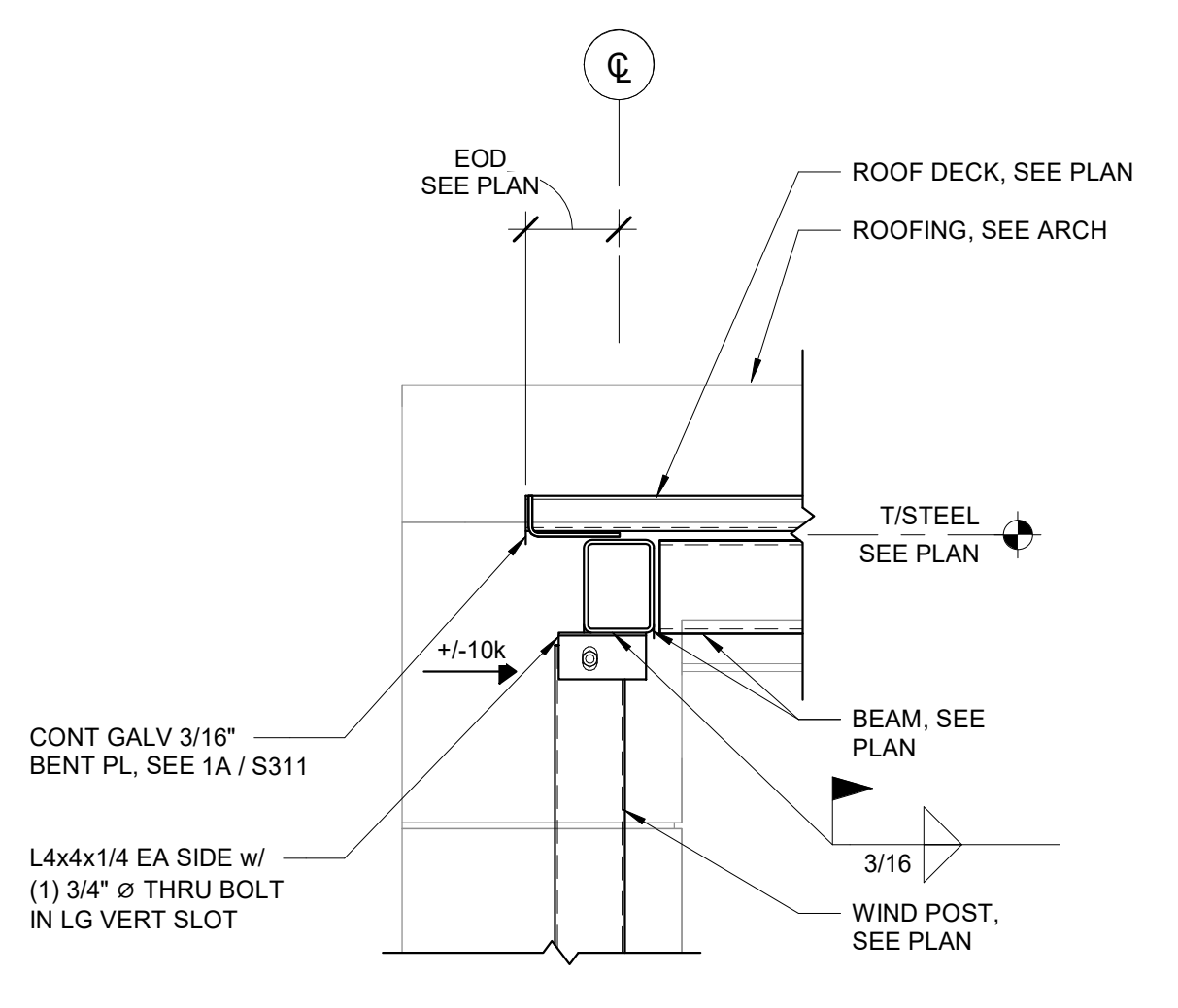
5E SECTION
S313 1" = 1'-0"



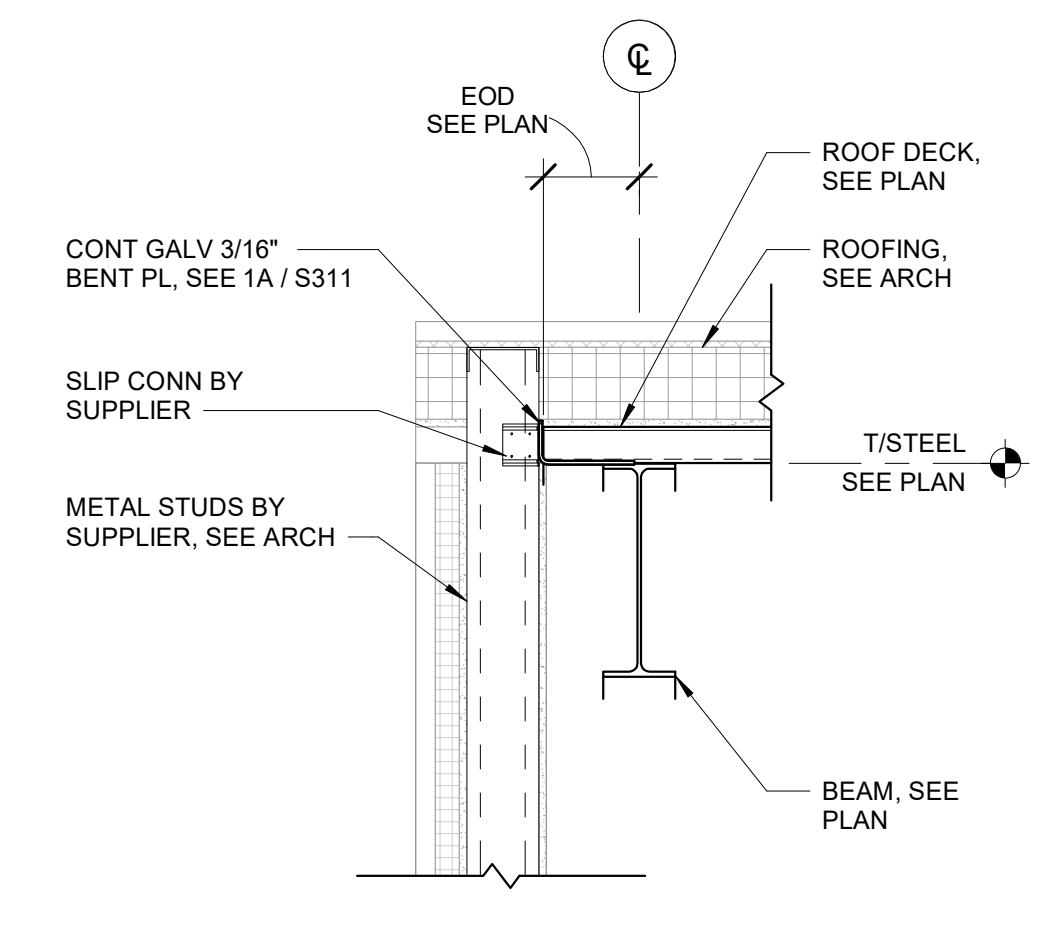
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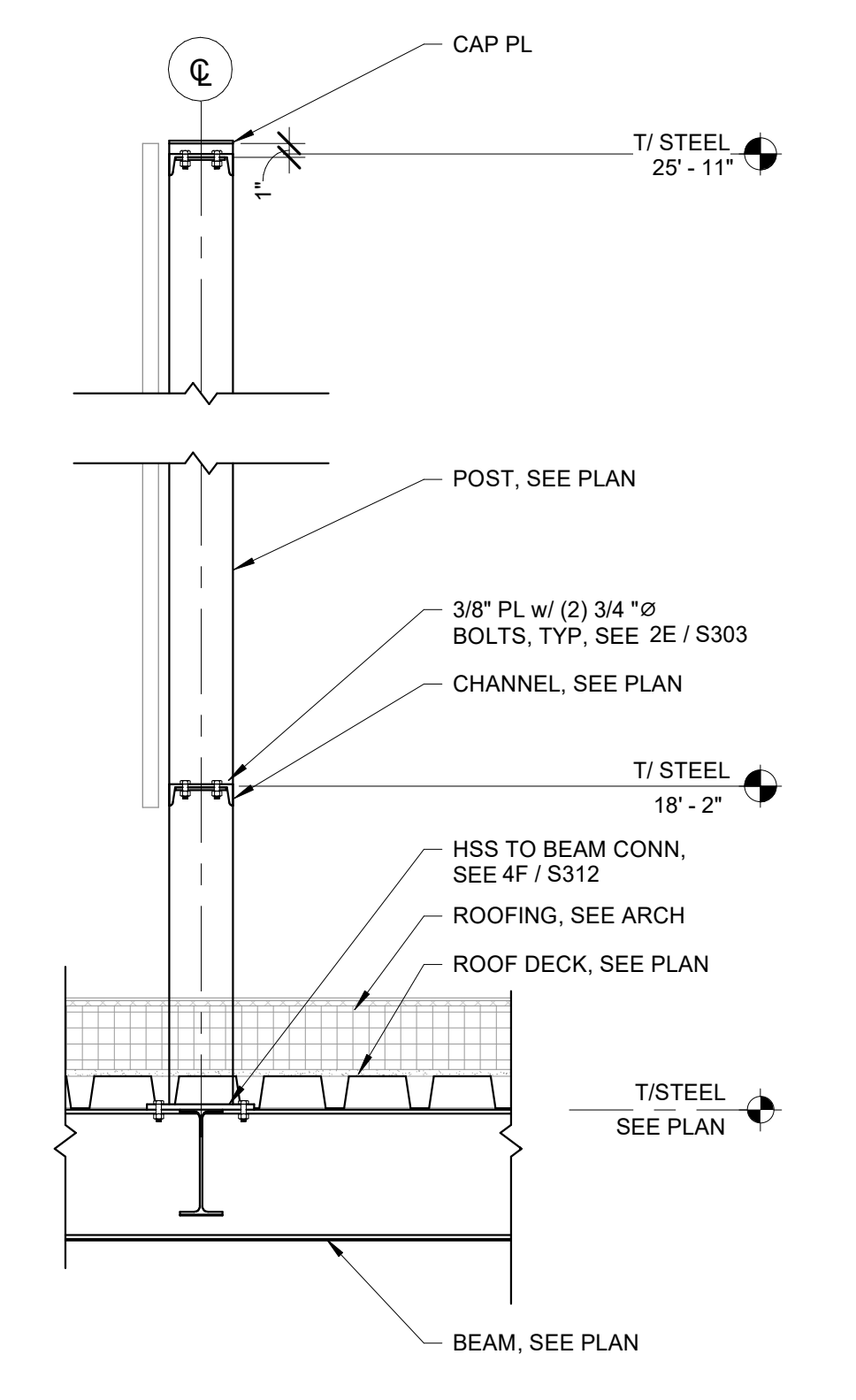
1B SECTION
S313 3/4" = 1'-0"



3B SECTION
S313 3/4" = 1'-0"



4B SECTION
S313 3/4" = 1'-0"



5B SECTION
S313 3/4" = 1'-0"



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03.38.2024

REVISIONS

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PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
Sohan Shetty, P.E.

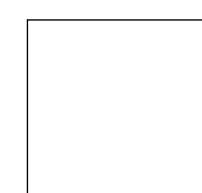
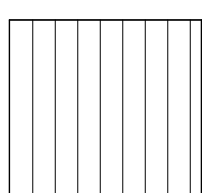
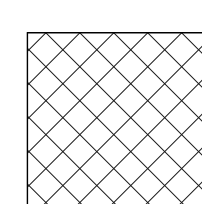
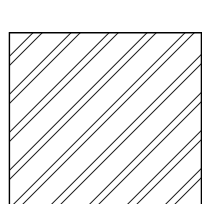
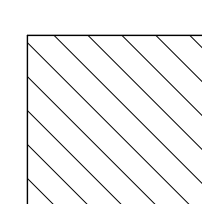
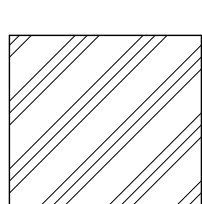
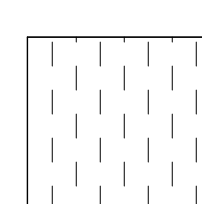
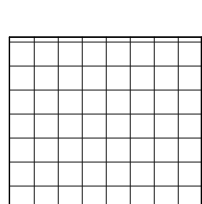
NORTHCHASE BRANCH LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
ROOF FRAMING DETAILS-III

SHEET NUMBER
S313

SPRINKLER SYSTEMS HAZARD CLASSIFICATIONS

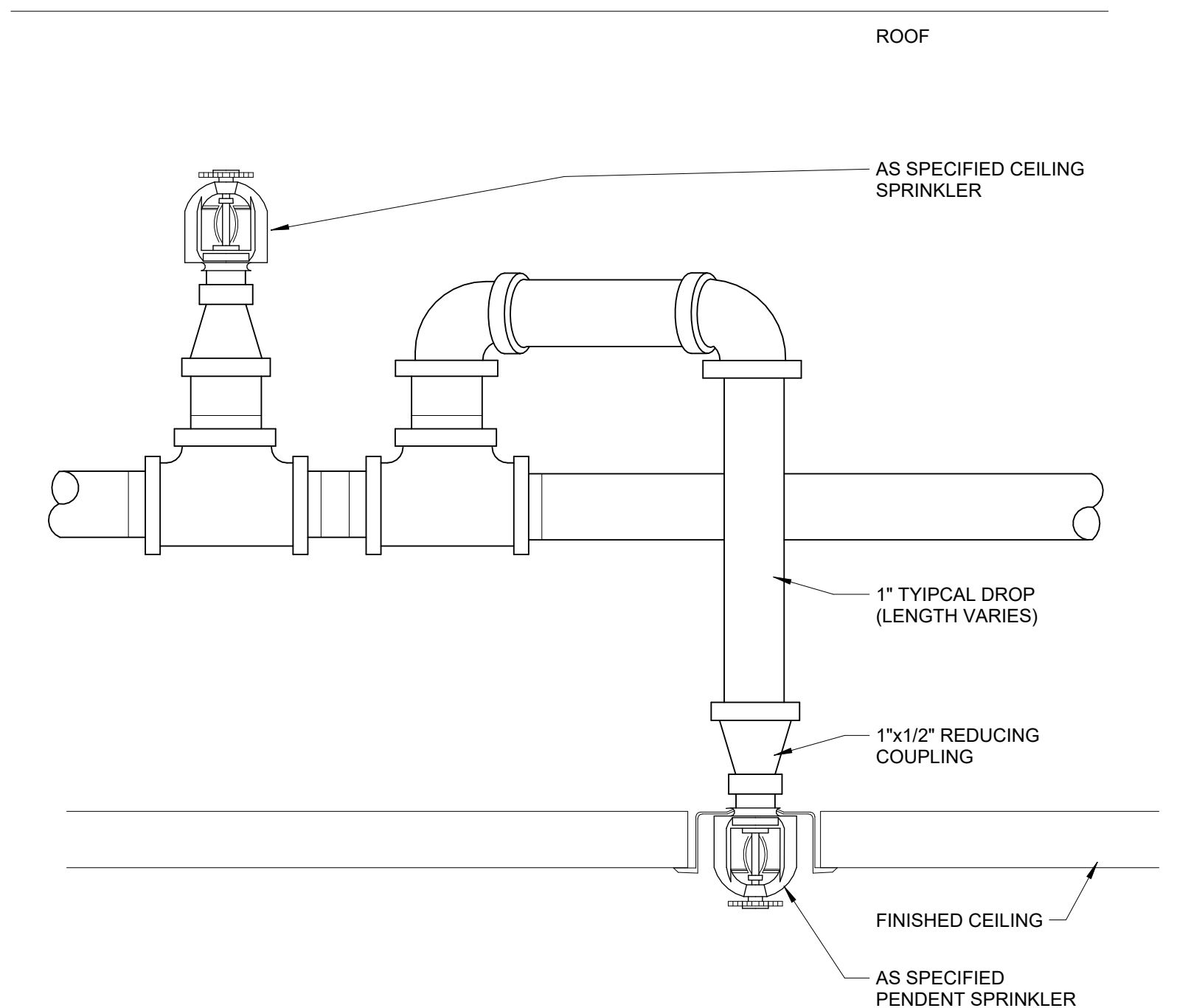
	DENOTES AREA BEING PROTECTED BY AUTOMATIC WET SPRINKLERS. OCCUPANCY CLASSIFICATION.....LIGHT HAZARD DESIGN DENSITY.....0.10 GPM/S.F. REMOTE HYDRAULIC AREA.....1,500 S.F. MAXIMUM SPRINKLER COVERAGE.....225 S.F. OUTSIDE HOSE STREAM.....100 GPM DURATION OF SUPPLY.....30 MINUTES		DENOTES AREA BEING PROTECTED BY AUTOMATIC WET SPRINKLERS. OCCUPANCY CLASSIFICATION.....LIGHT HAZARD DESIGN DENSITY.....0.10 GPM/S.F. REMOTE HYDRAULIC AREA.....1,500 S.F. MAXIMUM SPRINKLER COVERAGE.....225 S.F. OUTSIDE HOSE STREAM.....100 GPM DURATION OF SUPPLY.....30 MINUTES
	DENOTES AREA BEING PROTECTED BY AUTOMATIC WET SPRINKLERS. OCCUPANCY CLASSIFICATION.....ORDINARY HAZARD, GROUP 1 DESIGN DENSITY.....0.15 GPM/S.F. REMOTE HYDRAULIC AREA.....1,500 S.F. MAXIMUM SPRINKLER COVERAGE.....130 S.F. OUTSIDE HOSE STREAM.....250 GPM DURATION OF SUPPLY.....60-90 MINUTES		DENOTES AREA BEING PROTECTED BY AUTOMATIC DRY SPRINKLERS. OCCUPANCY CLASSIFICATION.....ORDINARY HAZARD GROUP 2 DESIGN DENSITY.....0.20 GPM/S.F. REMOTE HYDRAULIC AREA.....1,500 S.F. MAXIMUM SPRINKLER COVERAGE.....225 S.F. OUTSIDE HOSE STREAM.....250 GPM DURATION OF SUPPLY.....60-90 MINUTES
	DENOTES AREA BEING PROTECTED BY AUTOMATIC WET SPRINKLERS. OCCUPANCY CLASSIFICATION.....ORDINARY HAZARD, GROUP 2 DESIGN DENSITY.....0.20 GPM/S.F. REMOTE HYDRAULIC AREA.....1,500 S.F. MAXIMUM SPRINKLER COVERAGE.....130 S.F. OUTSIDE HOSE STREAM.....250 GPM DURATION OF SUPPLY.....60-90 MINUTES		DENOTES AREA BEING PROTECTED BY AUTOMATIC WET SPRINKLERS. OCCUPANCY CLASSIFICATION.....COMMODITY STORAGE, CLASS I-IV AND GROUP A & B PLASTICS, STORED ON OPEN RACKS UP TO 20 FEET, W/8' AISLES SPRINKLER TYPE.....K17.251, 286°F REMOTE HYDRAULIC AREA.....0.60 GPM/S.F. OVER 2000 S.F. MAXIMUM PRESSURE.....95 PSI DURATION OF SUPPLY.....120 MINUTES INSIDE HOSE STREAM.....100 GPM OUTSIDE HOSE STREAM.....500 GPM
	DENOTES AREA BEING PROTECTED BY AUTOMATIC WET SPRINKLERS. OCCUPANCY CLASSIFICATION.....EXTRA HAZARD, GROUP 1 DESIGN DENSITY.....0.30 GPM/S.F. REMOTE HYDRAULIC AREA.....2,500 S.F. MAXIMUM SPRINKLER COVERAGE.....100 S.F. OUTSIDE HOSE STREAM.....500 GPM DURATION OF SUPPLY.....90-120 MINUTES		DENOTES CURTAIN WALL GLAZING PROTECTED ON BOTH SIDES BY LISTED AUTOMATIC WINDOW SPRINKLERS DESIGN DENSITY.....15 GPM/SPRINKLER MAXIMUM PRESSURE.....70 PSI MAXIMUM SPRINKLER COVERAGE.....SINGLE WINDOW SECTION OUTSIDE HOSE STREAM.....500 GPM DURATION OF SUPPLY.....REQUIRED FIRE RATING PERIOD

GENERAL NOTES

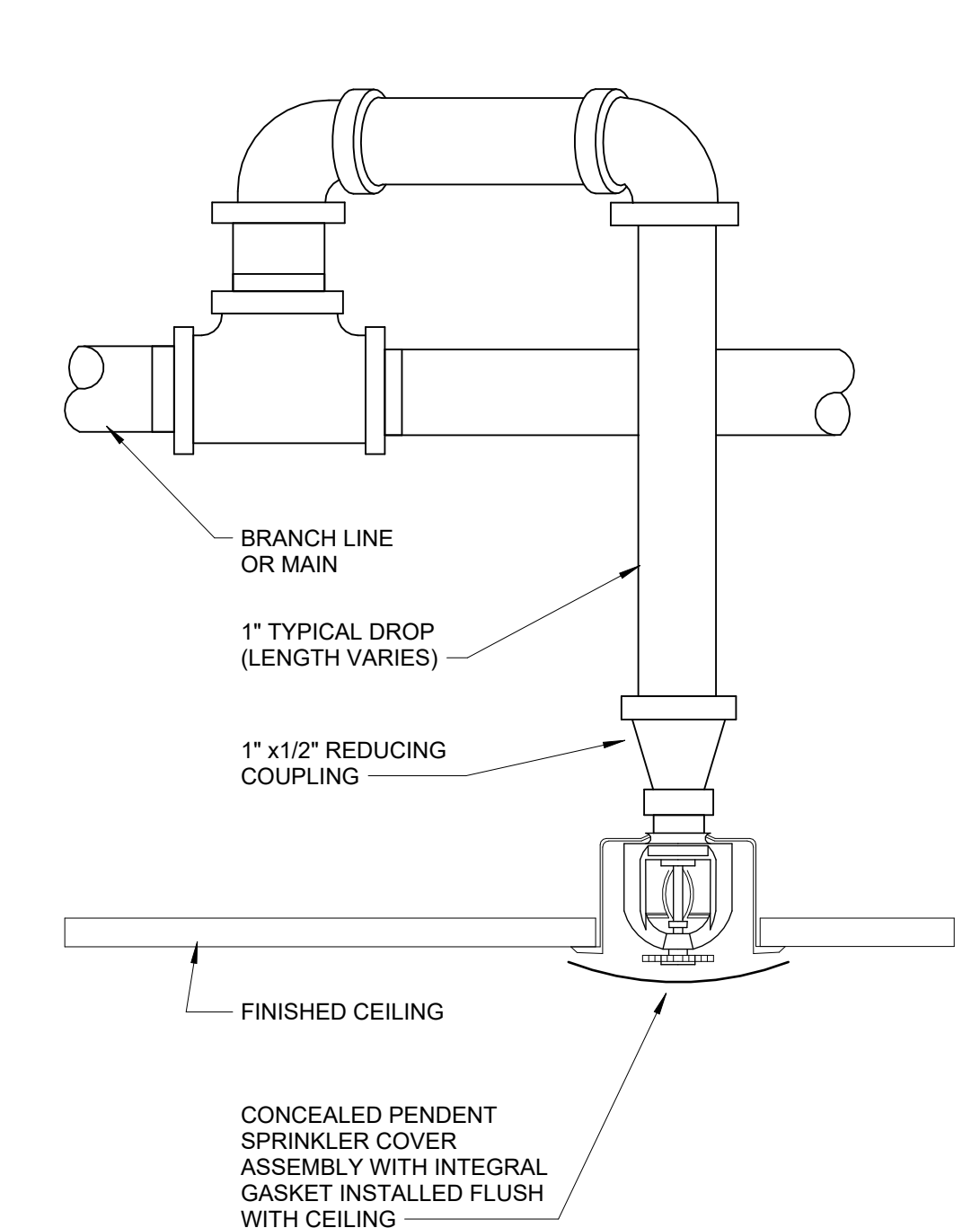
- SCOPE OF WORK: PROVIDE A COMPLETE WET PIPE AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13, NFPA 14, & NFPA 20. THE WORK SHALL INCLUDE ALL WORK NECESSARY TO PROVIDE COMPLETE SPRINKLER COVERAGE FOR THE ENTIRE BUILDING.
- SPRINKLERS SHALL BE HYDRAULICALLY DESIGNED TO PROVIDE COVERAGE FOR LIGHT HAZARD OCCUPANCY (0.10 GPM/SF OVER THE HYDRAULICALLY MOST REMOTE 1500 SF) UNLESS NOTED OTHERWISE OR REQUIRED BY NFPA 13. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SPRINKLER HYDRAULIC CALCULATIONS.
- THE CONTRACTOR SHALL OBTAIN CURRENT (LESS THAN ONE-YEAR OLD) HYDRAULIC DATA REQUIRED TO PREPARE THE HYDRAULIC CALCULATIONS.
- SUBMITTALS: THE CONTRACTOR SHALL SUBMIT HYDRAULIC CALCULATIONS AND ALL PRODUCT DATA FOR REVIEW AND ACCEPTANCE BY THE ENGINEER. THE SYSTEM SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER OR NICET DESIGNER (LEVEL III OR HIGHER) AND SHALL BEAR THE SEAL OF THE DESIGNER. THE CONTRACTOR SHALL BE PROCEEDING AT THEIR OWN RISK IF THE CONTRACTOR CHOOSES TO PROCEED WITH THE WORK PRIOR TO ACCEPTANCE OF THE MATERIALS AND EQUIPMENT BY THE ENGINEER.

- PRODUCTS:**
- ALL EQUIPMENT SHALL BE UL-LISTED AND/OR FM-APPROVED.
 - SPRINKLER PIPING SHALL BE SCHEDULE 40 BLACK STEEL WITH THREADED FITTINGS. PIPING 2-1/2" AND LARGER SHALL BE SCHEDULE 10 BLACK STEEL WITH GROOVED FITTINGS.
- HANGERS SHALL BE FLAT-BAND, GALVANIZED.
- INSTALLATION:**
- SPRINKLERS SHALL BE LOCATED IN THE CENTERS OF CEILING TILES AND SYMMETRICALLY ALIGNED ON THE CEILING.
 - MAXIMUM SPRINKLER SPACING SHALL NOT EXCEED THE LIMITS OF NFPA 13 AND THE LISTINGS OF SPRINKLERS.
 - PROVIDE AUXILIARY DRAINS WHERE REQUIRED TO DRAIN ALL PORTIONS OF THE PIPING SYSTEM.
 - ARMOR PIPING SHALL BE 1" MINIMUM.
 - HYDROSTATICALLY TEST THE SYSTEM IN ACCORDANCE WITH NFPA 13.
 - OBTAIN ALL APPROVALS OF AUTHORITIES HAVING JURISDICTION.
 - PROVIDE CLOSE-OUT DOCUMENTS TO THE OWNER INCLUDING RECORD DRAWINGS, HYDRAULIC CALCULATIONS, PRODUCT DATA, AND INSPECTION, TESTING AND MAINTENANCE INFORMATION.

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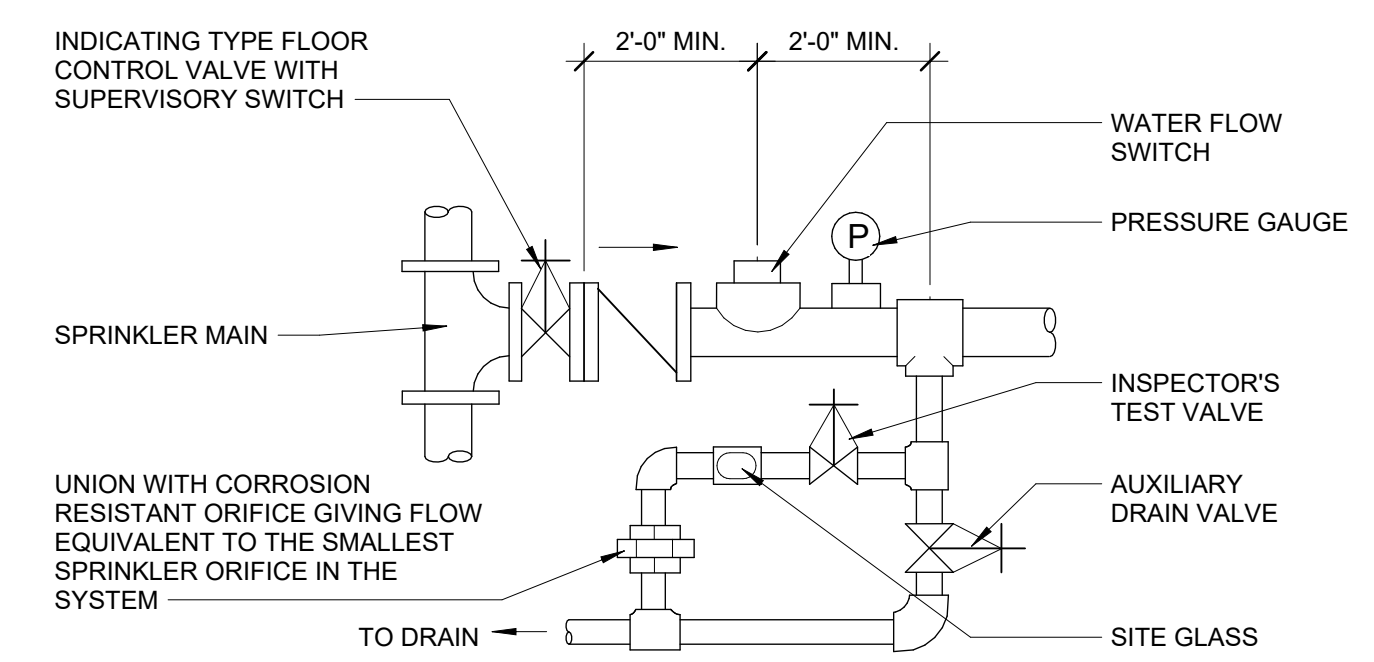


3C TYPICAL CHAMBER SPRINKLER DROP
FS001 NOT TO SCALE

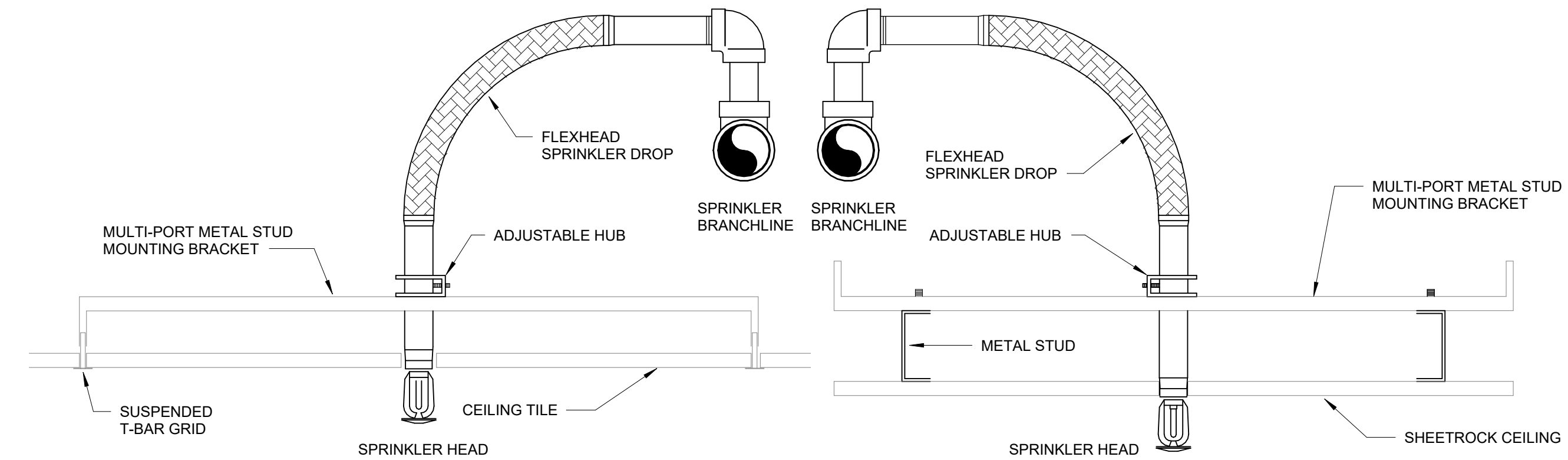


5C CONCEALED SPRINKLER DROP
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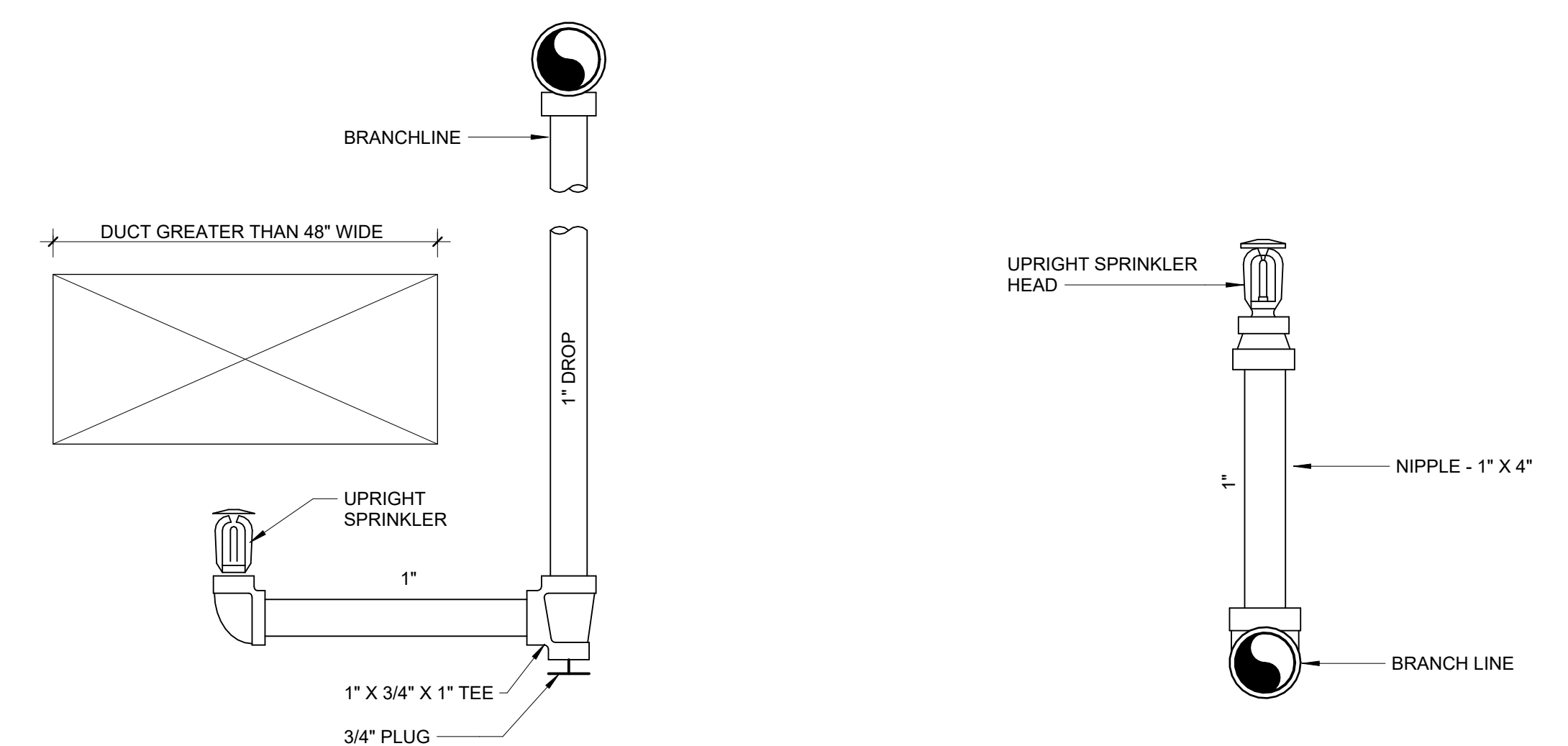
APPENDIX B PROJECT DATA			
SPRINKLERS:	<input type="checkbox"/> NO <input checked="" type="checkbox"/> YES	<input checked="" type="checkbox"/> NFPA 13 <input type="checkbox"/> NFPA 13R <input type="checkbox"/> NFPA 13D <input type="checkbox"/> NFPA 14 <input checked="" type="checkbox"/> NFPA 20	
STANDPIPES:	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	CLASS <input checked="" type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III	<input checked="" type="checkbox"/> WET <input type="checkbox"/> DRY <input type="checkbox"/> PRE-ACTION <input type="checkbox"/> DELUGE
FIRE PUMP:	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	GAS SUPPRESSION SYSTEM <input type="checkbox"/> NO <input type="checkbox"/> YES OTHER _____	
HIGH RISE:	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	BUILDING HEIGHT:	1 LEVEL
MEZZANINE:	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	NUMBER OF STORIES:	1 STORIES, _ BASEMENT
SYSTEM REQUIREMENTS: 750 GPM @ 45 PSI			



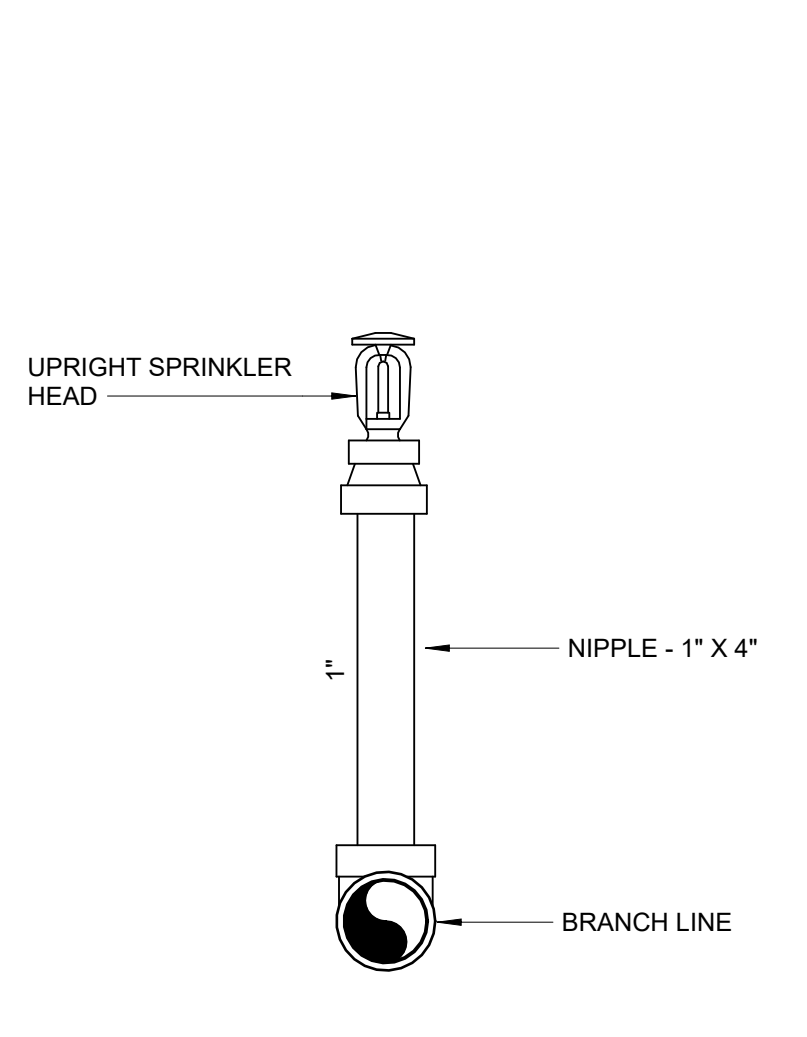
6C FLOOR CONTROL VALVE DETAIL
FS001 NOT TO SCALE



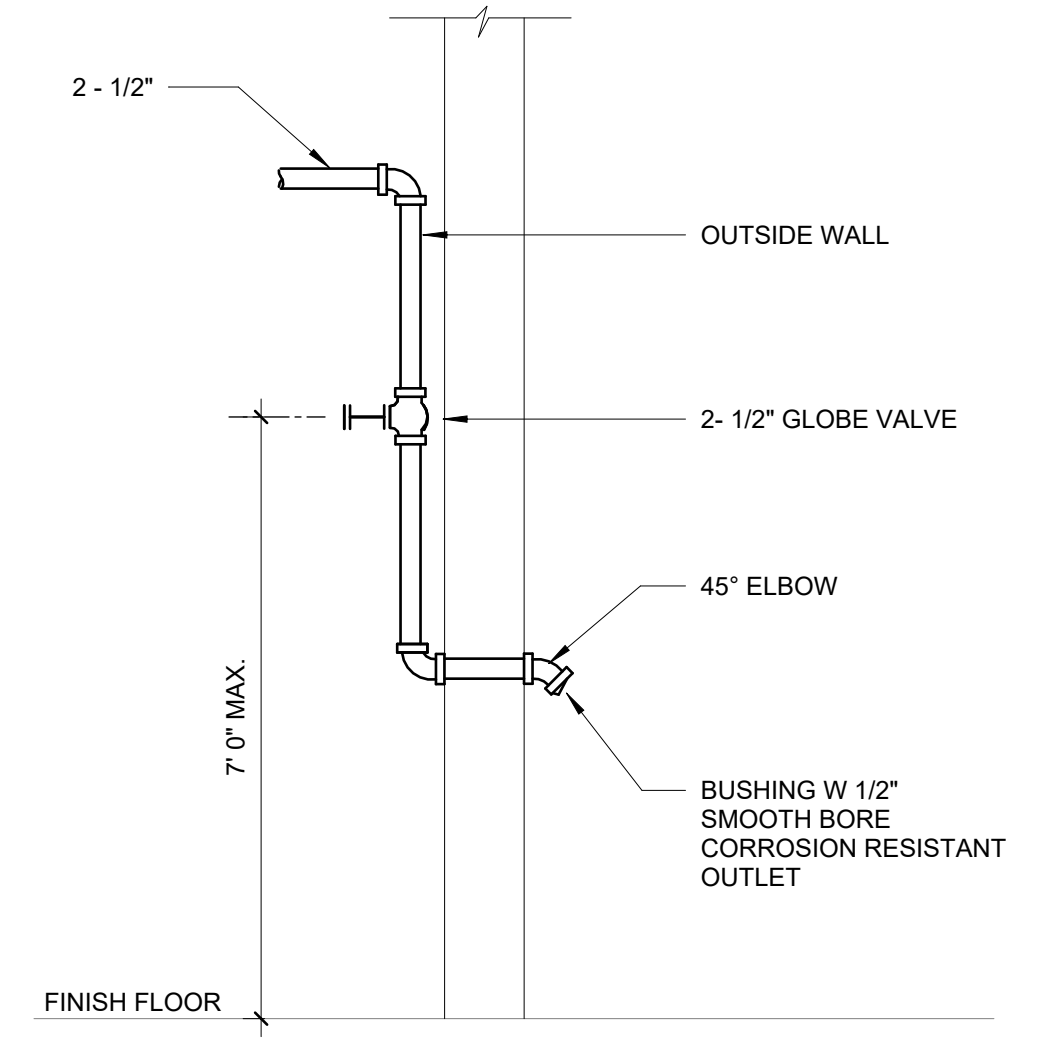
3B FLEXIBLE SPRINKLER HEAD DETAIL
FS001 NOT TO SCALE



4A TYPICAL SPRINKLER UNDER DUCT DETAIL
FS001 NOT TO SCALE



5A UPRIGHT SPRINKLER HEAD DETAIL
FS001 NOT TO SCALE



6A SPRINKLER SYSTEM
FS001 NOT TO SCALE

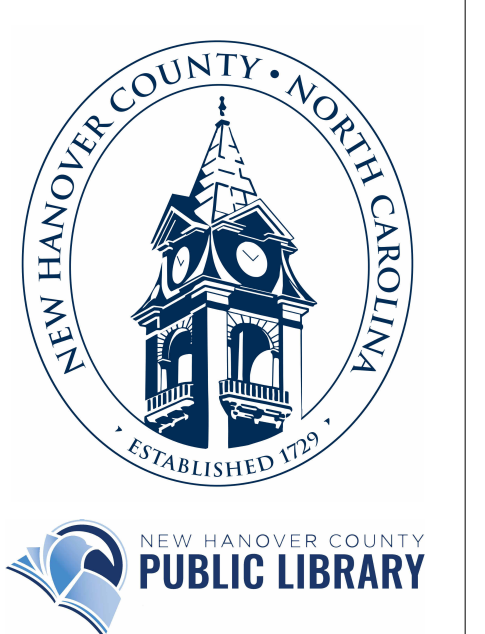
LITTLE
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ISSUE FOR
BID SET

ISSUE DATE
03.28.2024

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
MSG

PROJECT NAME
NORTHCHASE BRANCH LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
FIRE SUPPRESSION COVER SHEET

SHEET NUMBER
FS001

KEY NOTES

- 01 DEVICE SHALL BE CENTERED BETWEEN WALL PANEL SEAMS (COORDINATE WITH SHOP DRAWINGS PRIOR TO INSTALLATION).
- 02 ROUTE DRAIN LINE TO EXTERIOR WALL AND TERMINATE 2" ABOVE SPLASH BLOCK.



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LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

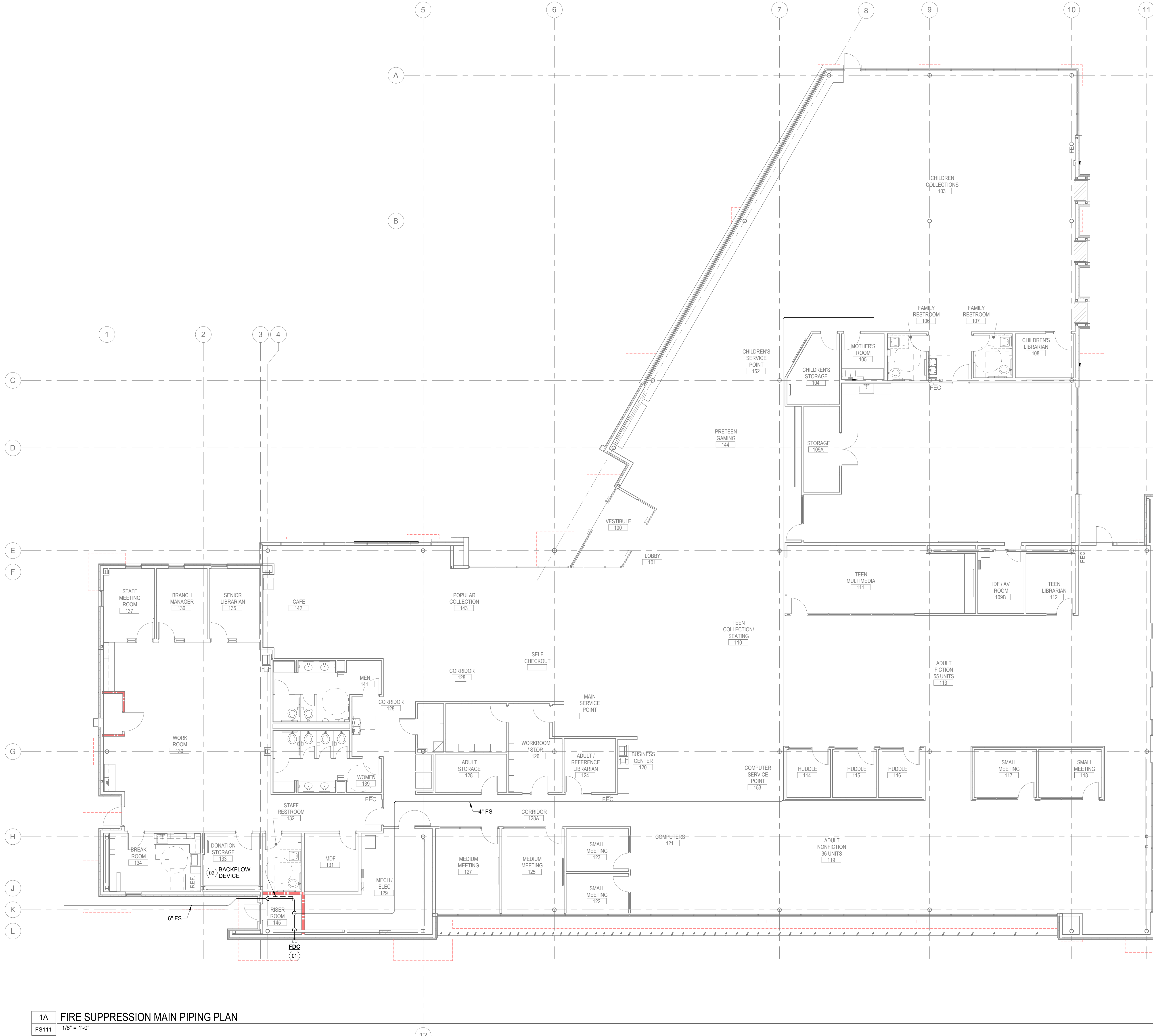
PROJECT NO.

514.18349.00

SHEET TITLE
FIRE SUPPRESSION MAIN
PIPING PLAN

SHEET NUMBER
FS111

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1A FIRE SUPPRESSION MAIN PIPING PLAN
FS111 1/8" = 1'-0"

WALL RATING LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Pattern]	1-HOUR	[Pattern]
2-HOUR	[Pattern]	2-HOUR	[Pattern]
3-HOUR	[Pattern]	3-HOUR	[Pattern]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Pattern]	0.5-HOUR	[Pattern]
3-HOUR	[Pattern]	1-HOUR	[Pattern]
4-HOUR	[Pattern]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Pattern]	1-HOUR	[Pattern]



GENERAL SHEET NOTES

- 1. FOR FIRE SYSTEM CLASSIFICATION, SEE SHEET SF001.

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FIRE SUPPRESSION DESIGN IS DELEGATED TO THE FIRE SUPPRESSION CONTRACTOR. DRAWINGS ARE FOR COORDINATION AND DESIGN INTENT ONLY.

WALL RATING LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]

ISSUE FOR
BID SET

ISSUE DATE
03.28.2024

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
MSG

PROJECT NAME
NORTHCHASE BRANCH
LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
FIRE SUPPRESSION
HAZARD GROUP PLAN

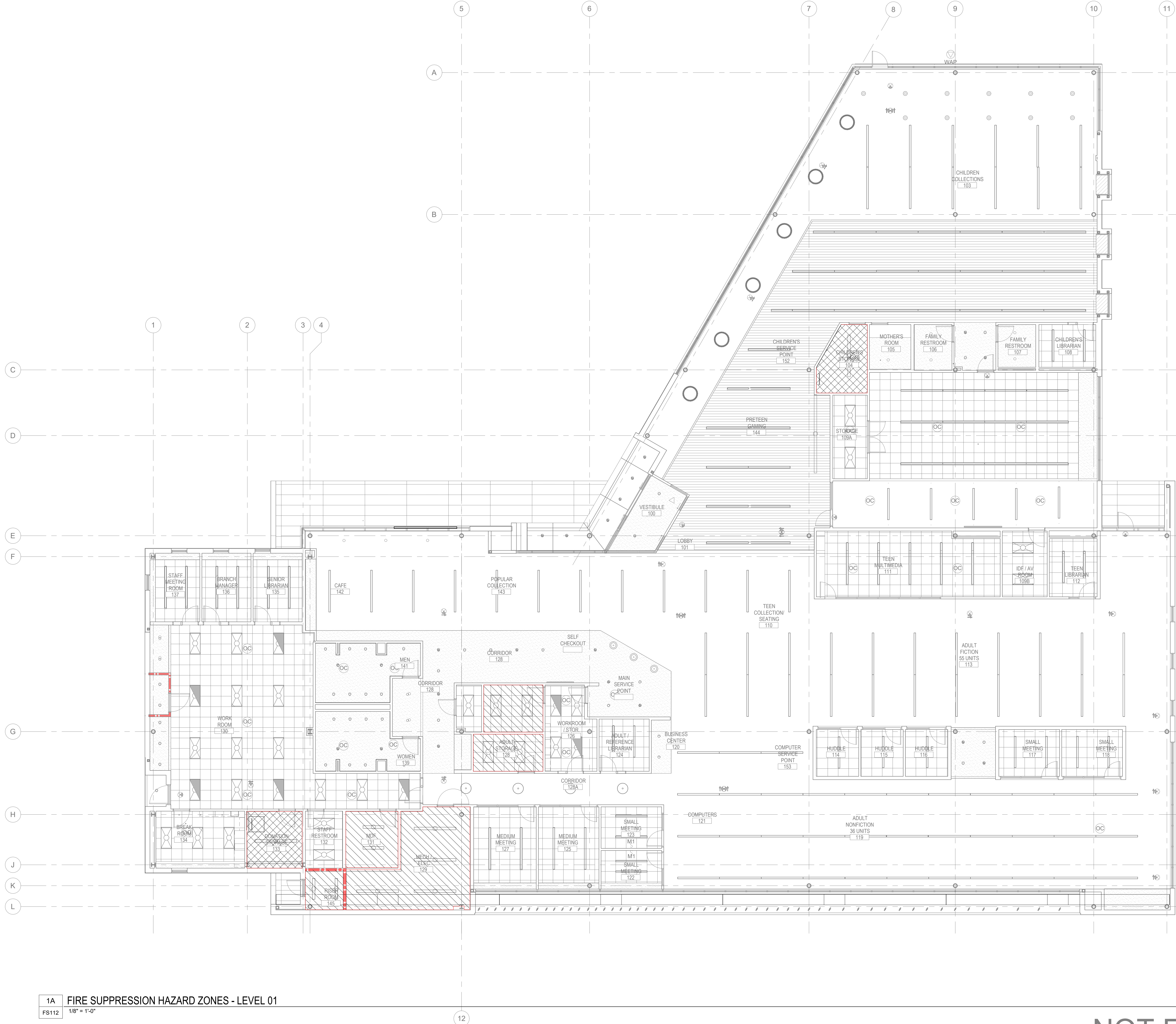
SHEET NUMBER
FS112

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1A FIRE SUPPRESSION HAZARD ZONES - LEVEL 01
FS112 1/8" = 1'-0"

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LEGEND

GENERAL

SS	SANITARY SEWER
GS	GREASE DRAINAGE
AS	ACID WASTE
----	DOMESTIC COLD WATER
-110°----	DOMESTIC HOT WATER (110°F)
----	DOMESTIC HOT WATER (140°F)
-110°----	DOMESTIC HOT WATER RECIRCULATING (110°F)
-HWR----	DOMESTIC HOT WATER RECIRCULATING (140°F)
NG	NATURAL GAS
----	VENT PIPING
○	PIPE TURNING DOWN
○	PIPE TURNING UP
○	BRANCH TOP CONNECTION
○	BRANCH BOTTOM CONNECTION
○	BRANCH SIDE CONNECTION
○	BRANCH TOP CONNECTION
○	CLEANOUT
○	CLEANOUT, FLOOR TYPE
○	CLEANOUT, YARD TYPE
○	FLOOR DRAIN WITH DEEP SEAL P-TRAP
○	FLOOR DRAIN WITH TRAP PRIMER
○	HOSE BIB (HB)
○	WALL HYDRANT (WH)
○	UNION
○	AIR GAP FITTING
○	WALL CLEANOUT
○	CLEANOUT PLUG
○	VENT THROUGH ROOF - DIAGRAMMATIC (VTR)
○	SHOCK ARRESTOR (SA)
○	LIMIT OF DEMOLITION WORK
○	CONNECT TO EXISTING

VALVES AND ACCESSORIES

▲	AUTOMATIC AIR VENT
○	AUTOMATIC FLOW CONTROL VALVE
○	BACKFLOW PREVENTER (BFP)
○	BALL VALVE
○	BUTTERFLY VALVE
○	CAPPED PIPE
○	CHECK VALVE
○	CONCENTRIC REDUCER
○	DIRECTION OF FLOW
○	ECCENTRIC REDUCER
○	FLANGED CONNECTION
○	FLEXIBLE CONNECTION
○	FLOW METER
○	GATE VALVE
○	GLOBE VALVE
○	MANUAL AIR VENT
○	METERED BALANCING VALVE
○	WIPRESSURE TAPS
○	GAS COCK
○	PIPE SLEEVE
○	PRESSURE REDUCING VALVE
○	PRESSURE RELIEF VALVE
○	PRESSURE GAUGE WITH GAUGE COCK
○	SQUARE HEAD COCK
○	STRAINER
○	STRAINER W/BLOW DOWN VALVE
○	THERMOMETER
○	VACUUM BREAKER
○	SOLENOID VALVE

GENERAL NOTES

- ALL WORK SHALL CONFORM TO ALL OF THE MOST RECENT APPLICABLE STATE AND ALL LOCAL PLUMBING CODES, AMENDMENTS, RULES AND REGULATIONS INCLUDING THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES, OSHA ACTS AND REGULATIONS, AND THE REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
- OPENINGS THRU WALLS, FLOORS AND ROOFS SHALL BE FLASHED AND SEALED WATER TIGHT. PENETRATIONS THROUGH SMOKE OR FIRE-RATED WALLS AND/OR PARTITIONS SHALL BE SEALED TO MAINTAIN RATING PER ASTM E-814 AND BUILDING CODE REQUIREMENTS.
- INTERRUPTIONS OF SERVICES SHALL BE COORDINATED WITH THE OWNER AND OTHER TRADES AT LEAST 48 HOURS IN ADVANCE OF THE WORK BEING PERFORMED. DISRUPTION TIME SHALL BE KEPT TO A MINIMUM.
- UNLESS OTHERWISE INDICATED, ALL PIPING SHALL BE RUN IN CONCEALED SPACES IN WALLS, IN CHASES OR BETWEEN CEILING AND INSULATION ABOVE. PIPES SHALL BE RUN AT RIGHT ANGLES OR PARALLEL LINES WITH BUILDING WALLS AND ROUTED WITH STRUCTURAL MEMBERS IN EXPOSED AREAS. PLUMBING SHALL COORDINATE WITH MECHANICAL DUCTWORK IN ALL CHASES. SUPPORT ALL INTERIOR PIPING FROM BUILDING STRUCTURE BY MEANS OF PIPE STANDS, HANGERS OR INSERTS TO MAINTAIN REQUIRED GRADING AND PITCHING OF LINES. TO PREVENT VIBRATION AND TO SECURE PIPING IN PLACE, SOIL WASTE AND VENT STACKS SHALL BE SUPPORTED AT THE BASE BY MEANS OF PIERS OR HEAVY DUTY RISER CLAMPS CLOSE TO THE BOTTOM OF RISERS AND SECURED AT EACH FLOOR BY MEANS OF HEAVY-DUTY IRON RISER CLAMPS. PROTECT COPPER PIPING AGAINST CONTACT WITH MASONRY OR DISSIMILAR METALS. COPPER PIPING HANGERS, SUPPORTS, ANCHORS AND CLIPS SHALL BE COPPER OR COPPER PLATED. PROVIDE CLEANOUTS AT THE BASE OF EACH WASTE OR INTERIOR STORM DRAINAGE STACK. WCO AND COP AT BASE OF STACKS SHALL BE 12" TO 15" AFF. FLAT WALL CLEANOUT COVERS SHALL BE FLUSH WITH FINISHED WALL SURFACE. DEEP COVERS ARE NOT ACCEPTABLE. EXPOSED PIPING SHALL BE LABELED WITH SERVICE AND DIRECTION OF FLOW EVERY 20 FEET, AND IN EACH ROOM, ALL VALVES SHALL BE TAGGED. EXPOSED PIPING CONNECTIONS IN OCCUPIED SPACES SHALL BE CHROME PLATED.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ITEMS TO BE FURNISHED FIT THE SPACE AVAILABLE. CONTRACTOR TO VERIFY LOCATIONS OF ALL SERVICES AND CONNECTION POINTS. CONTRACTOR SHALL FIELD CONFIRM ALL PIPE SIZES AND LOCATIONS, AND ALL DIMENSIONS AND ELEVATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND PAYING ALL FEES FOR UTILITY LOCATOR SERVICE TO LOCATE PUBLIC AND PRIVATE UTILITIES AND UNDERGROUND STRUCTURES BEFORE DIGGING. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES INCURRED AS A RESULT OF THIS WORK. ALL DISCOVERIES SHALL BE ACCURATELY SHOWN ON THE RECORD DRAWINGS.
- THE DRAWINGS ARE INTENDED TO COVER THE COMPLETE PLUMBING SYSTEMS, HOWEVER, THE DRAWINGS MAY NOT SHOW COMPLETE OR ACCURATE DETAILS OF THE BUILDING OR SYSTEMS IN EVERY RESPECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM FIELD CONDITIONS AND OBTAIN ANY ADDITIONAL INFORMATION AS REQUIRED. DO NOT SCALE FROM CONTRACT DRAWINGS.
- THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY THE CONTRACTOR OR OF THE SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL TO THE WORK OF THE CONTRACTOR TO PERFORM THE CONSTRUCTION WORK IN ACCORDANCE WITH OSHA, APPLICABLE CODES, THE DRAWINGS AND SPECIFICATIONS.
- PROVIDE DIELECTRIC UNIONS OR OTHER NON-CONDUCTIVE MEANS TO PREVENT ELECTROLYSIS.
- SANITARY TIE-INS SHALL BE MADE WITH SANITARY TEES IN THE VERTICAL AND WYES IN THE HORIZONTAL. TIE BRANCH CONNECTIONS TO SEWER MAINS IN UPPER HALF OF MAIN UNLESS NOTED OTHERWISE ON THE DRAWINGS. SANITARY PIPE CONNECTIONS SHALL NOT BE REDUCED IN SIZE WITHOUT PRIOR APPROVAL OF THE A/E. IF EXISTING IS FOUND TO BE OF DISSIMILAR METALS.
- ALL DISCONNECT SWITCHES, MOTOR STARTERS ASSOCIATED WITH DIVISION 22 EQUIPMENT SHALL BE FURNISHED BY THE DIVISION 22 CONTRACTOR AS APPLICABLE. WHERE COMBINATION MOTOR STARTERS ARE PROVIDED WITH INPUT POWER DISCONNECT SWITCH WITH OPERABLE HANDLE, A SEPARATE DISCONNECT SWITCH AT MOTOR STARTER IS NOT REQUIRED. COORDINATE ELECTRICAL POWER REQUIREMENTS OF ALL DIVISION EQUIPMENT WITH DIVISION 26 CONTRACTOR FOR DISCONNECT SWITCHES, MOTOR STARTERS, FEEDER BREAKER AND CABLE SIZE TO BE ACCURATE PER EQUIPMENT NAMEPLATE DATA. REFER TO ELECTRICAL SPECIFICATIONS FOR ELECTRICAL DEVICES SPECIFICATIONS. VFD'S FOR DIVISION 22 WILL BE PROVIDED BY THAT DIVISION CONTRACTOR IN ACCORDANCE WITH DIVISION 26 REQUIREMENTS.
- CONTRACTOR SHALL INSTALL FIXTURES, EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, AND APPLICABLE CODES. INSTALL ADA FIXTURES AT THE HEIGHTS PRESCRIBED BY THE CODE HAVING JURISDICTION. MAKE PROPER PIPING CONNECTIONS TO FIXTURES AND EQUIPMENT EVEN THOUGH BRANCH MAINS, ELBOWS AND CONNECTIONS ARE NOT SHOWN. COORDINATE WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING-IN PLUMBING FIXTURES. PROVIDE STOPS ON ALL PLUMBING FIXTURE WATER SUPPLIES. SENSOR OPERATED FLUSH VALVES SHALL BE MOUNTED AT A HEIGHT WHEREAS RAISED WATER CLOSET SEATS SHALL NOT INTERFERE WITH FLUSH VALVE OPERATION.
- CENTER OF FLOOR DRAIN RECEIVING DRAINAGE FROM BFP TEST PORTS, T&P RELIEF VALVE DISCHARGES AND OTHER CLEAR WATER WASTES SHALL BE LOCATED WITHIN 12" OF ITEMS OF EQUIPMENT, EQUIPMENT PADS OR ADJACENT WALLS. PIPES ROUTED TO THESE FLOOR DRAINS SHALL BE ROUTED IN SUCH A WAY AS TO NOT CAUSE A TRIPPING HAZARD.
- PROVIDE 4" HIGH (MIN.) CONCRETE HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL BE A MINIMUM OF 6" LARGER IN ALL DIRECTIONS THAN THE EQUIPMENT.
- LOCATE ALL VALVES ABOVE ACCESSIBLE CEILING WHERE POSSIBLE. PROVIDE ACCESS DOORS FOR ALL CONCEALED VALVES IN INACCESSIBLE LOCATIONS.
- INSTALL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS, AS SUCH AS PRACTICAL. CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH A MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS. PIPING SHALL NOT INTERFERE WITH COMPONENT CLEARANCES. UNIONS AND FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS. PROVIDE FLEXIBLE CONNECTIONS IN PIPING SYSTEMS CONNECTED TO PUMPS AND OTHER EQUIPMENT REQUIRING VIBRATION ISOLATION AS CLOSE TO EQUIPMENT AS POSSIBLE, UNLESS SHOWN OTHERWISE ON DRAWINGS.
- ANY ITEMS THAT ARE DAMAGED, SHALL BE REPAIRED BY THE CONTRACTOR.
- ALL PIPE ROUTING SHALL BE MADE WITH VENT-THROUGH-ROOF PENETRATIONS. THIS VERTICAL PIPE SHALL BE SECURED TO STRUCTURE IN AN APPROVED MANNER. ALL PIPING CAPS SHALL BE WATER AND GAS TIGHT CONNECTIONS IN A PERMANENT PIPING ARRANGEMENT.
- NEW FIXTURES INSTALLED SHALL MEET SCHEDULED PIPE REQUIREMENTS.
- P.C. SHALL TEST AND BALANCE DOMESTIC WATER SYSTEMS TO INSURE ADEQUATE WATER FLOW TO EACH FIXTURE, PER PLAN(S).
- CONTRACTOR SHALL COORDINATE HISHER WORK WITH THAT OF OTHER TRADES.
- THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE SITE AND INCLUDE PERFORMING ALL WORK REQUIRED BY THE DRAWINGS AND SPECIFICATIONS. FIELD VERIFY INFORMATION PROVIDED ON THE DRAWINGS AND EXISTING CONDITIONS, INCLUDING, LOCATIONS, ELEVATIONS, DIMENSIONS AND QUANTITIES REQUIRED FOR THE WORK. NOTIFY A/E IN WRITING OF ANY ADDITIONAL WORK THAT MAY BE REQUIRED TO ACCOMPLISH THE SCOPE OF WORK AND/OR ACCOMMODATE FIELD INCONSISTENCIES WITH OR IN THE DRAWINGS AND/OR SPECIFICATIONS.
- WHEN CONSTRUCTION IS COMPLETE, CONTRACTOR SHALL THOROUGHLY CLEAN ALL FIXTURES, EQUIPMENT AND SYSTEMS BEFORE PLACING IN OPERATION OR TURN OVER TO THE OWNER. RESTORE FINISHED SURFACES IF DAMAGED AND DELIVER THE ENTIRE INSTALLATION IN AN APPROVED CONDITION.
- ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE BUILDING(S) AND CONTENTS DURING THE PERFORMANCE OF THE WORK. CONTRACTOR SHALL BE RESPONSIBLE AS TO NOT TO ALLOW ON SITE ACCUMULATION OF DEBRIS OR DEMOLISHED MATERIALS. HE/SHE SHALL PROMPTLY AND LEGALLY TRANSPORT AND DISPOSE OF MATERIALS OFF-SITE. TRASH REMOVAL SHALL BE PERFORMED DAILY AND COORDINATED WITH THE OWNER'S REPRESENTATIVE TO PREVENT ITS ACCUMULATION, TO ENSURE PROPER DISPOSAL OF MATERIALS, AND TO PROTECT THE PROPERTY FROM DEBRIS AND TO PREVENT SPREAD INTO THE BUILDING(S). DO NOT BURN DEBRIS OR DEMOLISHED MATERIALS. ALL DISPOSAL COSTS TO BE BORNE BY CONTRACTOR.
- FOR ALL INVERT ELEVATIONS, FINISHED FLOORS SHALL BE ASSUMED TO BE 0'-0"
- UNLESS OTHERWISE NOTED ON PLANS ALL HOT WATER SUPPLY 140° AND RETURN SHALL BE 130°.
- THIS BUILDING UTILIZES A RETURN AIR PLENUM. MATERIALS WITHIN THE PLENUM SPACE SHALL BE PLENUM RATED FOR FLAME AND SMOKE SPREAD.
- THIS PROJECT IS USING A ROOF DRAINAGE SYSTEM IS A SYPHONIC SYSTEM (PRIMARY AND OVERFLOW) THAT IS DESIGNED BASED OFF ASPE 45.
- UNLESS OTHERWISE NOTED ON PLAN, ALL WALL CLEANOUTS SHALL BE 18" (MIN.) ABOVE FLOOR.

