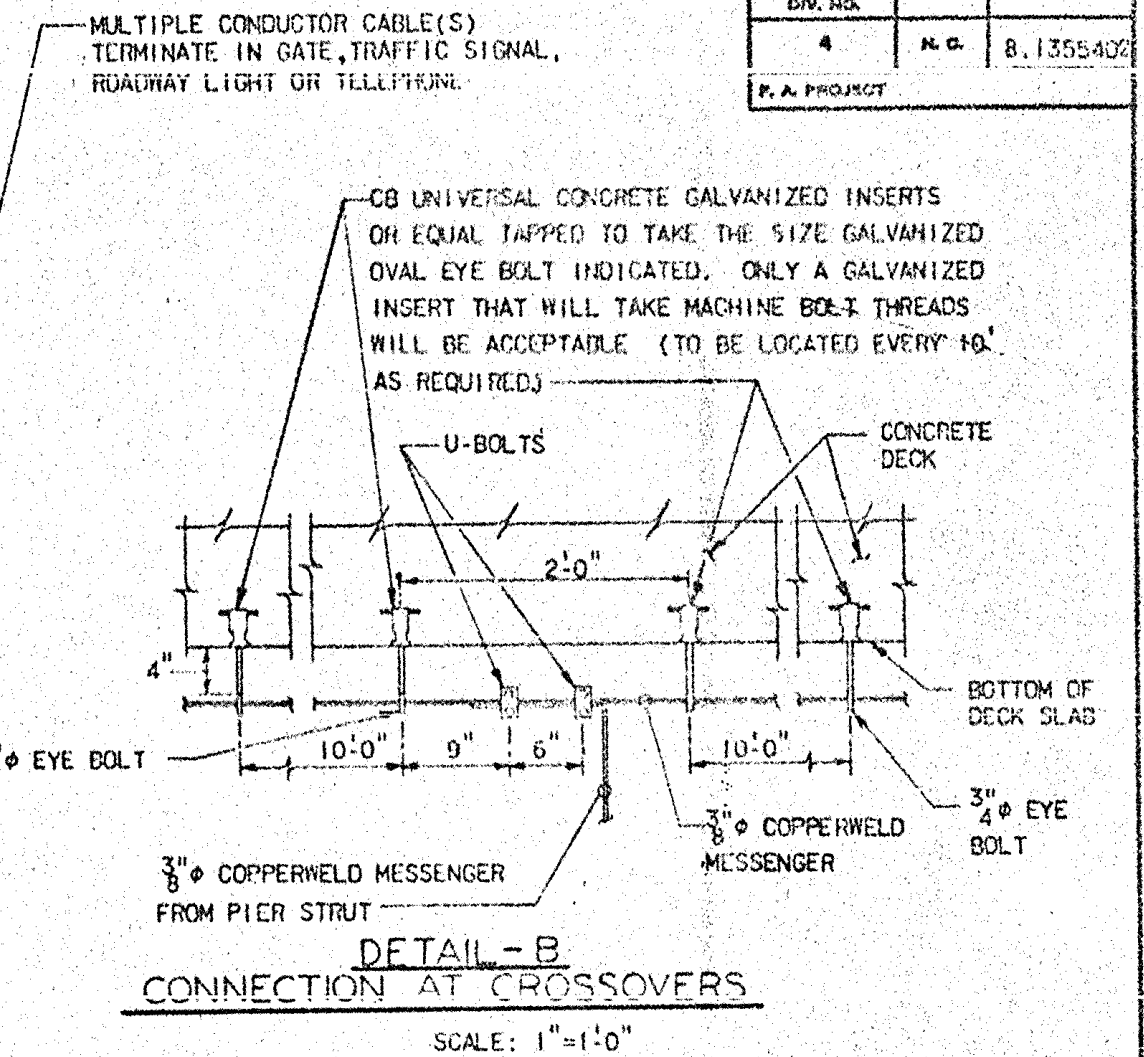
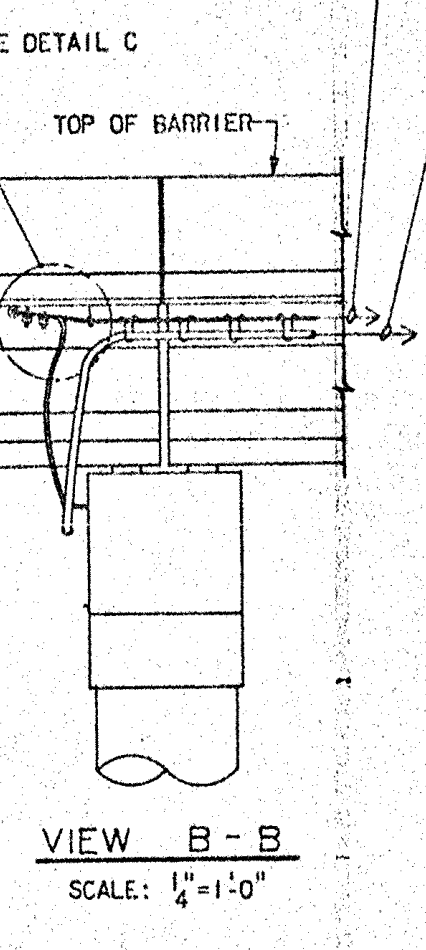
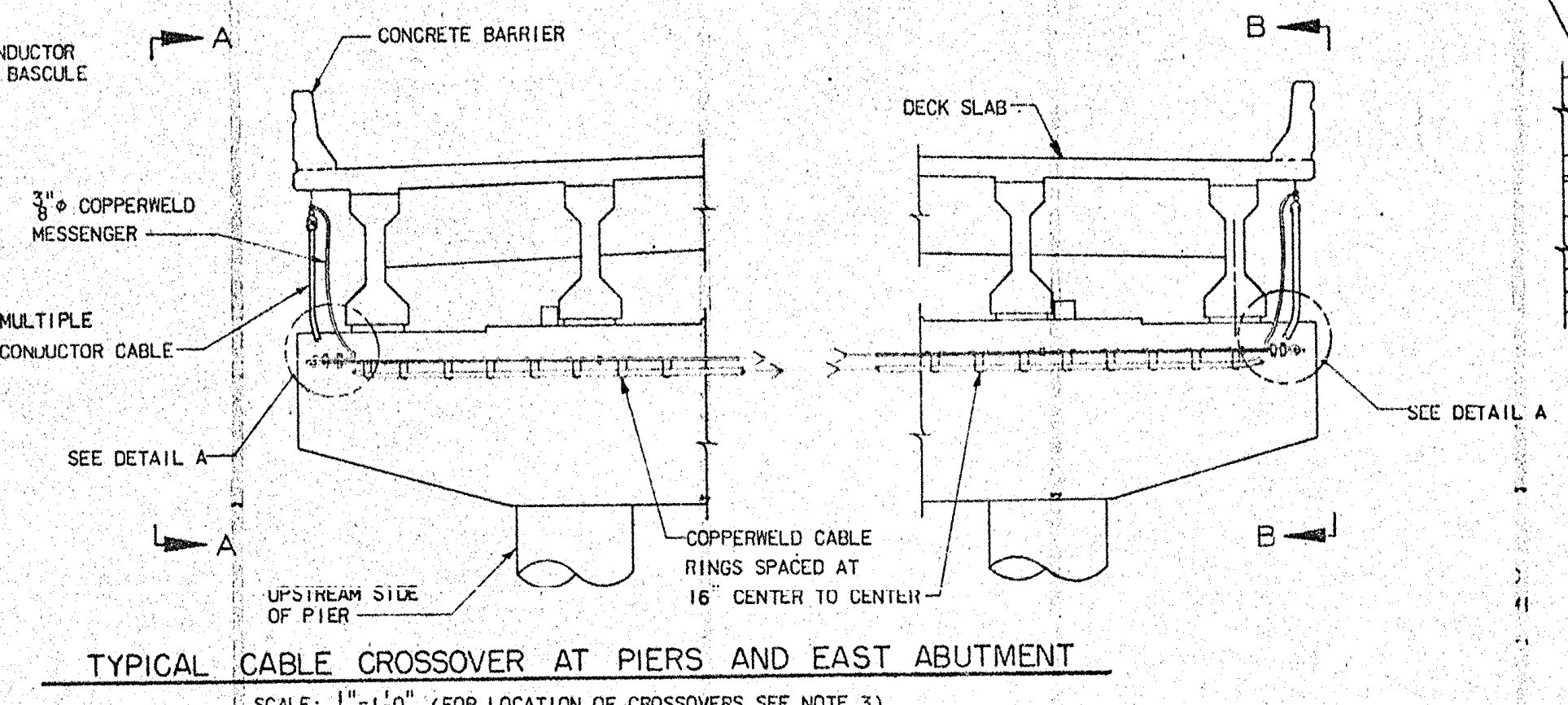
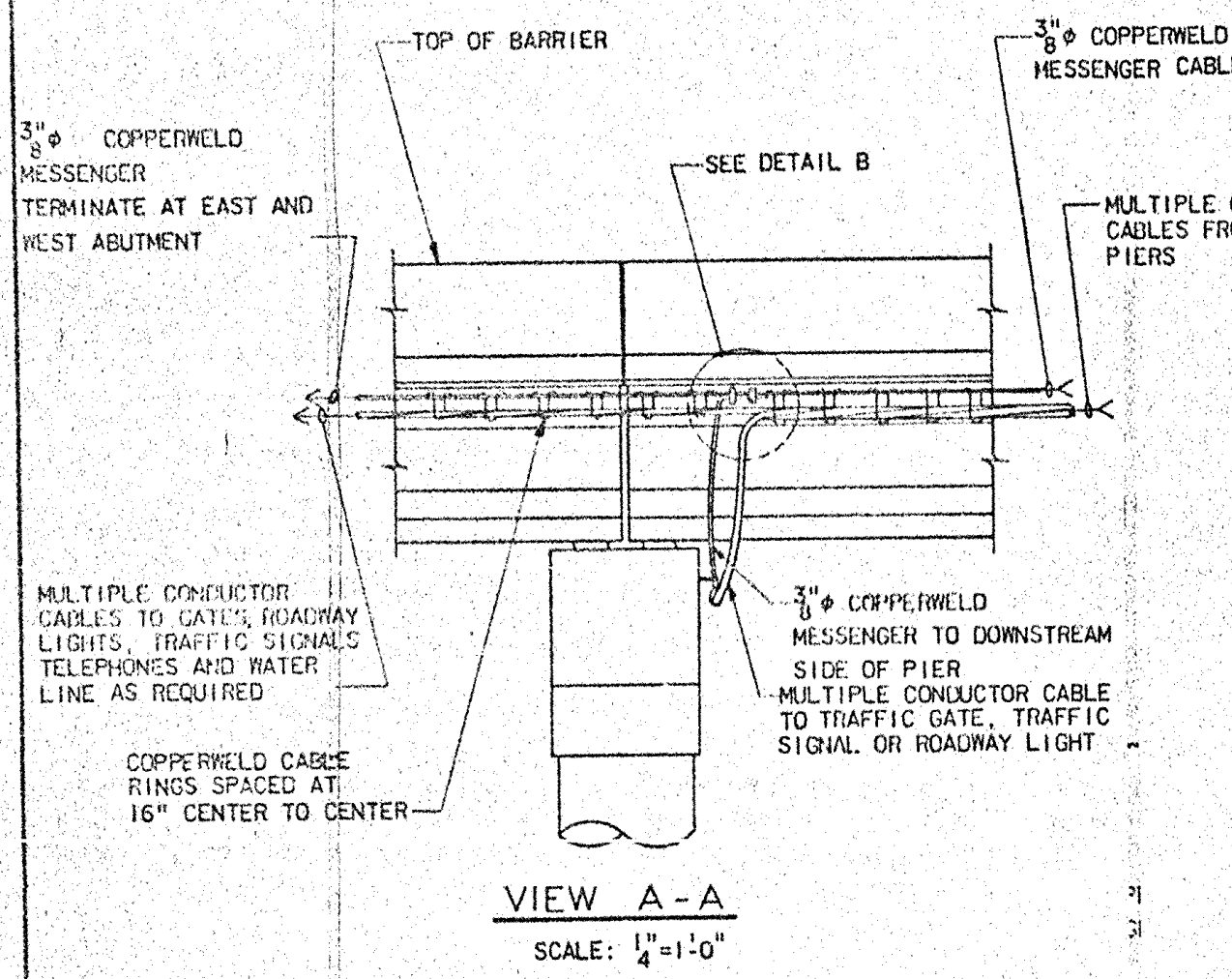


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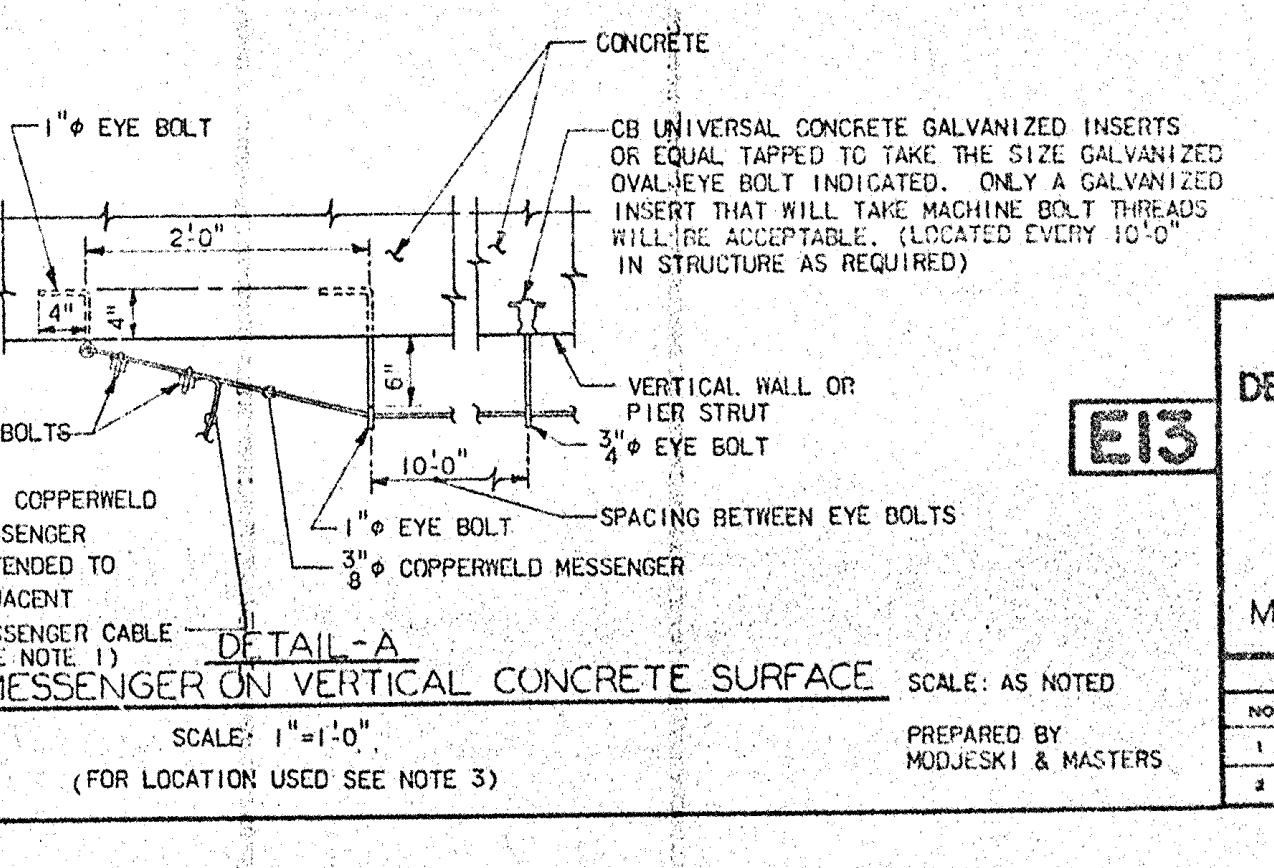
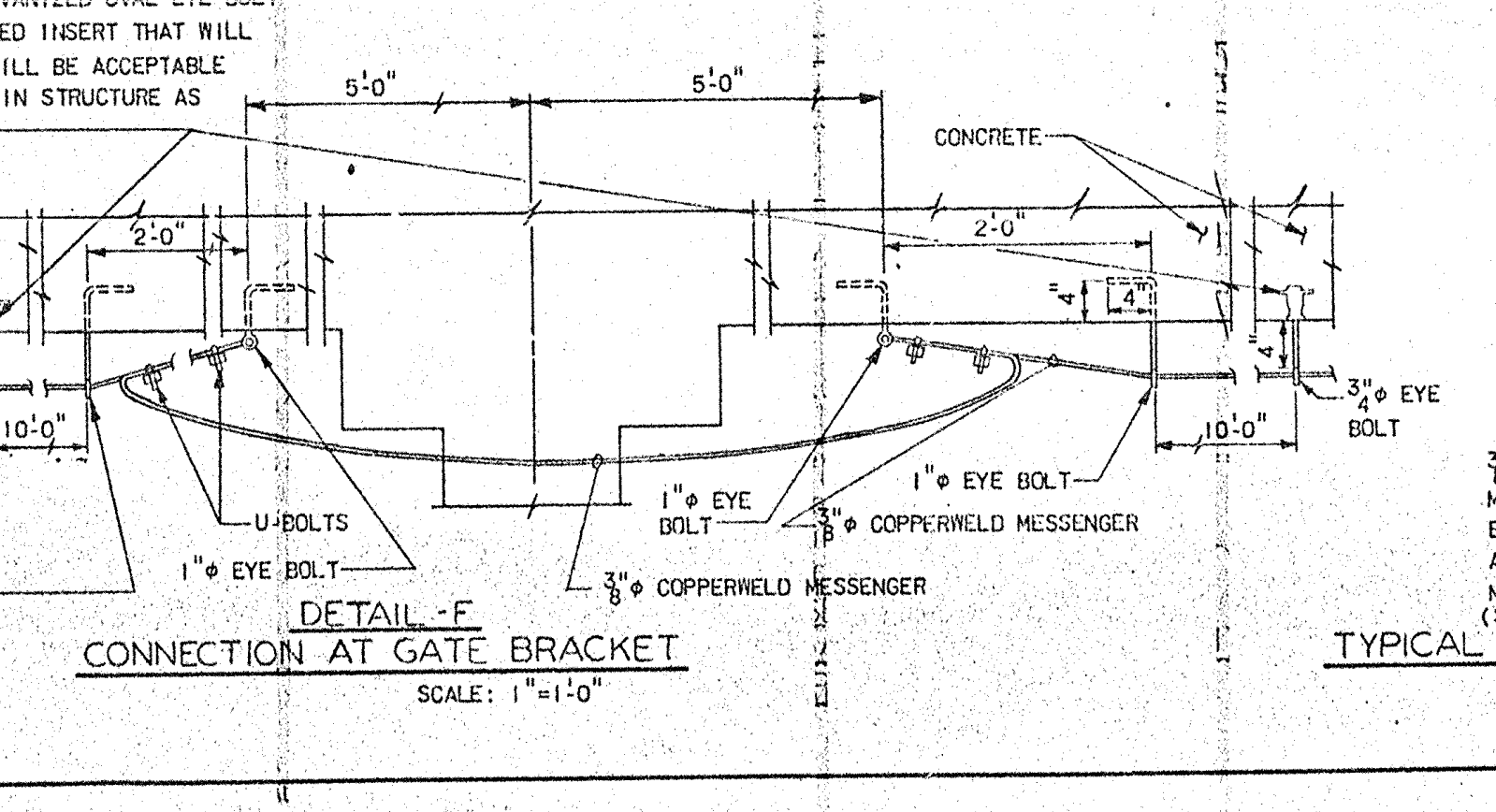
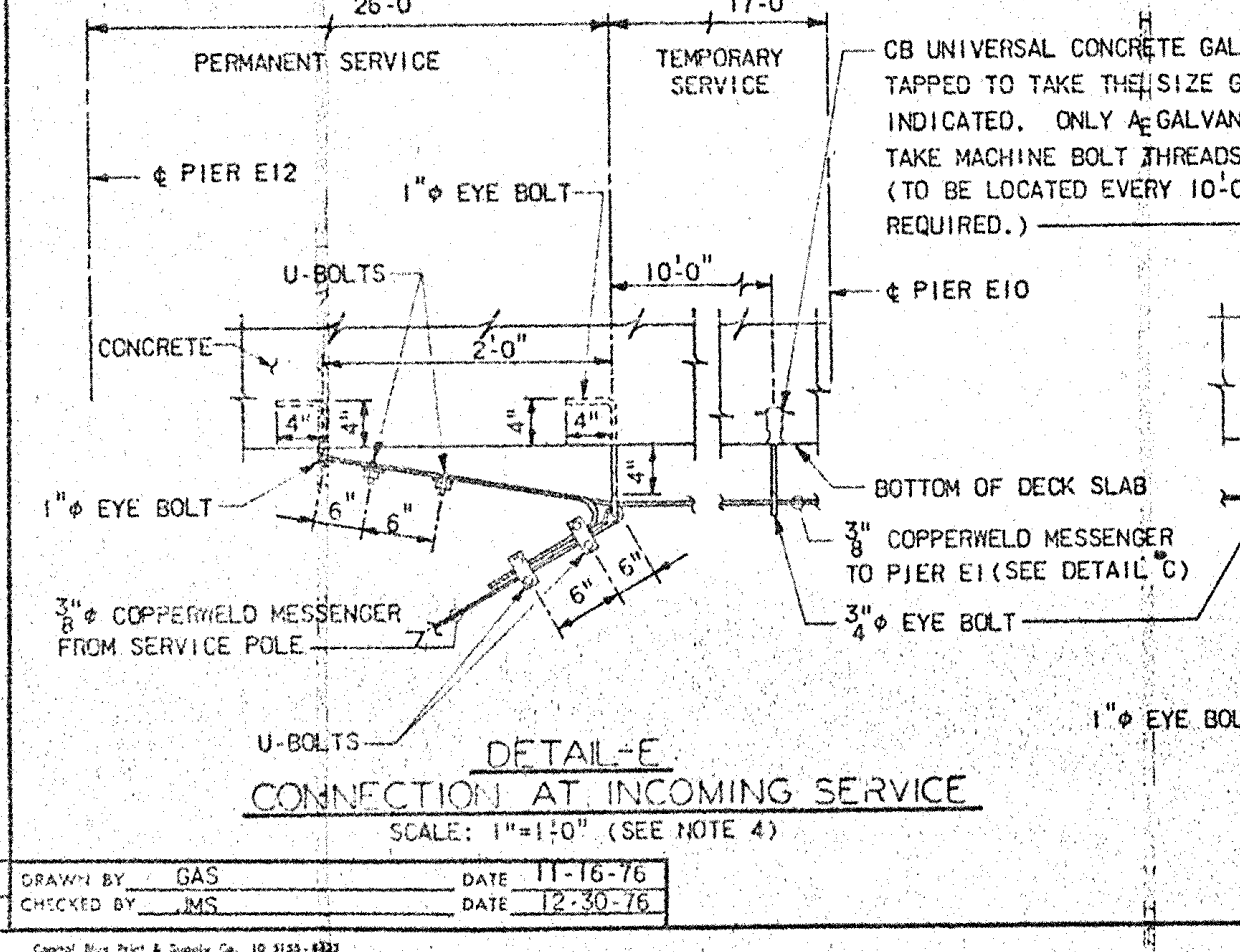
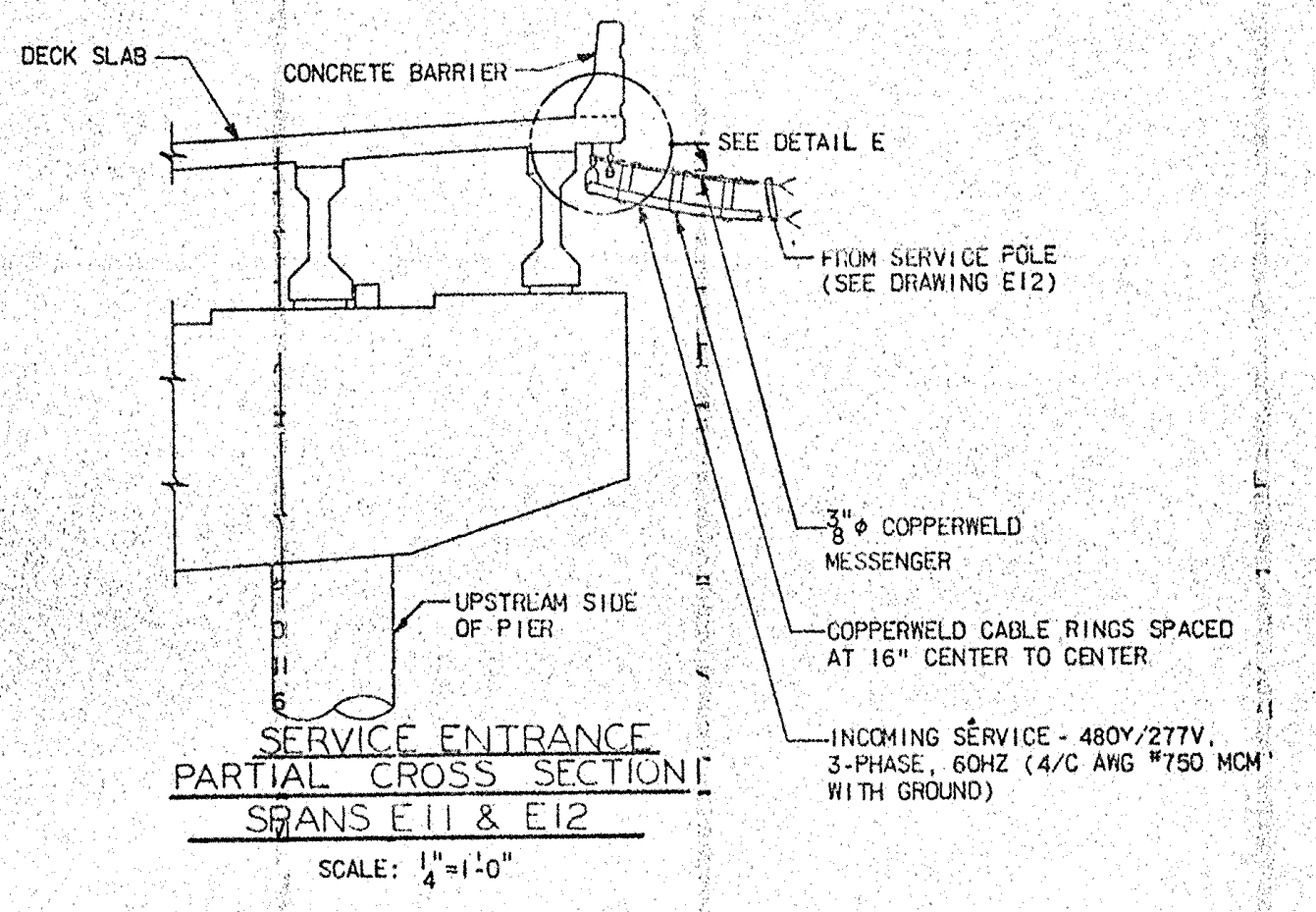
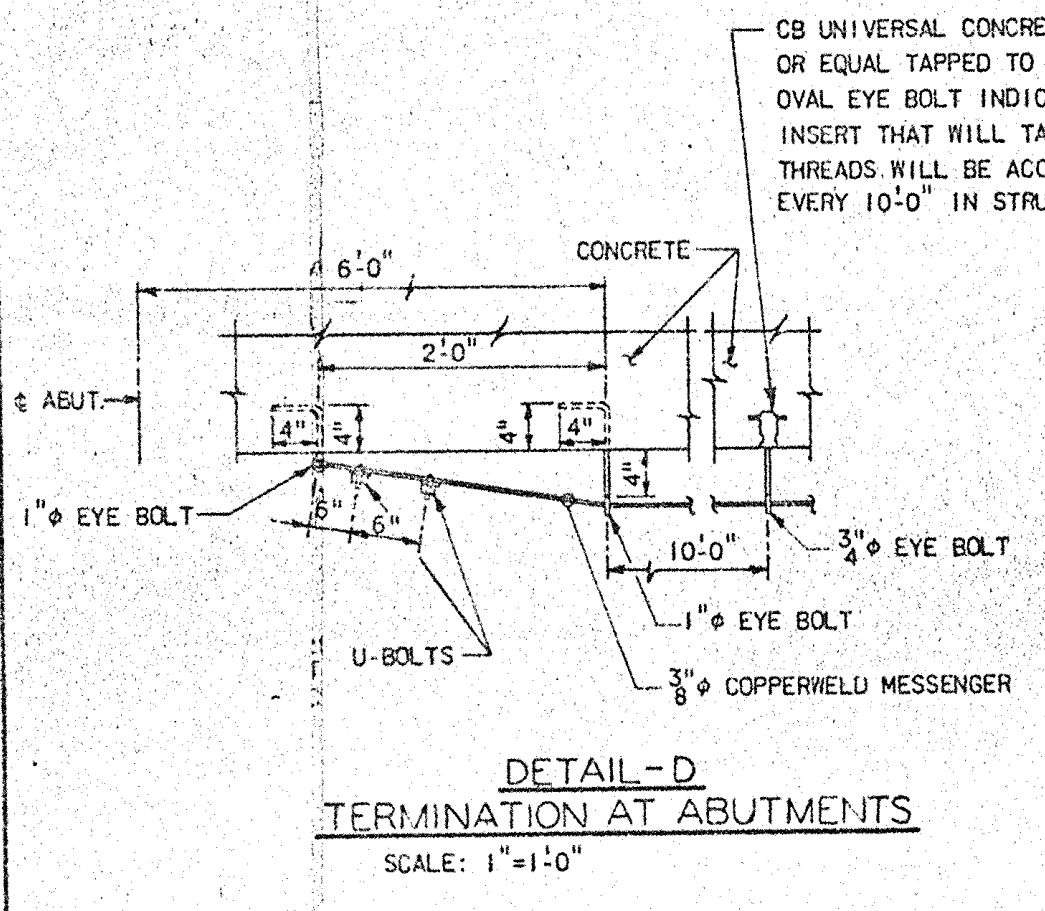
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FED. ROAD DIST. NO.	STATE	PROJECT NO.
4	N.C.	8.1355-402
P.A. PROJECT		



- NOTE:**
1. IN PIER W1 3/8" COPPERWELD MESSENGER CABLE IS RUN THRU 5" CONDUIT IN WALL VIA SCTC-2 AND BONDED TO SUBMARINE CABLE SUPPORT. (SEE DRAWING E19)
 2. CONTRACTOR SHALL LOCATE APPROVED TURN BUCKLES IN MESSENGER CABLE AS REQUIRED TO OBTAIN PROPER TENSION
 3. CABLE CROSSOVERS ARE REQUIRED AT PIER W1, W2, W5, W10, W14, E1, E2, E3, E6, E8 AND EAST ABUTMENT.
 4. AT PIER E11 CONNECTION DETAIL FOR INCOMING TEMPORARY SERVICE SHALL BE SIMILAR TO DETAIL B EXCEPT MESSENGER CABLE FROM SERVICE POLE SHALL LOOP THRU 1" EYE BOLT.
 5. FOR FURTHER NOTES SEE DRAWING E1.
 6. ALL HARDWARE SHOWN ON THIS SHEET SHALL BE HOT DIP GALVANIZED.