SHOCK ARRESTOR SCHEDULE

MARK	FIXTURE UNIT RANGE	MANUFACTURER(S)
SAF	12-32	SILOUX CHIEF, ZURN, SMITH, OR IPP
SAC	33-60	SILOUX CHIEF, ZURN, SMITH, OR IPP

PLUMBING EQUIPMENT SCHEDULE

MARK	TYPE	MANUFACTURER	MODEL	PIPE SIZE	VENT SIZE	DESCRIPTION
DN-6	DOWNSPOUT NOZZLE	ZURN	ZF199	6"	-	FOR EMERGENCY OVERFLOW ROOF DRAINAGE. ALL CAST ALUMINUM, FLAPPER WITH POWDERCOAT FINISH (COORDINATE COLOR WITH ARCHITECT).
DN-8	DOWNSPOUT NOZZLE	ZURN	ZF199	8"	-	FOR EMERGENCY OVERFLOW ROOF DRAINAGE. ALL CAST ALUMINUM, FLAPPER WITH POWDERCOAT FINISH (COORDINATE COLOR WITH ARCHITECT).
ET-1	EXPANSION TANK	AMTROL	ST-35CL	-	-	10.3 GALLON CAPACITY, STAND TYPE INSTALLATION
FOO-2	FLOOR CLEAN OUT	ZURN	Z140-BZ	SEE PLAN	-	NICKEL BRONZE TOP (ROUND) WITH BRONZE PLUG
FD-A4.8	FLOOR DRAIN	ZURN	Z415S	4"	2"	CAST IRON BODY, COMBINATION CLAMP AND ADJUSTABLE COLLAR, BOTTOM OUTLET WITH 8" RECTANGLE NICKEL BRONZE STRAINER AND TRAP PRIMER CONNECTION.
FD-B3.8	FLOOR DRAIN	ZURN	Z415B	3"	2"	CAST IRON BODY, COMBINATION CLAMP AND ADJUSTABLE COLLAR, BOTTOM OUTLET WITH 8" ROUND NICKEL BRONZE STRAINER AND TRAP PRIMER CONNECTION.
FD-B4.8	FLOOR DRAIN	ZURN	Z415B	4"	2"	CAST IRON BODY, COMBINATION CLAMP AND ADJUSTABLE COLLAR, BOTTOM OUTLET WITH 8" ROUND NICKEL BRONZE STRAINER AND TRAP PRIMER CONNECTION.
HB-1	HOSE BIB	WOODFORD	24	3/4"	-	INTERIOR HOSE BIBB W/ VACUUM BREAKER AND HANDLE, MOUNT 12" A.F.F.
HB-2	HOSE BIB	WOODFORD	B67	3/4"	-	EXTERIOR NON FREEZE WALL HYDRANT WITH VACUUM BREAKER AND KEYLESS, MOUNT AT 18" AFG
HT-1	HYDROSTATIC TANK	SYCROFLO	MODEL 132	-	-	132 GALLON CAPACITY, STAND TYPE INSTALLATION
MV-1	THERMOSTATIC MIXING VALVE	ACORN	ST70	1/2"	-	MIN. FLOW OF .25 GPM SET TO 105° MOUNT UNDER COUNTER. SHALL COMPLY WITH ASSE 1070.
MV-2	THERMOSTATIC MIXING VALVE	ACORN	ST70	1/2"	-	MIN. FLOW OF .25 GPM SET TO 115° MOUNT UNDER COUNTER. SHALL COMPLY WITH ASSE 1070.
OD-1	OVERFLOW DRAIN	WADE/ZURN	WH-401	SEE PLAN	-	CAST IRON SYPHONIC OVERFLOW ROOF DRAIN WITH 3" DAM.
OD-2	OVERFLOW ROOF DRAIN	ZURN	Z100-W3	SEE PLAN	-	DAM TYPE (3") OVERFLOW ROOF DRAIN, WITH CAST IRON DOME.
OD-3	OVERFLOW DRAIN	ZURN	Z100-WC	SEE PLAN	-	PROVIDE WITH CAST IRON LOW PROFILE DOME, HUBLESS, WITH 3" INTERNAL WATER DAM
RD-1	ROOF DRAIN	WADE/ZURN	WH-400	SEE PLAN	-	CAST IRON SYPHONIC ROOF DRAIN
RD-2	ROOF DRAIN	ZURN	ZC100-C	SEE PLAN	-	PROVIDE WITH CAST IRON DOME
RH-1	ROOF HYDRANT	WOODFORD	SRH-MS	3/4"	-	FREEZE RESISTANT ROOF HYDRANT, GALVANIZED WITH 50HF BFP STEEL PIPE WITH 3/4" OUTLET NOZZLE.
RPZ-1	BACKFLOW PREVENTER	WATTS	LF009	2"	-	BRONZE REDUCED PRESSURE ZONE, WITH STRAINER. SHALL COMPLY WITH ASSE 1022
TZ-1	THERMOSTATIC ZONE VALVE	CIRCUIT SOLVER	CSUAS	3/4"	-	THERMOSTATIC ZONE VALVE ASSEMBLY WITH STRAINER AND BALL VALVES SHUT-OFFS, INLET TEMPERATURE GAUGE AND PIPE UNION SET TEMP. @ 130° F
WCO	WALL CLEANOUT	ZURN	Z1445	SEE PLAN	-	WALL CLEANOUT, PROVIDE WITH SS COVER (ZURN CO2530)
YCO	YARD CLEAN OUT	ZURN	Z1400-BZ1	SEE PLAN	-	CAST IRON WITH ROUND ADJUSTABLE CAST IRON TOP IN CONCRETE SLAB. PROVIDE WITH BRONZE PLUG

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	MANUFACTURER	MODEL	FAUCET/VALVE		CONNECTIONS				MAX FLOW RATE	DESCRIPTION	REMARKS
				MANUFACTURER	MODEL	CW	HW	WASTE	VENT			
P10	WATER CLOSET (ADA)	ZURN	Z5615-BWL	ZURN	ZTR8200E-VLL	1"	-	4"	2"	-	1.28 gpf	HANDICAP TYPE
P11	WATER CLOSET	ZURN	Z5615-BWL	ZURN	ZTR8200E-VLL	1"	-	4"	2"	-	1.28 gpf	
P12	WATER CLOSET (ADA)	ZURN	Z5665-BWL-AM	ZURN	Z6000AV-HET	1"	-	4"	2"	-	1.28 gpf	HANDICAP TYPE
P20	URINAL (ADA)	ZURN	Z5755-U	ZURN	ZTR6203-QRT-LL	3/4"	-	2"	2"	-	0.125 gpf	HANDICAP TYPE
P21	URINAL	ZURN	Z5755-U	ZURN	ZTR6203-QRT-LL	3/4"	-	2"	2"	-	0.125 gpf	
P30	LAVATORY UNDER COUNTER TOP	ELKAY	ELUH12	MOEN	CA8301	1/2"	1/2"	2"	1-1/2"	-	0.50 gpm	HANDICAP TYPE
P31	LAVATORY WALL HUNG (ADA)	ZURN	Z5344	MOEN	8886	1/2"	1/2"	2"	1-1/2"	-	0.5 gpm	
P50	SINK (SINGLE BOWL)	ELKAY	ECTSRSD332260	MOEN	9196	1/2"	1/2"	2"	1-1/2"	-	1.5 gpm	HANDICAP TYPE
P51	SINK (SINGLE BOWL)	ELKAY	ELUHAD131655PD	MOEN	8279SMF12	1/2"	1/2"	2"	1-1/2"	-	1.2 gpm	HANDICAP TYPE
P52	SINK (SINGLE BOWL)	ELKAY	ECTSRAD252260	ELKAY	LKD208513LC	1/2"	1/2"	2"	1-1/2"	-	1.5 gpm	HANDICAP TYPE
P60	MOP BASIN	MOLDED STONE (FIAT)	MSB2424	ELKAY	LK940BP0774S	3/4"	3/4"	3"	1-1/2"	-	4.0 gpm	
P70	ELECTRIC WATER COOLER	ELKAY	LVRGRNLT8WSK	-	-	1/2"	-	2"	1-1/2"	-	1.1 gpm	HANDICAP TYPE
P93	VALVE BOX	OATEY	MODA 37687	-	-	1/2"	-	-	-	-	-	

ELECTRIC WATER HEATER SCHEDULE

MARK	LOCATION	MANUFACTURER	MODEL	ELECTRICAL			TEMPERATURE RISE	LEAVING WATER TEMPERATURE	RECOVERY RATE	STORAGE CAPACITY	DESCRIPTION
				HEATER KW	VOLTAGE	PHASE					
EWH-1	MECHANICAL ROOM	BRADFORD WHITE	LE350S3-3	11 kW	208 V	3	100 °F	140 °F	45 gal/h	45 gal	(2) 5.5 kW ELEMENTS WITH SIMULTANEOUS OPERATION, WITH STANDARD SAFETY DEVICES. COORDINATE WITH THE ELECTRICAL CONTRACTOR.
EWH-2	FAMILY RESTROOMS (8 AND 107)	STIEBEL ELTRON	MINI E-3-5-1	3.5 kW	110 V	1	50 °F	105 °F	0 gal/h	0 gal	POINT OF USE, 0.35 GPM MINIMUM ACTIVATION, MAXIMUM 0.53 GPM FLOW RATE. PROVIDE WITH OPTIONAL DISCONNECT SWITCH.
EWH-3	LARGE MEETING ROOM	STIEBEL ELTRON	DHC 9-3 CLASSIC	9 kW	277 V	1	61 °F	110 °F	0 gal/h	0 gal	POINT OF USE, 0.80 GPM MINIMUM ACTIVATION, MAXIMUM 2.0 GPM FLOW RATE. PROVIDE WITH OPTIONAL DISCONNECT SWITCH.

PUMP SCHEDULE

MARK	LOCATION	SERVICE	TYPE	GPM	FT. HD.	MAX. RPM	ELECTRICAL			MANUFACTURER	MODEL	DESCRIPTION	
							VFD	MOTOR HP	VOLTAGE				
BP-1	MECHANICAL ROOM	COLD WATER SUPPLY	BOOSTER PUMP	76	95	3500	Yes	5	208	3	SYNCFLO	PRO-Z2C05XXX-3H-XX-SWF44-3	DUPLEX PRE-PACKAGED (PUMPS ARE REDUNDANT AT 5 HP EACH AND SIZED TO OPERATE AT 80% OF FULL LOAD EACH). 3RD PARTY CERTIFIED, MINIMUM SUCTION PRESSURE OF 24 PSI, 76 PSI PUMP DISCHARGE, WITH AUTOMATIC CONTROL PANEL.
RP-1	MECHANICAL ROOM	HOT WATER RETURN	RECIRC PUMP	2	24.6	3250	Yes	0.1667	115	1	TACO	0013-SF3	LEAD FREE STAINLESS STEEL PUMP, SET PUMP TO 130° F, CONNECT TO BMS VIA BACKNET PROTOCOL.

DRAINAGE SCHEDULE

FIXTURE	TRAP SIZE	DFU (EACH)	QUANTITY	TOTAL DFU
DRINKING FOUNTAIN (DOUBLE)	2"	1	2	2
LAVATORY	2"	1	7	7
MCP BASIN	3"	2	1	2
SINK	2"	2	3	6
URINALS	2"	2	2	4
WATER CLOSETS	4"	4	9	36
TOTAL DRAINAGE FIXTURE UNITS =				57
SANITARY SEWER MAIN SIZE = 4"				

SUPPLY DEMAND SCHEDULE

FIXTURE	SFU (EACH)	QUANTITY	TOTAL SFU
DRINKING FOUNTAIN (DOUBLE)	0.5	2	1
HOSE BIB	2.25	8	18
LAVATORY	2	7	14
MCP BASIN	3	1	3
ROOF HYDRANT	2.25	2	4.5
SINK	1.4	3	4.2
URINALS	5	2	10
VALVE BOX	0.25	3	0.75
WATER CLOSETS	10	9	90
TOTAL SUPPLY FIXTURE UNITS =			145.45

TOTAL FIXTURE UNITS 145.45 = 78 GPM
 MISC. EQUIPMENT - GPM
 HVAC MAKEUP WATER - GPM
 TOTAL WATER DEMAND 78 GPM

COLD WATER MAIN SIZE = 2"

DISTANCE FROM FURTHEST FIXTURE - 600'
 EQUIVALENT LENGTH 600' x 1.2 = 720'

EXISTING WATER PRESSURE 53 PSI

MIN. FIXTURE OPERATIONAL PRESSURE 35.00 PSI
 HORIZONTAL DISTANCE 720' / 50' = 9.23 PSI
 ELEVATION .22 x 0.434 = 0.55 PSI
 METER PRESSURE DROP 8.50 PSI
 BACKFLOW PREVENTOR DROP 12.00 PSI
 TOTAL SYSTEM PRESSURE DROP 71.28 PSI

BUILDING MAIN PRESSURE DROP 53.00 - 71.28 = -18.28 PSI

BOOSTER PUMP WILL BE REQUIRED TO PROVIDE 76 PSI



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ISSUE FOR BID SET

ISSUE DATE 03.28.2024

REVISIONS NO. REASON DATE

PROJECT TEAM PRINCIPAL IN CHARGE Jerry Guerrier, AIA PROJECT MANAGER Charlotte Hagen, AIA DESIGN TEAM MSC PROJECT LEADER MSC

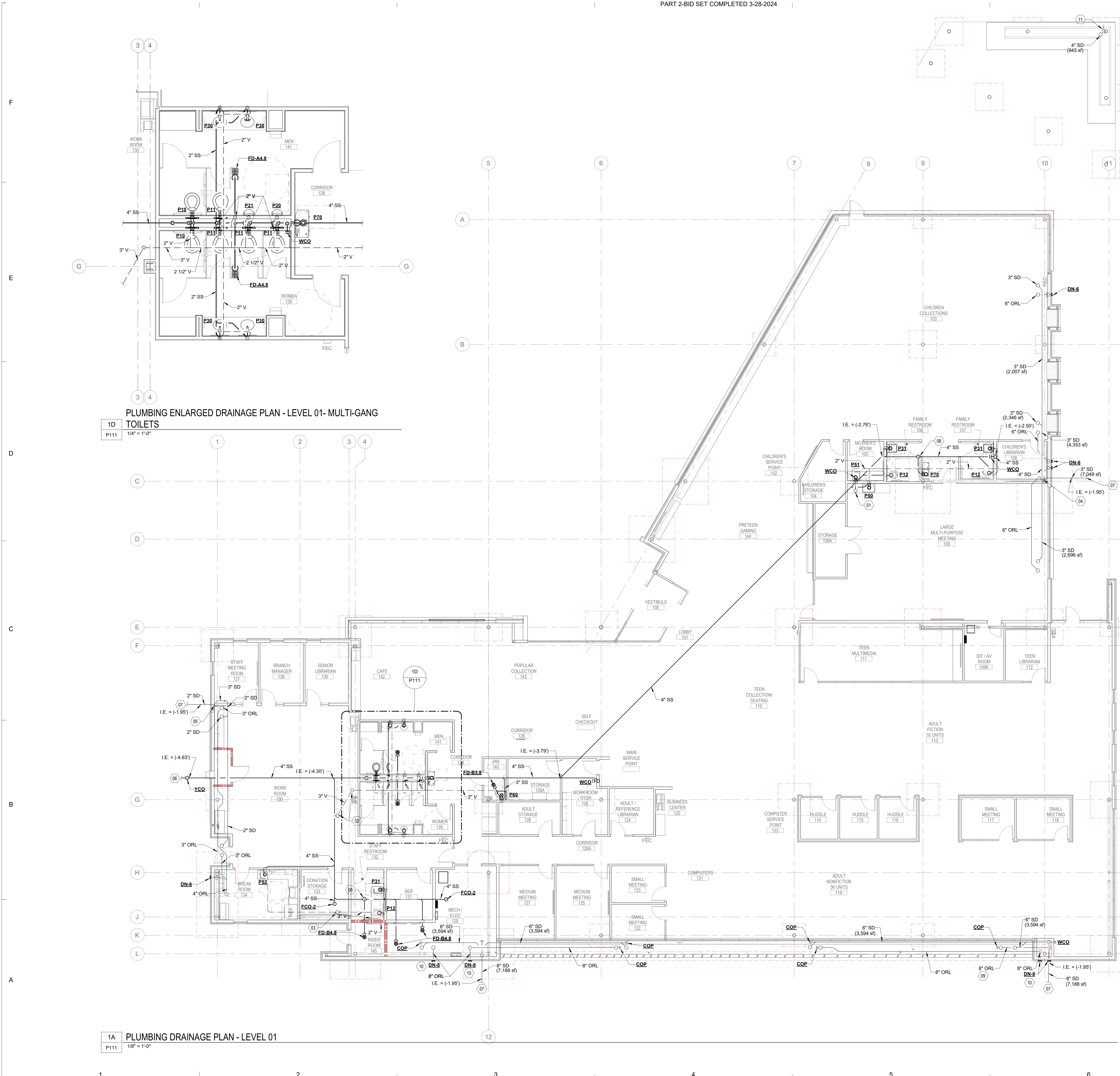
NORTHCHASE BRANCH LIBRARY

4400 Northchase Parkway NE Wilmington NC 28405

PROJECT NO. 514.18349.00

SHEET TITLE PLUMBING COVER SHEET

SHEET NUMBER P001



1D PLUMBING ENLARGED DRAINAGE PLAN - LEVEL 01- MULTI-GANG TOILETS
 P111 1/4" = 1'-0"

1A PLUMBING DRAINAGE PLAN - LEVEL 01
 P111 1/8" = 1'-0"

- KEY NOTES**
- 2" VENT DOWN TO FIXTURE, 3" VENT UP TO 3" VTR.
 - ROUTE 3" VENT PIPE AS TIGHT TO BOTTOM OF BEAM AS POSSIBLE, THEN ONCE CLEAR OF BEAM, ROUTE VENT PIPE UP AND OVER HVAC DUCT, THEN ROUTE UP THROUGH ROOF.
 - 3" VENT PIPE UP TO THROUGH ROOF TO 3" VTR.
 - REDUCE 4" STORM PIPE TO 3" AFTER TURN DOWN ELBOW AND ROUTE DOWN BELOW SLAB.
 - REDUCE 3" STORM PIPE TO 2" AFTER TURN DOWN ELBOW AND ROUTE DOWN BELOW SLAB.
 - 4" SANITARY SEWER LINE TO CITY SERVICES. SEE CIVIL DRAWINGS FOR CONTINUATION.
 - ROOF STORM LEADER TO STORM DRAIN SYSTEM, SEE CIVIL DRAWINGS FOR CONTINUATION.
 - ROUTE BRANCH ABOVE FOOTING. TURN DOWN WITH LONG SWEEP ELBOW TO ALLOW A JETTER OR OTHER DEVICE TO UN-STOP THE DRAIN (IF REQUIRED).
 - ROUTE OVERFLOW RAIN LEADER BELOW PRIMARY DRAIN LINE.
 - DEVICE SHALL BE CENTERED BETWEEN WALL PANEL SEAMS (COORDINATE WITH SHOP DRAWINGS PRIOR TO INSTALLATION).
 - ROUTE 4" STORM LEADER TIGHT TO COLUMN AND ROUTE DOWN TO ABOVE CURB. OFFSET TO DAYLIGHT OUTLET TO OUTSIDE OF CURB

WALL RATING LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]

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NEW HANOVER COUNTY PUBLIC LIBRARY

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 LICENSE NO. 1339783
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 STATE OF NORTH CAROLINA

ISSUE FOR BID SET

ISSUE DATE: 03.28.2024

REVISIONS NO.	REASON	DATE

PROJECT TEAM
 PRINCIPAL IN CHARGE: Jerry Guerrier, AIA
 PROJECT MANAGER: Charlotte Hagen, AIA
 DESIGN TEAM: MSG

PROJECT NAME
 NORTHCHASE BRANCH LIBRARY

4400 Northchase Parkway NE
 Wilmington NC 28405

PROJECT NO.
 514.18349.00

SHEET TITLE
 PLUMBING DRAINAGE PLAN

SHEET NUMBER
 P111

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KEY NOTES

- 01 COLD WATER PIPE UP TO RH-1 ABOVE ON ROOF.
- 02 DEVICE SHALL BE CENTERED BETWEEN WALL PANEL SEAMS (COORDINATE WITH SHOP DRAWINGS PRIOR TO INSTALLATION).
- 03 MOUNT P93 AT 18" ABOVE FLOOR.
- 04 DROP PIPING ELEVATION TO BE ROUTED UNDER OOWER ROOF.
- 05 INSTALL MAIN BUILDING SHUT-OFF VALVE IN VERTICAL PIPE ABOVE FLOOR.
- 06 DOMESTIC COLD WATER MAIN INTO BUILDING FROM CITY SERVICE. SEE CIVIL DRAWINGS FOR CONTINUATION.
- 07 ROUTE PIPING 8" ABOVE FLOOR ABOVE PLUMBING EQUIPMENT.
- 08 INSTALL NEW TANKLESS WATER HEATER UNDER LAVATORY/SINK. SEE DETAIL ON SHEET P502.
- 09 ROUTE DOMESTIC COLD WATER PIPE AS HIGH AS POSSIBLE TIGHT AS POSSIBLE TO BOTTOM OF STRUCTURE OF HIGH ROOF.
- 10 INSTALL P93 APPROXIMATELY 30" ABOVE FLOOR (BELOW COUNTER TOP).
- 11 ROUTE COLD WATER PIPING ABOVE HVAC DUCTWORK.
- 12 ROUTE COLD WATER PIPING BELOW HVAC DUCTWORK.
- 13 ELECTRICAL EQUIPMENT. DONOT ROUTE ANY PIPING OVER EQUIPMENT.

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WALL RATING LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]

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ISSUE DATE
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PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
MSG

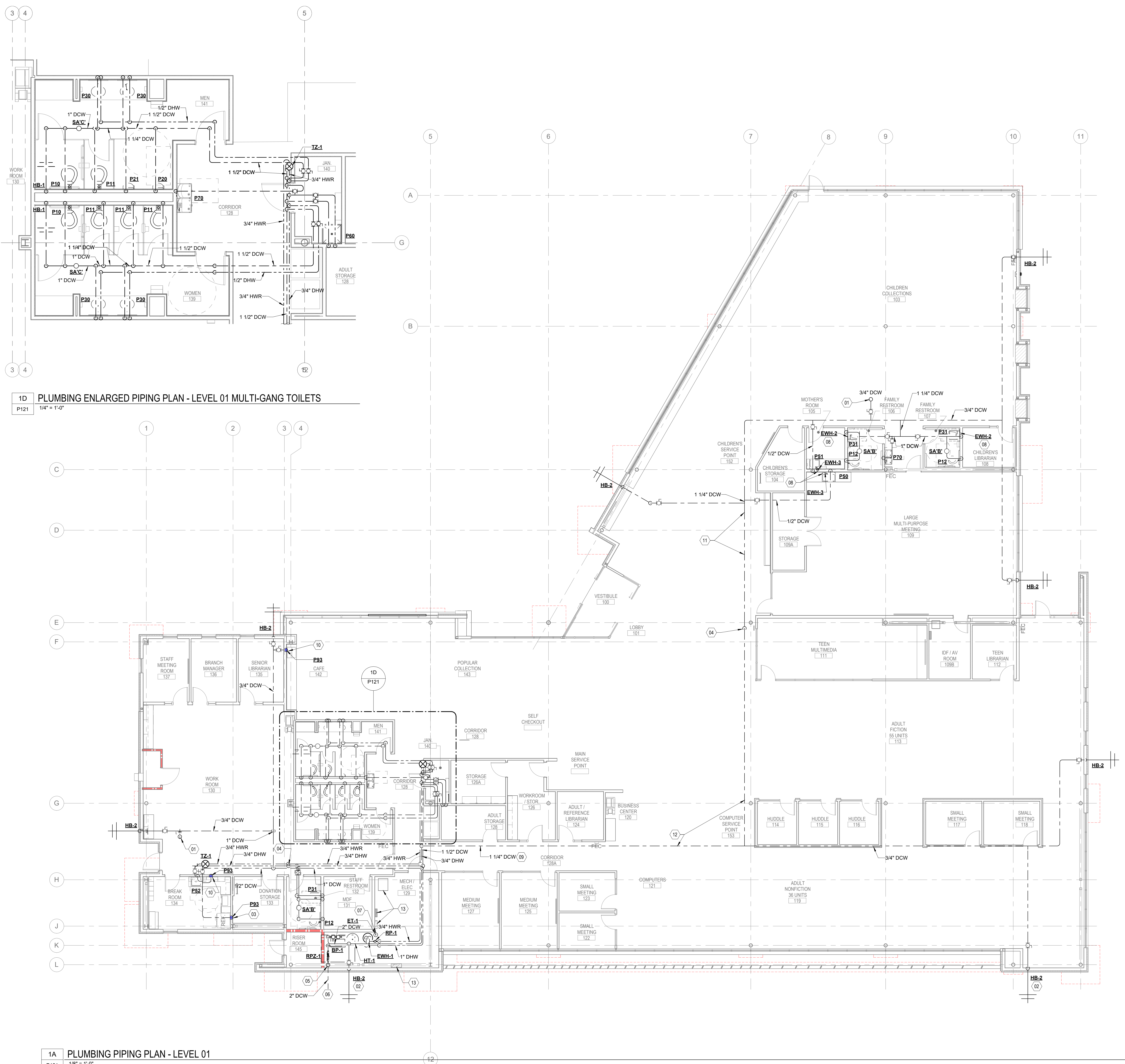
PROJECT NAME
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PROJECT NO.
514.18349.00

SHEET TITLE
PLUMBING PIPING PLAN

SHEET NUMBER
P121



1D PLUMBING ENLARGED PIPING PLAN - LEVEL 01 MULTI-GANG TOILETS
P121 1/4" = 1'-0"

1A PLUMBING PIPING PLAN - LEVEL 01
P121 1/8" = 1'-0"

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KEY NOTES

01 3" VTR SHOWN UNDER ROOF OVERHANG.

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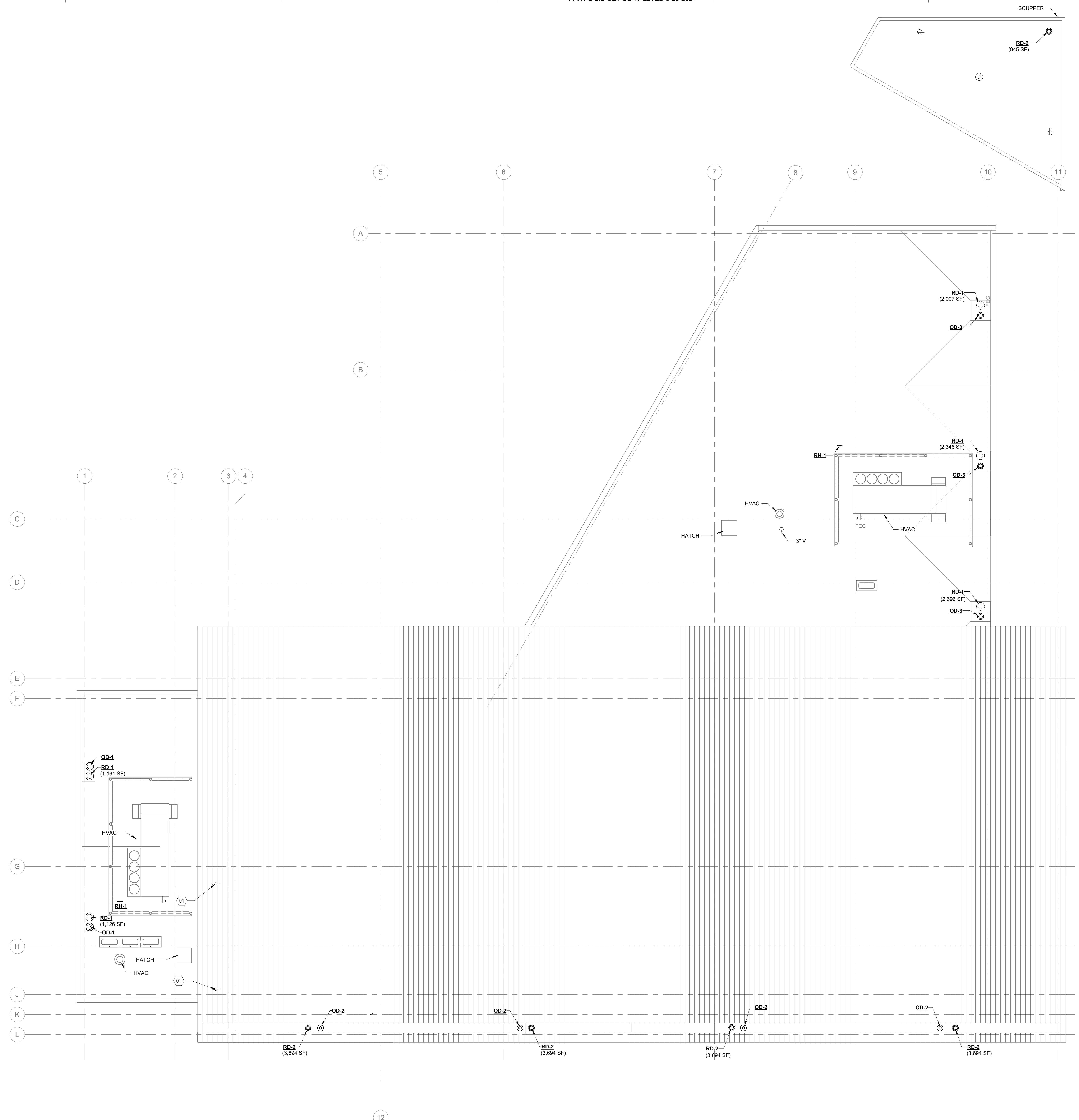
PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
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DESIGN TEAM
MSG

PROJECT NAME
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PROJECT NO.
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SHEET TITLE
PLUMBING ROOF PLAN

SHEET NUMBER
P131



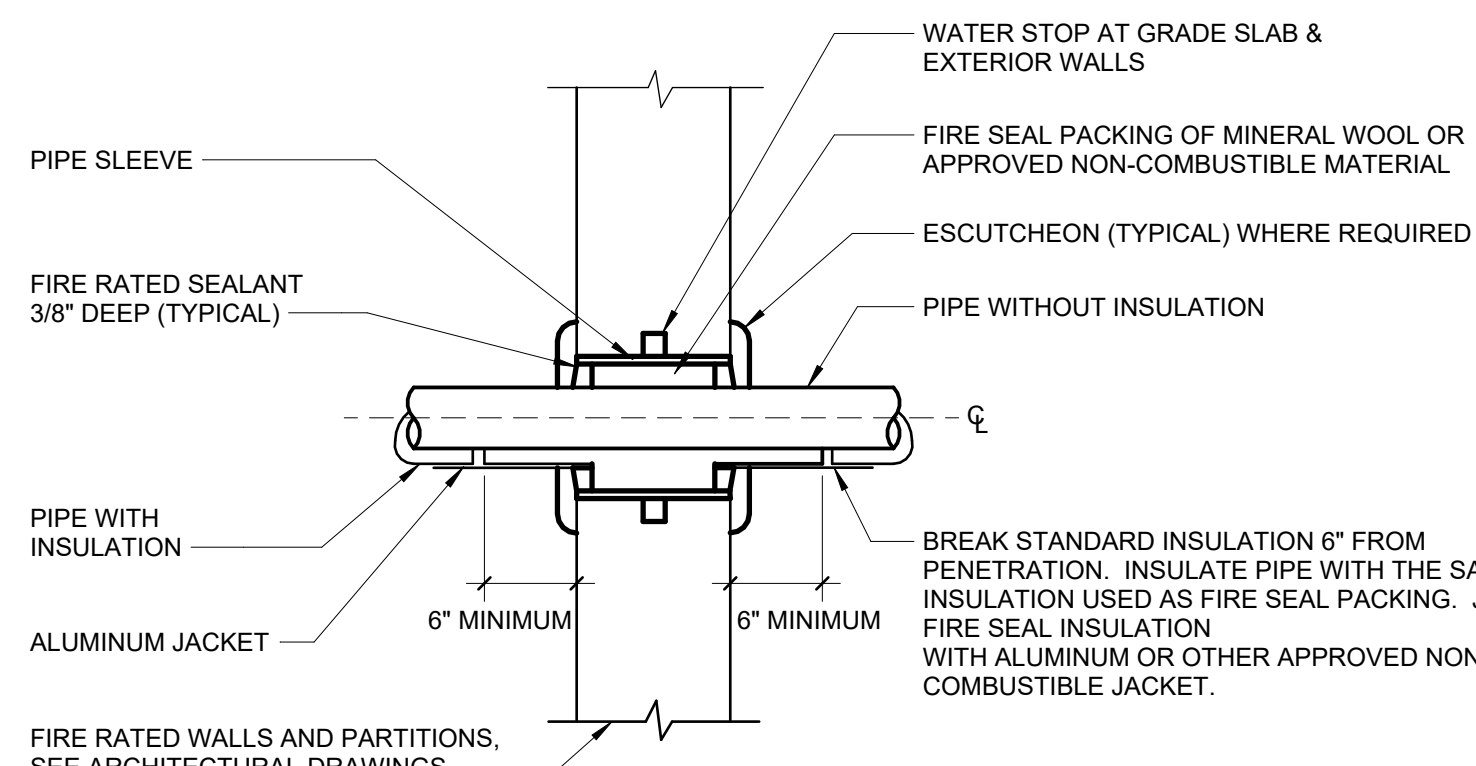
1A PLUMBING PLAN - ROOF
P131 1/8" = 1'-0"

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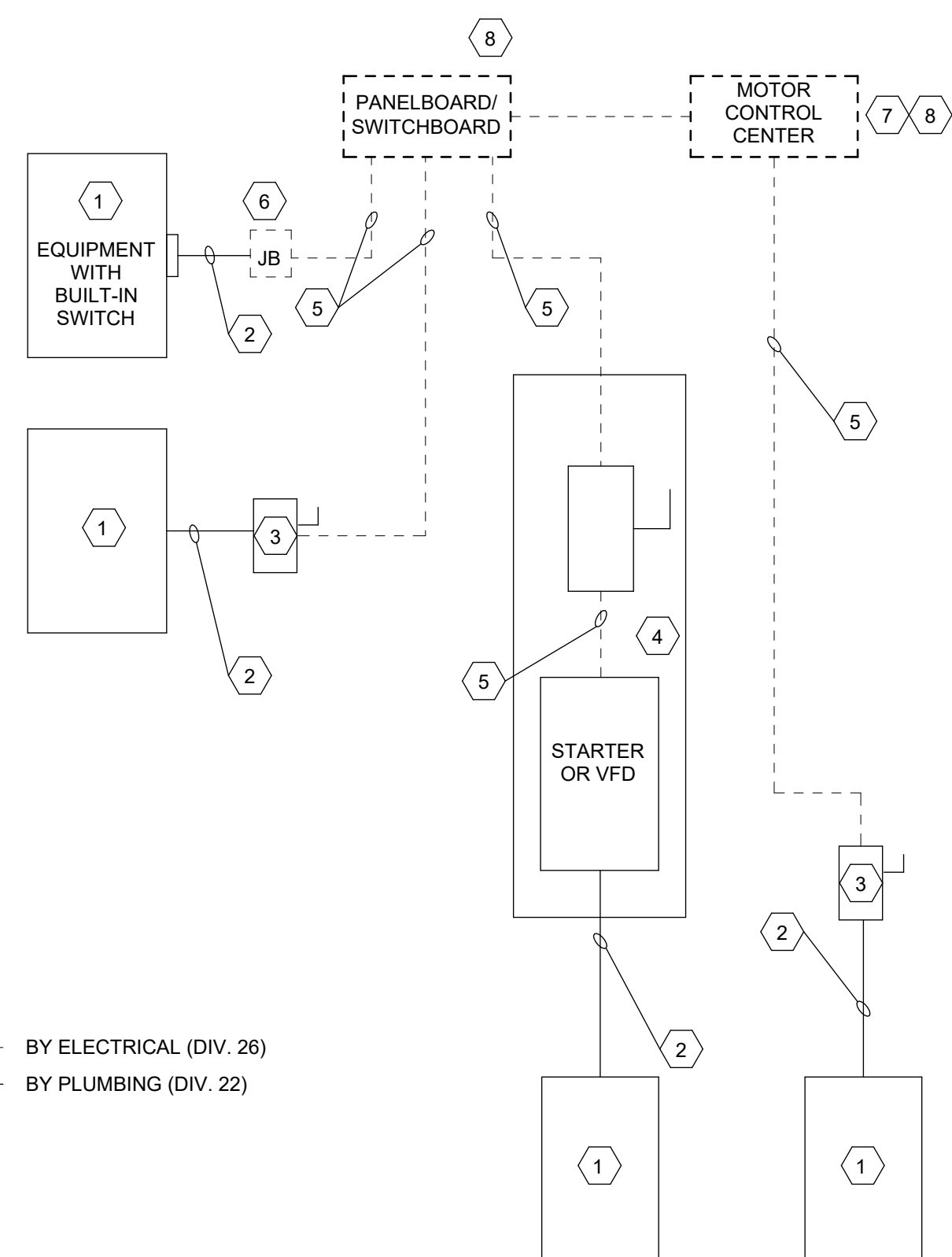
U.L. DETAILS			U.L. DETAILS		
CONCRETE OR BLOCK WALLS			GYPSUM WALLS		
Penetrant	F-Rating (hr)	Basis of design U.L. System	Penetrant	F-Rating (hr)	Basis of design U.L. System
SINGLE METAL PIPES OR CONDUITS	1	C-AJ-1226, W-J-1067, W-J-1020	SINGLE METAL PIPES OR CONDUITS	1	W-L-1054, W-L-1058, W-L-1164, W-L-1506
	2	C-AJ-1226, W-J-1067, W-J-1020, W-J-1248		2	W-L-1054, W-L-1058, W-L-1164, W-L-1506
	3	C-AJ-1226, W-J-1041, W-J-1068		4	W-L-1110, W-L-1111, W-L-1165
	4	C-BJ-1034, C-BJ-1037, W-J-1041, W-J-1042, W-J-1068		2	W-L-2078, W-L-2075, W-L-2128
SINGLE NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT)	1	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342	SINGLE NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT)	1	W-L-2184, W-L-2245
	2	C-AJ-2109, C-AJ-2098, C-AJ-2167, C-AJ-2371, C-AJ-2342		2	W-L-5028, W-L-5029, W-L-5047
	3	C-AJ-2109, C-AJ-2098, C-AJ-2371, C-AJ-2342		4	W-L-5073
	4	W-J-2057, W-J-2091		1	W-L-1095, W-L-8013
SINGLE INSULATED PIPES	1	C-AJ-5090, C-AJ-5091, C-AJ-5061, W-J-5042	SINGLE INSULATED PIPES	2	W-L-1095, W-L-8013
	2	C-AJ-5090, C-AJ-5091, C-AJ-5061, W-J-5042		4	W-L-8014
	3	C-AJ-5090, C-AJ-5061			
	4	C-BJ-5006, W-J-5028			
MIXED PENETRANTS	1	C-AJ 8099, C-AJ 8056, W-J 8007, C-AJ 8143	MIXED PENETRANTS	1	
	2	C-AJ 8099, C-AJ 8056, W-J 8007, C-AJ 8143		2	
	3	C-AJ 8041, C-AJ 8056, W-J 8007, C-AJ 8099		4	
	4	C-AJ 8095, W-J 8007			

U.L. Details are basis of design options. Contractor shall submit UL details used in field for approval by architect and engineers of record.

- NOTES:
- SEE U.L. DETAIL SCHEDULES FOR RATE ASSEMBLIES.
 - INSULATION IS 1" FIBERGLASS WITH ASJ COVERING.
 - SLEEVES ARE NOT PROVIDED THROUGH GYPSUM WALLS.
 - GYPSUM WALLS ARE 2 LAYERS OF 5/8" - EACH SIDE OF WALL.



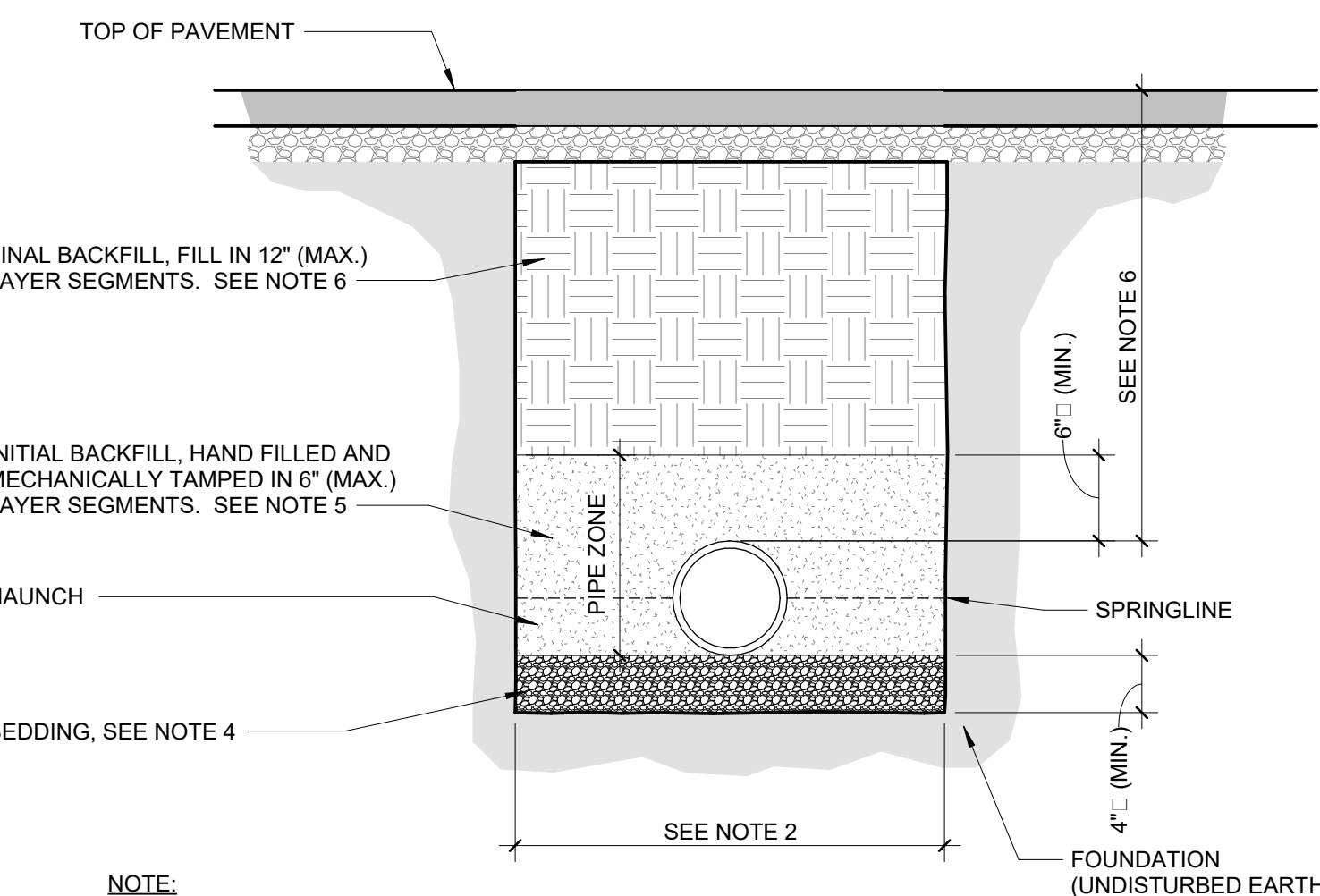
2D PIPE SLEEVE THROUGH FIRE RATED WALL
P501 NOT TO SCALE



- LEGEND:
- BY ELECTRICAL (DIV. 26)
 - BY PLUMBING (DIV. 22)

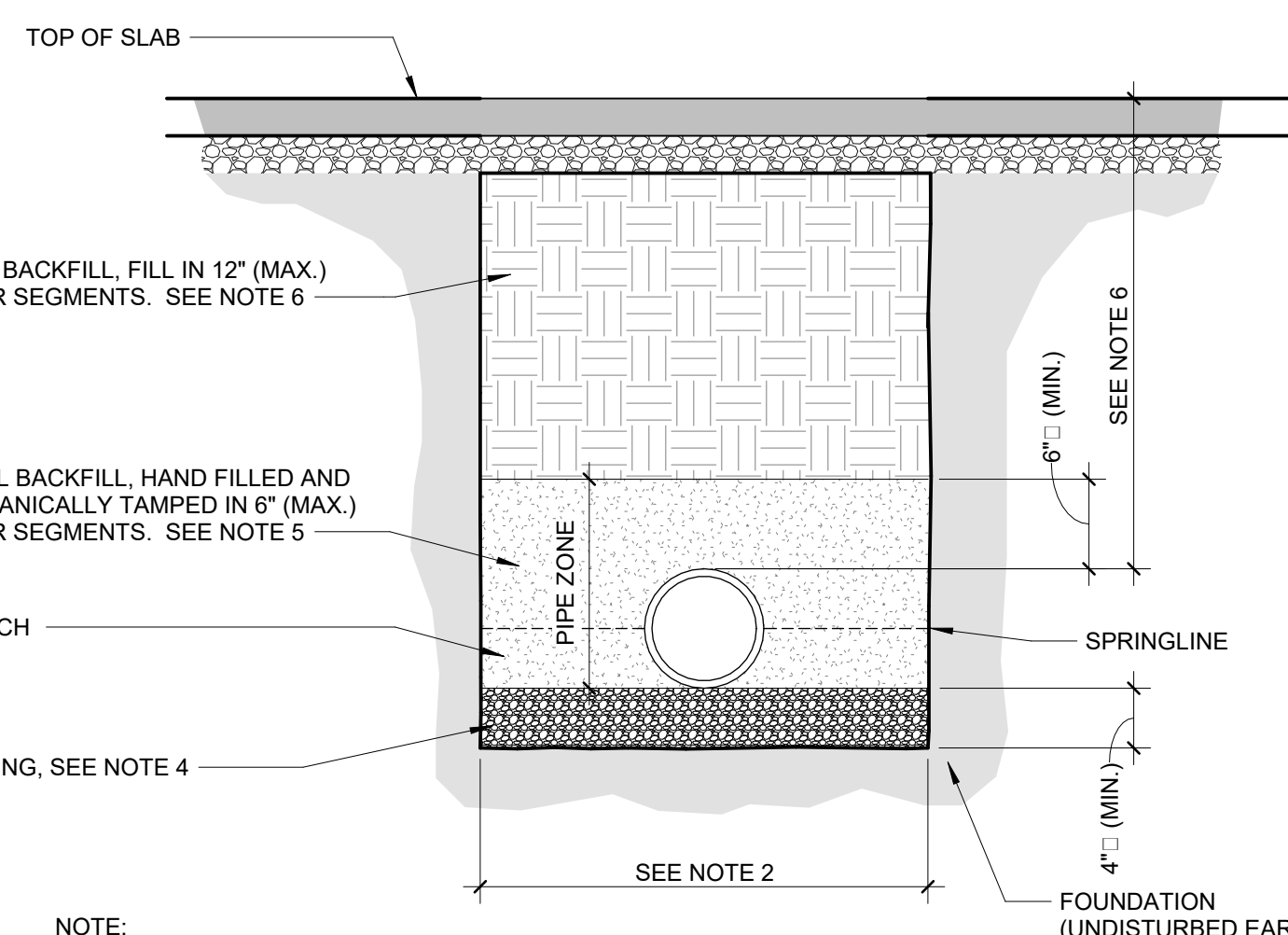
- GENERAL NOTES:
- ALL POWER WIRING ASSOCIATED WITH DIVISION 22 (PLUMBING) SHALL BE PERFORMED UNDER THE SCOPE OF WORK OF THE CONTRACTOR SUPPLYING THE EQUIPMENT AND SHALL BE COORDINATED WITH THE DIVISION 26 (ELECTRICAL) CONTRACTOR.
 - ALL POWER DISCONNECT SWITCHES, VFDS, AND SINGLE SPEED MANUAL STARTING SWITCHES ASSOCIATED WITH DIVISION 22 SHALL BE PROVIDED UNDER THE SCOPE OF WORK OF THE CONTRACTOR SUPPLYING THE EQUIPMENT AND SHALL BE COORDINATED WITH THE DIVISION 26 CONTRACTOR.
 - EXCEPT AS MAY BE INDICATED ON THE DRAWINGS AND/OR HEREINAFTER NOTED, ALL LOW VOLTAGE CONTROL WIRING, INCLUDING ALL TEMPERATURE CONTROL WIRING, INTERLOCKING, START-STOP WIRING, TOGETHER WITH CONDUIT FOR SAME, SHALL BE PROVIDED UNDER DIVISION 22 BY THE CONTRACTOR SUPPLYING THE EQUIPMENT. THIS INCLUDES, BUT IS NOT LIMITED TO, WIRING TO LOW VOLTAGE THERMOSTATS, DAMPER MOTORS, AQUASTATS, FIRESTATS, PUSH BUTTONS, SELECTOR SWITCHES, AND CONTROL PANELS. ALL DISCONNECT SWITCHES FOR CONTROL WIRING SHALL BE PROVIDED UNDER DIVISION 22 BY THE CONTRACTOR SUPPLYING THE EQUIPMENT.
 - WORK OF DIVISION 22 SHALL INCLUDE FURNISHING AND SETTING MOTORS.
 - ALL MAGNETIC STARTERS AND OVERLOAD ELEMENTS WILL BE PROVIDED UNDER DIVISION 22 BY THE CONTRACTOR SUPPLYING THE EQUIPMENT AND SHALL BE COORDINATED WITH THE DIVISION 26 CONTRACTOR. OVERLOAD ELEMENTS IN ALL STARTERS SHALL BE SELECTED ACCORDING TO ACTUAL MOTOR NAMEPLATE FULL LOAD CURRENT. RESPONSIBILITY FOR THIS COORDINATION SHALL LIE WITH THE DIVISION UNDER WHICH THE PARTICULAR STARTER WAS FURNISHED.
 - DEVICES THAT INTERRUPT LINE VOLTAGE POWER CIRCUITS TO MOTORS SHALL BE PROVIDED UNDER DIVISION 22, AND ELECTRICALLY CONNECTED IN THE BRANCH CIRCUIT WIRING AS WORK OF DIVISION 26.

- KEYED NOTES:
- DIVISION 22 EQUIPMENT
 - CONDUIT & WIRING OR CABLE BY MECHANICAL CONTRACTOR, CONTROLS CONTRACTOR, OR OTHER TRADES. IN ALL CASES THE EQUIPMENT CONTRACTOR (DIV. 22) SHALL MAKE FINAL CONNECTIONS, START UP EQUIPMENT AND TEST EQUIPMENT. COORDINATE CONNECTIONS WITH DIV. 26.
 - IF ANY ADDITIONAL DISCONNECTS ARE REQUIRED BY NEC, IT SHALL BE PROVIDED AND INSTALLED BY THE EQUIPMENT CONTRACTOR (DIV. 22).
 - A COMBINATION STARTER OR VFD MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER. FACTORY MOUNT OR LOCATE ADJACENT TO EQUIPMENT AND PROVIDED BY EQUIPMENT CONTRACTOR.
 - FEEEDER CIRCUIT WIRING AND CONDUIT BY ELECTRICAL CONTRACTOR.
 - A JUNCTION BOX MAY BE SHOWN ON THE ELECTRICAL PLANS FOR SOME EQUIPMENT. IF NO STARTER OR DISCONNECT IS SUPPLIED, A JUNCTION BOX SHALL BE INSTALLED ADJACENT TO EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO JUNCTION BOX. LOAD SIDE WIRING WILL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.
 - FOR PROJECTS UTILIZING MOTOR CONTROL CENTERS (MCC), THE STARTER, CB, OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL CONTRACTOR.
 - DIVISION 26 EQUIPMENT.



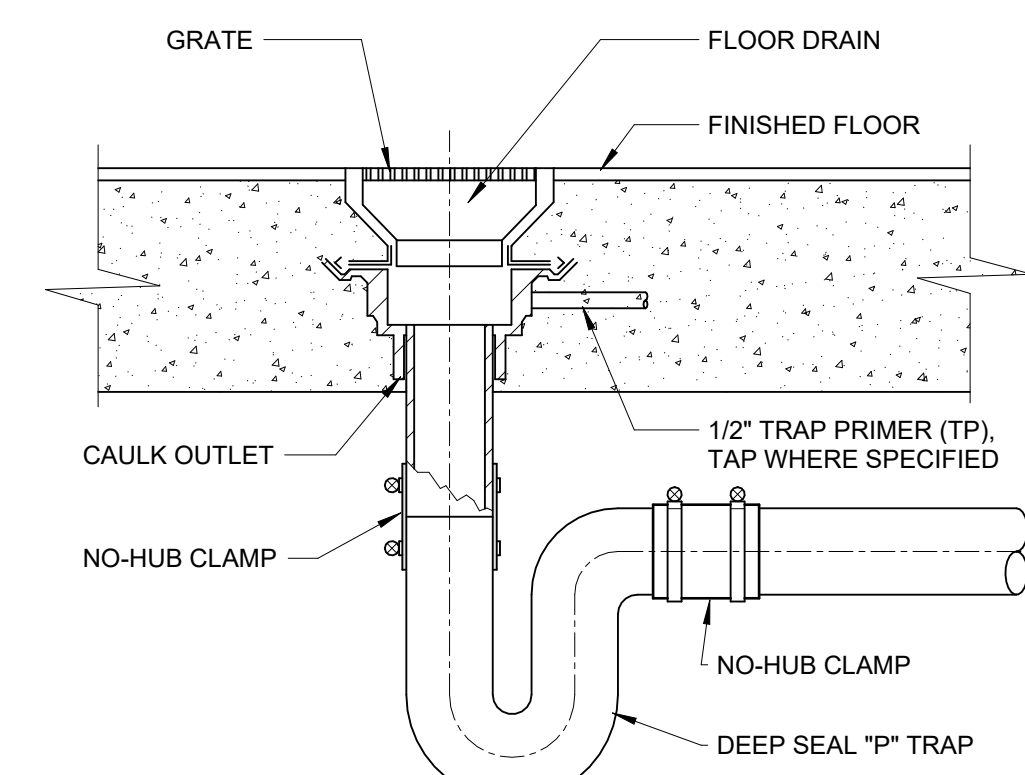
- NOTE:
- SLOPE PIPE PER STATE AND LOCAL CODES.
 - MINIMUM TRENCH WIDTH FOR PIPING 10" DIAMETER AND SMALLER SHALL BE PIPE DIAMETER + 16". FOR PIPING GREATER THAN 10" NOMINAL DIAMETER, MINIMUM TRENCH WIDTH SHALL BE 1.5 PIPE DIAMETER + 12". WHERE CIVIL ENGINEER, OSHA, AUTHORITY HAVING JURISDICTION, ETC. REQUIRES A MINIMUM TRENCH WIDTH, THE LARGEST SHALL BE USED.
 - FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACED WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING GEOTEXTILE MATERIAL.
 - BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE COMPACTED FOR CLASS I OR 95%-98% FOR CLASS II. UNLESS OTHERWISE NOTED BY ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 24" DIAMETER (OR LESS), 6" THICKNESS FOR 26" OR LARGER PIPE DIAMETER, MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PACKED.
 - INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 - FINAL BACKFILL: FOR TRAFFIC APPLICATIONS, CLASS I OR II MATERIAL COMPACTED TO 90% SPD IS REQUIRED. MINIMUM COVER SHALL BE 12" COVER FOR PIPE UP TO 48" DIAMETER AND 24" OF COVER FOR 60" DIAMETER, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT.
 - DETAIL BASED OFF OF ASTM D2123, CONTRACTOR SHALL REFER TO THE LATEST ISSUANCE OF ASTM STANDARD D2123.

1A PIPING OFFSET FOR WHEELCHAIR CLEARANCES
P501 NOT TO SCALE

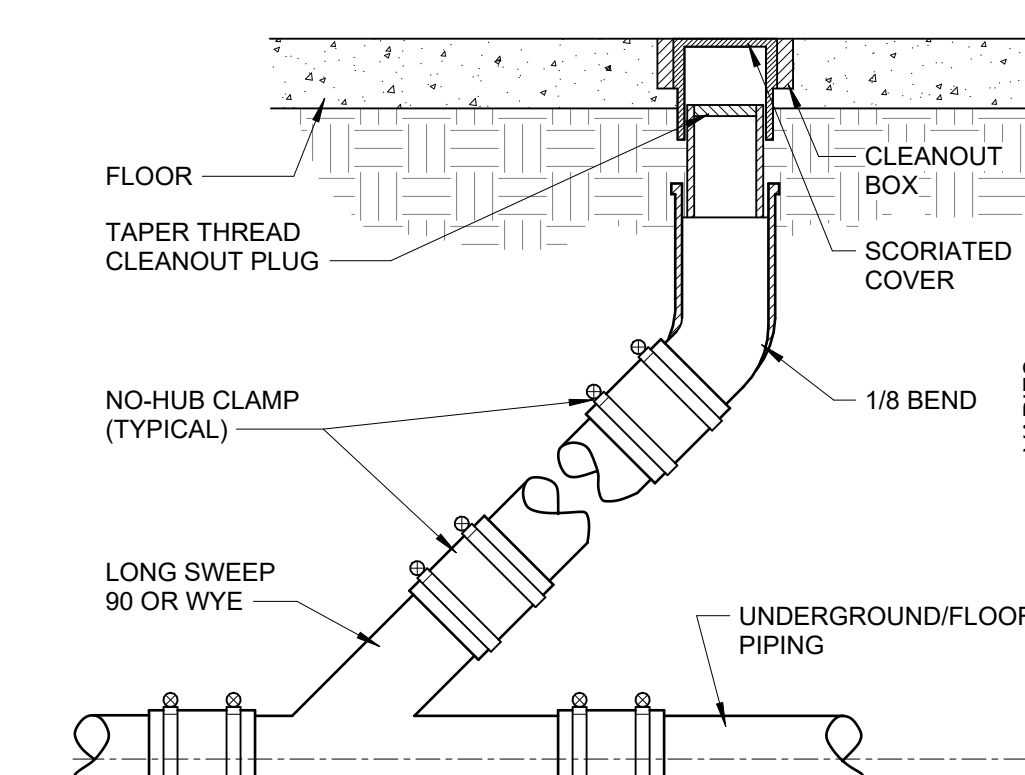


- NOTE:
- SLOPE PIPE PER STATE AND LOCAL CODES.
 - MINIMUM TRENCH WIDTH FOR PIPING 10" DIAMETER AND SMALLER SHALL BE PIPE DIAMETER + 16". FOR PIPING GREATER THAN 10" NOMINAL DIAMETER, MINIMUM TRENCH WIDTH SHALL BE 1.5 PIPE DIAMETER + 12". WHERE CIVIL ENGINEER, OSHA, AUTHORITY HAVING JURISDICTION, ETC. REQUIRES A MINIMUM TRENCH WIDTH, THE LARGEST SHALL BE USED.
 - FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACED WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING GEOTEXTILE MATERIAL.
 - BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE COMPACTED FOR CLASS I OR 95%-98% FOR CLASS II. UNLESS OTHERWISE NOTED BY ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 24" DIAMETER (OR LESS), 6" THICKNESS FOR 26" OR LARGER PIPE DIAMETER, MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PACKED.
 - INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 - FINAL BACKFILL: FOR NON-TRAFFIC APPLICATIONS, MATERIAL FROM EXCAVATION, TAMP TO 95% PROCTOR. THIS SHALL BE FREE OF STONE UP UNTIL FOUNDATION BEDDING. MINIMUM COVER SHALL BE 12" COVER FOR PIPE UP TO 48" DIAMETER AND 24" OF COVER FOR 60" DIAMETER OR BELOW FROST LINE WHICH EVER IS DEEPER, MEASURED FROM TOP OF PIPE TO TOP OF SLAB OR TOP OF GROUND SURFACE.
 - DETAIL BASED OFF OF ASTM D2123, CONTRACTOR SHALL REFER TO THE LATEST ISSUANCE OF ASTM STANDARD D2123.

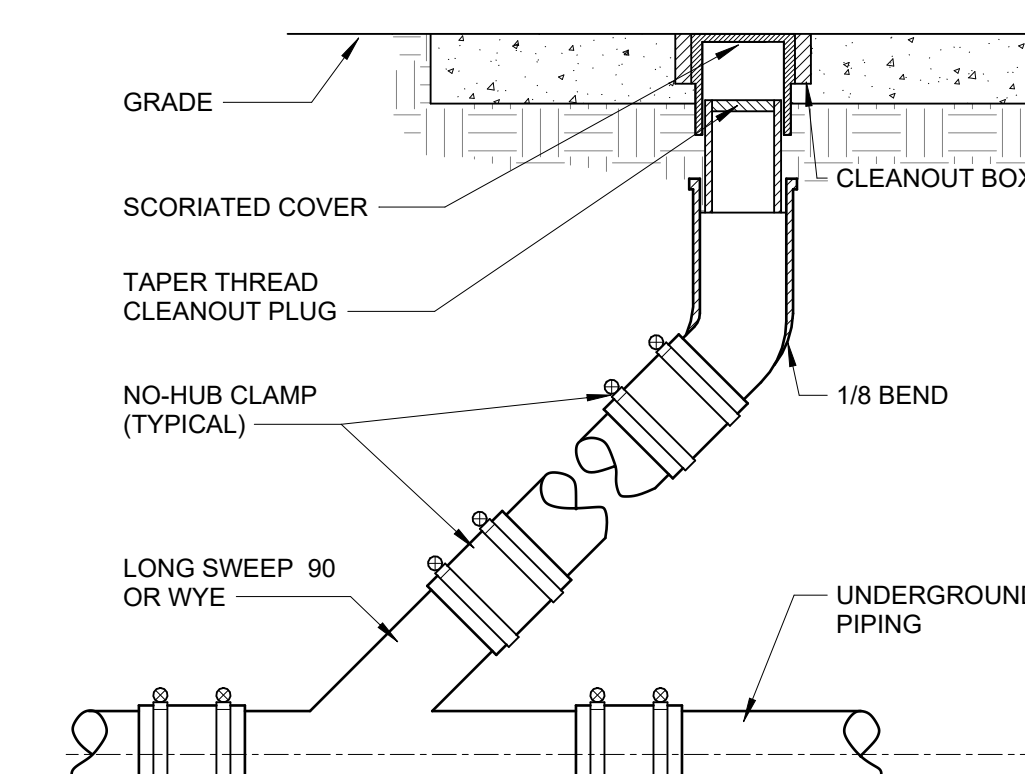
2A TRENCH DETAIL FOR GRAVITY FLOW THERMOPLASTIC PIPING BASE OFF ASTM D 2321
P501 NOT TO SCALE



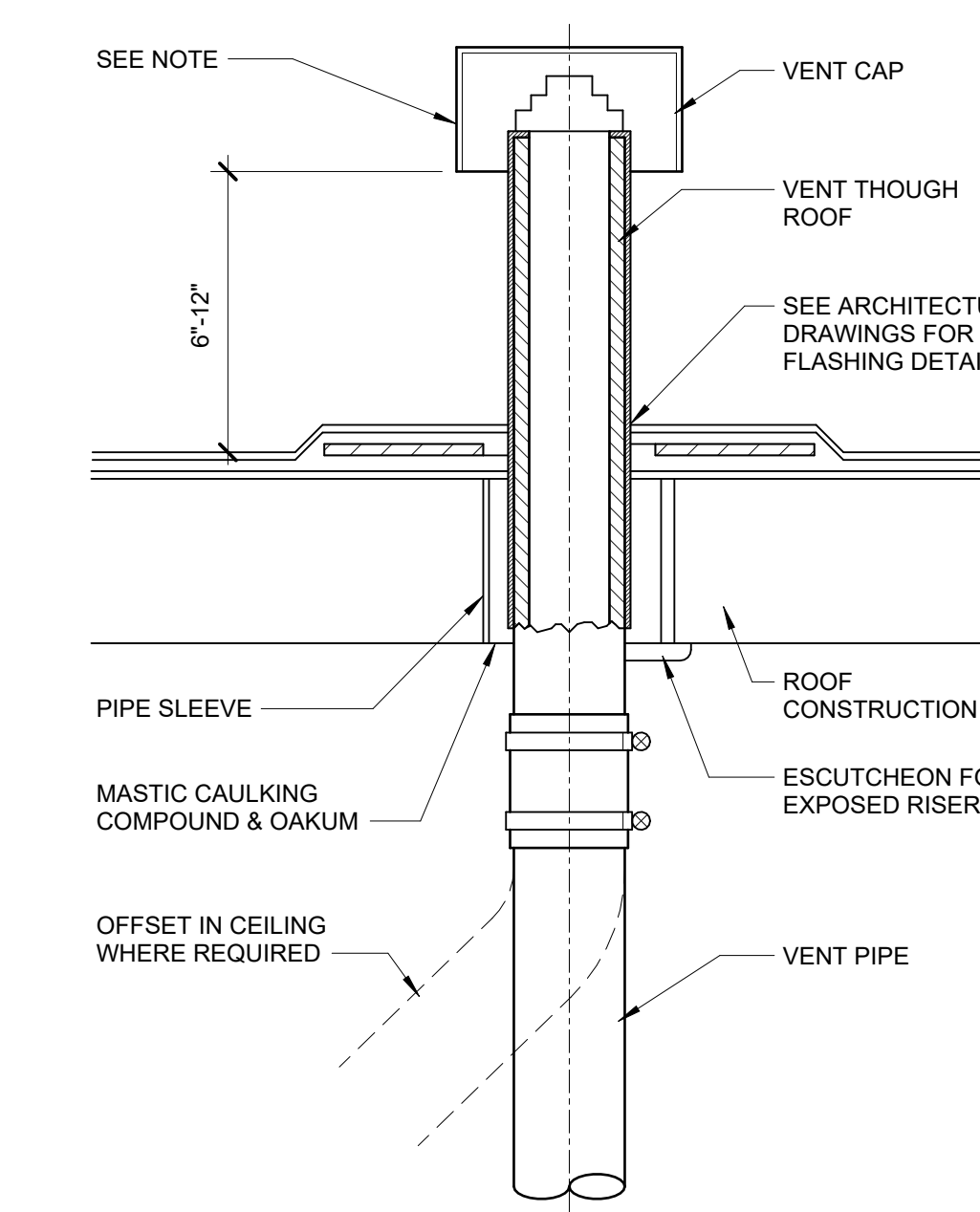
5C FLOOR DRAIN DETAIL
P501 NOT TO SCALE



6C FLOOR CLEANOUT DETAIL
P501 NOT TO SCALE

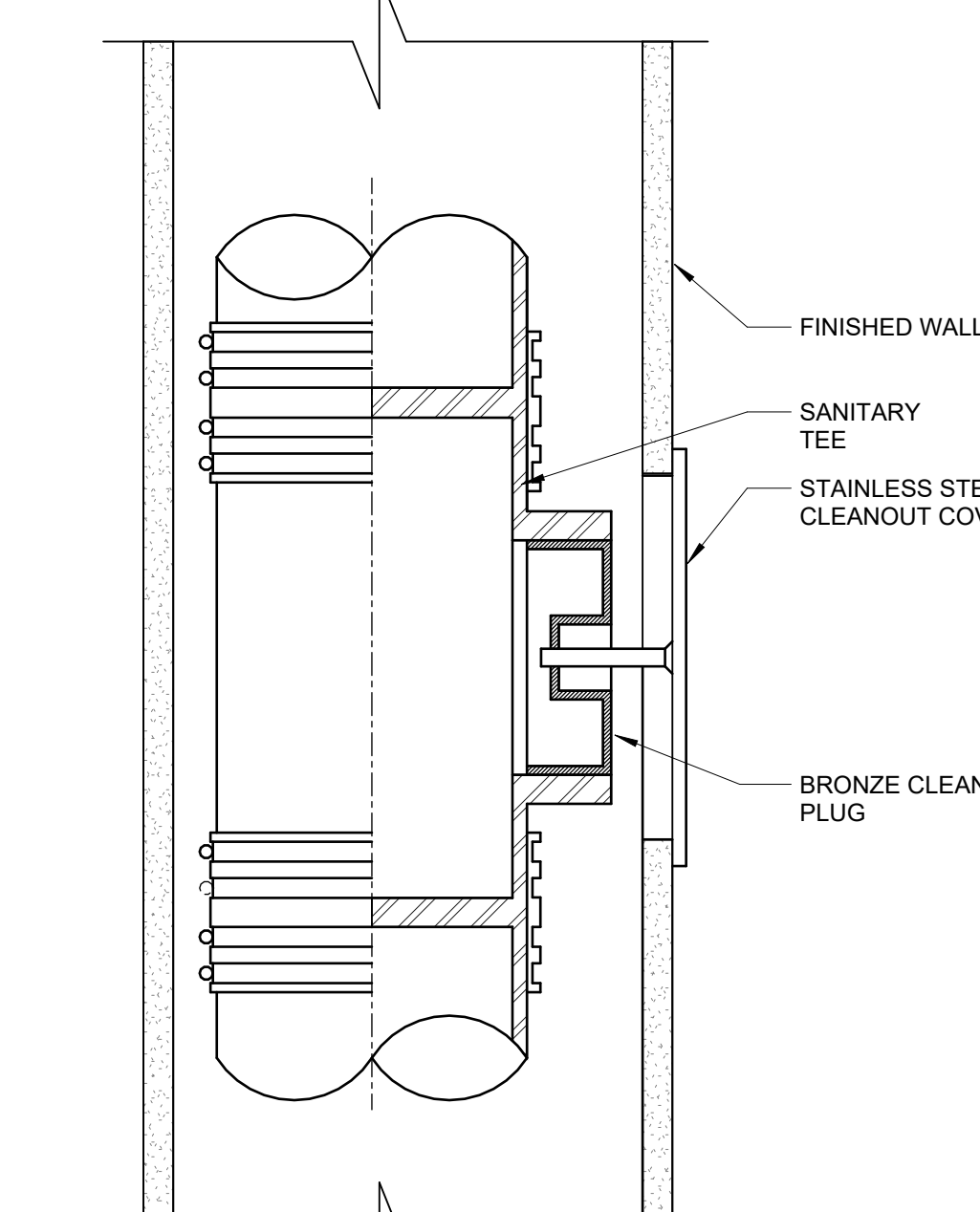


6B YARD CLEANOUT DETAIL (YCO)
P501 NOT TO SCALE



NOTE: 24" MINIMUM FROM ANY WALL OR VERTICAL SURFACE. COORDINATE WITH HVAC UNIT LOCATIONS.

5A VENT THRU ROOF (FLAT ROOF)
P501 NOT TO SCALE



6A WALL CLEANOUT DETAIL
P501 NOT TO SCALE



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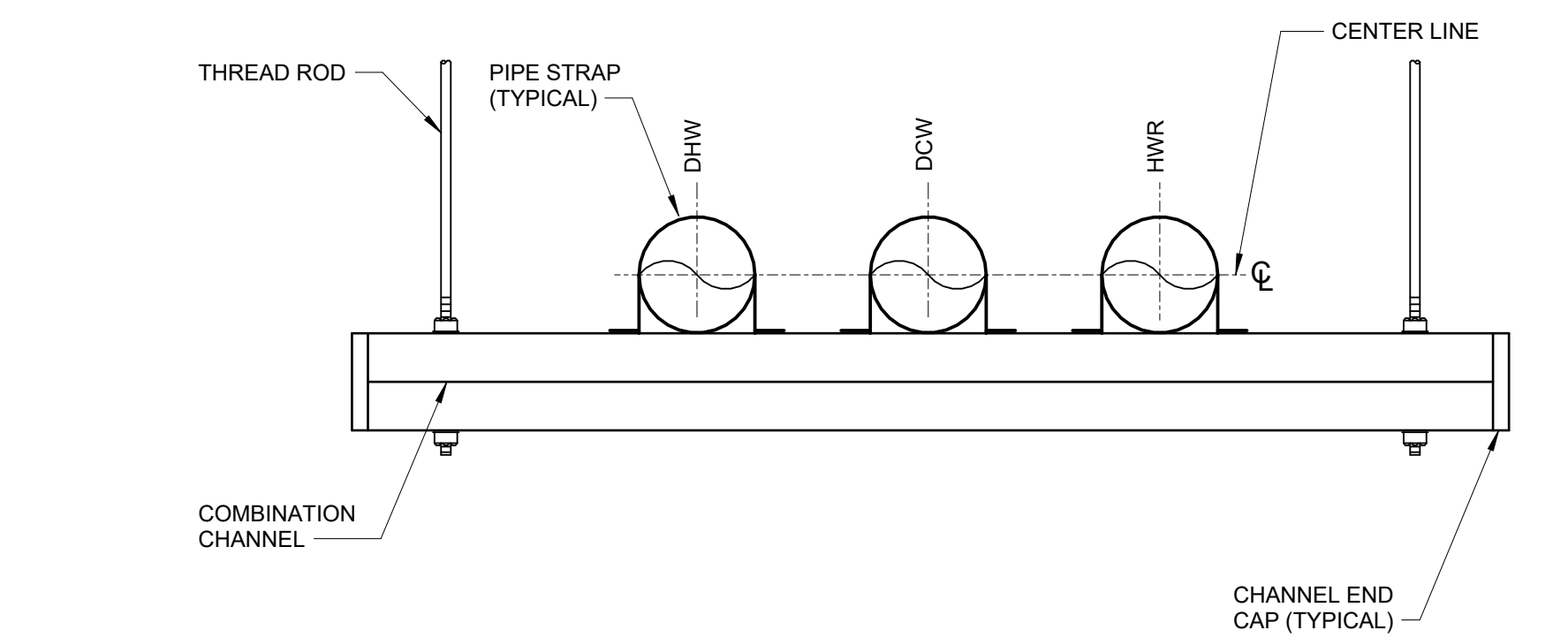
PROJECT TEAM

PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
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Charlotte Hagen, AIA
DESIGN TEAM
MSG
PROJECT NAME
NORTHCHASE BRANCH LIBRARY

4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00
SHEET TITLE
PLUMBING DETAILS

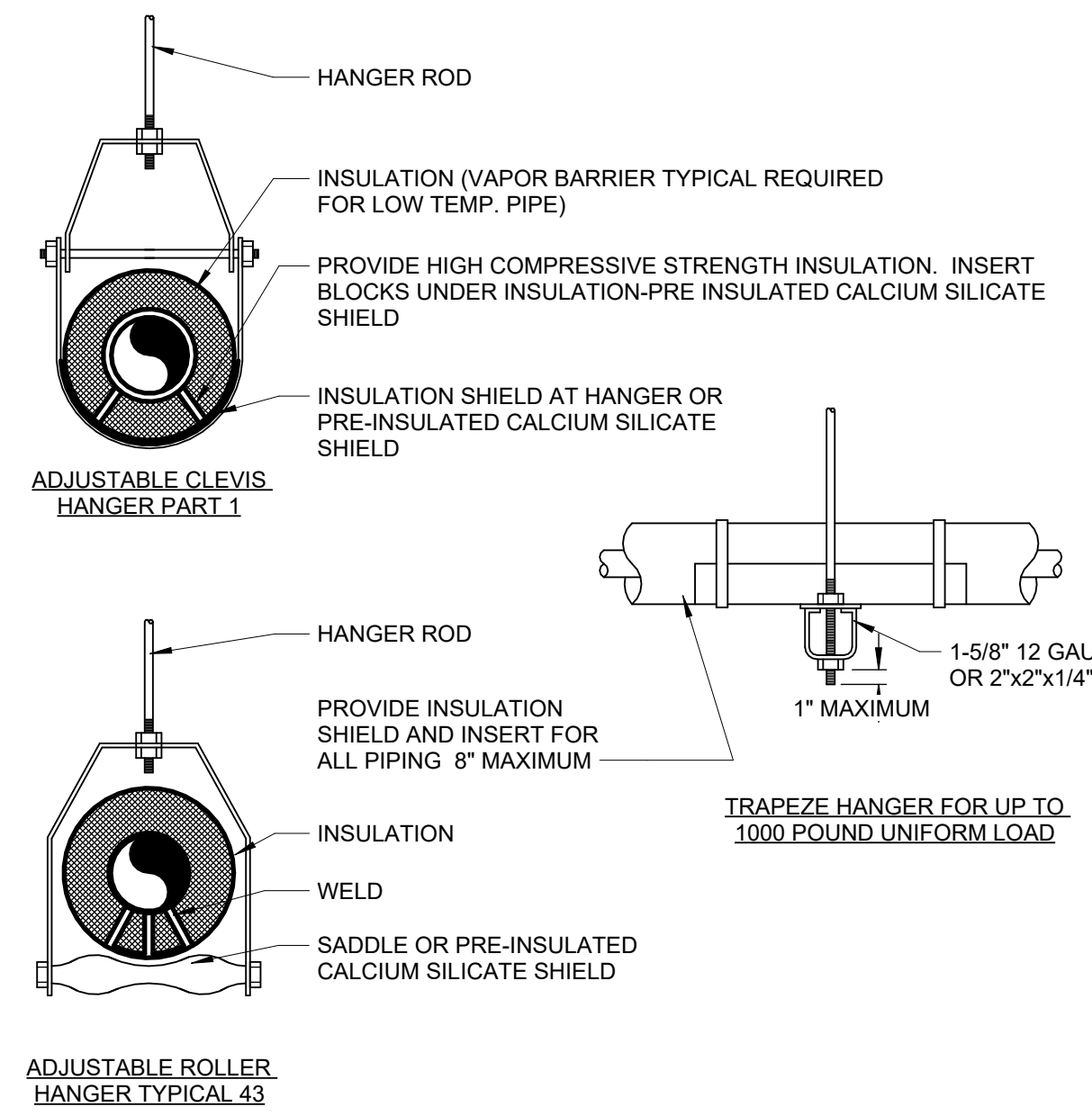
SHEET NUMBER
P501



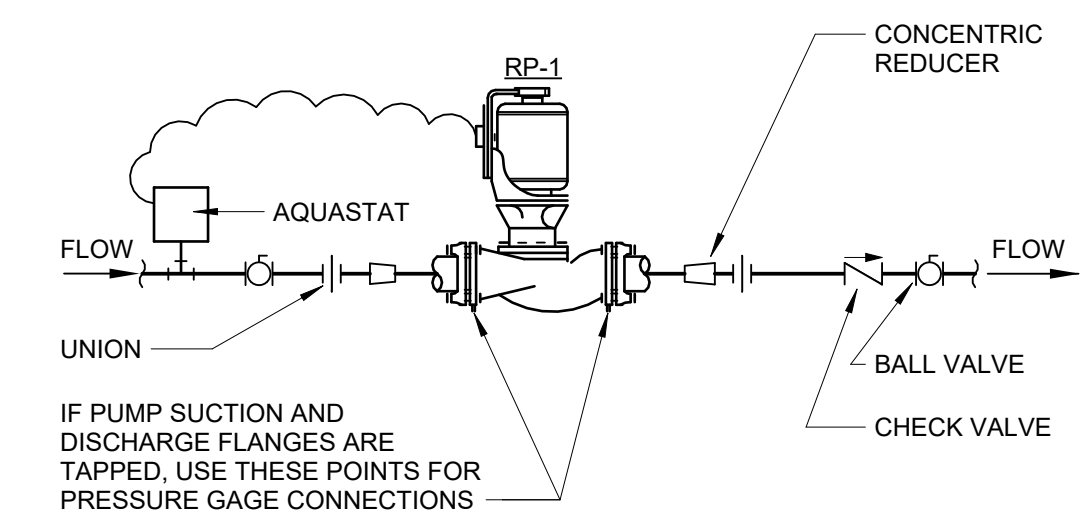
3E TRAPEZE HANGAR DETAIL
P502 NOT TO SCALE

		MAXIMUM PIPE/TUBING SUPPORT SPACING, FEET																
NOM. SIZE	THRU 3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"
PIPE	7 FT	7	7	9	10	11	12	14	16	17	19	22	23	25	27	28	30	32
TUBING	5 FT	6	7	8	8	9	10	12	13	14	16	-	-	-	-	-	-	-

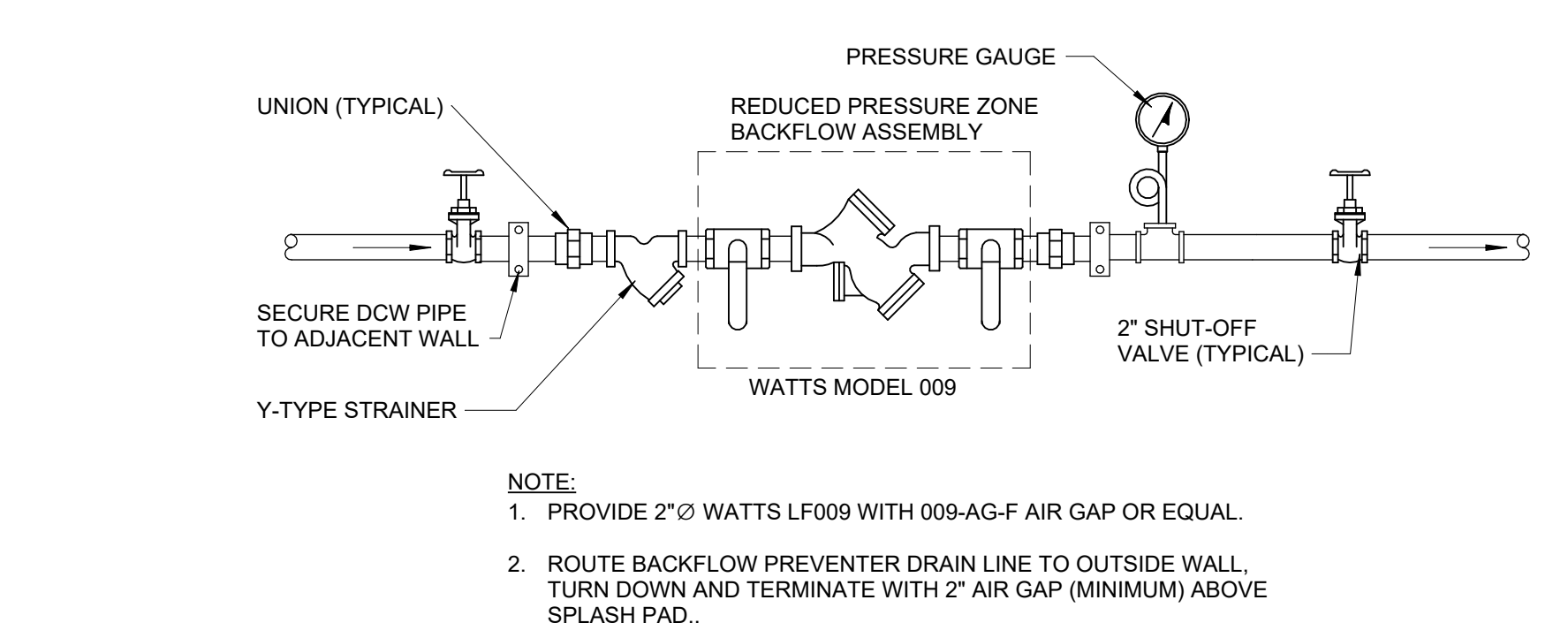
NOTE: FOR TRAPEZE HANGER - TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.



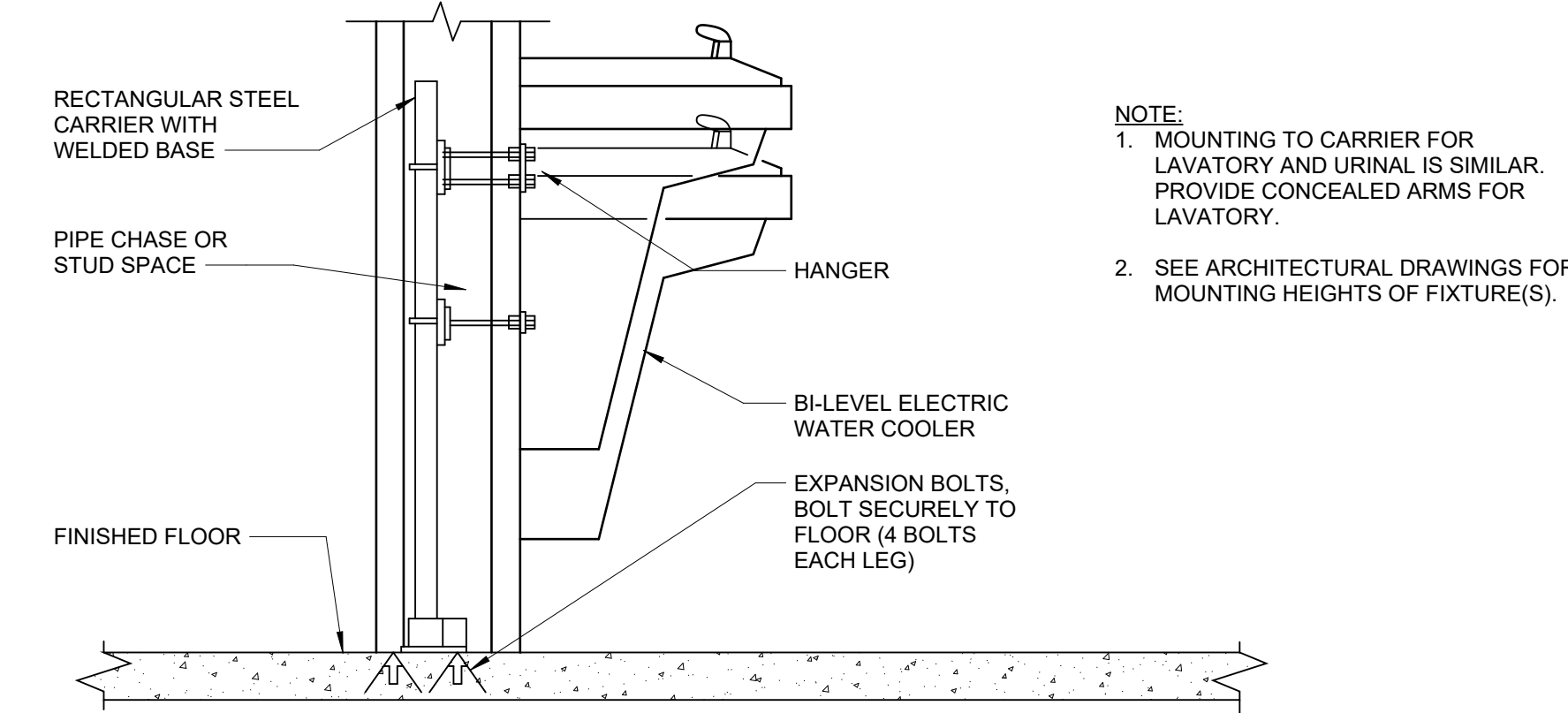
3C PIPE HANGAR DETAILS
P502 NOT TO SCALE



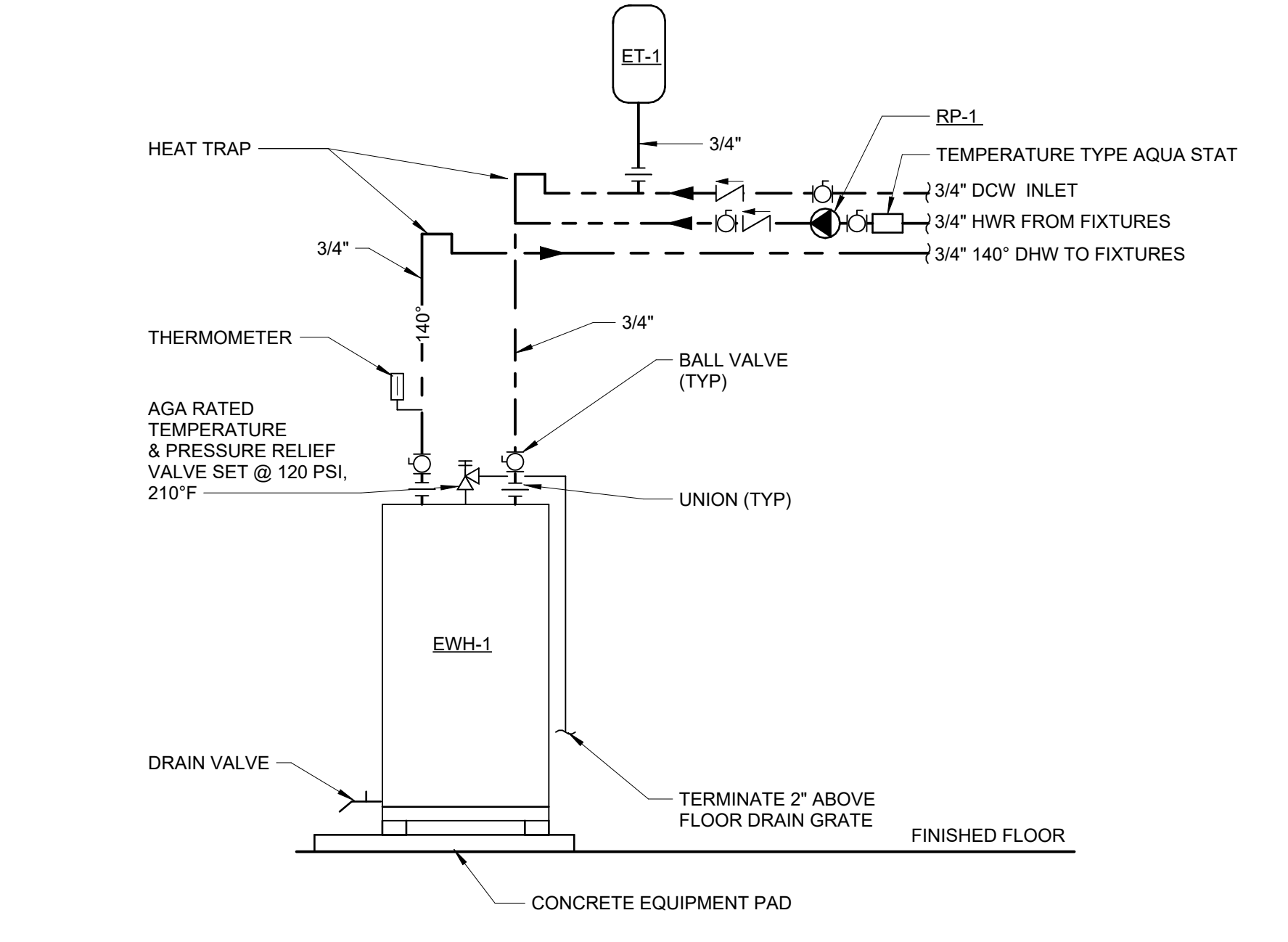
4C INLINE RECIRCULATING PUMP DETAIL
P502 NOT TO SCALE



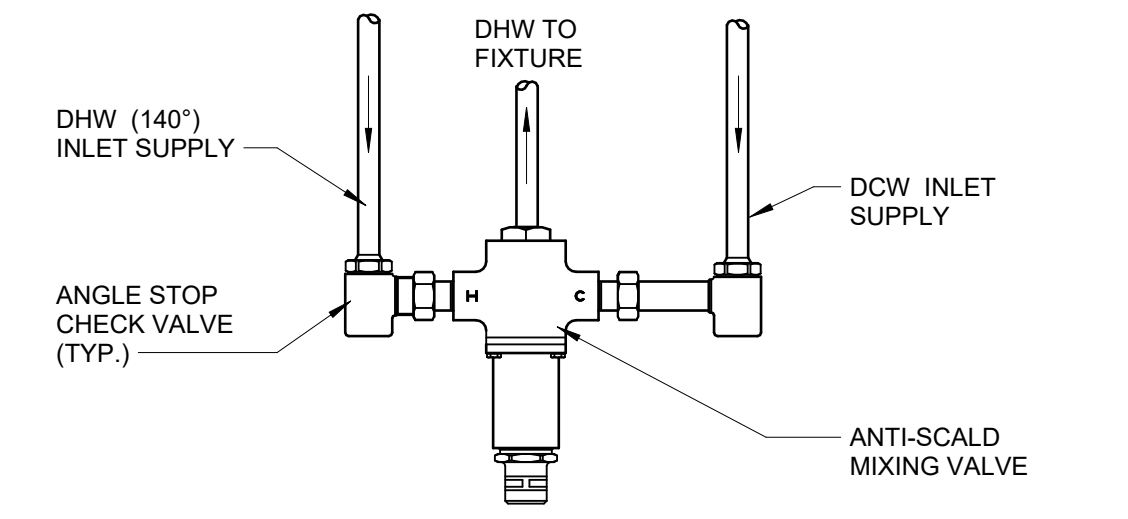
5E REDUCED PRESSURE ZONE (WATTS SERIES 009)
P502 NOT TO SCALE



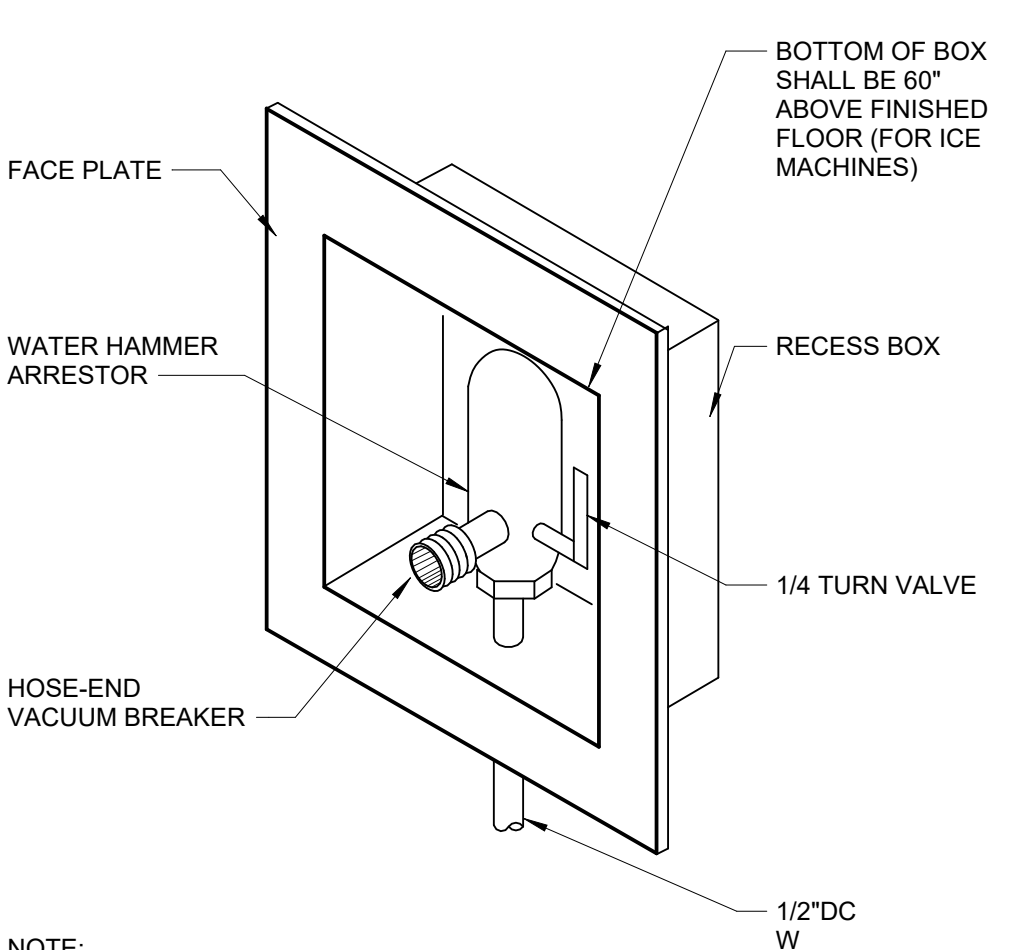
5D DOUBLE ELECTRIC WATER COOLER MOUNTING
P502 NOT TO SCALE



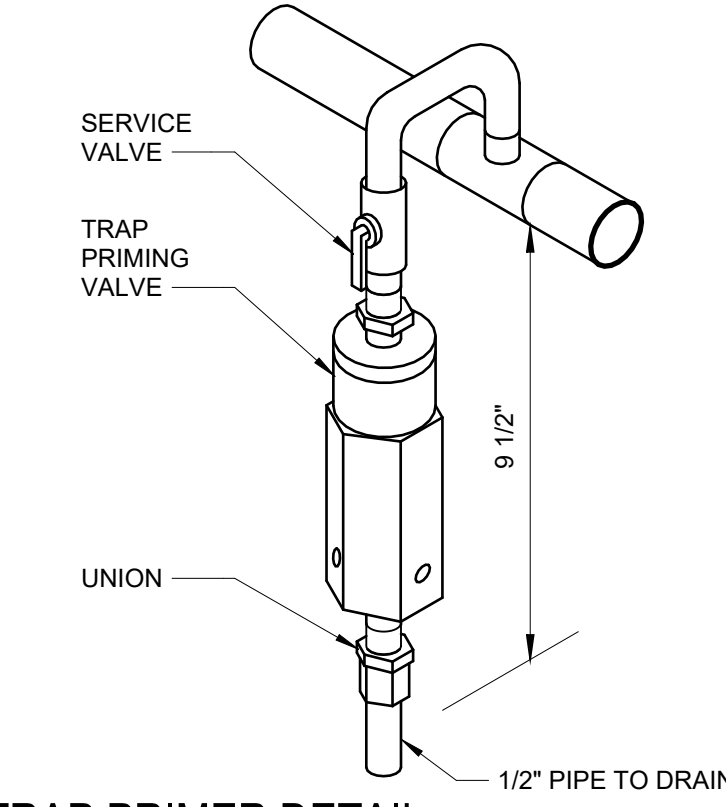
5C ELECTRIC WATER HEATER DETAIL (SINGLE)
P502 NOT TO SCALE



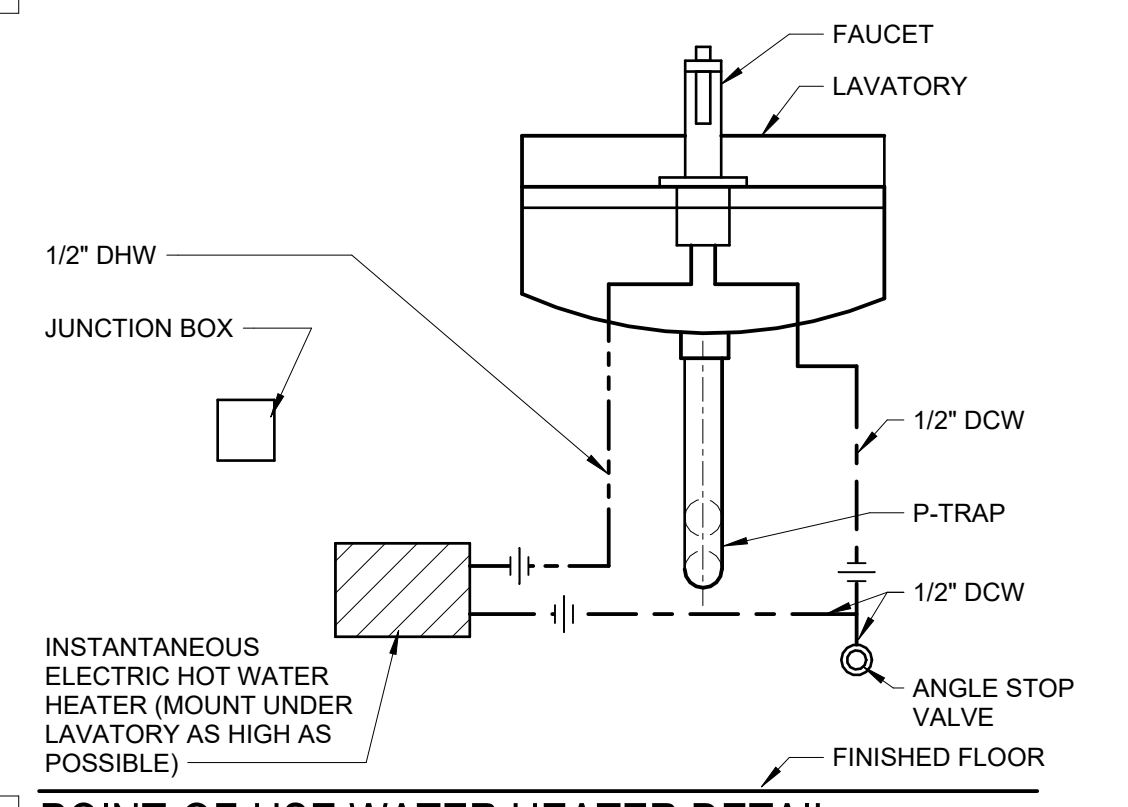
5B STEP DOWN MIXING VALVE (TEMPERED RISER ONLY)
P502 NOT TO SCALE



6A VALVE BOX DETAIL (MODULAR)
P502 NOT TO SCALE



4A TRAP PRIMER DETAIL
P502 NOT TO SCALE



5A POINT-OF-USE WATER HEATER DETAIL
P502 NOT TO SCALE

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KEY NOTES

01 4" SANITARY SEWER LINE TO CITY SERVICES, SEE CIVIL DRAWINGS FOR CONTINUATION.



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PROJECT TEAM
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PROJECT MANAGER
Charlotte Hagen, AIA

DESIGN TEAM
MSG

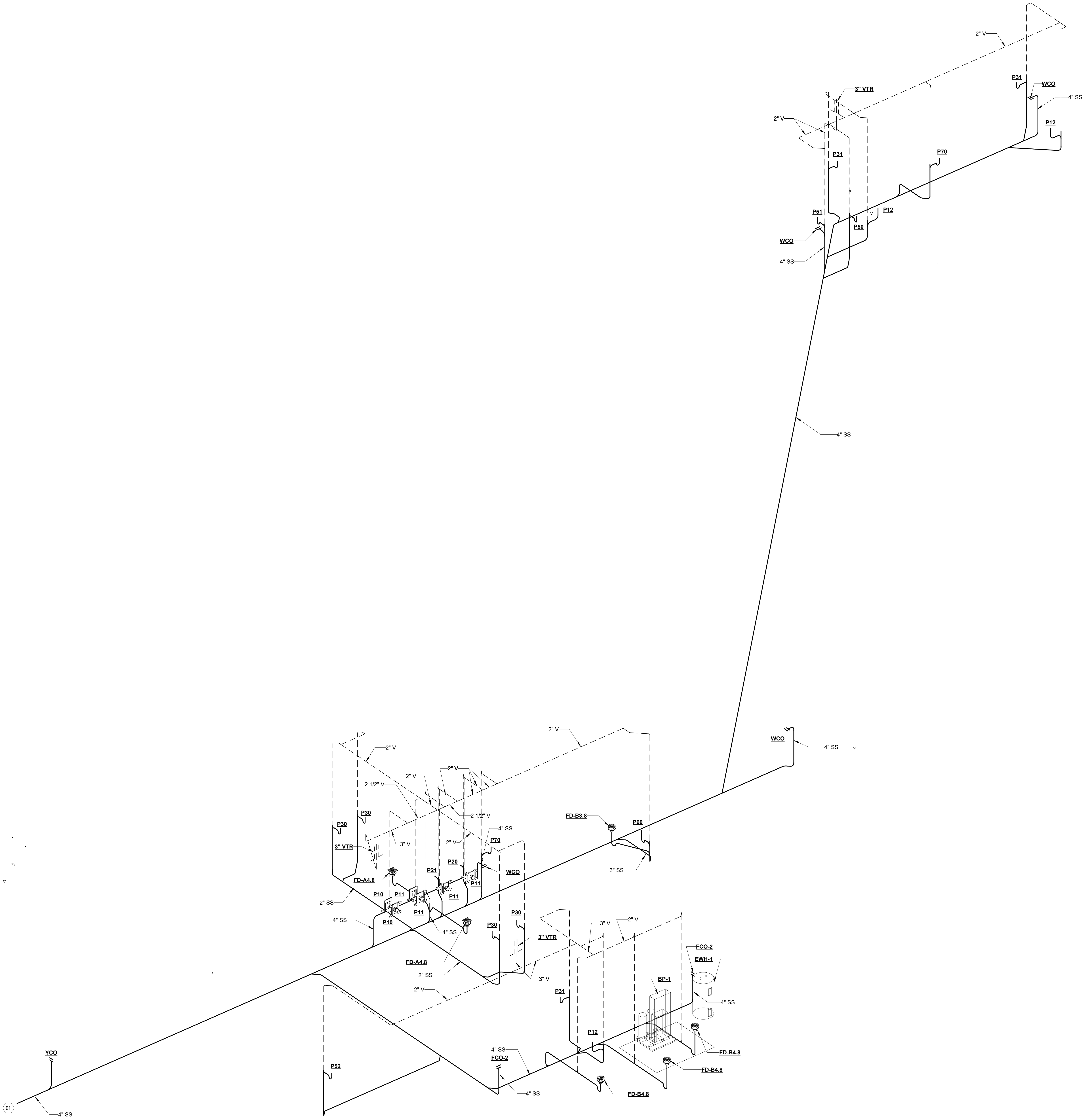
PROJECT NAME
NORTHCHASE BRANCH
LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
PLUMBING DRAINAGE
RISER

SHEET NUMBER
P711

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1A PLUMBING DRAINAGE RISER
P711 NOT TO SCALE

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KEY NOTES

01 DOMESTIC COLD WATER MAIN INTO BUILDING FROM CITY SERVICE. SEE CIVIL DRAWINGS FOR CONTINUATION.



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Charlotte Hagen, AIA

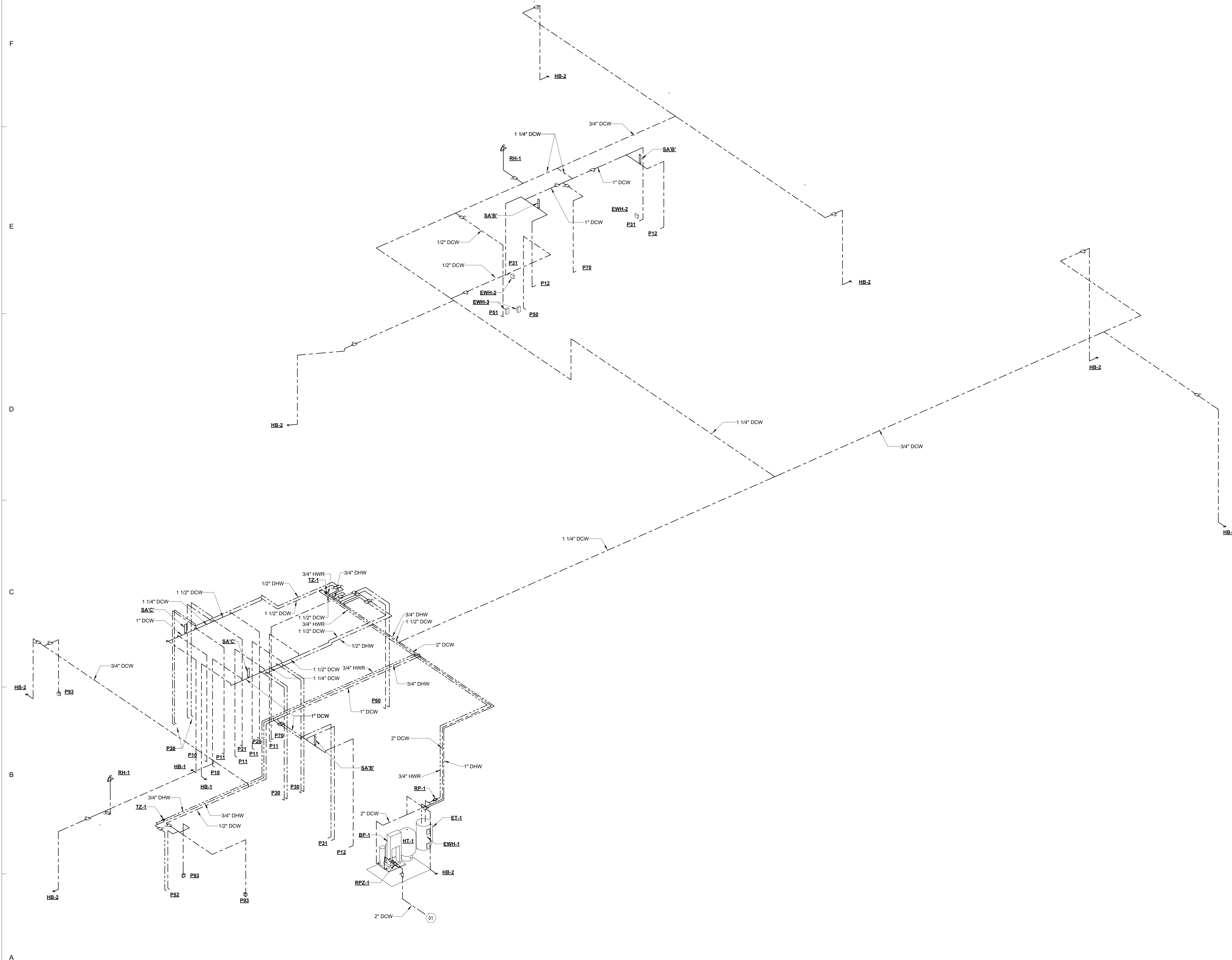
DESIGN TEAM
MSG

PROJECT NAME
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LIBRARY
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
PLUMBING PIPING RISER

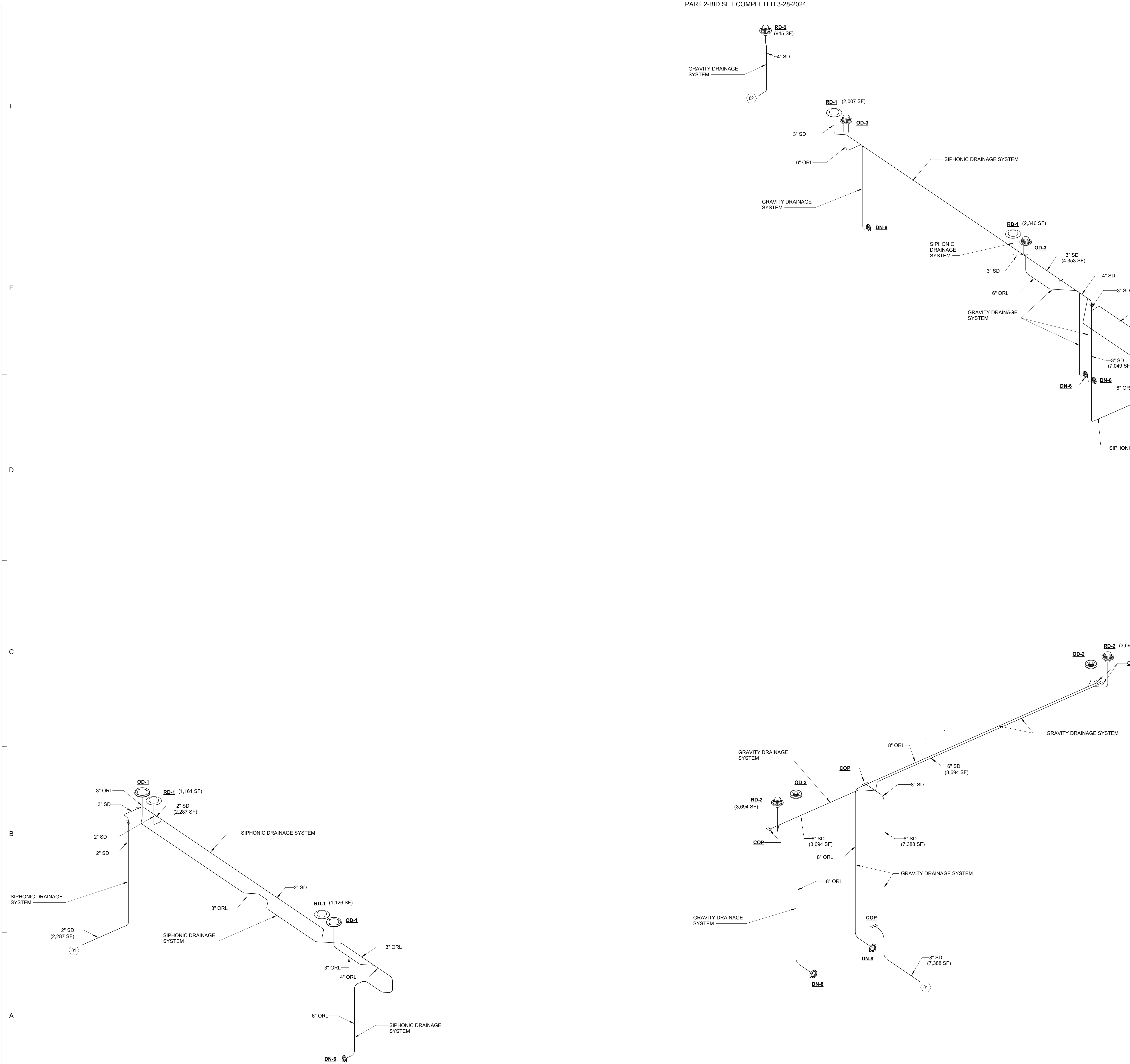
SHEET NUMBER
P721



1A PLUMBING PIPING RISER
P721 NOT TO SCALE

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KEY NOTES

- 01 ROOF STORM LEADER TO STORM DRAIN SYSTEM, SEE CIVIL DRAWINGS FOR CONTINUATION.
- 02 DAYLIGHT TERMINATION.

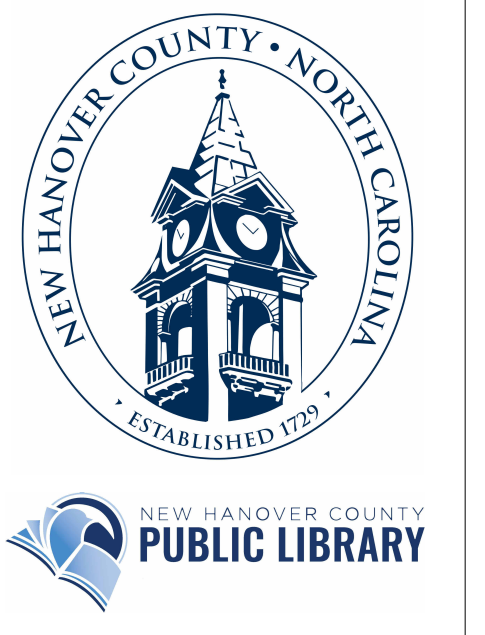
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SHEET TITLE
PLUMBING RAIN LEADER RISER

SHEET NUMBER
P731

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1A PLUMBING RAIN LEADER RISER
P731 NOT TO SCALE

DUCT & PIPING NOTES

- RUN ALL CONCEALED HORIZONTAL PIPING AND DUCTWORK ABOVE CEILING. TIGHT TO STRUCTURE UNLESS OTHERWISE NOTED. RUN ALL EXPOSED PIPING AND DUCTWORK AS HIGH AS POSSIBLE UNLESS OTHERWISE NOTED.
- DUCTWORK SIZES ARE SHEET METAL DIMENSIONS, UNLESS OTHERWISE NOTED. PROVIDE DUCT LINER ONLY WHERE INDICATED OR NOTED ON PLANS. PIPE SIZES ARE NOMINAL DIAMETERS.
- PROVIDE ESCUTCHEON PLATES WHERE DUCTS OR PIPES PENETRATE ASSEMBLIES IN FINISHED AREAS EXPOSED TO VIEW. ESCUTCHEONS FOR DUCTS SHALL BE CONSTRUCTED OF THE SAME MATERIAL AS DUCT. PIPE ESCUTCHEONS SHALL BE CHROME-PLATED BRASS. PIPE, CONDUIT AND DUCT OPENINGS THROUGH ASSEMBLIES AROUND MECHANICAL ROOMS SHALL BE PACKED WITH MINERAL WOOL AND SEALED.
- LOCATE ALL CONTROL DEVICES (TEMPERATURE, PRESSURE, AND FLOW MEASURING, ETC.) IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UPSTREAM AND DOWNSTREAM AS REQUIRED BY THE MANUFACTURER FOR GOOD ACCURACY.
- PENETRATIONS THROUGH RATED ASSEMBLIES (DUCTWORK, PIPING, ETC.) SHALL BE PROTECTED WITH A U.L. LISTED PENETRATION DETAIL. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING CONDITIONS IN FIELD AND SUBMITTING A U.L. DETAIL FOR APPROVAL OF THE ARCHITECT AND ENGINEER OF RECORD.
- CONCEALED DUCTWORK SHALL BE INSULATED USING EXTERIOR INSULATION. REFER TO DIVISION 23 SPECIFICATIONS AND SMACNA STANDARDS FOR ADDITIONAL REQUIREMENTS.
- EXPOSED ROUND AND FLAT OVAL DUCTWORK IN FINISHED SPACES SHALL BE DOUBLEWALL SPIRAL DUCT. DOUBLE WALL DUCT SHALL BE PROVIDED WITH FIBERGLASS INSULATION BETWEEN THE DUCT WALLS AND A PERFORATED INTERIOR WALL SHALL BE USED. WHERE EXPOSED TO VIEW, THE EXTERIOR SHALL HAVE WELDS AND JOINTS FINISHED IN A NEAT AND PROFESSIONAL MANNER.
- DUCTWORK ROUTED OUTSIDE THE BUILDING ENVELOPE SHALL BE INSULATED WITH RIGID FIBERGLASS DUCTBOARD WITH AN EXTERIOR JACKET AND ACOUSTICALLY LINED.
- FLEXIBLE DUCT LENGTH SHALL NOT EXCEED 5 FEET, AND SHALL ONLY BE INSTALLED IN CONCEALED SPACES.
- ALL DUCT PENETRATIONS OF WALLS SHALL BE MADE WITH RIGID METAL DUCTS. FLEXIBLE DUCT PENETRATIONS OF WALLS ARE NOT ACCEPTABLE.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF DIFFUSERS, REGISTERS, AND GRILLES. FINISH AND COLOR TO BE SELECTED FROM MANUFACTURER'S STANDARD PALETTE AND APPROVED BY ARCHITECT UNLESS OTHERWISE NOTED.
- ALL ELBOWS IN DUCTWORK SHALL BE RADIUS ELBOWS UNLESS OTHERWISE NOTED. WHERE SQUARE ELBOWS ARE SHOWN, OR WHERE FIELD CONDITIONS PREVENT USE OF RADIUS ELBOWS, INSTALL AIRFOIL TYPE TURNING VANES IN ACCORDANCE WITH SMACNA STANDARDS.
- ELBOWS SHALL BE 1.5R RADIUS ELBOWS WHEREVER POSSIBLE. WHERE FIELD CONDITIONS PREVENT USE OF RADIUS ELBOWS, INSTALL SQUARE ELBOWS WITHOUT TURNING VANES.
- PROVIDE LOCKING OPPOSED BLADE MANUAL VOLUME DAMPERS WHERE INDICATED ON THE DUCT PLANS, AT SUPPLY, RETURN, AND EXHAUST BRANCH DUCTS, AND IN EACH RUNOUT TO AIR TERMINALS, UNLESS DAMPER IS SPECIFIED AT TERMINAL. BRANCH DUCT DAMPERS SHALL BE AS CLOSE TO MAIN TRUNK DUCT AS POSSIBLE. VOLUME DAMPERS ABOVE INACCESSIBLE CEILINGS SHALL BE PROVIDED WITH REMOTE CABLE CONTROLS WITH ALL NECESSARY HARDWARE. TERMINATING 3" ACCESS PORT WITH FINAL LOCATION COORDINATED IN FIELD BY ARCHITECT.
- FIRE, SMOKE, AND FIRE-SMOKE DAMPERS SHALL BE INSTALLED IN COMPLETE ACCORDANCE WITH THE MANUFACTURER'S U.L. LISTING AND INSTALLATION INSTRUCTIONS. DAMPERS SHALL HAVE SPECIFIC U.L. LISTING FOR THE CONSTRUCTION IN WHICH THEY ARE INSTALLED. PROVIDE DYNAMIC FIRE DAMPERS WITH BLADES OUT OF THE AIRSTREAM. INSTALL DUCTS THROUGH FIRE AND SMOKE RATED ASSEMBLIES AND PARTITIONS TO LEAVE A MINIMUM OF 2 INCHES AROUND THE DUCT TO SEAL THE ASSEMBLY. DO NOT INSTALL FLEXIBLE DUCT THROUGH FIRE AND SMOKE RATED ASSEMBLIES AND PARTITIONS.
- DUCT MOUNTED SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR.
- PROVIDE PIANO-HINGED DUCT ACCESS DOORS AT ALL DUCT ACCESSORIES (MOTOR OPERATED DAMPERS, FIRE DAMPERS, ETC.) REQUIRING MAINTENANCE AND SERVICE, AND WHERE REQUIRED FOR OPERATION, ADJUSTMENT, AND MAINTENANCE OF MECHANICAL EQUIPMENT. WHERE ACCESS DOORS ARE LOCATED ABOVE AN INACCESSIBLE CEILING, PROVIDE AN ACCESS DOOR IN THE CEILING. PROVIDE RATED ACCESS PANELS AS REQUIRED TO MAINTAIN ASSEMBLY RATING.
- BEFORE FABRICATING DUCTWORK, THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION AND SIZE WITH ALL OTHER TRADES.
- PROVIDE AUXILIARY CONDENSATE PANS BELOW EQUIPMENT INSTALLED ABOVE CEILINGS. PROVIDE FLOAT SWITCH ON AUXILIARY PAN TO SHUTDOWN EQUIPMENT AND GENERATE AN AUDIBLE ALARM IN THE EVENT OF PRIMARY DRAIN PAN OVERFLOW.
- EXTEND CONDENSATE DRAIN PIPING TO NEAREST DRAIN UNLESS OTHERWISE NOTED. ALL CONDENSATE PIPING SHALL BE TRAPPED AND PITCHED AT A MINIMUM OF 1/8" PER LINEAR FOOT TOWARDS THE DRAIN.
- ALL BELOW GRADE PIPING SHALL BE A MINIMUM OF 3'-6" BELOW FINISHED GRADE OR 6" BELOW THE FROST LINE, WHICHEVER IS DEEPER.
- REFRIGERANT PIPING SHALL BE INSTALLED AS REQUIRED BY MANUFACTURER. PROVIDE ALL ACCESSORIES REQUIRED FOR PROPER OPERATION AND MAINTENANCE OF SYSTEM (OIL TRAPS, STRAINERS, FILTER DRYERS, ETC.) IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

GENERAL NOTES

- GENERAL NOTES ON THIS DRAWING ARE APPLICABLE TO EACH MECHANICAL DRAWING OF THIS SET. NOTES SPECIFIC TO INDIVIDUAL MECHANICAL DRAWINGS WILL BE SHOWN ON THE RESPECTIVE MECHANICAL DRAWINGS.
- THE CONTRACTOR SHALL PROVIDE A COMPLETE HVAC SYSTEM TO INCLUDE ALL LABOR, MATERIALS, TOOLS, AND EQUIPMENT FOR A COMPLETE AND FUNCTIONAL SYSTEM INCLUDING ALL NECESSARY APPURTENANCES CUSTOMARILY INCLUDED IF NOT SPECIFICALLY CALLED OUT. ALL WORK SHALL BE GUARANTEED IN WRITING AGAINST DEFECTIVE WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM TURN OVER TO OWNER.
- ENTIRE INSTALLATION, INCLUDING MATERIALS, EQUIPMENT, AND WORKMANSHIP, SHALL CONFORM WITH ALL APPLICABLE LAWS, CODES, AND REGULATIONS OF MUNICIPAL, STATE AND FEDERAL AUTHORITIES.
- ALL WORK SHALL CONFORM TO APPLICABLE ASHRAE, NFPA, AND SMACNA STANDARDS AND OTHER REGULATORY BODIES HAVING JURISDICTION OVER THE CLASS OF WORK. ALL MATERIALS AND EQUIPMENT SHALL HAVE APPROPRIATE STAMPS/SEALS OF AHR, ASME, U.L., AND ASTM.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, DOCUMENTS, AND SERVICES RELATED TO INSTALLATION OF THE WORK. THE CONTRACTOR SHALL MAKE TESTS FOR ACCEPTANCE AND APPROVAL AS REQUIRED BY CODE AND THE REQUIREMENTS OF APPLICABLE REGULATORY AGENCIES. REQUIRED TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE UNLESS OTHERWISE WAIVED IN WRITING.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE ALL MECHANICAL WORK WITH ALL OTHER TRADES IN ORDER TO RESOLVE ANY CONFLICT THAT MIGHT ARISE IN THE FIELD.
- EQUIPMENT OF DIFFERING CHARACTERISTICS MAY BE PROVIDED IF SUCH PROPOSED ALTERNATE EQUIPMENT IS SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD AND OWNER'S REPRESENTATIVE IN WRITING. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL IMPACTED TRADES, AND ANY SUBSEQUENT COSTS OF THE ALTERNATE EQUIPMENT SHALL BE PROVIDED AT NO COST TO THE OWNER.
- NO EQUIPMENT, PIPING, OR DUCTWORK SHALL BE INSTALLED OVER ANY ELECTRICAL EQUIPMENT OR ELECTRICAL SERVICE SPACE.
- LAYOUT OF PIPING AND DUCTWORK IS DIAGRAMMATIC IN NATURE. MECHANICAL CONTRACTOR SHALL ALLOW FOR RISES, DROPS AND OFFSETS AS REQUIRED FOR PROPER INSTALLATION, OPERATION, AND MAINTENANCE. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR/REPLACEMENT OF COMPONENTS, INCLUDING ACCESS TO UNIT PANELS, CONTROLS, VALVING, ETC. AS MUCH AS PRACTICAL. CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH A MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS. PIPING AND DUCTWORK SHALL NOT INTERFERE WITH FILTER ACCESS.
- PROVIDE VIBRATION ISOLATION AS REQUIRED FOR MECHANICAL EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE AND SYSTEMS. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK AND PIPING SYSTEMS CONNECTED TO MECHANICAL EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION TO THE EQUIPMENT UNLESS OTHERWISE INDICATED.
- PROVIDE ALL CONTROL DEVICES, SUCH AS TEMPERATURE SENSORS, RELAYS, PRESSURE SWITCHES WHICH ARE ASSOCIATED WITH MECHANICAL EQUIPMENT AND ASSOCIATED CONTROL WIRING FROM STARTER TO THE CONTROL DEVICE. ALL CONTROL DEVICES SHALL BE POWERED AND OPERATED BY LOW VOLTAGE POWER (<24V) UNLESS OTHERWISE NOTED.
- EXCEPT IN EQUIPMENT ROOMS, ALL CONTROL WIRING SHALL BE RUN CONCEALED. ALL CONTROL WIRING SHALL BE PLENUM RATED AND ROUTED IN CONDUIT. J-HOOKS ARE AN ACCEPTABLE ALTERNATE METHOD TO CONDUIT WITH WRITTEN APPROVAL BY OWNER. CONTROL WIRING SHALL NOT BE ROUTED WITHOUT CONDUIT OR J-HOOKS.
- ALL SPACE MOUNTED CONTROL DEVICES (THERMOSTATS, SWITCHES, HUMIDISTATS, ETC.) SHALL BE MOUNTED ALIGNED TO LIGHTSWITCHES, IN ACCORDANCE WITH ADA REQUIREMENTS, UNLESS OTHERWISE NOTED. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE LOCATION OF SPACE MOUNTED CONTROL DEVICES WITH THE ARCHITECT, GENERAL CONTRACTOR, AND OTHER TRADES BEFORE ROUGHING-IN OF WALLS HAS BEGUN.
- TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). TESTING, ADJUSTING, AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE AABC STANDARDS.
- ALL PENETRATIONS THROUGH THE BUILDING ENVELOPE SHALL BE COORDINATED IN THE FIELD BY THE GENERAL CONTRACTOR. ROOF MOUNTED EQUIPMENT SHALL BE INSTALLED ON PREFABRICATED CURBS OR RAILS, WITH ROOF PATCHED AND FLASHED TO PREVENT MOISTURE INTRUSION.

SYMBOL	ABBR.	DESCRIPTION	SYMBOL	ABBR.	DESCRIPTION
		RECTANGULAR DUCT			DEMOLITION WORK
		ROUND DUCT			EXISTING CONDITIONS
		OVAL DUCT			NEW CONSTRUCTION
	FSD	CLASS 1 COMBINATION FIRE & SMOKE DAMPER WITH DUCT ACCESS DOOR AND DUCT MOUNTED ACTUATOR. REFER TO ELECTRICAL PLANS FOR POWER REQUIREMENTS.			TEMPORARY WORK
	SD	CLASS 1 SMOKE DAMPER WITH DUCT ACCESS DOOR AND DUCT MOUNTED ACTUATOR. REFER TO ELECTRICAL PLANS FOR POWER REQUIREMENTS.			CONNECT TO EXISTING
	FD	DYNAMIC TYPE B OR TYPE C FIRE DAMPER WITH DUCT ACCESS DOOR. COORDINATE DAMPER RATING WITH ARCHITECTURAL WALL SCHEDULE.			LIMIT OF DEMOLITION
	MD	CLASS 1 MOTORIZED DAMPER. REFER TO ELECTRICAL PLANS FOR POWER REQUIREMENTS.		CO	CARBON MONOXIDE SENSOR
	BD	LOCKING MANUAL OPPOSED BLADE BALANCING DAMPER		CO2	CARBON DIOXIDE SENSOR
		MITERED ELBOW WITH TURNING VANES.		H	HUMIDISTAT/HUMIDITY SENSOR
		MITERED ELBOW WITHOUT TURNING VANES AND WITH LINER.		DP	DIFFERENTIAL PRESSURE SENSOR
		RADIUS DUCT ELBOW. RADIUS ELBOWS SHALL BE 1.5W/1.5D ELBOWS UNLESS OTHERWISE NOTED.		SD	DUCT SMOKE DETECTOR (COORDINATE WITH ELECTRICAL CONTRACTOR)
		GORED ELBOW (OVAL DUCT)		SP	STATIC PRESSURE SENSOR
		FLEXIBLE DUCT		T	THERMOSTAT/TEMPERATURE SENSOR
		DIFFUSER TAG		C	CONTROL DEVICE
		DIFFUSER		CD	COOLING COIL CONDENSATE DRAIN
		PIPE SLEEVE		RS/RL	REFRIGERANT SUCTION & LIQUID PIPING

2018 Appendix B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN & SUMMARY

Mechanical Systems, Service Systems and Equipment

METHOD OF COMPLIANCE: No Change to Existing Systems Prescriptive
 Performance Energy Cost Budget

Weather Station: WILMINGTON
 Thermal Zone: 3A

Exterior Design Conditions:
 summer dry bulb: 84 °F summer wet bulb: 76.9 °F
 winter dry bulb: 20.5 °F

Interior Design Conditions:
 summer dry bulb: 75 °F
 winter dry bulb: 70 °F
 relative humidity: 45-60%

Building Cooling Load: 755,804 Btu/h

Building Heating Load: 531,251 Btu/h

Mechanical Spacing Conditioning System:
 Unitary: REFER TO MECHANICAL SCHEDULES
 description of unit: REFER TO MECHANICAL SCHEDULES
 cooling output: REFER TO MECHANICAL SCHEDULES
 cooling efficiency: REFER TO MECHANICAL SCHEDULES
 heating output: REFER TO MECHANICAL SCHEDULES
 heating efficiency: REFER TO MECHANICAL SCHEDULES

Chiller: REFER TO MECHANICAL SCHEDULES
 Chiller output: REFER TO MECHANICAL SCHEDULES
 Oversizing reason: REFER TO MECHANICAL SCHEDULES

Boiler: REFER TO MECHANICAL SCHEDULES
 Boiler output: REFER TO MECHANICAL SCHEDULES
 Oversizing reason: REFER TO MECHANICAL SCHEDULES

List equipment efficiencies:
 Cooling Efficiency: REFER TO MECHANICAL SCHEDULES
 Heating Efficiency: REFER TO MECHANICAL SCHEDULES

Mechanical system motors:
 Motor horsepower: REFER TO MECHANICAL SCHEDULES
 Number of phases: REFER TO MECHANICAL SCHEDULES
 Minimum efficiency: NEMA PREMIUM EFFICIENCY
 Motor type: REFER TO MECHANICAL SCHEDULES
 Number of poles: REFER TO MECHANICAL SCHEDULES

U.L. DETAILS		
GYPSUM WALLS		
Penetrant	F-Rating (hr)	Basis of design U.L. System
SINGLE METAL PIPES OR CONDUITS	1	W-L-1054, W-L-1056, W-L-1164, W-L-1506
	2	W-L-1054, W-L-1056, W-L-1164, W-L-1506
	4	W-L-1110, W-L-1111, W-L-1165
	1	W-L-2078, W-L-2075, W-L-2128
SINGLE NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT)	2	W-L-2078, W-L-2075, W-L-2128
	4	W-L-2184, W-L-2245
	1	W-L-5028, W-L-5029, W-L-5047
	2	W-L-5028, W-L-5029, W-L-5047
SINGLE INSULATED PIPES	4	W-L-5073
	1	W-L-7017, W-L-7040, W-L-7042, W-L-7155
	2	W-L-7040, W-L-7042, W-L-7155
	1	W-L-7059, W-L-7153, W-L-7156, W-L-7151
MECHANICAL DUCTWORK WITHOUT DAMPERS NON-INSULATED	1	W-L-7059, W-L-7153, W-L-7156, W-L-7151
	2	W-L-7059, W-L-7153, W-L-7156, W-L-7151
	1	W-L-1095, W-L-8013
	2	W-L-1095, W-L-8013
MECHANICAL DUCTWORK WITHOUT DAMPERS INSULATED	1	W-L-1095, W-L-8013
	2	W-L-1095, W-L-8013
	4	W-L-8014
	1	W-L-1095, W-L-8013
MIXED PENETRANTS	1	W-L-1095, W-L-8013
	2	W-L-1095, W-L-8013
	4	W-L-8014
	1	W-L-1095, W-L-8013

U.L. Details are basis of design options. Contractor shall submit U.L. details used in field for approval by architect and engineers of record.

REFER TO FIRE DAMPER INSTALLATION DETAILS FOR INSTALLATION OF FIRE DAMPERS IN RATED PENETRATIONS.

URL

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PROJECT MANAGER
Charlotte Hagen, AIA

DESIGN TEAM
M GRUBBS

NORTHCHASE BRANCH
LIBRARY

4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
MECHANICAL GENERAL
NOTES & LEGEND

SHEET NUMBER
M001

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KEY NOTES

- 01 DUCT UP TO UNIT MOUNTED ON ROOF ABOVE
- 02 DUCT THROUGH EXTERIOR WALL TO UNIT MOUNTED ON ROOF
- 03 COORDINATE FAN MOUNTING AND CLEARANCES WITH ALL TRADES PRIOR TO INSTALLATION.
- 04 PROVIDE TWO RETURN GRILLES MOUNTED VERTICALLY FOR RETURN TO ROOF TOP UNIT. REFER TO SECTION AND 3D RISER FOR FURTHER INFORMATION. ANGLE RETURN GRILLES TO PREVENT SIGHT INTO DUCT.
- 05 COORDINATE MOUNTING OF ALL SLOT GRILLES IN SLAT CEILING SYSTEM. TYPICAL ALL IN THIS CEILING TYPE.
- 06 COORDINATE UNIT LOCATION WITH ACCESS PANEL. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LOCATION OF ACCESS PANEL IN CEILING.
- 07 PROVIDE SMOKE DETECTOR MOUNTED IN DUCT CONNECTED INTO FIRE ALARM SYSTEM. SMOKE DETECTOR SHALL BE FURNISHED AND WIRED BY DIVISION 28 CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR.

GENERAL SHEET NOTES

1. PROVIDE BALANCING DAMPERS ON ALL BRANCH RUNOUTS TO DIFFUSERS. DEVICES MOUNTED IN IN-ACCESSIBLE CEILINGS SHALL BE PROVIDED WITH FACE-ACCESSED BALANCING DEVICES MOUNTED IN THE NECK.
2. RUNOUTS AND FLEX DUCTS SHALL BE SIZED TO MATCH DIFFUSER NECK SIZE.
3. PROVIDE FLEX DUCT SOUND BOOTS ON ALL T14 TYPE RETURN GRILLES FOR ACOUSTIC PRIVACY. REFER TO DETAIL FOR FURTHER INFORMATION.
4. PROVIDE ACOUSTIC LINING ON ALL TRANSFER DUCTS. REFER TO DETAIL FOR FURTHER INFORMATION.
5. EXPOSED DUCTWORK, AIR DEVICES, AND TERMINAL UNITS SHALL BE FACTORY PRIMED FOR PAINTING. PAINT BY OTHERS. NAMEPLATES, IDENTIFICATION LABELS, ETC. SHALL NOT BE PAINTED.

WALL RATING LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]

2D MECHANICAL DUCT PLAN - LEVEL 01 RESTROOMS
M111 1/4" = 1'-0"

2A MECHANICAL DUCT PLAN - LEVEL 01
M111 1/8" = 1'-0"


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 PROJECT MANAGER: Charlotte Hagen, AIA
 DESIGN TEAM: M GRUBBS

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PROJECT NO.
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SHEET TITLE
MECHANICAL DUCTWORK PLAN

SHEET NUMBER
M111

KEY NOTES

- 01 PUMP CONDENSATE UP. COORDINATE LIFT OF CONDENSATE PUMP WITH FIELD CONDITIONS. PROVIDE CHECK VALVES AS REQUIRED.
- 02 REFRIGERANT PIPING LINE-SETS ROUTED TO ROOF. REFER TO ROOF PLAN FOR CONTINUATION.
- 03 CONDENSATE ROUTED TO ROOF. REFER TO ROOF PLAN FOR CONTINUATION. PROVIDE CLEANOUT PLUGS.
- 04 REFRIGERANT PIPING LINE-SET AND CONDENSATE ROUTED TO ROOF. REFER TO ROOF PLAN FOR CONTINUATION.



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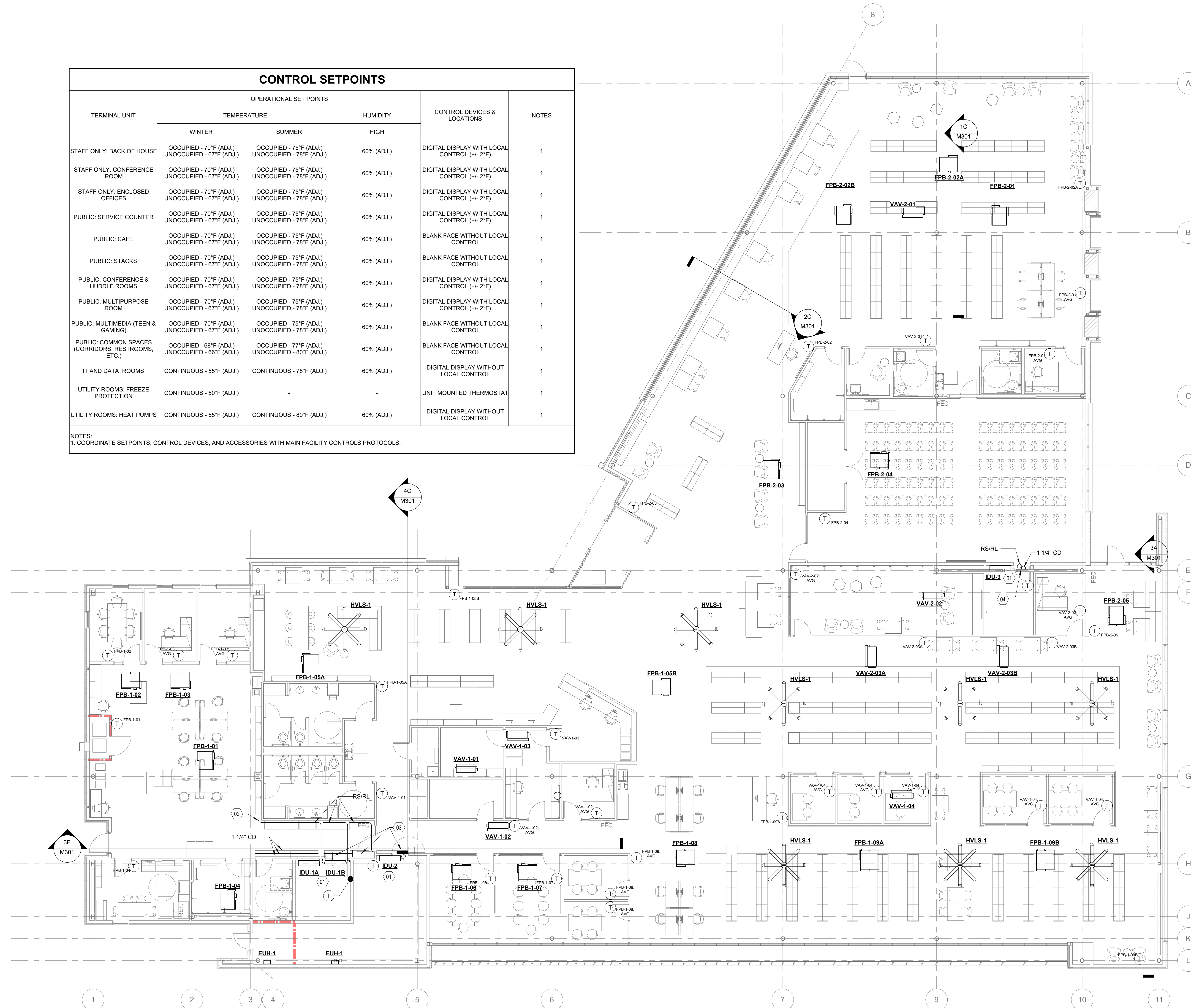


GENERAL SHEET NOTES

- 1. PROVIDE FULL PORT ISOLATION VALVES ON ALL REFRIGERANT PIPING AT BOTH INTERNAL AND EXTERNAL UNITS.
- 2. CONTROL DEVICES SHALL BE CAPABLE OF MONITORING SPACE TEMPERATURE, HUMIDITY, CARBON DIOXIDE, AND OCCUPANCY (MOTION IN SPACE). BASIS OF DESIGN THERMOSTAT SHALL BE ALLURE EC-SMART-VUE-CHM OR SIMILAR THERMOSTAT.
- 3. MOUNT CONTROL DEVICES ADJACENT TO LIGHTSWITCHES, UNLESS OTHERWISE INDICATED. REFER TO DEVICE MOUNTING DETAIL IN ARCHITECTURAL DOCUMENTATION.

TERMINAL UNIT	OPERATIONAL SET POINTS			CONTROL DEVICES & LOCATIONS	NOTES
	TEMPERATURE		HUMIDITY		
	WINTER	SUMMER			
STAFF ONLY: BACK OF HOUSE	OCCUPIED - 70°F (ADJ.) UNOCCUPIED - 67°F (ADJ.)	OCCUPIED - 75°F (ADJ.) UNOCCUPIED - 78°F (ADJ.)	60% (ADJ.)	DIGITAL DISPLAY WITH LOCAL CONTROL (+/- 2°F)	1
STAFF ONLY: CONFERENCE ROOM	OCCUPIED - 70°F (ADJ.) UNOCCUPIED - 67°F (ADJ.)	OCCUPIED - 75°F (ADJ.) UNOCCUPIED - 78°F (ADJ.)	60% (ADJ.)	DIGITAL DISPLAY WITH LOCAL CONTROL (+/- 2°F)	1
STAFF ONLY: ENCLOSED OFFICES	OCCUPIED - 70°F (ADJ.) UNOCCUPIED - 67°F (ADJ.)	OCCUPIED - 75°F (ADJ.) UNOCCUPIED - 78°F (ADJ.)	60% (ADJ.)	DIGITAL DISPLAY WITH LOCAL CONTROL (+/- 2°F)	1
PUBLIC: SERVICE COUNTER	OCCUPIED - 70°F (ADJ.) UNOCCUPIED - 67°F (ADJ.)	OCCUPIED - 75°F (ADJ.) UNOCCUPIED - 78°F (ADJ.)	60% (ADJ.)	DIGITAL DISPLAY WITH LOCAL CONTROL (+/- 2°F)	1
PUBLIC: CAFE	OCCUPIED - 70°F (ADJ.) UNOCCUPIED - 67°F (ADJ.)	OCCUPIED - 75°F (ADJ.) UNOCCUPIED - 78°F (ADJ.)	60% (ADJ.)	BLANK FACE WITHOUT LOCAL CONTROL	1
PUBLIC: STACKS	OCCUPIED - 70°F (ADJ.) UNOCCUPIED - 67°F (ADJ.)	OCCUPIED - 75°F (ADJ.) UNOCCUPIED - 78°F (ADJ.)	60% (ADJ.)	BLANK FACE WITHOUT LOCAL CONTROL	1
PUBLIC: CONFERENCE & Huddle ROOMS	OCCUPIED - 70°F (ADJ.) UNOCCUPIED - 67°F (ADJ.)	OCCUPIED - 75°F (ADJ.) UNOCCUPIED - 78°F (ADJ.)	60% (ADJ.)	DIGITAL DISPLAY WITH LOCAL CONTROL (+/- 2°F)	1
PUBLIC: MULTIPURPOSE ROOM	OCCUPIED - 70°F (ADJ.) UNOCCUPIED - 67°F (ADJ.)	OCCUPIED - 75°F (ADJ.) UNOCCUPIED - 78°F (ADJ.)	60% (ADJ.)	DIGITAL DISPLAY WITH LOCAL CONTROL (+/- 2°F)	1
PUBLIC: MULTIMEDIA (TEEN & GAMING)	OCCUPIED - 70°F (ADJ.) UNOCCUPIED - 67°F (ADJ.)	OCCUPIED - 75°F (ADJ.) UNOCCUPIED - 78°F (ADJ.)	60% (ADJ.)	BLANK FACE WITHOUT LOCAL CONTROL	1
PUBLIC: COMMON SPACES (CORRIDORS, RESTROOMS, ETC.)	OCCUPIED - 68°F (ADJ.) UNOCCUPIED - 66°F (ADJ.)	OCCUPIED - 77°F (ADJ.) UNOCCUPIED - 80°F (ADJ.)	60% (ADJ.)	BLANK FACE WITHOUT LOCAL CONTROL	1
IT AND DATA ROOMS	CONTINUOUS - 55°F (ADJ.)	CONTINUOUS - 78°F (ADJ.)	60% (ADJ.)	DIGITAL DISPLAY WITHOUT LOCAL CONTROL	1
UTILITY ROOMS: FREEZE PROTECTION	CONTINUOUS - 50°F (ADJ.)	-	-	UNIT MOUNTED THERMOSTAT	1
UTILITY ROOMS: HEAT PUMPS	CONTINUOUS - 55°F (ADJ.)	CONTINUOUS - 80°F (ADJ.)	60% (ADJ.)	DIGITAL DISPLAY WITHOUT LOCAL CONTROL	1

NOTES:
1. COORDINATE SETPOINTS, CONTROL DEVICES, AND ACCESSORIES WITH MAIN FACILITY CONTROLS PROTOCOLS.



WALL RATING LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]



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PROJECT TEAM

PRINCIPAL IN CHARGE
Jerry Guerrier, AIA

PROJECT MANAGER
Charlotte Hagen, AIA

DESIGN TEAM
M GRUBBS

PROJECT NAME
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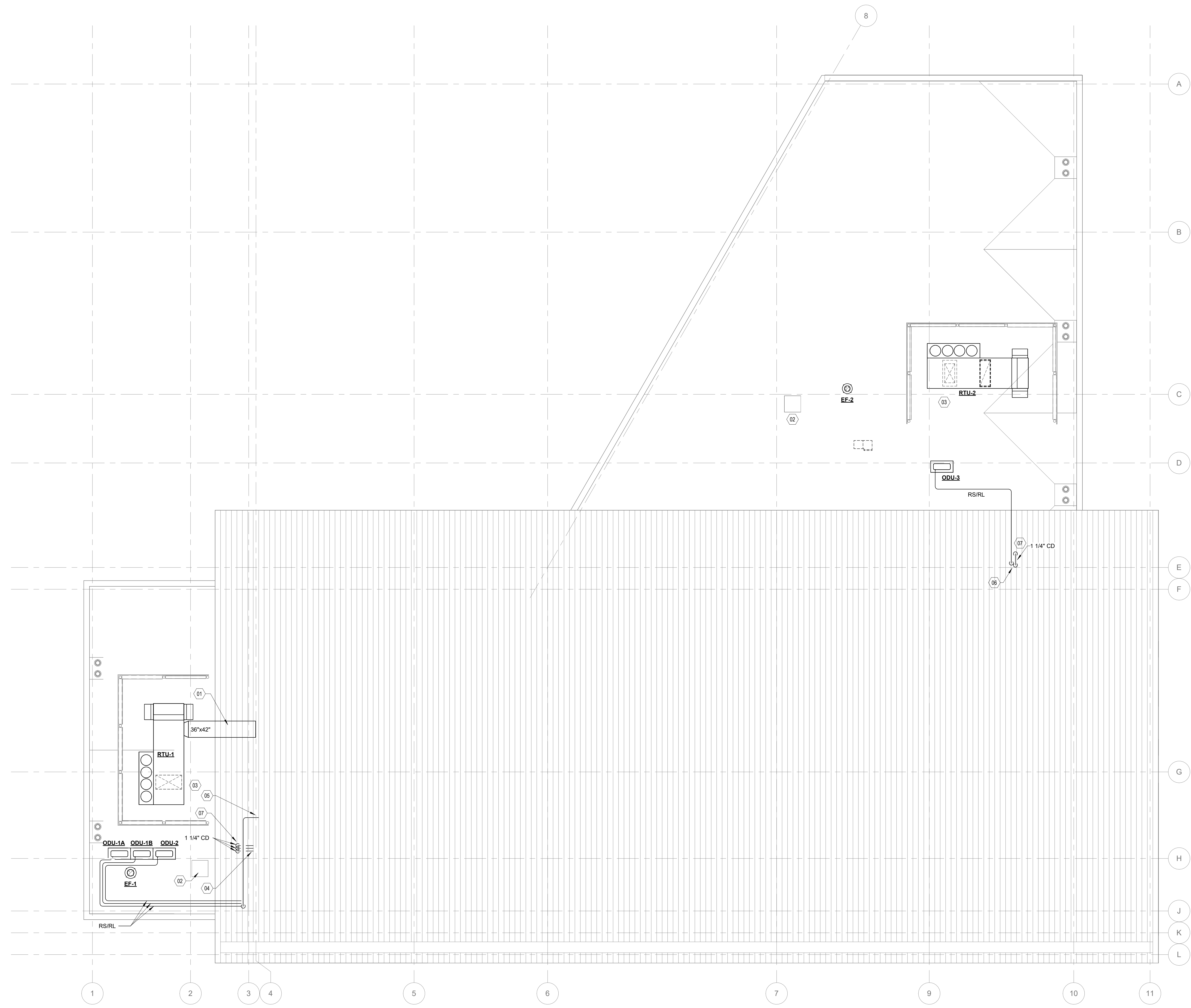
4400 Northchase Parkway NE
Wilmington NC 28405

PROJECT NO.
514.18349.00

SHEET TITLE
MECHANICAL PIPING AND CONTROL PLAN

SHEET NUMBER
M121

2A MECHANICAL PIPING PLAN - LEVEL 01
M121 1/8" = 1'-0"



2A MECHANICAL ROOF PLAN
M131 1/8" = 1'-0"

KEY NOTES

- 01 RETURN DUCT ROUTED INTO BUILDING. DUCT INSTALLATION SHALL BE HIGH ENOUGH TO ALLOW FOR FUTURE ROOF REPLACEMENT. COORDINATE REQUIREMENTS WITH ROOFING CONTRACTOR PRIOR TO INSTALLATION.
- 02 ROOF HATCH. REFER TO ARCHITECTURAL ROOF PLANS FOR WALKING PATH LOCATIONS. COORDINATE WALKING PAD INSTALLATION WITH LOCATION OF EQUIPMENT TO BE SERVICED.
- 03 CONTROL PANEL OF UNIT SHALL BE MOUNTED FOR ROUTINE ACCESS WITHOUT LADDER.
- 04 CONDENSATE PIPING TO INTERIOR. REFER TO FLOOR PLAN FOR CONTINUATION.
- 05 REFRIGERANT PIPING TO INTERIOR. REFER TO FLOOR PLAN FOR CONTINUATION.
- 06 REFRIGERANT PIPING AND CONDENSATE ROUTED TO INTERIOR. REFER TO FLOOR PLAN FOR CONTINUATION.
- 07 CONDENSATE PUMPED UP FROM INDOOR UNIT. SPILL CONDENSATE ONTO ROOF. COORDINATE ROUTING WITH FIELD CONDITIONS.