PROJECT No. 8.1355402
NEW HANOVER COUNTY
STATION: 20+53

E13

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
NORTHEAST CAPE FEAR RIVER BRIDGE
US117 - NC133 AT WILMINGTON, N.C.
ELECTRICAL SYSTEM
MESSENGER CABLE DETAILS

NO.	BY	DATE	NO.	BY	DATE	REVISIONS
1			2			
2			4			

PREPARED BY
MODJESKI & MASTERS

PROJECT NO. 15BPR.14
NEW HANOVER COUNTY
STATION:

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
ELECTRICAL
MESSENGER CABLE
DETAILS - 5

MODJESKI and MASTERS
Experience great bridges.
333 FAYETTEVILLE STREET, SUITE 505
RALEIGH, NC 27601
NC LICENSE NO. C-2979

STATE OF NORTH CAROLINA
PROFESSIONAL ENGINEER
SEAL
044780
J. G. STRENKOSKI
11/15/2018

FOR INFORMATION ONLY

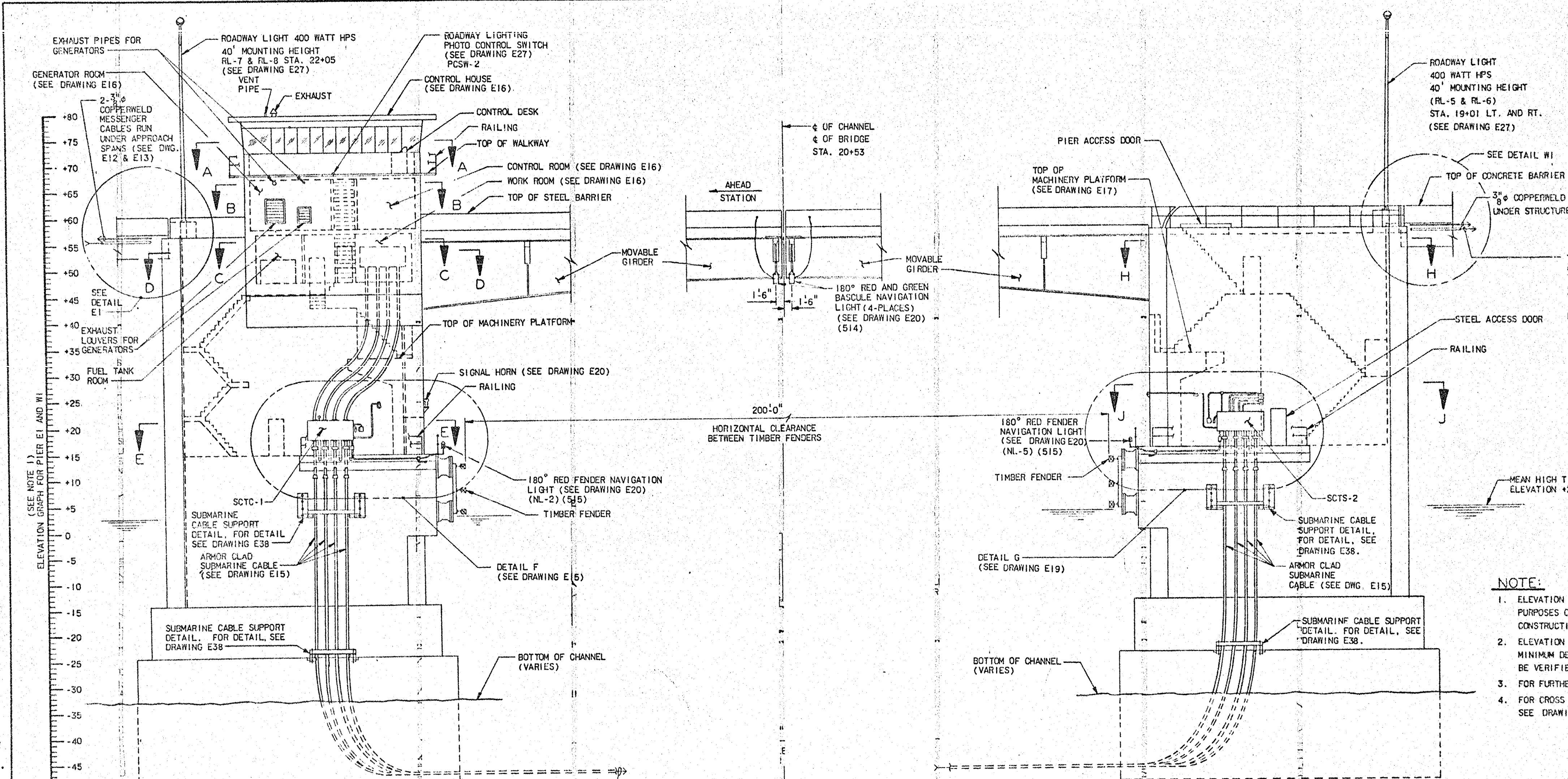
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NO.	BY	DATE	NO.	BY	DATE	SHEET NO.
1			3			E-124
2			4			TOTAL SHEETS 213

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DESIGNED BY:	E. N. CLAY	DATE:	10/24/18
DRAWN BY:	R. L. REED	DATE:	10/24/18
CHECKED BY:	L. V. BORDEN	DATE:	11/15/18
DESIGN ENGINEER OF RECORD:	J. G. STRENKOSKI	DATE:	11/15/18

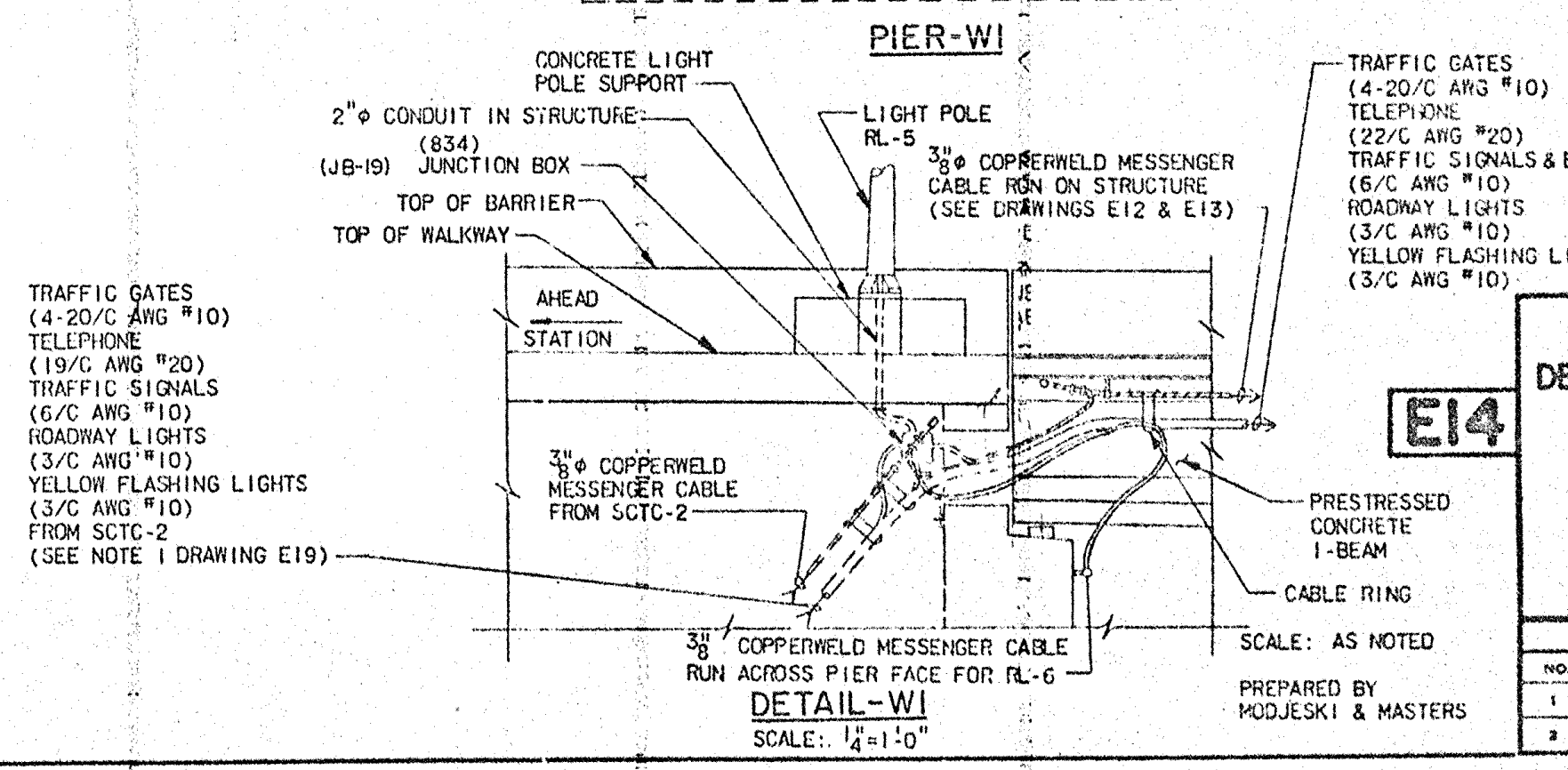
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4	N.C.	8.1355402
P.A. PROJECT		



- TRAFFIC GATES (4-20/C ANG #10)
- TELEPHONE (19/C ANG #20)
- TRAFFIC SIGNALS & BELLS (6/C ANG #10)
- ROADWAY LIGHTS (3/C ANG #10)
- YELLOW FLASHING LIGHTS (3/C ANG #10)

- NOTE:**
- ELEVATION GRAPH SHOWN IS FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED FOR CONSTRUCTION PURPOSES.
 - ELEVATION OF -47.00 SHOWN ON SHEET FOR MINIMUM DEPTH OF SUBMARINE CABLES SHALL BE VERIFIED BY CONTRACTOR FROM N.C.D.D.T.
 - FOR FURTHER NOTES SEE DRAWING E1.
 - FOR CROSS SECTIONS SHOWN ON THIS SHEET SEE DRAWING E15, E16 & E19.

**NORTH ELEVATION VIEW
PIER E1 AND W1**
SCALE: 1"=10'-0"



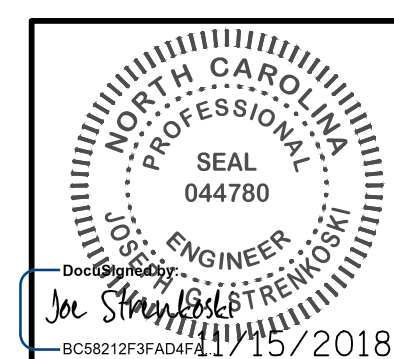
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NEW HANOVER COUNTY
STATION: 20+53

REVISIONS				SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
				TOTAL SHEETS 1150	

DESIGNED BY: E. N. CLAY DATE: 10/24/18
 DRAWN BY: R. L. REED DATE: 10/24/18
 CHECKED BY: L. V. BORDEN DATE: 11/15/18
 DESIGN ENGINEER OF RECORD: J. G. STRENKOSKI DATE: 11/15/18

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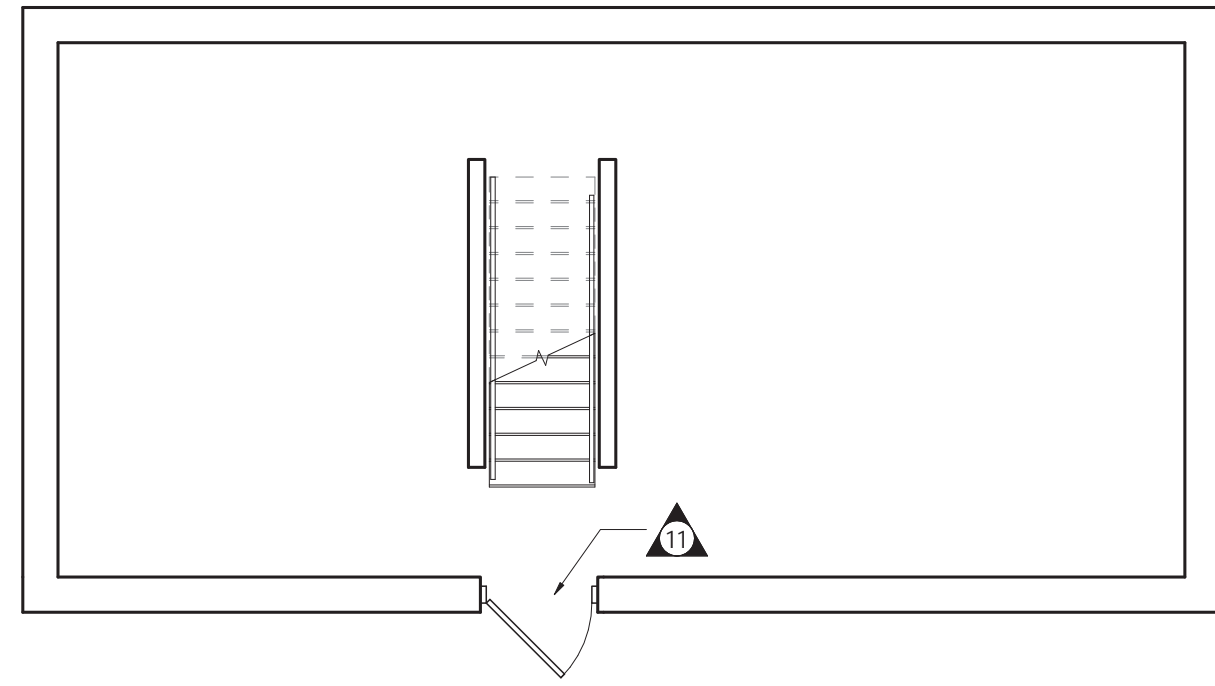
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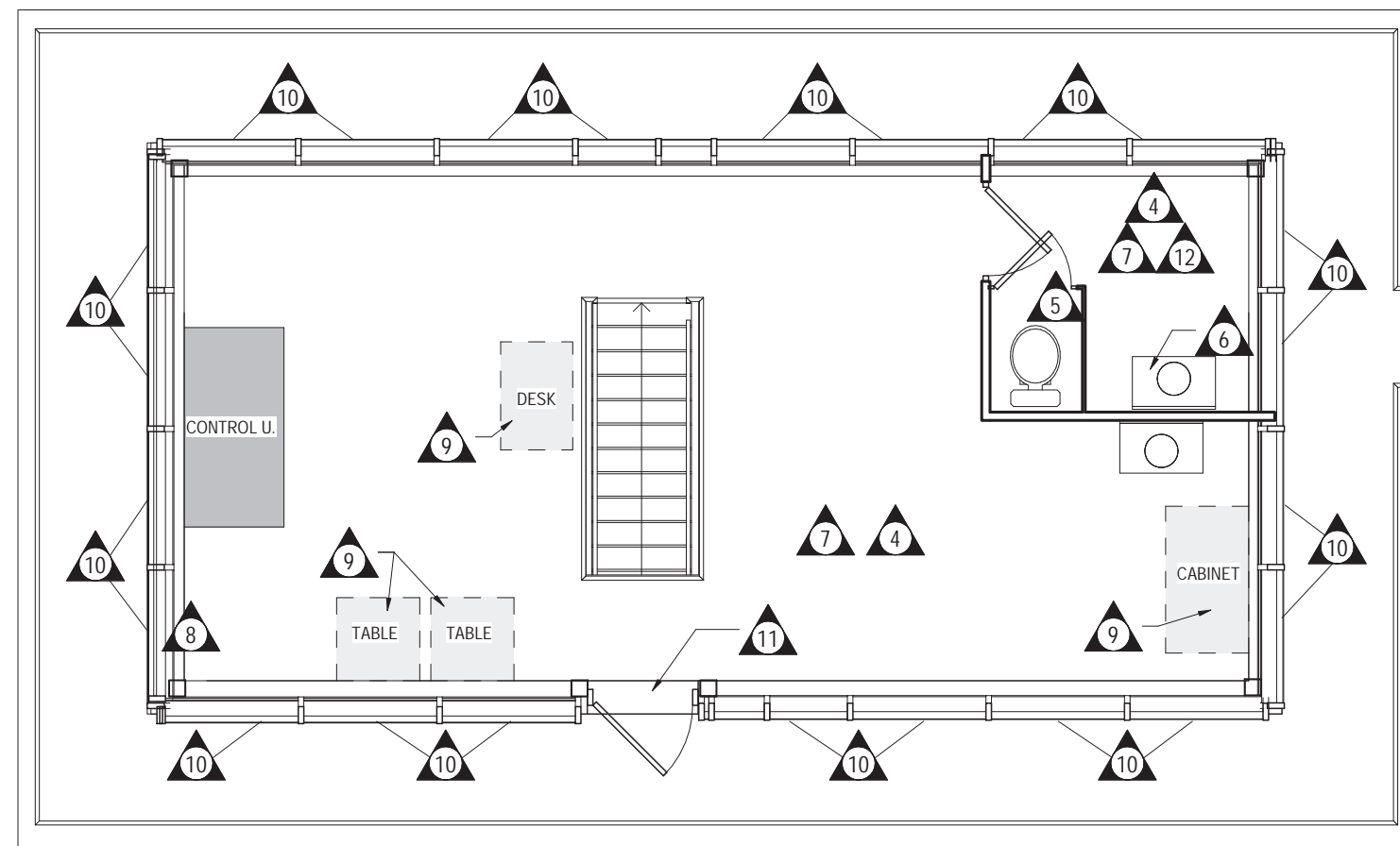
PROJECT NO. 15BPR.14
NEW HANOVER COUNTY
STATION:

REVISIONS						SHEET NO.	
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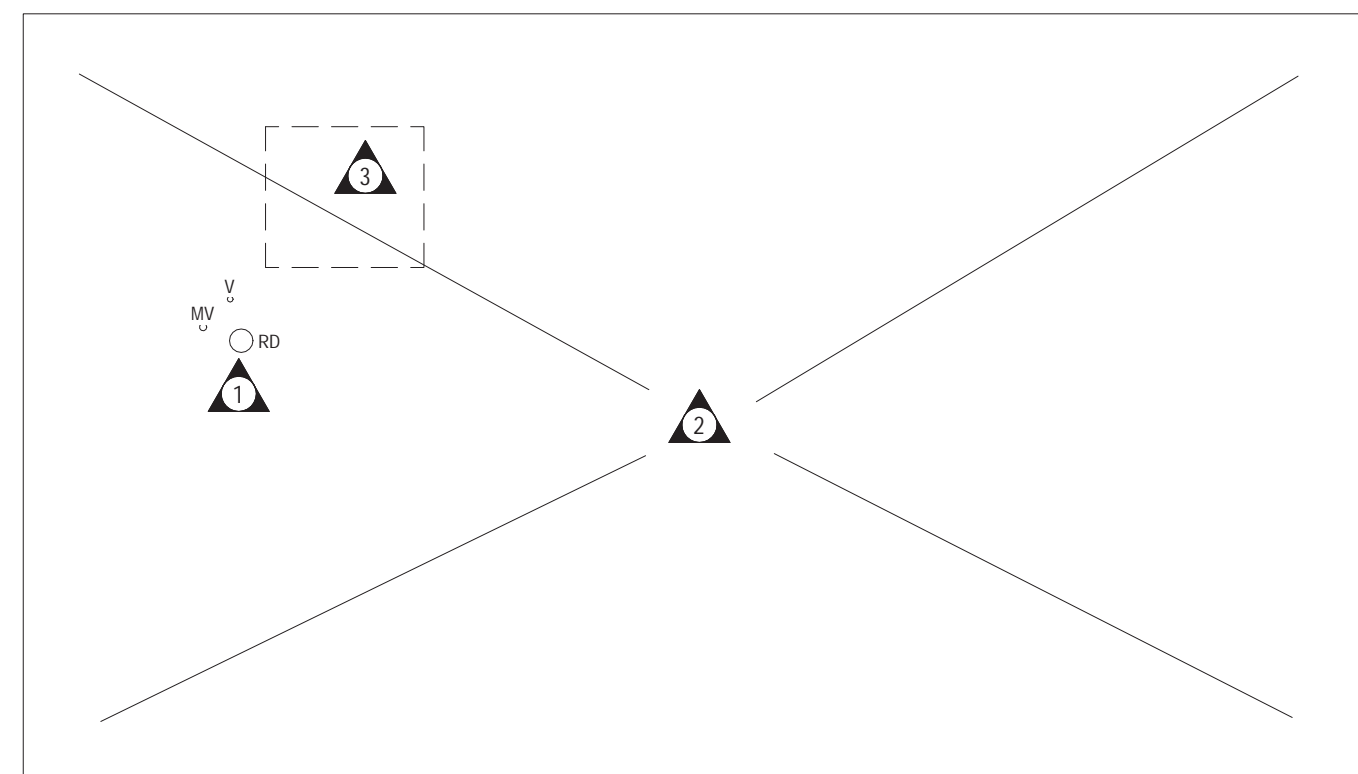
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5 GROUND DEMOLITION PLAN
1/4" = 1'-0"



1 FIRST FLOOR DEMOLITION PLAN
1/4" = 1'-0"



2 ROOF DEMOLITION PLAN
1/4" = 1'-0"

DEMOLITION LEGEND	
TAG	DEMOLITION NOTE
1	DEMOLISH ROOF DRAIN AND ALL RELATED COMPONENTS. PREPARE FOR NEW WORK AS SCHEDULED.
2	DEMOLISH ENTIRE EPDM ROOF SYSTEM INCLUDING ROOF INSULATION, VAPOR RETARDER TO ROOF DECK. REMOVE ALL ASSOCIATED FASTENERS AND ADHESIVES. PREPARE SURFACE FOR NEW WORK AS SCHEDULED.
3	REMOVE MECHANICAL RTU AND ALL RELATED COMPONENTS. PREPARE FOR NEW WORK AS SCHEDULED.
4	REMOVE EXISTING SUSPENDED ACOUSTIC CEILING TILE SYSTEM, GRID, HANGERS, BATT INSULATION AND ALL ASSOCIATED COMPONENTS IN THEIR ENTIRETY.
5	DEMOLISH TOILET AND PARTITION. REMOVE ALL ASSOCIATED FASTENERS, HARDWARE, AND ADHESIVES IN THEIR ENTIRETY. PREPARE FOR NEW WORK AS SCHEDULED.
6	DEMOLISH SINK. REMOVE ALL ASSOCIATED FASTENERS, HARDWARE AND ALL COMPONENTS IN THEIR ENTIRETY. PATCH AND PREPARE ALL ADJACENT SUBSTRATES TO RECEIVE NEW WORK AS SCHEDULED.
7	REMOVE EXISTING VINYL FLOORING, WALL BASE AND ADHESIVES IN THEIR ENTIRETY TO THEIR EXISTING SUBSTRATE. PREPARE SURFACE FOR NEW FINISH. SEE ROOM FINISH SCHEDULE.
8	REMOVE WINDOW TREATMENTS. REMOVE ALL ASSOCIATED FASTENERS, HARDWARE, AND SUPPORTS. PATCH AND REPAIR ALL ADJACENT SURFACES TO RECEIVE NEW WORK FINISHES AS SCHEDULED.
9	REMOVE FURNITURE AND REINSTALL FURNITURE AFTER CONSTRUCTION IS COMPLETED.
10	REMOVE WINDOW AND FRAME. PATCH AND PREPARE ALL ADJACENT SUBSTRATES AND FINISHES TO RECEIVE NEW WORK FINISHES AS SCHEDULED.
11	REMOVE EXISTING DOOR AND FRAME IN THEIR ENTIRETY INCLUDING ALL TRIM, HARDWARE FASTENERS, THRESHOLD ANY LOUVERS AND OTHER ASSOCIATED COMPONENTS. PREPARE EXISTING OPENING FOR NEW DOOR AND FRAME.
12	REMOVE EXISTING TOILET ACCESSORIES IN THEIR ENTIRETY REMOVE ALL ASSOCIATED ANCHORS, SUPPORTS, HARDWARE, FASTENERS AND ADHESIVES. LEAVE EXISTING PAPER TOWEL DISPENSER INTACT

GENERAL DEMOLITION NOTES:

D1. DASHED LINES INDICATE GENERAL EXISTING CONSTRUCTION TO BE REMOVED. GENERAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS RELATING TO THE DEMOLITION REQUIRED FOR INSTALLATION OF NEW CONSTRUCTION SHOWN ELSEWHERE.	D5. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL EXISTING BUILDING DIMENSIONS AND CONDITIONS, INCLUDING FINISHES AND MATERIALS, SYSTEMS SHOWN AND DESIGNATED AS EXISTING ON CONTRACT DRAWINGS PRIOR TO STARTING DEMOLITION AND CONSTRUCTION. ANY DISCREPANCIES IN INFORMATION INDICATED ON CONTRACT DRAWINGS SHALL BE DIRECTED IN WRITING TO THE ATTENTION OF THE ARCHITECT PRIOR TO STARTING OF DEMOLITION AND CONSTRUCTION. VERIFICATION OF CLEARANCES REQUIRED FOR ALL NEW EQUIPMENT, PIPING, DUCTWORK AND RELATED COMPONENTS SHALL BE THE CONTRACTORS RESPONSIBILITY.	D9. DEMOLITION DRAWINGS INDICATE EXISTING SLABS TO BE REMOVED IN THEIR ENTIRETY. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ANY SAWCUTTING AND PATCHING OF CONCRETE SLABS THAT NEEDS TO OCCUR AS PART OF THEIR WORK. IN ADDITION, REFER TO STRUCTURAL DRAWINGS FOR SAWCUTTING AND PATCHING THAT NEEDS TO OCCUR TO ACCOMMODATE INSTALLATION OF NEW FOOTINGS, PIERS ETC.
D2. SEE STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FOOD SERVICE DRAWINGS FOR OTHER DEMOLITION WORK REQUIRED. ANY DEMOLITION OF MECHANICAL, ELECTRICAL, OR PLUMBING EQUIPMENT SHOWN ON THESE DRAWINGS, IS FOR COORDINATION ONLY. COORDINATE ALL WORK BY OTHER CONTRACTORS INCLUDING GAPPING AND DISCONNECTING OF BUILDING SERVICES SUCH AS WATER, WASTE, ELECTRIC, DUCTWORK, ETC.	D6. DEMOLITION WORK SHOWN ON THE DEMOLITION CONTRACT DRAWINGS SHALL BE FOR THE BUILDING RECEIVING MAJOR DEMOLITION WORK, AND DOES NOT REPRESENT THE DEMOLITION FOR THE PROJECT IN ITS ENTIRETY. REFER TO CONTRACT DRAWINGS FOR ADDITIONAL DEMOLITION WORK, IF ANY, FOR EACH ROOM OR BUILDING COMPONENT.	D10. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY EXISTING LOAD BEARING WALLS AND PROVIDE TEMPORARY SHORING AND SUPPORT UNTIL NEW STRUCTURE CAN BE INSTALLED.
D3. BEFORE DEMOLITION AND THROUGHOUT CONSTRUCTION, GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW WITH OWNERS REPRESENTATIVE ALL ITEMS BEING REMOVED BY THEIR TRADES. ALL ITEMS DESIGNATED DURING THIS REVIEW TO REMAIN OWNERS PROPERTY, SHALL BE MAINTAINED IN GOOD CONDITION AND TURNED OVER TO OWNER. ALL ITEMS DESIGNATED TO BE REUSED AS PART OF NEW CONSTRUCTION SHALL BE MAINTAINED IN A REUSABLE CONDITION AND STORED ON SITE BY CONTRACTOR IN A CLEAN, DRY LOCATION UNTIL INSTALLATION. ALL REMAINING ITEMS AND MATERIALS DEEMED TO BE TRASH SHALL BE DISPOSED OF PROPERLY BY LAW, OFF SITE BY THE RESPONSIBLE CONTRACTOR.	D7. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DEMOLITION CONDITIONS RELATED TO ACCEPTED ALTERNATE BIDS INCLUDING FINISHES AND MATERIALS, SYSTEMS SHOWN AND DESIGNATED AS EXISTING OR NEW ON THE CONTRACT DRAWINGS PRIOR TO STARTING OF DEMOLITION AND CONSTRUCTION. ANY DISCREPANCIES IN INFORMATION INDICATED ON CONTRACT DRAWINGS SHALL BE DIRECTED IN WRITING TO THE ATTENTION OF THE ARCHITECT PRIOR TO STARTING OF DEMOLITION AND CONSTRUCTION.	D11. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ASBESTOS CONTAINING MATERIALS AND DISPOSING OF THEM OFF SITE IN ACCORDANCE WITH STATE LOCAL AND LAWS.
D4. EXISTING CONDITIONS AS THEY APPEAR IN THESE CONTRACT DOCUMENTS MAY VARY WITH ACTUAL CONDITIONS BECAUSE OF WORK PERFORMED WITH OWNERS STAFF AND BY OTHER CONTRACTORS (I.E. ASBESTOS ABATEMENT CONTRACTORS) PRIOR TO CONTRACT. PORTIONS OF DEMOLITION WORK MAY BE INCLUDED IN THE SCOPE OF WORK OF ANOTHER CONTRACT AND NOT PART OF THIS PROJECT. GENERAL CONTRACTOR SHALL VERIFY THE ACTUAL SCOPE OF DEMOLITION IN THEIR CONTRACT PRIOR TO SUBMITTING A BID.	D8. OWNER RESERVES THE RIGHT TO SALVAGE AND REMOVE ANY EXISTING ITEMS BEFORE START OF DEMOLITION WORK.	D12. WHERE EXTERIOR WALLS ARE SCHEDULED TO BE REMOVED, THEY ARE TO BE REMOVED DOWN TO TOPS OF EXISTING FOOTINGS. REMOVE EXISTING FOOTINGS WHERE THEY INTERFERE WITH NEW CONSTRUCTION.

GENERAL ALTERATION NOTES:

R1. GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND RECORDING OF ALL EXISTING BUILDING DIMENSIONS AND CONDITIONS RELATED TO THE WORK, INCLUDING BUT NOT LIMITED TO FINISHES, MATERIALS AND SYSTEMS SHOWN AND DESIGNATED AS EXISTING IN CONTRACT DOCUMENTS. ANY DISCREPANCIES FROM INFORMATION INDICATED ON CONTRACT DOCUMENTS SHALL BE DIRECTED TO THE ATTENTION OF THE ARCHITECT. VERIFICATION OF CLEARANCES REQUIRED FOR ALL NEW EQUIPMENT, PIPING, DUCTWORK, AND RELATED COMPONENTS SHALL BE THE CONTRACTORS RESPONSIBILITY.	R6. ALL EXISTING MATERIALS AND FINISHES DISTURBED OR INTERRUPTED BY THE WORK SHALL BE REPLACED OR "FILLED IN" TO ACHIEVE UNIFORM COLOR, TEXTURE, PATTERN AND APPEARANCE TO MATCHING ADJACENT MATERIALS AND FINISHES. TRANSITIONS BETWEEN EXISTING TO EXISTING AND NEW TO EXISTING MATERIALS AND FINISHES SHALL BE ACHIEVED IN STRAIGHT HORIZONTAL AND OR VERTICAL LINES BETWEEN DIFFERENT AND OR NEW MATERIALS AND FINISHES.	R12. AT THE DEMOLITION OF AN EXISTING ITEM, REMOVE ALL TRACES OF THE DEMOLISHED ITEMS COMPONENTS FROM THE SURFACE OF THE REMAINING FLOOR, WALLS AND CEILING. AT THE REMOVAL OF FASTENERS IN ALL EXISTING MASONRY WALLS AND FLOORS, PATCH HOLE WITH GROUT LEVEL WITH EXISTING ADJACENT SURFACES IN ORDER TO RECEIVE NEW FINISHES.
R2. GENERAL CONTRACTORS RESPONSIBILITY TO REVIEW WITH THE OWNERS REPRESENTATIVE ALL ITEMS REQUIRING REMOVAL BEFORE THE START OF WORK. OWNER RESERVES THE RIGHT TO SALVAGE ANY ITEM. ALL REMAINING ITEMS SHALL BE DISPOSED OF OFF SITE.	R7. PATCH ALL HOLES IN FLOORS, WALLS AND CEILINGS, LEVEL WITH EXISTING ADJACENT SURFACES TO RECEIVE NEW FINISHES AND/OR CONSTRUCTION TO COMPLETE THE WORK. MATCH THE EXISTING ADJACENT MATERIALS, PATTERNS AND FINISHES.	R13. AT EXISTING FLOORS, CUT IN PLACE CONSTRUCTION TO RECEIVE NEW WORK. REPLACE WITH MATERIALS TO MATCH EXISTING REMAINING MATERIALS. PATCH FLUSH TO ADJACENT EXISTING ELEVATIONS. APPLY CEMENTITIOUS UNDERLAMENT TO PRODUCE A UNIFORM SURFACE IN ALL AREAS RECEIVING NEW FINISHES AS INDICATED ON THE ROOM FINISH SCHEDULE. PATCH FLUSH TO ADJACENT EXISTING ELEVATIONS. APPLY CEMENTITIOUS UNDERLAMENT TO PRODUCE A UNIFORM SURFACE IN ALL AREAS RECEIVING NEW FINISH AS INDICATED ON ROOM FINISH SCHEDULE. PATCHED JOINTS SHALL NOT TELEGRAPH THROUGH THE NEW FINISH.
R3. WHERE EXISTING WALL OPENINGS ARE INDICATED TO BE CLOSED, USE MATERIALS AND FINISHES TO MATCH ADJACENT EXISTING FINISHES. MASONRY SHALL BE TOOTHED INTO THE EXISTING COURSEWORK TO ACHIEVE A UNIFORM JOINT PATTERN TO MATCH THE EXISTING, FIELD VERIFY WALL THICKNESS.	R8. PATCH, REPAIR OR REPLACE ALL EXISTING FINISHES AND MATERIALS DISTURBED DURING CONSTRUCTION OR AS A RESULT OF DEMOLITION OR REMOVAL OF AN ITEM. ALL REPAIR OR REPLACEMENT MATCH ADJACENT EXISTING PATTERNS AND FINISHES. SEE ROOM FINISH SCHEDULE FOR NEW FINISHES.	R14. AT EXISTING FLOORS, WHERE WALLS ARE SCHEDULED FOR DEMOLITION AND EXTEND TO BELOW THE CONTIGUOUS CONCRETE FLOOR SLAB, THE WALL SHALL BE DEMOLISHED TO BELOW THE FLOOR THICKNESS. THE FLOOR SHALL BE PATCHED WITH CONCRETE AND GRANULOS FILL TO MATCH THE EXISTING THICKNESS. PROVIDE NEW WAPOR BARRIER TO THE PATCHED AREA. PATCH FLUSH TO ADJACENT EXISTING ELEVATIONS. APPLY CEMENTITIOUS UNDERLAMENT TO PRODUCE A UNIFORM SURFACE IN ALL AREAS RECEIVING NEW FINISH AS INDICATED ON ROOM FINISH SCHEDULE. PATCHED JOINTS SHALL NOT TELEGRAPH THROUGH THE NEW FINISH.
R4. ALL NEW MASONRY WALLS AND INFILLS THAT ARE IN CONTINUANCE WITH EXISTING MASONRY WALLS SHALL BE TOOTHED INTO THE EXISTING COURSEWORK TO ACHIEVE A UNIFORM JOINT PATTERN TO MATCH THE EXISTING, FIELD VERIFY WALL THICKNESS.	R9. PREPARE EXISTING REMAINING WORK SUBSTRATES TO RECEIVE NEW FINISHES AS INDICATED ON THE ROOM FINISH SCHEDULE. SUBSTRATE PREPARATION SHALL BE IN CONFORMANCE WITH THE INSTALLATION REQUIREMENTS OF EACH NEW FINISH.	R15. PAINT EXISTING METALS: AT EXISTING DOOR FRAMES TO REMAIN AND OTHER PAINTED METAL COMPONENTS INDICATED. REMOVE ALL DIRTY, LOOSE PAINT AND RUST. SAND ENTIRE FRAME, PRIME AND PAINT. COLOR SELECTION BY ARCHITECT. WHERE THE EXISTING PAINT IS INCOMPATIBLE WITH NEW PAINT COATINGS, THE EXISTING PAINT SHALL BE COMPLETELY REMOVED.
R5. IN ALL RENOVATED AREAS OF THE WORK, THE INTENT OF THESE CONTRACT DOCUMENTS IS TO PROVIDE A LEVEL OF QUALITY FOR ALL PATCHED SURFACES EQUAL TO THAT OF NEW SURFACES, INCLUDING BUT NOT LIMITED TO PLASTER, GYPSUM WALL BOARD AND MASONRY.	R10. ALL WALLS SHOWN WITH MASONRY HATCHING WITHIN THE EXISTING BUILDING SHALL BE NEW AND TOOTHED INTO EXISTING MASONRY. MATCH EXISTING COURSEWORK, JOINT PATTERN AND THICKNESS UNLESS NOTED OTHERWISE.	R16. PAINT SURFACES: WHERE PATCHING OCCURS IN THE WORK OF AN EXISTING PAINTED SURFACE, THE PATCHED AREA SHALL BE SPACKLED, PRIMED AND INTERMEDIATE PAINT COATS APPLIED OVER THE PATCH. APPLY FINAL PAINT COAT OVER ENTIRE UNBROKEN SURFACE CONTAINING THE PATCH. THE UNBROKEN SURFACE SHALL BE FROM THE INTERSECTION OF THE WALL TO FLOOR TO THE INTERSECTION OF THE WALL TO CEILING AND FROM THE RIGHT SIDE WALL TO WALL INTERSECTION TO THE LEFT SIDE WALL TO WALL INTERSECTION. PROVIDE ADDITIONAL SPACKLING AND/OR PAINT COATS UNTIL THE PATCH AREAS BLEND INVISIBLY INTO THE ADJACENT EXISTING SURFACE. UNBROKEN CEILING SURFACES SHALL BE FROM CEILING TO WALL INTERSECTION AND OR NEW BULKHEAD CEILING ELEVATION CHANGE FOR THE ENTIRE PERIMETER OF THE CEILING AREA. APPLY PAINT COATS AS DESCRIBED FOR THE WALLS.
	R11. MASONRY WALLS AND INFILLS THAT ARE IN CONTINUANCE WITH EXISTING MASONRY WALLS SHALL BE TOOTHED INTO THE EXISTING COURSEWORK TO ACHIEVE A UNIFORM JOINT PATTERN TO MATCH THE EXISTING WORK. MATCH EXISTING WALL THICKNESS.	R17. AT EXISTING CERAMIC TILE: AT DEMOLISHED ITEMS AND DAMAGED AREAS, FILL ALL HOLES IN EXISTING CERAMIC WALL AND FLOOR TILE THAT ARE UP TO 1" WITH A COLOR EPOXY GROUT TO MATCH THE EXISTING CERAMIC TILE COLOR. REMOVE AND REPLACE EXISTING TILES AT HOLES THAT ARE OVER 1" AND AT ALL BROKEN AND MISSING WALL AND FLOOR TILES WITH A NEW TILE TO MATCH EXISTING COLOR AND SIZE.

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NO.	DATE	BY	DESCRIPTION OF CHANGES

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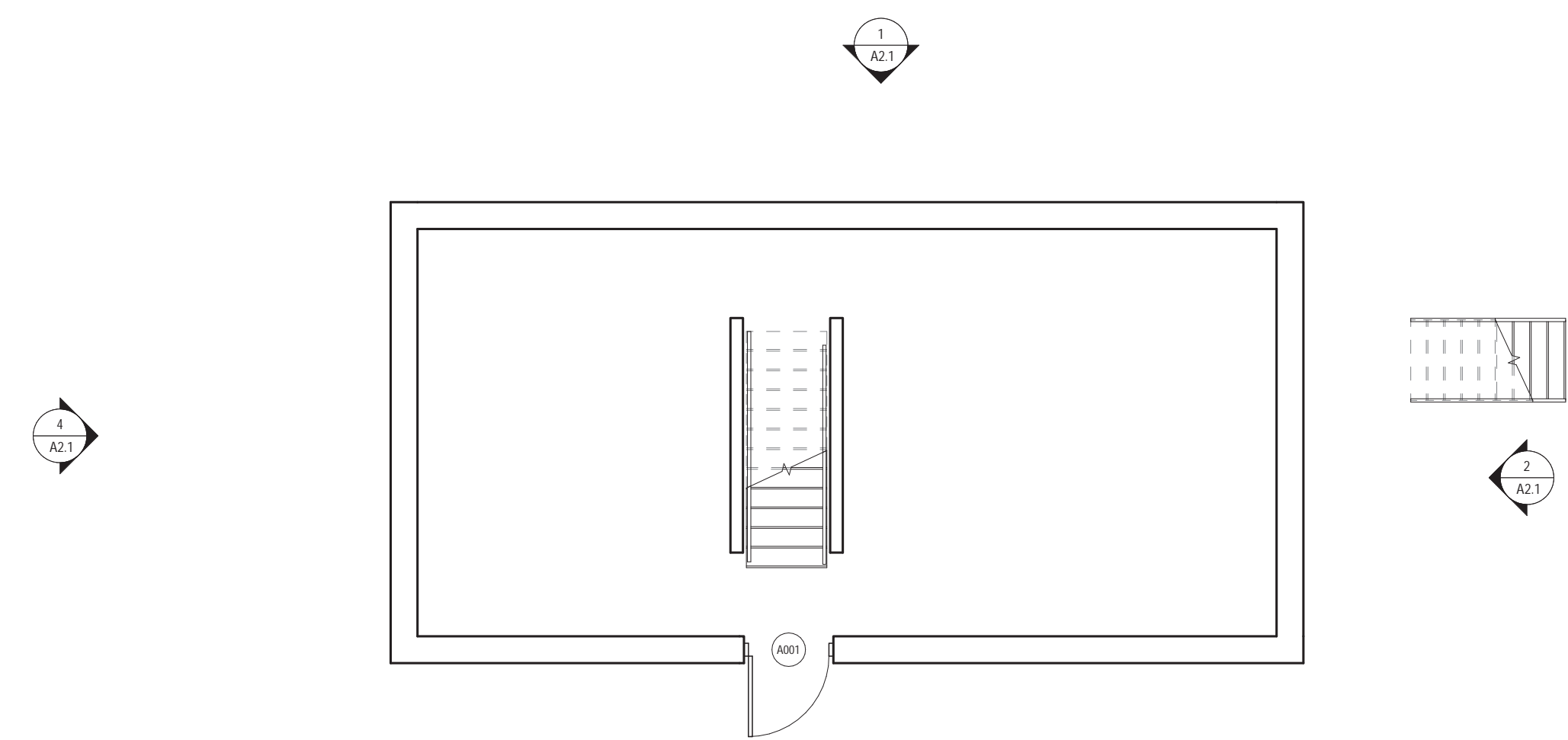


DEMOLITION PLANS

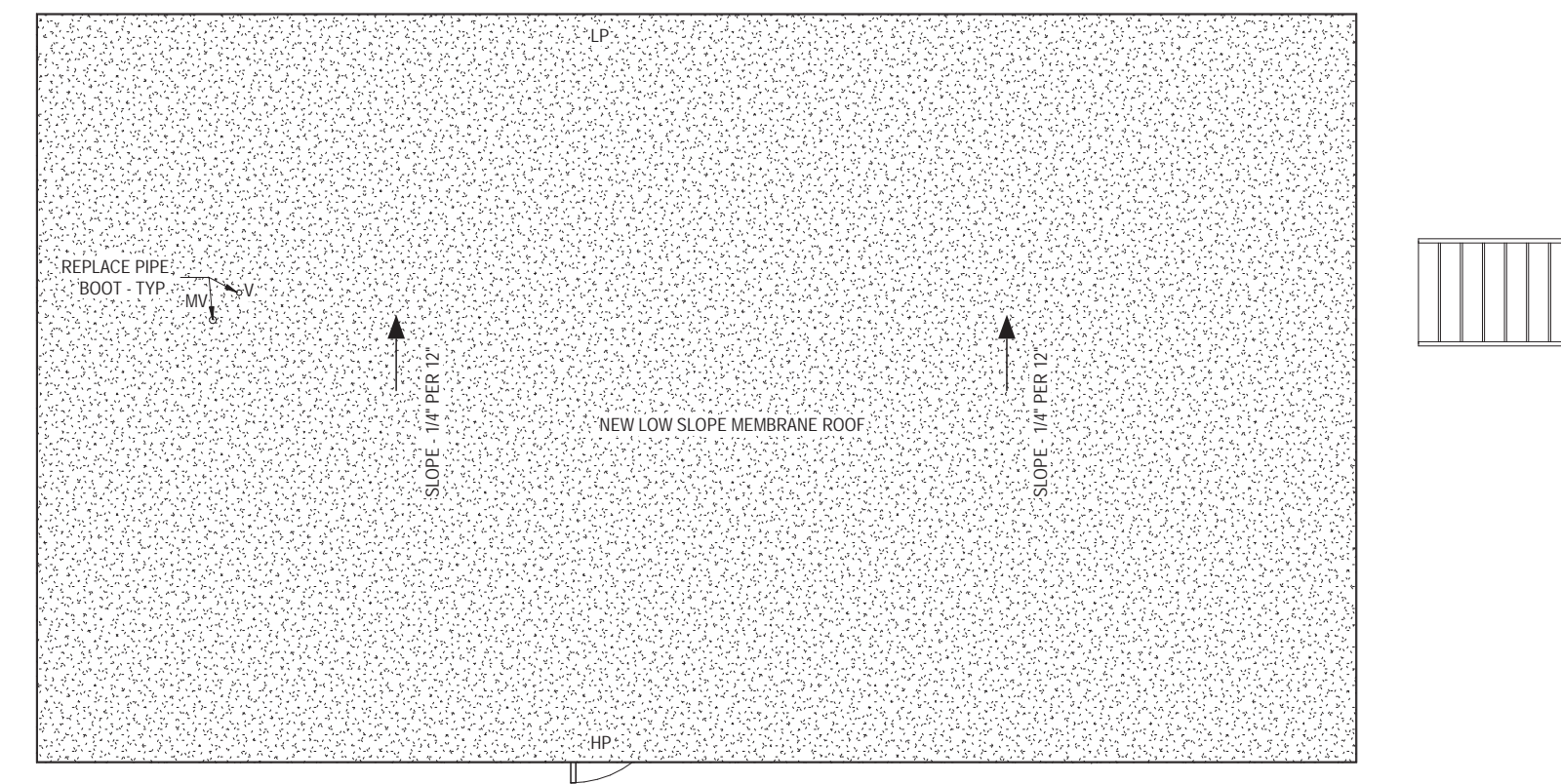
PROJECT
3133
D1.1
November 9, 2018



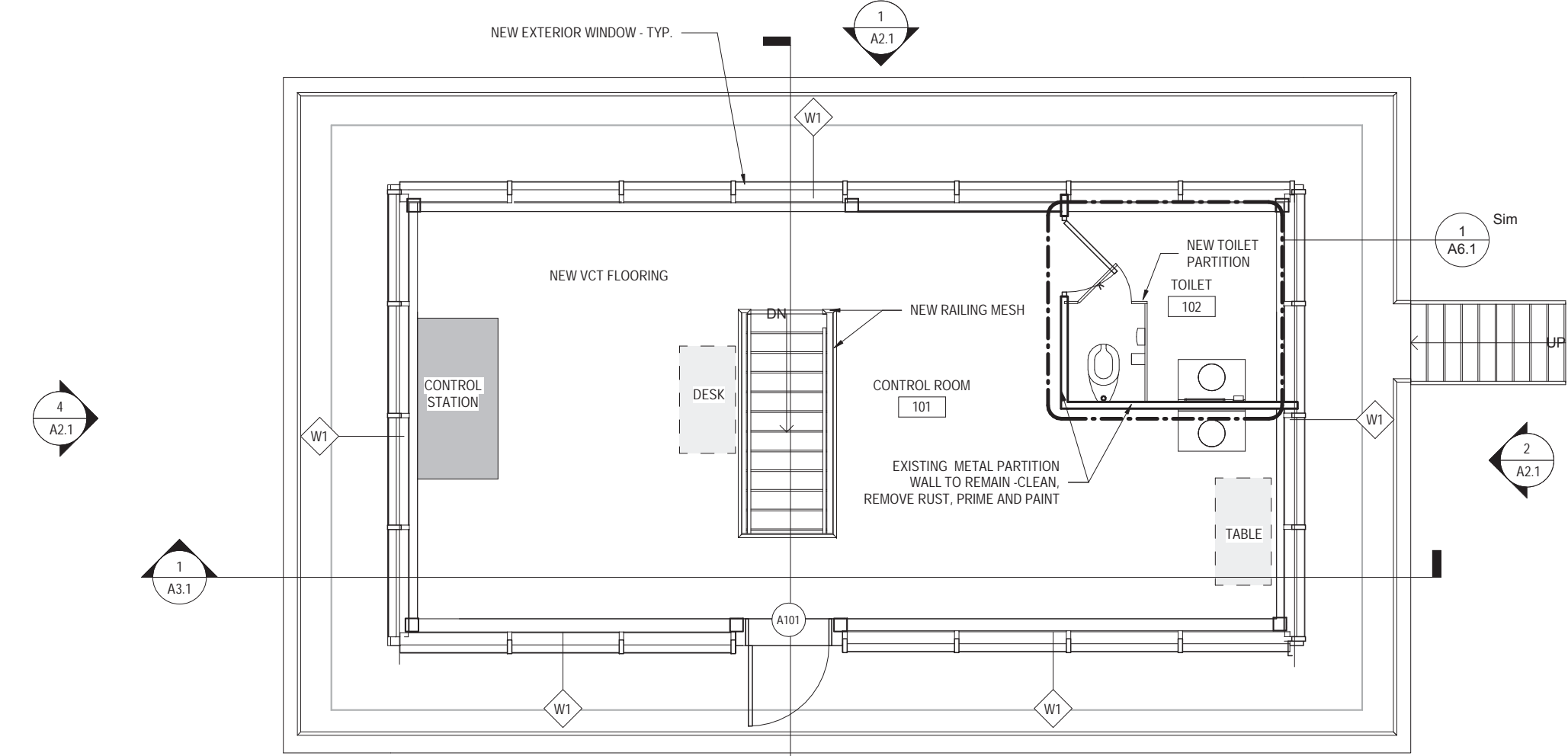
RENOVATIONS TO THE ISABEL HOLMES BRIDGE



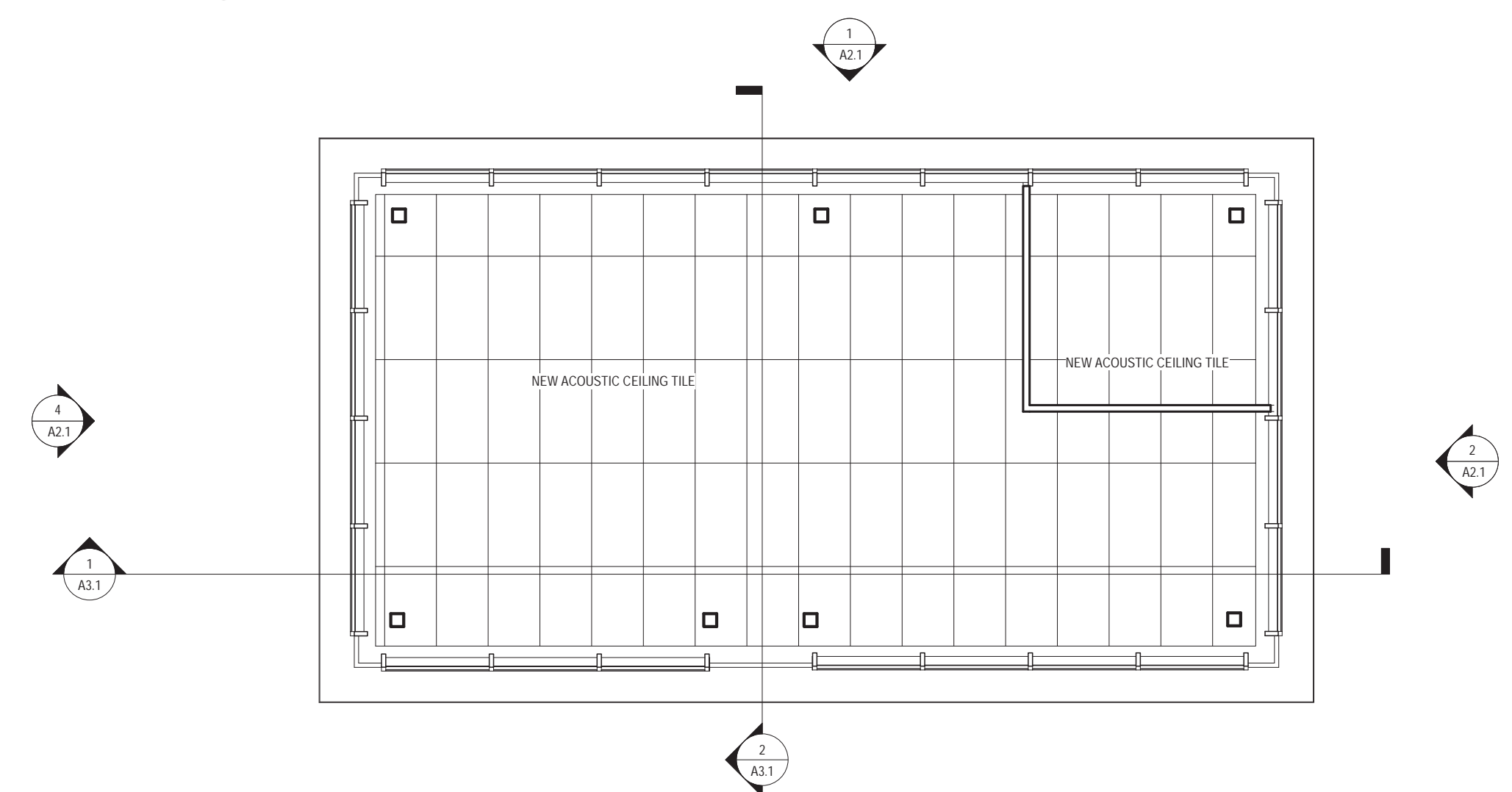
1 GROUND FLOOR
1/4" = 1'-0"



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



2 FIRST FLOOR PLAN
1/4" = 1'-0"



3 FIRST FLOOR REFLECTED CEILING PLAN
1/4" = 1'-0"

- GENERAL NOTES:**
1. ALL DOOR JAMBS SHALL BE LOCATED 4" FROM INSIDE CORNER OF WALL ON HINGE SIDE UNLESS OTHERWISE INDICATED.
 2. COORDINATE LOCATION OF MEP EQUIPMENT, DEVICES, OUTLET BOXES, ETC. WITH OTHER EQUIPMENT AND FINISH SCHEDULE PRIOR TO INSTALLATION.
 3. UNLESS NOTED OTHERWISE, WHERE DIFFERENT FLOOR ELEVATIONS OCCUR ON OPPOSITE SIDES OF INTERIOR MASONRY WALLS, PROVIDE COLD FLUID APPLIED WATERPROOFING (CFWP) ON THE BACKFILLED FACE OF WALL. APPLY CFWP FROM UNDERSIDE OF CONC. SLAB TO TOP OF FOOTING BELOW. CFWP NOT TO INTERFERE WITH INSTALLATION OF CONC. SLAB VAPOR BARRIER.
 4. ALL WALL LAYOUT DIMENSIONS ARE FROM FACE OF STUD & FACE OF CMU UNLESS OTHERWISE NOTED.