GENERAL SHEET NOTES

- 1. PROVIDE FULL PORT ISOLATION VALVES ON ALL REFRIGERANT PIPING AT BOTH INTERNAL AND EXTERNAL UNITS.
- 2. CONTROL DEVICES SHALL BE CAPABLE OF MONITORING SPACE TEMPERATURE, HUMIDITY, CARBON DIOXIDE, AND OCCUPANCY (MOTION IN SPACE). BASIS OF DESIGN THERMOSTAT SHALL BE ALLURE EC-SMART-VUE-CHM OR SIMILAR THERMOSTAT.
- 3. MOUNT CONTROL DEVICES ADJACENT TO LIGHTSWITCHES, UNLESS OTHERWISE INDICATED. REFER TO DEVICE MOUNTING DETAIL IN ARCHITECTURAL DOCUMENTATION.

WALL RATING LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR		1-HOUR	
2-HOUR		2-HOUR	
3-HOUR		3-HOUR	
FIRE WALL		FIRE PARTITION	
2-HOUR		0.5-HOUR	
3-HOUR		1-HOUR	
4-HOUR			
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR		1-HOUR	

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Jerry Guerrier, AIA
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Charlotte Hagen, AIA
DESIGN TEAM
M GRUBBS

PROJECT NAME
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PROJECT NO.
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SHEET TITLE
MECHANICAL ROOF PLAN

SHEET NUMBER
M131

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KEY NOTES

- 01 MOUNT SLOT DIFFUSERS IN SLAT CEILING. COORDINATE MOUNTING WITH CEILING SYSTEM.
- 02 COORDINATE UNIT LOCATION WITH ACCESS PANEL. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LOCATION OF ACCESS PANEL IN CEILING.
- 03 COORDINATE UNIT LOCATION WITH ACCESS PANEL. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LOCATION OF ACCESS PANEL IN CEILING.



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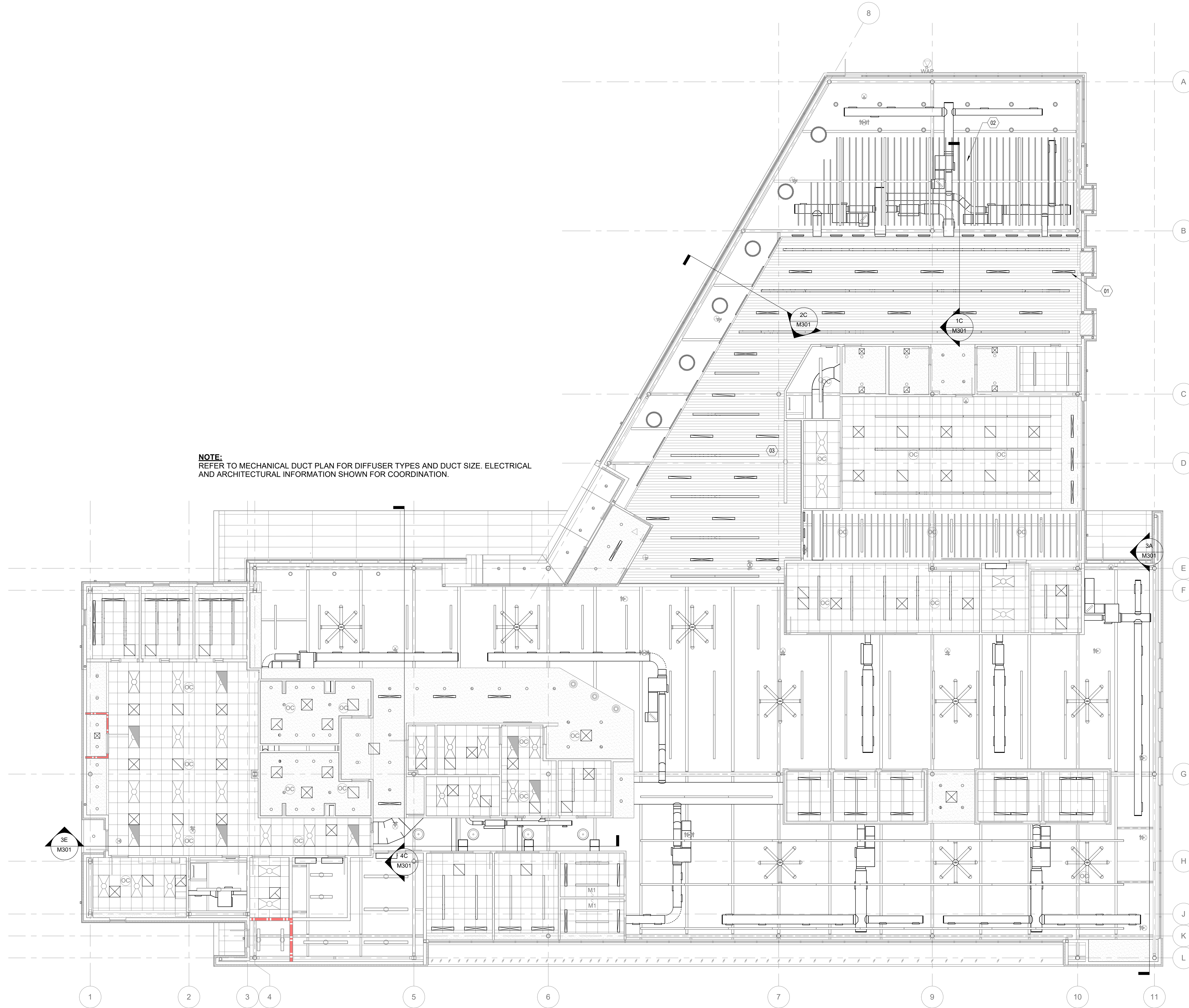
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GENERAL SHEET NOTES

1. PROVIDE BALANCING DAMPERS ON ALL BRANCH RUNOUTS TO DIFFUSERS. DEVICES MOUNTED IN IN-ACCESSIBLE CEILINGS SHALL BE PROVIDED WITH FACE-ACCESSIBLE BALANCING DEVICES MOUNTED IN THE NECK.
2. RUNOUTS AND FLEX DUCTS SHALL BE SIZED TO MATCH DIFFUSER NECK SIZE.
3. PROVIDE FLEX DUCT SOUND BOOTS ON ALL T14 TYPE RETURN GRILLES FOR ACOUSTIC PRIVACY. REFER TO DETAIL FOR FURTHER INFORMATION.
4. PROVIDE ACOUSTIC LINING ON ALL TRANSFER DUCTS. REFER TO DETAIL FOR FURTHER INFORMATION.
5. EXPOSED DUCTWORK, AIR DEVICES, AND TERMINAL UNITS SHALL BE FACTORY PRIMED FOR PAINTING. PAINT BY OTHERS. NAMEPLATES, IDENTIFICATION LABELS, ETC. SHALL NOT BE PAINTED.

NOTE:
REFER TO MECHANICAL DUCT PLAN FOR DIFFUSER TYPES AND DUCT SIZE. ELECTRICAL AND ARCHITECTURAL INFORMATION SHOWN FOR COORDINATION.



WALL RATING LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]



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PRINCIPAL IN CHARGE
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Charlotte Hagen, AIA
DESIGN TEAM
Designer

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SHEET TITLE
MECHANICAL CEILING PLAN

SHEET NUMBER
M211

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2A MECHANICAL REFLECTED CEILING PLAN - LEVEL 01
M211 1/8" = 1'-0"



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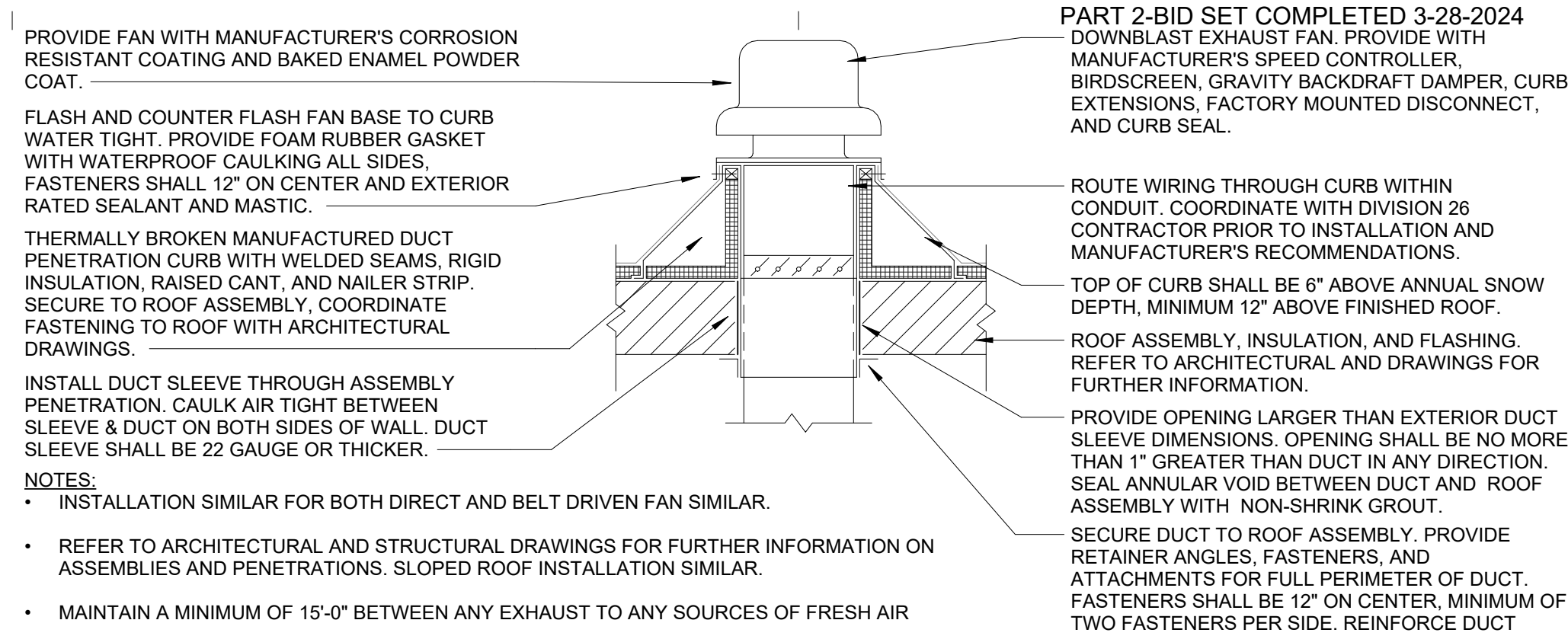
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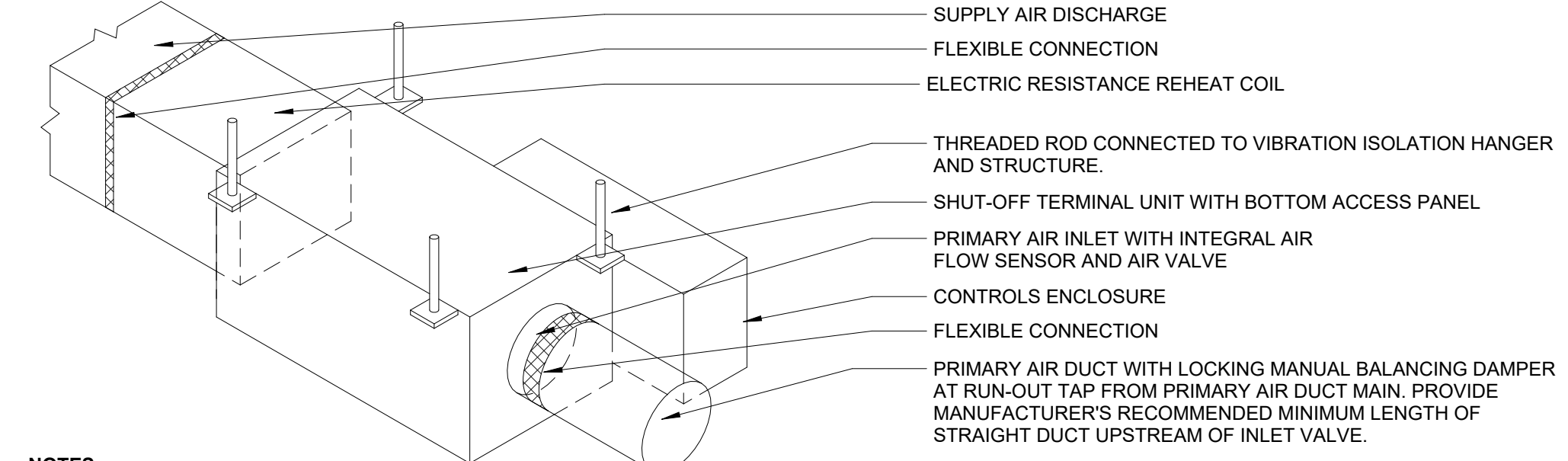
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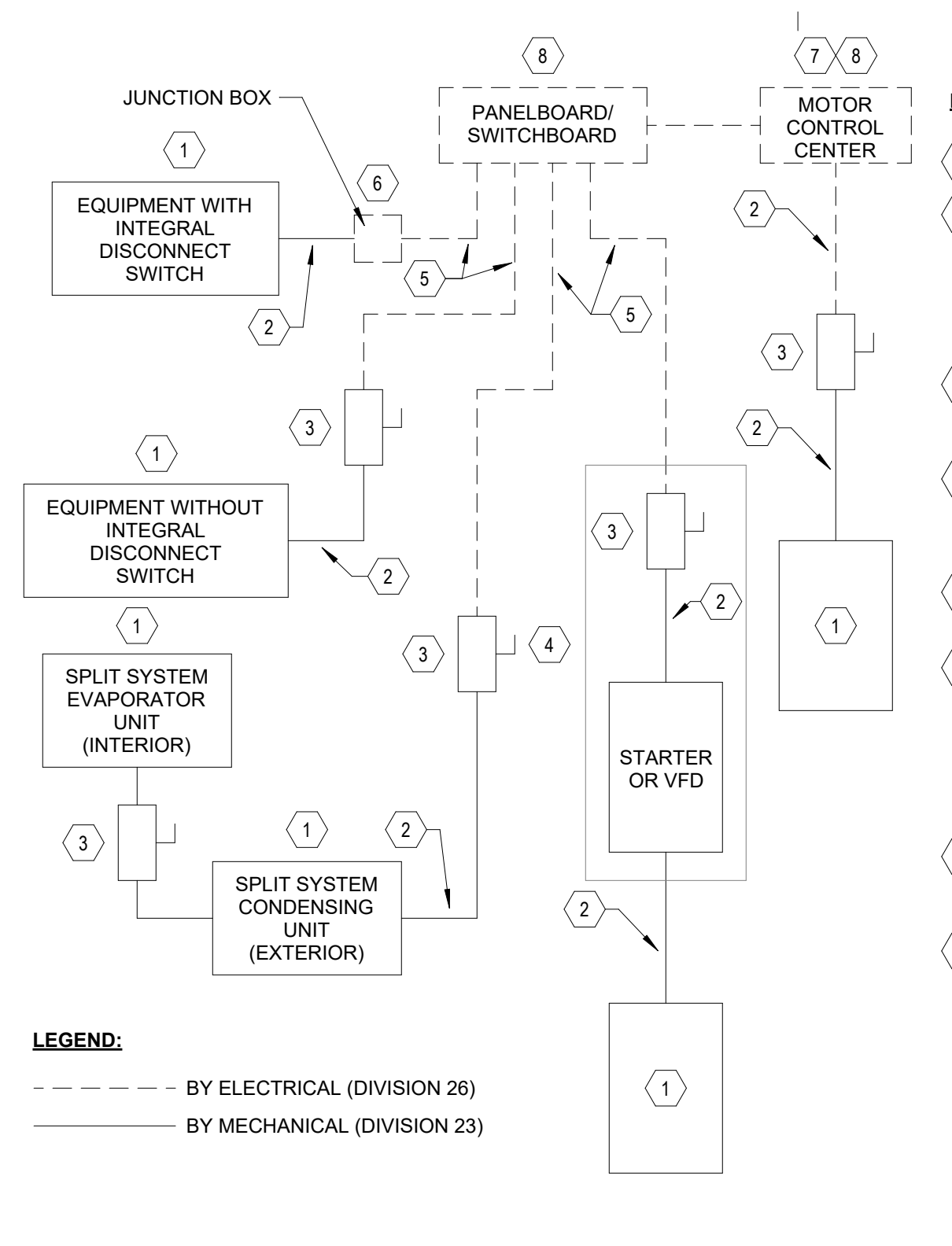
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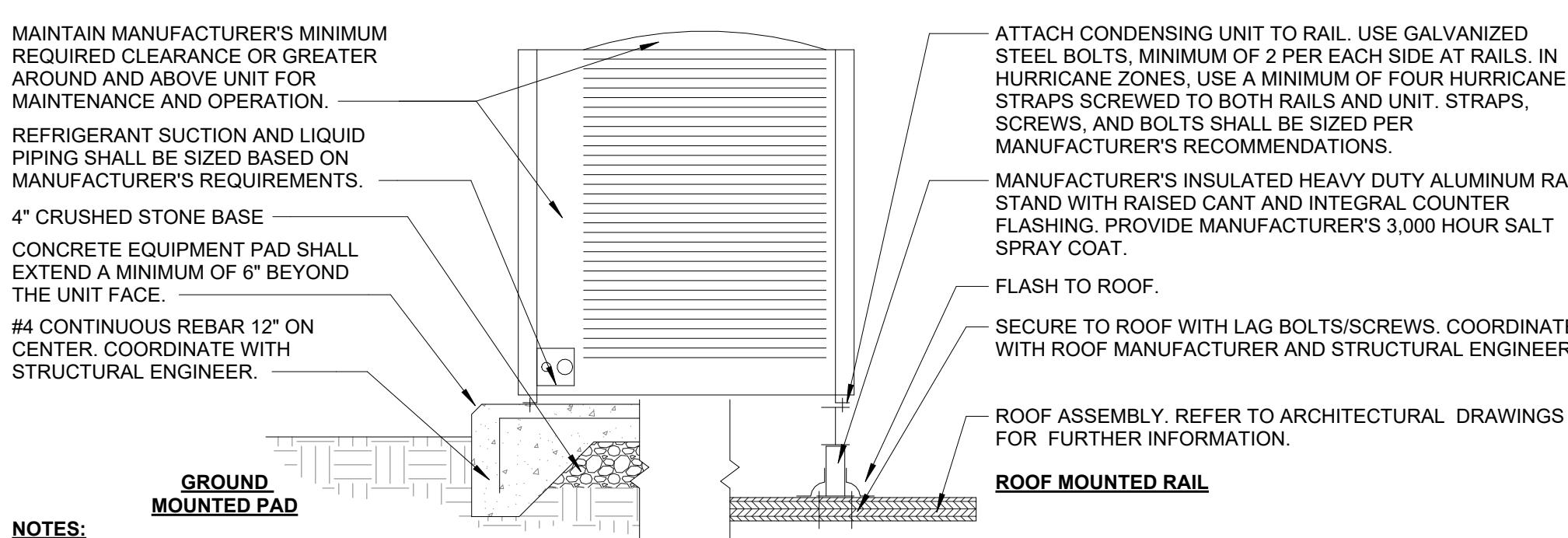
3F ROOF DOWN BLAST FAN DETAIL
M501 NOT TO SCALE



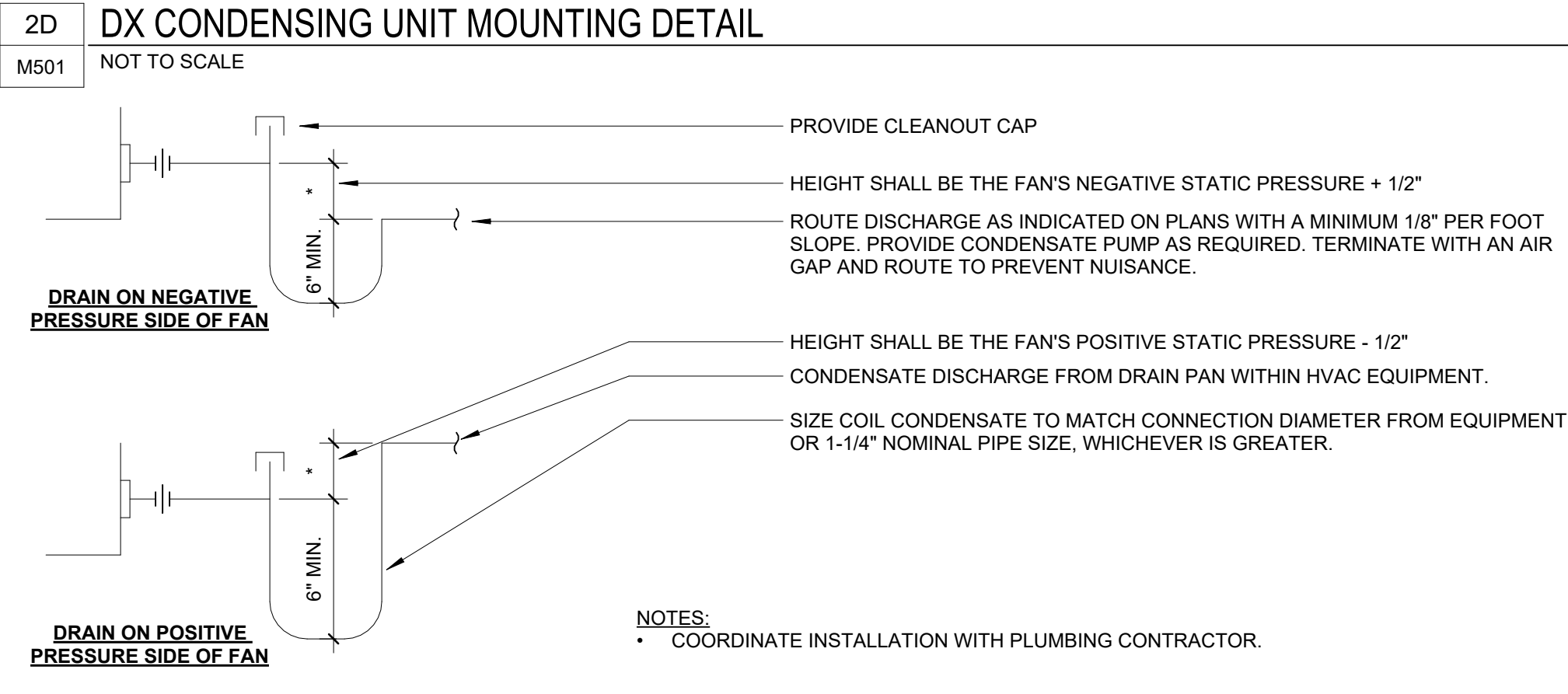
3E SHUT-OFF TERMINAL UNIT DETAIL
M501 NOT TO SCALE



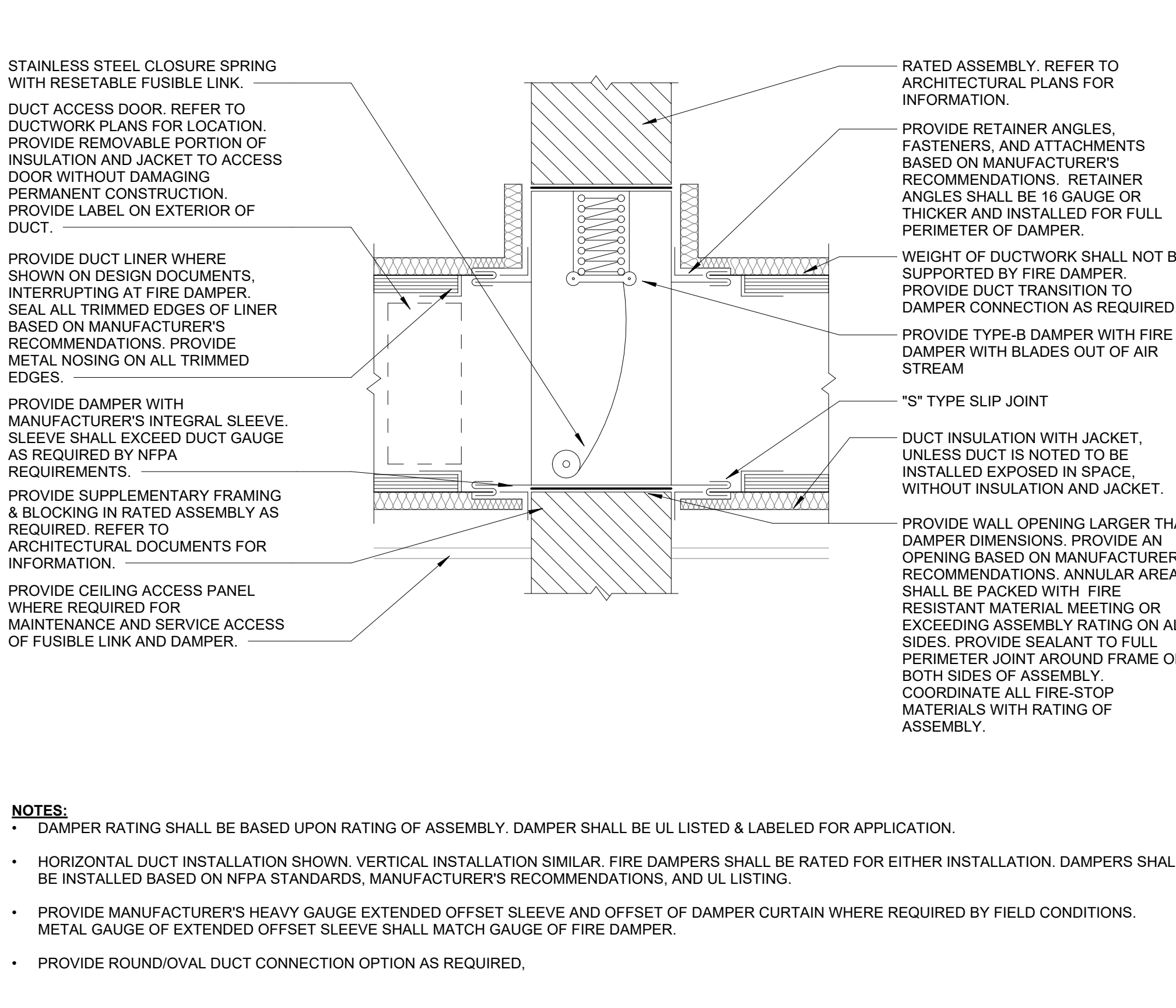
5E EQUIPMENT POWER CONNECTION DETAIL
M501 NOT TO SCALE



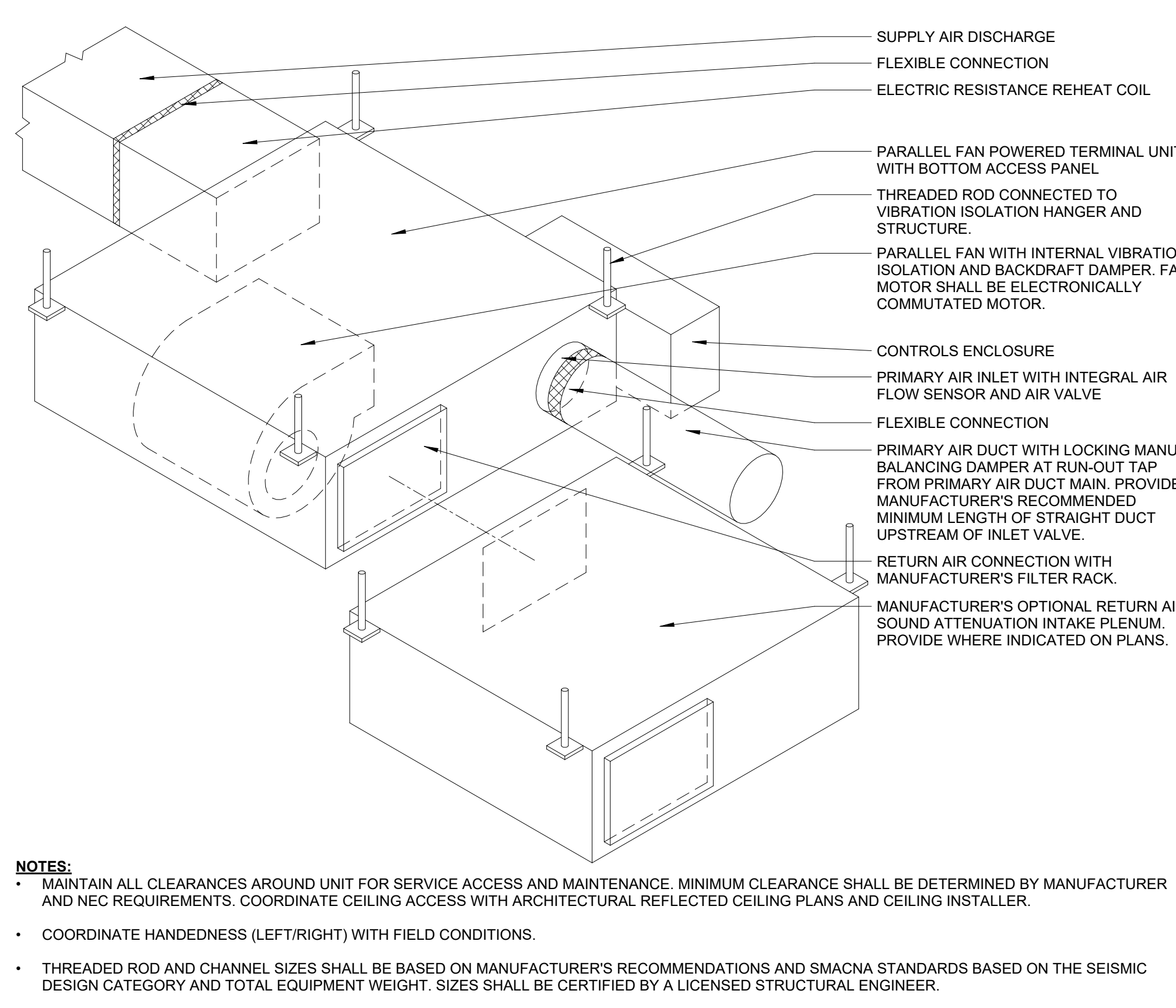
2D DX CONDENSING UNIT MOUNTING DETAIL
M501 NOT TO SCALE



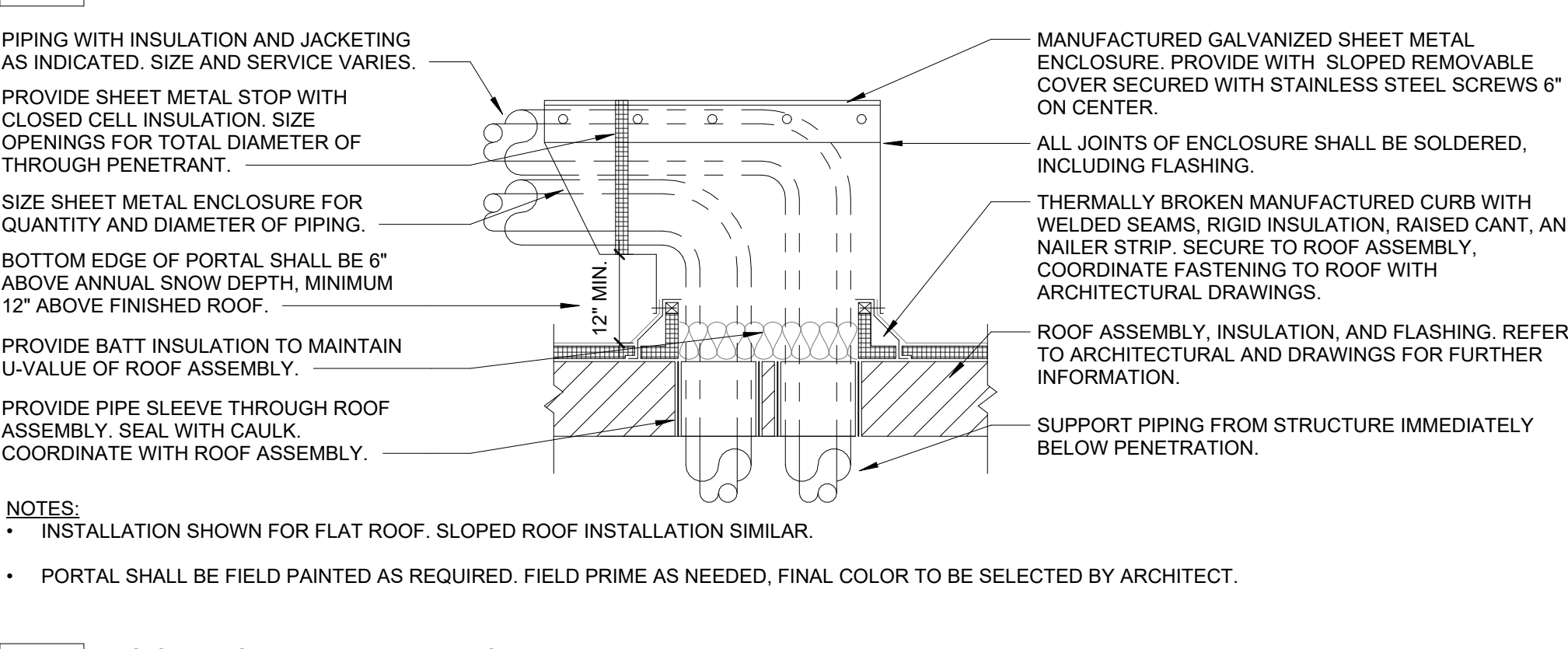
2C COIL CONDENSATE TRAP DETAIL
M501 NOT TO SCALE



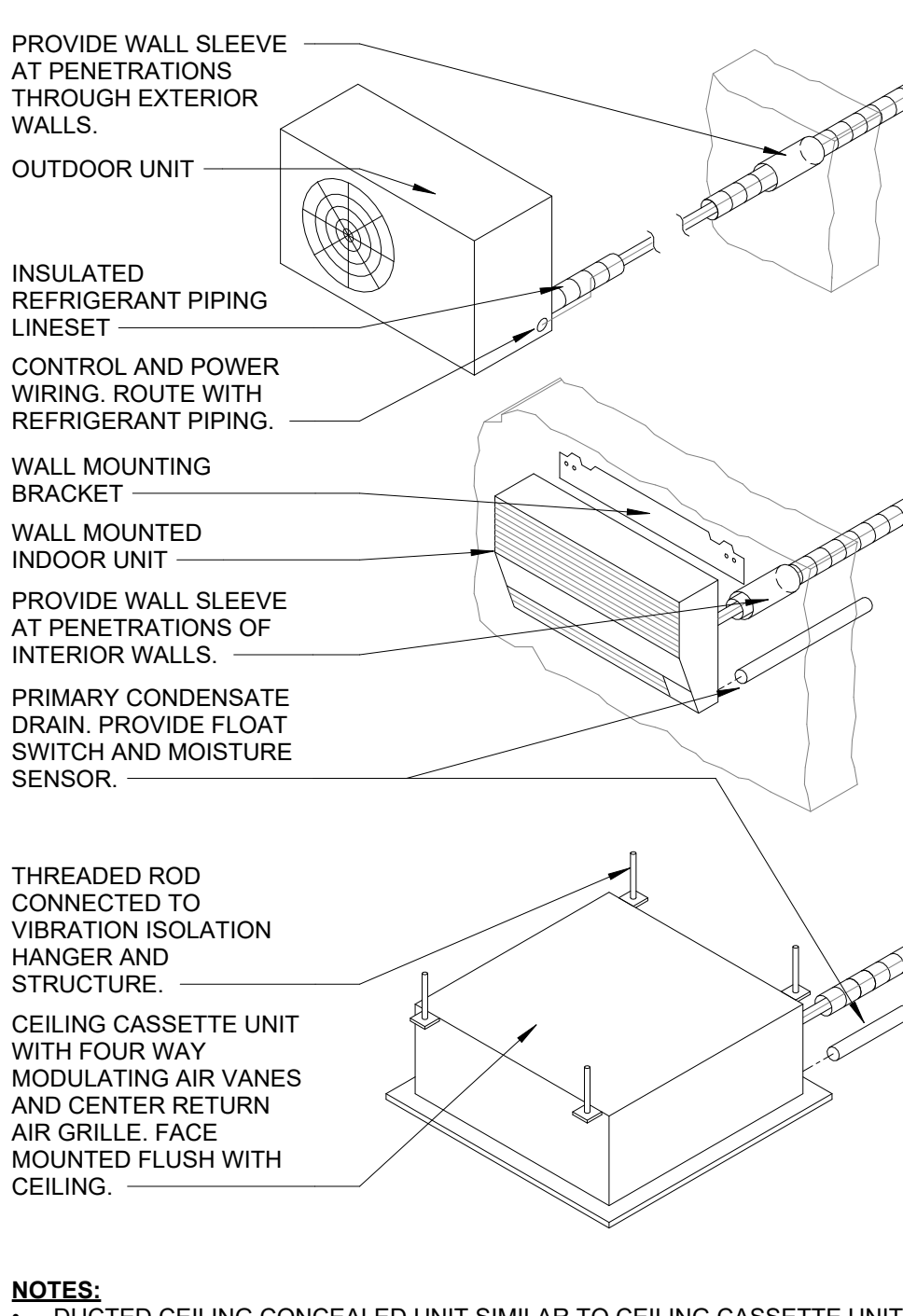
4C FIRE DAMPER INSTALLATION DETAIL
M501 NOT TO SCALE



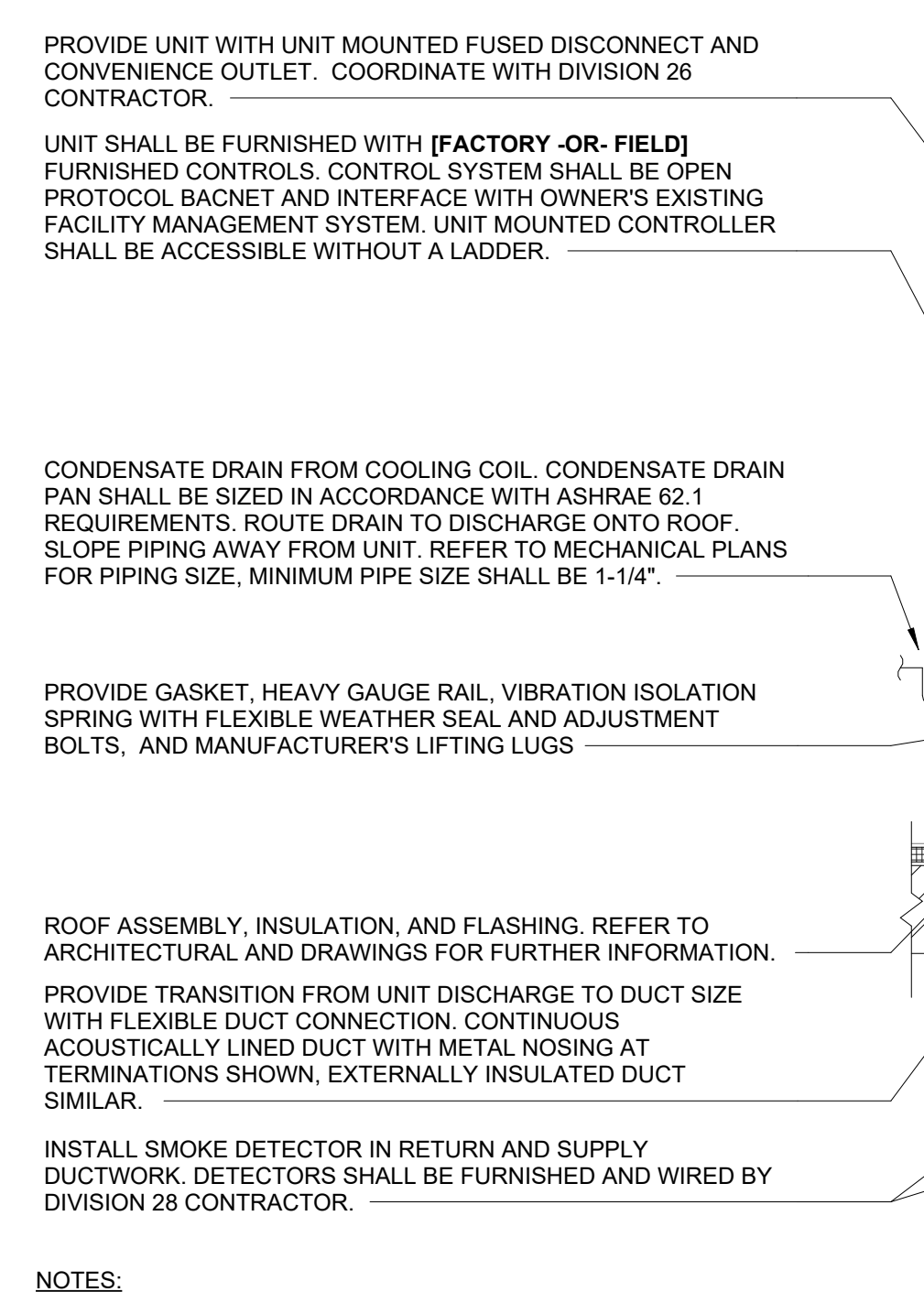
6C PARALLEL FAN POWERED TERMINAL UNIT DETAIL
M501 NOT TO SCALE



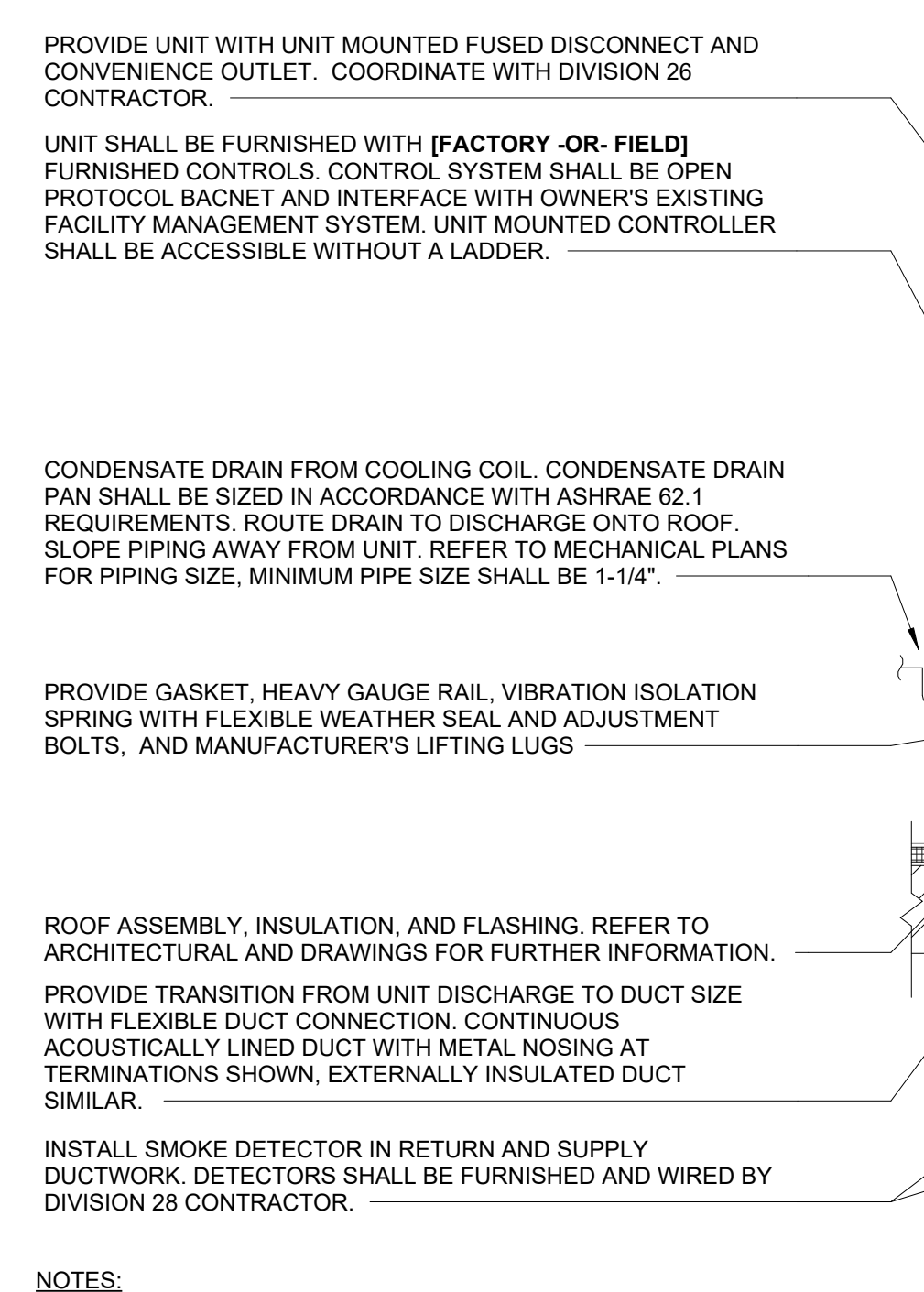
2B ROOF MOUNTED PIPE PORTAL DETAIL
M501 NOT TO SCALE



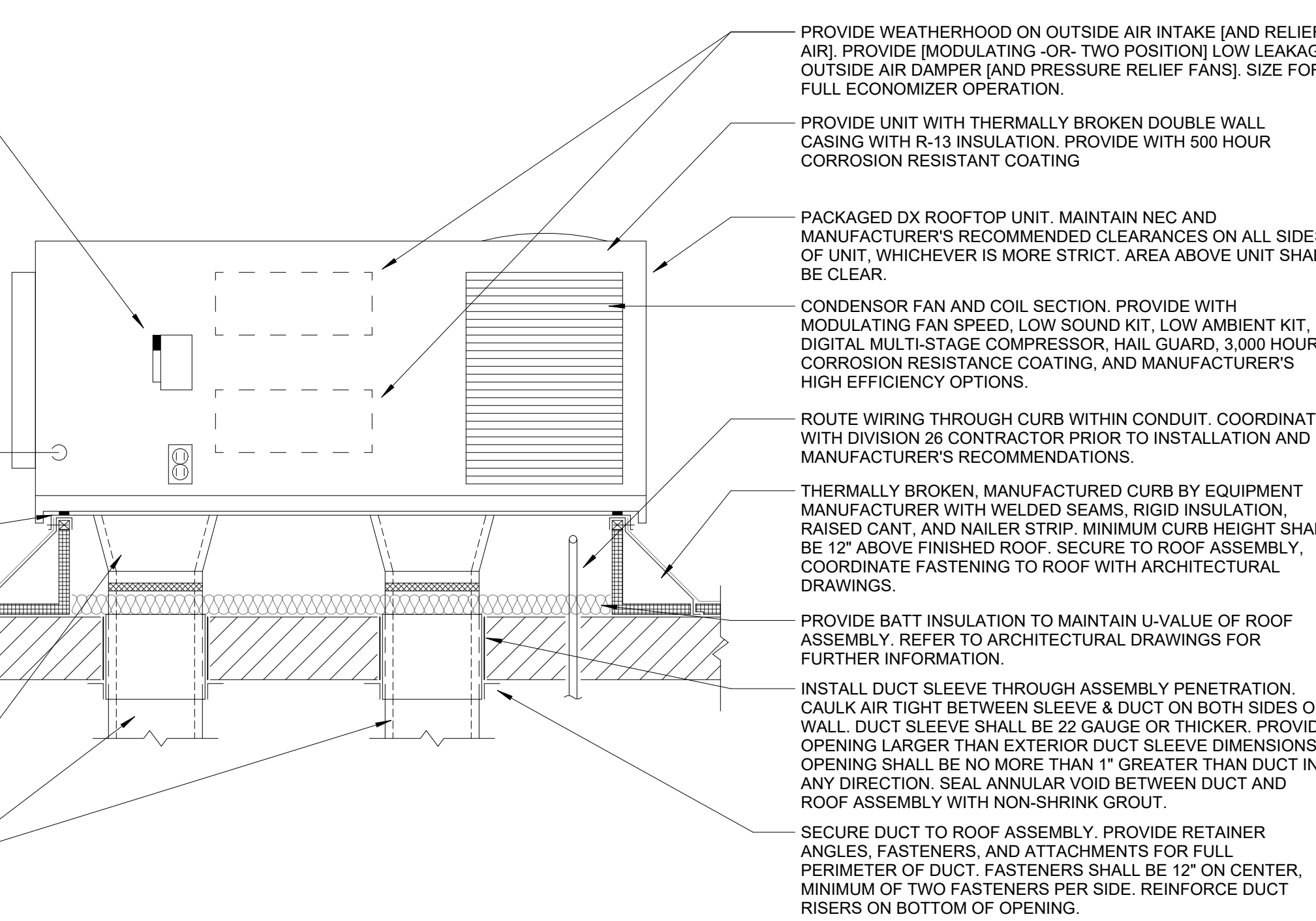
3A PIPE THROUGH EXTERIOR WALL DETAIL
M501 NOT TO SCALE



4A MINI-SPLIT SYSTEM DETAIL
M501 NOT TO SCALE



5A PACKAGED DX ROOFTOP UNIT DETAIL
M501 NOT TO SCALE



5B DOWN FLOW UNIT DETAIL
M501 NOT TO SCALE

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ISSUE FOR BID SET

ISSUE DATE 03.28.2024

REVISIONS NO. REASON DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
JERRY QUARTER, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
M GRUBBS

PROJECT NO.
514.18349.00

SHEET TITLE
MECHANICAL DETAILS

SHEET NUMBER
M501

PROJECT NO.
514.18349.00

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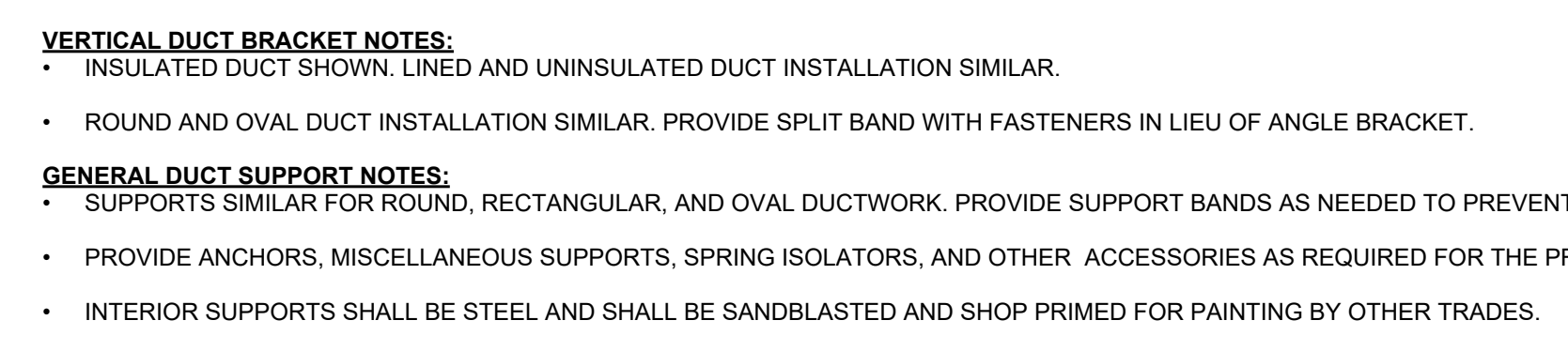
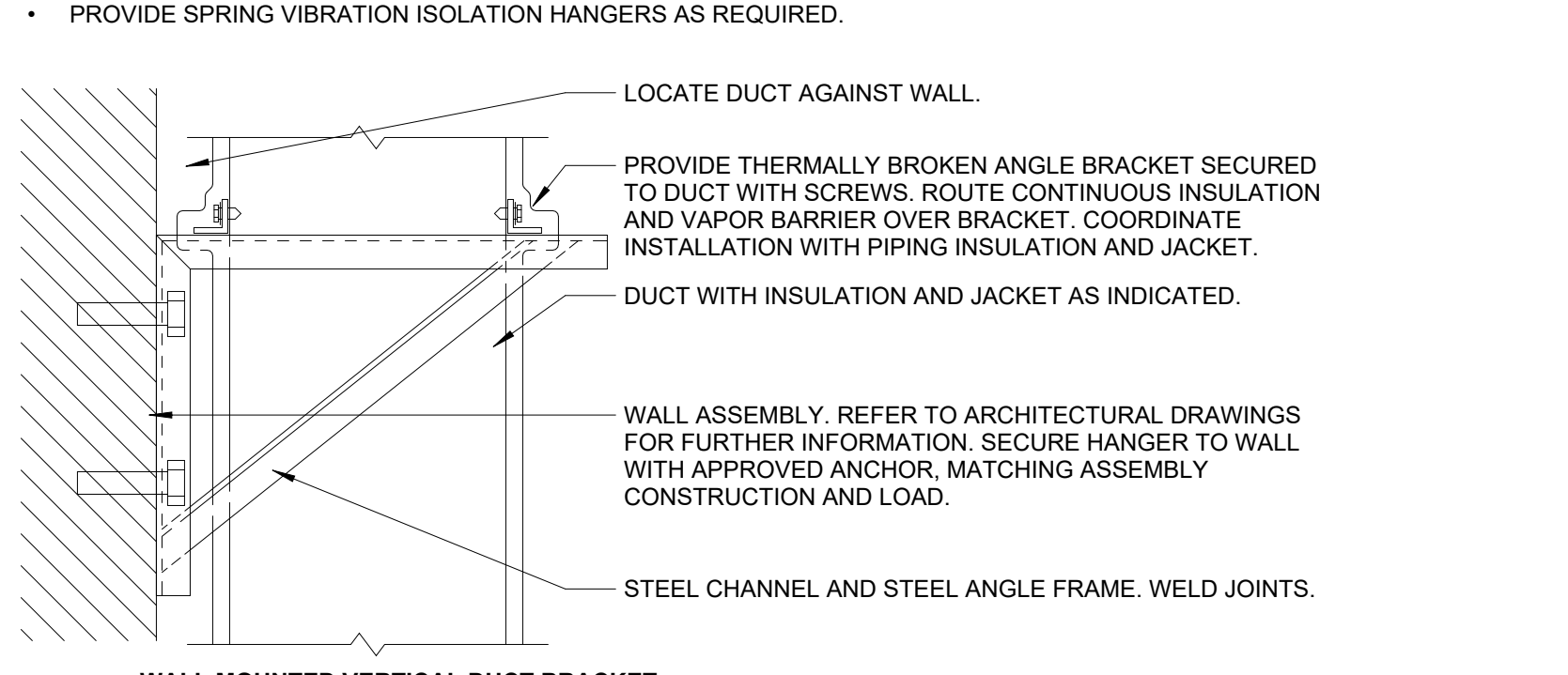
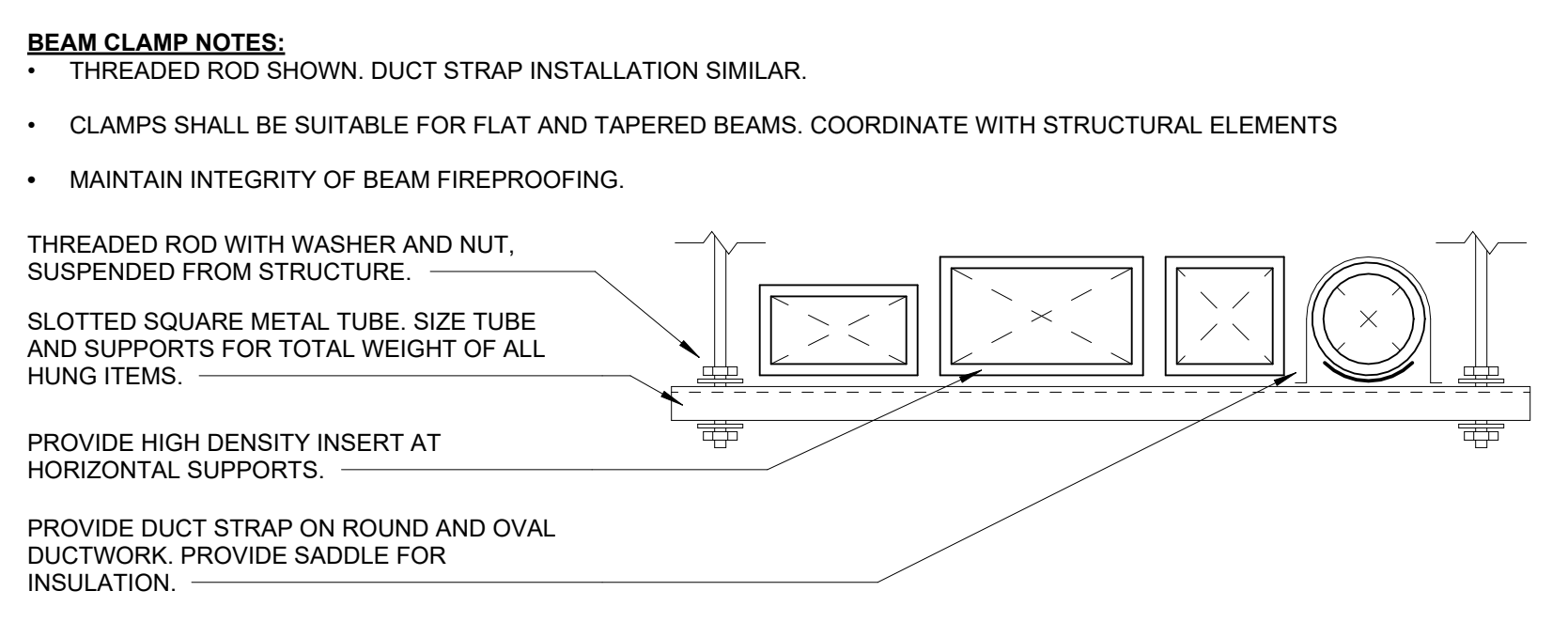
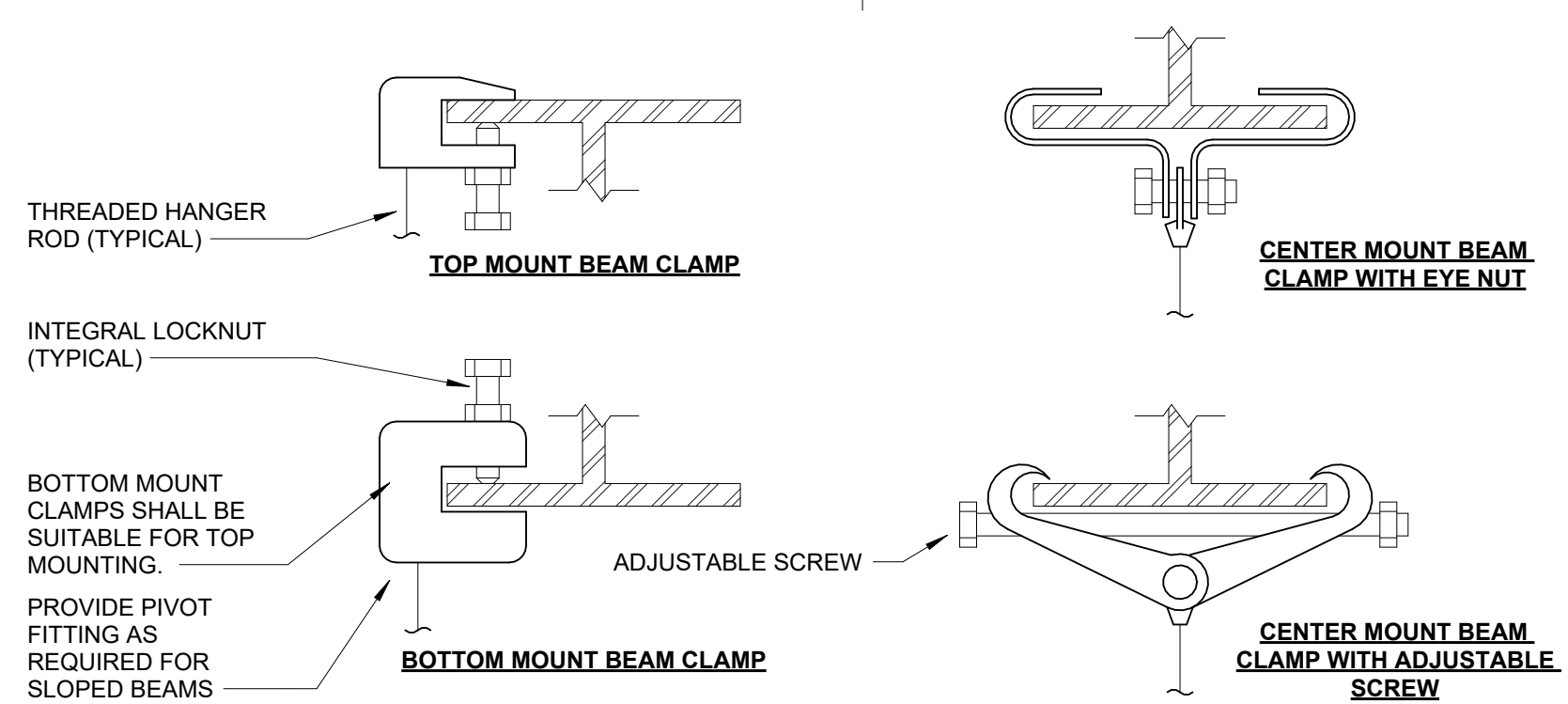
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MECHANICAL DETAILS

SHEET NUMBER
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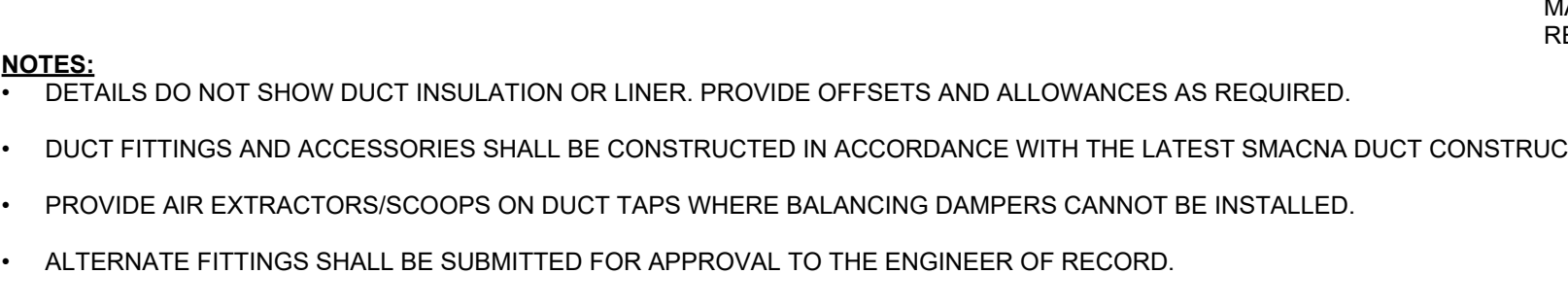
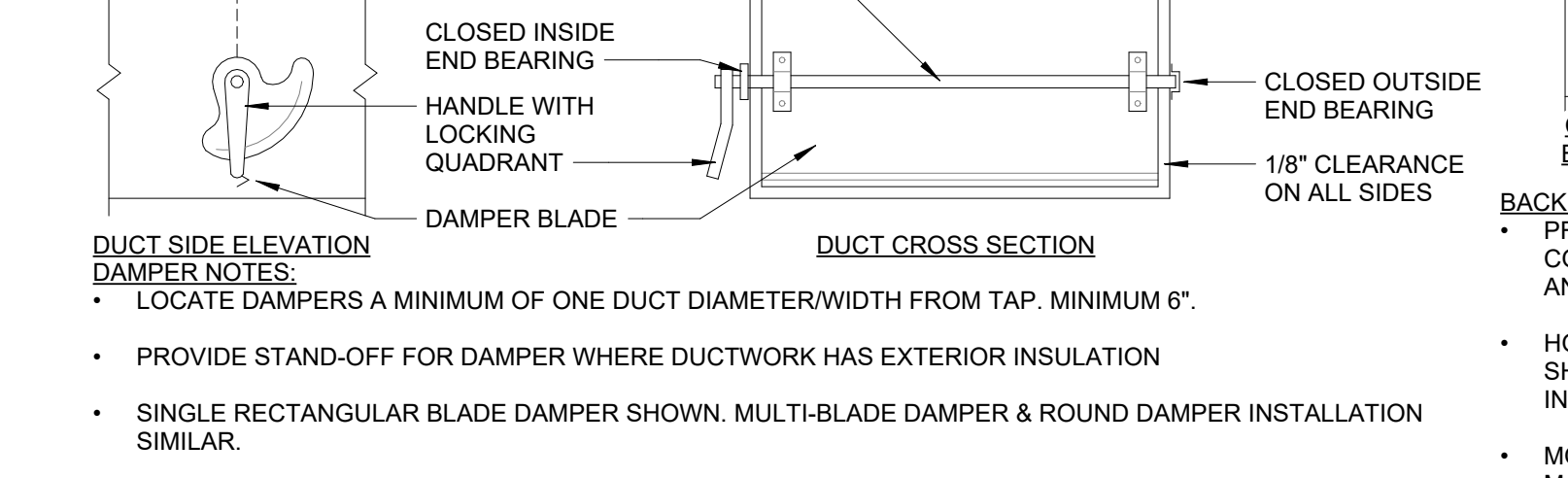
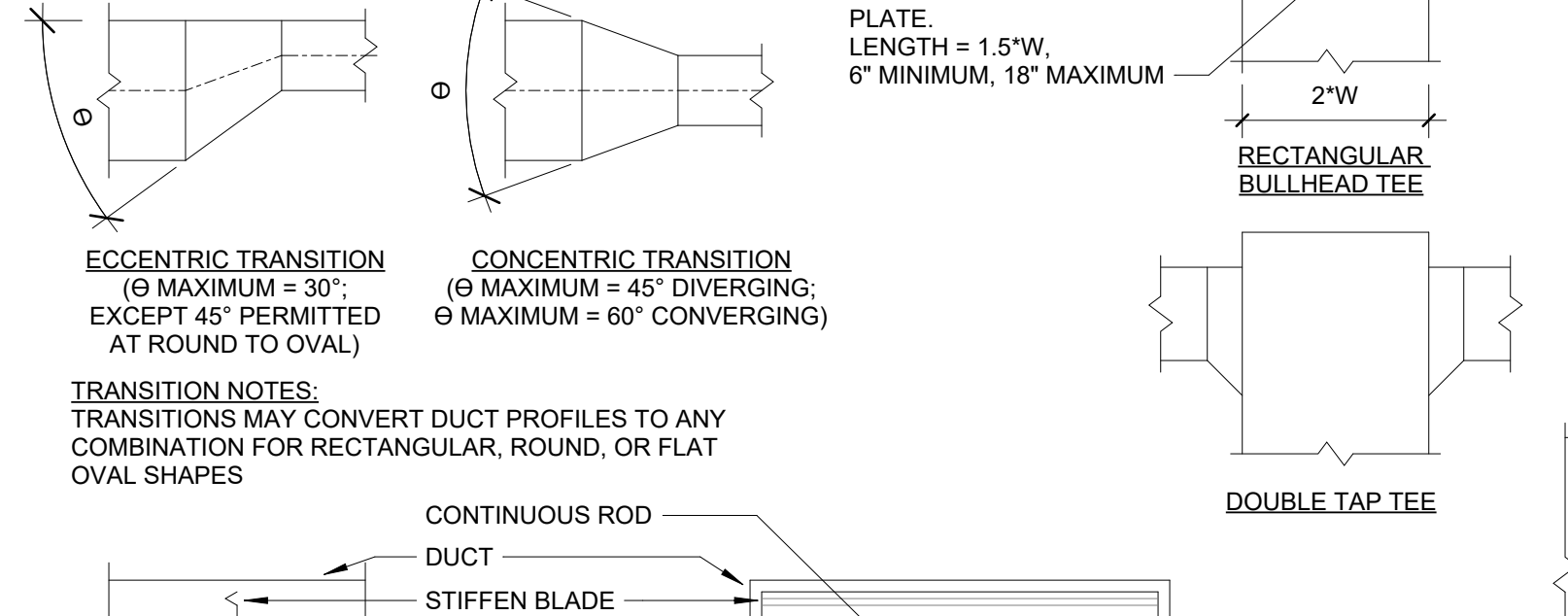
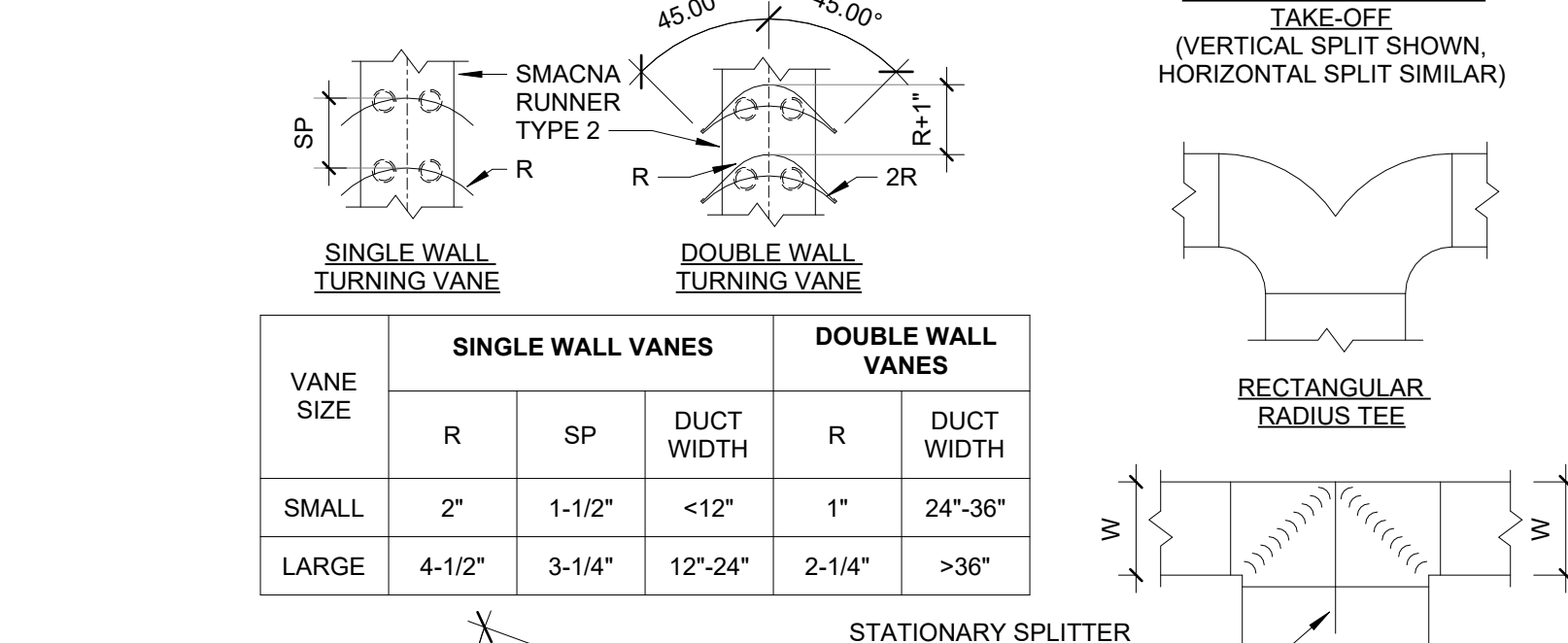
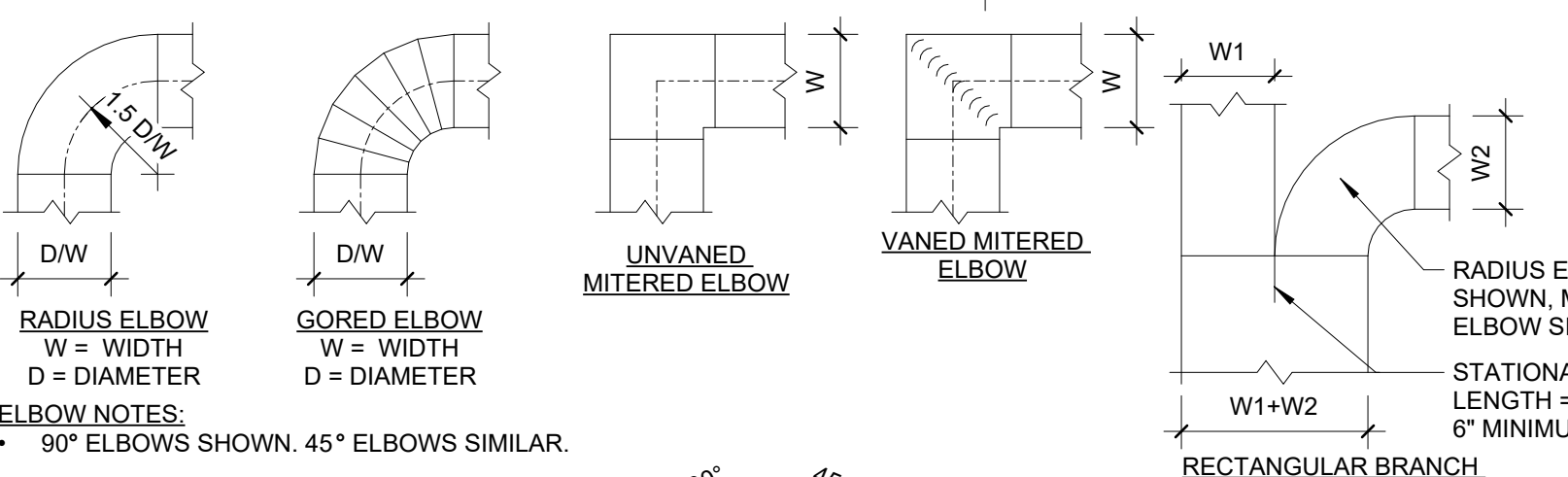
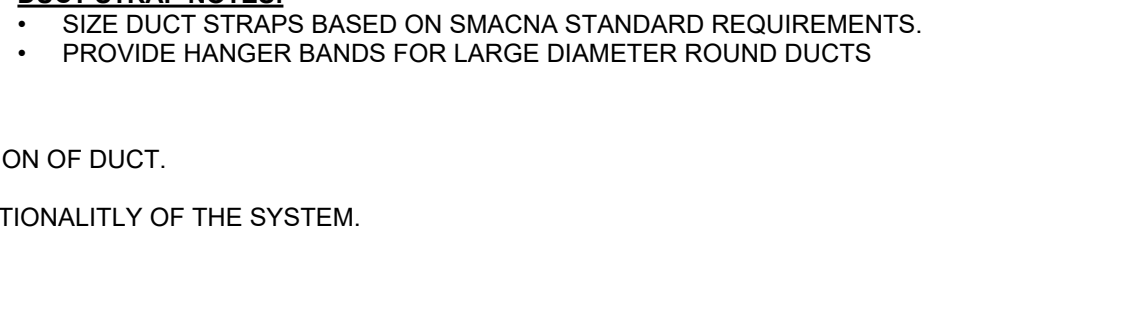
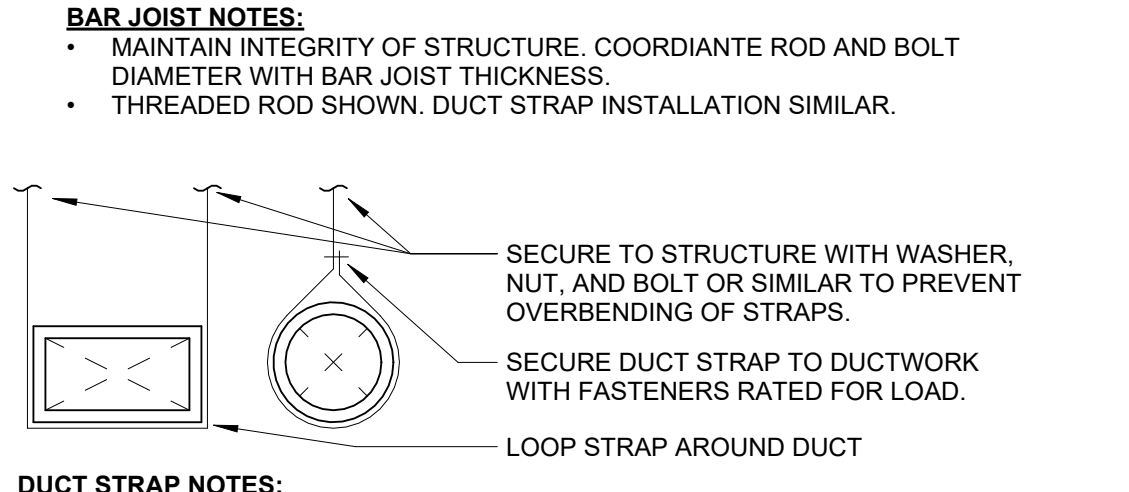
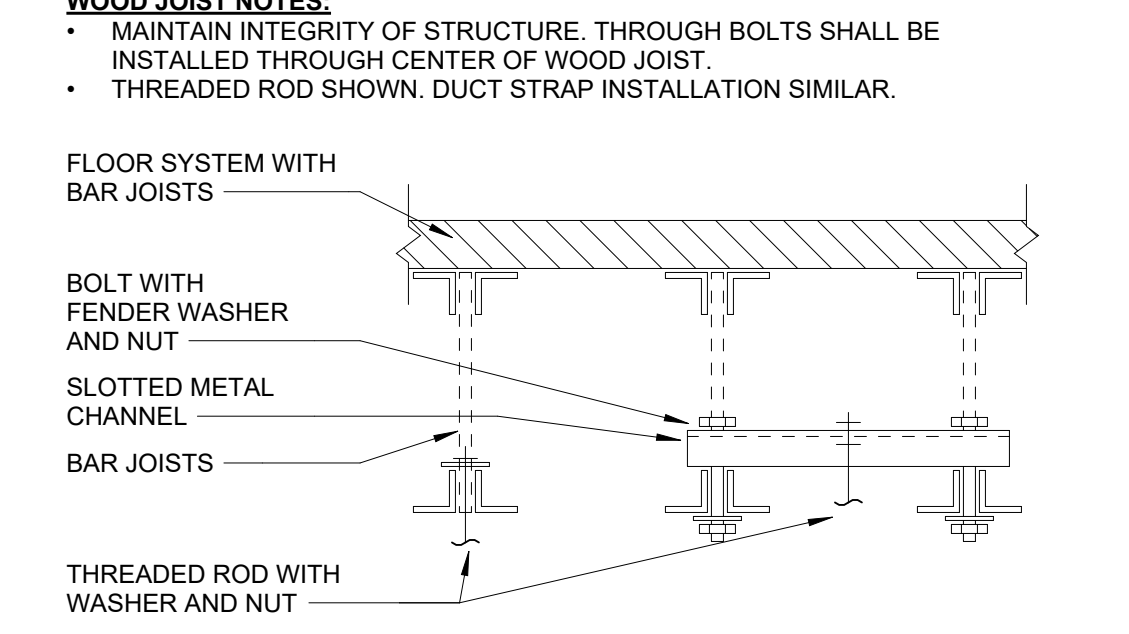
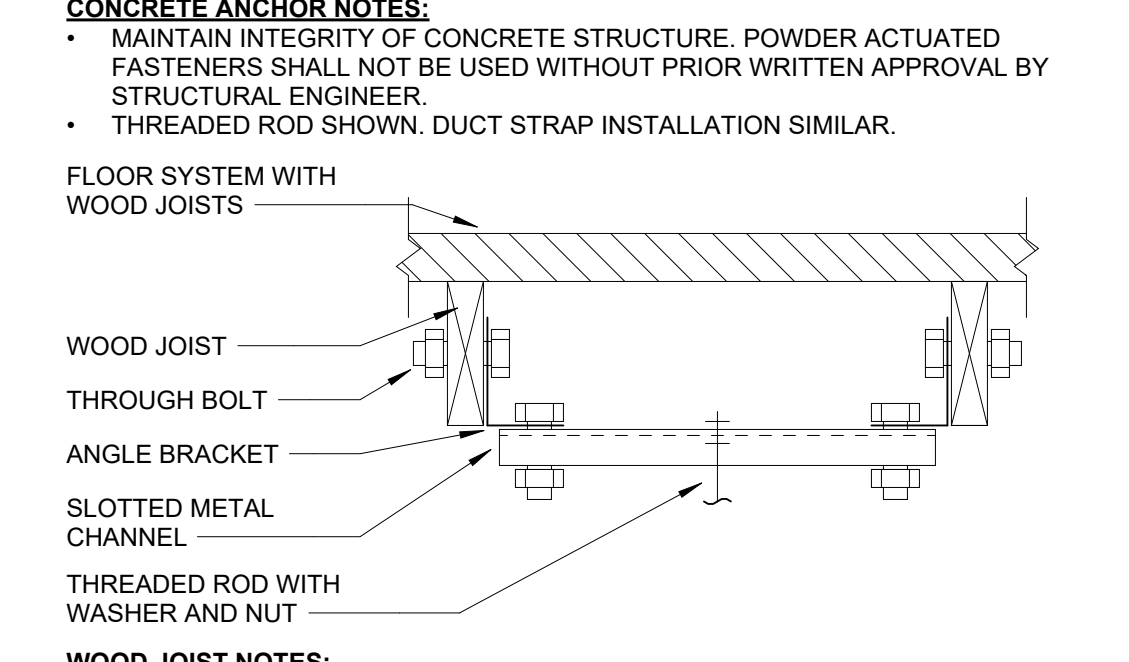
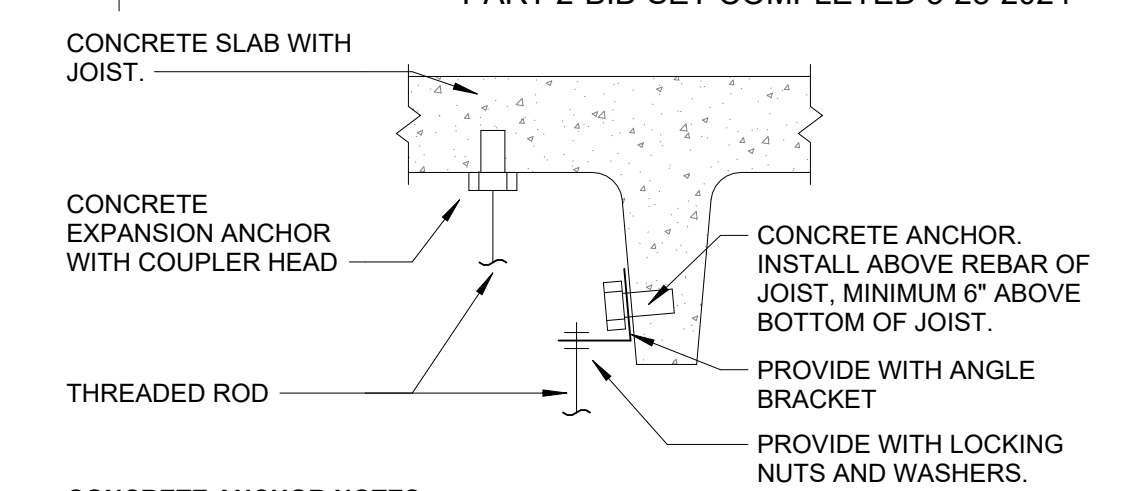
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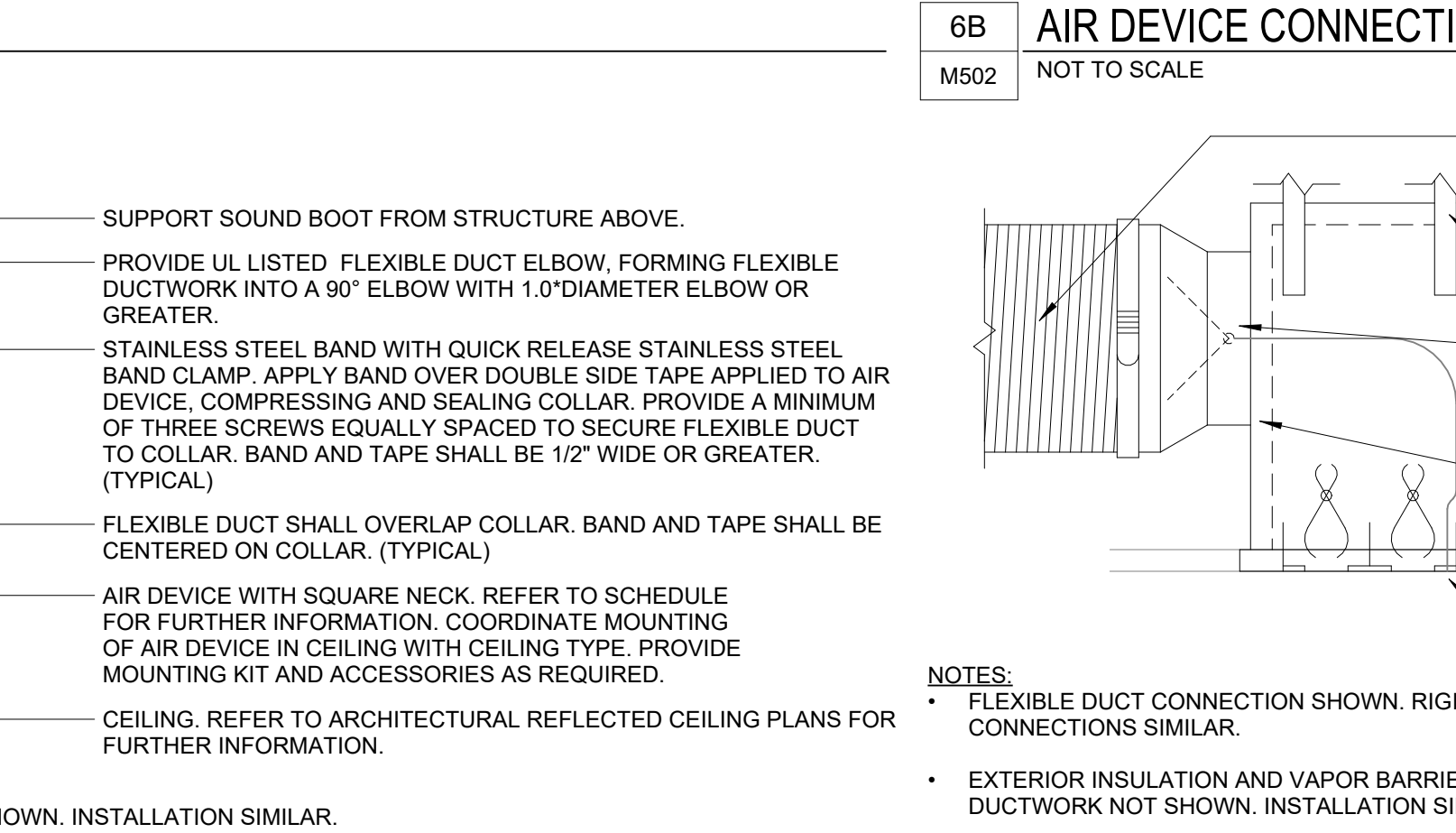
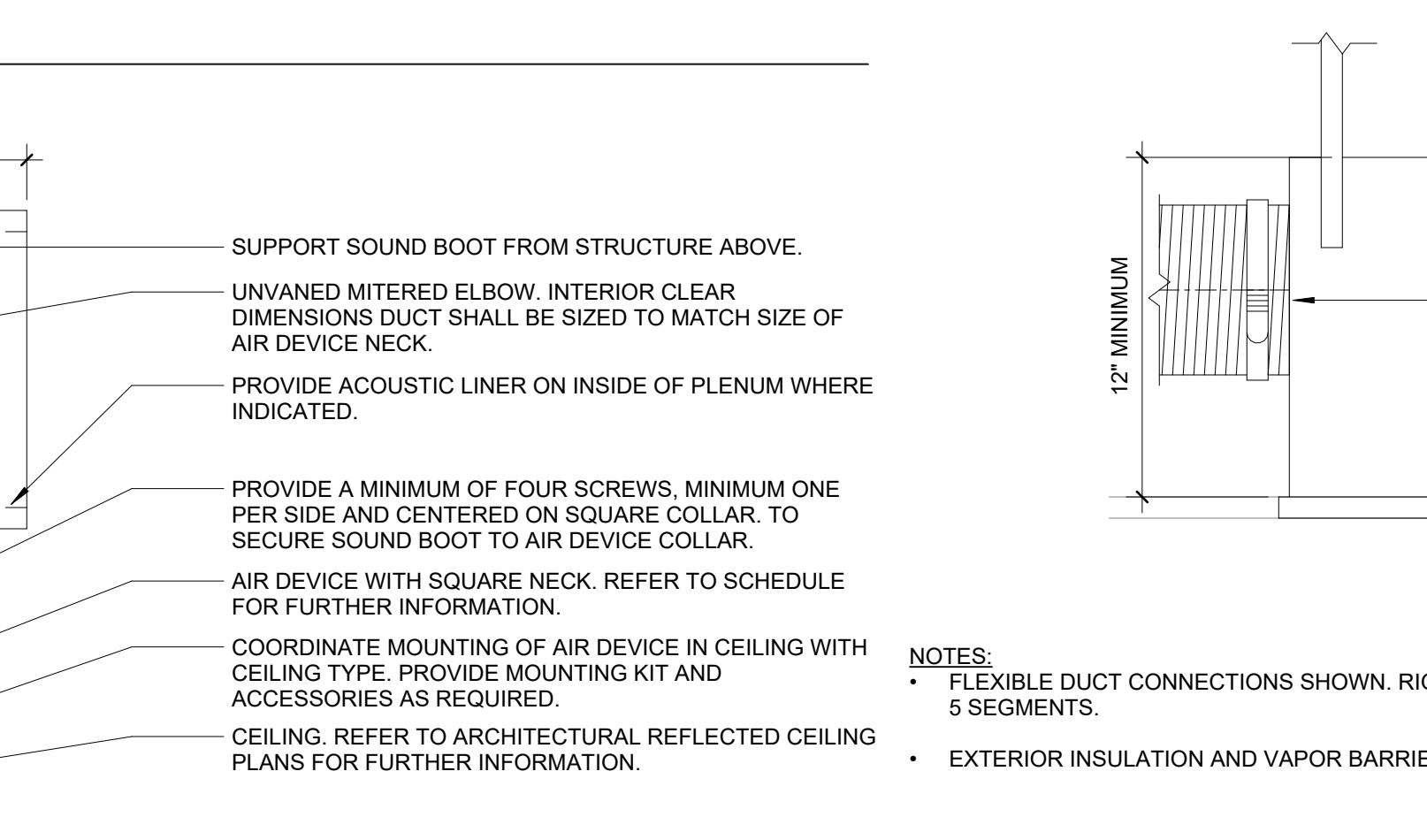
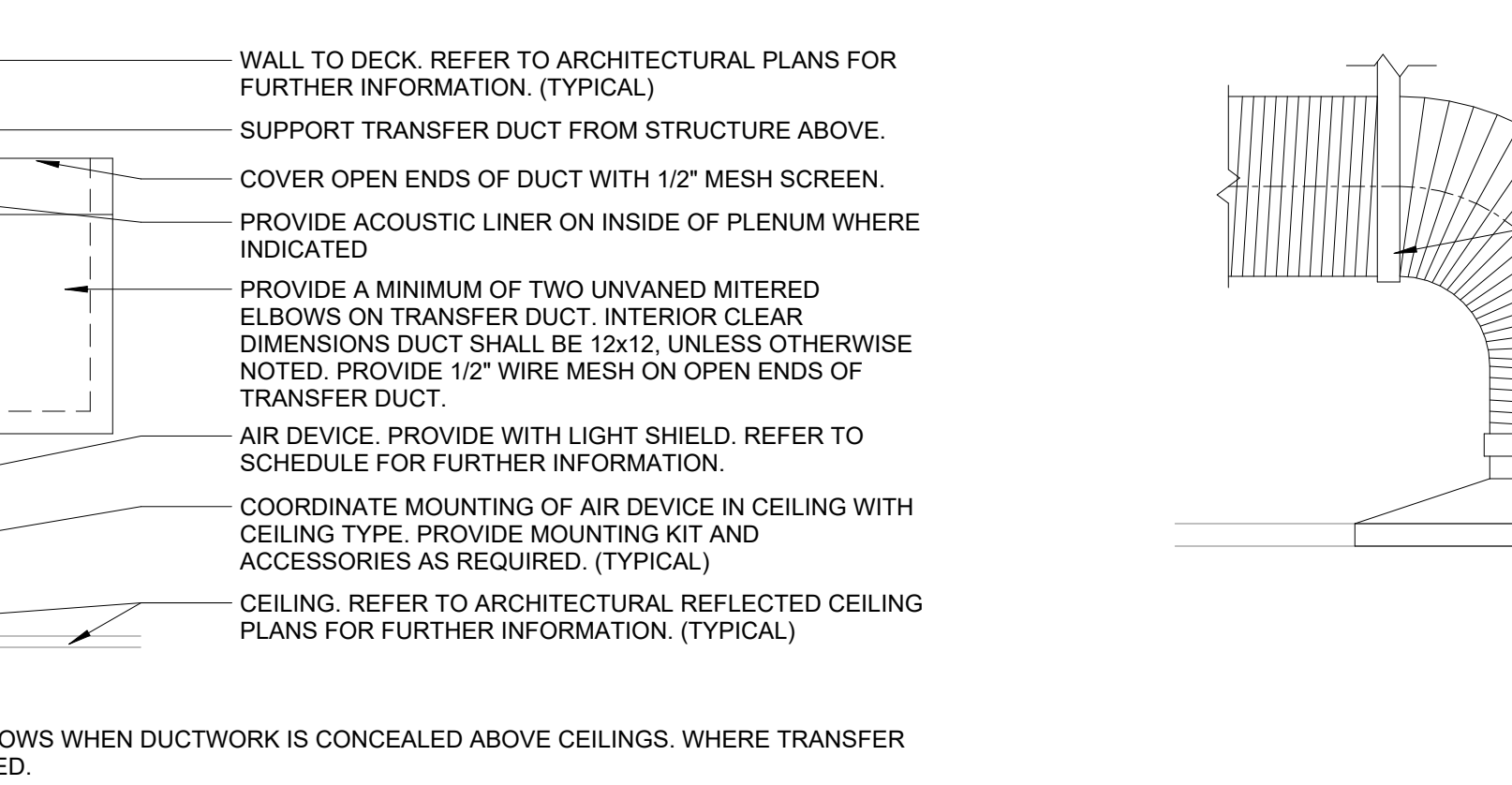
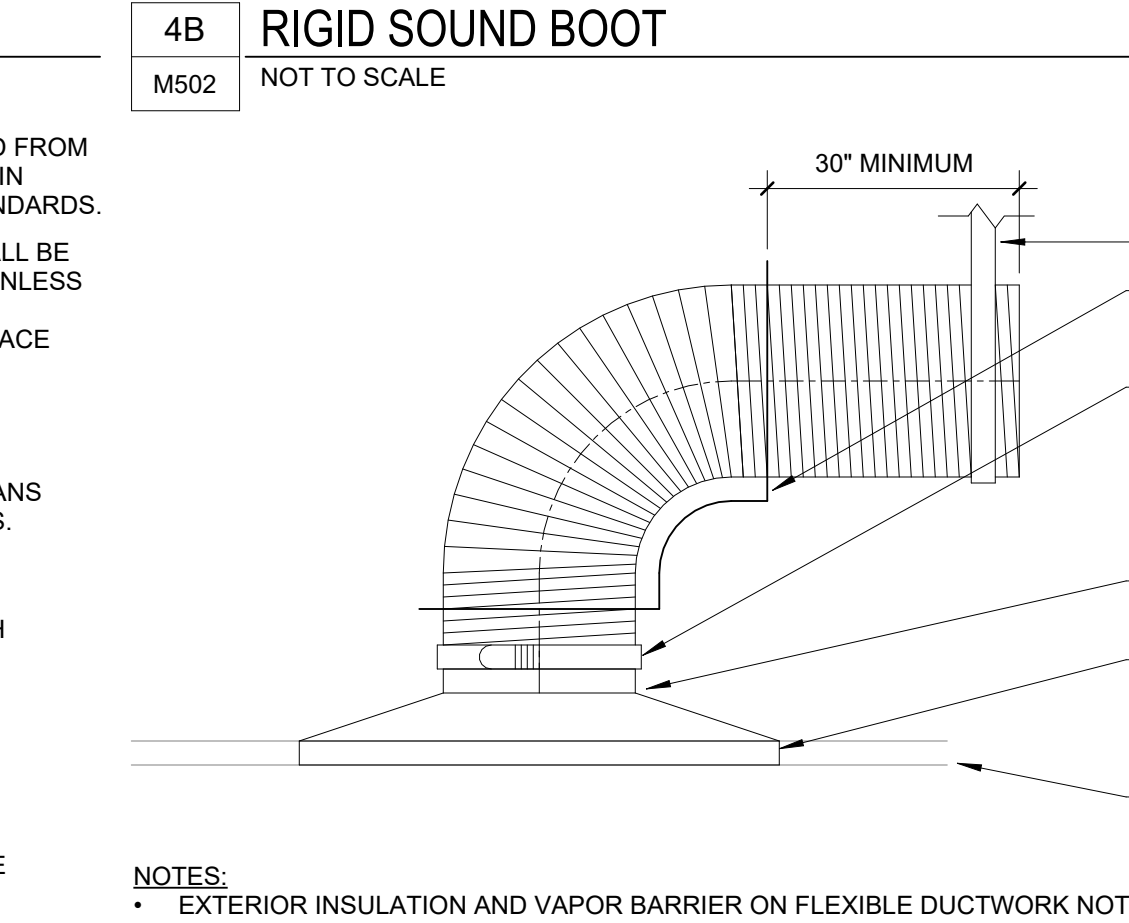
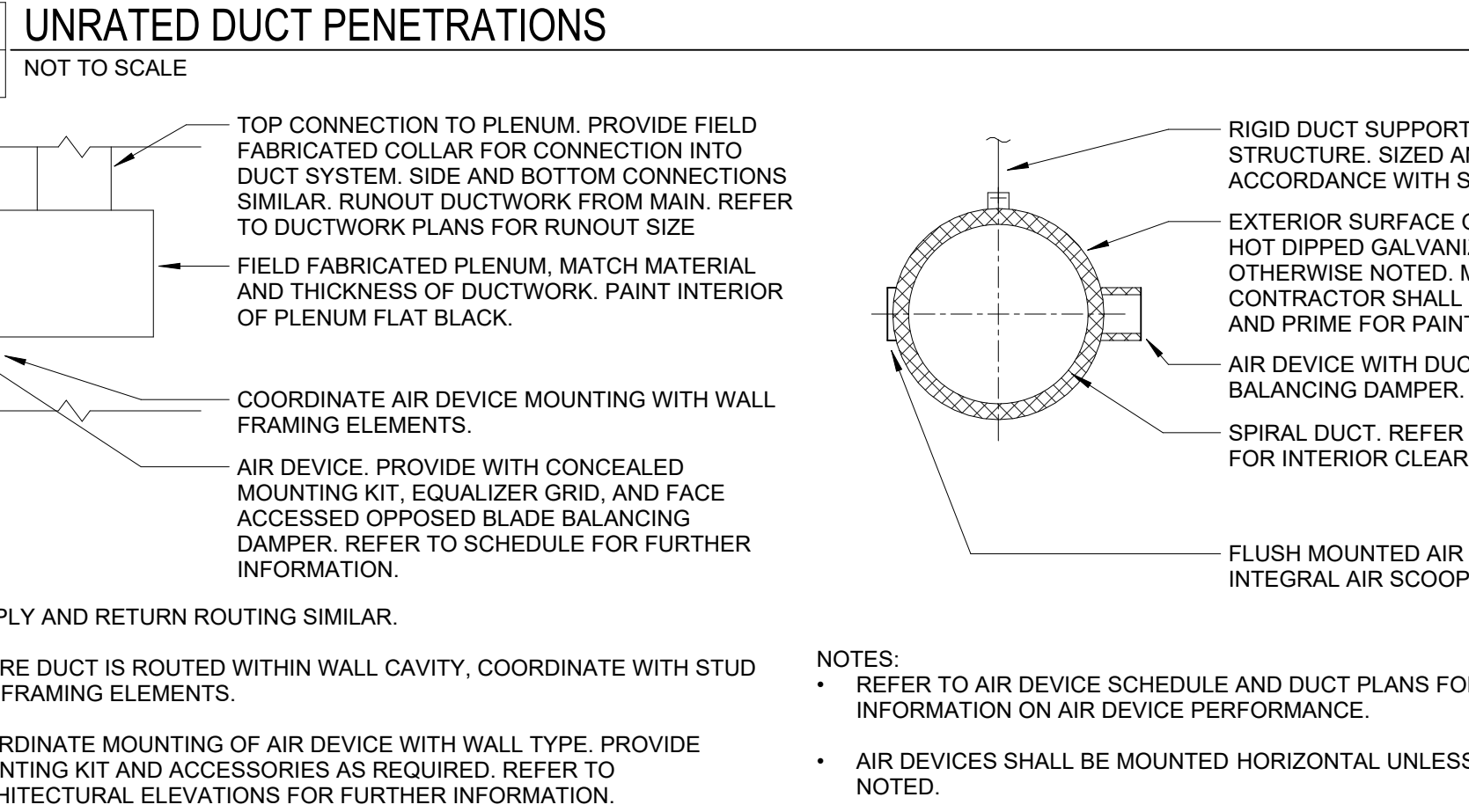
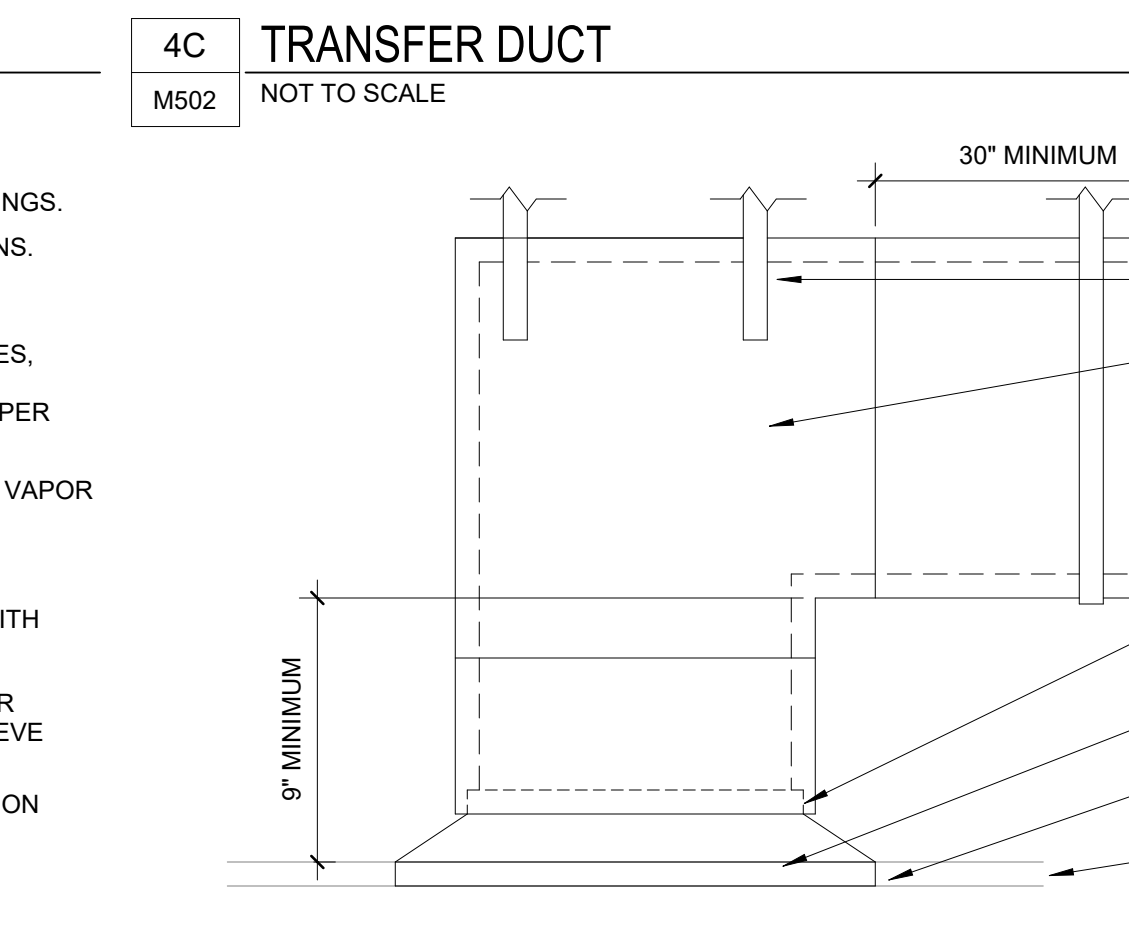
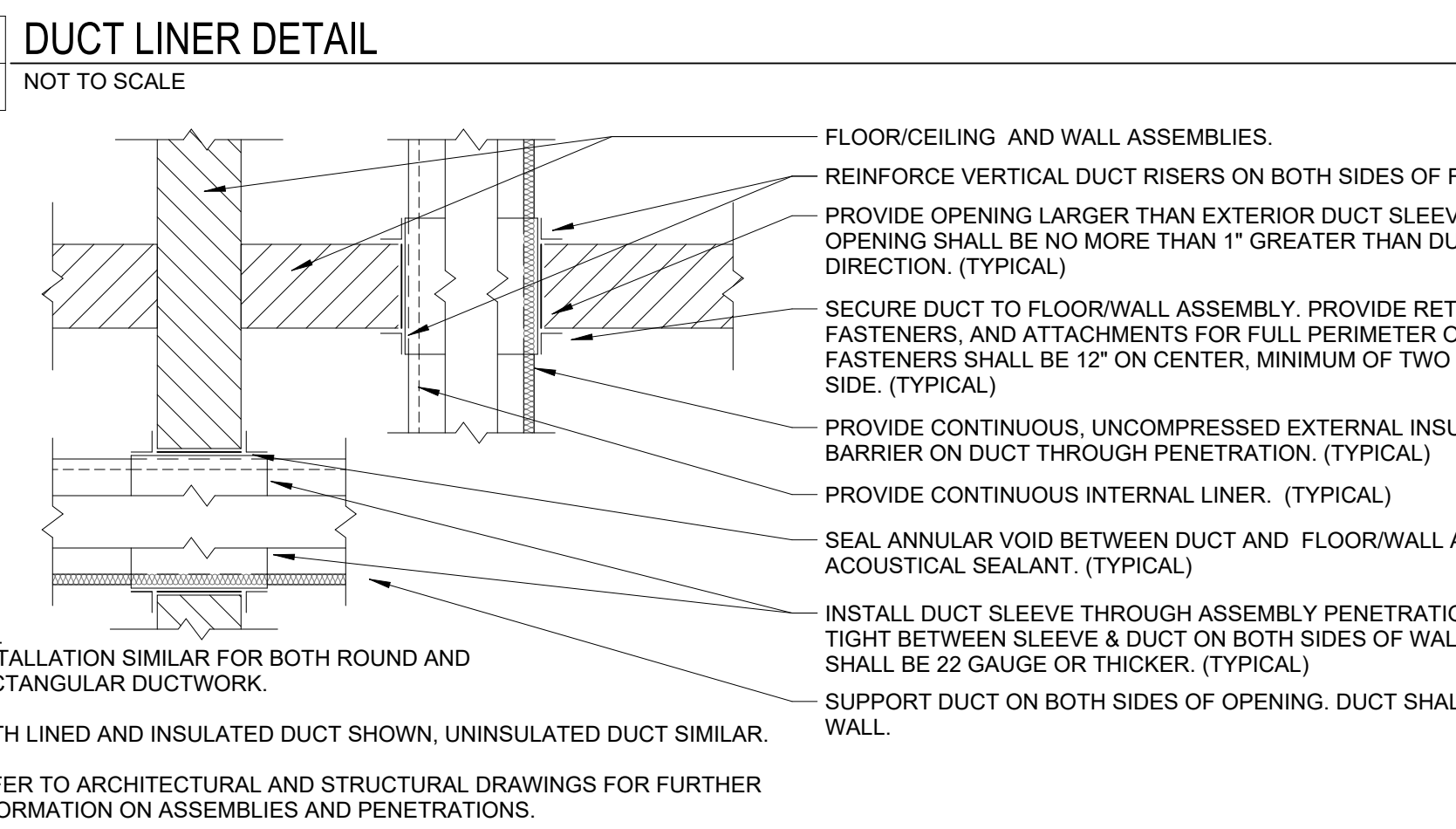
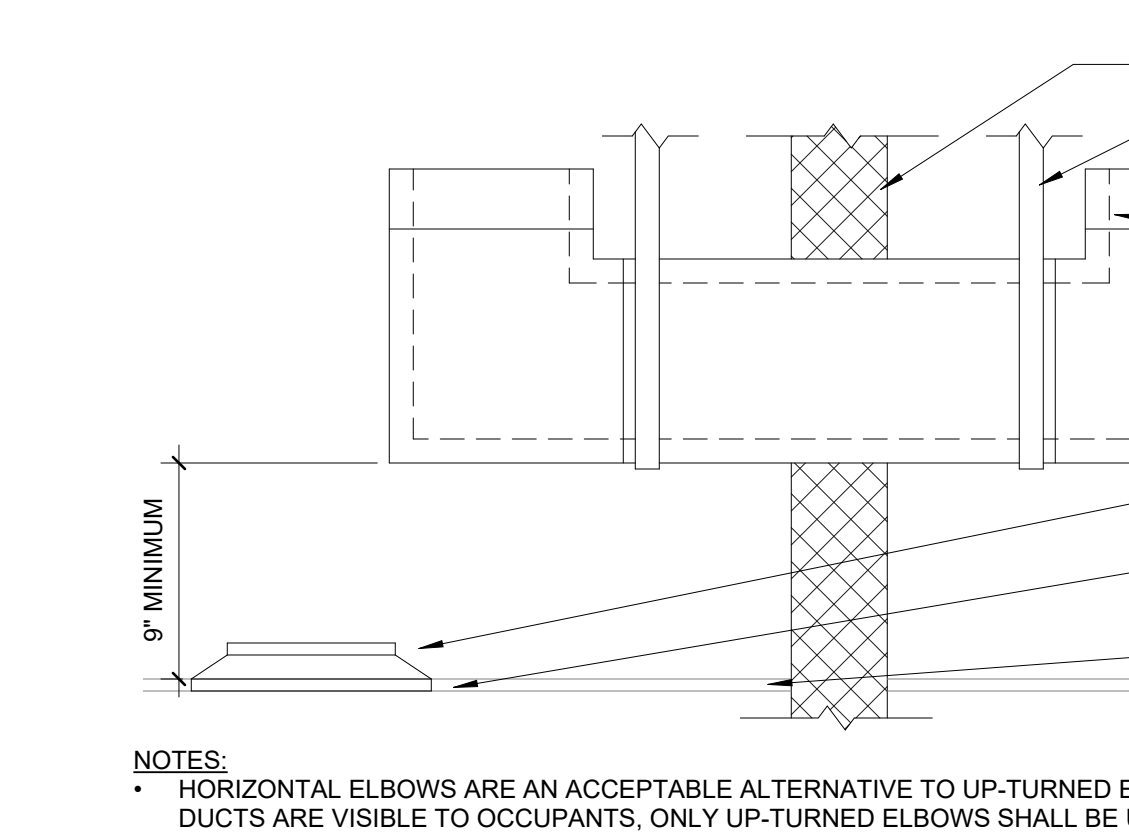
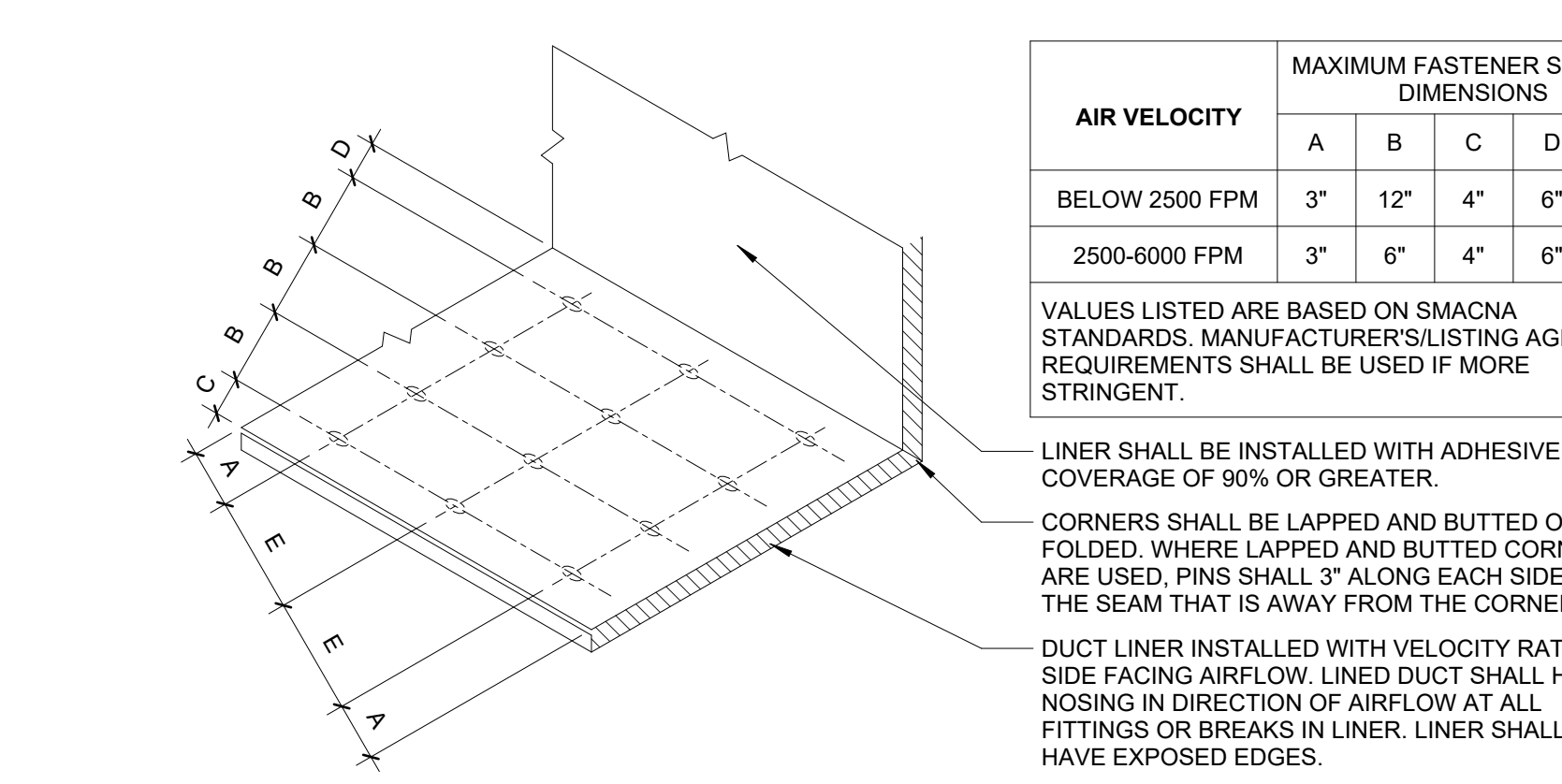
SHEET NUMBER
M501



2D DUCT SUPPORT DETAILS
M502 NOT TO SCALE



5D DUCT FITTINGS AND ACCESSORIES DETAIL
M502 NOT TO SCALE



2A SIDE WALL AIR DEVICE DETAIL
M502 NOT TO SCALE

4A FLEXIBLE SOUND BOOT
M502 NOT TO SCALE

6A LINEAR SLOT AIR DEVICE CONNECTION DETAIL
M502 NOT TO SCALE

LITTLE
OVERSEEN ARCHITECTURAL CONSULTING

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Durham, NC 27701
(919) 474-2500

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REVISIONS NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE: Jerry Quarter, AIA
PROJECT MANAGER: Charlotte Hagen, AIA
DESIGN TEAM: M GRUBBS

NORTHCHASE BRANCH LIBRARY

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Wilmington NC 28405

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DX & ELECTRIC PACKAGED ROOF TOP UNIT SCHEDULE

MARK	SUPPLY FAN							RELIEF FAN							DX COOLING COIL							SCR ELECTRIC RESISTANCE PREHEATER			AIR FILTRATION				ELECTRICAL DATA			SOUND RATING (DBA)	WEIGHT	MANUFACTURER	MODEL	NOTES
	PEAK AIRFLOW	MINIMUM AIRFLOW	PEAK VENTILATION AIRFLOW	MINIMUM VENTILATION AIRFLOW	ESP	TYPE	INDIVIDUAL MOTOR SIZE	VFD	TYPICAL RELIEF FLOW	ESP	INDIVIDUAL MOTOR SIZE	TYPE	VFD	TOTAL CAPACITY	AIRSIDE SENSIBLE CAPACITY	LEAVING AIR DB	WB	REFRIGERANT	TYPE	QUANTITY	KW	ENTERING (DB)	LEAVING (DB)	EFFICIENCY	TYPE	EFFICIENCY	TYPE	VOLTAGE	PHASE	FREQUENCY						
																															PLENUM FAN ARRAY (x2)					
RTU-1	12000 CFM	3600 CFM	2650 CFM	1875 CFM	2.50 in-wg	PLENUM FAN ARRAY (x2)	15.0 hp	Yes	2650 CFM	1.25 in-wg	7.5 hp	FULL ECONOMIZER	Yes	430,400.0 Btu/h	319,700.0 Btu/h	55 °F	55 °F	R-454B	DIGITAL SCROLL	4	60 KW	50 °F	66 °F	MERV 8	PLEATED	MERV 13	PLEATED	480 V	3	60 Hz	93	6600.00 lbf	TRANE	OAND480B4	1, 3, 4	
RTU-2	12000 CFM	3600 CFM	2650 CFM	1875 CFM	2.50 in-wg	PLENUM FAN ARRAY (x2)	15.0 hp	Yes	2650 CFM	1.25 in-wg	7.5 hp	FULL ECONOMIZER	Yes	430,400.0 Btu/h	319,700.0 Btu/h	55 °F	55 °F	R-454B	DIGITAL SCROLL	4	60 KW	50 °F	66 °F	MERV 8	PLEATED	MERV 13	PLEATED	480 V	3	60 Hz	93	6600.00 lbf	TRANE	OAND480B4	1, 2, 4	

- NOTES:**
- PROVIDE WITH MANUFACTURER'S OPTIONS FOR:
INSULATED ROOF CURB, WEATHER HOOD, SINGLE POINT POWER CONNECTION, LOW AMBIENT OPERATION, FULL ECONOMIZER OPERATION, HOT GAS REHEAT, VARIABLE SPEED FANS AND COMPRESSORS, 3,000 HOUR SALT SPRAY COATING, AND HURRICANE STRAPS.
 - PROVIDE UNIT WITH DOWN FLOW CONFIGURATION.
 - PROVIDE UNIT WITH DOWN FLOW SUPPLY AND SIDE FLOW RETURN CONFIGURATION.
 - UNIT SHALL MEET OR EXCEED ASHRAE 90.1-2022 MINIMUM ENERGY EFFICIENCY REQUIREMENTS.

FAN POWERED BOX (ELEC HEAT) SCHEDULE

MARK	LOCATION	INLET SIZE	PRIMARY AIR AIRFLOW		TEMPERATURE	INLET STATIC PRESSURE	SOUND RATING	WEIGHT	HEATING AIRFLOW (FAN + PRIMARY)	FAN ESP	MOTOR	FAN TYPE	ELECTRICAL DATA			HEATING DATA		SCR ELECTRIC REHEAT COIL		ELECTRICAL DATA			MANUFACTURER	MODEL	NOTES
			MAXIMUM	MINIMUM									VOLTAGE	PHASE	FREQUENCY	HEATER KW	ENTERING AIR TEMPERATURE	LEAVING AIR TEMPERATURE	VOLTAGE	PHASE	FREQUENCY				
			400 CFM	120 CFM									277 V	1	60 Hz	15 KW	60 °F	91.4 °F	480 V	3	60 Hz				
FPB-1-01	WORKROOM	14"	2500 CFM	750 CFM	55 °F	0.75 in-wg	30	129.00 lbf	1500 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	15 KW	60 °F	91.4 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-1-02	STAFF MEETING	06"	400 CFM	120 CFM	55 °F	0.75 in-wg	30	97.00 lbf	240 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	2.5 KW	60 °F	92.8 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-1-03	OFFICE	06"	400 CFM	120 CFM	55 °F	0.75 in-wg	30	97.00 lbf	240 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	2.5 KW	60 °F	92.8 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-1-04	STAFF SUPPORT	08"	700 CFM	210 CFM	55 °F	0.75 in-wg	30	98.00 lbf	420 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	4.5 KW	60 °F	93.7 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-1-05A	CAFE	12"	1850 CFM	555 CFM	55 °F	0.75 in-wg	30	115.00 lbf	1110 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	11 KW	60 °F	91.2 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-1-05B	CAFE	12"	1850 CFM	555 CFM	55 °F	0.75 in-wg	30	115.00 lbf	1110 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	11 KW	60 °F	91.2 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-1-06	CONFERENCE	08"	550 CFM	165 CFM	55 °F	0.75 in-wg	30	98.00 lbf	330 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	3.5 KW	60 °F	93.4 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-1-07	CONFERENCE	08"	550 CFM	165 CFM	55 °F	0.75 in-wg	30	98.00 lbf	330 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	3.5 KW	60 °F	93.4 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-1-08	COMPUTING	14"	2400 CFM	720 CFM	55 °F	0.75 in-wg	30	129.00 lbf	1440 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	14 KW	60 °F	90.6 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-1-09A	NON FICTION	16"	3000 CFM	900 CFM	55 °F	0.75 in-wg	30	146.00 lbf	1800 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	18 KW	60 °F	91.4 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-1-09B	NON FICTION	16"	3000 CFM	900 CFM	55 °F	0.75 in-wg	30	146.00 lbf	1800 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	18 KW	60 °F	91.4 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-2-01	CHILDRENS	12"	1500 CFM	450 CFM	55 °F	0.75 in-wg	30	115.00 lbf	900 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	9 KW	60 °F	91.4 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-2-02A	CHILDRENS	12"	1500 CFM	450 CFM	55 °F	0.75 in-wg	30	115.00 lbf	900 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	9 KW	60 °F	91.4 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-2-02B	CHILDRENS	12"	1500 CFM	450 CFM	55 °F	0.75 in-wg	30	115.00 lbf	900 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	9 KW	60 °F	91.4 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-2-03	PRE-TEEN	12"	1500 CFM	450 CFM	55 °F	0.75 in-wg	30	115.00 lbf	900 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	9 KW	60 °F	91.4 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-2-04	MULTI PURPOSE	10"	1275 CFM	385 CFM	55 °F	0.75 in-wg	30	114.00 lbf	770 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	7.5 KW	60 °F	90.6 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	
FPB-2-05	FICTION	10"	1150 CFM	345 CFM	55 °F	0.75 in-wg	30	114.00 lbf	690 CFM	0.75 in-wg	0.5 hp	PARALLEL	277 V	1	60 Hz	7 KW	60 °F	91.9 °F	480 V	3	60 Hz	TRANE	VPEF	ALL	

- NOTES:**
- MECHANICAL CONTRACTOR SHALL COORDINATE LEFT/RIGHT HAND CONTROLS AND CONNECTIONS WITH FIELD CONDITIONS.
 - PROVIDE FACTORY MOUNTED PRESSURE INDEPENDENT CONTROLS, BACNET CONTROLLER, ECM FANS, AND SCR HEATERS.
 - PROVIDE WITH FACTORY INSTALLED CONTROL ENCLOSURE AND FUSED DISCONNECT, CLOSED CELL FOAM INSULATION LINER, MANUFACTURER'S HANGERS AND MOUNTING KIT, AND VIBRATION ISOLATION KIT.
 - PROVIDE WITH SINGLE POINT POWER.
 - PROVIDE WITH MANUFACTURER'S 2" FILTER RACK OPTION AND PLEATED MERV 8 FILTER
 - SCR HEATERS SHALL BE SIZED FOR A LEAVING AIR TEMPERATURE BETWEEN 90°F AND 95°F

SHUT-OFF VAV (ELEC HEAT) SCHEDULE

MARK	LOCATION	INLET SIZE	AIRFLOW		PRIMARY AIR TEMPERATURE	INLET STATIC PRESSURE	SOUND RATING	WEIGHT	HEATING AIRFLOW (FAN + PRIMARY)	FAN ESP	MOTOR	FAN TYPE	ELECTRICAL DATA			HEATING DATA		SCR ELECTRIC REHEAT COIL		ELECTRICAL DATA			MANUFACTURER	MODEL	NOTES
			MAXIMUM	MINIMUM									VOLTAGE	PHASE	FREQUENCY	HEATER KW	ENTERING AIR TEMPERATURE	LEAVING AIR TEMPERATURE	VOLTAGE	PHASE	FREQUENCY				
			400 CFM	120 CFM									277 V <td>1</td> <td>60 Hz</td> <td>2.5 KW</td> <td>55 °F</td> <td>94.3 °F</td> <td>277 V</td> <td>1</td> <td>60 Hz</td>	1	60 Hz	2.5 KW	55 °F	94.3 °F	277 V	1	60 Hz				
VAV-1-01	RESTROOM	6"	400 CFM	120 CFM	55 °F	0.75 in-wg	25	67.00 lbf	2.5 KW	55 °F	94.3 °F	277 V	1	60 Hz	2.5 KW	55 °F	94.3 °F	277 V	1	60 Hz	TRANE	VCEF	ALL		
VAV-1-02	WORKROOM	6"	400 CFM	120 CFM	55 °F	0.75 in-wg	25	67.00 lbf	2.5 KW	55 °F	94.3 °F	277 V	1	60 Hz	2.5 KW	55 °F	94.3 °F	277 V	1	60 Hz	TRANE	VCEF	ALL		
VAV-1-03	CHECK OUT	10"	925 CFM	280 CFM	55 °F	0.75 in-wg	25	81.00 lbf	5.5 KW	55 °F	92.2 °F	480 V	3	60 Hz	5.5 KW	55 °F	92.2 °F	480 V	3	60 Hz	TRANE	VCEF	ALL		
VAV-1-04	CONFERENCE	8"	775 CFM	235 CFM	55 °F	0.75 in-wg	25	67.00 lbf	4.5 KW	55 °F	91.3 °F	277 V	1	60 Hz	4.5 KW	55 °F	91.3 °F	277 V	1	60 Hz	TRANE	VCEF	ALL		
VAV-2-01	CHILDRENS	12"	2000 CFM	600 CFM	55 °F	0.75 in-wg	25	93.00 lbf	12 KW	55 °F	92.7 °F	460 V	3	60 Hz	12 KW	55 °F	92.7 °F	460 V	3	60 Hz	TRANE	VCEF	ALL		
VAV-2-02	TEEN MEDIA	8"	600 CFM	180 CFM	55 °F	0.75 in-wg	25	67.00 lbf	3.5 KW	55 °F	91.7 °F	277 V	1	60 Hz	3.5 KW	55 °F	91.7 °F	277 V	1	60 Hz	TRANE	VCEF	ALL		
VAV-2-03A	FICTION	12"	2000 CFM	600 CFM	55 °F	0.75 in-wg	25	93.00 lbf	12 KW	55 °F	92.7 °F	460 V	3	60 Hz	12 KW	55 °F	92.7 °F	460 V	3	60 Hz	TRANE	VCEF	ALL		
VAV-2-03B	FICTION	12"	2000 CFM	600 CFM	55 °F	0.75 in-wg	25	93.00 lbf	12 KW	55 °F	92.7 °F	460 V	3	60 Hz	12 KW	55 °F	92.7 °F	460 V	3	60 Hz	TRANE	VCEF	ALL		

- NOTES:**
- MECHANICAL CONTRACTOR SHALL COORDINATE LEFT/RIGHT HAND CONTROLS AND CONNECTIONS WITH FIELD CONDITIONS.
 - PROVIDE FACTORY MOUNTED PRESSURE INDEPENDENT CONTROLS, BACNET CONTROLLER, AND SCR HEATERS.
 - PROVIDE WITH FACTORY INSTALLED CONTROL ENCLOSURE AND FUSED DISCONNECT, CLOSED CELL FOAM INSULATION LINER, AND MANUFACTURER'S HANGERS AND MOUNTING KIT.
 - PROVIDE WITH SINGLE POINT POWER.
 - SCR HEATERS SHALL BE SIZED FOR A LEAVING AIR TEMPERATURE BETWEEN 90°F AND 95°F

DUCTLESS MINISPLIT INDOOR UNIT SCHEDULE - HEAT PUMP

MARK	EQUIPMENT TYPE	LOCATION	SUPPLY FAN			EVAPORATOR COIL						HEAT PUMP OPERATION			AIR FILTRATION		ELECTRICAL DATA			PAIRED CONDENSING UNIT	MANUFACTURER	MODEL	NOTES	
			PEAK AIRFLOW	TYPE	MOTOR	ECM?	TOTAL CAPACITY	SENSIBLE CAPACITY	ENTERING AIR DB	WB	LEAVING AIR DB	WB	HEATING CAPACITY	AIR TEMPERATURE DB	EFFICIENCY	TYPE	VOLTAGE	PHASE	FREQUENCY					
			775 CFM	CENTRIFUGAL	56 W	Yes	30,000.0 Btu/h	30,000.0 Btu/h	80 °F	67 °F	55 °F	55 °F	32,000 Btu/h	70 °F	90 °F	MERV 8	MANUFACTURER'S INTEGRAL	208 V	1					60 Hz
IDU-1A	WALL MOUNTED	RISER ROOM	775 CFM	CENTRIFUGAL	56 W	Yes	30,000.0 Btu/h	30,000.0 Btu/h	80 °F	67 °F	55 °F	55 °F	32,000 Btu/h	70 °F	90 °F	MERV 8	MANUFACTURER'S INTEGRAL	208 V	1	60 Hz	ODU-1A	MITSUBISHI	PKA-A30KA7	ALL
IDU-1B	WALL MOUNTED	RISER ROOM	775 CFM	CENTRIFUGAL	56 W	Yes	30,000.0 Btu/h	30,000.0 Btu/h	80 °F	67 °F	55 °F	55 °F	32,000 Btu/h	70 °F	90 °F	MERV 8	MANUFACTURER'S INTEGRAL	208 V	1	60 Hz	ODU-1B	MITSUBISHI	PKA-A30KA7	ALL
IDU-2	WALL MOUNTED	RISER ROOM	775 CFM	CENTRIFUGAL	56 W	Yes	30,000.0 Btu/h	30,000.0 Btu/h	80 °F	67 °F	55 °F	55 °F	32,000 Btu/h	70 °F	90 °F	MERV 8	MANUFACTURER'S INTEGRAL	208 V	1	60 Hz	ODU-2	MITSUBISHI	PKA-A30KA7	ALL
IDU-3	WALL MOUNTED	RISER ROOM	775 CFM	CENTRIFUGAL	56 W	Yes	30,000.0 Btu/h	30,000.0 Btu/h	80 °F	67 °F	55 °F	55 °F	32,000 Btu/h	70 °F	90 °F	MERV 8	MANUFACTURER'S INTEGRAL	208 V	1	60 Hz	ODU-3	MITSUBISHI	PKA-A30KA7	ALL

- NOTES:**
- PROVIDE WITH VARIABLE SPEED FAN OPTION AND ECM FAN MOTORS.
 - PROVIDE WITH INTEGRAL CONDENSATE PUMP AND INTEGRAL BACNET CONNECTION CARD
 - PROVIDE WITH MANUFACTURER'S AUTO-CHANGE OVER THERMOSTAT FOR HEATING/COOLING/DEHUMIDIFICATION OPERATION.

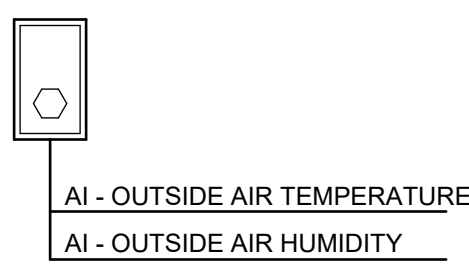
ELECTRIC UNIT HEATER SCHEDULE

MARK	FAN DATA			HEATING COIL DATA			ELECTRICAL DATA			WEIGHT	MANUFACTURER	MODEL	NOTES
	AIR FLOW	AIR THROW	HEATER KW	STAGES	ENTERING AIR TEMPERATURE	LEAVING AIR TEMPERATURE	VOLTAGE	PHASE	FREQUENCY				
EUH-1	400 CFM	12' - 0"	3 KW	1	40 °F	66 °F	208 V	1	60 Hz	25.00 lbf	MARKEL	F2F5103N	ALL

- NOTES:**
- WITH MANUFACTURER'S MOUNTING BRACKET.
 - PROVIDE WITH FAN DELAY SWITCH, SUMMER FAN SWITCH, UNIT MOUNTED THERMOSTAT, AND UNIT MOUNTED DISCONNECT
 - PROVIDE WITH BACNET CONNECTION INTO CONTROL SYSTEM FOR ALERTS/ALARMS

HIGH VOLUME LOW SPEED FAN SCHEDULE

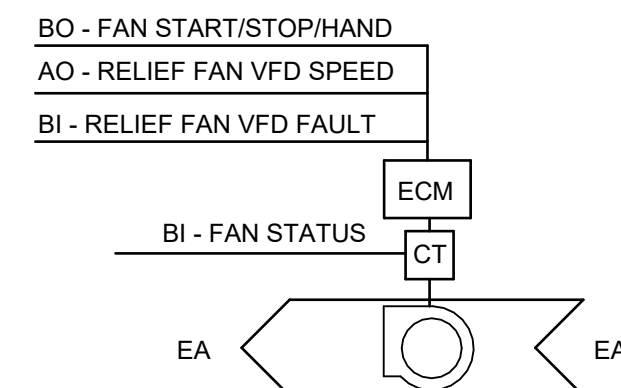
MARK	COLOR	VOLTAGE	PHASE	MANUFACTURER	MODEL	NOTES



OUTSIDE AIR CONDITIONS: THE CONTROLLER SHALL MONITOR THE OUTSIDE AIR TEMPERATURE AND HUMIDITY AND CALCULATE THE OUTSIDE AIR ENTHALPY ON A CONTINUOUS BASIS. THESE VALUES SHALL BE MADE AVAILABLE TO THE SYSTEM AT ALL TIMES.

ALARM SHALL BE GENERATED AS FOLLOWS: HARD WIRED SENSOR FAILURE, SENSOR READING INDICATES SHORTED OR DISCONNECTED SENSOR, IN THE EVENT OF A SENSOR FAILURE, THE ALTERNATE OUTSIDE AIR CONDITIONS SHALL BE OBTAINED FROM THE NEAREST LOCAL WEATHER STATION VIA NETWORK CONNECTION. SENSOR SHALL BE MADE AVAILABLE TO THE SYSTEM WITHOUT INTERRUPTION IN SENSOR READINGS.

2F WEATHER STATION CONTROL SCHEMATIC



RUN CONDITIONS - CONTINUOUS: THE FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS, THE FAN SHALL OPERATE AT FULL SPEED DURING UNOCCUPIED HOURS, THE FAN SHALL RUN AT MINIMUM SPEED.

FAN: THE FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

EMERGENCY SHUTDOWN: THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING AN EMERGENCY SHUTDOWN SIGNAL.

FAN STATUS: THE CONTROLLER SHALL MONITOR THE FAN STATUS.

ALARMS SHALL BE PROVIDED AS FOLLOWS: FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF, FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON, FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

1D CONTINUOUSLY OPERATING EXHAUST FAN

RUN CONDITIONS - CONTINUOUS: THE UNIT SHALL RUN CONTINUOUSLY AND SHALL MAINTAIN THE HEATING SETPOINT.

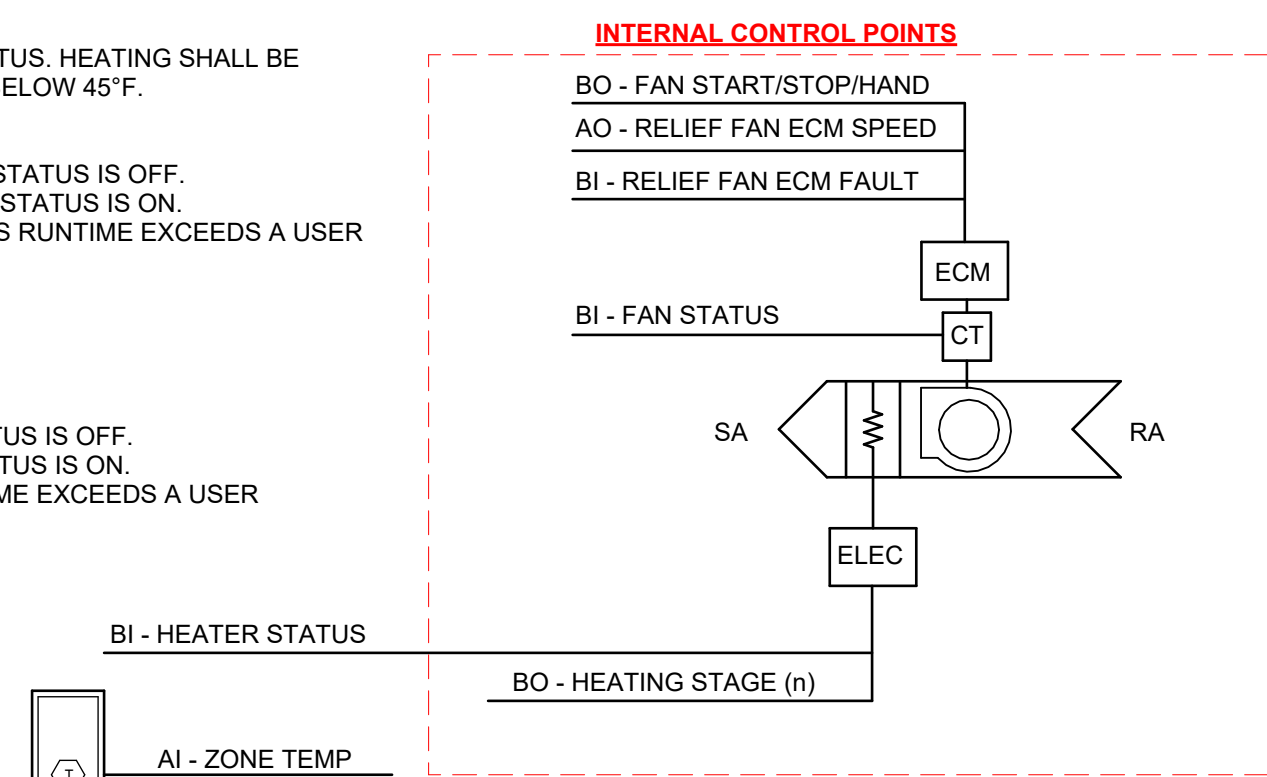
ALARMS SHALL BE PROVIDED AS FOLLOWS: LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

HEATER STATUS: THE CONTROLLER SHALL MONITOR THE HEATER STATUS. HEATING SHALL BE ENABLED WHENEVER THE SPACE TEMPERATURE IS BELOW 45°F.

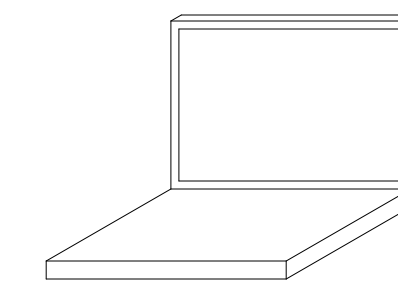
ALARMS SHALL BE PROVIDED AS FOLLOWS: HEATER FAILURE: COMMANDED ON, BUT THE STATUS IS OFF, HEATER IN HAND: COMMANDED OFF, BUT THE STATUS IS ON, HEATER RUNTIME EXCEEDED: HEATER STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

FAN STATUS: THE CONTROLLER SHALL MONITOR THE FAN STATUS.

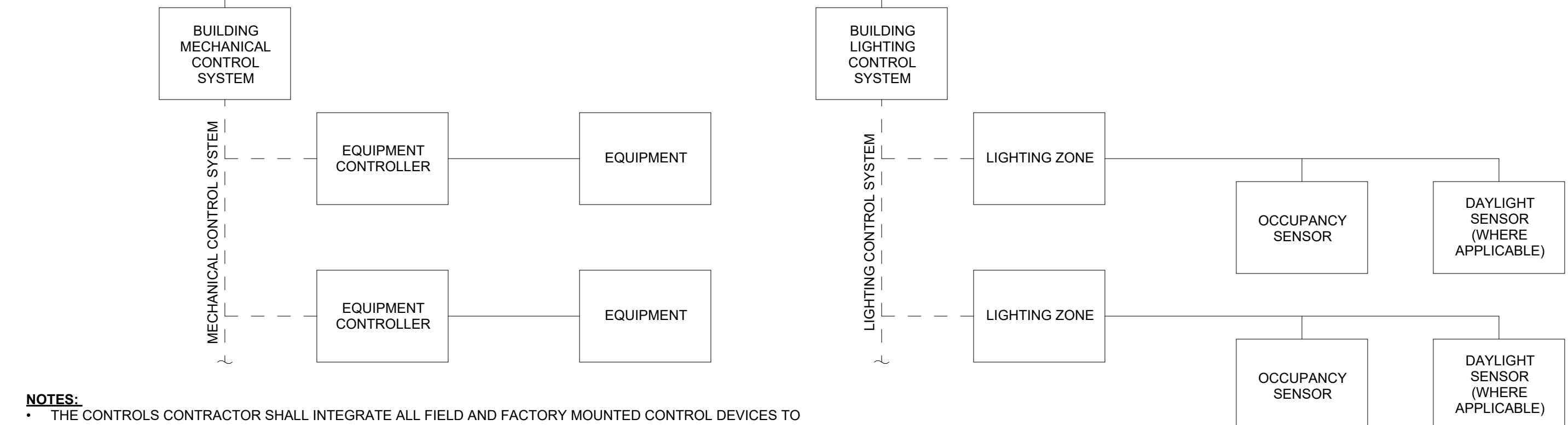
ALARMS SHALL BE PROVIDED AS FOLLOWS: FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF, FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON, FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).



BUILDING FACILITIES COMPUTER INTERFACE



BACNET NETWORK BACKBONE



NOTES: THE CONTROLS CONTRACTOR SHALL INTEGRATE ALL FIELD AND FACTORY MOUNTED CONTROL DEVICES TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.

CONTROL SYSTEM SHALL UTILIZE AUTOMATED FAULT DETECTION AND DIAGNOSTIC ALGORITHMS. THESE ALGORITHMS SHALL BE OPTIMIZED TO FACILITATE PREDICTIVE MAINTENANCE AND REDUCE ENERGY CONSUMPTION. PROVIDE POSITION SWITCHES ON ALL ACTUATED DAMPERS AND VALVES. THE AUTOMATION SYSTEM SHALL MONITOR POSITION. SAFETIES SHALL TAKE PRECEDENCE IN BUILDING AUTOMATION SYSTEM OVER CONTROL SYSTEM OVERRIDES. CONTROLS CONTRACTOR SHALL PROVIDE A FULLY FUNCTIONAL SYSTEM AND SHALL BE RESPONSIBLE FOR INTEGRATION OF ALL FIELD AND FACTORY MOUNTED CONTROL DEVICES. CONTROLS CONTRACTOR SHALL COORDINATE CONTACT INFORMATION FOR ALERTS AND ALARMS WITH OWNERS MAINTENANCE TEAM. SYSTEM SHALL INTERFACE WITH EXISTING CENTRAL FACILITIES CONTROL SYSTEM USED BY OWNER. CENTRAL SYSTEM SHALL BE CAPABLE OF MONITORING AND TRENDRING DATA FROM DDC SYSTEM AND OVERRIDING SETPOINTS AND SCHEDULES AS REQUIRED.