LEGEND		ROOF PLAN NOTES:	
LP	LOW POINT	1.	COORDINATE ROOF-MOUNTED EQUIPMENT & PENETRATIONS. REFER TO MEP DRAWINGS.
HP	HIGH POINT	2.	PROVIDE ROOFING MANUFACTURERS' STANDARD DETAILS FOR ALL PENETRATIONS & FLASHING AS PER ROOFING MANUFACTURERS' WARRANTY.
OD	OVERFLOW DRAIN	3.	CRICKETS AND SADDLES SHALL HAVE A MINIMUM OF TWO TIMES THE SLOPE OF THE PRIMARY TAPERED SYSTEM OR STRUCTURAL SLOPE.
→	FLOW DIRECTION	4.	ROOF MOUNTED EQUIPMENT CURBS AND SUPPORTS SHALL BE FURNISHED AND INSTALLED BY THE EQUIPMENT SUPPLIER.
[Stippled Box]	INDICATES MEMBRANE ROOF SYSTEM WITH TAPERED INSULATION ROOF		

- REFLECTED CEILING PLAN GENERAL NOTES:**
1. UNLESS NOTED OTHERWISE, GYPSUM BULKHEADS TO BE 3/8" METAL STUDS AT 16" O/C WITH 5/8" GWB EACH SIDE, EXTENDING MIN. 1" BELOW ADJACENT CEILING.
 2. CEILING GRID SHALL BE COORDINATED WITH MEP EQUIPMENT AND DEVICES.
 3. UNLESS NOTED OTHERWISE, ALL VISIBLE STRUCTURAL STEEL, ROOF FLOOR DECK, DUCTWORK, PIPING, CONDUIT, HANGER WIRES, ETC. AT EXPOSED LOCATIONS OR ABOVE CEILING CLOUDS SHALL BE PAINTED.
 4. REFER TO ROOM FINISH SCHEDULE FOR CEILING TYPES.
 5. ALL VISIBLE HANGER WIRES, STRUCTURE AND BRACING AT EXPOSED CEILING GRID OR CEILING CLOUD LOCATIONS SHALL BE INSTALLED PLUMB AND LEVEL.
 6. FOR WINDOWS THAT REQUIRE TWO OR MORE ROLLER SHADES, EACH ROLLER SHADE SHALL TERMINATE AT THE CENTER OF THE WINDOW MULLION. REFER TO HOLLOW METAL AND ALUMINUM FRAME ELEVATIONS FOR DIMENSIONS AND WINDOW MULLION DESIGN AND ROLLER SHADE BRAKES.

LEGEND	
[Grid Box]	2" X 4" SUSPENDED CEILING SYSTEM

REVISIONS		
NO.	DATE	DESCRIPTION OF CHANGES

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RENOVATIONS TO THE ISABEL HOLMES BRIDGE

OVERALL FLOOR PLANS,
 REFLECTED CEILING PLAN,
 ROOF PLAN

PROJECT
 3133

1/4" = 1'-0"

FILENAME:

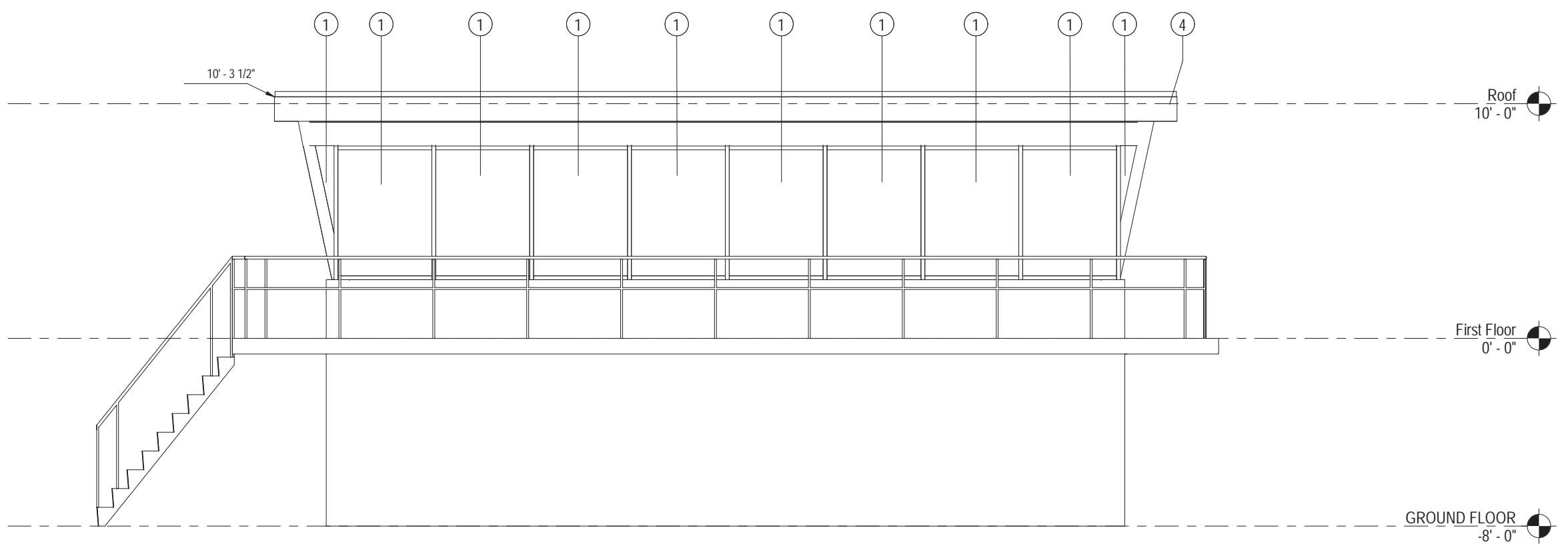
DATE: November 9, 2018

A1.1

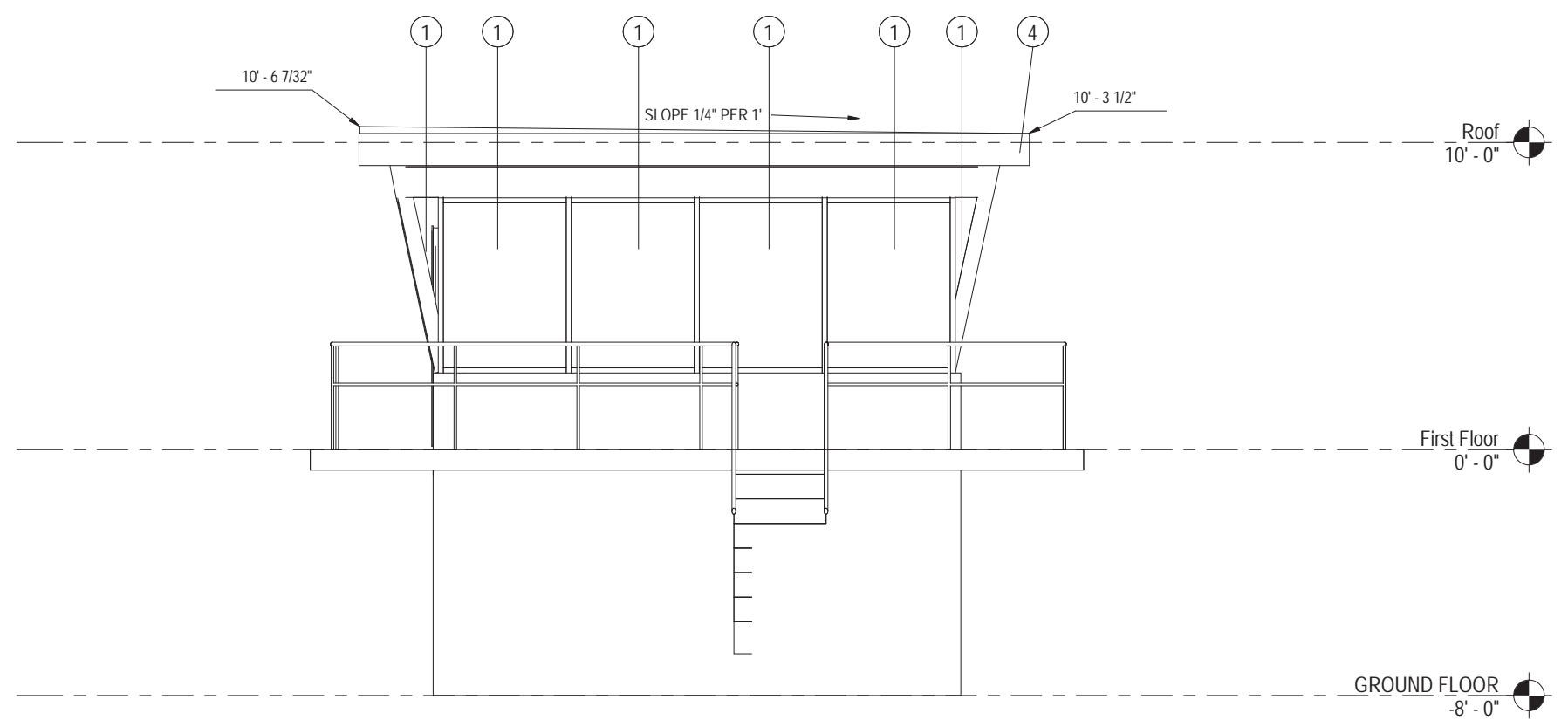
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ELEVATION LEGEND	
TAG	ELEVATION NOTE
1	WINDOW REPLACEMENT
2	RAILING MESH
3	EXTERIOR DOOR
4	ROOF REPLACEMENT

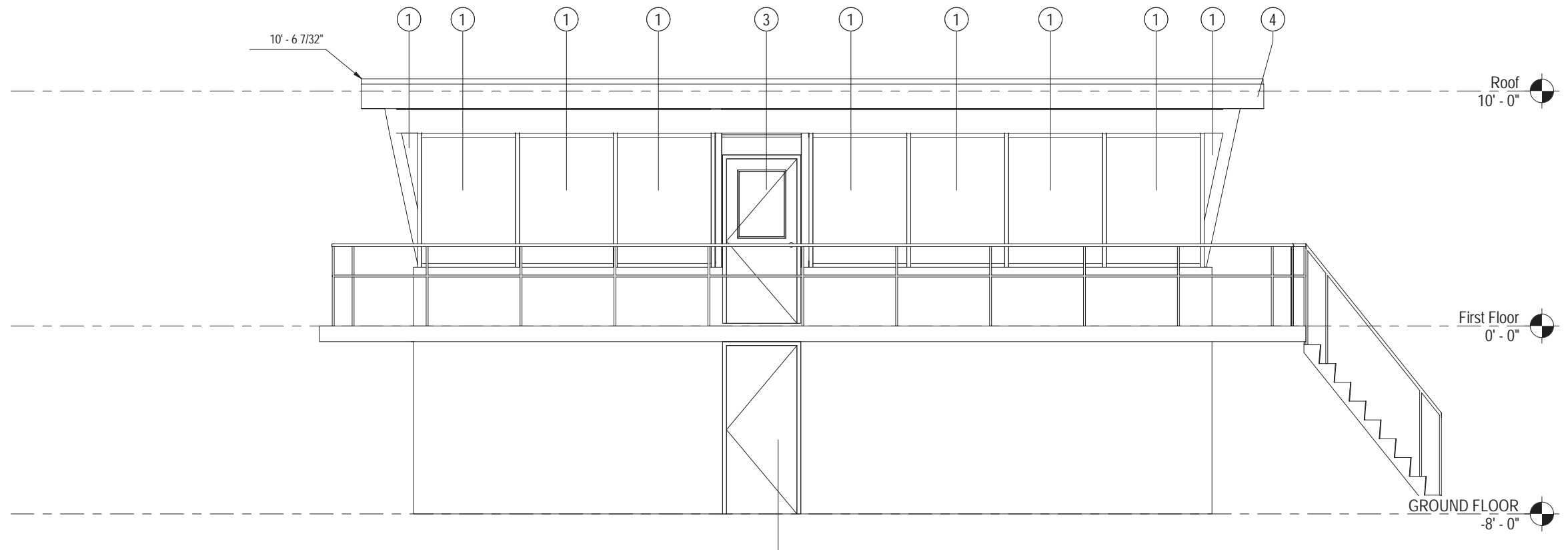
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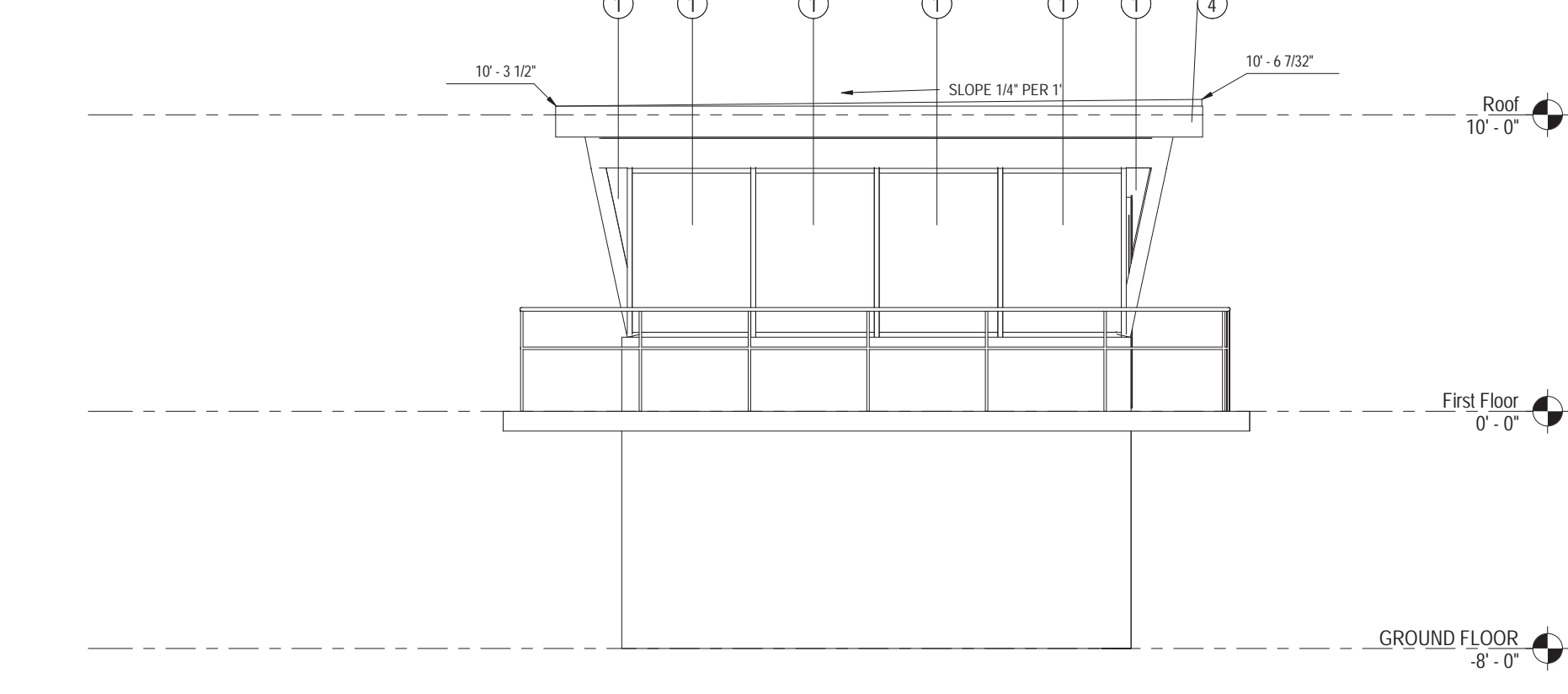
1 EXTERIOR ELEVATION - A
A2.1 1/4" = 1'-0"



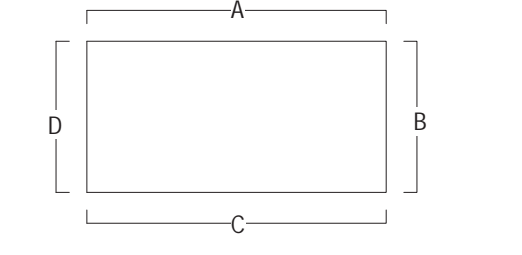
2 EXTERIOR ELEVATION - B
A2.1 1/4" = 1'-0"



3 EXTERIOR ELEVATION - C
A2.1 1/4" = 1'-0"



4 EXTERIOR ELEVATION - D
A2.1 1/4" = 1'-0"



KEY PLAN - EXTERIOR ELEVATION

REVISIONS		
NO.	DATE	DESCRIPTION OF CHANGES

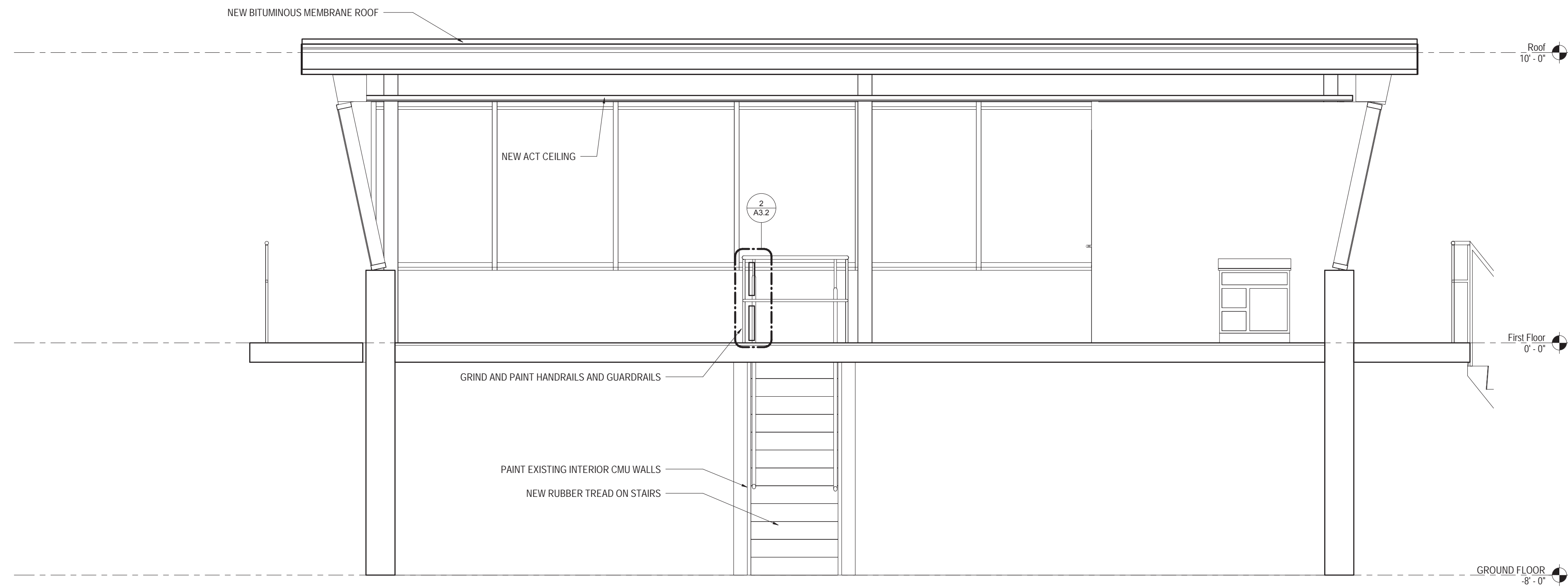
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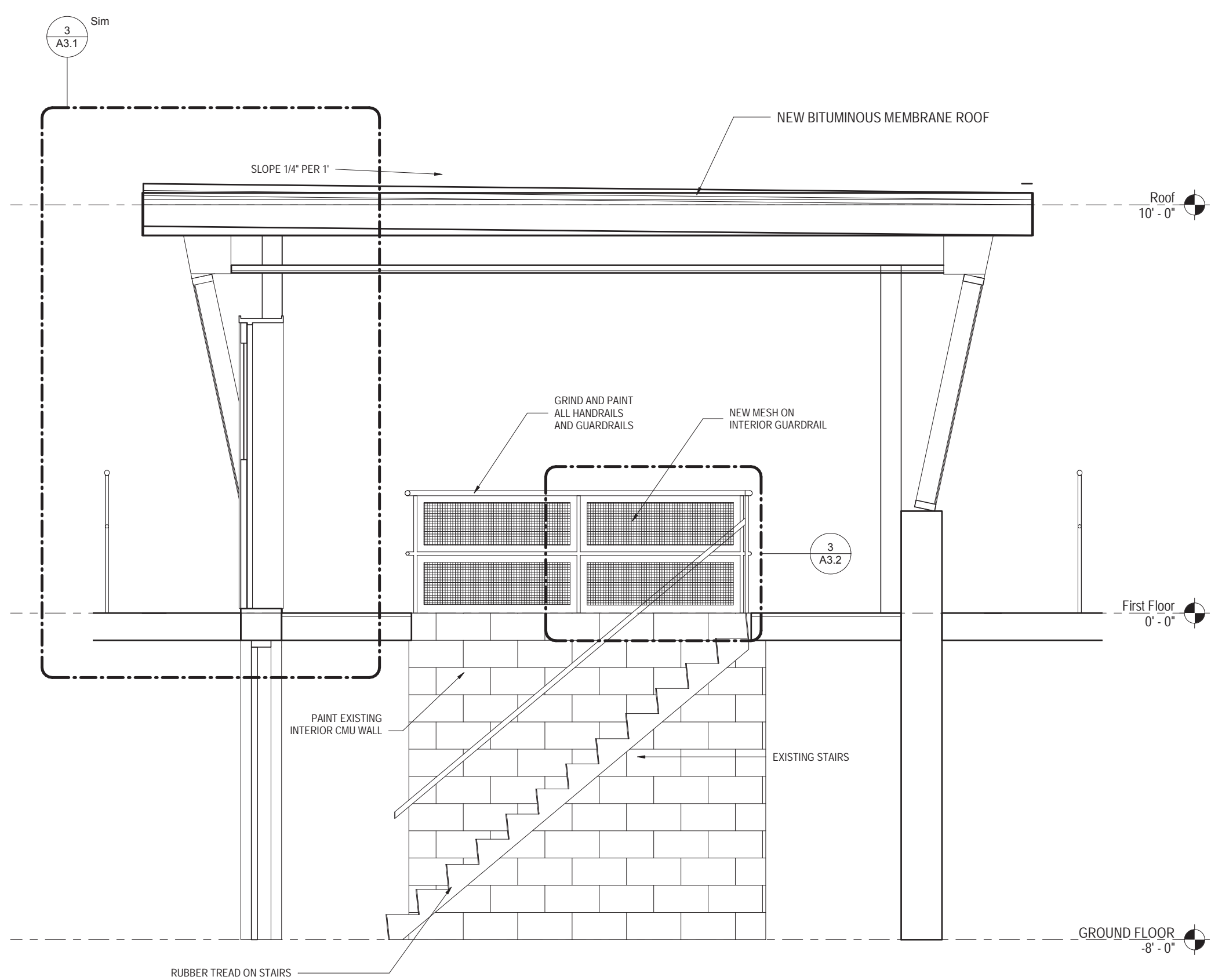


OVERALL EXTERIOR ELEVATIONS
 PLOT SCALE: As Indicated
 FILENAME:
 DATE: November 9, 2018