5D CONTROL SYSTEM ARCHITECTURE

RUN CONDITIONS - SCHEDULED: THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:

OCCUPIED MODE: THE UNIT SHALL MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINTS.

UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN THE UNOCCUPIED SPACE TEMPERATURE SETPOINTS.

ALARMS SHALL BE PROVIDED AS FOLLOWS: HIGH ZONE TEMP: IF THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.), LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

MINIMUM VENTILATION ON CARBON DIOXIDE (CO2) CONCENTRATION: WHEN IN THE OCCUPIED MODE, THE CONTROLLER SHALL MEASURE THE ZONE CO2 CONCENTRATION AT 5 MINUTE (ADJ.) INTERVALS.

THE ZONE DAMPER SHALL MODULATE OPEN TO INCREASE PRIMARY AIRFLOW FROM ROOFTOP UNIT WHEN CARBON DIOXIDE CONCENTRATION IS ABOVE 750 PPM (ADJ.) FOR MORE THAN 10 MINUTES (ADJ.).

ALARMS SHALL BE PROVIDED AS FOLLOWS: HIGH ZONE CARBON DIOXIDE CONCENTRATION: IF THE ZONE CO2 CONCENTRATION IS GREATER THAN 1250 PPM (ADJ.).

ZONE SETPOINT ADJUST: THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING AND COOLING SETPOINTS AT THE ZONE SENSOR.

ZONE OPTIMAL START: THE UNIT SHALL USE AN OPTIMAL START ALGORITHM FOR MORNING START-UP. THIS ALGORITHM SHALL MINIMIZE THE UNOCCUPIED WARM-UP OR COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD.

ALARMS SHALL BE PROVIDED AS FOLLOWS: FILTER CHANGE REQUIRED: FILTER HAS BEEN IN USE FOR MORE THAN 2200 HRS (ADJ.).

ZONE UNOCCUPIED OVERRIDE: A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO AN OCCUPIED MODE FOR AN ADJUSTABLE PERIOD OF TIME. AT THE EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE.

VARIABLE VOLUME TERMINAL UNIT - FLOW CONTROL: THE UNIT SHALL MAINTAIN ZONE SETPOINTS BY CONTROLLING THE AIRFLOW THROUGH ONE OF THE FOLLOWING:

OCCUPIED: WHEN ZONE TEMPERATURE IS GREATER THAN ITS COOLING SETPOINT, THE ZONE DAMPER SHALL MODULATE BETWEEN THE MINIMUM OCCUPIED AIRFLOW (ADJ.) AND THE MAXIMUM COOLING AIRFLOW (ADJ.) UNTIL THE ZONE IS SATISFIED.

UNOCCUPIED: WHEN THE ZONE IS UNOCCUPIED THE ZONE DAMPER SHALL CONTROL TO ITS MINIMUM UNOCCUPIED AIRFLOW (ADJ.).

ALARMS SHALL BE PROVIDED AS FOLLOWS: HIGH ZONE HUMIDITY: IF THE ZONE HUMIDITY IS GREATER THAN 70% (ADJ.), LOW ZONE HUMIDITY: IF THE ZONE HUMIDITY IS LESS THAN 35% (ADJ.).

THE HEATING SHALL BE ENABLED WHENEVER: THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT, AND THE SUPPLY FAN STATUS IS ON, AND THE DX COOLING IS NOT ACTIVE.

THE COOLING SHALL BE ENABLED WHENEVER: THE ZONE TEMPERATURE IS ABOVE COOLING SETPOINT, AND THE SUPPLY FAN STATUS IS ON, AND THE DX HEATING IS NOT ACTIVE.

THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A 15 MINUTE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A 15 MINUTE (ADJ.) MINIMUM RUNTIME.

THE HEATING SHALL BE ENABLED WHENEVER: THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT, AND THE SUPPLY FAN STATUS IS ON, AND THE DX COOLING IS NOT ACTIVE.

THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A 15 MINUTE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A 15 MINUTE (ADJ.) MINIMUM RUNTIME.

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THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A 15 MINUTE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A 15 MINUTE (ADJ.) MINIMUM RUNTIME.

THE HEATING SHALL BE ENABLED WHENEVER: THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT, AND THE SUPPLY FAN STATUS IS ON, AND THE DX COOLING IS NOT ACTIVE.

3A ELECTRIC REHEAT SHUT-OFF TERMINAL UNIT WITH LOCAL CONTROLS SCHEMATIC



RUN CONDITIONS - SCHEDULED: THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING MODES:

OCCUPIED MODE: THE UNIT SHALL MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINTS.

UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN THE UNOCCUPIED SPACE TEMPERATURE SETPOINTS.

ALARMS SHALL BE PROVIDED AS FOLLOWS: HIGH ZONE TEMP: IF THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.), LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.).

MINIMUM VENTILATION ON CARBON DIOXIDE (CO2) CONCENTRATION: WHEN IN THE OCCUPIED MODE, THE CONTROLLER SHALL MEASURE THE ZONE CO2 CONCENTRATION AT 5 MINUTE (ADJ.) INTERVALS.

THE ZONE DAMPER SHALL MODULATE OPEN TO INCREASE PRIMARY AIRFLOW FROM ROOFTOP UNIT WHEN CARBON DIOXIDE CONCENTRATION IS ABOVE 750 PPM (ADJ.) FOR MORE THAN 10 MINUTES (ADJ.).

ALARMS SHALL BE PROVIDED AS FOLLOWS: HIGH ZONE CARBON DIOXIDE CONCENTRATION: IF THE ZONE CO2 CONCENTRATION IS GREATER THAN 1250 PPM (ADJ.).

ZONE SETPOINT ADJUST: THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING AND COOLING SETPOINTS AT THE ZONE SENSOR.

ZONE OPTIMAL START: THE UNIT SHALL USE AN OPTIMAL START ALGORITHM FOR MORNING START-UP. THIS ALGORITHM SHALL MINIMIZE THE UNOCCUPIED WARM-UP OR COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD.

ALARMS SHALL BE PROVIDED AS FOLLOWS: FILTER CHANGE REQUIRED: FILTER HAS BEEN IN USE FOR MORE THAN 2200 HRS (ADJ.).

ZONE UNOCCUPIED OVERRIDE: A TIMED LOCAL OVERRIDE CONTROL SHALL ALLOW AN OCCUPANT TO OVERRIDE THE SCHEDULE AND PLACE THE UNIT INTO AN OCCUPIED MODE FOR AN ADJUSTABLE PERIOD OF TIME. AT THE EXPIRATION OF THIS TIME, CONTROL OF THE UNIT SHALL AUTOMATICALLY RETURN TO THE SCHEDULE.

VARIABLE VOLUME TERMINAL UNIT - FLOW CONTROL: THE UNIT SHALL MAINTAIN ZONE SETPOINTS BY CONTROLLING THE AIRFLOW THROUGH ONE OF THE FOLLOWING:

OCCUPIED: WHEN ZONE TEMPERATURE IS GREATER THAN ITS COOLING SETPOINT, THE ZONE DAMPER SHALL MODULATE BETWEEN THE MINIMUM OCCUPIED AIRFLOW (ADJ.) AND THE MAXIMUM COOLING AIRFLOW (ADJ.) UNTIL THE ZONE IS SATISFIED.

UNOCCUPIED: WHEN THE ZONE IS UNOCCUPIED THE ZONE DAMPER SHALL CONTROL TO ITS MINIMUM UNOCCUPIED AIRFLOW (ADJ.).

ALARMS SHALL BE PROVIDED AS FOLLOWS: HIGH ZONE HUMIDITY: IF THE ZONE HUMIDITY IS GREATER THAN 70% (ADJ.), LOW ZONE HUMIDITY: IF THE ZONE HUMIDITY IS LESS THAN 35% (ADJ.).

THE HEATING SHALL BE ENABLED WHENEVER: THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT, AND THE SUPPLY FAN STATUS IS ON, AND THE DX COOLING IS NOT ACTIVE.

THE COOLING SHALL BE ENABLED WHENEVER: THE ZONE TEMPERATURE IS ABOVE COOLING SETPOINT, AND THE SUPPLY FAN STATUS IS ON, AND THE DX HEATING IS NOT ACTIVE.

THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A 15 MINUTE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A 15 MINUTE (ADJ.) MINIMUM RUNTIME.

THE HEATING SHALL BE ENABLED WHENEVER: THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT, AND THE SUPPLY FAN STATUS IS ON, AND THE DX COOLING IS NOT ACTIVE.

THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A 15 MINUTE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A 15 MINUTE (ADJ.) MINIMUM RUNTIME.

THE HEATING SHALL BE ENABLED WHENEVER: THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT, AND THE SUPPLY FAN STATUS IS ON, AND THE DX COOLING IS NOT ACTIVE.

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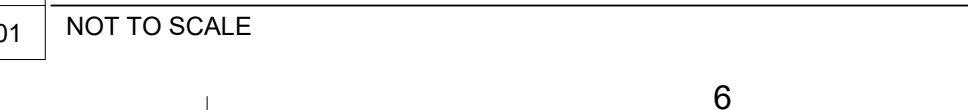
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THE HEATING SHALL BE ENABLED WHENEVER: THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT, AND THE SUPPLY FAN STATUS IS ON, AND THE DX COOLING IS NOT ACTIVE.

THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A 15 MINUTE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A 15 MINUTE (ADJ.) MINIMUM RUNTIME.

THE HEATING SHALL BE ENABLED WHENEVER: THE ZONE TEMPERATURE IS BELOW HEATING SETPOINT, AND THE SUPPLY FAN STATUS IS ON, AND THE DX COOLING IS NOT ACTIVE.

5A ELECTRIC REHEAT PARALLEL FAN POWERED TERMINAL UNIT WITH LOCAL CONTROLS SCHEMATIC



1A DUCTLESS MINISPLIT SYSTEM CONTROL SCHEMATIC



NOT TO SCALE

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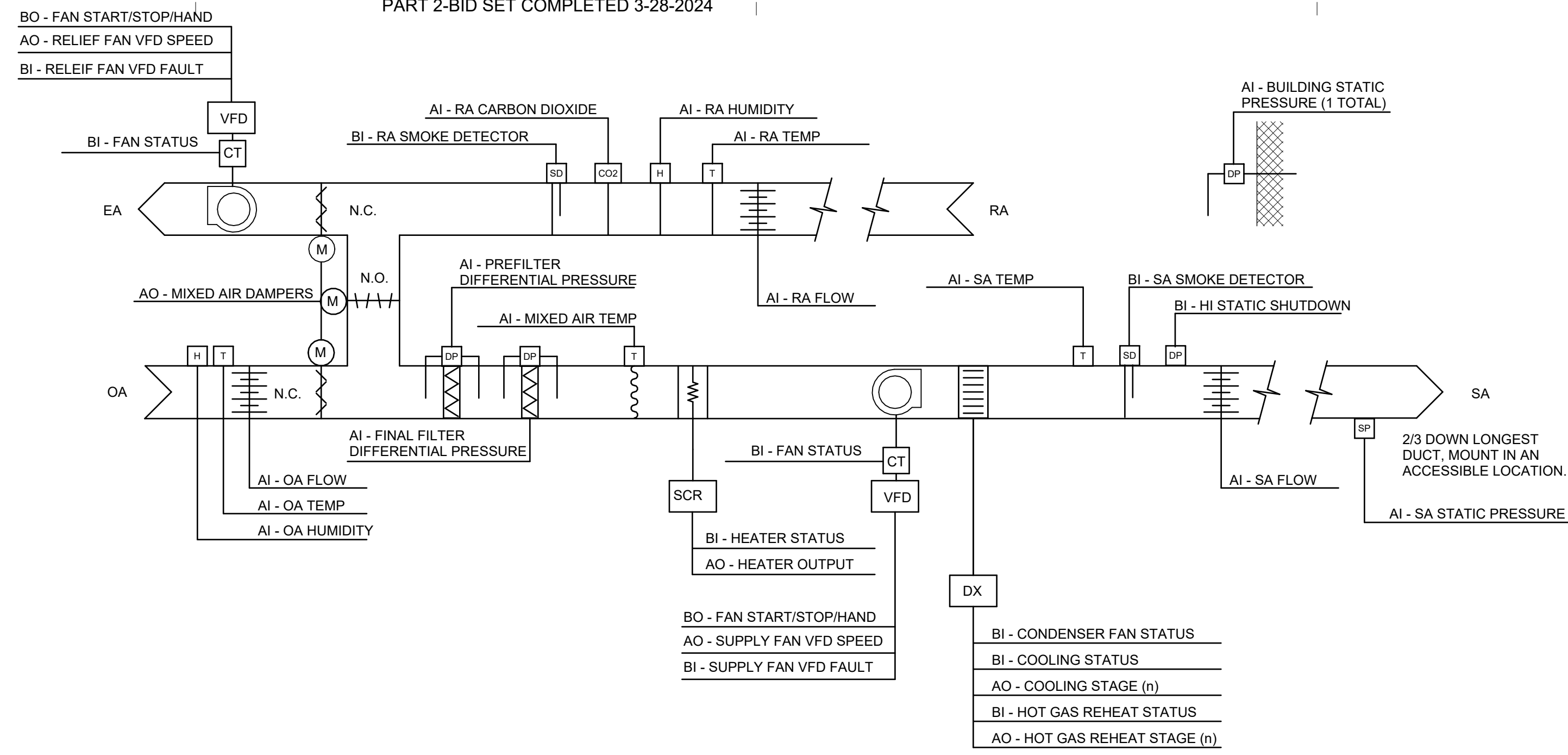
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PROJECT NO.: 514.18349.00 SHEET TITLE: MECHANICAL CONTROL DIAGRAMS

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RUN CONDITIONS - SCHEDULED:

THE UNIT SHALL RUN ACCORDING TO A USER DEFINED AND ADJUSTABLE SCHEDULES IN OCCUPIED/UNOCCUPIED MODES TO MAINTAIN THE TEMPERATURE SETPOINTS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH ZONE TEMP: IF THE ZONE TEMPERATURE IS GREATER THAN THE COOLING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.)
- LOW ZONE TEMP: IF THE ZONE TEMPERATURE IS LESS THAN THE HEATING SETPOINT BY A USER DEFINABLE AMOUNT (ADJ.)

ZONE OPTIMAL START:

THE UNIT SHALL USE AN OPTIMAL START ALGORITHM FOR MORNING START-UP. THIS ALGORITHM SHALL MINIMIZE THE UNOCCUPIED WARM-UP OR COOL-DOWN PERIOD WHILE STILL ACHIEVING COMFORT CONDITIONS BY THE START OF SCHEDULED OCCUPIED PERIOD.

THE AIR HANDLING UNIT SHALL POLL ALL THERMOSTATS CONNECTED TO THE ASSOCIATED TERMINAL UNITS AND AVERAGE THE RESULTING TEMPERATURE TO CALCULATE THE OPTIMAL START TEMPERATURE.

EMERGENCY SHUTDOWN:

THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING AN EMERGENCY SHUTDOWN SIGNAL.

SMOKE DETECTION:

THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A SUPPLY OR RETURN AIR SMOKE DETECTOR STATUS.

HIGH STATIC SHUTDOWN:

THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING AN HIGH STATIC SHUTDOWN SIGNAL.

DEMAND CONTROLLED VENTILATION:

THE UNIT SHALL MEASURE THE OUTSIDE AIRFLOW AND MODULATE THE MIXED AIR DAMPERS (OUTSIDE AIR, RECIRCULATED AIR, AND RELIEF AIR) TO MAINTAIN PROPER VENTILATION OF THE SPACES SERVED.

MAXIMUM AND MINIMUM VENTILATION RATES ARE LISTED ON EQUIPMENT SCHEDULES AND ARE CALCULATED IN ACCORDANCE WITH THE VENTILATION RATE PROCEDURES OF ASHRAE 62.1.

WHEN IN THE OCCUPIED MODE, THE CONTROLLER SHALL MEASURE THE ZONE CO2 CONCENTRATION AND RETURN AIR CO2 CONCENTRATIONS AT 5 MINUTE (ADJ.) INTERVALS.

THE UNIT SHALL OPERATE IN THE FOLLOWING VENTILATION MODES:

- MINIMALLY OCCUPIED: WHEN CARBON DIOXIDE CONCENTRATION IS MEASURED 600 PPM (ADJ.) OR LESS FOR MORE THAN 15 MINUTES (ADJ.), THE UNIT SHALL OPERATE AT MINIMUM VENTILATION.
- PARTIALLY OCCUPIED: WHEN CARBON DIOXIDE CONCENTRATION IS MEASURED BETWEEN 600 AND 1,250 PPM (ADJ.) OR MORE FOR MORE THAN 15 MINUTES (ADJ.), THE UNIT SHALL INCREASE THE OUTSIDE AIR LINEARLY FROM MINIMUM TO MAXIMUM.
- FULLY OCCUPIED: WHEN CARBON DIOXIDE CONCENTRATION IS MEASURED 1,250 PPM (ADJ.) OR MORE FOR MORE THAN 15 MINUTES (ADJ.), THE UNIT SHALL OPERATE AT MAXIMUM VENTILATION.

SUPPLY FAN:

THE SUPPLY FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES. TO PREVENT SHORT CYCLING, THE SUPPLY FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- SUPPLY FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- SUPPLY FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- SUPPLY FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.)

SUPPLY AIR DUCT STATIC PRESSURE CONTROL:

THE CONTROLLER SHALL MEASURE DUCT STATIC PRESSURE AND MODULATE THE SUPPLY FAN VFD SPEED TO MAINTAIN A DUCT STATIC PRESSURE SETPOINT. THE SPEED SHALL NOT DROP BELOW 30% (ADJ.) THE STATIC PRESSURE SETPOINT SHALL BE RESET BASED UPON THE POSITION OF THE ZONE DAMPERS. WITH A GOAL OF REDUCING THE STATIC PRESSURE UNTIL AT LEAST ONE ZONE DAMPER IS NEARLY WIDE OPEN.

- THE INITIAL DUCT STATIC PRESSURE SETPOINT SHALL BE 1.0 IN H2O (ADJ.)
- IF NO ZONE DAMPER IS NEARLY WIDE OPEN, THE SETPOINT SHALL INCREMENTALLY RESET DOWN TO A MINIMUM OF 0.75 IN H2O (ADJ.)
- AS ONE OR MORE DAMPERS NEARS THE WIDE OPEN POSITION, THE SETPOINT SHALL INCREMENTALLY RESET UP TO A MAXIMUM OF 1.5 IN H2O (ADJ.)

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH SUPPLY AIR STATIC PRESSURE: IF THE SUPPLY AIR STATIC PRESSURE IS 25% (ADJ.) GREATER THAN SETPOINT.
- LOW SUPPLY AIR STATIC PRESSURE: IF THE SUPPLY AIR STATIC PRESSURE IS 25% (ADJ.) LESS THAN SETPOINT.
- SUPPLY FAN VFD FAULT.

RELIEF FAN:

THE RELIEF FAN SHALL RUN WHENEVER THE SUPPLY FAN RUNS TO MAINTAIN POSITIVE BUILDING PRESSURIZATION.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- RELIEF FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- RELIEF FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- RELIEF FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.)

THE RELIEF FAN VFD SHALL MODULATE IN UNISON WITH THE SUPPLY FAN VFD. RELIEF AIRFLOW SETPOINT SHALL BE 100% (ADJ.) OF THE SUPPLY AIRFLOW MINUS 1,000 CFM (ADJ.). THIS OFFSET VALUE SHALL BE SET DURING TESTING AND BALANCING TO MAINTAIN BUILDING POSITIVE PRESSURIZATION APPROXIMATELY + 0.025 INCHES H2O. THE RELIEF FAN VFD SPEED SHALL NOT DROP BELOW 20% (ADJ.)

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH RELIEF AIRFLOW: IF THE RETURN AIRFLOW IS AN ADJUSTABLE PERCENTAGE GREATER THAN SETPOINT.
- LOW RELIEF AIRFLOW: IF THE RETURN AIRFLOW IS AN ADJUSTABLE PERCENTAGE LESS THAN SETPOINT.

BUILDING STATIC PRESSURE MONITORING:

THE CONTROLLER SHALL MEASURE BUILDING STATIC PRESSURE.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH BUILDING STATIC PRESSURE: IF THE BUILDING AIR STATIC PRESSURE IS 25% (ADJ.) GREATER THAN SETPOINT.
- LOW BUILDING STATIC PRESSURE: IF THE BUILDING AIR STATIC PRESSURE IS 25% (ADJ.) LESS THAN SETPOINT.

SUPPLY AIR TEMPERATURE SETPOINT - OPTIMIZED:

THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE AND SHALL MAINTAIN A SUPPLY AIR TEMPERATURE SETPOINT RESET BASED ON ZONE COOLING AND HEATING REQUIREMENTS.

- THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE RESET FOR COOLING BASED ON ZONE COOLING REQUIREMENTS AS FOLLOWS:
 - THE INITIAL SUPPLY AIR TEMPERATURE SETPOINT SHALL BE 55°F (ADJ.)
 - AS COOLING DEMAND INCREASES, THE SETPOINT SHALL INCREMENTALLY RESET DOWN TO A MINIMUM OF 53°F (ADJ.)
 - AS COOLING DEMAND DECREASES, THE SETPOINT SHALL INCREMENTALLY RESET UP TO A MAXIMUM OF 57°F (ADJ.)

- IF MORE ZONES NEED HEATING THAN COOLING, THEN THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE RESET FOR HEATING AS FOLLOWS:
 - THE INITIAL SUPPLY AIR TEMPERATURE SETPOINT SHALL BE 60°F (ADJ.)
 - AS HEATING DEMAND INCREASES, THE SETPOINT SHALL INCREMENTALLY RESET UP TO A MAXIMUM OF 63°F (ADJ.)
 - AS HEATING DEMAND DECREASES, THE SETPOINT SHALL INCREMENTALLY RESET DOWN TO A MINIMUM OF 67°F (ADJ.)

DX COOLING STAGES:

THE CONTROLLER SHALL MEASURE THE DISCHARGE AIR TEMPERATURE AND STAGE THE COOLING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A 15 MINUTE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A 15 MINUTE (ADJ.) MINIMUM RUNTIME.

THE COOLING SHALL BE ENABLED WHENEVER:

- THERE IS A DEMAND FOR COOLING
- AND THE ECONOMIZER IS DISABLED OR FULLY OPEN.
- AND THE SUPPLY FAN STATUS IS ON.
- AND THE HEATING IS NOT ACTIVE

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5°F (ADJ.) GREATER THAN SETPOINT.
- LOW SUPPLY AIR TEMPERATURE ALARM: THE CONTROLLER SHALL ALARM IF THE SUPPLY AIR TEMPERATURE IS LESS THAN 45°F (ADJ.)

SCR ELECTRIC HEATING:

THE CONTROLLER SHALL MEASURE THE DISCHARGE AIR TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS HEATING SETPOINT. TO PREVENT SHORT CYCLING, THE HEATER SHALL HAVE A 15 MINUTE (ADJ.) MINIMUM RUNTIME.

THE HEATING SHALL BE ENABLED WHENEVER:

- THERE IS A DEMAND FOR HEATING.
- AND THE SUPPLY FAN STATUS IS ON.

SCR ELECTRIC HEATING - HIGH DISCHARGE AIR TEMPERATURE LIMIT:

THE CONTROLLER SHALL MEASURE THE DISCHARGE AIR TEMPERATURE AND, ON RISING TEMPERATURE, LIMIT THE HEATING AS FOLLOWS:

- AS THE DISCHARGE AIR TEMPERATURE RISES FROM 80°F TO 75°F (ADJ.)
- THE CONTROLLER SHALL LIMIT THE HEATING OUTPUT FROM 100% TO 0% (ADJ.)

ECONOMIZER:

THE ECONOMIZER SHALL MEASURE THE MIXED AIR CONDITIONS AND MODULATE THE ECONOMIZER DAMPERS IN SEQUENCE TO MAINTAIN A SETPOINT 2°F (ADJ.) LESS THAN THE COOLING SUPPLY AIR TEMPERATURE SETPOINT. THE MIXED AIR DAMPERS (OUTSIDE AIR, RECIRCULATED AIR, AND RELIEF AIR) SHALL MODULATE TO MAINTAIN THE OUTSIDE AIRFLOW WHENEVER OCCUPIED.

THE ECONOMIZER SHALL BE ENABLED WHENEVER:

- OUTSIDE AIR TEMPERATURE IS LESS THAN 65°F (ADJ.)
- AND THE OUTSIDE AIR ENTHALPY IS LESS THAN 22 BTU/LB (ADJ.)
- AND THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE.
- AND THE OUTSIDE AIR ENTHALPY IS LESS THAN THE RETURN AIR ENTHALPY.
- AND THE SUPPLY FAN STATUS IS ON.

THE ECONOMIZER SHALL CLOSE WHENEVER:

- MIXED AIR TEMPERATURE DROPS FROM 45°F TO 40°F (ADJ.)
- OR ON LOSS OF SUPPLY FAN STATUS.
- OR FREEZE/STAT IS ON.

THE OUTSIDE AND EXHAUST AIR DAMPERS SHALL CLOSE AND THE RETURN AIR DAMPER SHALL OPEN WHEN THE UNIT IS OFF. IF OPTIMAL START UP IS AVAILABLE, THE MIXED AIR DAMPER SHALL OPERATE AS DESCRIBED IN THE OCCUPIED MODE EXCEPT THAT THE OUTSIDE AIR DAMPER AND RELIEF AIR DAMPER SHALL MODULATE TO FULLY CLOSED.

MINIMUM OUTSIDE AIR VENTILATION - CARBON DIOXIDE (CO2) CONTROL: WHEN IN THE OCCUPIED MODE, THE CONTROLLER SHALL MEASURE THE RETURN AIR CO2 LEVELS AND MODULATE THE OUTSIDE AIR DAMPERS OPEN ON RISING CO2 CONCENTRATIONS, OVERRIDING NORMAL DAMPER OPERATION TO MAINTAIN A CO2 SETPOINT OF 750 PPM (ADJ.)

DEHUMIDIFICATION:

THE CONTROLLER SHALL MEASURE THE RETURN AIR HUMIDITY AND OVERRIDE THE COOLING SEQUENCE TO MAINTAIN A MAXIMUM RETURN AIR HUMIDITY SETPOINT OF 60% RH (ADJ.). DURING THIS DEHUMIDIFICATION MODE, THE SUPPLY AIR TEMPERATURE SHALL DROP 0.5°F (ADJ.) EVERY 5 MINUTES (ADJ.) TO A MINIMUM SUPPLY AIR TEMPERATURE SETPOINT OF 53°F (ADJ.) UNTIL THE MAXIMUM RETURN AIR HUMIDITY SETPOINT IS ACHIEVED FOR A MINIMUM OF 10 MINUTES (ADJ.)

FILTER HOURS:

THE CONTROLLER SHALL MONITOR THE FAN RUNTIME.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- PREFILTER CHANGE REQUIRED: FILTER HAS BEEN IN USE FOR MORE THAN 2200 HRS (ADJ.)
- FINAL FILTER CHANGE REQUIRED: FILTER HAS BEEN IN USE FOR MORE THAN 2200 HRS (ADJ.)

MIXED AIR TEMPERATURE:

THE CONTROLLER SHALL MONITOR THE MIXED AIR TEMPERATURE AND USE AS REQUIRED FOR ECONOMIZER CONTROL OR PREHEATING CONTROL.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH MIXED AIR TEMP: IF THE MIXED AIR TEMPERATURE IS GREATER THAN 90°F (ADJ.)
- LOW MIXED AIR TEMP: IF THE MIXED AIR TEMPERATURE IS LESS THAN 45°F (ADJ.)

RETURN AIR CARBON DIOXIDE (CO2) CONCENTRATION MONITORING:

THE CONTROLLER SHALL MEASURE THE RETURN AIR CO2 CONCENTRATION.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH RETURN AIR CARBON DIOXIDE CONCENTRATION: IF THE RETURN AIR CO2 CONCENTRATION IS GREATER THAN 1000 PPM (ADJ.) WHEN IN THE OCCUPIED MODE.

RETURN AIR HUMIDITY:

THE CONTROLLER SHALL MONITOR THE RETURN AIR HUMIDITY.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH RETURN AIR HUMIDITY: IF THE RETURN AIR HUMIDITY IS GREATER THAN 70% (ADJ.)
- LOW RETURN AIR HUMIDITY: IF THE RETURN AIR HUMIDITY IS LESS THAN 35% (ADJ.)

RETURN AIR TEMPERATURE:

THE CONTROLLER SHALL MONITOR THE RETURN AIR TEMPERATURE.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS GREATER THAN 90°F (ADJ.)
- LOW RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS LESS THAN 45°F (ADJ.)

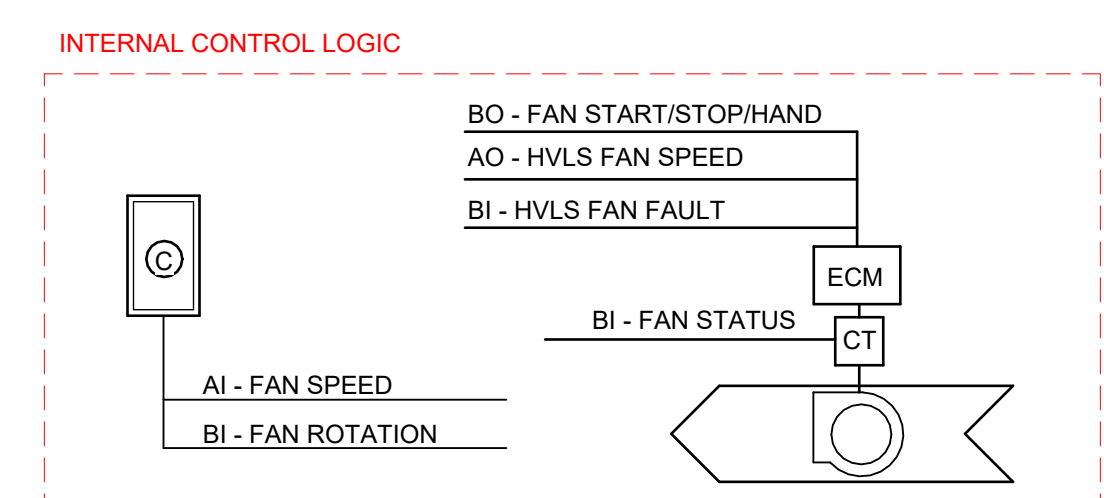
SUPPLY AIR TEMPERATURE:

THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE.

ALARMS SHALL BE PROVIDED AS FOLLOWS:

- HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.)
- LOW SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS LESS THAN 45°F (ADJ.)

1 ROOFTOP UNIT CONTROL DIAGRAM
M802 NOT TO SCALE



RUN CONDITIONS - CONTINUOUS:
THE FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS TO MAINTAIN SPACE COMFORT.

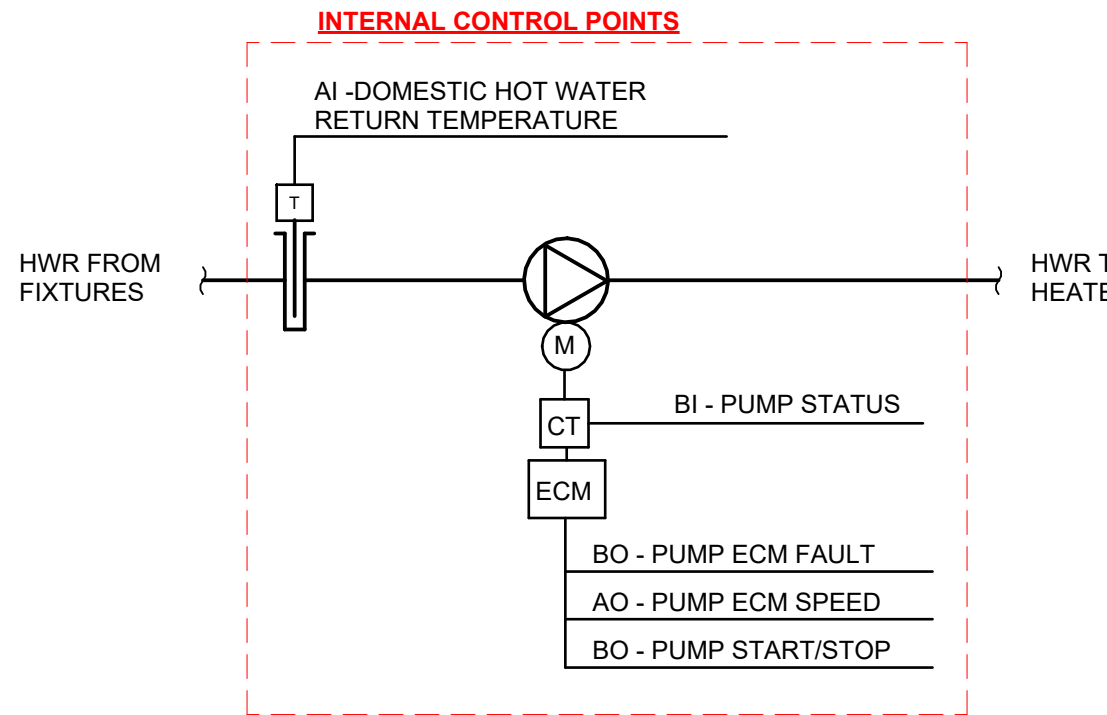
FAN:
THE FAN SHALL RUN WHEN THE CONTROL DEVICE IS ENABLED, UNLESS SHUTDOWN ON SAFETIES.

IN COOLING MODE, THE FAN SHALL OPERATE TO FORCE AIR DOWN TOWARDS OCCUPIED SPACE. IN HEATING MODE, THE FAN SHALL OPERATE TO PREVENT STRATIFICATION OF HEAT.

EMERGENCY SHUTDOWN:
THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING AN EMERGENCY SHUTDOWN SIGNAL.

FAN STATUS:
THE CONTROLLER SHALL MONITOR THE FAN STATUS.

- ALARMS SHALL BE PROVIDED AS FOLLOWS:
- FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
 - FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
 - FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.)



DOMESTIC HOT WATER RECIRCULATION PUMP - RUN CONDITIONS:
THE PUMP SHALL BE ENVIRO-CONTROLLED BASED ON MANUFACTURER'S INTERNAL CONTROL LOGIC TO MAINTAIN DOMESTIC HOT WATER RETURN TEMPERATURE. THE DOMESTIC COLD WATER PRESSURE SETPOINT SHALL BE SET DURING TESTING AND BALANCING FOR PROPER OPERATION OF PLUMBING FIXTURES AND EQUIPMENT.

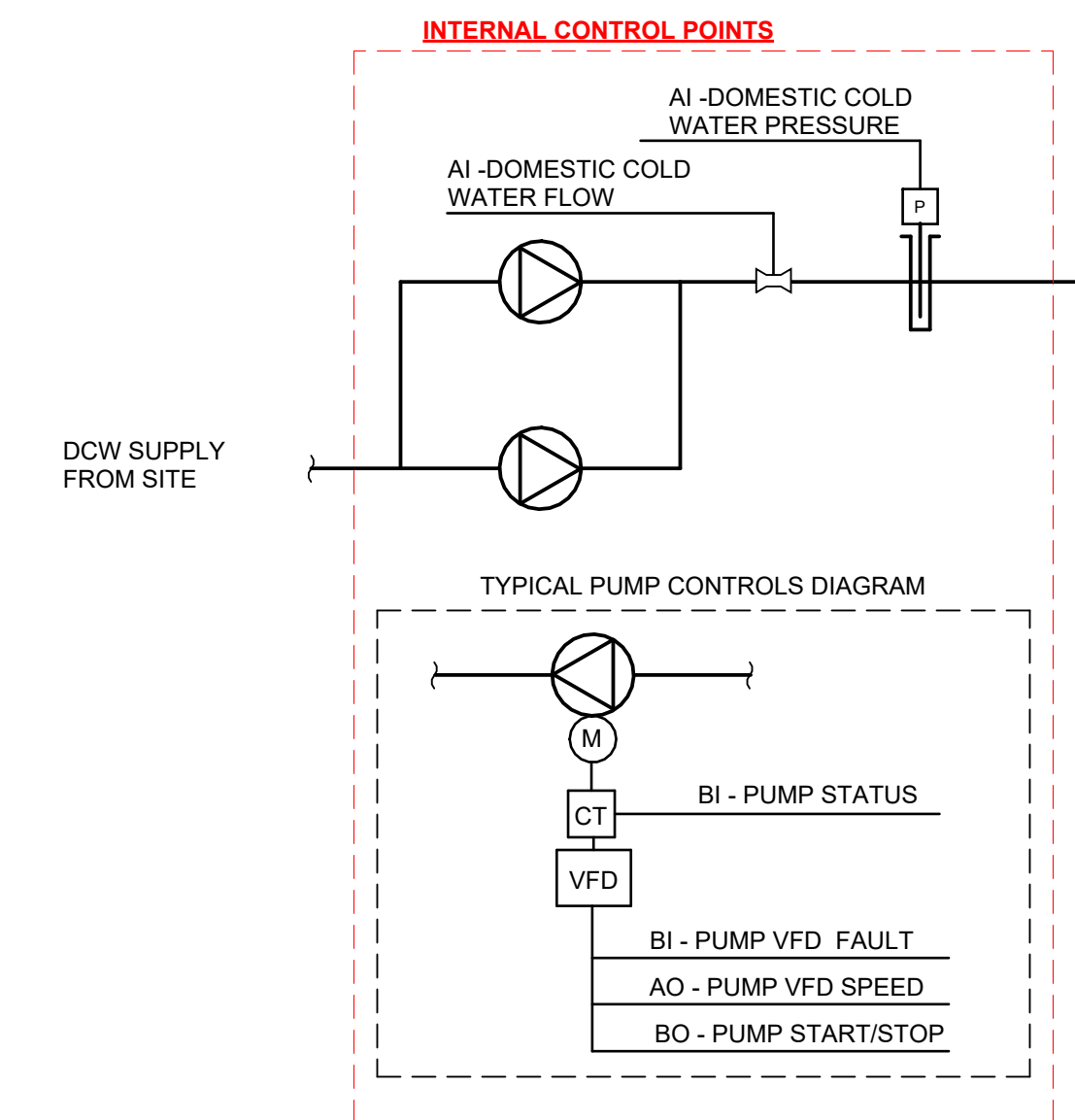
ALARMS SHALL BE PROVIDED FOR EACH PUMP AS FOLLOWS:

- FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- RUNNING IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT.
- VFD FAULT.

EMERGENCY SHUTDOWN:
THE BOOSTER PUMP SHALL SHUT DOWN AND AN ALARM GENERATED UPON RECEIVING AN EMERGENCY SHUTDOWN SIGNAL STATUS.

DOMESTIC HOT WATER RETURN MONITORING:
THE BUILDING CONTROL SYSTEM SHALL MONITOR AND TREND THE RECIRCULATION PUMP STATUS AND RUNTIME HOURS.

4A DOMESTIC HOT WATER RECIRCULATION PUMP CONTROL SCHEMATIC
M802 NOT TO SCALE



DOMESTIC WATER BOOSTER PUMP - RUN CONDITIONS:
THE BOOSTER PUMP SHALL BE ENABLED TO RUN CONTINUOUSLY BASED ON MANUFACTURER'S INTERNAL CONTROL LOGIC TO MAINTAIN ADEQUATE FLOW AND PRESSURE OF DOMESTIC WATER TO THE BUILDING. THE DOMESTIC COLD WATER PRESSURE SETPOINT SHALL BE SET DURING TESTING AND BALANCING FOR PROPER OPERATION OF PLUMBING FIXTURES AND EQUIPMENT AND SHALL BE ADJUSTABLE THROUGH THE PUMP CONTROLLER. THE BUILDING AUTOMATION CONTROL SYSTEM SHALL MONITOR THE DOMESTIC COLD WATER PRESSURE SETPOINT.

ALARMS SHALL BE PROVIDED FOR EACH PUMP AS FOLLOWS:

- FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- RUNNING IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT.
- VFD FAULT.

EMERGENCY SHUTDOWN:
THE BOOSTER PUMP SHALL SHUT DOWN AND AN ALARM GENERATED UPON RECEIVING AN EMERGENCY SHUTDOWN SIGNAL STATUS.

BOOSTER PUMP MONITORING:
THE BUILDING CONTROL SYSTEM SHALL MONITOR AND TREND EACH PUMP STATUS AND RUNTIME HOURS.

DOMESTIC WATER FLOW MONITORING:
THE BUILDING CONTROL SYSTEM SHALL MONITOR AND TREND DOMESTIC WATER FLOW.

DOMESTIC WATER PRESSURE MONITORING:
THE BUILDING CONTROL SYSTEM SHALL MONITOR AND TREND DOMESTIC WATER PRESSURE.

- ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH DOMESTIC WATER PRESSURE: IF THE DOMESTIC WATER PRESSURE IS 25% (ADJ.) GREATER THAN SETPOINT.
 - LOW DOMESTIC WATER PRESSURE: IF THE DOMESTIC WATER PRESSURE IS 25% (ADJ.) LESS THAN SETPOINT.

5A DOMESTIC WATER BOOSTER PUMP CONTROL SCHEMATIC
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2A HVLS FAN CONTROL EXHAUST FAN
M802 NOT TO SCALE

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ISSUE FOR

BID SET

ISSUE DATE

03.28.2024

REVISIONS

NO.	REASON	DATE

PROJECT TEAM

PRINCIPAL IN CHARGE
Jerry Guerrier, AIA

PROJECT MANAGER
Charlotte Hagen, AIA

DESIGN TEAM
M CRUBBS

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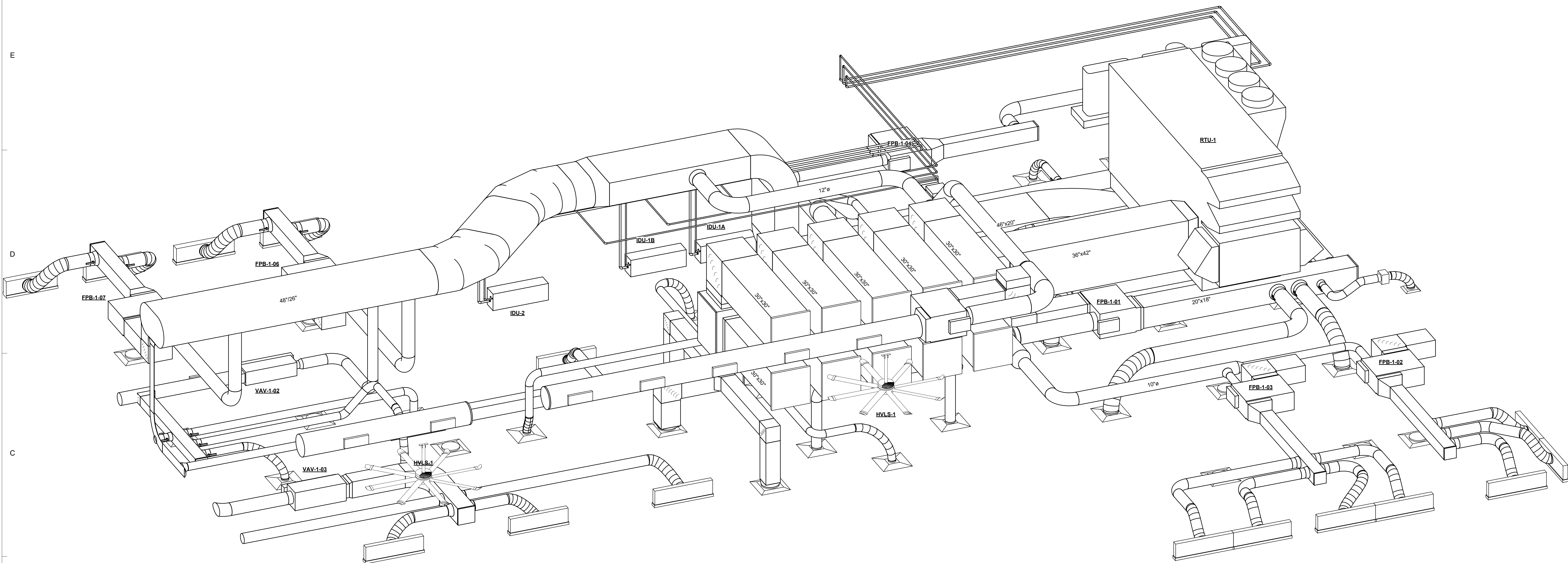
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PROJECT NO.
514.18349.00

SHEET TITLE
MECHANICAL CONTROL DIAGRAMS

SHEET NUMBER
M802

F
E
D
C
B
A



1B MECHANICAL RISER DIAGRAM - CAFE AND BACK OF HOUSE
M901 NOT TO SCALE

LITTLE
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SHEET TITLE
3D DIAGRAMS

SHEET NUMBER
M901

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GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NFPA 70 - 2020 EDITION), THE NATIONAL FIRE ALARM CODE (NFPA 72), THE NATIONAL LIFE SAFETY CODE (NFPA 101), THE AMERICANS WITH DISABILITIES ACT (ADA), ALL OTHER APPLICABLE LOCAL, STATE, AND NATIONAL CODES, AND ALL AUTHORITIES HAVING JURISDICTION.
- CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY SUCH FEES AS MAY BE NECESSARY FOR INSPECTIONS, TESTS, AND OTHER SERVICES NEEDED FOR THE COMPLETION OF WORK.
- IT IS THE INTENT OF THESE DRAWINGS AND OTHER RELATED DOCUMENTS TO PROVIDE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND OTHER SERVICES AS MAY BE NECESSARY TO ACHIEVE THIS PRODUCT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES IN THE PLANS AND SPECIFICATIONS THAT WILL AFFECT THE WORK, PRIOR TO SUBMISSION OF THE PRICE.
- ALL MATERIAL SHALL BE NEW AND BEAR THE UL LABEL INDICATING THE LISTING FOR ITS INSTALLED APPLICATION.
- CONTRACTOR SHALL UTILIZE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF LIGHTING FIXTURES AND ALL OTHER LIGHTING/ELECTRICAL/SPECIAL SYSTEMS CEILING DEVICES.
- CONTRACTOR SHALL UTILIZE MECHANICAL/PLUMBING PLANS FOR EXACT LOCATIONS OF ALL MECHANICAL/PLUMBING EQUIPMENT.
- ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE DRAWINGS EXCEPT WHERE DIMENSIONS ARE SHOWN.
- CONTRACTOR TO CONSULT PLANS FOR ALL OTHER TRADES FOR COORDINATION AND FOR RELATED AND ADJOINING WORK.
- CONTRACTOR TO CONSULT ARCHITECTURAL AND STRUCTURAL PLANS AND DETAILS FOR CONSTRUCTION TYPE, HEADROOM, CEILINGS, FINISHES, ETC. CONTRACTOR TO COORDINATE ALL CONDUITS AND ELECTRICAL DEVICES/BOXES WITH ARCHITECT AS RELATED TO WALL CONSTRUCTION TYPE PRIOR TO INSTALLATION.
- ALL CONDUCTORS IN ELECTRICAL SYSTEM SHALL BE NO. 12 AWG COPPER MINIMUM UNLESS SPECIFICALLY LABELED OTHERWISE OR AS REQUIRED BY SPECIFICATIONS OR CODE. THE CORRECT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS. ONLY THOSE WHERE CLARIFICATION IS NECESSARY. THE CONTRACTOR SHALL PROVIDE ALL WIRES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM.
- ALL EMPTY CONDUIT RUNS IN EXCESS OF 10 FEET SHALL BE PROVIDED WITH A PULL STRING OR FISH TAPE.
- RACEWAYS SHALL BE CONCEALED IN FINISHED SPACES AND AS PER SPECS. WHERE APPLICABLE, EXPOSED CONDUITS MOUNTED TO STRUCTURE SHALL BE RUN AS INCONSPICUOUS AS POSSIBLE AND SHALL BE PAINTED TO MATCH SURFACE TO WHICH THEY ARE MOUNTED. CONDUITS SHALL RUN PARALLEL TO BUILDING LINES. ALL EXPOSED JUNCTION BOXES SHALL BE WEATHERPROOF, WITH NO KNOCKOUT.
- ALL DEVICES INDICATED AS REQUIRING AN ISOLATED GROUND CONNECTION SHALL BE SERVED VIA A BRANCH CIRCUIT CONTAINING AN INSULATED ISOLATED GROUND CONDUCTOR IN ADDITION TO AN INSULATED EQUIPMENT GROUNDING CONDUCTOR. THE ISOLATED GROUND CONDUCTOR SHALL BE CONNECTED TO THE ISOLATED GROUND BUS IN THE PANELBOARD SERVING THE DEVICE.
- PROVIDE "LOCKING" TYPE DEVICES ON ALL CIRCUIT BREAKERS THAT WILL SERVE EMERGENCY LIGHTING, SIGNS, FIRE ALARM SYSTEMS, AND SECURITY SYSTEMS.
- PROVIDE COMPLIANCE WITH ANSI A117.1 FOR ADA REQUIREMENTS.
- CONTRACTOR SHALL INCREASE WIRE SIZE AS REQUIRED TO MAINTAIN A 5-PERCENT WORST CASE VOLTAGE DROP, FROM SERVICE ENTRANCE TO FURTHEST DEVICE.
- EACH INDIVIDUAL BRANCH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL UNLESS INDICATED OTHERWISE. WHEN MULTI-WIRE BRANCH CIRCUITS ARE SPECIFIED TO BE INSTALLED, PROVIDE MULTI-POLE CIRCUIT BREAKERS AS REQUIRED BY NEC 210.4(B). PROVIDE A #10 NEUTRAL CONDUCTOR FOR ALL MULTI-WIRE RECEPTACLE BRANCH CIRCUITS.
- POWER RATINGS INDICATED ON DRAWINGS MAY DIFFER FROM THE ACTUAL EQUIPMENT FURNISHED. IF FURNISHED EQUIPMENT DIFFERS FROM RATINGS ON THE DRAWINGS, CONTRACTOR SHALL NOTIFY ENGINEER FOR APPROPRIATE ACTION TO BE TAKEN.
- HORSEPOWER RATINGS INDICATED ON DRAWINGS MAY DIFFER FROM THE ACTUAL EQUIPMENT FURNISHED. IF FURNISHED EQUIPMENT DIFFERS FROM RATINGS ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY ENGINEER FOR APPROPRIATE ACTION TO BE TAKEN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SIZING OF ALL MOTOR OVERLOAD DEVICES IN STARTERS, BASED ON ACTUAL NAMEPLATE RATINGS ON THE MOTORS BEING INSTALLED.
- CONTRACTOR SHALL NOTE UL LABELS ON PACKAGE-TYPE MECHANICAL EQUIPMENT. IF UL LABEL ON MECHANICAL EQUIPMENT CALLS FOR THE OVERCURRENT PROTECTIVE DEVICE TO BE FUSES, THE CONTRACTOR SHALL PROVIDE A FUSED DISCONNECT SWITCH WITH PROPERLY SIZED FUSES AT THE SWITCH LOCATION INDICATED ON THE DRAWINGS.
- CONTRACTOR SHALL VERIFY WIRE SIZES, FUSE RATINGS, AND CIRCUIT BREAKER RATINGS FOR ALL HVAC EQUIPMENT, AND SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES AFFECTING THE WORK, PRIOR TO PROCEEDING.
- ALL ELECTRIC DRINKING FOUNTAINS SHALL BE PROTECTED WITH GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION. PROVIDE GFCI TYPE CIRCUIT BREAKERS FEEDING ELECTRIC DRINKING FOUNTAINS (EWC).
- ALL EXTERIOR RECEPTACLES SHALL BE LISTED WEATHER-RESISTANT TYPE, BE GFI PROTECTED AND HAVE AN ENCLOSURE/COVERPLATE THAT IS WEATHERPROOF (WITH THE ATTACHMENT PLUG CAP INSERTED OR REMOVED). OUTLET BOX HOOD, IF INSTALLED SHALL BE EXTRA DUTY RATED, REFER TO SPECIFICATIONS.
- ALL DEVICES INCLUDING LIGHT SWITCH BOXES, ELECTRICAL OUTLET BOXES, AND FIRE ALARM PULL STATIONS) SHALL NOT BE RECESSED INTO THE OUTER MEMBRANE OF EXIT STAIR ENCLOSURES. LOCATE THESE DEVICES AS REQUIRED. THERE SHALL BE NO PENETRATIONS INTO AND OPENINGS THROUGH AN EXIT ENCLOSURE ASSEMBLY PER NFPA 101: 7.1.3.2.(19).
- ALL SINGLE-PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 50 AMPERES OR LESS AND THREE-PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 100 AMPERES OR LESS INSTALLED IN THE FOLLOWING LOCATIONS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL: BATHROOMS, KITCHENS, ROOFTOPS, SINKS (INSTALLED WITHIN 6FT FROM THE TOP INSIDE EDGE OF BOWL OF THE SINK), INDOOR WET LOCATIONS, LAUNDRY ROOM AREAS, CRAWL SPACES, WITHIN 6' OF EDGE OF BATH/UB/SHOWER STALLS, AND WITHIN AREAS WHERE EQUIPMENT REQUIRES SERVICING (ELECTRICAL ROOMS, MECHANICAL ROOMS, ETC.).

ABBREVIATIONS NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

A	AMPERES	LV	LOW VOLTAGE
AC	ALTERNATING CURRENT OR ABOVE COUNTER	MATV	MASTER ANTENNA TELEVISION MECHANICAL CONTRACTOR
AE	ARCHITECT/ENGINEER	MCB	MAIN CIRCUIT BREAKER
AF	AMPERE FRAME	MCC	MOTOR CONTROL CENTER
AFF	ABOVE FINISHED FLOOR	MDF	MAIN DISTRIBUTION PANEL
AFG	ABOVE FINISHED GRADE	MDS	MAIN DISTRIBUTION SWITCHBOARD
AHU	AUTHORITY HAVING JURISDICTION	MLO	MAIN LUGS ONLY
AHU	AIR HANDLING UNIT	MH	MANHOLE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTES, INC.	MSP	MOTOR STARTER PANEL
AT	AMPERE TRIP	MT	MOUNT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MTS	MANUAL TRANSFER SWITCH
AV	AUTOMATIC TRANSFER SWITCH	MHT	MOUNTING HEIGHT
ATS	AUTOMATIC TRANSFER SWITCH	MV	MEDIUM VOLTAGE
AWG	AMERICAN WIRE GAUGE	MW	MICROWAVE
BAS	BUILDING AUTOMATION SYSTEM	N	NEUTRAL
BC	BARE COPPER	NC	NORMALLY CLOSED
BPS	BOLTED PRESSURE SWITCH	NEC	NATIONAL ELECTRICAL CODE
C	CONDUIT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CB	CIRCUIT BREAKER	NIC	NOT IN CONTRACT
CBM	CERTIFIED BALLAST MANUFACTURERS	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CATV	COMMUNITY ANTENNA TELEVISION	NL	NIGHT LIGHT
CCTV	CLOSED CIRCUIT TELEVISION	NO	NORMALLY OPEN
cd	CANDELA RATING	NTS	NOT TO SCALE
cf	COMPACT FLUORESCENT CIRCUIT	PA	PUBLIC ADDRESS
CLG	CEILING	PB	PULLBOX
CT	CIRCUIT TRANSFORMER	PH	PHASE
CU	COPPER	P	POLE
DB	DIRECT BURIAL	PNL	PANELBOARD
DBA	DECIBEL LEVEL	PT	POTENTIAL TRANSFORMER
DC	DIRECT CURRENT	PWR	POWER
DISP	GARBAGE DISPOSAL	Q	QUARTS RESTRIKE LAMP
DN	DOWN	Q	QUARTS RESTRIKE LAMP
DWG	DRAWING	REC	RECEPTACLE
E.C.	ELECTRICAL CONTRACTOR	REF	REFRIGERATOR
EC	EMPTY CONDUIT	RL	RELOCATE EXISTING
EF	EXHAUST FAN	RM	ROOM
EG	EQUIPMENT GROUND	RMC	RIGID METAL CONDUIT
ELBU	EMERGENCY LIGHTING BATTERY UNIT	RS	RAPID START
EM	EMERGENCY	RV	REMOVE EXISTING
EMR	EQUIPMENT MANUFACTURER REQUIREMENT	SA	SURGE ARRESTOR
EMT	ELECTRIC METALLIC TUBING	SN	SOLID NEUTRAL
ETR	EXISTING TO REMAIN	SPD	SURGE PROTECTION DEVICE
EUH	ELECTRIC UNIT HEATER	SS	SAFETY SWITCH
EWC	ELECTRIC WATER COOLER	SW	SWITCH
EX	EXISTING	SWBD	SWITCHBOARD
F	FUSE	SWR	SWITCHGEAR
FA	FIRE ALARM	TB	TELEPHONE TERMINAL BOARD
FAAP	FIRE ALARM ANNUNCIATOR PANEL	TT	TELEPHONE TERMINAL CABINET
FACP	FIRE ALARM CONTROL PANEL	TEL	TELEPHONE
FAN	FAN COIL UNIT	TV	TELEVISION
FDAS	FIRE DETECTION ALARM SYSTEM	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
FLUOR	FLUORESCENT	UC	UNDER COUNTER
FPXAV	FAN POWERED VARIABLE AIR VOLUME BOX	UH	UNIT HEATER
FPN	FUSE PER NAMEPLATE	UL	UNDERWRITERS' LABORATORIES, INC.
GC	GENERAL CONTRACTOR	UN	UNLESS OTHERWISE NOTED
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UN	UNLESS OTHERWISE NOTED
GFR	GROUND FAULT RELAY	UPS	UNINTERRUPTIBLE POWER SUPPLY
G, GND	GROUND	V	VOLTS
HOA	HAND OFF AUTOMATIC	VP	VAPOR PROOF
HP	HORSEPOWER	VAV	VARIABLE AIR VOLUME BOX
HH	HERTZ	VFD	VARIABLE FREQUENCY DRIVE
IG	ISOLATED GROUND	W	WIRE, WATTS
IMC	INTERMEDIATE METAL CONDUIT	WAP	WIRELESS ACCESS POINT
IB	JUNCTION BOX	WH	WATER HEATER
KCMIL	THOUSAND CIRCULAR MILS	WP	WEATHERPROOF
KW	KILOWATT	XFMR	TRANSFORMER
KV	KILO VOLT		
KVA	KILO VOLT-AMPERE		
L	LOCKING		
LCP	LIGHTING CONTROL PANEL		

ENERGY CODE

2018 Appendix B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS ELECTRICAL DESIGN & SUMMARY

- Electrical Systems and Equipment**
- METHOD OF COMPLIANCE: No Change to Existing Systems Prescriptive (NCECC 2018) Performance (NCECC 2018) Prescriptive (ASHRAE 90.1-2013) Performance (ASHRAE 90.1-2013)

Lighting Schedule:

Fixture Type:	REFER TO LIGHTING FIXTURE SCHEDULE
Lamp Type Required:	REFER TO LIGHTING FIXTURE SCHEDULE
Number of Lamps:	REFER TO LIGHTING FIXTURE SCHEDULE
Ballast Type Used:	REFER TO LIGHTING FIXTURE SCHEDULE
Number of Ballasts:	REFER TO LIGHTING FIXTURE SCHEDULE
Total Watts / Fixture:	REFER TO LIGHTING FIXTURE SCHEDULE

Allowable Lighting Power: Whole Building Method Space by Space Method

INTERIOR LIGHTING	Allowed Lighting Power:	23730 W
	Designed Lighting Power:	11190 W
	Difference:	12540 W
EXTERIOR LIGHTING	Allowed Lighting Power:	7706 W
	Designed Lighting Power:	680 W
	Difference:	7026 W

Additional Efficiency Package Options:

FOR 2018 NCECC COMPLIANCE PATHS. NOT REQUIRED FOR ASHRAE 90.1 COMPLIANCE PATHS.

- C406.2 More Efficient HVAC Equipment Performance
- C406.3 Reduced Lighting Power Density
- C406.4 Enhanced Digital Lighting Controls
- C406.5 On-Site Renewable Energy
- C406.6 Dedicated Outside Air System
- C406.7 Reduced Energy Use in Service Water Heating
- Not Applicable

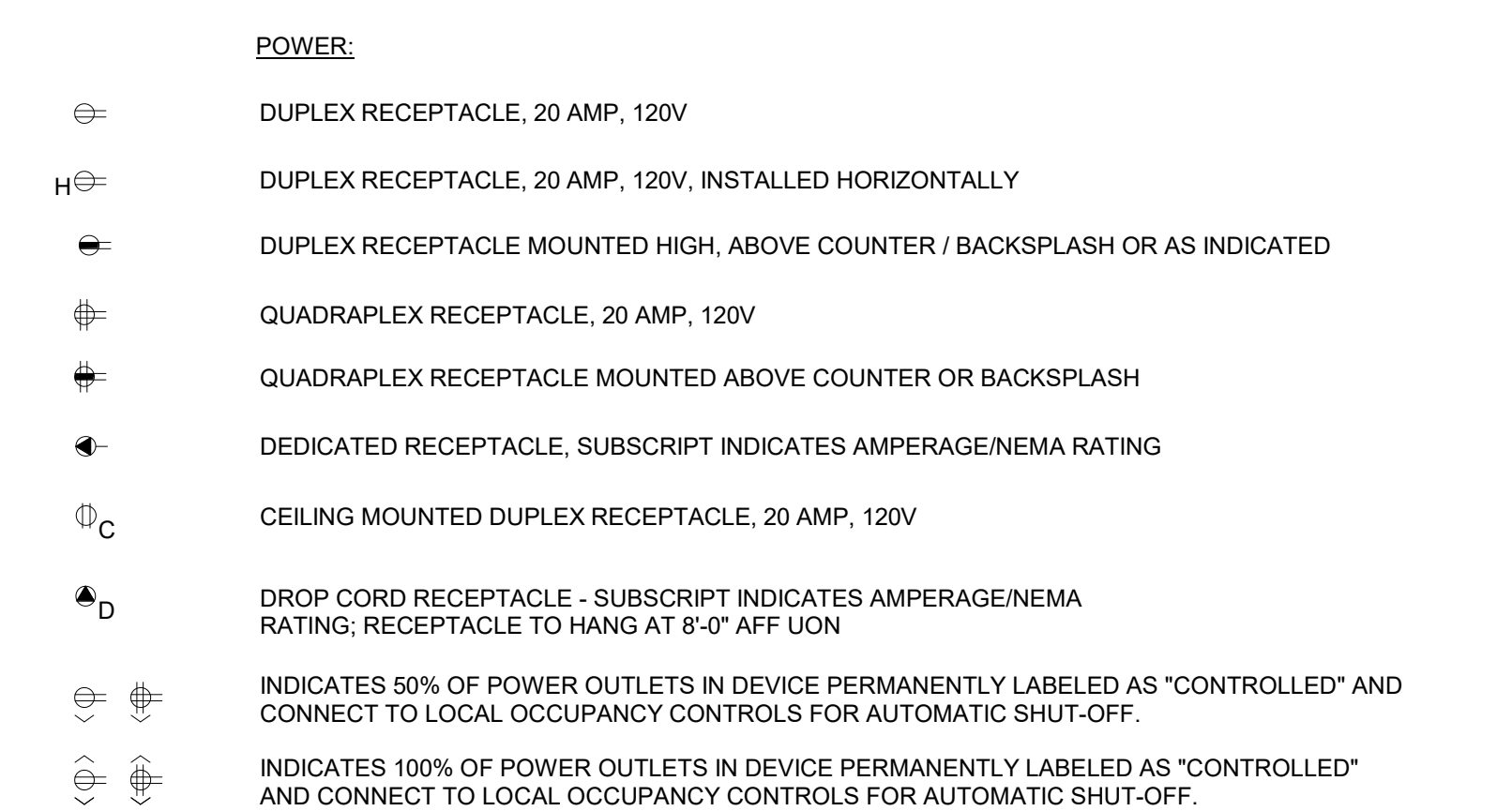
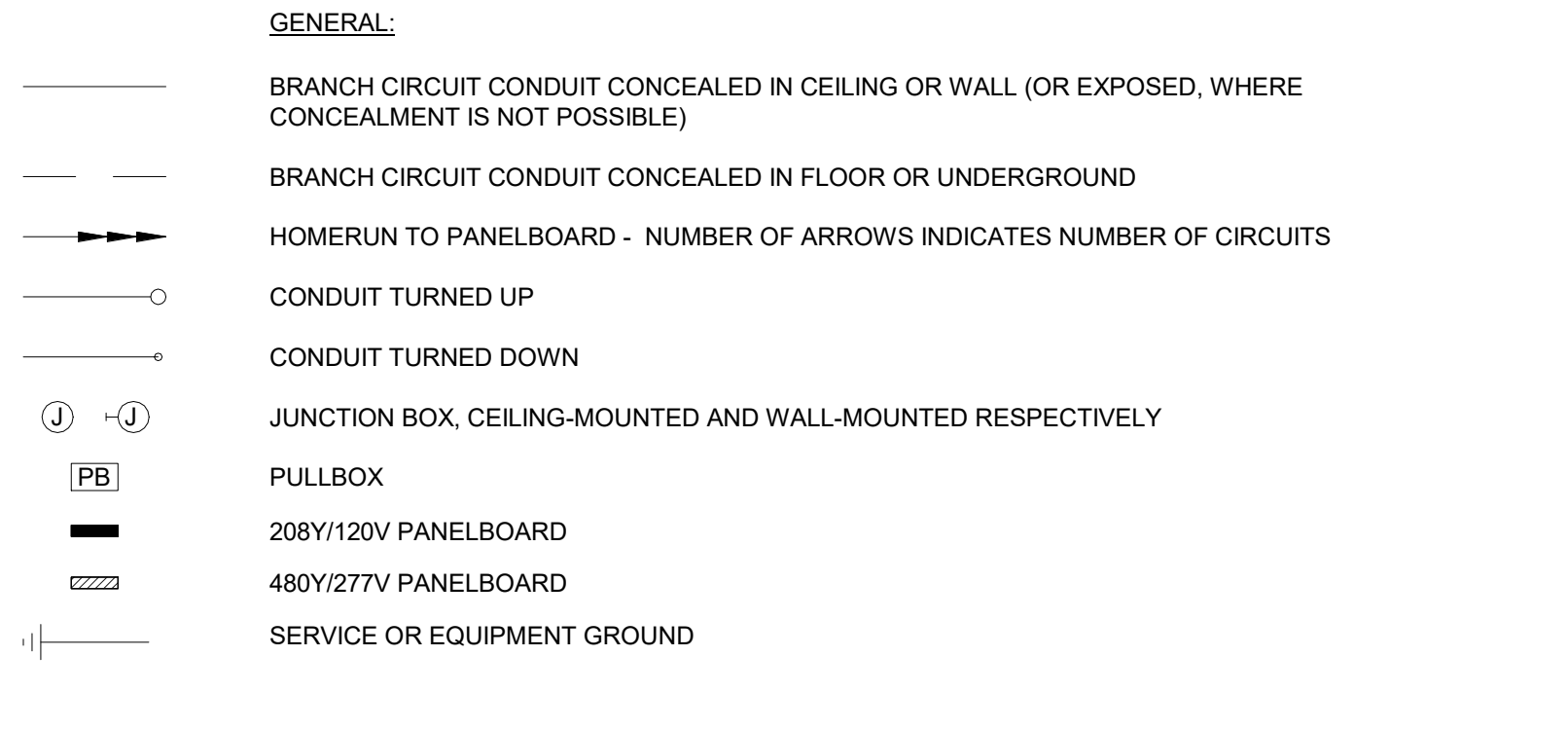
MOUNTING HEIGHTS

(DISTANCE FROM FINISHED FLOOR TO CENTER OF DEVICE, UNLESS OTHERWISE NOTED)

RECEPTACLES:		
GENERAL	18"	UNLESS OTHERWISE NOTED
ABOVE 36" COUNTER TOPS	44"	UNLESS OTHERWISE NOTED
ABOVE OR ADJACENT TO LAVATORIES	44"	UNLESS OTHERWISE NOTED
BEHIND REFRIGERATORS	52"	UNLESS OTHERWISE NOTED
BEHIND WASHERS/DRYERS	44"	UNLESS OTHERWISE NOTED
LIGHT SWITCHES/OCCUPANCY WALL SWITCHES	44"	
COMMUNICATIONS OUTLETS:		
TELE/ DATA OUTLETS	SAME AS ADJACENT RECEPTACLE	
ABOVE COUNTER TOPS	44"	UNLESS OTHERWISE NOTED
CABLE TV OUTLETS	SAME AS ADJACENT RECEPTACLE	

NOTE: FOR ALL DEVICES LOCATED IN CMU WALL, INSTALL BOXES AS FOLLOWS: THE TOP OF THE BOX SHALL MATCH THE TOP OF THE BLOCK COURSING. MOUNT BOXES AT 48" TO TOP FOR SWITCHES AND 18" TO BOTTOM OF BOXES FOR OUTLETS. WHERE OUTLETS ARE SHOWN TO BE MOUNTED HIGH, ADJUST HEIGHT AS REQUIRED TO TOP OF BLOCK COURSING.

ELECTRICAL SYMBOL SCHEDULE NOTE: ALL SYMBOLS MAY NOT BE USED.



** TYPICAL FOR ALL RECEPTACLES:

GFI = GROUND FAULT INTERRUPTER TYPE
EWC = ELECTRIC WATER COOLER
TV = POWER FOR TELEVISION
IG = ISOLATED GROUND
REF = REFRIGERATOR
MW = MICROWAVE
WP = WEATHERPROOF/WEATHER RESISTANT
TP = TAMPERPROOF
USB = DUPLEX WITH (2) USB PORTS
UC = UNDERCOUNTER

FLUSH MOUNTED FLOOR DEVICE WITH NUMBER OF RECEPTACLES AS INDICATED, BLACK FINISH. SUBSCRIPT INDICATES TYPE, WHERE REQUIRED PROVIDE (1) 2" FOR AV, (1) 3/4" FOR POWER AND (1) 1-1/4" FOR TELE/ DATA. COORDINATE LOCATION OF FLOOR BOXES WHEN SHOWN UNDER OR NEAR WORK STATIONS, CONFERENCE TABLES, OR OTHER FURNITURE. AVOID FURNITURE SUPPORTS THAT WOULD BLOCK ACCESS.

TYPE A1: POKE-THROUGH WITH AV PROVISIONS, TWO DUPLX RECEPTACLES, AND DATA CONNECTIONS; WIREMOLD #8ATCPBK WITH (1) #8ACT6A, (2) #8MAAP, (1) #22CHA, (1) #1125CHA

TYPE B1: FLOOR BOX WITH 2 CIRCUITS, TWO DUPLX RECEPTACLES, AND DATA CONNECTIONS; WIREMOLD #EFB8S-OG WITH #EFB610CTCBK

TYPE B2: FLOOR BOX WITH AV PROVISIONS, TWO DUPLX RECEPTACLES, AND DATA CONNECTIONS; WIREMOLD #EFB8S-OG WITH #EFB610CTCBK

TYPE B3: FLOOR BOX, TWO DUPLX RECEPTACLES, AND DATA CONNECTIONS; WIREMOLD #EFB8S-OG WITH #EFB610CTCBK

FLUSH MOUNTED FLOOR DEVICE WITH NUMBER OF RECEPTACLES AS INDICATED, BLACK FINISH. SUBSCRIPT INDICATES TYPE

TYPE B: FLOOR BOX DEVICE, TWO DUPLX RECEPTACLES; WIREMOLD #RFB4E-OG WITH (2) #RFBDP, (2) #RFB8B, (1) #6CTCBK

FURNITURE SYSTEMS POWER FEED, FLOOR MOUNTED, # OF CIRCUITS AS SHOWN ON PLANS, WIREMOLD FURNITURE FEED 4FATCA, PROVIDE PATHWAY FOR NUMBER OF CABLES AS REQUIRED FOR FURNITURE SYSTEMS. COORDINATE WITH OWNER'S IT CONTRACTOR.

FURNITURE SYSTEMS DATA FEED, WALL MOUNTED SINGLE GANG BOX, PROVIDE PATHWAY TO INSTALL NUMBER OF DATA CABLES REQUIRED TO FURNITURE SYSTEM GROUP. COORDINATE WITH OWNER'S IT CONTRACTOR.

MOTOR CONNECTION - HP AS INDICATED

MOTOR STARTER OR CONTROLLER. SUBSCRIPT INDICATES NEMA MOTOR SIZE.