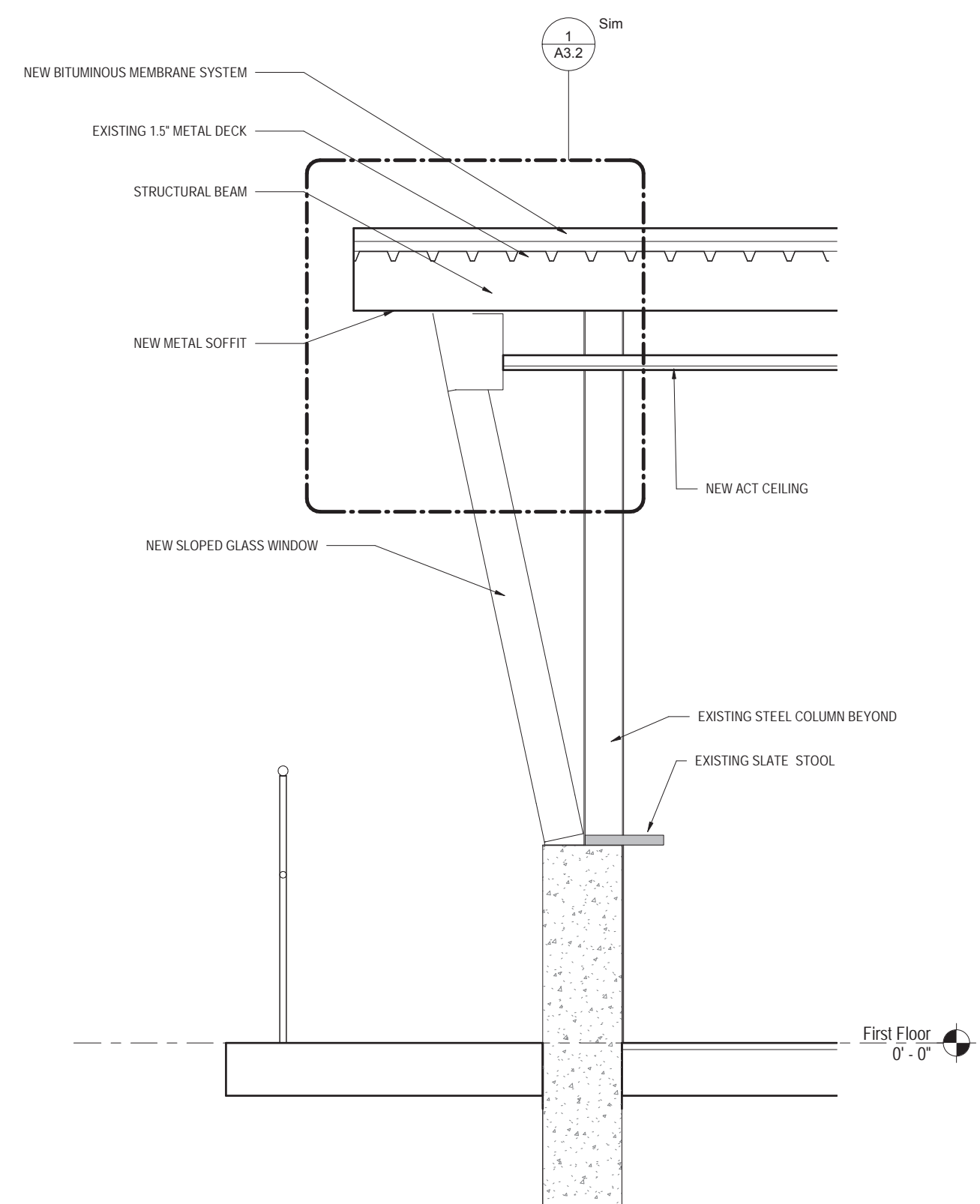
PROJECT 3133
 A2.1



1 SECTION 1
A3.1 1/2" = 1'-0"



2 SECTION 2
A3.1 1/2" = 1'-0"



3 DETAIL 1
A3.1 3/4" = 1'-0"

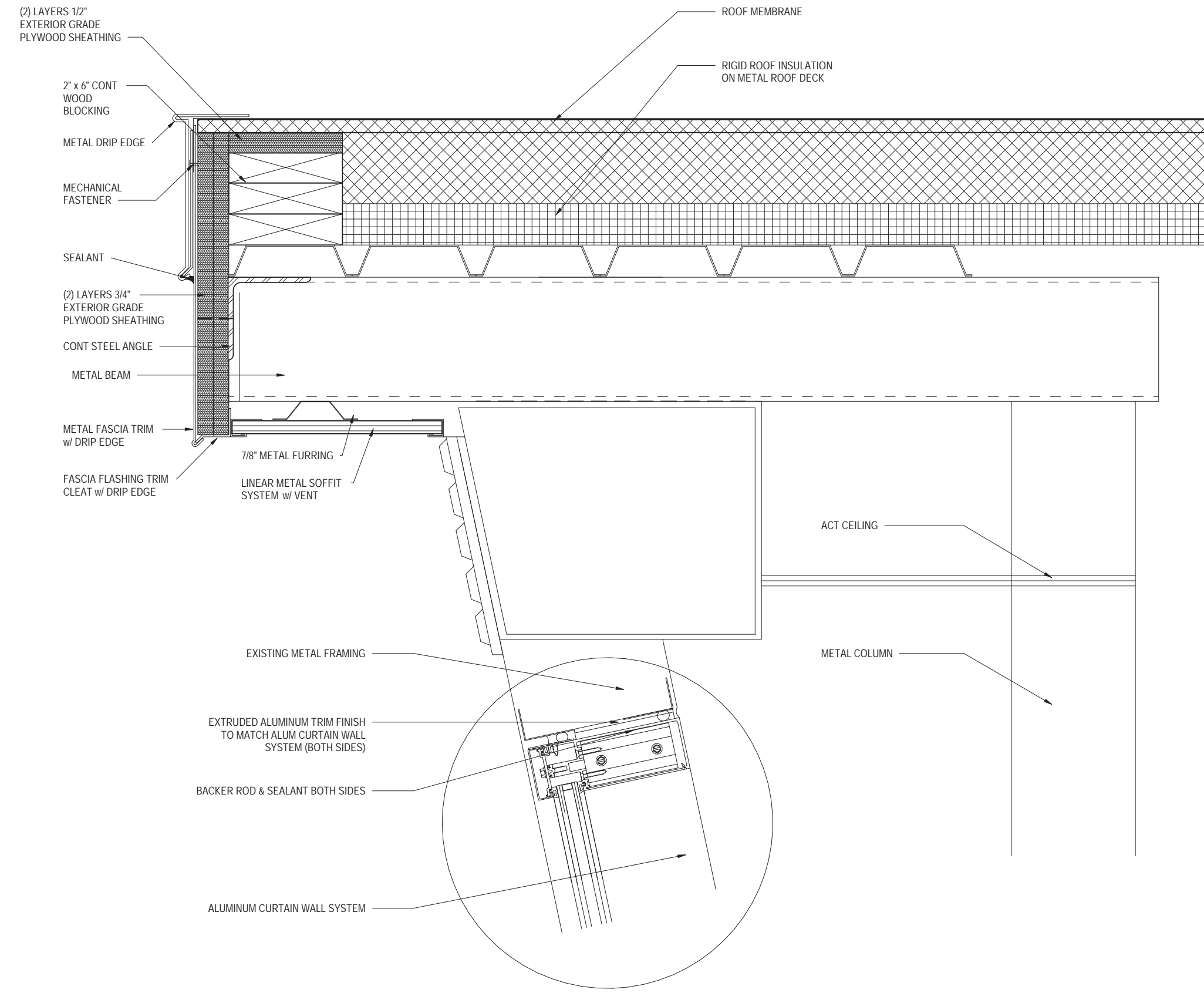
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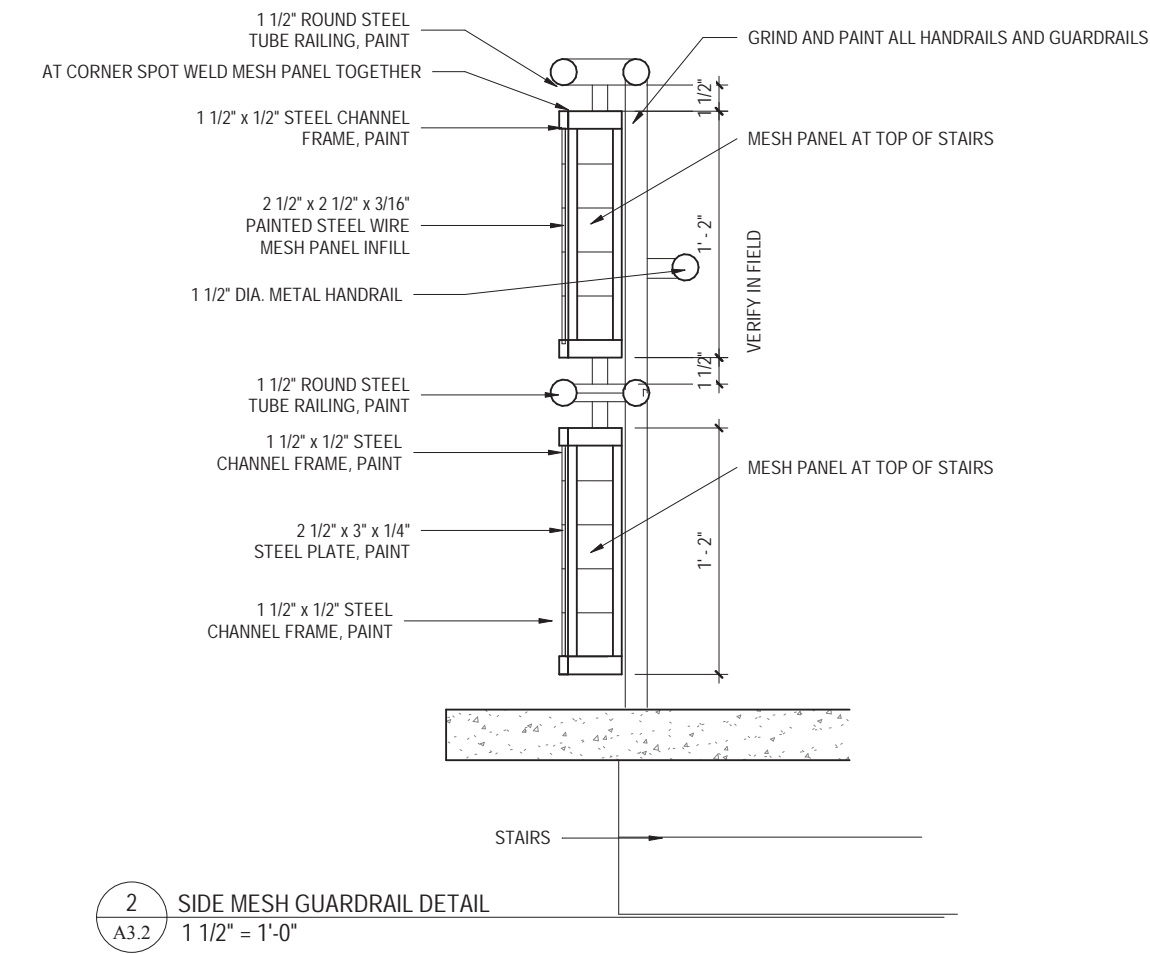
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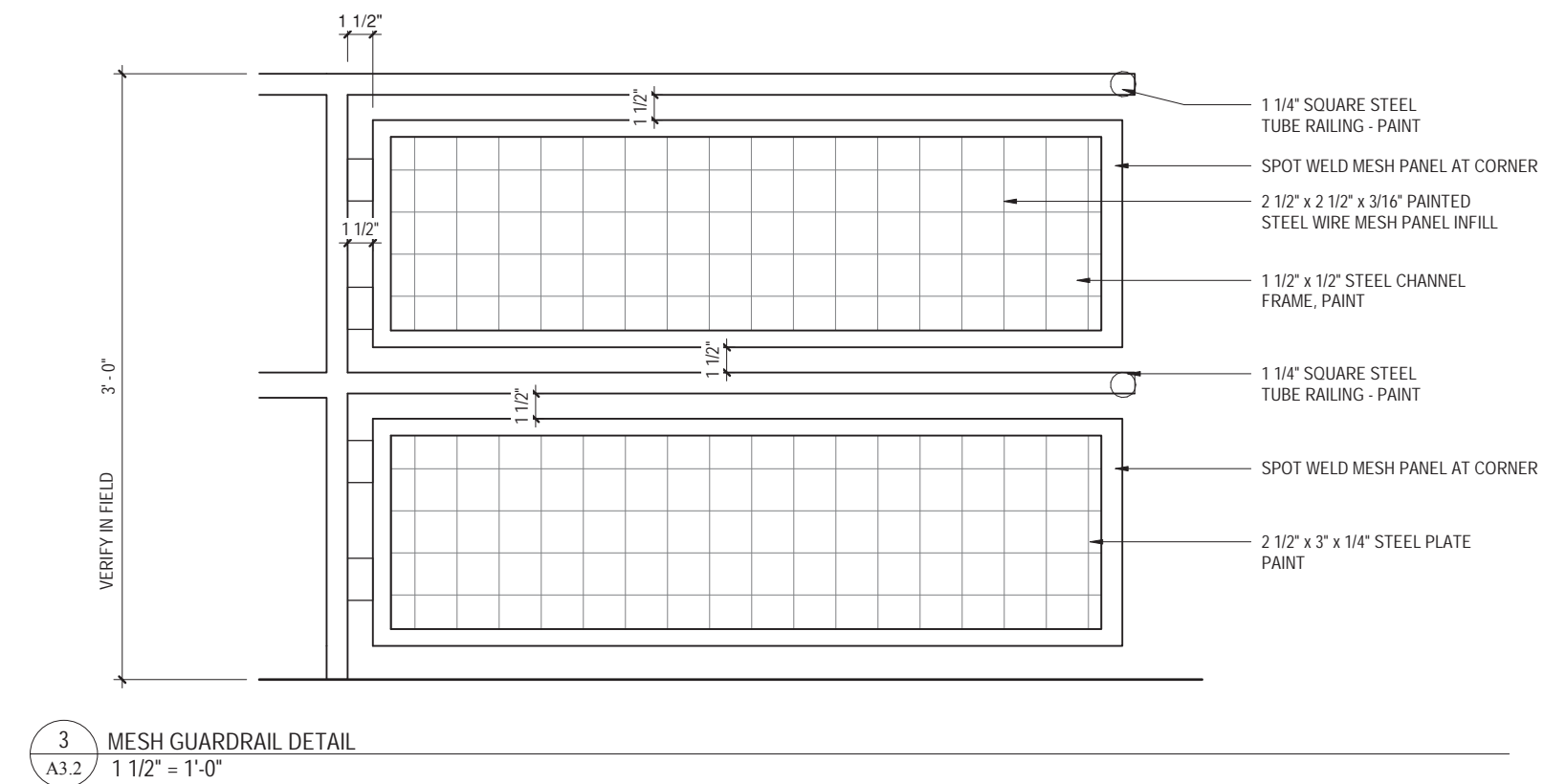
BUILDING SECTIONS AND DETAILS
 PROJECT 3133
 A3.1
 DATE: November 9, 2018



1 SOFFIT DETAIL
A3.2 3" = 1'-0"



2 SIDE MESH GUARDRAIL DETAIL
A3.2 1 1/2" = 1'-0"



3 MESH GUARDRAIL DETAIL
A3.2 1 1/2" = 1'-0"

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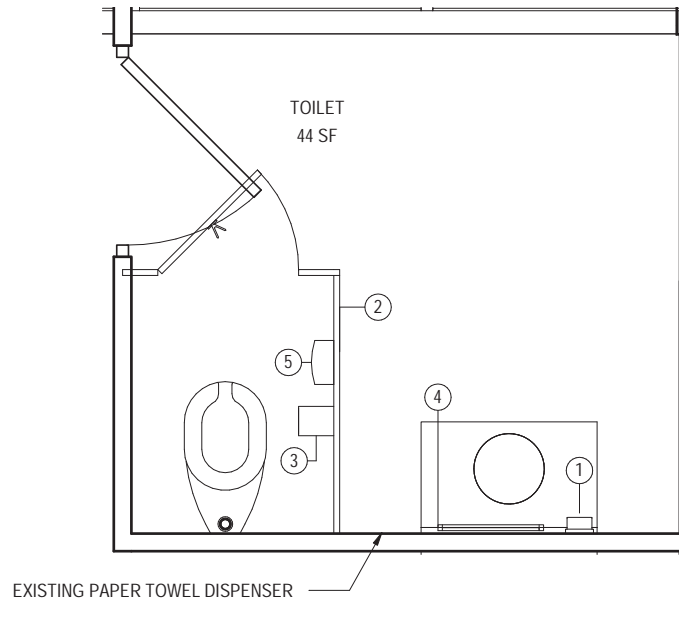
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RENOVATIONS TO THE ISABEL HOLMES BRIDGE

SECTION DETAILS	PROJECT 3133 A3.2
PLOT SCALE: As indicated	
FILENAME:	
DATE: 08/07/18	

ROOM FINISH SCHEDULE								
NUMBER	NAME	COLOR SCHEME	FLOOR	BASE	WALLS		CEILING FINISH	REMARKS
					WALL FINISH	WAINSCOT FINISH HEIGHT		
101	CONTROL ROOM		VCT	VB	PNT		ACT	
102	TOILET		VCT	VB	PNT		ACT	

TOILET ACCESSORY SCHEDULE				
No.	DESCRIPTION	MOUNTING	MANUFACTURER	MODEL
1	SOAP DISPENSER	44" MAX TO PUSH BUTTON	OWNER FURNISHED GC INSTALLED	
2	TOILET PARTITION	AS SPECIFIED	AS SPECIFIED	
3	TOILET PAPER DISPENSER	TISSUE ACCESS AT 18" MIN AFF	OWNER FURNISHED GC INSTALLED	
4	MIRROR 18" x 30" w/ SS FRAME	48" AFF TO BOTTOM EDGE OF REFLECTING SURFACE	Rohrig Washroom Equipment, Inc.	R-165 (1630)
5	SURFACE MOUNTED SANITARY NAPKIN DISPOSAL	SS w/ FINISH	Rohrig Washroom Equipment, Inc.	B-270



1 LARGE SCALE TOILET PLAN
1/2" = 1'-0"

LEGEND

MATERIALS

- UNDISTURBED EARTH
- CONTROLLED FILL
- CONCRETE
- GRANULAR FILL
- CONC MASONRY UNIT
- FACE MASONRY UNITS
- WOOD BLOCKING
- RIGID INSULATION
- BATT INSULATION

ARCHITECTURAL DRAWING NO. DESIGNATIONS

- INDICATES FLOOR PLANS
- INDICATES SHEET NUMBER
- INDICATES ELEVATIONS
- INDICATES SHEET NUMBER
- INDICATES SECTIONS
- INDICATES SHEET NUMBER
- INDICATES LARGE SCALE PLANS
- INDICATES SHEET NUMBER
- INDICATES GENERAL DETAILS
- INDICATES SHEET NUMBER
- INDICATES SCHEDULES AND FRAME ELEVATIONS
- INDICATES SHEET NUMBER
- INDICATES INTERIOR LARGE SCALE LAYOUTS
- INDICATES SHEET NUMBER
- INDICATES FLOOR PATTERN LAYOUTS
- INDICATES SHEET NUMBER

SYMBOLS

- SECTION
SECTION OR DETAIL NO.
SHEET NO.
- BUILDING SECTION
SECTION INDICATOR
BUILDING SECTION SHEET NO.
- DETAIL
DETAIL NO.
DETAIL SHEET NO.
- INTERIOR ELEVATION
ELEVATION NO.
ELEVATION SHEET NO.
- DOOR TAG
DOOR NUMBER
- WINDOW TAG
WINDOW ELEVATION
- WALL TYPE TAG
WALL IDENTIFICATION
- MILLWORK SECTION
SECTION OR DETAIL NO.
DETAIL SHEET NO.
- ROOM TAG
ROOM NAME
BLDG. & ROOM NO.
- NORTH ARROW

ARCHITECTURAL ABBREVIATIONS

THIS ABBREVIATION LIST IS A STANDARD AND NOT ALL ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT.

- | | | |
|--|--|--|
| ABV ABOVE | HC HANDICAPPED | SCH SCHEDULE |
| AC ACOUSTICAL | HDW HARDWARE | SECT SECTION |
| ACT ACOUSTICAL CEILING TILE | HGT HEIGHT | SF SQUARE FEET |
| AED AUTOMATED EXTERNAL DEFIBRILLATOR | HP HIGH POINT | SFCM SPLIT FACE CONCRETE MASONRY UNIT |
| AFF ABOVE FINISH FLOOR | HM HOLLOW METAL | SFRM SPRAY APPLIED FIRE RESISTIVE MATERIAL |
| ALUM ALUMINUM | HORZ HORIZONTAL | SH SHEATHING |
| ALT ALTERNATE | HVAC HEATING, VENTILATION & AIR CONDITIONING | SI SIMILAR |
| AP ACCESS PANEL | ID INSIDE DIAMETER | SJ SCORE JOINT |
| ARCH ARCHITECTURAL | INFO INFORMATION | SQ SPECIFICATIONS |
| | INSUL INSULATION | SS STAINLESS STEEL |
| BD BOARD | INT INTERIOR | STD STANDARD |
| BIT BITUMINOUS | INV INVERT | STR STRUCTURAL |
| BLDG BUILDING | | SYN SYNTHETIC |
| BLK BLOCKING | | |
| BM BENCH MARK | JST JOIST | T TREAD |
| BOT BOTTOM | JT JOINT | TG TEMPERED GLASS |
| BRG BEARING | | THK THICKNESS |
| BSMT BASEMENT | KIT KITCHENETTE | TOM TOP OF MASONRY |
| | | TOP TOP OF PLANK |
| CLR CLEAR | | TOS TOP OF STEEL |
| CL CENTERLINE | | TYP TYPICAL |
| CJ CONTROL JOINT | | |
| CLG CEILING | LAM LAMINATE | UL UNDERWRITERS LABORATORIES |
| CMU CONCRETE MASONRY UNIT | LAV LAVATORY | UNO UNLESS NOTED OTHERWISE |
| COL COLUMN | LB POUND | |
| CONC CONCRETE | LF LINEAL FEET | VCT VINYL COMPOSITION TILE |
| CONT CONTINUOUS | LLH LONG LEG HORIZONTAL | VERT VERTICAL |
| CONST CONSTRUCTION | LLV LONG LEG VERTICAL | VIF VERIFY IN FIELD |
| CONTR CONTRACTOR | LP LOW POINT | |
| COORD COORDINATE | | |
| CT CERAMIC TILE | | |
| | MFR MANUFACTURER | WP WATERPROOFING |
| DEMO DEMOLITION | MAT MATERIAL | Wf WITH |
| DET DETAIL | MAX MAXIMUM | WD WOOD |
| DF DRINKING FOUNTAIN | MC MECHANICAL CONTRACTOR | WG WIRE GLASS |
| DM DIMENSION | MECH MECHANICAL | |
| DN DOWN | MEP MECHANICAL, ELECTRICAL, PLUMBING | |
| DR DOOR | MIN MINIMUM | |
| DS DOWNSPOUT | MISC MISCELLANEOUS | |
| DWG DRAWING | MO MASONRY OPENING | |
| | MTD MOUNTED or MOUNTING | |
| EA EACH | | |
| EC ELECTRICAL CONTRACTOR | NIC NOT IN CONTRACT | |
| EJ EXPANSION JOINT | NO NUMBER | |
| EL ELEVATION | NOM NOMINAL | |
| ELEC ELECTRICAL | NTS NOT TO SCALE | |
| ELEV ELEVATOR | | |
| ENT ENTRANCE | OC ON CENTER | |
| EO EQUAL | OD OUTSIDE DIAMETER | |
| EQUIP EQUIPMENT | OPNG OPENING | |
| EX EXISTING | OPP OPPOSITE | |
| EXP EXPOSED | | |
| EXT EXTERIOR | PTN PARTITION | |
| EW EACH WAY | PC PLUMBING CONTRACTOR | |
| | PL PLATE | |
| FD FLOOR DRAIN | PLAM PLASTIC LAMINATE | |
| FE FIRE EXTINGUISHER (CABINET) | PLYW PLYWOOD | |
| FFE FINISHED FLOOR ELEVATION | PSF POUNDS PER SQUARE FOOT | |
| FIN FINISHED | PSI POUNDS PER SQUARE INCH | |
| FL FLOOR | PTD PAINTED | |
| FRP FIBERGLASS REINFORCED PANEL | | |
| FRT FIRE RETARDANT | QT QUARRY TILE | |
| FT FOOT or FEET | | |
| | R RISER or RADIUS | |
| GA GAUGE | RD ROOF DRAIN | |
| GALV GALVANIZED | REC RECESSED | |
| GC GENERAL CONTRACTOR | RECT RECTANGLE | |
| GFCMU GROUND FACE CONCRETE MASONRY UNIT | REINF REINFORCED or REINFORCING | |
| GL GLASS | REQ REQUIRED | |
| GCMU GLAZED CONCRETE MASONRY UNIT | RM ROOM | |
| GWB GYPSUM WALL BOARD | RO ROUGH OPENING | |
| GWBAR GYPSUM WALL BOARD ABUSE RESISTANT | RWC RAIN WATER CONDUCTOR | |
| GWBMR GYPSUM WALL BOARD MOISTURE RESISTANT | | |
| GWBFR GYPSUM WALL BOARD FIRE RATED | | |

ABBREVIATION SYMBOLS

- AT CENTERLINE
- D DIAMETER
- +/- PLUS OR MINUS

REVISIONS

NO	DATE	NAME	DESCRIPTION OF CHANGES

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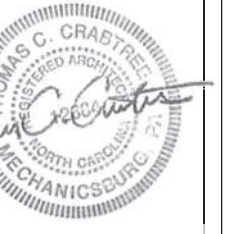


ROOM FINISH SCHEDULE,
SIGNAGE SCHEDULE, LARGE
SCALE TOILET PLAN AND
GENERAL INFORMATION

PROJECT
3133

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

FILENAME:
November 9, 2018

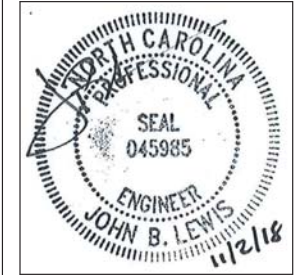


PROJECT
3133

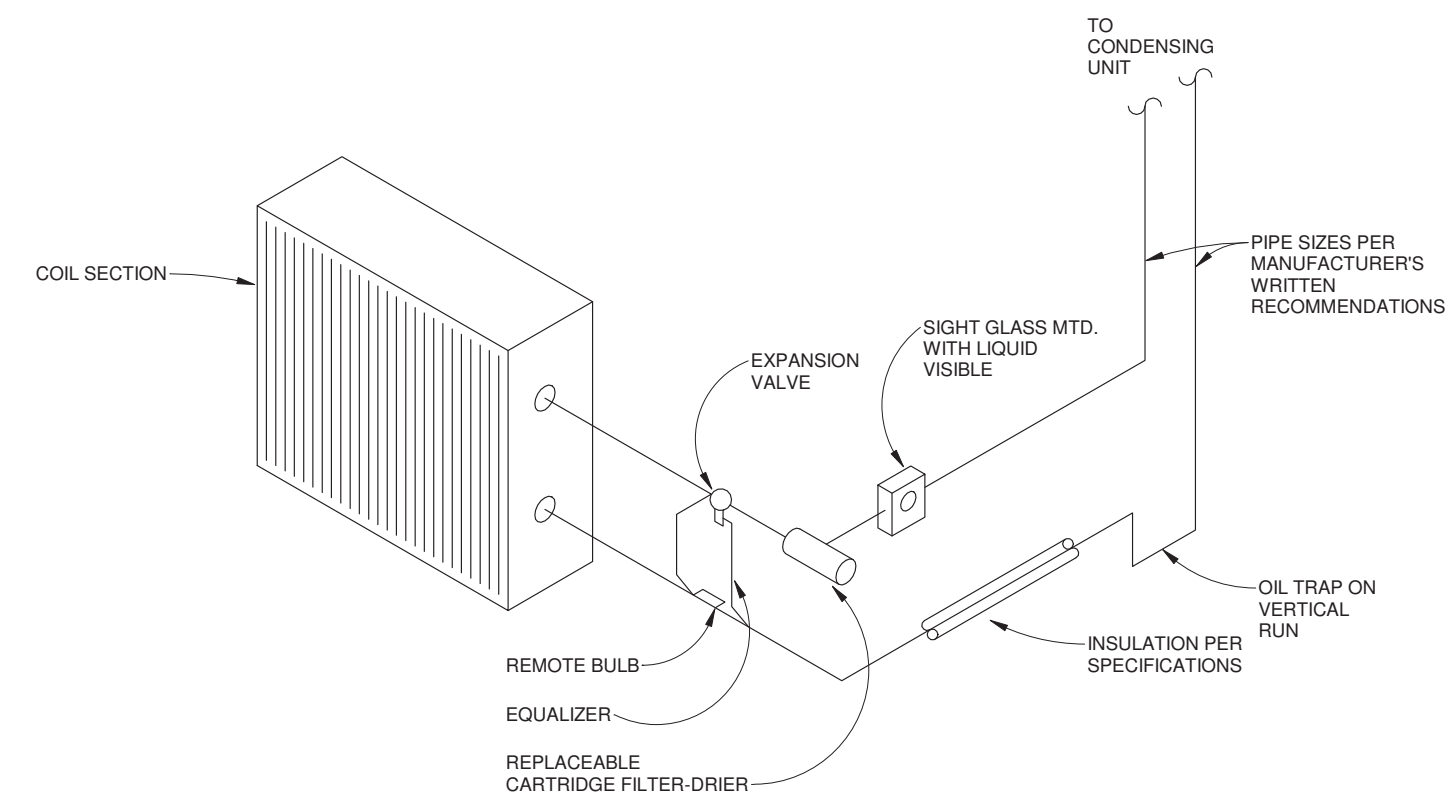
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FILENAME:
November 9, 2018

DATE:
November 9, 2018



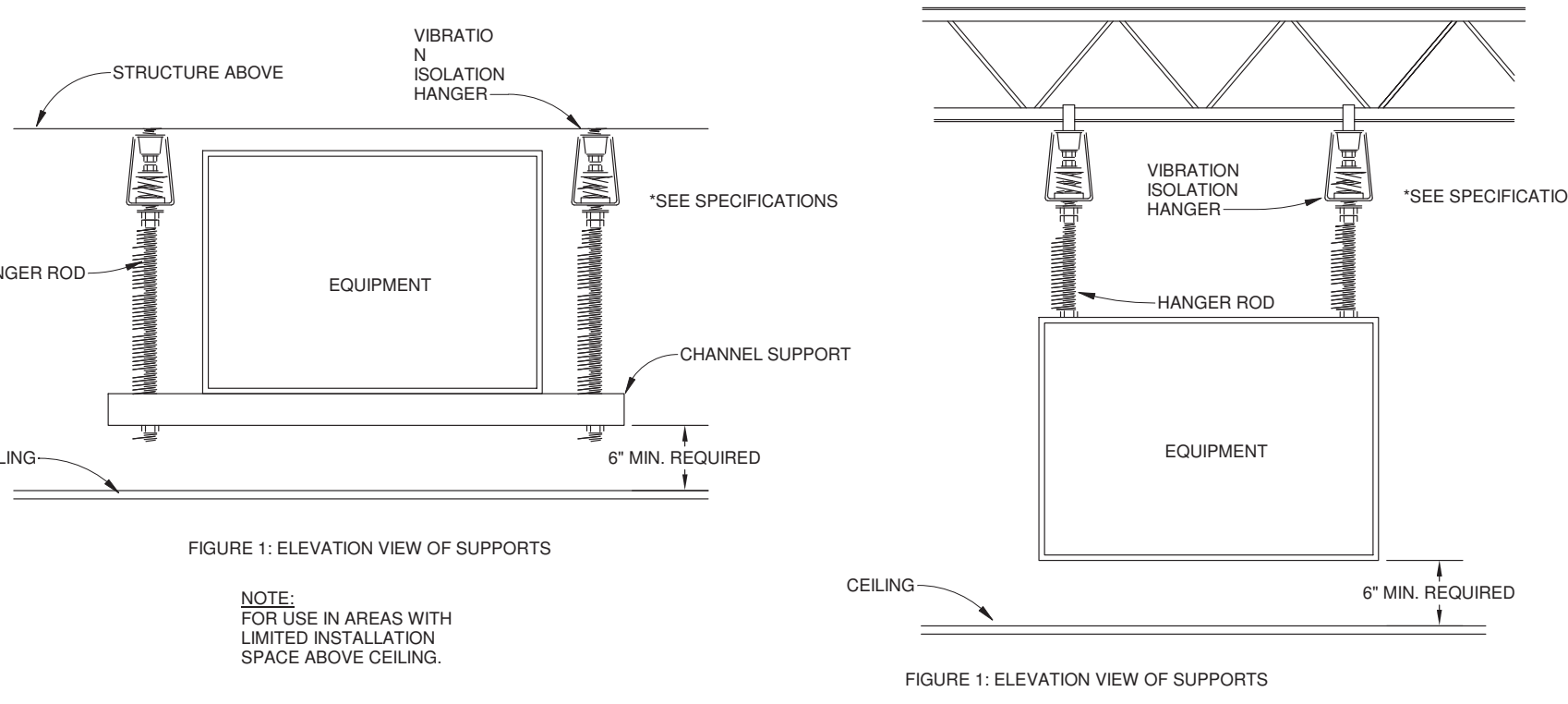
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3 SPLIT SYSTEM REFRIGERANT PIPING DETAIL
M0.1 NO SCALE

**MECHANICAL GENERAL NOTES
(APPLY TO ALL DRAWINGS)**

- ALL WORK AND EQUIPMENT SHALL COMPLY WITH ALL APPLICABLE LAWS, CODES, AND REQUIREMENTS, OF ALL AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL MECHANICAL CODE, THE INTERNATIONAL PLUMBING CODE, THE INTERNATIONAL ENERGY CODE, THE LOCAL FIRE MARSHALL, UNDERWRITERS LABORATORY, IRI, FM, OSHA, AND THE NATIONAL ELECTRICAL CODE. MODIFICATIONS REQUIRED BY THE ABOVE AUTHORITIES IN ORDER TO BRING THE PROJECT INTO CODE COMPLIANCE SHALL BE MADE AT NO ADDITIONAL COST TO OWNER. IF CONTRACT DOCUMENTS ARE MORE STRINGENT THAN CODE REQUIREMENTS, THE CONTRACT DOCUMENTS SHALL GOVERN.
- ALL SPECIFICATIONS AND DRAWINGS ARE COMPLEMENTARY AND MUST BE USED IN COMBINATION TO OBTAIN COMPLETE CONSTRUCTION INFORMATION. ANY CONFLICTING INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, AND WORK SHALL CEASE ON THAT PORTION OF THE PROJECT UNTIL CLARIFICATIONS ARE ISSUED.
- WORK SHALL BE EXECUTED IN A GOOD WORKMANLIKE MANNER USING MECHANICS IN THEIR RESPECTIVE TRADES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING THE WORK UNDER THIS CONTRACT. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL DELIVER COMPLETE AND FUNCTIONAL SYSTEMS AS ENCOMPASSED BY THE CONTRACT. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND CODE REQUIREMENTS.
- WHEREVER FIRE RATED ASSEMBLIES ARE PENETRATED FOR WIRE, DUCT OR PIPE PASSAGE, SEAL AROUND PASSAGES WITH CODE APPROVED, LABORATORY TESTED AND LABELED SEALANT OF FIRE RESISTANCE RATING NOT LESS THAN THAT OF PENETRATED ASSEMBLY THAT WILL PREVENT PASSAGE OF FIRE AND SMOKE. INSTALL APPROPRIATELY RATED FIRE, SMOKE OR COMBINATION DAMPERS IN ALL DUCT THAT PENETRATES RATED ASSEMBLIES WHETHER SHOWN OR NOT. DRAWING SYMBOLS ARE USED AS AN AID, NOT TO DEFINE AN EXACT NUMBER OF PIECES OF EQUIPMENT.
- WIRING OF ALL MOTORIZED OPERATORS AND THERMOSTATS, REGARDLESS OF VOLTAGE ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
- CONTRACTOR SHALL MAKE ALL FINAL EQUIPMENT CONNECTIONS AND PROVIDE THE NECESSARY ADAPTERS, FITTINGS, VALVES, AND DEVICES FOR A COMPLETE OPERABLE SYSTEM. COORDINATE REQUIREMENT FOR PROVISION OF CONTACTORS, AND CONTROL WIRING FOR PROPER FUNCTIONING SYSTEM WITH ELECTRICAL CONTRACTOR. MOTOR STARTERS, AND DISCONNECTS ARE TO BE PROVIDED BY THIS CONTRACTOR FOR INSTALLATION BY OTHERS.
- CLEAN ALL MECHANICAL EQUIPMENT AND DUCTWORK OF ALL CONSTRUCTION DUST AT PROJECT COMPLETION. REPLACE ALL FILTERS PRIOR TO AIR BALANCING. PROVIDE ONE SPARE SET OF FILTERS FOR EACH PIECE OF EQUIPMENT TO OWNER. NEWLY INSTALLED HVAC EQUIPMENT SHALL NOT BE USED AT ANY TIME FOR TEMPORARY CONDITIONING OF THE SPACE DURING CONSTRUCTION.
- COORDINATE INSTALLATION OF NEW WORK WITH ARCHITECTURAL PLANS, STRUCTURAL PLANS, AND LIGHTING PLANS. CONTRACTOR SHALL TAKE ALL INTERFERENCES INTO CONSIDERATION. PROVIDE ALL NECESSARY OFFSETS OR TRANSITIONS WITH EQUIVALENT AREAS TO MATCH SIZES AS INDICATED ON DRAWINGS.
- DO NOT INSTALL ANY MECHANICAL WORK ABOVE ELECTRICAL PANELS.
- ALL DIMENSIONS AND PIPE SIZES ARE IN INCHES UNLESS NOTED OTHERWISE.
- SLEEVE AND SEAL ALL PIPE OR DUCT PENETRATIONS OF WALLS AND FLOORS. PACK VOID BETWEEN PIPE OR DUCT AND SLEEVE WITH INSULATION IN NON-RATED WALLS AND FLOORS. PACK VOID BETWEEN PIPE OR DUCT AND SLEEVE WITH INSULATION IN FIRE-RATED WALLS AND FLOORS. APPLY INTUMESCENT FIRE SAFING COMPOUND AT PENETRATION, MAINTAINING INTEGRITY AND RATING OF FIRE SEPARATION. SLEEVES THROUGH FLOORS SHALL EXTEND 2" ABOVE FLOOR, BE GROUTED INTO PLACE AND WATERPROOFED. PIPING THROUGH EXTERIOR WALLS SHALL BE SLEEVED AND SEALED WEATHER TIGHT.
- FURNISH AND INSTALL IDENTIFICATION TAGS FOR ALL H.V.A.C. EQUIPMENT. TAGS SHALL BE RIVETED TO ASSOCIATED PIECE OF EQUIPMENT. TAGS SHALL BE CLEAR WITH BLACK LETTERING THAT IDENTIFIES UNIT VALVE SERVICES. TAGS SHALL BE TRANSPARENT TO BLEND IN WITH CEILING TILE. M.C. SHALL CONSULT WITH OWNER TO SHOW SAMPLE TAGS BEFORE PURCHASING TAGS.
- FURNISH AND INSTALL ALL EQUIPMENT ELECTRICAL DISCONNECTS UNLESS INDICATED OTHERWISE. DISCONNECTS SHALL BE PROVIDED BY EQUIPMENT MANUFACTURER.



2 VIBRATION ISOLATION FOR SUSPENDED EQUIPMENT DETAIL
M0.1 NO SCALE

EXHAUST FAN SCHEDULE

SYMBOL	TYPE	MFG	MODEL	CFM	ESP	FAN RPM	ELECTRICAL DATA		CONTROLS	WEIGHT (LBS)	REMARKS
							MOTOR - HP/WATTS (W)	V/PH			
EF-1	CABINET	GREENHECK	SP-80-VG	75	0.375	935	(6)	120/1/60	ACC. MOTION SENSOR	20	1,2

- REMARKS:
1. PROVIDE WITH FACTORY DISCONNECT SWITCH AND ACCESSORY MOTION SENSOR.
2. PROVIDE WITH ACCESSORY WALL CAP AND BACKDRAFT DAMPER.

HEAT PUMP SPLIT SYSTEM UNIT SCHEDULE

INDOOR UNIT SYMBOL	MFG	MODEL	SUPPLY FAN		OUTDOOR UNIT SYMBOL	COOLING / HEATING RATED CAP (MBH)	NOM. TONS	SEER	REFRIG. TYPE	ELECTRICAL DATA			WEIGHT (LBS.)	REMARKS
			AIR FLOW							MCA	MOP	V/PH		
MSI-1	LG	LC247HV / LUU247HV	530		MSO-1	24.0 / 27.0	2	17.0	R-410A	18.1	30	208-230/60/1	57	1,2,3,4
MSI-2	LG	LC247HV / LUU247HV	530		MSO-1	24.0 / 27.0	2	17.0	R-410A	18.1	30	208-230/60/1	57	1,2,3,4

- REMARKS:
1. PROVIDE UNIT WITH LOW AMBIENT KIT AND WIND BAFFLE.
2. SINGLE POINT POWER CONNECTION TO OUTDOOR UNIT. EC TO PROVIDE DISCONNECT SWITCH FOR OUTDOOR AND INDOOR UNIT. EC TO PROVIDE CONDUIT AND WIRE FROM OUTDOOR UNIT TO INDOOR UNIT.
3. PROVIDE UNIT WITH ACCESSORY MINI CONDENSATE PUMP.
4. OUTDOOR UNIT MOUNTED ON EXISTING STRUCTURE.

REVISIONS

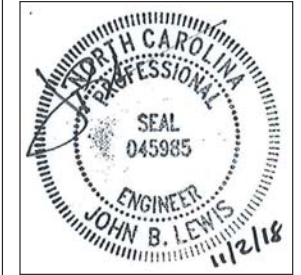
NO.	DATE	BY	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
 401 EAST WINDING HILL ROAD
 MECHANICSBURG, PA 17055
 717-458-0272 FAX 717-458-0047
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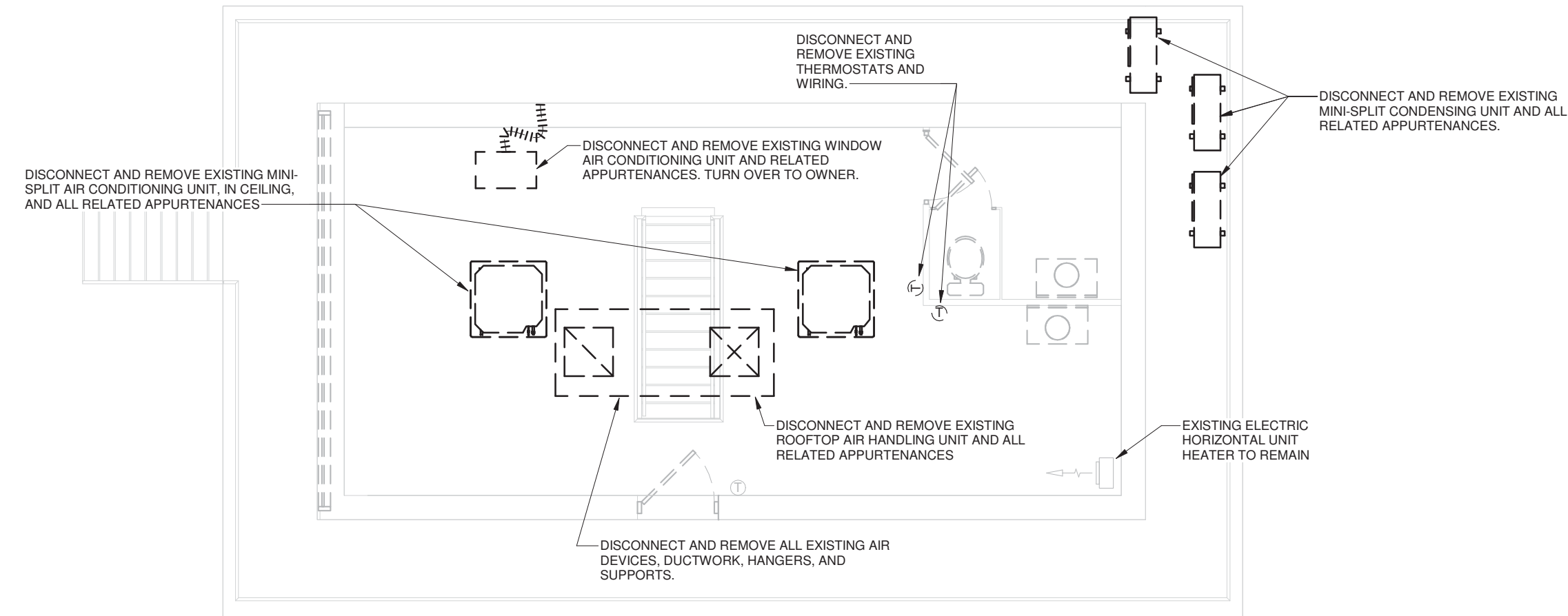


GENERAL NOTES
 PROJECT 3133
 FILENAME: 18018 Holmes Bridge NC Revit 18 HVAC.rvt
 DATE: NOVEMBER 2, 2018

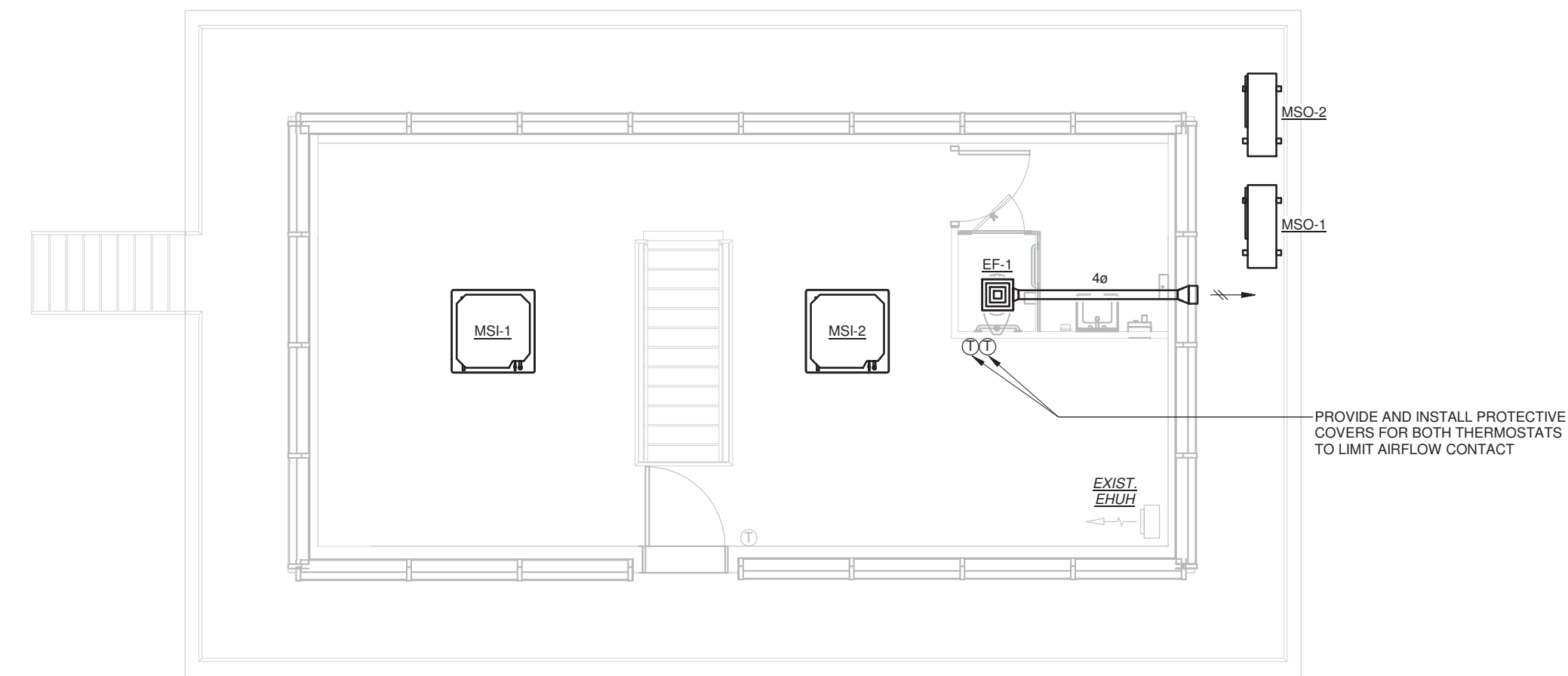
RENOVATIONS TO THE ISABEL HOLMES BRIDGE



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1 OVERALL CONTROL HOUSE LEVEL PLAN - MECHANICAL DEMOLITION
M1.1 1/4" = 1'-0"



2 OVERALL CONTROL HOUSE LEVEL PLAN - MECHANICAL
M1.1 1/4" = 1'-0"

REVISIONS

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RENOVATIONS TO THE ISABEL HOLMES BRIDGE



OVERALL CONTROL HOUSE
 LEVEL PLANS - MECHANICAL
 PLOT SCALE:
 1/4" = 1'-0"
 FILENAME:
 1819 Holmes Bridge NC Rev18 HWAC.H
 DATE:
 NOVEMBER 2, 2018

PROJECT
 3133
M1.1

PLUMBING SYMBOLS	
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	BALL VALVE
	PLUG VALVE
	CALIBRATED BALANCING SHUT-OFF VALVE & GPM SETTING
	ANGLE VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	SOLENOID VALVE
	STRAINER
	PRESSURE REGULATING VALVE
	SAFETY RELIEF VALVE
	VENTURI FLOW MEASURING DEVICE
	AIR SEPARATOR
	UNION
	TEMPERATURE/PRESSURE TEST PLUG
	PRESSURE GAUGE WITH GAUGE COCK
	THERMOMETER
	WALL HYDRANT (NON-FREEZE)
	ROOF HYDRANT (NON-FREEZE)
	HOSE BIBB
	PUMP
	CIRCULATOR PUMP
	WATER HAMMER ARRESTER
	FLOOR DRAIN
	AREA DRAIN (STORM WATER)
	ROOF DRAIN
	PIPE ANCHOR
	PIPE GUIDE
	PIPE TRANSITION
	EXPANSION COMPENSATOR
	FLEXIBLE CONNECTION
	ELBOW DOWN
	ELBOW UP
	TEE DOWN
	TEE UP
	FLOW ARROW
	FLOOR CLEANOUT FLUSH WITH FINISH FLOOR
	YARD CLEANOUT FLUSH IN GRASS OR PAVED AREA
	CLEANOUT IN HORIZONTAL RUN
	CLEANOUT IN VERTICAL DROP EXPOSED
	CLEANOUT IN VERTICAL DROP WITH EXTENSION THROUGH WALL
	PIPE CAP
	CONTINUATION BREAK
	ACCESS DOOR IN WALL OR CEILING
	CONNECT TO EXISTING
	LIMIT OF DEMOLITION
	DISTANCE FROM FLOOR TO BOTTOM OF OBJECT
	CONCRETE THRUST BLOCK
	SLOPING PIPE (.01 = 1%) & DIRECTION OF SLOPE

EXISTING PIPING SYMBOLS	
	EXISTING PIPING TO BE REMOVED
	EXISTING PIPING TO REMAIN - SERVICE IS SAME DESIGNATION AS NEW
	EXISTING PIPING NOTED AS CAPPED AND PORTION REMOVED

GENERAL SYMBOLS	
	SECTION MARKER
	PARTIAL PLAN / DETAIL MARKER
	RISER TYPE: S-SANITARY/W-WASTE/V-VENT/CW-COLD WATER/HW-HOT WATER RISER NUMBER

PLUMBING LINE TYPES	
	POTABLE DOMESTIC COLD WATER
	NON-POTABLE DOMESTIC COLD WATER
	DOMESTIC HOT WATER (120° F)
	DOMESTIC HOT WATER RECIRCULATION (120° F)
	DOMESTIC HOT WATER (140° F)
	DOMESTIC HOT WATER RECIRCULATION (140° F)
	SANITARY SEWER (GRAVITY)
	SANITARY SEWER (VACUUM)
	WASTE
	ACID WASTE
	SLURRY SUPPLY/RETURN FOR PULPER
	VENT
	ACID VENT
	STORM DRAIN
	OVERFLOW (SECONDARY) STORM DRAIN
	SIPHONIC STORM DRAIN SYSTEM
	INDIRECT DRAIN
	NATURAL GAS
	GREASE (WASTE) LINE
	INDIRECT WASTE
	PUMP DISCHARGE

ROOF DRAIN SCHEDULE				
MARK	OUTLET SIZE	DOME SIZE	DOME TYPE	COMMENTS

PLUMBING GENERAL NOTES:

- FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE ORDERING EQUIPMENT OR FABRICATING COMPONENTS.
- UNLESS NOTED OTHERWISE, CONSTRUCTION MATERIAL AND EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFF THE SITE.
- INSTALL ALL EQUIPMENT AND MATERIALS IN STRICT ACCORDANCE WITH RESPECTIVE MANUFACTURER'S WRITTEN INSTRUCTIONS UNLESS THERE IS A CONFLICT BETWEEN THESE INSTRUCTIONS AND THE CURRENT CODE IF A CONFLICT OCCURS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
- COORDINATE WORK WITH STRUCTURAL AND ARCHITECTURAL FEATURES AND PROVIDE OFFSETS AND FITTINGS AS REQUIRED.
- COORDINATE WORK WITH ALL OTHER TRADES. CEILING HEIGHTS ON ARCHITECTURAL PLANS ARE FINAL.
- ALL DIMENSIONS AND PIPE SIZES ARE IN INCHES UNLESS NOTED OTHERWISE.
- RUN PIPING CONCEALED EXCEPT IN MECHANICAL ROOMS OR WHERE NOTED OTHERWISE.
- PROVIDE ACCESS PANELS IN WALLS OR CEILINGS WHERE REQUIRED FOR ALL CONCEALED VALVES AND EQUIPMENT WHERE NO OTHER ACCESS IS PROVIDED. INSTALL RATED ACCESS PANELS IN FIRE RATED CONSTRUCTION TO MAINTAIN RATING.
- RUN CONCEALED PIPING ON ROOM SIDE OF BUILDING INSULATION UNLESS NOTED OTHERWISE.
- ALL EXPOSED PIPING SHALL BE CLEANED AND HAVE THE SURFACE PREPARED TO RECEIVE PAINTED FINISH. PRIME AND PAINT THE EXPOSED PIPING IN COLOR AS SELECTED BY THE ARCHITECT.
- SLOPE ALL SOIL, WASTE AND STORM WATER LINES PER CODE.
- CONNECT WATER, WASTE, AND VENT PIPING TO FIXTURES IN ACCORDANCE WITH SIZES INDICATED ON FIXTURE SCHEDULE. RUN-OUTS TO FIXTURES WITHOUT SIZES INDICATED ON DRAWINGS, SHALL BE THE SAME SIZE AS THE CONNECTOR SIZE FOR THE CORRESPONDING FIXTURE AS INDICATED ON THE FIXTURE SCHEDULE.
- THE CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES AND PIPING BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ALL DAMAGES WHICH MIGHT OCCUR BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY UNDERGROUND UTILITIES.
- INSTALL ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
- PATCH ALL OPENINGS IN BUILDING CONSTRUCTION WHERE PIPING, ETC. IS INSTALLED. MATERIAL AND FINISH TO MATCH EXISTING SURROUNDING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE PIPE SLEEVES IN ALL FOUNDATION WALLS FOR PIPING PENETRATIONS.
- THE CONTRACTOR SHALL VERIFY AND CONFIRM ALL PLUMBING FIXTURE LOCATIONS AND TYPES WITH ARCHITECTURAL PLANS, DETAILS AND ELEVATIONS. ANY DISCREPANCIES BETWEEN THE PLUMBING DRAWINGS AND THE ARCHITECTURAL DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION, PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL CUT ANY OPENING IN FLOORS, WALLS, ROOFS AND CEILINGS REQUIRED FOR INSTALLATION OF PLUMBING EQUIPMENT, PIPING, ETC. THE CONTRACTOR SHALL ALSO PATCH AND REPAIR ANY EXISTING FLOORS, WALLS, AND CEILING OPENINGS LEFT BY THE REMOVAL OR INSTALLATION OF PLUMBING EQUIPMENT, PIPING, ETC. PATCHING SHALL MATCH THE EXISTING ADJACENT SUBSTRATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINISHES WHERE PATCHING MENTIONED ABOVE IS PROVIDED.