FUSED SAFETY SWITCH. SUBSCRIPT, IF USED, INDICATES AMPERAGE RATING/POLES/FUSE SIZE/NEMA RATING

NON-FUSED SAFETY SWITCH. SUBSCRIPT, IF USED, INDICATES AMPERAGE RATING/POLES/NEMA RATING

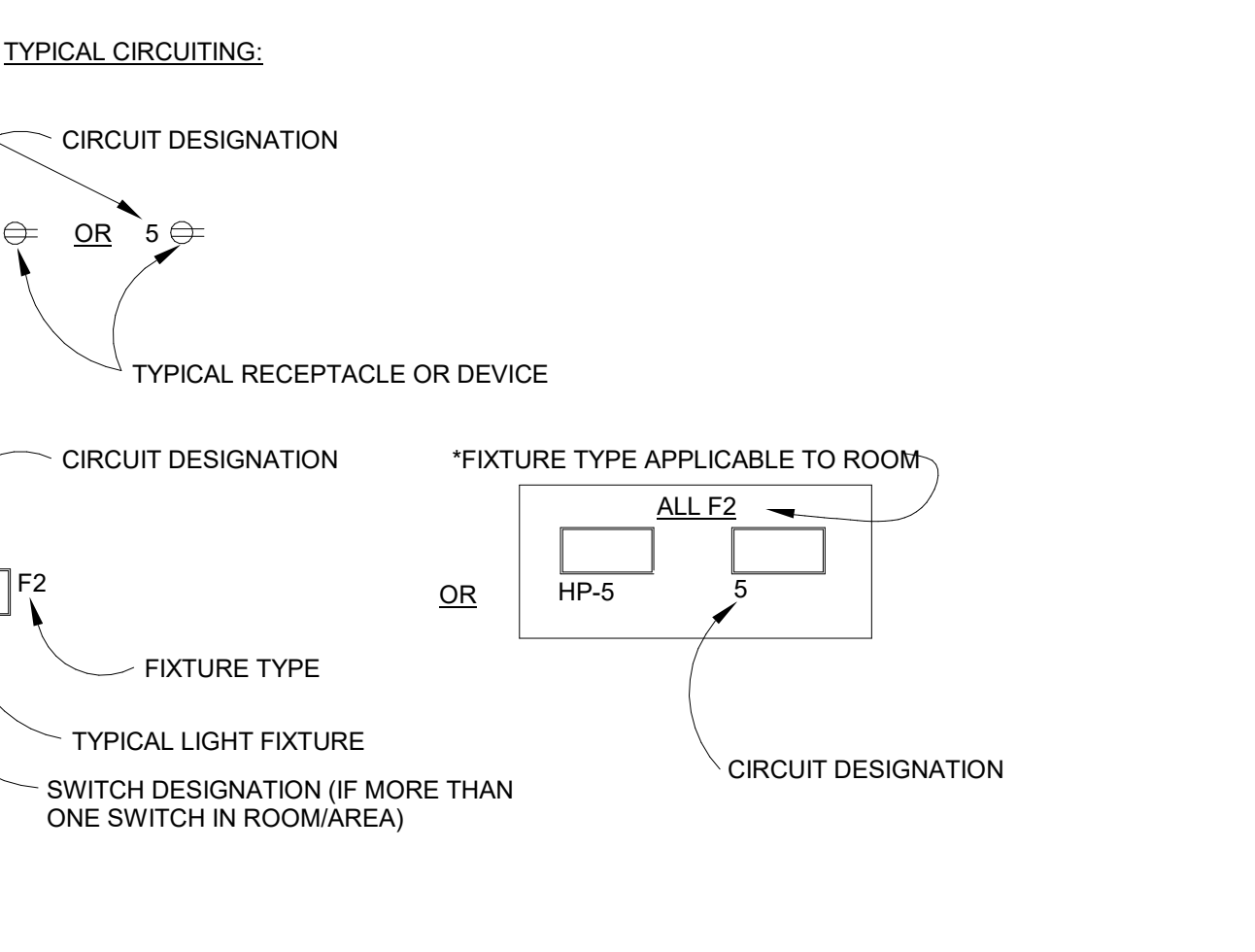
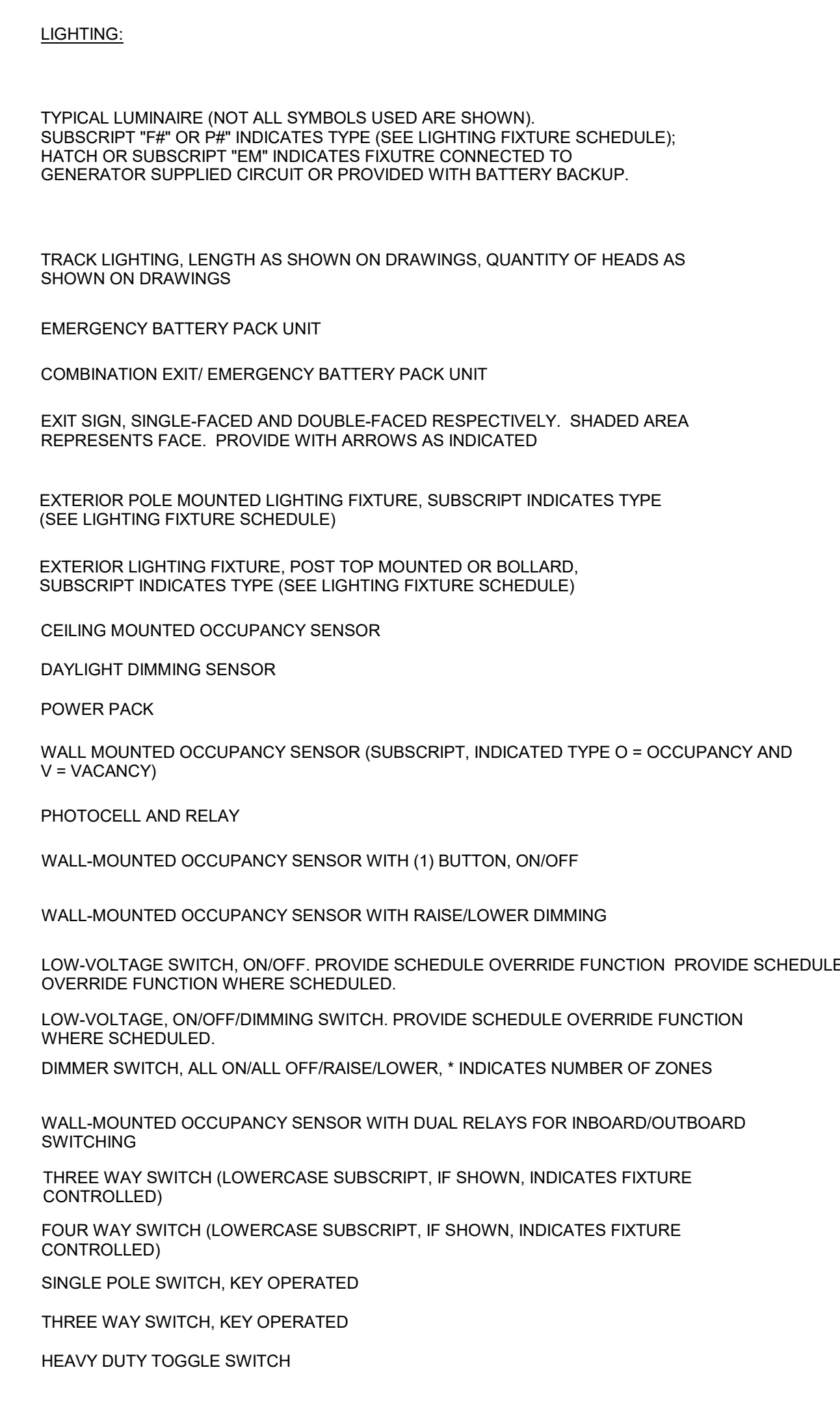
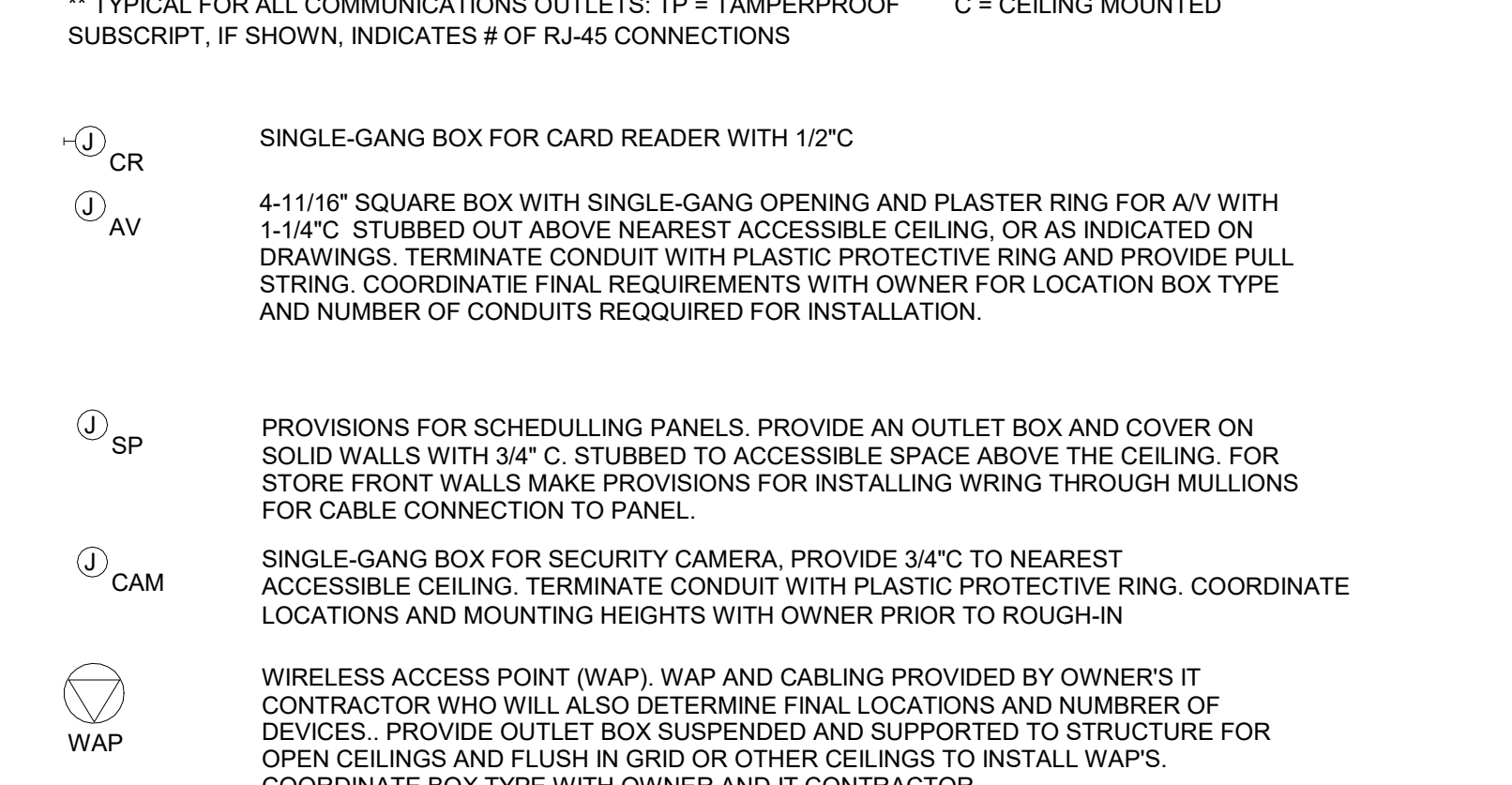
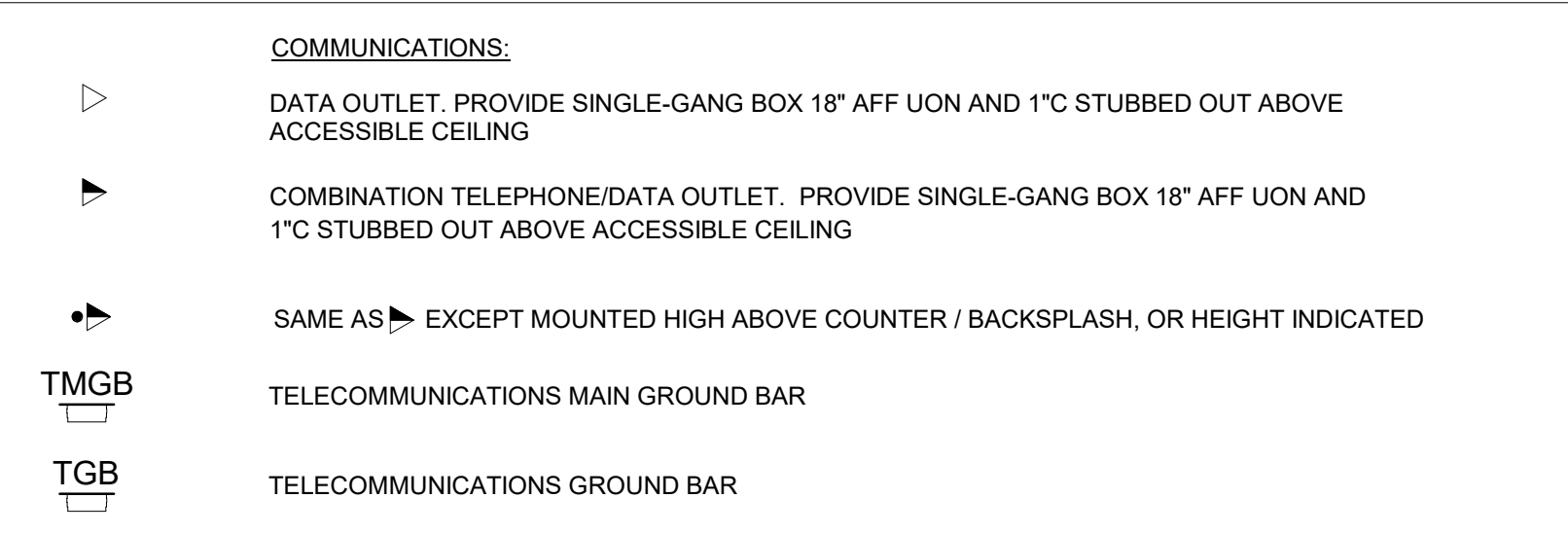
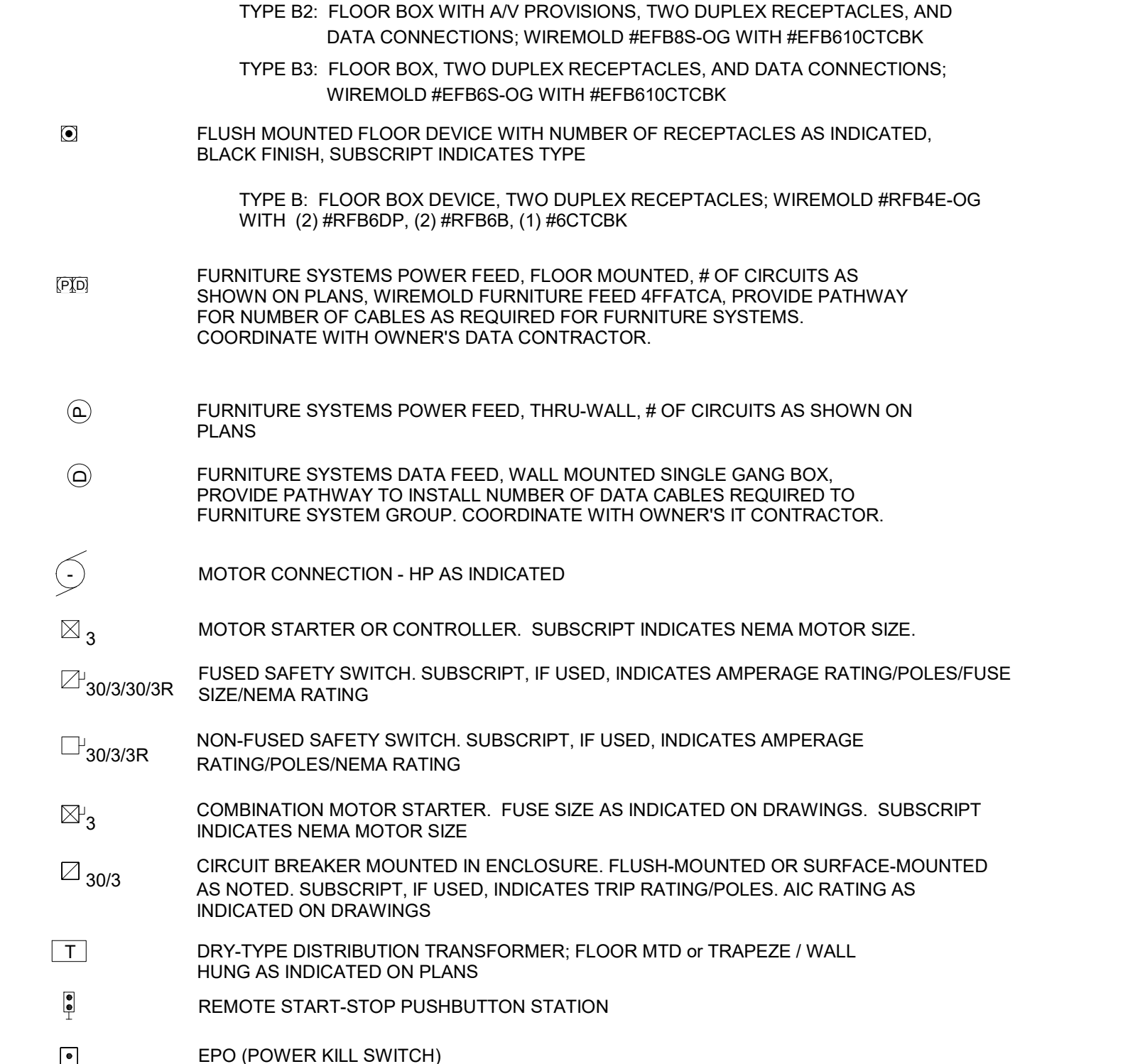
COMBINATION MOTOR STARTER. FUSE SIZE AS INDICATED ON DRAWINGS. SUBSCRIPT INDICATES NEMA MOTOR SIZE

CIRCUIT BREAKER MOUNTED IN ENCLOSURE. FLUSH-MOUNTED OR SURFACE-MOUNTED AS NOTED. SUBSCRIPT, IF USED, INDICATES TRIP RATING/POLES, AIC RATING AS INDICATED ON DRAWINGS

DRY-TYPE DISTRIBUTION TRANSFORMER; FLOOR MTD or TRAPEZE / WALL HUNG AS INDICATED ON PLANS

REMOTE START-STOP PUSH-BUTTON STATION

EPO (POWER KILL SWITCH)



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BID SET

ISSUE DATE: 03.28.2024

REVISIONS:

NO.	REASON	DATE

PROJECT TEAM

PRINCIPAL IN CHARGE: Jerry Guerrier, AIA

PROJECT MANAGER: Charlotte Hagen, AIA

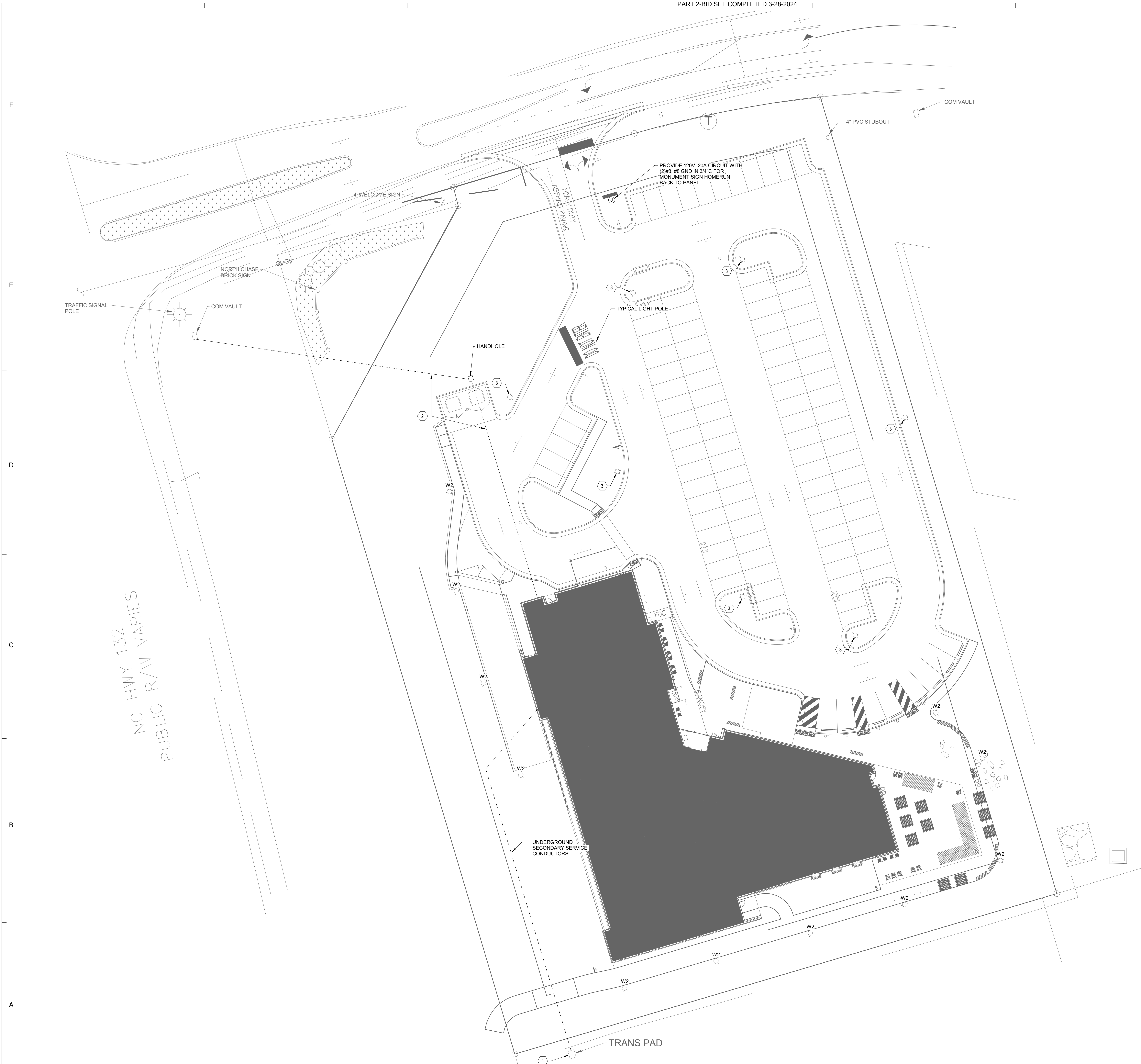
DESIGN TEAM: RCK

PROJECT NAME: NORTHCHASE BRANCH LIBRARY

PROJECT NO.: 514.18349.00

SHEET TITLE: ELECTRICAL COVERSHEET

SHEET NUMBER: E000



KEY NOTES

- 1 POWER COMPANY PAD MOUNTED TRANSFORMER. FINAL LOCATION TO BE COORDINATED.
- 2 2-3" UNDERGROUND CONDUITS FOR INTERNET SERVICE PROVIDER (ISP) FIBER. COORDINATE SERVICE POINT WITH OWNER AND ISP.
- 3 PARKING LOT LIGHTING PROVIDED AND INSTALLED BY DUKE ENERGY. TYPICAL OF ALL PARKING LOT LIGHTING.

GENERAL SHEET NOTES

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RATED WALL LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]

KEY PLAN

ISSUE FOR BID SET

ISSUE DATE: 03.28.2024

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PROJECT MANAGER: Charlotte Hagen, AIA
DESIGN TEAM: RCK
PROJECT NAME: NORTHCHASE BRANCH LIBRARY

PROJECT NO.

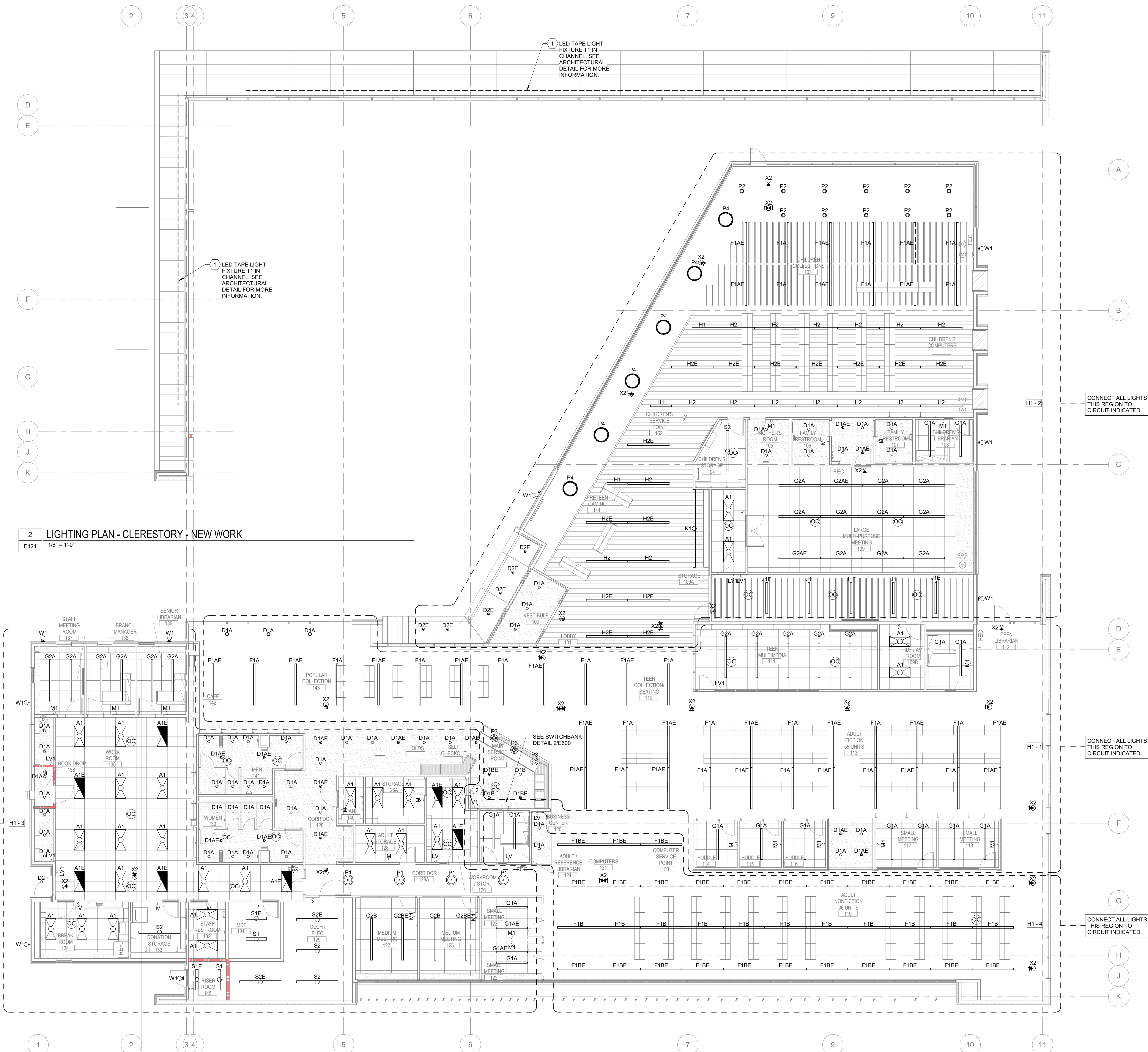
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SHEET TITLE

ELECTRICAL SITE PLAN

SHEET NUMBER

E100



1 LIGHTING PLAN - LEVEL 01
E121 1/8" = 1'-0"

2 LIGHTING PLAN - CLERESTORY - NEW WORK
E121 1/8" = 1'-0"

KEY NOTES

- CONNECT TO LIGHTING CIRCUIT H1-3.
- FOR MAIN SERVICE POINT LIGHTING. CONTROLS BOTH CAN LIGHTS AND PENDANTS.

GENERAL SHEET NOTES

- ALL EXIT SIGNS SHALL BE ON UNSWITCHED "HOT" LEG SERVING THE AREA. CONNECTED AHEAD OF SWITCH SERVING AREA/ROOM.
- ALL EXIT SIGNS SHALL BE INSTALLED AS PER NFPA. WALL MOUNTED EXIT SIGNS SHALL BE MOUNTED SO THAT THE BOTTOM EDGE OF THE SIGN IS 2" CLEAR OF THE DOOR LINTEL OR FINISHED DOOR TRIM. WHERE WALL MOUNTING AFFECTS FIRE RATING OF THE AREA (SUCH AS STAIR ENCLOSURES), EXIT SIGN SHALL BE CEILING MOUNTED. THE BOTTOM OF THE SIGN MUST BE OUT OF THE EGRESS PATH OR ABOVE THE MINIMUM HEADROOM HEIGHT.
- CONTRACTOR SHALL COORDINATE NUMBER AND LOCATION OF OCCUPANCY/VACANCY SENSORS AS PER MANUFACTURER RECOMMENDATIONS TO ASSURE COVERAGE IN ALL OCCUPIABLE AREAS OF ROOMS COVERED. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS WITH ACTUAL INSTALLATION OF OTHER CEILING DEVICES (INCLUDING DIFFUSERS). LOCATE TO ENSURE ADEQUATE FUNCTIONALITY AND OPERATION.
- IN ROOMS WITH LOW VOLTAGE DIMMER SWITCHES: PROVIDE A COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO POWER PACK, LOW VOLTAGE WIRING FROM EACH DIMMING DIMMER DRIVER TO RELAY/POWER PACK, AND CATS CABLING FROM POWER PACK TO SWITCH, AS REQUIRED. PROVIDE 4"x4" JUNCTION BOX FOR POWER PACKS. REFER TO LIGHTING CONTROL DIAGRAMS FOR ADDITIONAL REQUIREMENTS.
- ALL SITE/EXTERIOR LIGHTS SHALL TURN 'ON' VIA PHOTOCELL. ADJUSTABLE TIME 'OFF'.
- FOR ALL EMERGENCY LIGHTS SHOWN ON PLANS, LAMPS SHALL TURN 'ON' FULL BRIGHTNESS WHEN BUILDING IS POWERED BY THE GENERATOR. REGARDLESS OF SWITCH POSITION. PROVIDE A TRANSFER DEVICE (BODINE STD OR EQUAL) OR ADDITIONAL RELAYS AS REQUIRED. IF A TRANSFER DEVICE IS PROVIDED, EACH EMERGENCY FIXTURE SHALL BE CONNECTED TO BOTH NORMAL POWER AND EMERGENCY POWER. CONNECT TO NORMAL CIRCUIT WHICH SERVES SAME ROOM OR NEARBY CIRCUIT ON SAME PHASE IN SAME PANEL.
- COORDINATE AND ADJUST ALL LIGHTING FIXTURES IN MECHANICAL ROOMS AND OTHER OPEN CEILING ROOMS (TYPICAL), WITH ACTUAL INSTALLATION OF PIPING, DUCTS, SPECIAL EQUIPMENT, ETC. COORDINATE PRIOR TO ROUGH-IN.
- SEE E121 FOR ADD ALTERNATE LIGHTING IN PAVILION. CONNECT LIGHTING TO LOCAL 277V LIGHTING CIRCUIT.

RATED WALL LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]

KEY PLAN

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PROFESSIONAL SEAL
NORTH CAROLINA
JERRY GUERRIER
15363
ENGINEER
NORTH CHASE BRANCH LIBRARY
03-28-2024

BID SET

ISSUE DATE: 03.28.2024

REVISIONS NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE: Jerry Guerrier, AIA
PROJECT MANAGER: Charlotte Hagen, AIA
DESIGN TEAM: RCK

NORTHCHASE BRANCH LIBRARY

PROJECT NO.: 514.18349.00
SHEET TITLE: ELECTRICAL LIGHTING PLAN
SHEET NUMBER: E121

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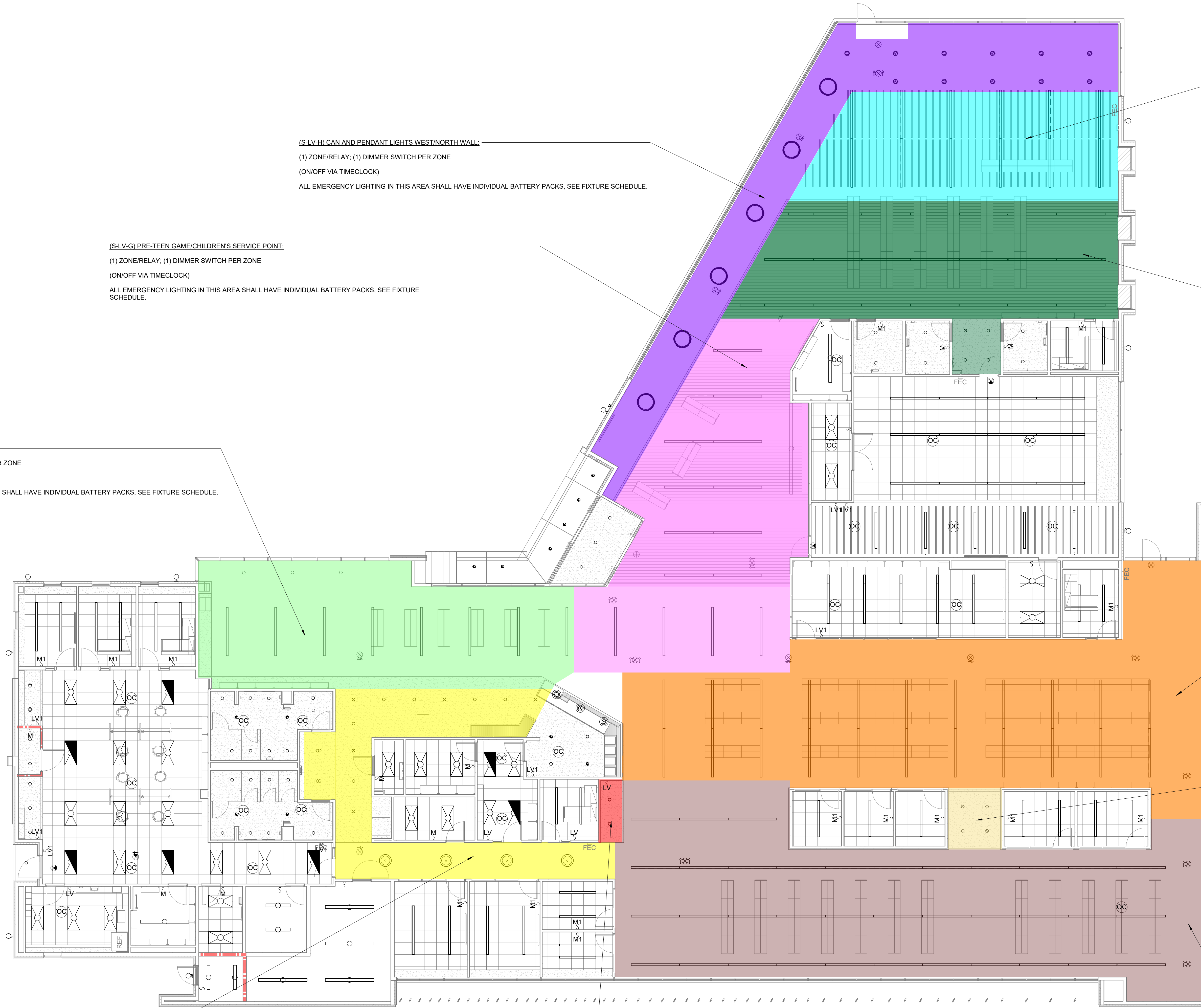
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D

C

B

A



(S-LV-J) CHILDREN'S COLLECTIONS:
(1) ZONE/RELAY; (1) DIMMER SWITCH PER ZONE
(ON/OFF VIA TIMECLOCK)
ALL EMERGENCY LIGHTING IN THIS AREA SHALL HAVE INDIVIDUAL BATTERY PACKS, SEE FIXTURE SCHEDULE.

(S-LV-I) CHILDREN'S COMPUTERS:
(1) ZONE/RELAY; (1) DIMMER SWITCH PER ZONE
(ON/OFF VIA TIMECLOCK)
ALL EMERGENCY LIGHTING IN THIS AREA SHALL HAVE INDIVIDUAL BATTERY PACKS, SEE FIXTURE SCHEDULE.

(S-LV-F) ADULT FICTION:
(1) ZONE/RELAY; (1) DIMMER SWITCH PER ZONE
(ON/OFF VIA TIMECLOCK)
ALL EMERGENCY LIGHTING IN THIS AREA SHALL HAVE INDIVIDUAL BATTERY PACKS, SEE FIXTURE SCHEDULE.

(S-LV-E) 4 CAN LIGHTS SOUTH:
(1) ZONE/RELAY; (1) DIMMER SWITCH PER ZONE
(ON/OFF VIA TIMECLOCK)
ALL EMERGENCY LIGHTING IN THIS AREA SHALL HAVE INDIVIDUAL BATTERY PACKS, SEE FIXTURE SCHEDULE.

(S-LV-D) ADULT NONFICTION:
(1) ZONE/RELAY; (1) DIMMER SWITCH PER ZONE
(ON/OFF VIA TIMECLOCK)
ALL EMERGENCY LIGHTING IN THIS AREA SHALL HAVE INDIVIDUAL BATTERY PACKS, SEE FIXTURE SCHEDULE.

(S-LV-H) CAN AND PENDANT LIGHTS WEST/NORTH WALL:
(1) ZONE/RELAY; (1) DIMMER SWITCH PER ZONE
(ON/OFF VIA TIMECLOCK)
ALL EMERGENCY LIGHTING IN THIS AREA SHALL HAVE INDIVIDUAL BATTERY PACKS, SEE FIXTURE SCHEDULE.

(S-LV-G) PRE-TEEN GAME/CHILDREN'S SERVICE POINT:
(1) ZONE/RELAY; (1) DIMMER SWITCH PER ZONE
(ON/OFF VIA TIMECLOCK)
ALL EMERGENCY LIGHTING IN THIS AREA SHALL HAVE INDIVIDUAL BATTERY PACKS, SEE FIXTURE SCHEDULE.

(S-LV-A) POPULAR COLLECTION/CAFE:
(1) ZONE/RELAY; (1) DIMMER SWITCH PER ZONE
(ON/OFF VIA TIMECLOCK)
ALL EMERGENCY LIGHTING IN THIS AREA SHALL HAVE INDIVIDUAL BATTERY PACKS, SEE FIXTURE SCHEDULE.

(S-LV-B) CORRIDOR 128A:
(1) ZONE/RELAY; (1) DIMMER SWITCH PER ZONE
LOCAL OVERRIDE SWITCHES (S-OD) FOR AFTER-HOUR OPERATION SHALL HAVE DIMMING FUNCTIONALITY UNDER NORMAL CONDITIONS.
(ON/OFF VIA TIMECLOCK)
ALL EMERGENCY LIGHTING IN THIS AREA SHALL HAVE INDIVIDUAL BATTERY PACKS, SEE FIXTURE SCHEDULE.

(S-LV-C) BUSINESS CENTER:
(1) ZONE/RELAY; (1) DIMMER SWITCH PER ZONE
(ON/OFF VIA TIMECLOCK)
ALL EMERGENCY LIGHTING IN THIS AREA SHALL HAVE INDIVIDUAL BATTERY PACKS, SEE FIXTURE SCHEDULE.



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ISSUE DATE
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REVISIONS

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PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
RCK
PROJECT NAME

NORTHCHASE BRANCH LIBRARY

PROJECT NO.
514.18349.00

SHEET TITLE
ELECTRICAL LIGHTING CONTROL PLAN

SHEET NUMBER
E122

1 LIGHTING CONTROL ZONE PLAN
E122 1/8" = 1'-0"

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KEY NOTES

- COORDINATE ELECTRICAL CONNECTION TO MATCH EQUIPMENT HEIGHT.
- CONNECTED TO ODU ON ROOF. SEE SHEET E132 FOR CIRCUIT NUMBER.

GENERAL SHEET NOTES

- PROVIDE 120V EMERGENCY POWER TO ALL FIRE/SMOKE DAMPERS. VERIFY QUANTITY AND LOCATION OF ALL DAMPERS WITH MECHANICAL DRAWINGS. REFER TO FIRE ALARM DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- ALL POWER AND CONTROL CONDUIT ROUTED TO EXTERIOR ON-GRADE MECHANICAL EQUIPMENT SHALL BE ROUTED UNDERGROUND UNLESS OTHERWISE NOTED. COORDINATE STUB-UP LOCATIONS PRIOR TO ROUGH-IN.
- ALL POWER AND CONTROL CONDUIT ROUTED TO ROOF MECHANICAL EQUIPMENT SHALL BE COORDINATED WITH ARCHITECT AND GENERAL CONTRACTOR TO LIMIT THE NUMBER OF ROOF PENETRATIONS. COORDINATE STUB-UP LOCATIONS PRIOR TO ROUGH-IN.

RATED WALL LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]

KEY PLAN

1 MECHANICAL POWER PLAN
E131 1/8" = 1'-0"

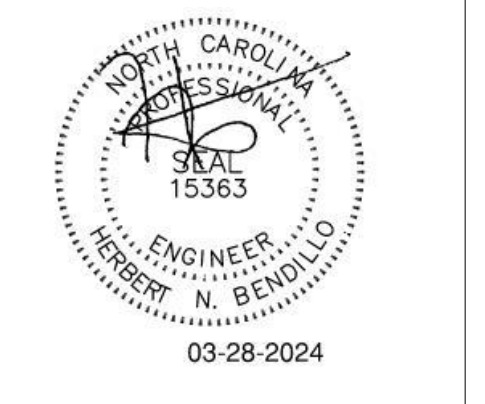
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PROJECT MANAGER: Charlotte Hagen, AIA
DESIGN TEAM: RCK

NORTHCHASE BRANCH LIBRARY

PROJECT NO.: 514.18349.00

SHEET TITLE: MECHANICAL POWER PLAN

SHEET NUMBER: E131

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KEY NOTES

GENERAL SHEET NOTES

- A. PROVIDE 120V EMERGENCY POWER TO ALL FIRE/SMOKE DAMPERS. VERIFY QUANTITY AND LOCATION OF ALL DAMPERS WITH MECHANICAL DRAWINGS. REFER TO FIRE ALARM DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- B. ALL POWER AND CONTROL CONDUIT ROUTED TO EXTERIOR ON-GRADE MECHANICAL EQUIPMENT SHALL BE ROUTED UNDERGROUND UNLESS OTHERWISE NOTED. COORDINATE STUB-UP LOCATIONS PRIOR TO ROUGH-IN.
- C. ALL POWER AND CONTROL CONDUIT ROUTED TO ROOF MECHANICAL EQUIPMENT SHALL BE COORDINATED WITH ARCHITECT AND GENERAL CONTRACTOR TO LIMIT THE NUMBER OF ROOF PENETRATIONS. COORDINATE STUB-UP LOCATIONS PRIOR TO ROUGH-IN.

RATED WALL LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR		1-HOUR	
2-HOUR		2-HOUR	
3-HOUR		3-HOUR	
FIRE WALL		FIRE PARTITION	
2-HOUR		0.5-HOUR	
3-HOUR		1-HOUR	
4-HOUR			
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR		1-HOUR	

KEY PLAN



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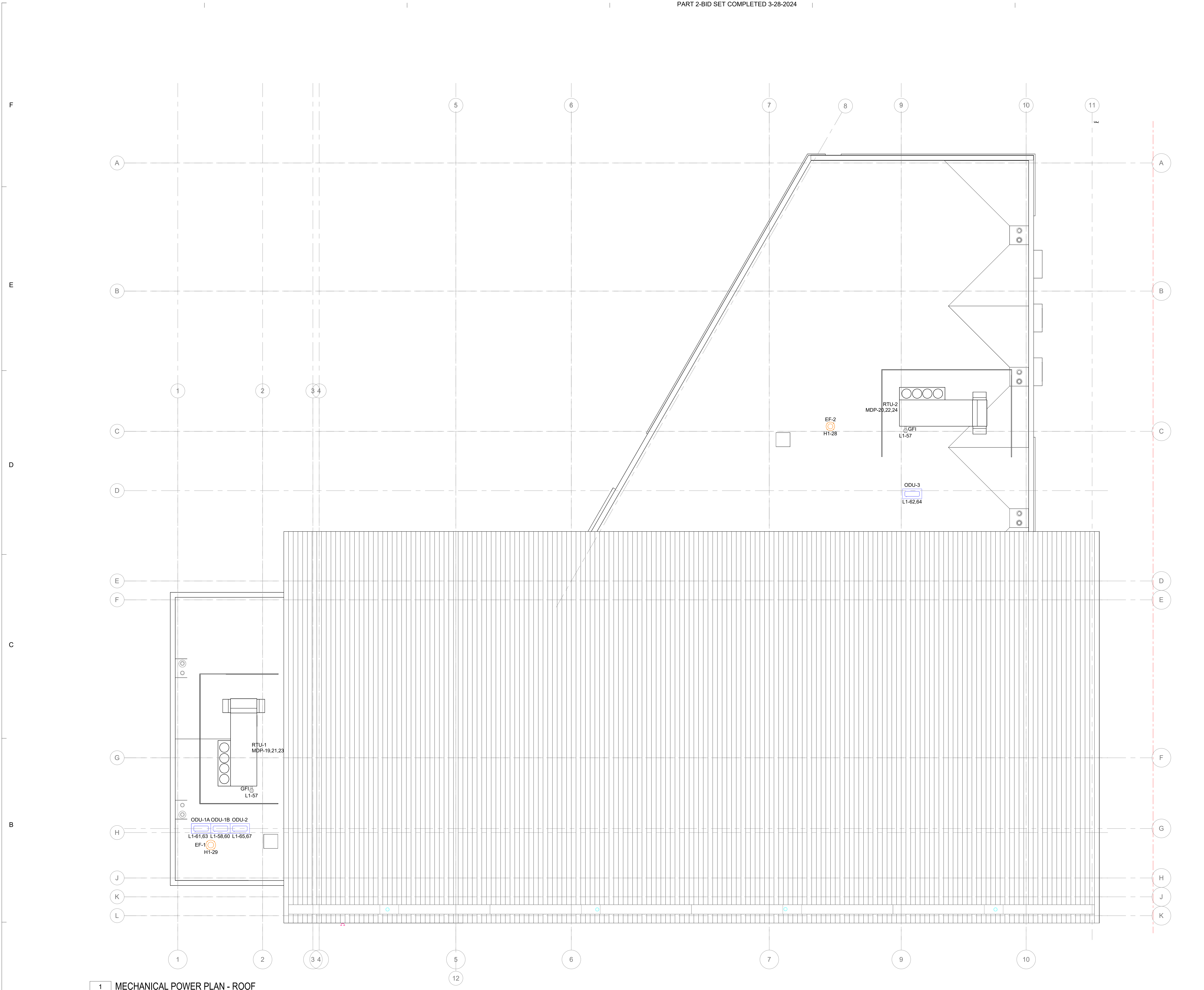
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Jerry Guerrier, AIA
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DESIGN TEAM
RCK
PROJECT NAME
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PROJECT NO.
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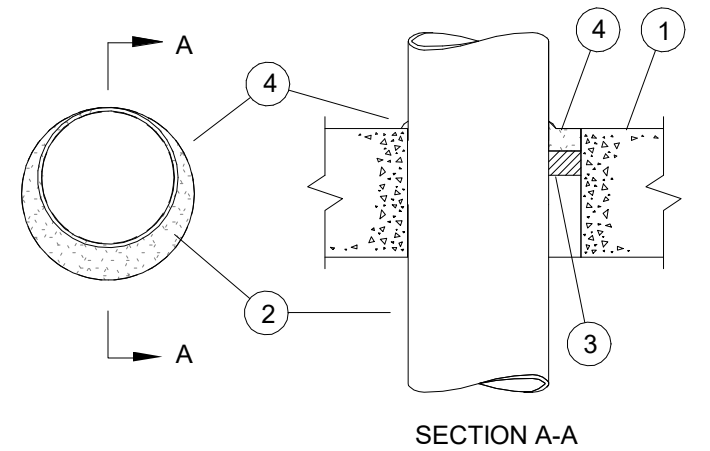
SHEET TITLE
MECHANICAL POWER PLAN - ROOF

SHEET NUMBER
E132



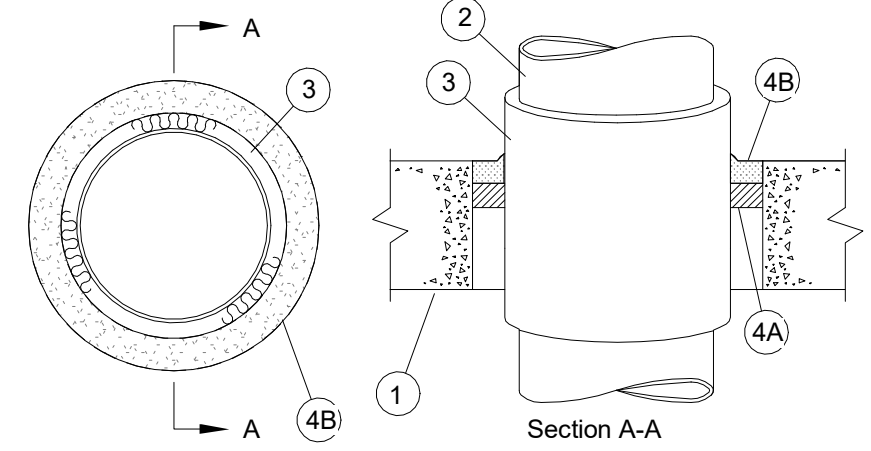
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System No. C-AJ-1001
F Rating - 3 Hr
T Rating - 0 Hr



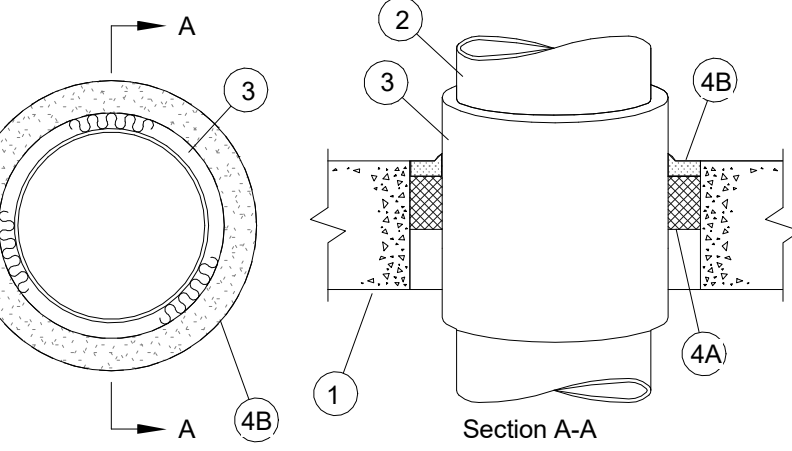
- Floor or Wall Assembly** - Min 4-1/2 in. thick lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of circular through opening is 22-1/2 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Steel Sleeve** - (Optional, not shown) - Nom 12 in. diam (or smaller) Schedule 40 (or heavier) steel pipe sleeve cast into concrete floor or wall. Sleeve to be flush with or project max 2 in. from top surface of floor or from both surfaces of wall.
- Through-Penetrant** - One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the freestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. (point contact) to max 1-3/8 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - Steel Pipe** - Nom 30 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Iron Pipe** - Nom 30 in. diam (or smaller) cast or ductile iron pipe.
 - Conduit** - Nom 6 in. diam (or smaller) rigid steel conduit.
 - Conduit** - Nom 4 in. diam (or smaller) steel electrical metallic tubing.

System No. C-AJ-5001
F Ratings - 1-1/2, 2 and 3 Hr (See Item 4)
T Ratings - 0, 1/2, 3/4, and 1 Hr (See Items 1A and 4)
L Rating At Ambient - 2 CFM per sq ft
L Rating at 400 F - less than 1 CFM per sq ft



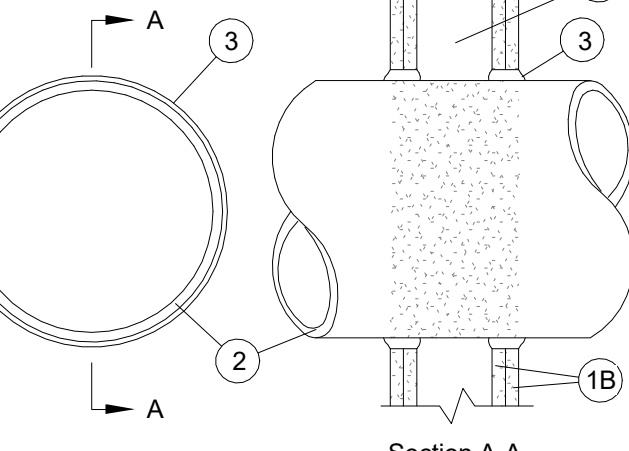
- Floor or Wall Assembly** - Min 2-1/2 in. thick lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of circular through opening is 15 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Steel Sleeve** - (Optional, not shown) - Nom 10 in. diam (or smaller) Schedule 10 (or heavier) steel pipe sleeve cast into concrete floor or wall. Sleeve to be flush with or project max 2 in. above top of floor or beyond either surface of wall. **When sleeve is used, F Rating is 0 Hr when sleeve is used.**
- Through-Penetrant** - Nom 4 in. diam (or smaller) Type L (or heavier) copper pipe, nom 12 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. diam (or smaller) ductile iron pressure pipe or nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe centered in the opening and rigidly supported on both sides of the floor or wall assembly.
- Pipe Covering** - Nom 1/2 to 2 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with built strip tape supplied with the product. See Pipe and Equipment Covering - Materials (BRGU) category in Building materials Directory for names of manufacturers. Any pipe covering materials meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

System No. C-AJ-5002
F Ratings - 2 and 3 Hr (See Item 4)
T Ratings - 0, 1/2, and 1 Hr (See Items 1A and 4)
L Rating At Ambient - 2 CFM per sq ft
L Rating at 400 F - less than 1 CFM per sq ft



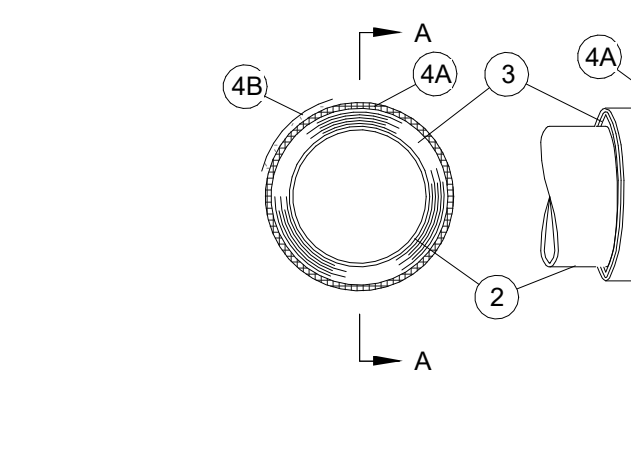
- Floor or Wall Assembly** - Min 2-1/2 in. thick lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of circular through opening is 36 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Steel Sleeve** - (Optional, not shown) - Nom 36 in. diam (or smaller) Schedule 10 (or heavier) steel pipe sleeve cast into concrete floor or wall. Sleeve to be flush with or project max 2 in. above top of floor or beyond either surface of wall. **When sleeve is used, F Rating is 2 Hr and T Rating is 0 Hr.**
- Through-Penetrant** - Nom 4 in. diam (or smaller) Type L (or heavier) copper pipe, nom 15 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 30 in. diam (or smaller) Class 50 (or heavier) ductile iron pressure pipe or nom 30 in. diam (or smaller) Schedule 10 (or heavier) steel pipe rigidly supported on both sides of the floor or wall assembly.
- Pipe Covering** - Nom 1, 2, or 3 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with built strip tape supplied with the product. See Pipe and Equipment Covering - Materials (BRGU) category in Building materials Directory for names of manufacturers. Any pipe covering materials meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

System No. W-L-1001
F Ratings - 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings - 0, 1, 2, 3, and 4 Hr (See Item 3)
L Rating At Ambient - 1 CFM per sq ft
L Rating at 400 F - less than 1 CFM per sq ft



- Wall Assembly** - The 1, 2, 3 or 4 hour fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs** - Wall framing may consist of either wood studs (max 2 in fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.
 - Wallboard, Gypsum** - Nom 5/8 in. thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 14-1/2 in. for wood stud walls and 18 in. for steel stud walls.
- Pipe or Conduit** - Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe, nom 12 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. diam (or smaller) Class 50 (or heavier) ductile iron pressure pipe, nom 6 in. diam (or smaller) steel conduit, nom 4 in. diam (or smaller) steel electrical metallic tubing, nom 6 in. diam (or smaller) Type L (or heavier) copper tubing or nom 1 in. diam (or smaller) flexible steel conduit. **When copper pipe is used, max F rating of freestop system (Item 3) is 2 Hr. Steel pipes or conduits larger than nom 4 in. diam may only be used in walls constructed using steel channel studs. A max of one pipe or conduit is permitted in the freestop system. Pipe or conduit to be installed near center of stud cavity width and to be rigidly supported on both sides of wall assembly.**

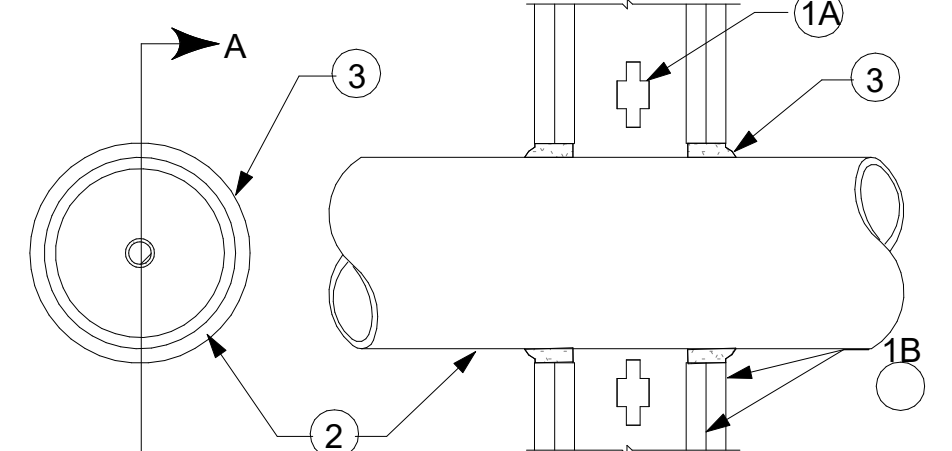
System No. W-L-1001
F Ratings - 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings - 0, 1, 2, 3, and 4 Hr (See Item 3)
L Rating At Ambient - 2 CFM per sq ft
L Rating at 400 F - less than 1 CFM per sq ft



- Wall Assembly** - The 1 or 2 hour fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs** - Wall framing may consist of either wood studs (max 2 in fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.
 - Wallboard, Gypsum** - Nom 5/8 in. thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 14-1/2 in. for wood stud walls and 18 in. for steel stud walls.
- Through Penetrants** - One metallic pipe or tubing to be centered within the freestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:
 - Steel Pipe** - Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Copper Tubing** - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
 - Copper Pipe** - Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

SYSTEM NO. W-L-1001
UPDATED JUNE 15, 2005

F Ratings - 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings - 0, 1, 2, 3, and 4 Hr (See Item 3)
L Rating At Ambient - less than 1 CFM per sq ft
L Rating @ 400° F - less than 1 CFM per sq ft



- Wall Assembly** - The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs** - Wall framing may consist of either wood studs (max 2 in fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.
 - Gypsum Board** - Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 28 in. (660 mm).
- Through Penetrant** - One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the freestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. (0 mm) (point contact) to max 2 in. (51 mm). Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - Steel Pipe** - Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Iron Pipe** - Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.
 - Copper Tubing** - Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper tubing.
 - Copper Pipe** - Nom 6 in. (152 mm) diam (or smaller) steel flexible metal gas piping may be used.

- Through Penetrants** - One metallic pipe or tubing to be centered within the freestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:
 - Steel Pipe** - Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Copper Tubing** - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
 - Copper Pipe** - Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
- Pipe Covering** - Nom 1 or 2 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with built strip tape supplied with the product. When nom 1 in. thick pipe covering is used, the annular space between the pipe covering and the circular cutout in the gypsum wallboard layers on each side of the wall shall be a min 1/4 in. to max 3/8 in. When nom 2 in. thick pipe covering is used, the annular space between the pipe covering and the circular cutout in the gypsum wallboard layers on each side of the wall shall be min 1/2 in. to max 3/4 in.

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space between the pipe or sleeve and flush with both surfaces of wall. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. When nom pipe covering thickness is 1-1/2 in. or more, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Firestop System** - The details of the firestop system shall be as follows:
 - Packing Material** - Min 1 in. thickness of firmly packed mineral wool batt insulation used as a permanent form. Packing material to be recessed from top surface of floor or sleeve or from both surfaces of wall as required to accommodate the required thickness of caulk fill material (Item B).
 - Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is 2 in. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is 2 in. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is 2 in. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is 2 in. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is 2 in. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is 2 in. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is 2 in. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is 2 in. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is 2 in. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is 2 in. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is 2 in. When nom pipe covering thickness is 1-1/2 in. or less, min thickness of caulk fill material is 1 in. The hourly F and T Ratings of the freestop system are dependent upon the thickness of the floor or wall, the size of pipe, the thickness of pipe covering material and the size of the annular space (between the pipe covering material and the edge of the circular opening), as shown in the following table:

Min Floor or Wall Thkns	Max Pipe Diam	Nom Pipe Thkns	Annular Space	F Rating	T Rating
2-1/2	4	1 or 1-1/2	1/2 to 2-3/8	2	1
4-1/2	4	2	1/4 to 3/8	2	1-1/2
2-1/2	12	1	1/2 to 1-1/2	2	1/2
4-1/2	12	1	1/2 to 2-3/8	2	1
2-1/2	12	1/2	1/2 to 2-3/8	2	0

- Fill, Void or Cavity Material** - Caulk - Applied to fill the annular space flush with the top surface of the floor or sleeve or flush with both surfaces of wall. When nom pipe covering thickness is 2 in., min thickness of caulk fill material is

LIGHTING FIXTURE SCHEDULE

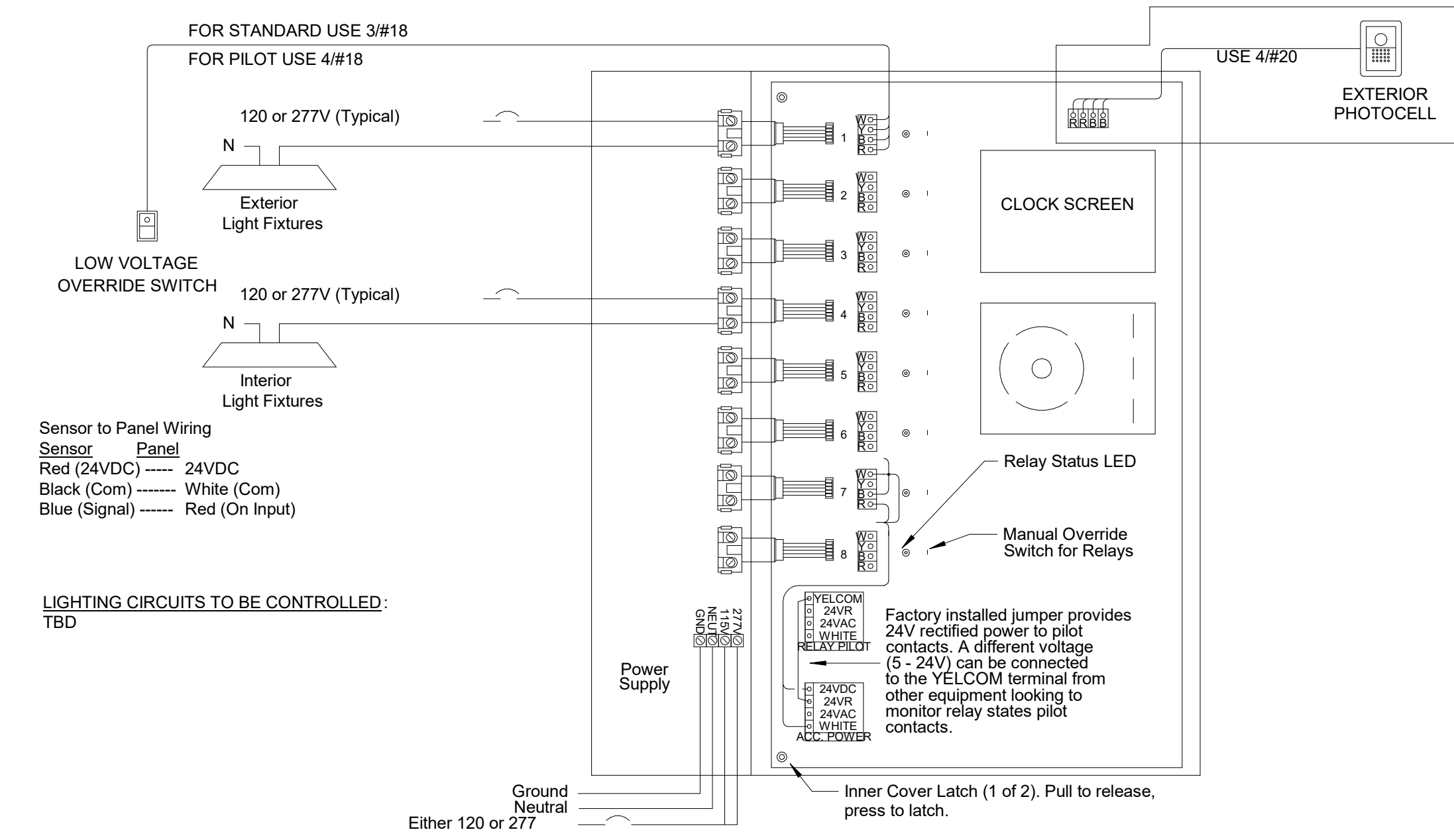
TYPE	DESCRIPTION	MANUFACTURER	MODEL	LAMP INFORMATION	DRIVER	VOLT	APPARENT LOAD	MOUNTING	COMMENTS
A1	2'x4' LED TROFFER	METALUX	24SR-LD-39-C-UNV-L835-CD1-U	LED	0-10V DIMMING 10%	277 V	31.9 VA	RECESSED	
A1E	2'x4' LED TROFFER WITH EMERGENCY BATTERY PACK	METALUX	24SR-LD-39-C-UNV-EL7W-L835-CD1-U	LED	0-10V DIMMING 10%	277 V	31.9 VA	RECESSED	
D1A	6" RECESSED DOWNLIGHT	H.E. WILLIAMS	6PR-TR-L10-840-DIM-UNV-LW-OF-WH	LED	0-10V DIMMING 10%	277 V	12.2 VA	RECESSED	
D1AE	6" RECESSED DOWNLIGHT WITH EMERGENCY BACKUP	H.E. WILLIAMS	6PR-TR-L10-840-EM7W-DIM-UNV-LW-OF-WH	LED	0-10V DIMMING 10%	277 V	12.2 VA	RECESSED	
D1B	6" RECESSED DOWNLIGHT	H.E. WILLIAMS	6PR-TR-L10-840-DIM-UNV-LW-OF-WH	LED	0-10V DIMMING 10%	277 V	12.2 VA	RECESSED	
D1BE	6" RECESSED DOWNLIGHT WITH EMERGENCY BACKUP	H.E. WILLIAMS	6PR-TR-L10-840-EM7W-DIM-UNV-LW-OF-WH	LED	0-10V DIMMING 10%	277 V	12.2 VA	RECESSED	
D2	6" RECESSED DOWNLIGHT	H.E. WILLIAMS	6PR-TR-L10-840-DIM-UNV-LW-OF-WH-WET/CC	LED	0-10V DIMMING 10%	277 V	12.2 VA	RECESSED	
D2E	6" RECESSED DOWNLIGHT WITH EMERGENCY BACKUP	H.E. WILLIAMS	6PR-TR-L10-840-EM7W/PRTS-DIM-UNV-LW-OF-WH-WET/CC	LED	0-10V DIMMING 10%	277 V	12.2 VA	RECESSED	
F1A	8' SUSPENDED LINEAR DIRECT LED FIXTURE	FINELITE	HP-6-P-D-8-B-835-F-96LG-277-SC-FC-1%-FA50-C1-FE-SW	LED	0-10V DIMMING 10%	277 V	57.6 VA	SUSPENDED	
F1AE	8' SUSPENDED LINEAR DIRECT LED FIXTURE	FINELITE	HP-6-P-D-8-B-835-F-96LG-277-SC-FC-1%-FA50-C1-FE-SW-LGD18W	LED	0-10V DIMMING 10%	277 V	57.6 VA	SUSPENDED	
F1B	8' SUSPENDED LINEAR DIRECT LED FIXTURE	FINELITE	HP-6-P-D-8-H-835-F-96LG-277-SC-FC-1%-FA50-C1-FE-SW	LED	0-10V DIMMING 10%	277 V	75.2 VA	SUSPENDED	
F1BE	8' SUSPENDED LINEAR DIRECT LED FIXTURE	FINELITE	HP-6-P-D-8-H-835-F-96LG-277-SC-FC-1%-FA50-C1-FE-SW-LGD18W	LED	0-10V DIMMING 10%	277 V	75.2 VA	SUSPENDED	
G1A	6' LINEAR, RECESSED LED FIXTURE	FINELITE	HP-4-R-D-8-B-835-F-96LG-277-SC-FC-1%-C1-FE-SW	LED	0-10V DIMMING 10%	277 V	42.6 VA	RECESSED	
G1AE	6' LINEAR, RECESSED LED FIXTURE WITH EMERGENCY BACKUP	FINELITE	HP-4-R-D-8-B-835-F-96LG-277-SC-FC-1%-C1-FE-SW-LGD18W	LED	0-10V DIMMING 10%	277 V	42.6 VA	RECESSED	
G2A	8' LINEAR, RECESSED LED FIXTURE	FINELITE	HP-4-R-D-8-B-835-F-96LG-277-SC-FC-1%-C1-FE-SW	LED	0-10V DIMMING 10%	277 V	27.6 VA	RECESSED	
G2AE	8' LINEAR, RECESSED LED FIXTURE WITH EMERGENCY BACKUP	FINELITE	HP-4-R-D-8-B-835-F-96LG-277-SC-FC-1%-C1-FE-SW-LGD18W	LED	0-10V DIMMING 10%	277 V	27.6 VA	RECESSED	
G2B	8' LINEAR, RECESSED LED FIXTURE	FINELITE	HP-4-R-D-8-B-835-F-96LG-277-SC-FC-1%-C1-FE-SW	LED	0-10V DIMMING 10%	277 V	42.6 VA	RECESSED	
G2BE	8' LINEAR, RECESSED LED FIXTURE WITH EMERGENCY BACKUP	FINELITE	HP-4-R-D-8-B-835-F-96LG-277-SC-FC-1%-C1-FE-LGD18W-SW	LED	0-10V DIMMING 10%	277 V	42.6 VA	RECESSED	
H1	4' LINEAR RECESSED FIXTURE FOR INTEGRATION IN WOOD PANEL CEILING	ARCHLIT	ANCARSL0T55 - ANCARSL0T5 35 BK 4 (1)D (1)00	LED	0-10V DIMMING 10%	277 V	24 VA	RECESSED	
H2	8' LINEAR RECESSED FIXTURE FOR INTEGRATION IN WOOD PANEL CEILING	ARCHLIT	ANCARSL0T55 - ANCARSL0T5 35 BK 4 (1)H (1)00	LED	0-10V DIMMING 10%	277 V	48 VA	RECESSED	
H2E	8' LINEAR RECESSED FIXTURE FOR INTEGRATION IN WOOD PANEL CEILING	ARCHLIT	ANCARSL0T55 - ANCARSL0T5 35 BK 4 (1)H (2)EM	LED	0-10V DIMMING 10%	277 V	48 VA	RECESSED	
J1	6' SUSPENDED LINEAR DIRECT LED FIXTURE	FINELITE	HP-4-P-D-6-H-835-F-96LG-277-SC-FC-1%-C1-FE-SW-LGD18W	LED	0-10V DIMMING 10%	277 V	43.2 VA	SUSPENDED	
J1E	6' SUSPENDED LINEAR DIRECT LED FIXTURE	FINELITE	HP-4-P-D-6-H-835-F-96LG-277-SC-FC-1%-C1-FE-SW-LGD18W	LED	0-10V DIMMING 10%	277 V	43.2 VA	SUSPENDED	
K1	15' LED STRIP LIGHT WALL GRAZER WITH DIRECTIONAL CONTROL	VODE	107-WG-01-15'-15'-CC-12"-IP-AE-2-0-Z-LO-309-D1-0-A-L-0	LED	0-10V DIMMING 10%	277 V	57 VA	SUSPENDED	
P1	SMALL DRUM LED PENDANT	SHAPER	143-24P1A-L835-UNV-NA-24	LED	0-10V DIMMING 10%	277 V	37 VA	SUSPENDED	
P2	DECORATIVE LED PENDANT DOWNLIGHT	EUREKA	4277D-14-LED-35-80-277-DV-AC-BLKE-BLK-BBF-WH-3981EA	LED	0-10V DIMMING 10%	277 V	15 VA	SUSPENDED	
P3	14" SUSPENDED DECORATIVE PENDANT	BOOK LIGHTING	WOOZLE PENDANT 14IN / LVGV1-1500-XXX	LED	0-10V DIMMING 10%	277 V	12 VA	SUSPENDED	
P4	14" SUSPENDED DECORATIVE PENDANT, 35.5" DIAMETER	EUREKA	4278D1-14 MILL	LED	0-10V DIMMING 10%	277 V	56 VA	SUSPENDED	
S1	4' SUSPENDED LINEAR FIXTURE	LITHONIA	CLX-L48-4000LM-SEF-RDL-MVOLT-EZ1-35K-80CR-N-LTAIR2-RIO-WH	LED	0-10V DIMMING 10%	277 V	32 VA	SUSPENDED	
S1E	4' SUSPENDED LINEAR FIXTURE	LITHONIA	CLX-L48-4000LM-SEF-RDL-MVOLT-EZ1-35K-80CR-N-LTAIR2-RIO-WH	LED	0-10V DIMMING 10%	277 V	32 VA	SUSPENDED	
S2	8' SUSPENDED LINEAR FIXTURE	LITHONIA	CLX-L96-8000LM-SEF-RDL-MVOLT-EZ1-35K-80CR-N-LTAIR2-RIO-WH	LED	0-10V DIMMING 10%	277 V	64 VA	SUSPENDED	
S2E	8' SUSPENDED LINEAR FIXTURE	LITHONIA	CLX-L96-8000LM-SEF-RDL-MVOLT-EZ1-35K-80CR-N-LTAIR2-RIO-WH	LED	0-10V DIMMING 10%	277 V	64 VA	SUSPENDED	
T1	LED TAPE LIGHT - 212FT	SOLID STATE LUMINAIRES	ECV-LWET1.5-1-35K-CR180-3080-WCL-1-ADBW2-90	LED	0-10V DIMMING 10%	277 V	742 VA	SURFACE	
W1	EXTERIOR WALL MOUNTED SCONCE FIXTURE	LITHONIA	AFF-PEL-DBL8XD-UVOLT-LTP-SDRT-WT	LED	0-10V DIMMING 10%	277 V	12 VA	SURFACE	
W2	EXTERIOR POLE LIGHT LED FIXTURE AND POLE	LITHONIA	RAD1 LED P3 40K SYM MVOLT RPA PE DBLXD / RSS 16 4B DM19RAD DDBXD	LED	0-10V DIMMING 10%	277 V	590 VA	POLE MOUNTED	CONTROLLED VIA PHOTOCELL
X2	EXIT SIGN - CEILING MOUNTED	SURE-LITES	ELX6-X-G-X-C	LED	0-10V DIMMING 10%	277 V	5 VA	CEILING	

LIGHTING FIXTURE SCHEDULE NOTES

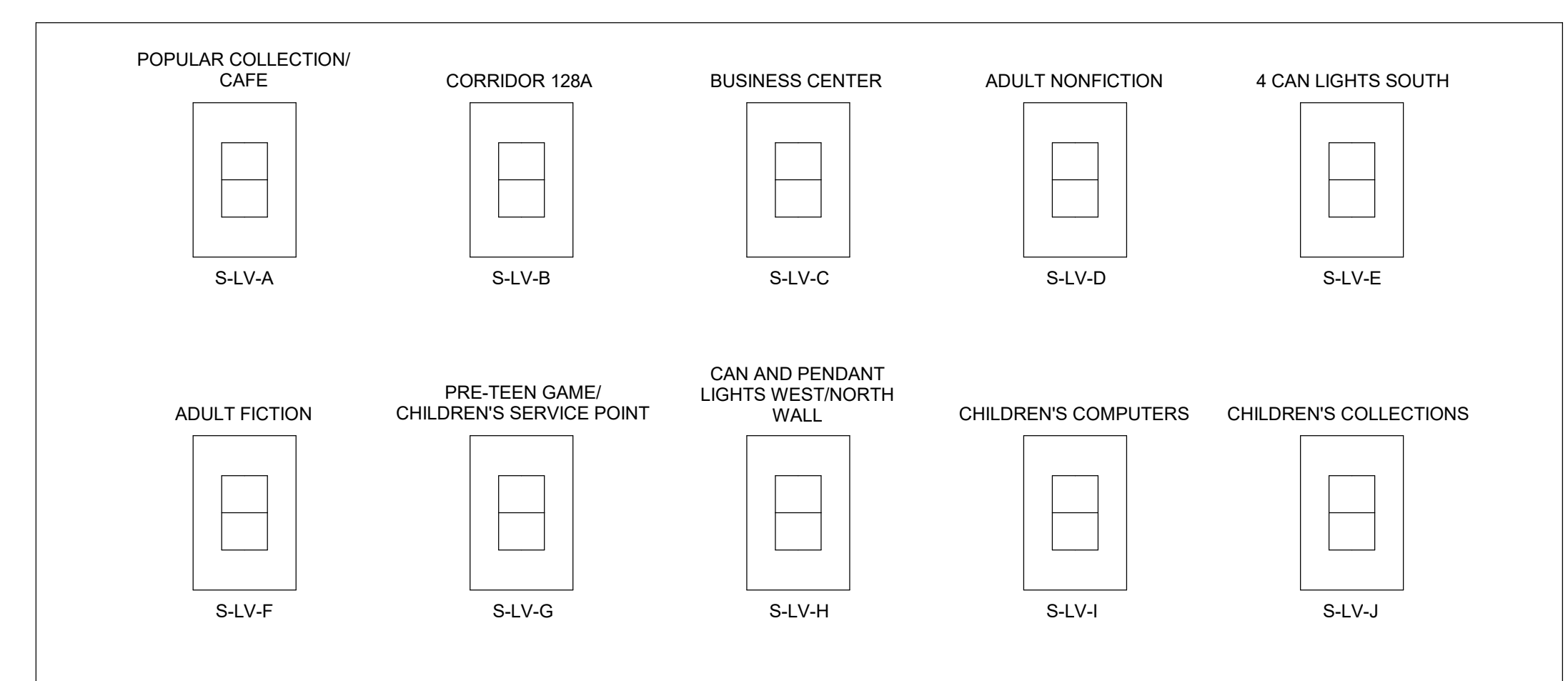
- A. FOR ALL SUSPENDED AND PENDANT FIXTURES IN ACT CEILINGS, PROVIDE MANUFACTURER'S SPACERS FOR REGULAR GRID MOUNTING AS REQUIRED.
- B. FOR ALL SUSPENDED AND PENDANT FIXTURES MOUNTED IN OPEN CEILING AT STRUCTURE ABOVE, PROVIDE SHALLOW, ROUND JUNCTION BOXES FOR LIGHT FIXTURE CANOPIES TO MOUNT TO. MOUNT ALL EXPOSED CONDUIT AS INCONSPICUOUS AS POSSIBLE. ALL CONDUIT TO BE RUN PARALLEL AND PERPENDICULAR TO BUILDING LINES. MINIMIZE LENGTH OF CONDUIT AS MUCH AS POSSIBLE. 1/2" CONDUIT IS ACCEPTABLE BETWEEN FIXTURES. GROUP CONDUITS TOGETHER AS MUCH AS POSSIBLE AND COORDINATE ROUTING WITH OTHER SYSTEMS.
- C. FOR ALL RECESSED DOWNLIGHTS, THE DRIVER SHALL BE ACCESSIBLE FROM BELOW THE CEILING WITHOUT THE USE OF A SCREWDRIVER. INSTALLATION SHALL ALLOW FOR THE DRIVER TO BE REMOVED AND LOWERED BELOW THE CEILING FOR FUTURE REPLACEMENT. CONTRACTOR SHALL PROVIDE LENGTH OF LEADS AS REQUIRED.
- D. CONTRACTOR SHALL CONFIRM VOLTAGE REQUIREMENTS OF ALL FIXTURES AND PROVIDE REQUIRED STEP-DOWN TRANSFORMERS TO ACCOMMODATE CIRCUITRY AND CONTROLS REQUIREMENTS.
- E. ALL EXTERIOR LIGHT FIXTURES SHALL BE UL DAMP LOCATION LISTED AND WHERE MOUNTED BELOW OVERHANG OR CANOPY, ALL OTHER EXTERIOR LIGHT FIXTURES SHALL BE WET LOCATION LISTED.