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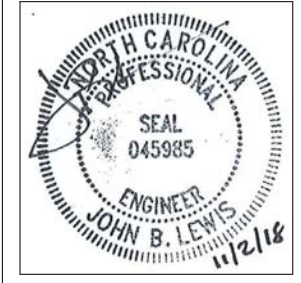
RENOVATIONS TO THE ISABEL HOLMES BRIDGE



SYMBOLS, ABBREVIATIONS, NOTES AND DETAILS - PLUMBING	PROJECT 3133
PLOT SCALE: 12" = 1'-0" FILENAME: 1818 Holmes Bridge NC Rev18 PLUMB.rvt DATE: NOVEMBER 2, 2018	P0.1

BARRY ISETT & ASSOCIATES INC.
 MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

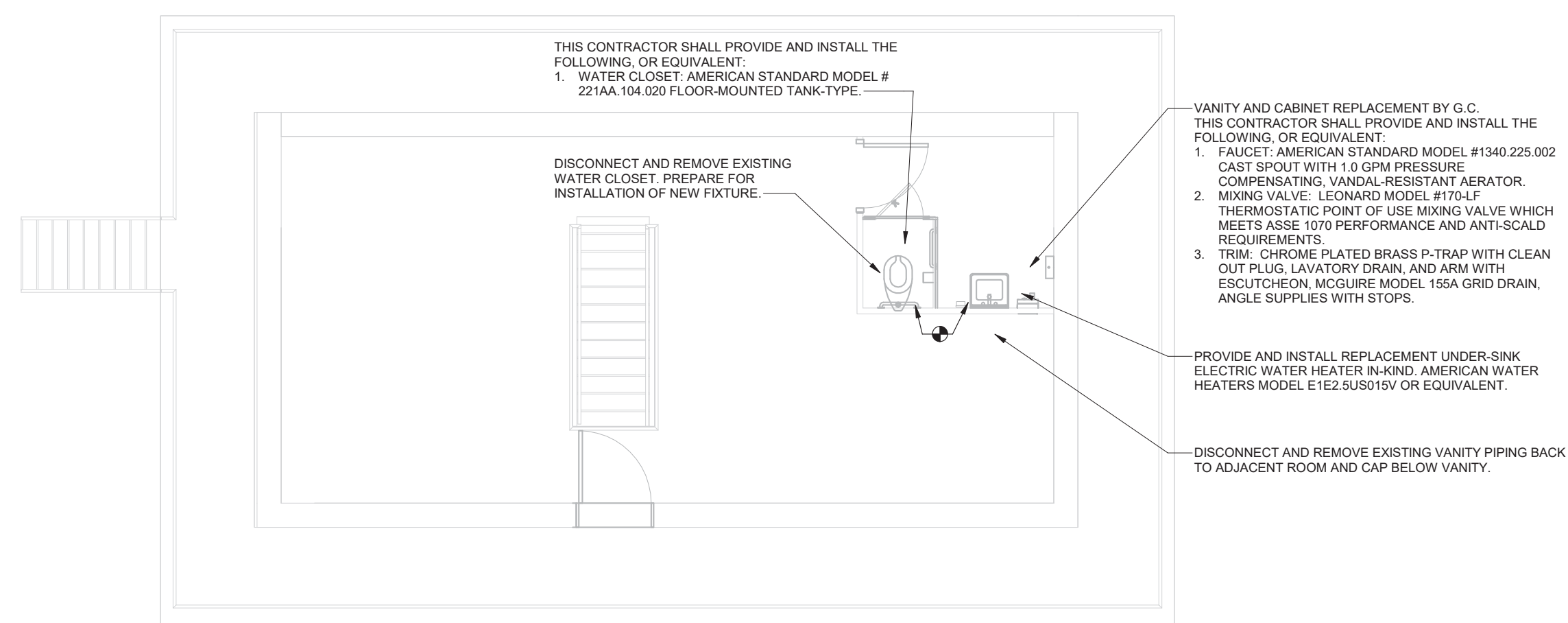
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 barryisett.com



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NO.	DATE	BY	DESCRIPTION OF CHANGES



OVERALL CONTROL HOUSE LEVEL PLAN - PLUMBING
 2
 P1.1
 1/4" = 1'-0"

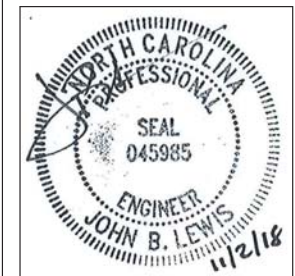
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RENOVATIONS TO THE ISABEL HOLMES BRIDGE

OVERALL CONTROL HOUSE
 LEVEL AND ROOF PLANS -
 PLUMBING
 PLOT SCALE:
 1/4" = 1'-0"
 FILENAME:
 1876 Holmes Bridge NC Rev18
 PLUMB.rvt
 DATE:
 NOVEMBER 2, 2018

PROJECT
 3133
P1.1



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717-458-0272 FAX 717-458-0047

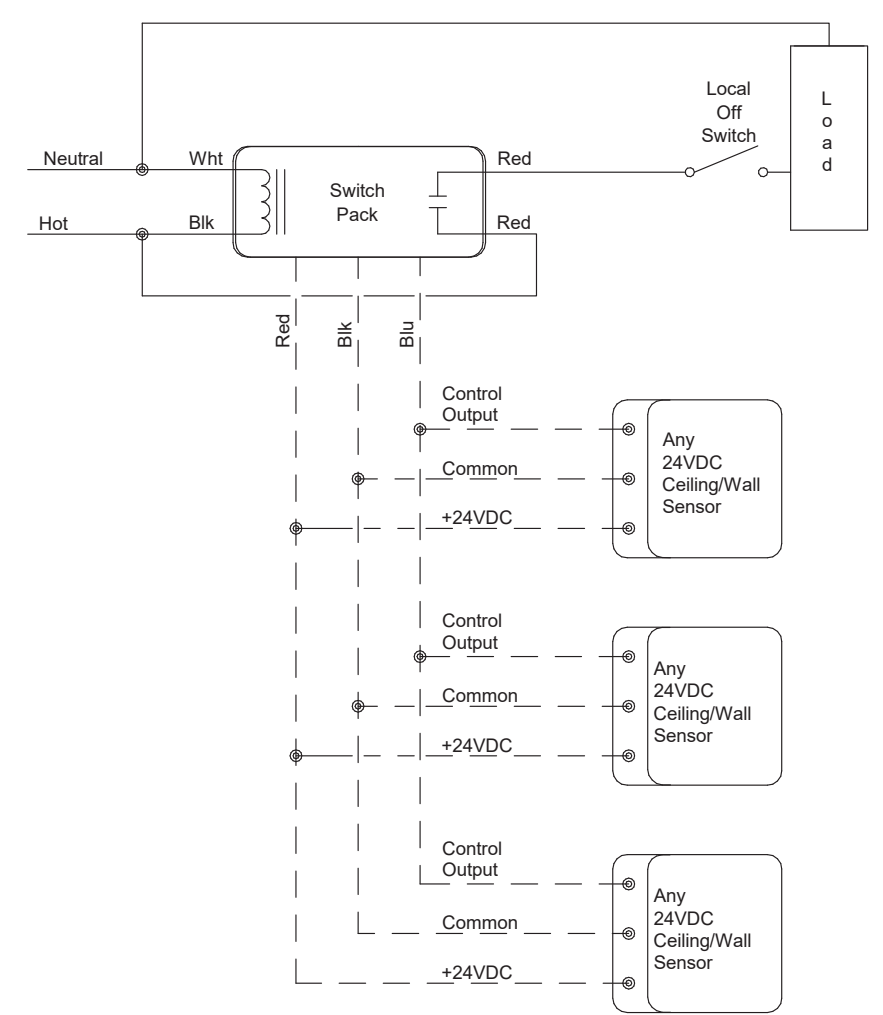


FLOOR PLANS - ELECTRICAL
 PROJECT 3133
 PLOT SCALE: As indicated
 FILENAME: 3133 Holmes Bridge NC Rev18
 ELECT.rvt
 DATE: NOVEMBER 2, 2018

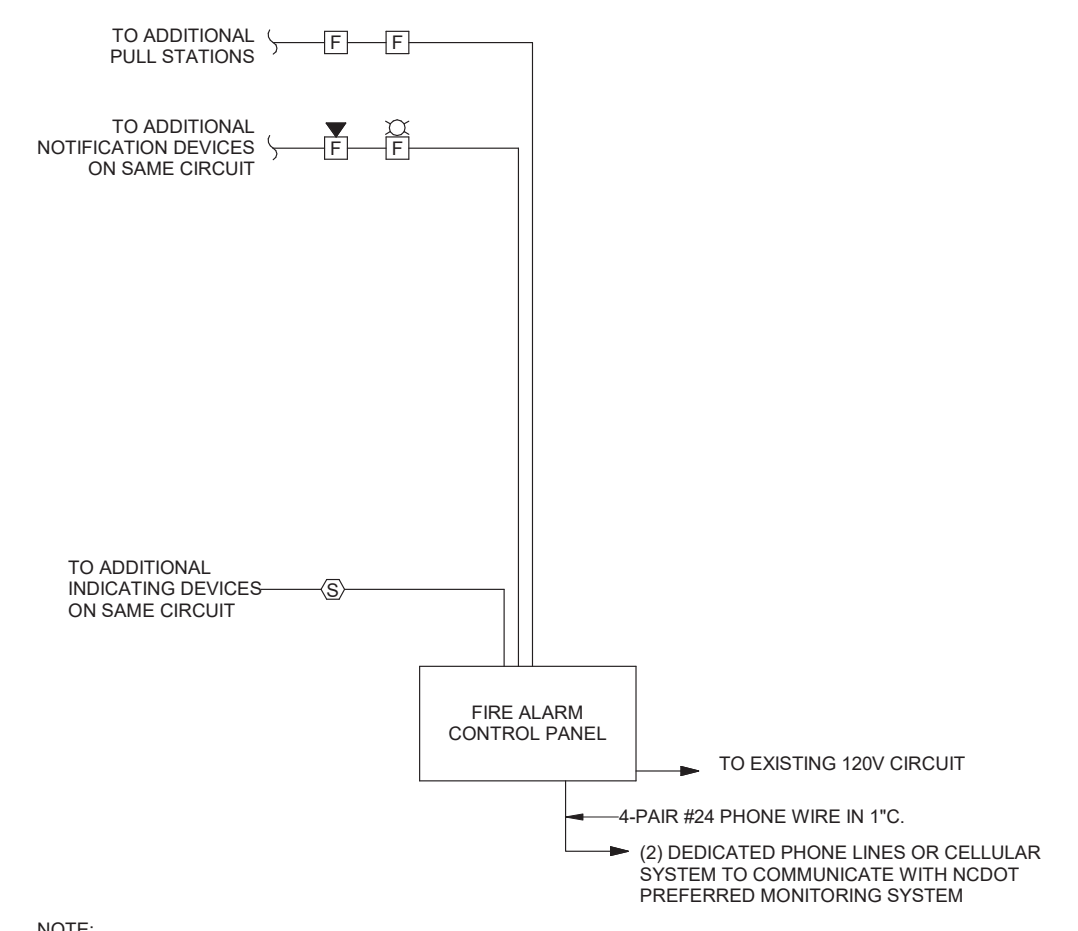
RENOVATIONS TO THE ISABEL HOLMES BRIDGE

- GENERAL PLAN NOTES:**
- UNLESS NOTED OTHERWISE, ALL ELECTRICAL DEVICES AND EQUIPMENT ARE EXISTING TO REMAIN.
 - CONNECT EMERGENCY LIGHTING TO LOCAL NORMAL LIGHTING CIRCUIT, AHEAD OF SWITCHING, WITH 2 #12 AND 1 #12 GROUND IN 3/4" CONDUIT.
 - PROVIDE PLENUM RATED CABLE ABOVE CEILINGS.
 - PROVIDE CABLE IN CONDUIT IN ALL EXPOSED AREAS.
 - THE EXISTING ELECTRICAL DISTRIBUTION & SERVICE EQUIPMENT IS LOCATED ON THE LEVELS BELOW.
 - NOT ALL EXISTING DEVICES ARE SHOWN. UNLESS NOTED OTHERWISE, ALL ELECTRICAL DEVICES AND EQUIPMENT ARE EXISTING TO REMAIN.

- DRAWING NOTES:**
- EXTEND TO EXISTING BRANCH CIRCUIT THAT PREVIOUSLY FED LIGHT FIXTURES IN THIS SPACE UTILIZING 2 #12 AND 1 #12 GROUND IN 3/4" CONDUIT.
 - EXTEND TO EXISTING SWITCH AT BOTTOM OF STAIRS, ON LEVEL BELOW, UTILIZING 2 #12 AND 1 #12 GROUND IN 3/4" CONDUIT.
 - RECONNECT TO EXISTING 120 VOLT BRANCH CIRCUIT.

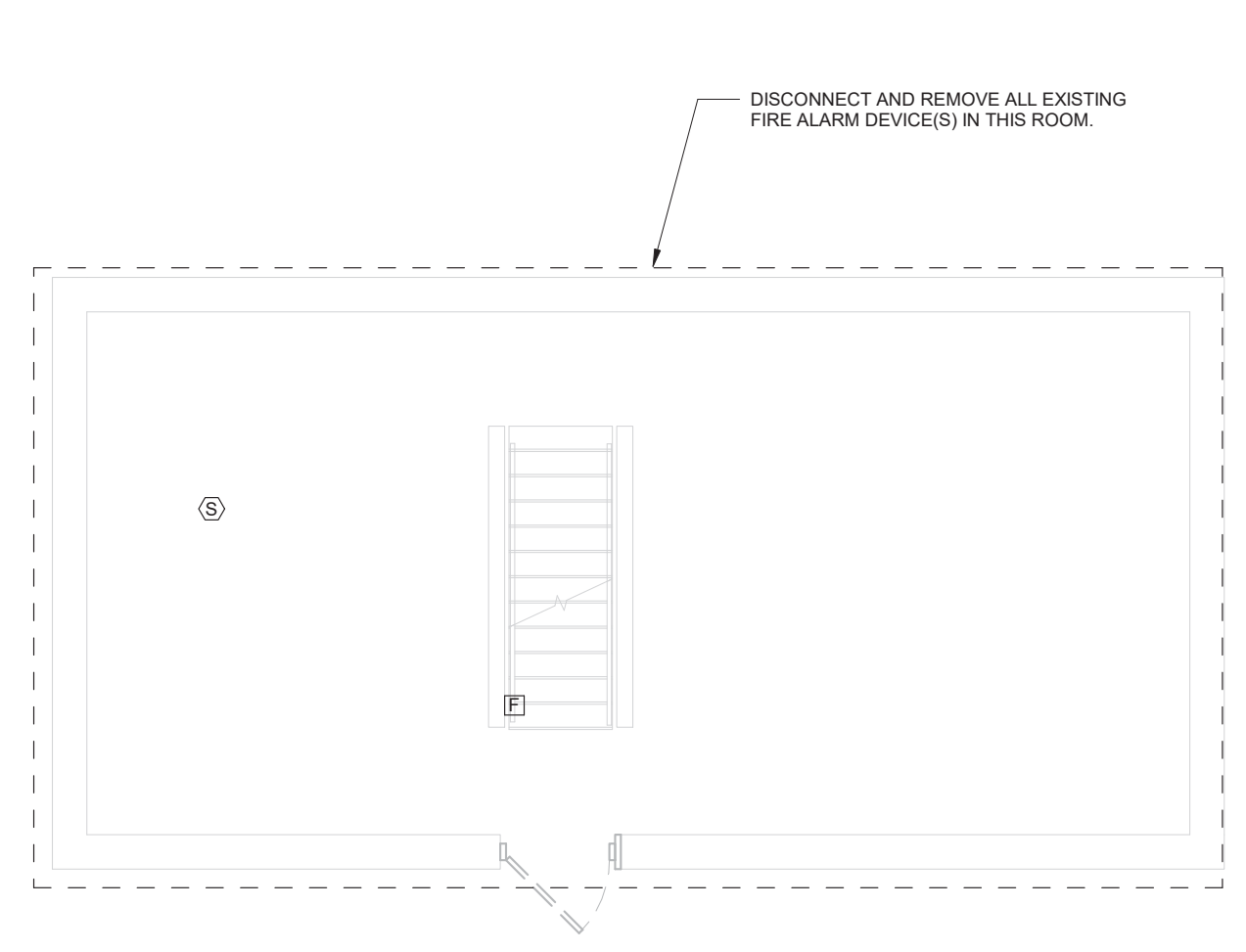


6 TYPICAL MULTIPLE SENSOR LIGHTING CONTROL DETAIL
 E1.1 NOT TO SCALE

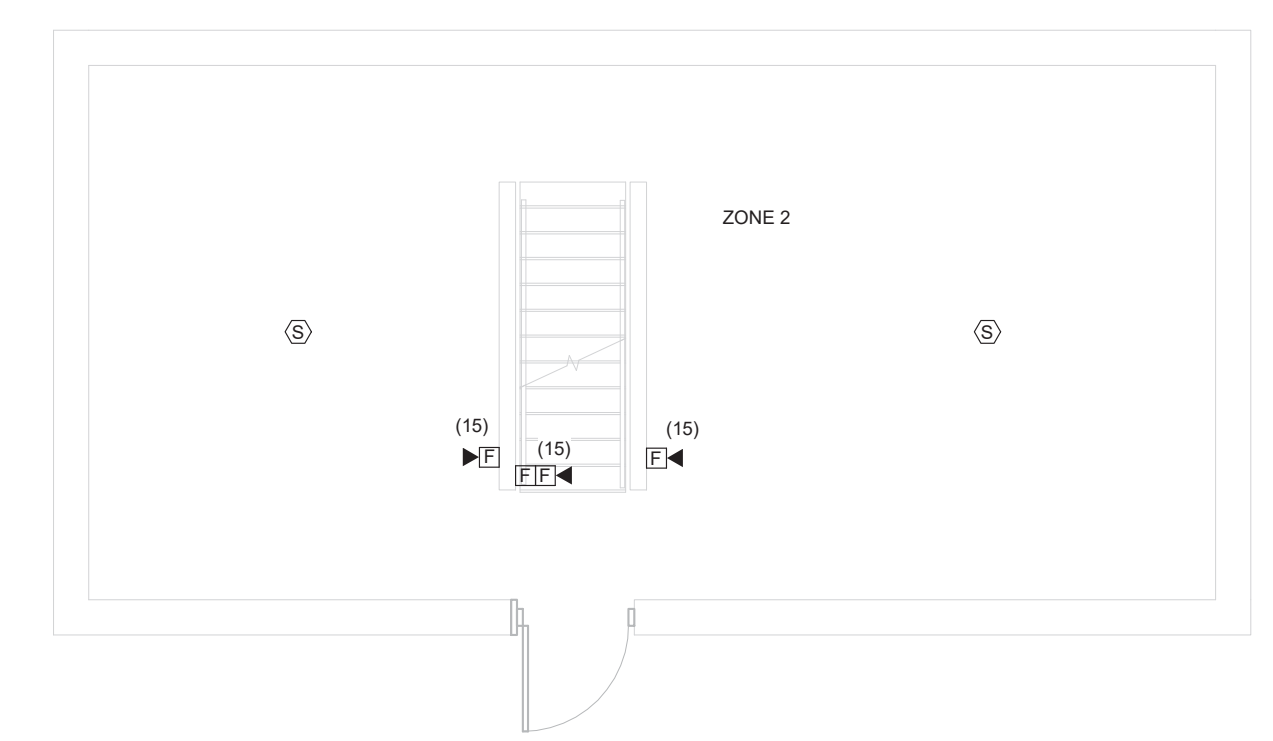


NOTE:
 1. NUMBER AND SIZE OF CONDUCTORS AND CONDUIT SHALL BE AS RECOMMENDED BY MANUFACTURER.
 2. ALL RELAYS REQUIRED SHALL BE ADDRESSABLE.
 3. RECONNECT TO EXISTING 120 VOLT CIRCUIT THAT FED TO PREVIOUS FIRE ALARM PANEL.

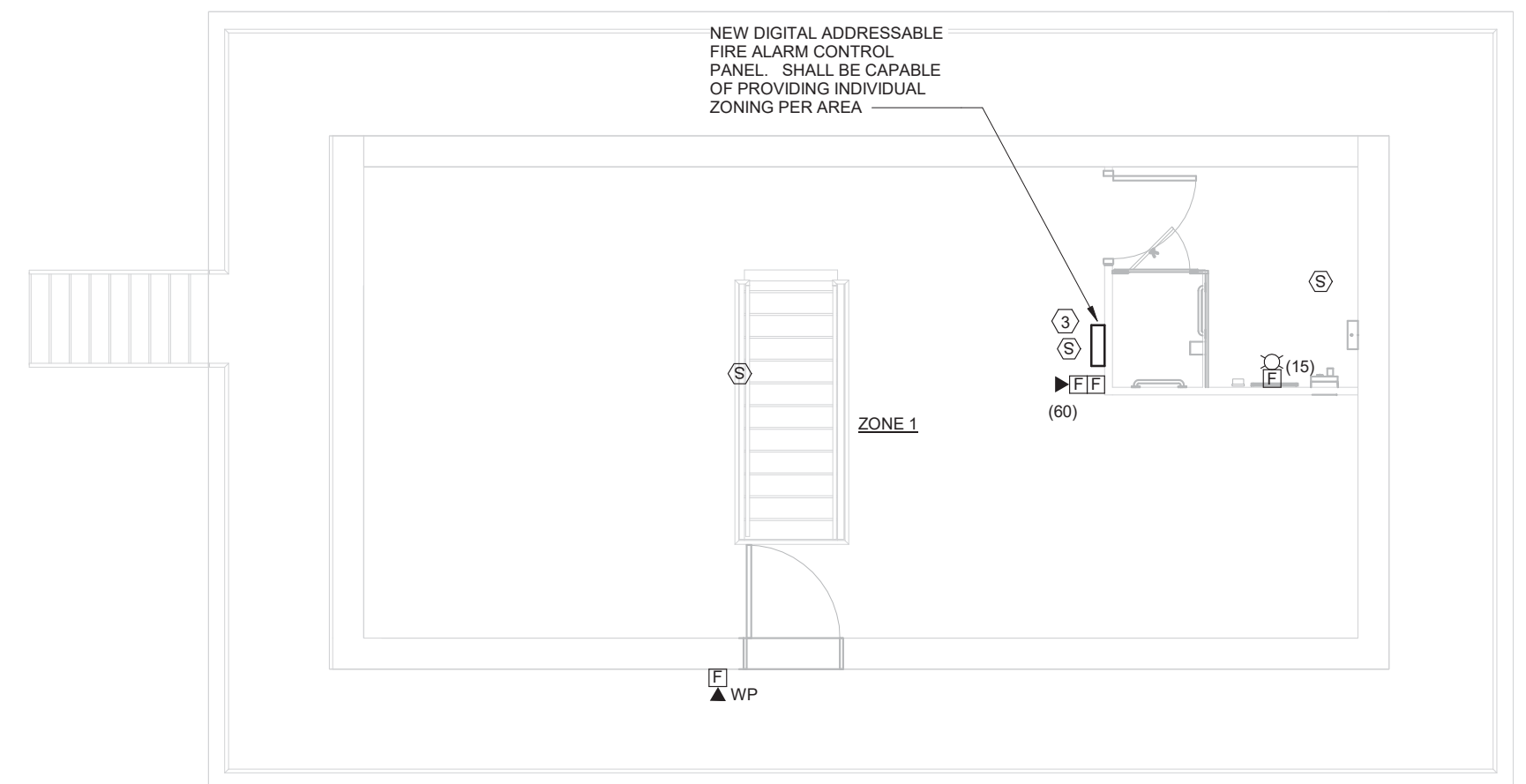
7 FIRE ALARM RISER DIAGRAM
 E1.1 NOT TO SCALE



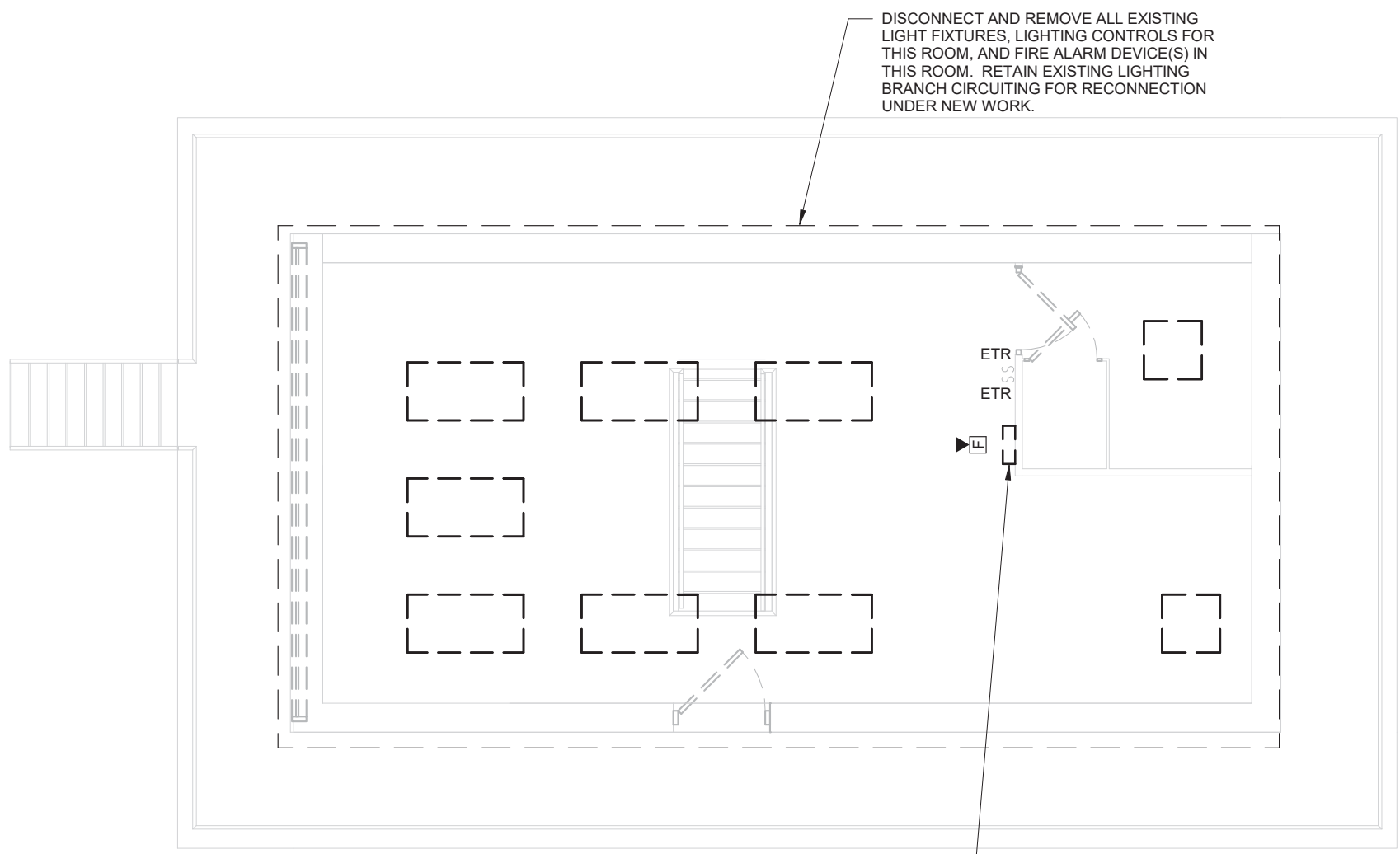
1 LOWER CONTROL AND GENERATOR ROOM - ELECTRICAL DEMOLITION
 E1.1 1/4" = 1'-0"