LIGHTING CONTROL GENERAL NOTES

- A. REFER TO ALL LTG PLANS, NOTES, CONTROL DETAILS, SEQUENCE OF OPERATIONS, AND SPECIFICATIONS FOR REQUIREMENTS. CONTRACTOR SHALL RELAY ALL INFORMATION IN THE SPECIFICATIONS AND DRAWINGS TO THOSE PREPARING PRICING FOR THE PROJECT. THIS INCLUDES LIGHTING CONTROL DETAILS, SEQUENCE OF OPERATIONS, AND OTHER RELATED DESIGN DOCUMENTATION. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF INCLUDING ALL COMPONENTS REQUIRED FOR A FULLY FUNCTIONING CONTROL SYSTEM. ALSO, FAILURE TO DO SO WILL NOT BE CAUSE FOR CHANGE ORDER REQUESTS DURING CONSTRUCTION.
- B. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY EQUIPMENT, DEVICES, WIRING, ETC TO ENSURE ACTUAL INSTALLATIONS AND PERFORMANCE OF THE SYSTEM MEETS THE DESIGN INTENT. IF ALTERNATIVE MANUFACTURER TO BASIS OF DESIGN IS SUBMITTED, CONTRACTOR SHALL PROVIDE ALL NECESSARY COMPONENTS FOR COMPLETE FULLY FUNCTIONAL SYSTEM TO MEET DESIGN INTENT.
- C. PROVIDE NUMBER OF ZONES PER BUILDING SEQUENCE OF OPERATIONS. WHERE SCENE CONTROLS ARE REQUIRED, SCENE SETTINGS SHALL BE CONFIRMED WITH THE OWNER PRIOR TO FINAL PROGRAMMING.
- D. POWER RACKS AND ROOM CONTROLLERS SHALL BE MOUNTED ABOVE THE CEILING IN THE ROOM THEY SERVE. LOCATE CONSISTENTLY THROUGHOUT THE BUILDING, ABOVE THE DOOR.
- E. ALL LIGHT FIXTURES ON EMERGENCY BACK-UP SHALL TURN ON FULL BRIGHTNESS DURING LOSS OF POWER REGARDLESS OF SWITCH POSITION OR LIGHTING CONTROL SYSTEM SETTINGS. PROVIDE UL924 DEVICE AS REQUIRED.
- F. PROVIDE OCCUPANCY TYPE (AUTO ON / AUTO OFF) OR VACANCY TYPE (MANUAL ON / AUTO OFF) SENSORS AS INDICATED IN THE PROJECT DOCUMENTS. ENSURE THEY ARE SET CONSISTENTLY THROUGHOUT THE BUILDING PRIOR TO OCCUPANCY.
- G. LIGHTING CONTROLS SHALL MATCH DIMMING TECHNOLOGY OF FIXTURES. CONTRACTOR SHALL VERIFY PRIOR TO ORDERING.
- H. BASIS OF DESIGN: **ACUITY NLIGHT**
- I. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ENGINEER'S REVIEW PRIOR TO ORDERING. INCLUDE WIRING DETAILS AND PLANS WITH SWITCH TYPES, CABLING, AND ZONES INDICATED PROVIDE THE SERVICES OF THE MANUFACTURER TECHNICAL REPRESENTATIVE TO COMMISSION THE SYSTEM. COMMISSIONING SHALL INCLUDE PROGRAMMING, TESTING AND ADJUSTING SYSTEM TO MEET PROJECT REQUIREMENTS. PROVIDE TRAINING TO TENANT SELECTED PERSONNEL. PROVIDE CLOSEOUT LETTER AT COMPLETION OF COMMISSIONING TO DELCLARE THAT IT HAS BEEN DONE AND THAT SYSTEM IS OPERATIONAL. A SECOND SITE VISIT SHALL BE INCLUDED TO MAKE ADJUSTMENTS AT OWNER'S REQUEST.
- J. PROVIDE ADDITIONAL 2 YEAR PRODUCT WARRANTY BEYOND THE STANDARD 1 YEAR PROJECT WARRANTY FOR A TOTAL OF THREE YEARS.



1 COMMON AREA INTERIOR/EXTERIOR LIGHTING CONTROL DIAGRAM
E600 NOT TO SCALE



2 SWITCHBANK DETAIL - LIBRARY OPEN AREAS
E600 NOT TO SCALE

- 1. ALL SWITCHES SHALL SERVE AS OCCUPANCY OVERRIDE SWITCHES AS WELL AS LOCAL CONTROL AND DIMMING.
- 2. INSTALL PERMANENT DURABLE LABEL ON WALL ABOVE EACH SWITCH.

LIGHTING CONTROL SEQUENCE OF OPERATIONS

SPACE TYPE	OCC SENSOR SETPOINT	LUMEN SENSOR SETPOINT	NORMAL BUSINESS HOURS		AFTER HOURS OVERRIDE		AUTOMATIC DEMAND RESPONSE
			LIGHTING	RECEPTACLES	LIGHTING	DURATION	
PRIVATE OFFICES, WORK ROOMS, FOCUS ROOMS	MANUAL ON, 15 MIN OFF	-	MANUAL 100% ON THEN DIM CONTROL, AUTO OFF VIA OCC SENSOR	N/A	-	-	NOT REQUIRED
MECHANICAL/ELECTRICAL/DATA ROOMS	-	-	ON/OFF PER LOCAL SWITCH	N/A	-	-	NOT REQUIRED
SERVICE SUPPORT ROOMS (JANITORS, WELL, ETC.)	MANUAL ON, 15 MIN OFF	-	LOCAL OCCUPANCY SENSOR AND SWITCH, 100% ON WHEN ANY OCC SENSOR IS ACTIVATED.	N/A	-	-	NOT REQUIRED
RESTROOMS	AUTOMATIC ON 30 MIN OFF	-	LOCAL OCCUPANCY SENSOR, NO SWITCH, 100% ON WHEN ANY OCC SENSOR IS ACTIVATED.	N/A	-	-	NOT REQUIRED
ALL CONFERENCE ROOMS, AND MEETING ROOMS	MANUAL ON, 30 MIN OFF	-	AUTOMATIC OFF VIA OCC SENSOR(S); LOCAL MANUAL DIMMING CONTROLS.	N/A	-	-	NOT REQUIRED
MAIN SERVICE POINT	AUTOMATIC ON 30 MIN OFF	-	AUTOMATIC OFF VIA OCC SENSOR(S); LOCAL MANUAL DIMMING CONTROLS.	N/A	-	-	NOT REQUIRED
EXTERIOR LED TAPE LIGHT (BUILDING CLERESTORY)	-	-	CONTROLLED VIA PHOTOCELL.	N/A	-	-	NOT REQUIRED
EXTERIOR PATH LIGHTING	-	-	CONTROLLED VIA PHOTOCELL.	N/A	-	-	NOT REQUIRED
ZONE RELAY CONTROLLED AREAS	-	-	SCHEDULE ON/OFF, OVERRIDE AND DIMMING SWITCH	N/A	YES	2 HOURS	NOT REQUIRED

- NOTES:
1. THE INTENT OF THIS SCHEDULE IS TO CLARIFY THE PROGRAMMING AND FUNCTION OF CONTROLS THAT MAY BE LOCATED IN EACH SPACE TYPE.
 2. THIS SCHEDULE IS NOT INTENDED COMPLETELY DEFINE WHICH CONTROLS ARE TO BE INSTALLED IN EACH SPACE TYPE. REFER TO PLANS AND DETAILS FOR ADDITIONAL CLARIFICATION.
 3. ALL ZONING, SETPOINTS AND TIME SCHEDULES TO BE VERIFIED WITH OWNER PRIOR TO PROGRAMMING.



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ISSUE FOR
BID SET

ISSUE DATE
03.28.2024

REVISIONS
NO. REASON DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
RCK
PROJECT NAME
NORTHCHASE BRANCH LIBRARY

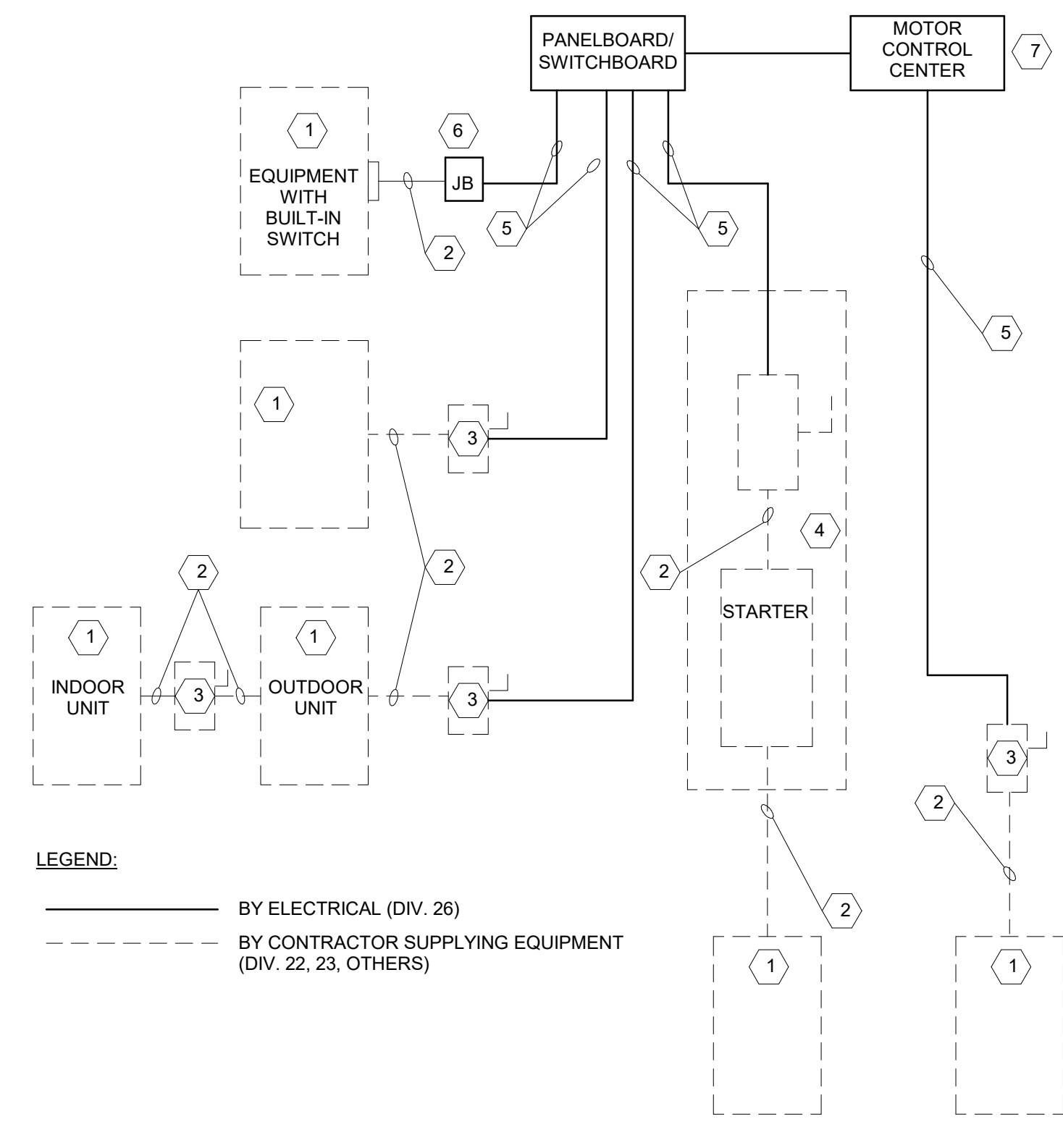
PROJECT NO.
514.18349.00

SHEET TITLE
LIGHTING FIXTURE SCHEDULE

SHEET NUMBER
E600

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MECHANICAL EQUIPMENT SCHEDULE												
EQUIP.	HP	KW	FLA	MCA	MOCP	VOLT	PHASE	VFD	DISCONNECT SIZE	CONDUCTORS	COMMENTS	
BP-1	5		37 A	46 A	50 A	480 V	3		PROVIDED BY DIVISION 22/23	(4)#10, #6 (G) IN 3/4"		
EF-1	1/4		3 A	3 A	15 A	277 V	1	Yes	PROVIDED BY DIVISION 22/23	(4)#12, #12 (G) IN 3/4"		
EF-2	1/4		3 A	3 A	15 A	277 V	1	Yes	PROVIDED BY DIVISION 22/23	(4)#12, #12 (G) IN 3/4"		
EUH-1-1		3.3	16 A	20 A	20 A	208 V	1	No	PROVIDED BY DIVISION 22/23	(2)#12, #12 (G) IN 3/4"		
EUH-1-2		3.3	16 A	20 A	20 A	208 V	1	No	PROVIDED BY DIVISION 22/23	(2)#12, #12 (G) IN 3/4"		
EWH-1	11		31 A	38 A	40 A	208 V	3	No	PROVIDED BY DIVISION 22/23	(4)#8, #10 (G) IN 3/4"		
EWH-2-1		3.5	29 A	30 A	30 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #12 (G) IN 3/4"		
EWH-2-2		3.5	29 A	30 A	30 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #12 (G) IN 3/4"		
EWH-3-1		9	33 A	40 A	40 A	277 V	1	No	PROVIDED BY DIVISION 22/23	(2)#8, #10 (G) IN 3/4"		
EWH-3-2		9	33 A	40 A	40 A	277 V	1	No	PROVIDED BY DIVISION 22/23	(2)#8, #10 (G) IN 3/4"		
FPB-1-01			20 A	24 A	25 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#10, #10 (G) IN 3/4"		
FPB-1-02			11 A	14 A	15 A	277 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
FPB-1-03			11 A	14 A	15 A	277 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
FPB-1-04			18 A	22 A	25 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#12, #12 (G) IN 3/4"		
FPB-1-05A			15 A	18 A	20 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#12, #12 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
FPB-1-05B			15 A	18 A	20 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#12, #12 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
FPB-1-06			14 A	18 A	20 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(2)#12, #12 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
FPB-1-07			14 A	18 A	20 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(2)#12, #12 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
FPB-1-08			18 A	22 A	25 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#10, #10(G) IN 3/4" FOR EACH UNIT.	
FPB-1-09A			23 A	29 A	30 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#10, #10(G) IN 3/4" FOR EACH UNIT.	
FPB-1-09B			23 A	29 A	30 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#10, #10(G) IN 3/4" FOR EACH UNIT.	
FPB-2-01			12 A	15 A	15 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#6, #10 (G) IN 1"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
FPB-2-02A			12 A	15 A	15 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#6, #10 (G) IN 1"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
FPB-2-02B			12 A	15 A	15 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#6, #10 (G) IN 1"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
FPB-2-03			12 A	15 A	15 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#12, #12 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
FPB-2-04			11 A	13 A	15 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#12, #12 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
FPB-2-05			10 A	13 A	15 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#12, #12 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
HVLS-1-1			6 A	8 A	15 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
HVLS-1-2			6 A	8 A	15 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
HVLS-1-3			6 A	8 A	15 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
HVLS-1-4			6 A	8 A	15 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
HVLS-1-5			6 A	8 A	15 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
HVLS-1-6			6 A	8 A	15 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
HVLS-1-7			6 A	8 A	15 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
HVLS-1-8			6 A	8 A	15 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
HVLS-1-9			6 A	8 A	15 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
IDU-1A			3 A	4 A	15 A	208 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	IDU IS FED FROM ODU ON ROOF	
IDU-1B			3 A	4 A	15 A	208 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	IDU IS FED FROM ODU ON ROOF	
IDU-2			3 A	4 A	15 A	208 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	IDU IS FED FROM ODU ON ROOF	
IDU-3			3 A	4 A	15 A	208 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	IDU IS FED FROM ODU ON ROOF	
ODU-1A			15 A	19 A	25 A	208 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"		
ODU-1B			15 A	19 A	25 A	208 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"		
ODU-2			15 A	19 A	25 A	208 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"		
ODU-3			15 A	19 A	25 A	208 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"		
RP-1	1/6		2 A	3 A	15 A	120 V	1	No	PROVIDED BY DIVISION 22/23	(2)#12, #12 (G) IN 3/4"		
RTU-1			122 A	134 A	150 A	480 V	3	Yes	PROVIDED BY DIVISION 22/23	(4)#1/0, #6 (G) IN 2"		
RTU-2			122 A	134 A	150 A	480 V	3	Yes	PROVIDED BY DIVISION 22/23	(4)#2/0, #6 (G) IN 2"		
VAV-1-01			9 A	11 A	15 A	277 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
VAV-1-02			9 A	11 A	15 A	277 V	1	No	PROVIDED BY DIVISION 22/23	(2)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (2)#12, #12(G) IN 3/4" FOR EACH UNIT.	
VAV-1-03			7 A	8 A	15 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#12, #12 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
VAV-1-04			5 A	7 A	15 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#12, #12 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
VAV-2-01			14 A	18 A	20 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
VAV-2-02			4 A	5 A	15 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#10, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
VAV-2-03A			14 A	18 A	20 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#8, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	
VAV-2-03B			14 A	18 A	20 A	480 V	3	No	PROVIDED BY DIVISION 22/23	(4)#8, #10 (G) IN 3/4"	CONDUCTORS COLUMN REPRESENT WIRING FOR CIRCUITS SERVING MULTIPLE UNITS. PROVIDE (4)#12, #12(G) IN 3/4" FOR EACH UNIT.	



D4 04 EQUIPMENT CONNECTION DETAIL
 E610 1/8" = 1'-0"

- GENERAL NOTES:**
- ALL POWER WIRING ASSOCIATED WITH DIVISION 22/23 (PLUMBING/MECHANICAL) SHALL BE DONE UNDER THE SCOPE OF WORK OF THE CONTRACTOR SUPPLYING THE EQUIPMENT.
 - ALL POWER DISCONNECT, VFD, AND SINGLE SPEED MANUAL STARTER DISCONNECT SWITCHES ASSOCIATED WITH DIVISION 22/23 (PLUMBING/MECHANICAL) SHALL BE FURNISHED AND INSTALLED UNDER THE SCOPE OF WORK OF THE CONTRACTOR SUPPLYING THE EQUIPMENT. WHERE MULTIPLE UNITS ARE FED BY THE SAME CIRCUIT, DISCONNECTS SHALL BE FUSIBLE TYPE.
 - EXCEPT AS MAY BE INDICATED ON THE DRAWINGS AND/OR HEREINAFTER NOTED, ALL CONTROL WIRING, INCLUDING ALL TEMPERATURE CONTROL WIRING, INTERLOCKING, START-UP WIRING, TOGETHER WITH CONDUIT FOR SAME WILL BE FURNISHED AND INSTALLED UNDER DIVISION 22/23 BY THE CONTRACTOR SUPPLYING THE EQUIPMENT. THIS INCLUDES, BUT IS NOT LIMITED TO, WIRING TO LOW VOLTAGE THERMOSTATS, DAMPER MOTORS, AQUASTATS, FIRESTATS, PUSHBUTTONS, SELECTOR SWITCHES, AND CONTROL PANEL. ALL DISCONNECT SWITCHES FOR CONTROL WIRING SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 22/23 BY THE CONTRACTOR SUPPLYING THE EQUIPMENT.
 - WORK OF DIVISION 22/23 SHALL INCLUDE FURNISHING AND SETTING MOTORS.
 - ALL VFD'S, MAGNETIC STARTERS AND OVERLOAD ELEMENTS WILL BE FURNISHED UNDER DIVISION 22/23 BY THE CONTRACTOR SUPPLYING THE EQUIPMENT. OVERLOAD ELEMENTS IN ALL STARTERS SHALL BE SELECTED ACCORDING TO ACTUAL MOTOR NAMEPLATE FULL LOAD CURRENT. RESPONSIBILITY FOR THIS COORDINATION SHALL LIE WITH THE DIVISION UNDER WHICH THE PARTICULAR VFD/STARTER WAS FURNISHED.
 - FIRESTATS AND WALL MOUNTED THERMOSTATS WHICH INTERRUPT LINE VOLTAGE POWER CIRCUITS TO MOTORS WILL BE FURNISHED AND SET UNDER DIVISION 23, AND ELECTRICALLY CONNECTED IN THE BRANCH CIRCUIT WIRING AS WORK OF DIVISION 26.
 - ALL POWER AND CONTROL CONDUIT ROUTED TO EXTERIOR ON-GRADE MECHANICAL EQUIPMENT SHALL BE ROUTED UNDERGROUND UNLESS OTHERWISE NOTED. COORDINATE STUB-UP LOCATIONS PRIOR TO ROUGH-IN.
 - ALL POWER AND CONTROL CONDUIT ROUTED TO ROOF MECHANICAL EQUIPMENT SHALL BE COORDINATED WITH ARCHITECT AND GENERAL CONTRACTOR TO LIMIT THE NUMBER OF ROOF PENETRATIONS. COORDINATED STUB-UP LOCATIONS PRIOR TO ROUGH-IN.
 - VFD'S SHALL BE MOUNTED IMMEDIATELY ADJACENT TO THE EQUIPMENT SERVED. IF FIELD CONDITIONS REQUIRE REMOTE MOUNTING OF VFD'S, THE EQUIPMENT SHALL BE PROVIDED WITH A MOTOR SHAFT GROUNDING RING AND DISCONNECTING MEANS WITH AUXILIARY CONTACTS TO BE VISIBLE.
- KEYED NOTES:**
- EQUIPMENT OF TRADES OTHER THAN ELECTRICAL.
 - CONDUIT & WIRING OR CABLE BY MECHANICAL CONTRACTOR, CONTROLS CONTRACTOR, OR OTHER TRADES. IN ALL CASES THE EQUIPMENT CONTRACTOR (DIV. 22/23) SHALL MAKE FINAL CONNECTIONS, START UP EQUIPMENT AND TEST EQUIPMENT. COORDINATE CONNECTIONS WITH DIV. 26.
 - IF ANY ADDITIONAL DISCONNECTS ARE REQUIRED BY NEC, IT SHALL BE PROVIDED AND INSTALLED BY THE EQUIPMENT CONTRACTOR (DIV. 22/23).
 - A COMBINATION DISCONNECT/STARTER MAY BE USED IN LIEU OF A VFD, ONLY WHERE NOTED ON DRAWINGS. LOCATE PER MECHANICAL PLANS.
 - FEEDER CIRCUIT WIRING AND CONDUIT BY ELECTRICAL CONTRACTOR.
 - A JUNCTION BOX MAY BE SHOWN ON THE ELECTRICAL PLANS FOR SOME EQUIPMENT. IF NO STARTER OR DISCONNECT IS SUPPLIED, A JUNCTION BOX SHALL BE INSTALLED ADJACENT TO EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO JUNCTION BOX. LOAD SIDE WIRING WILL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.
 - FOR PROJECTS UTILIZING MOTOR CONTROL CENTERS (MCC), THE STARTER, CB, OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL CONTRACTOR.

LITTLE
 OVERSEEN ARCHITECTURAL CONSULTING

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 Durham, NC 27701
 (919) 474-2500

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ISSUE FOR BID SET

ISSUE DATE: 03.28.2024

REVISIONS:

NO.	REASON	DATE

PROJECT TEAM:
 PRINCIPAL IN CHARGE: Jerry Guerrier, AIA
 PROJECT MANAGER: Charlotte Hagen, AIA
 DESIGN TEAM: RCK
 PROJECT LEAD: RCK

NORTHCHASE BRANCH LIBRARY

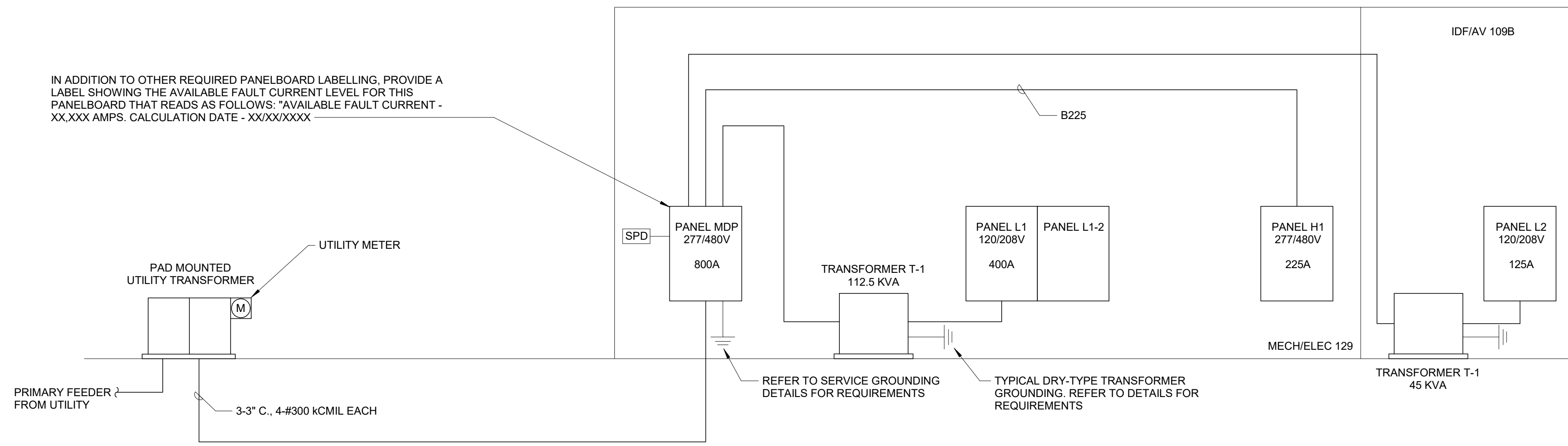
PROJECT NO.: 514.18349.00

SHEET TITLE: MECHANICAL EQUIPMENT POWER SCHEDULE

SHEET NUMBER: E610

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1 ELECTRICAL RISER DIAGRAM - NEW WORK
E700 NOT TO SCALE

KVA Rating	Primary Section 480V Delta				Secondary Section 208Y/120V				GROUND
	FLA	125% FLA	OC Protection	Feeder Size	FLA	125% FLA	OC Protection	Feeder Size	
3	4	5	15 A	3#12, 1#12G IN 1/2"C	8	10	20 A	4#12, 1#12G IN 1/2"C	1#8:1/2"C
6	7	9	15 A	3#12, 1#12G IN 1/2"C	17	21	25 A	4#10, 1#10G IN 1/2"C	1#8:1/2"C
9	11	14	15 A	3#12, 1#12G IN 1/2"C	25	31	35 A	4#8, 1#10G IN 1"C	1#8:1/2"C
15	18	23	25 A	3#10, 1#10G IN 3/4"C	42	52	60 A	4#6, 1#8G IN 1-1/4"C	1#8:1/2"C
30	36	45	45 A	3#8, 1#10G IN 3/4"C	83	104	100 A	4#1, 1#6G IN 1-1/2"C	1#6:1/2"C
45	54	68	70 A	3#4, 1#8G IN 1"C	125	156	150 A	4#1/0, 1#6G IN 2"C	1#6:1/2"C
75	90	113	125 A	3#1/0, 1#6G IN 1-1/2"C	208	260	250 A	4-250KCMIL, 1#2G IN 3"C	1#2:3/4"C
112.5	135	169	175 A	3#2/0, 1#6G IN 2"C	312	390	400 A	2 SETS OF (4-3/0, #1/0G IN 2-1/2"C) OR 4-600KCMIL, 1#1/0G IN 3-1/2"C	1#1/0:3/4"C
150	180	226	225 A	3#4/0, 1#4G IN 2-1/2"C	416	520	500 A	2 SETS OF (4-250KCMIL, 1#1/0G IN 3"C)	1#1/0:1"C
225	271	338	350 A	3-500KCMIL, 1#3G IN 3"C	625	781	800 A	3 SETS OF (4-300KCMIL, 1#2/0G IN 3-1/2"C) OR 2 SETS OF (4-600KCMIL, 1#3/0G IN 4"C)	1#2/0:1-1/4"C
300	361	451	450 A	2 SETS OF (3-4/0, 1#1G IN 2-1/2"C)	833	1041	1000 A	3 SETS OF (4-400KCMIL, 1#3/0G IN 3"C)	1#3/0:1/2"C
500	601	752	800 A	2 SETS OF (3-500KCMIL, 1#1/0G IN 3-1/2"C)	1388	1735	1600 A	5 SETS OF (3-400KCMIL, 1#3/0G IN 3"C)	1#3/0:1/2"C

FEEDER SCHEDULE B										
4 WIRE + EGC (100% NEUTRAL)										
TAG	MINIMUM CONDUIT	Cu CONDUCTORS PER CONDUIT						EGC	QTY	AWG
		PHASE		NEUTRAL		EGC				
AMPS	QTY	SIZE	QTY	AWG	QTY	AWG	QTY	AWG	AWG	
B20	1	3/4	3	12	1	12	1	12	12	
B30	1	3/4	3	10	1	10	1	10	10	
B40	1	1	3	8	1	8	1	10	10	
B50	1	1-1/4	3	6	1	6	1	10	10	
B70	1	1-1/4	3	4	1	4	1	8	8	
B80	1	1-1/2	3	3	1	3	1	8	8	
B100	1	2	3	1	1	1	1	8	8	
B125	1	2	3	1/0	1	1/0	1	6	6	
B150	1	2	3	1/0	1	1/0	1	6	6	
B175	1	2	3	2/0	1	2/0	1	6	6	
B200	1	2-1/2	3	3/0	1	3/0	1	6	6	
B225	1	2-1/2	3	4/0	1	4/0	1	4	4	
B250	1	3	3	250	1	250	1	4	4	
B300	1	3-1/2	3	350	1	350	1	4	4	
B350	1	4	3	500	1	500	1	2	2	
B400	2	2-1/2	3	3/0	1	3/0	1	3	3	
B500	2	3	3	250	1	250	1	1	1	
B600	2	3-1/2	3	350	1	350	1	1	1	
B700	2	4	3	500	1	500	1	1/0	1/0	
B800	3	3-1/2	3	300	1	300	1	1/0	1/0	
B1000	3	3-1/2	3	400	1	400	1	2/0	2/0	
B1200	4	3-1/2	3	350	1	350	1	3/0	3/0	
B1600	5	3-1/2	3	400	1	400	1	4/0	4/0	

FEEDER SCHEDULE A										
3 WIRE + EGC										
TAG	MINIMUM CONDUIT	Cu CONDUCTORS PER CONDUIT						EGC	QTY	AWG
		PHASE		EGC		EGC				
AMPS	QTY	SIZE	QTY	AWG	QTY	AWG	QTY	AWG	AWG	
A20	1	3/4	3	12	1	12	1	12	12	
A30	1	3/4	3	10	1	10	1	10	10	
A40	1	1	3	8	1	8	1	10	10	
A50	1	1	3	6	1	6	1	10	10	
A70	1	1-1/4	3	4	1	4	1	8	8	
A80	1	1-1/4	3	2	1	8	1	8	8	
A100	1	1-1/2	3	1	1	8	1	8	8	
A125	1	1-1/2	3	1/0	1	6	1	6	6	
A150	1	2	3	1/0	1	6	1	6	6	
A175	1	2	3	2/0	1	6	1	6	6	
A200	1	2	3	3/0	1	6	1	6	6	
A225	1	2-1/2	3	4/0	1	4	1	4	4	
A250	1	2-1/2	3	250	1	4	1	4	4	
A300	1	3	3	350	1	4	1	4	4	
A350	1	3-1/2	3	500	1	2	1	2	2	
A400	2	2-1/2	3	3/0	1	2	1	2	2	
A500	2	2-1/2	3	250	1	1	1	1	1	
A600	2	3	3	350	1	1	1	1	1	
A700	2	3-1/2	3	500	1	1/0	1	1/0	1/0	
A800	3	3	3	300	1	1/0	1	1/0	1/0	
A1000	3	3	3	400	1	2/0	1	2/0	2/0	
A1200	3	3	3	350	1	3/0	1	3/0	3/0	
A1600	4	3	3	400	1	4/0	1	4/0	4/0	



ISSUE FOR
BID SET

ISSUE DATE
03.28.2024

REVISIONS
NO. REASON DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
PROJECT MANAGER
Charlotte Hagen, AIA
DESIGN TEAM
RCK
PROJECT NAME
NORTHCHASE BRANCH LIBRARY

PROJECT NO.
514.18349.00
SHEET TITLE
SINGLE LINE DIAGRAM

SHEET NUMBER
E700

2 FEEDER SCHEDULES
E700 1/8" = 1'-0"

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Branch Panel: MDP

Location: MECH / ELEC 129
Supply From: MDP
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 30,000
Mains Type: MCB
Mains Rating: 800 A
MCB Rating: 800 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	BP-1	50 A	3	10.34	8.15			40 A	HVAC: FPB-1-05A,-1-05B	2
3	--	--	--		10.34	8.15		--	--	4
5	--	--	--			10.34	8.15	--	--	6
7	HVAC: FPB-1-06,-1-07	45 A	3	7.82	10.23			50 A	HVAC: FPB-2-01,-2-02A,-2-02B	8
9	--	--	--		7.82	10.23		--	--	10
11	--	--	--			7.82	10.23	--	--	12
13	HVAC: VAV-2-03A,-2-03B	40 A	3	8	9.06			45 A	HVAC: FPB-2-03,-2-04,-2-05	14
15	--	--	--			8	9.06	--	--	16
17	--	--	--				8	9.06	--	18
19	HVAC: RTU-1	150 A	3	33.87	33.87			150 A	HVAC: RTU-2	20
21	--	--	--		33.87	33.87		--	--	22
23	--	--	--			33.87	33.87	--	--	24
25	SPACE	--	3	--	--			3	SPACE	26
27	--	--	--		--	--	--	--	--	28
29	--	--	--		--	--	--	--	--	30
31	PANEL H1	400 A	3	51.51	0			60 A	SURGE PROTECTION DEVICE (SPD)	32
33	--	--	--		46.88	0		--	--	34
35	--	--	--			38.93	0	--	--	36
37	TRANSFORMER T-1	125 A	3	23.39	8.51			100 A	TRANSFORMER T-2	38
39	--	--	--		21.17	10.73		--	--	40
41	--	--	--			24.83	8.75	--	--	42
Total Load:				204.72 kVA	200.1 kVA	193.83 kVA				
Total Amps:				743 A	726 A	700 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	544.13 kVA	100.00%	544.13 kVA	
Lighting	11.69 kVA	100.00%	11.69 kVA	Total Conn. Load: 598.64 kVA
Other	2 kVA	100.00%	2 kVA	Total Est. Demand: 588.79 kVA
Receptacle	29.7 kVA	66.84%	19.85 kVA	Total Conn. Current: 720 A
Misc Load	11.16 kVA	100.00%	11.16 kVA	Total Est. Demand Current: 708 A

Notes:

1. PROVIDE SERVICE RATED SURGE PROTECTION DEVICE. REFER TO SPECIFICATIONS FOR RATING REQUIREMENTS. PROVIDE INTEGRAL OR SEPARATE DEVICE. CONFIRM CIRCUIT BREAKER SIZE ACCORDING TO MANUFACTURERS RECOMMENDATIONS.

Branch Panel: H1

Location: MECH / ELEC 129
Supply From: MDP
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	L: PLAN MIDDLE	20 A	1	2.58	3.14			1	20 A L: PLAN NORTH	2
3	L: PLAN WEST	20 A	1		2.61	2.79		1	20 A L: PLAN SOUTH (ADULT NON-FICTION)	4
5	L: EXTERIOR PATH LIGHTING	20 A	1			0.59	5.82	1	30 A HVAC: FPB-1-02,-1-03	6
7	HVAC: FPB-1-01	25 A	3	5.4	3.33			3	20 A HVAC: VAV-1-03,-1-04	8
9	--	--	--		5.4	3.33		--	--	10
11	--	--	--			5.4	3.33	--	--	12
13	HVAC: FPB-1-08	25 A	3	5.08	5.16			3	25 A HVAC: VAV-2-01,-2-02	14
15	--	--	--			5.08	5.16	--	--	16
17	--	--	--				5.08	5.16	--	18
19	HVAC: FPB-1-09B	30 A	3	6.42	6.42			3	30 A HVAC: FPB-1-09A	20
21	--	--	--		6.42	6.42		--	--	22
23	--	--	--			6.42	6.42	--	--	24
25	HVAC: VAV-1-01,-1-02	25 A	1	4.99	9			1	40 A EWH-3-2	26
27	EW-3-1	40 A	1		9	0.72		1	20 A HVAC: EF-2	28
29	HVAC: EF-1	20 A	1			0.72	0	1	20 A SPARE	30
31	SPARE	20 A	1	0	0			1	20 A SPARE	32
33	SPARE	20 A	1		0	0		1	20 A SPARE	34
35	SPARE	20 A	1			0	0	1	20 A SPARE	36
37	SPACE	--	1	--	--			1	SPACE	38
39	SPACE	--	1	--	--			1	SPACE	40
41	SPACE	--	1	--	--			1	SPACE	42
Total Load:				51.51 kVA	46.88 kVA	38.93 kVA				
Total Amps:				190 A	174 A	141 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	125.66 kVA	100.00%	125.66 kVA	
Lighting	11.69 kVA	100.00%	11.69 kVA	Total Conn. Load: 137.32 kVA
				Total Est. Demand: 137.32 kVA
				Total Conn. Current: 165 A
				Total Est. Demand Current: 165 A

Notes:

Branch Panel: L1

Location: MECH / ELEC 129
Supply From: T-1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MCB
Mains Rating: 400 A
MCB Rating: 400 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	R: QUAD MDF 131	20 A	1	0.36	0.36			1	20 A R: QUAD MDF 131	2
3	R: QUAD MDF 131	20 A	1		0.36	0.18		1	20 A R: RISER ROOM 145	4
5	R: STAFF RESTROOM 132	20 A	1			0.18	0.54	1	20 A R: BREAK ROOM 134/DONATION STOR 135	6
7	R: BREAKROOM 134	20 A	1	0.36	0.18			1	20 A R: BOT MICROWAVE BREAK ROOM 134 (GFI)	8
9	R: TOP MICROWAVE BREAK ROOM 134 (GFI)	20 A	1		0.18	0.18		1	20 A R: REFRIGERATOR BREAK ROOM 134 (GFI)	10
11	R: DESKS WORK ROOM 130	20 A	1			0.72	0.36	1	20 A R: WORK ROOM 130 BOOK DROP AREA	12
13	R: WORK ROOM 130	20 A	1	0.9	0.72			1	20 A R: WORK ROOM 130 DESKS	14
15	R: STAFF MEETING ROOM 137	20 A	1		0.9	0.18		1	20 A R: COPY/PRINTER WORK ROOM 130	16
17	R: BRANCH MANAGER 136	20 A	1			0.54	0.54	1	20 A R: SENIOR LIBRARIAN 135	18
19	R: MEN 141/WOMEN 139	20 A	1	0.36	0.18			1	20 A R: EWC (GFI)	20
21	R: COFFEE MACHINE CAFE 142 (GFI)	20 A	1		0.18	0.36		1	20 A R: COUNTERTOPS CAFE 142	22
23	R: FLOORBOXES CAFE 142	20 A	1			0.72	0.72	1	20 A R: CAFE 142/POPULAR COLLECT 143	24
25	R: MECH/ELEC 129	20 A	1	0.36	0.18			1	20 A R: JAN. 140	26
27	R: VENDING CORRIDOR 128 (GFI)	20 A	1		0.18	0.18		1	20 A R: VENDING CORRIDOR 128 (GFI)	28
29	R: STORAGE 126A/ADULT STORAGE 128	20 A	1			0.9	0.54	1	20 A R: WORKROOM/STOR. 126	30
31	R: ADULT/REFERENCE LIBRARIAN 124	20 A	1	0.36	0.36			1	20 A R: SELF CHECKOUT DESKS	32
33	R: MAIN SERVICE POINT	20 A	1		0.9	0.36		1	20 A R: HOLDS WALL MONITOR	34
35	R: MEDIUM MEETING 127	20 A	1			0.72	0.54	1	20 A R: BUSINESS CENTER 120	36
37	R: SMALL MEETING 123, 122	20 A	1	0.72	0.54			1	20 A R: FLRBOX/WALL MEDIUM MEETING 127	38
39	R: FLRBOX COMPUTERS 121	20 A	1		0.72	0.54		1	20 A R: FLRBOX/WALL MEDIUM MEETING 125	40
41	R: WALLS NONFICTION 119	20 A	1			1.08	0.72	1	20 A R: MEDIUM MEETING 125	42
43	R: WALLS ADULT FICTION 113	20 A	1	0.9	0.72			1	20 A R: FLRBOX COMPUTERS 121	44
45	R: FLRBOX ADULT NONFICTION 119	20 A	1		0.54	0.36		1	20 A R: COMPUTER SERVICE POINT 153	46
47	R: WALLS NONFICTION 119/FICTION 113	20 A	1			1.08	0.36	1	20 A R: FLRBOX FOR NONFICTION KIOSK	48
49	R: SMALL MEETING 117	20 A	1	0.36	0.54			1	20 A R: TEEN COLLECTION 110	50
51	R: FLRBOX/MONITOR TEEN MULTIMEDIA 111	20 A	1		0.72	1.08		1	20 A R: HUDDLE ROOMS 114, 115, 116	52
53	R: SMALL MEETING 118	20 A	1			0.72	0.54	1	20 A R: MONITOR PRETEEN GAMING 144	54
55	R: FLRBOX FOR FICTION KIOSK	20 A	1	0.72	0.5			1	20 A R: MOTORIZED DOOR VESTIBULE	56
57	R: ROOFTOP RECEPTACLES	20 A	1		0.36	2.24		2	25 A HVAC: ODU-1B/IDU-1B	58
59	MOTORIZED DOOR VESTIBULE	20 A	1			0.5	2.24	--	--	60
61	HVAC: ODU-1A/IDU-1A	25 A	2	2.24	2.24			2	25 A HVAC: ODU-3/IDU-3	62
63	--	--	--		2.24	2.24		--	--	64
65	HVAC: ODU-2/IDU-2	25 A	2			2.24	2.34	2	20 A HVAC: EUH-1-1	66
67	--	--	--		2.24	2.34		--	--	68
69	EW-1	40 A	3		3.67	2.34		2	20 A HVAC: EUH-1-2	70
71	--	--	--			3.67	2.34	--	--	72
73	--	--	--		3.67	1		1	20 A L: MONUMENT SIGN	74
75	SPARE	20 A	1			0	0	1	20 A SPARE	76
77	SPARE	20 A	1				0	1	20 A SPARE	78
79	SPARE	20 A	1	0	0			1	20 A SPARE	80
81	SPARE	20 A	1		0	--		1	--	82
83	SPARE	20 A	1			0	--	1	--	84
Total Load:				23.39 kVA	21.17 kVA	24.83 kVA				
Total Amps:				198 A	176 A	210 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	38.24 kVA	100.00%	38.24 kVA	
Other	2 kVA	100.00%	2 kVA	Total Conn. Load: 69.4 kVA
Receptacle	21.6 kVA	73.15%	15.8 kVA	Total Est. Demand: 63.6 kVA
Misc Load	7.56 kVA	100.00%	7.56 kVA	Total Conn. Current: 193 A
				Total Est. Demand Current: 177 A

Notes:

1. "(GFI)" INDICATES GROUND FAULT INTERRUPTER CIRCUIT BREAKER

Branch Panel: L2

Location: IDF / AV ROOM 109B
Supply From: T-2
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14,000
Mains Type: MCB
Mains Rating: 125 A
MCB Rating: 125 A

Notes:

CKT	Circuit Description	Trip	Poles
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FIRE ALARM GENERAL NOTES

- A. PROVIDE ALL REQUIRED AND NECESSARY PANELS, BOARDS, APPLIANCES, WIRING, POWER SUPPLIES, PROGRAMMING, TELEPHONE CONNECTIONS, RACEWAY SYSTEMS, BACKBOXES, SUPPORT HARDWARE, INTERFACE WITH EQUIPMENT OF OTHER DIVISIONS AND THIS DIVISION, GROUNDING, INSTALLATION, DC SOURCE (BATTERY) BACKUP, COMMISSIONING, TESTING, SUBMITTALS, ETC., FOR A COMPLETE OPERATING SYSTEM IN COMPLIANCE WITH NFPA 101, 70, 72 AND OTHER RELATED CODES.
B. REFER TO PLANS AND DETAILS FOR QUANTITIES AND LOCATIONS OF DEVICES AND EQUIPMENT.
C. EXACT LOCATIONS AND QUANTITIES OF APPLIANCES, PANELS, ETC. TO BE COORDINATED WITH AE TEAM PRIOR TO ROUGH-IN AND LAYOUT.
D. PROVIDE DETAILED SHOP DRAWING SUBMITTAL, INCLUDING BUT NOT LIMITED TO, A LAYOUT PLAN OF ALL APPLIANCES, CABLING, AND EQUIPMENT, INCLUDING POINT TO POINT WIRING DIAGRAM FOR SUBMITTAL TO AND REVIEW AND APPROVAL BY AE TEAM AND OSFM PRIOR TO COMMENCING WORK OR ORDERING MATERIAL.
E. ALL EQUIPMENT, ETC. INSTALLED IN OR OPEN TO THE CEILING CAVITY ENVIRONMENTAL AIR PLENUM SHALL BE RATED AND U.L. LISTED FOR SUCH INSTALLATIONS.
F. FIRE ALARM SYSTEM CABLING TYPE, RATING, SIZE AND QUANTITIES, TO BE AS DICTATED BY FIRE ALARM AND FIRE SUPPRESSION SYSTEMS MANUFACTURERS.
G. QUANTITIES OF NOTIFICATION APPLIANCES, INITIATING DEVICES, ETC., SHALL BE AS DELINEATED ON THE PLANS AND AS REQUIRED BY THE OFFICE OF THE STATE FIRE MARSHAL.
H. QUANTITIES OF POWER SUPPLY UNITS, MODULES, CONTROLLERS, CARDS, RELAYS, ETC., SHALL BE PROVIDED AS DICTATED BY APPLIANCE LOADS.
I. CEILING MOUNTED SMOKE/HEAT DETECTORS SHALL BE A MINIMUM OF 2' AWAY FROM LIGHT FIXTURES AND A MINIMUM OF 3' AWAY FROM AIR DISTRIBUTION DEVICES.
J. CANDELA RATINGS INDICATED ON DRAWINGS ARE THE REQUIRED MINIMUM CANDELA. ALL 15 CANDELA FIRE ALARM STROBES SHALL BE RATED FOR 1575 CANDELAS.
K. WHERE VISUAL NOTIFICATION APPLIANCES ARE WITHIN THE SAME FIELD OF VIEW, PROVIDE FLASH SYNCHRONIZATION OF ALL APPLIANCES.
L. AUDIBLE SIGNAL SOUND LEVEL SHALL BE AT LEAST 15dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF 60 SECONDS MINIMUM, WHICHEVER IS LOUDER, MEASURED FIVE FEET ABOVE THE FLOOR IN THE OCCUPABLE AREA. AMBIENT SOUND LEVEL IS CONSIDERED AT 60dBA. REQUIREMENT SHALL BE MET WHILE DOOR IS CLOSED.
M. ALL WIRING SHALL BE IN 1/2" CONDUIT.
N. ALL FIRE ALARM SYSTEM WORK SHALL BE APPROVED BY LOCAL AHJ PRIOR TO COMMENCING ANY FIRE ALARM WORK.
O. ALL FIRE ALARM APPLIANCES SHALL BE WHITE FINISH.

FIRE ALARM SYMBOL LEGEND NOTE: ALL SYMBOLS MAY NOT BE USED.

- F FIRE ALARM PULL STATION. SEE SPECIFICATIONS FOR DEVICE TYPE.
COMBINATION AUDIBLE/VISUAL FIRE ALARM NOTIFICATION APPLIANCE. (15 CANDELAS UNLESS OTHERWISE NOTED). WALL-MOUNTED OR CEILING-MOUNTED AS INDICATED ON PLANS. SEE SPECS FOR TYPE.
AUDIBLE NOTIFICATION APPLIANCE. WALL-MOUNTED OR CEILING MOUNTED AS INDICATED ON PLANS.
VISUAL FIRE ALARM NOTIFICATION APPLIANCE. (15 CANDELAS UNLESS OTHERWISE NOTED). WALL-MOUNTED OR CEILING-MOUNTED AS INDICATED ON PLANS.
CEILING OR WALL MOUNTED SMOKE DETECTOR
ELEVATOR LOBBY SMOKE DETECTOR
DUCT MOUNTED SMOKE DETECTOR WITH REMOTE LED INDICATOR
TAMPERPROOF SMOKE DETECTOR. IONIZATION TYPE.
TAMPER SWITCH
FLOW SWITCH
HEAT DETECTOR
CONTROL MODULE
MONITOR MODULE
DUCT DETECTOR REMOTE ALARM INDICATOR LIGHT WITH TEST SWITCH (AND ENGRAVED LABEL) - LOCATE IN NEAREST CORRIDOR OR PUBLIC AREA, EITHER OUTSIDE OF MECHANICAL ROOM OR IN OR WALL OR CEILING BELOW DETECTOR.
FIRE ALARM CONTROL PANEL
FIRE ALARM ANNUNCIATOR PANEL
FIRE ALARM ADDRESSABLE RELAY. COORDINATE CONNECTIONS TO MECHANICAL EQUIPMENT WITH DIVISION 23 CONTRACTOR TO ENSURE PROPER OPERATION OF MECHANICAL EQUIPMENT.
FIRE/SMOKE DAMPER - FIRE ALARM CONNECTION
DOOR HOLD OPEN DEVICE PROVIDED UNDER GENERAL CONTRACT. PROVIDE 120V AC CONNECTION TO FURNISHED POWER SUPPLY ABOVE ACCESSIBLE CEILING. PROVIDE 34°C AND WIRING PER MANUFACTURER REQUIREMENTS BETWEEN POWER SUPPLY AND HOLD OPEN DEVICE(S) AT DOOR.
POST INDICATOR VALVE
BEAM DETECTOR

ABBREVIATIONS NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

- A AMPERES
A/E ARCHITECT/ENGINEER
AFF ABOVE FINISHED FLOOR
AFG ABOVE FINISHED GRADE
AHJ AUTHORITY HAVING JURISDICTION
ANSI AMERICAN NATIONAL STANDARDS INSTITUTES, INC.
AWG AMERICAN WIRE GAUGE
BAS BUILDING AUTOMATION SYSTEM
CB CONDUIT
CB CIRCUIT BREAKER
cd CANDELA RATING
CCT CIRCUIT
CLG CEILING
CU COPPER
dBA DECIBEL LEVEL
DC DIRECT CURRENT
DWG DRAWING
EC ELECTRICAL CONTRACTOR
EC EMPTY CONDUIT
EMT ELECTRIC METALLIC TUBING
ETR EXISTING TO REMAIN
EX EXISTING
F FUSE
FA FIRE ALARM
FAAP FIRE ALARM ANNUNCIATOR PANEL
FACP FIRE ALARM CONTROL PANEL
FDAS FIRE DETECTION ALARM SYSTEM
GC GENERAL CONTRACTOR
GFI GROUND FAULT CIRCUIT INTERRUPTER
GFR GROUND FAULT RELAY
G, GND GROUND
HH HANDHOLE
HZ HERTZ
IG ISOLATED GROUND
IMC INTERMEDIATE METAL CONDUIT
JB JUNCTION BOX
KCMIL THOUSAND CIRCULAR MILS
KW KILOWATT
KV KILO VOLT
KVA KILO VOLT-AMPERE
LV LOW VOLTAGE
MC MECHANICAL CONTRACTOR
MT MOUNT
MHT MOUNTING HEIGHT
N NEUTRAL
NC NORMALLY CLOSED
NEC NATIONAL ELECTRICAL CODE
NIC NOT IN CONTRACT
NFA NATIONAL FIRE PROTECTION ASSOCIATION
NO NORMALLY OPEN
NTS NOT TO SCALE
PB PULLBOX
PH PHASE
P POLE
PNL PANELBOARD
PT POTENTIAL TRANSFORMER
PWR POWER
R RACEWAY
REC RECEPTACLE
RELOCATE EXISTING
RM ROOM
RMC RIGID METAL CONDUIT
RE MOVE EXISTING
SA SURGE ARRESTOR
SPD SURGE PROTECTION DEVICE
TYP TYPICAL
UL UNDERWRITERS' LABORATORIES, INC. UNLESS OTHERWISE NOTED
V VOLTS
W WIRE, WATTS
WP WEATHERPROOF

EMERGENCY RESPONDER RADIO COVERAGE

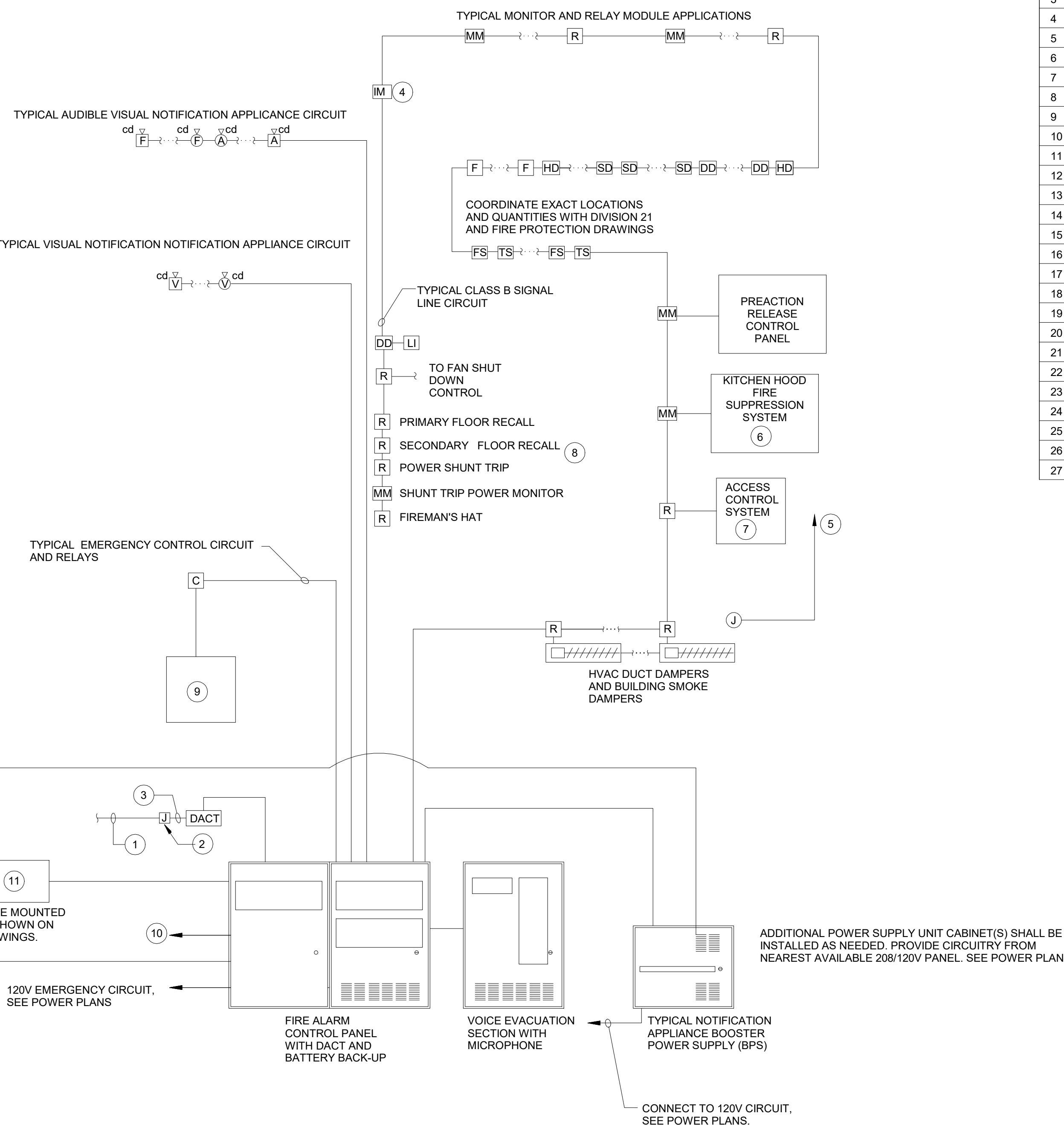
- A. PER NC FIRE CODE SECTION 510, CONTRACTOR SHALL SURVEY THE BUILDING AT SUBSTANTIAL COMPLETION TO DETERMINE ADEQUATE RADIO COVERAGE. THE MINIMUM SIGNAL STRENGTH SHALL BE -95dBm IN 95 PERCENT OF EACH BUILDING AREA ALONG WITH THE EXTERIOR OF THE BUILDING. IF ADEQUATE RADIO COVERAGE IS NOT PRESENT THEN A UL2524 BDA SYSTEM IS REQUIRED. PROVIDE TESTING AS NOTED IN THE ALLOWANCE SECTION. CONTRACTOR SHALL CARRY ALLOWANCES FOR TESTING AND FOR FULL SYSTEM INSTALLATION.
B. EMERGENCY RESPONDER RADIO COVERAGE SYSTEM - ONCE BUILDING HAS REACHED SUBSTANTIAL COMPLETION AND TESTING PER NFPA 510.4.1 HAS BEEN DOCUMENTED AND TESTING INDICATES THAT A BDA SYSTEM IS REQUIRED, THEN THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL AHJ (FIRE CODE OFFICIAL) PER SECTION 510.
C. 510.5.1 - APPROVAL PRIOR TO INSTALLATION, AMPLIFICATION SYSTEMS CAPABLE OF OPERATING ON FREQUENCIES LICENSED TO ANY PUBLIC SAFETY AGENCY BY THE FCC SHALL NOT BE INSTALLED WITHOUT PRIOR COORDINATION AND APPROVAL OF THE FIRE CODE OFFICIAL.
D. 510.4.2.2 - TECHNICAL CRITERIA - THE FIRE CODE OFFICIAL SHALL MAINTAIN A DOCUMENT PROVIDING THE SPECIFIC TECHNICAL INFORMATION AND REQUIREMENTS FOR EMERGENCY RESPONDER RADIO COVERAGE SYSTEM. THIS DOCUMENT SHALL CONTAIN, BUT NOT BE LIMITED TO, THE VARIOUS FREQUENCIES REQUIRED, THE LOCATION OF RADIO SITES, EFFECTIVE RADIATED POWER OF RADIO SITES, AND OTHER SUPPORTING TECHNICAL INFORMATION.

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PROJECT NO: 514.18349.00; SHEET TITLE: FIRE ALARM COVERSHEET; SHEET NUMBER: FA000

D

NOTE: THIS IS A GENERAL SERVICE SCHEMATIC WITH TYPICAL BOARD AND DEVICE WIRING RELATIONSHIPS OF A NEW FIRE ALARM AND DETECTION CONTROL SYSTEM TO SERVE THE FACILITY.

- KEY NOTES:
1. PROVIDE 1" C WITH (2) FOUR PAIRS TELEPHONE CABLES FROM JUNCTION BOX TO FIRST FLOOR TELECOM ROOM. PROVIDE 5' OF SLACK CABLE IN JUNCTION BOX.
2. JUNCTION BOX FOR FIRE ALARM CONTROL PANEL TELEPHONE DIALER CONNECTION.
3. CONTRACTOR SHALL PROVIDE 1" C WITH (2) FOUR PAIRS TELEPHONE CABLE FROM JUNCTION BOX TO THE TELEPHONE DIALER.
4. PROVIDE ISOLATION MODULE WHERE SLC CIRCUIT ENTERS THROUGH THE CABINET. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. INSTALL ISOLATION MODULES AFTER EACH 20 INITIATING DEVICES AND CONTROL POINTS ON THE SLC. FOR SLC WITH LESS THAN 20 DEVICES AND CONTROL POINTS, INSTALL AN ISOLATOR AT THE APPROXIMATE MIDDLE OF THE SLC (IN ADDITION TO THOSE AT THE CABINET).
5. PROVIDE 120V POWER FOR OPERATION OF MOTORIZED DAMPERS WHERE AND AS REQUIRED. COORDINATE WITH MECHANICAL DISCIPLINE FOR ALL LOCATIONS, AND ADJUST WORK ACCORDINGLY. COORDINATE WORK WITH OTHER DISCIPLINES IN FIELD.
6. INSTALLATION SHALL COMPLY WITH THE CURRENT EDITION OF NFPA 72 STANDARD FOR THE TYPE OF SYSTEM INSTALLED. SYSTEM SHALL BE INTERCONNECTED WITH THE FIRE ALARM SYSTEM AS A SEPARATE SYSTEM ADDRESS. ALL SOURCES OF HEAT FOR APPLIANCES SERVED BY THE EXTINGUISHING SYSTEM (BOTH ELECTRIC AND/OR GAS) MUST BE TURNED OFF UPON ACTIVATION. SEE KITCHEN VENDOR'S DRAWINGS AND SHEET FIRE ALARM FLOOR PLANS FOR ADDITIONAL REQUIREMENTS.
7. PROVIDE ALARM SIGNAL TO ACCESS CONTROL SYSTEM FOR CHANGE OF OPERATION OF DOORS AND OTHER BARRIERS FOR EGRESS.
8. TYPICAL ELEVATOR FIRE ALARM FUNCTIONS.
9. FOR ELEVATOR RECALL, DOOR CONTROLS, SMOKE CONTROL AND OTHER APPROVED FUNCTIONS NOT CONTROLLED THROUGH ADDRESSABLE RELAYS CONNECTED TO THE SLC.
10. FIRE ALARM FIBER OR OTHER NETWORK CONNECTION WHERE APPLICABLE.
11. THE REMOTE ANNUNCIATOR SHALL HAVE A MICROPHONE MODULE AND CONTROLS FOR A VOICE EVACUATION SYSTEMS.



ADDITIONAL POWER SUPPLY UNIT CABINET(S) SHALL BE INSTALLED AS NEEDED. PROVIDE CIRCUITRY FROM NEAREST AVAILABLE 208/120V PANEL. SEE POWER PLANS.

SYSTEM INPUTS

Matrix table with 27 rows (1-27) and 26 columns (A-Y). Rows include: 1. FIRE ALARM SYSTEM AC POWER FAILURE, 2. FIRE ALARM SYSTEM LOW BATTERY, 3. OPEN CIRCUIT, 4. GROUND FAULT, 5. NOTIFICATION APPLIANCE CIRCUIT SHORT, 6. BUILDING MANUAL PULL STATIONS, 7. CORRIDOR SMOKE DETECTORS, 8. AREA SMOKE DETECTORS, 9. HVAC AIR DUCT SMOKE DETECTORS, 10. AREA HEAT DETECTORS, 11. HOOD OR ROOM FIRE SUPPRESSION SYSTEM ALARM, 12. SPRINKLER TAMPER SWITCH, 13. SPRINKLER WATER FLOW IN BUILDING, 14. SPRINKLER WATER FLOW IN ELEVATOR EQUIPMENT ROOM OR SHAFT, 15. AREA OF REFUGE TWO-WAY COMMUNICATIONS STATUS, 16-27. Columns A-Y represent different system outputs.

FIRE ALARM SYSTEM MATRIX OVERALL MATRIX

Matrix table with 27 rows (1-27) and 26 columns (A-Y). Rows include: 1. FIRE ALARM SYSTEM AC POWER FAILURE, 2. FIRE ALARM SYSTEM LOW BATTERY, 3. OPEN CIRCUIT, 4. GROUND FAULT, 5. NOTIFICATION APPLIANCE CIRCUIT SHORT, 6. BUILDING MANUAL PULL STATIONS, 7. CORRIDOR SMOKE DETECTORS, 8. AREA SMOKE DETECTORS, 9. HVAC AIR DUCT SMOKE DETECTORS, 10. AREA HEAT DETECTORS, 11. HOOD OR ROOM FIRE SUPPRESSION SYSTEM ALARM, 12. SPRINKLER TAMPER SWITCH, 13. SPRINKLER WATER FLOW IN BUILDING, 14. SPRINKLER WATER FLOW IN ELEVATOR EQUIPMENT ROOM OR SHAFT, 15. AREA OF REFUGE TWO-WAY COMMUNICATIONS STATUS, 16-27. Columns A-Y represent different system outputs.

SYSTEM OUTPUTS

FIRE ALARM CLASS A VOICE EVAC RISER DIAGRAM (NEW CONSTRUCTION)

1 FA000 1/8" = 1'-0"



GENERAL SHEET NOTES

RATED WALL LEGEND

FIRE BARRIER		FIRE & SMOKE BARRIER	
1-HOUR	[Symbol]	1-HOUR	[Symbol]
2-HOUR	[Symbol]	2-HOUR	[Symbol]
3-HOUR	[Symbol]	3-HOUR	[Symbol]
FIRE WALL		FIRE PARTITION	
2-HOUR	[Symbol]	0.5-HOUR	[Symbol]
3-HOUR	[Symbol]	1-HOUR	[Symbol]
4-HOUR	[Symbol]		
SMOKE PARTITION		SMOKE BARRIER	
0-HOUR	[Symbol]	1-HOUR	[Symbol]

KEY PLAN



ISSUE FOR
BID SET

ISSUE DATE
03.28.2024

REVISIONS
NO. REASON DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Jerry Guerrier, AIA
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DESIGN TEAM
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PROJECT NAME
NORTHCHASE BRANCH LIBRARY

PROJECT NO.
514.18349.00

SHEET TITLE
FIRE ALARM PLAN

SHEET NUMBER
FA111

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1 FIRE ALARM PLAN - LEVEL 01
FA111 1/8" = 1'-0"