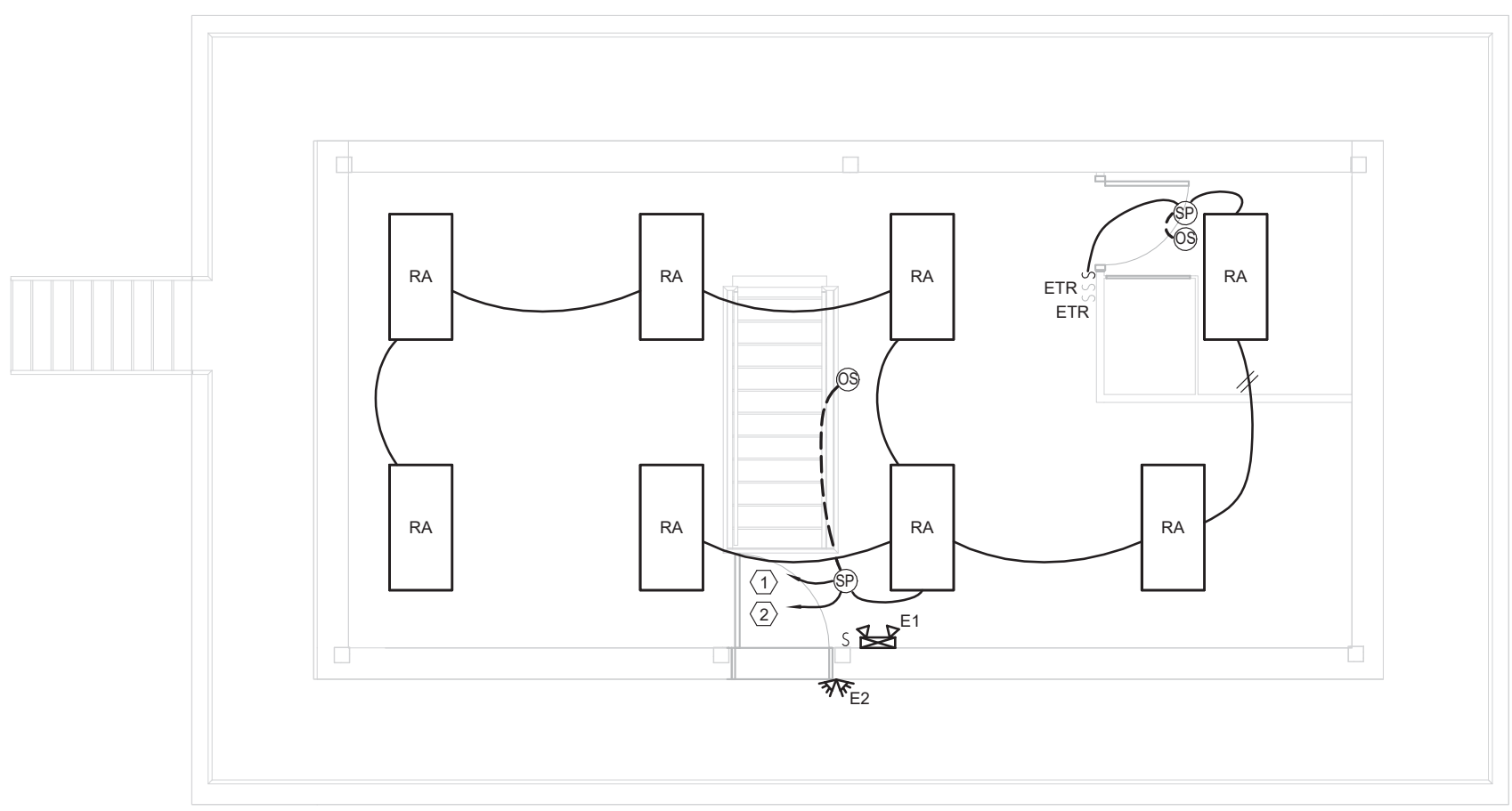
3 LOWER CONTROL AND GENERATOR ROOM - SYSTEMS
 E1.1 1/4" = 1'-0"



5 CONTROL ROOM FLOOR PLAN - SYSTEMS
 E1.1 1/4" = 1'-0"



2 CONTROL ROOM FLOOR PLAN - ELECTRICAL DEMOLITION
 E1.1 1/4" = 1'-0"



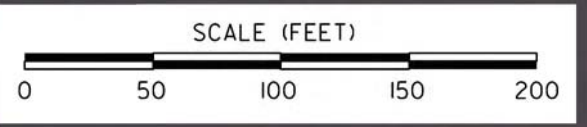
4 CONTROL ROOM FLOOR PLAN - LIGHTING
 E1.1 1/4" = 1'-0"



NOTES:
 INFORMATION SHOWN IS FROM THE BEST DATA AVAILABLE. CONTRACTOR SHOULD CONDUCT THEIR INVESTIGATION PRIOR TO BIDDING. CONTRACTOR SHALL HAVE NO CLAIM AGAINST NCDOT OR THE ENGINEER.
 MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE AND TYPE MATERIAL FOR THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROJECT NO. 15BPR.14
 NEW HANOVER COUNTY
 STATION: _____

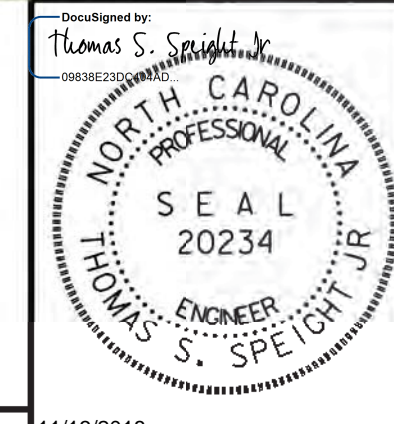
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 BRIDGE TENDER HOUSE
 SEWER LINE
 REPLACEMENT



DESIGNED BY:	TSS	DATE:	11-9-18
DRAWN BY:	JTD	DATE:	11-9-18
CHECKED BY:	SC	DATE:	11-9-18
DESIGN ENGINEER OF RECORD:	TSS	DATE:	11-9-18

PLAN

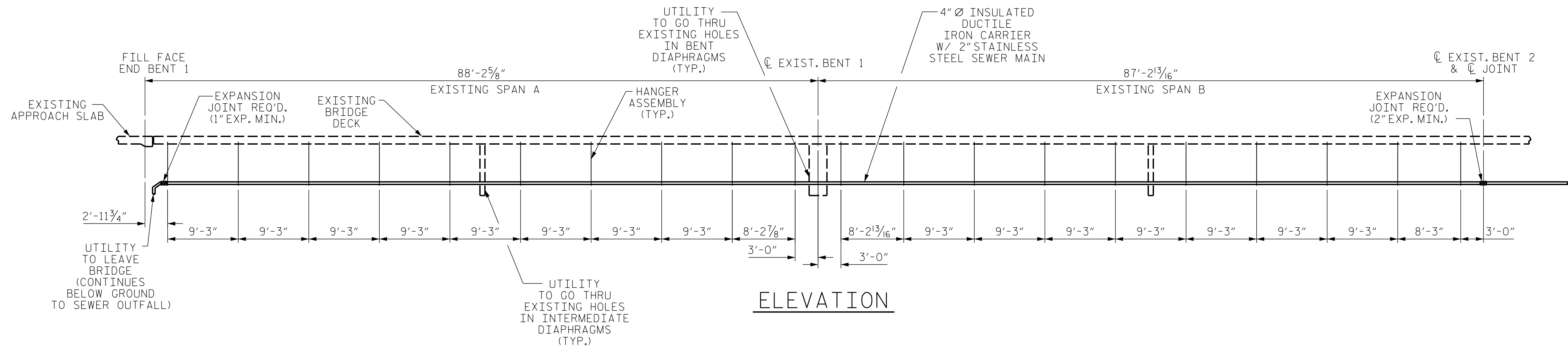
BCSC
 BATEMAN CIVIL SURVEY COMPANY
 2524 RELIANCE AVENUE
 APEX, NC 27539
 NC LICENSE NO. C-2378



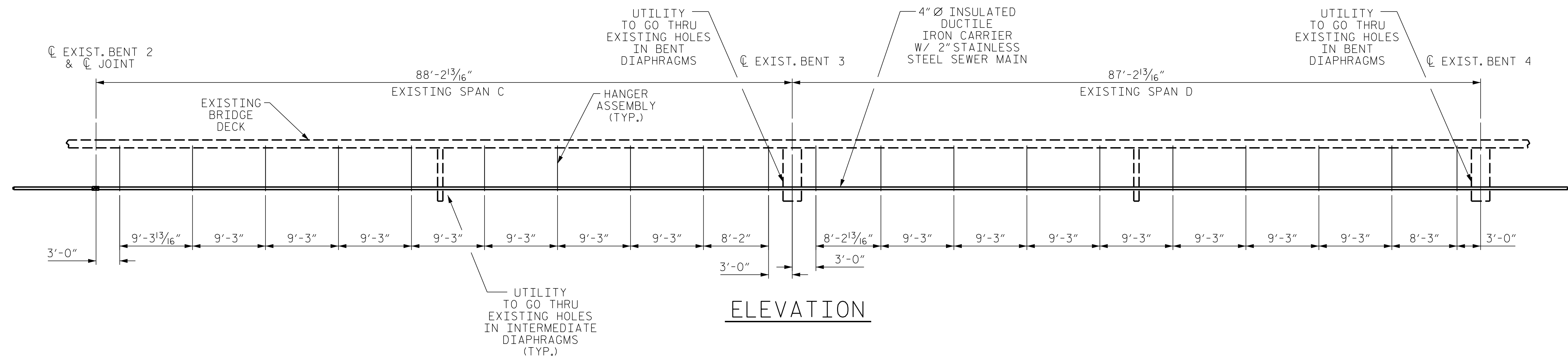
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NO.	BY:	DATE:	NO.	BY:	DATE:	U-1
1			3			TOTAL SHEETS
2			4			213

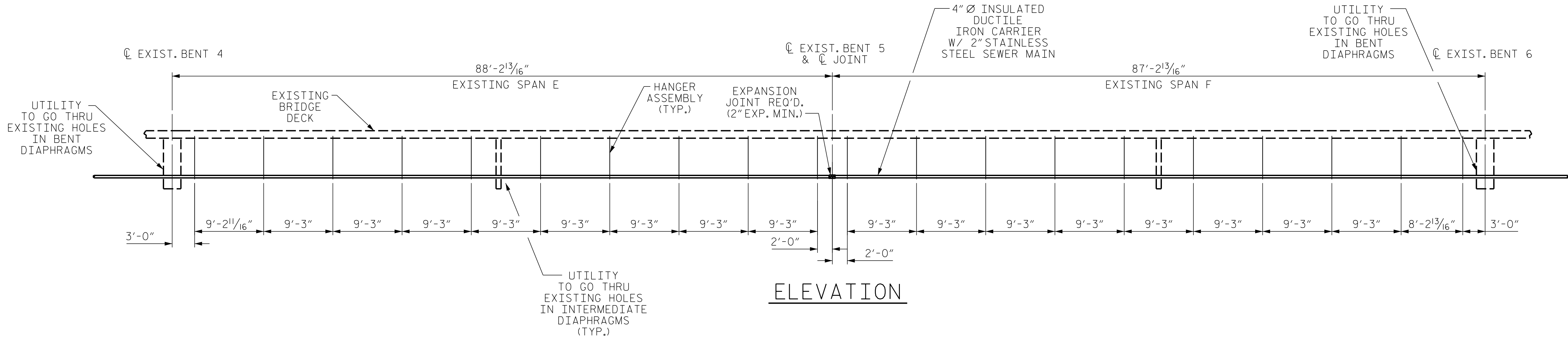
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ELEVATION



ELEVATION



ELEVATION

PROJECT NO. 15BPR.14

NEW HANOVER COUNTY

STATION: _____

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE TENDER HOUSE
SEWER LINE
HANGER SPACING

BCSC
BATEMAN CIVIL SURVEY COMPANY
2524 RELIANCE AVENUE
APEX, NC 27539
NC LICENSE NO. C-2378

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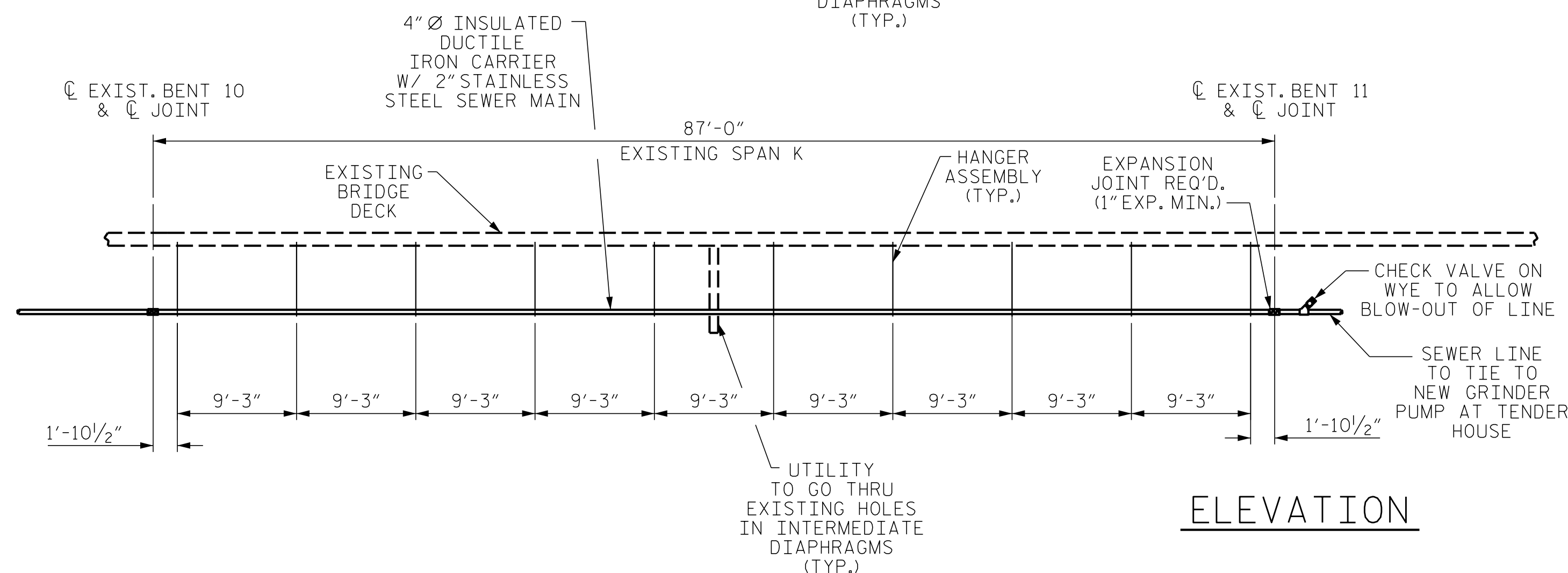
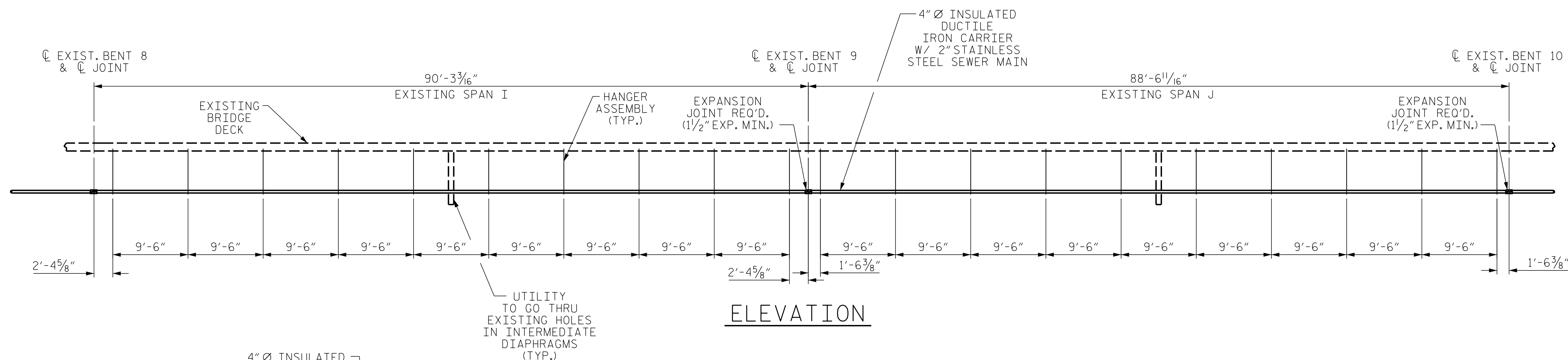
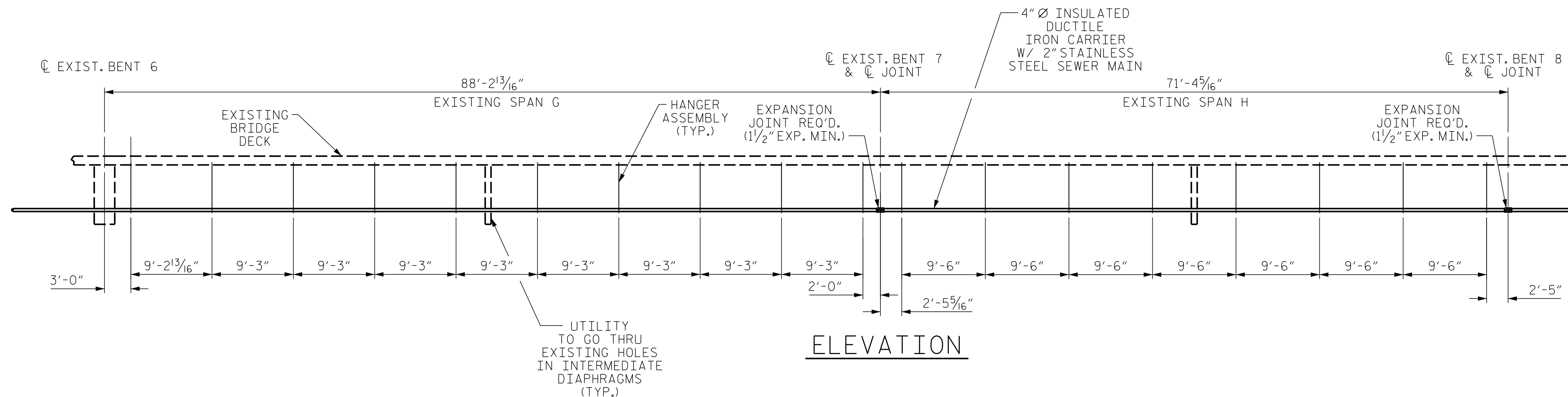
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DESIGNED BY:	TSS	DATE:	11-9-18
DRAWN BY:	BCH	DATE:	11-9-18
CHECKED BY:	SC	DATE:	11-9-18
DESIGN ENGINEER OF RECORD:	TSS	DATE:	11-9-18

NOTES:

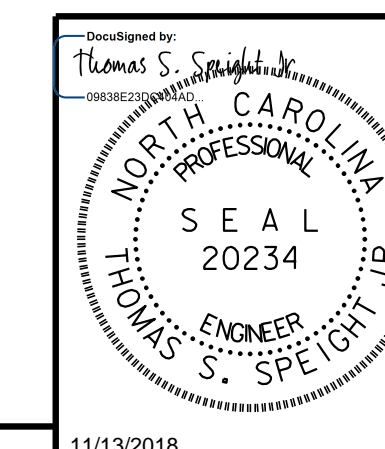
1. PROVIDE EXPANSION JOINTS AT LOCATIONS SHOWN. CONTRACTOR CAN PROVIDE ADDITIONAL EXPANSION JOINTS AS DEEMED NECESSARY. INDICATED EXPANSION JOINTS SHALL BE STAINLESS STEEL AND PROVIDE FOR THE AMOUNT OF MOVEMENT SHOWN (MIN.).



PROJECT NO. 15BPR.14
NEW HANOVER COUNTY
 STATION: _____

SHEET 2 OF 2

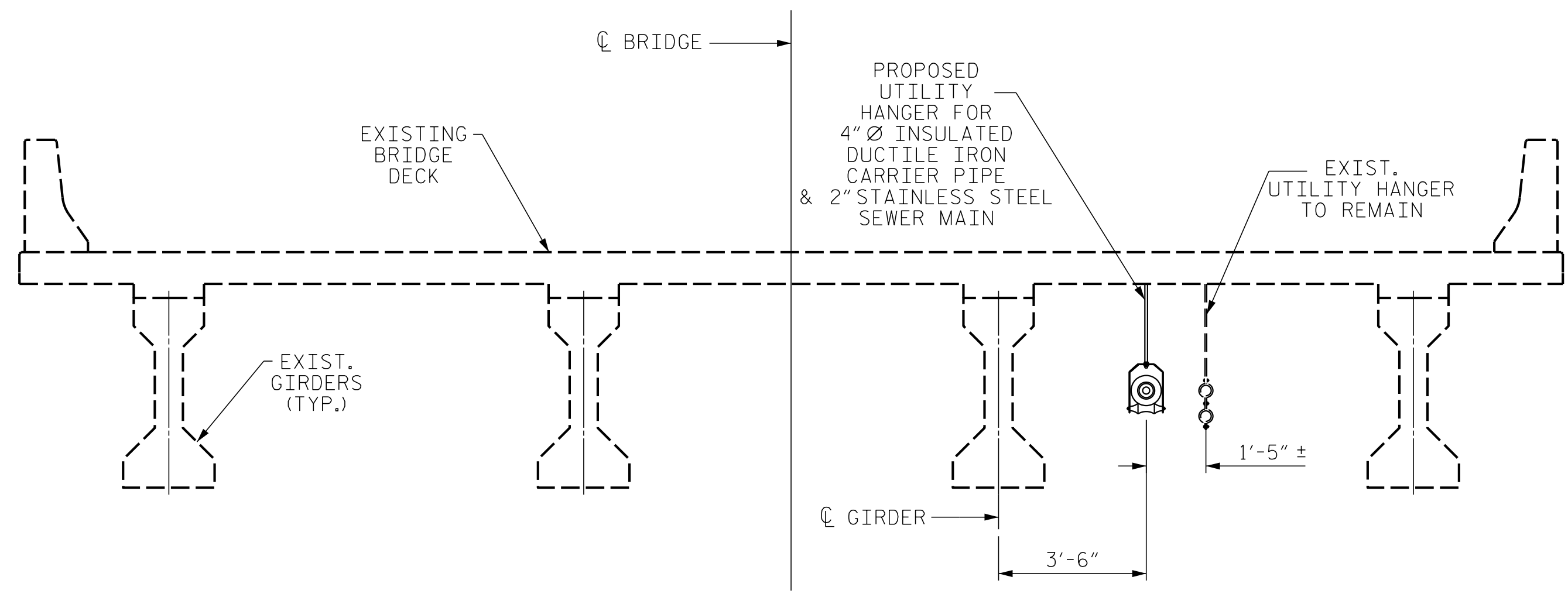
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BRIDGE TENDER HOUSE SEWER LINE HANGER SPACING					
REVISIONS					
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SHEET NO.					U-3
TOTAL SHEETS					213



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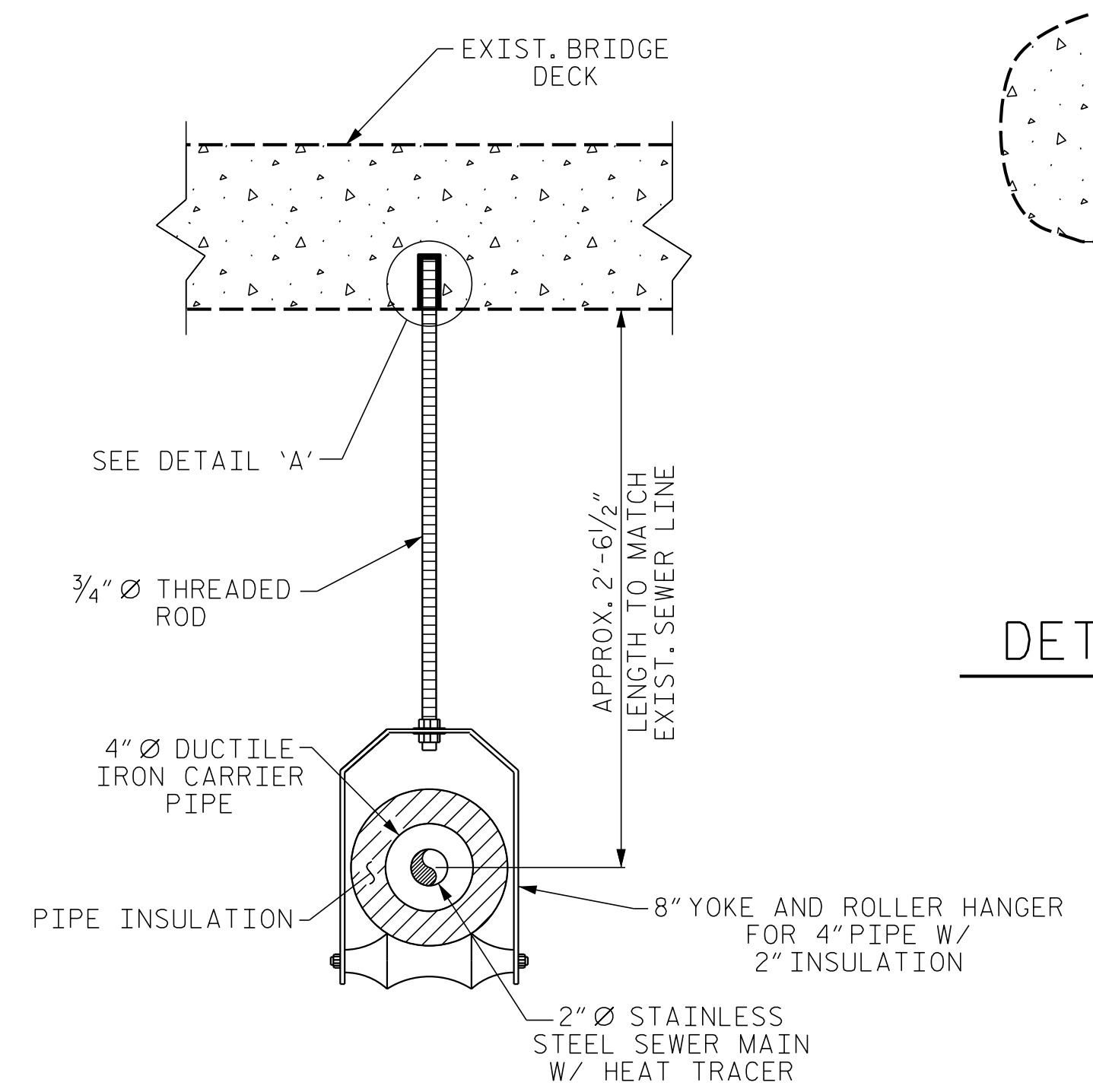
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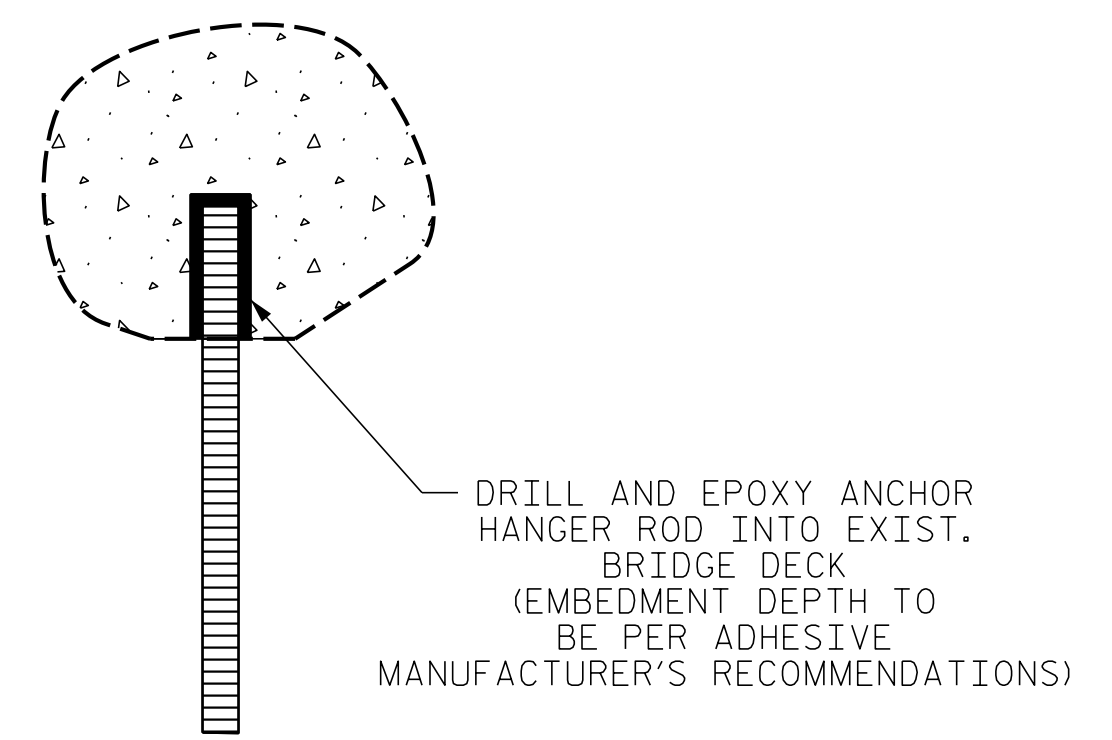
EXISTING TYPICAL SECTION

LOOKING TOWARDS TENDER HOUSE
SPANS A THRU F SHOWN
OTHER SPANS SIMILAR



TYPICAL HANGER ASSEMBLY DETAIL

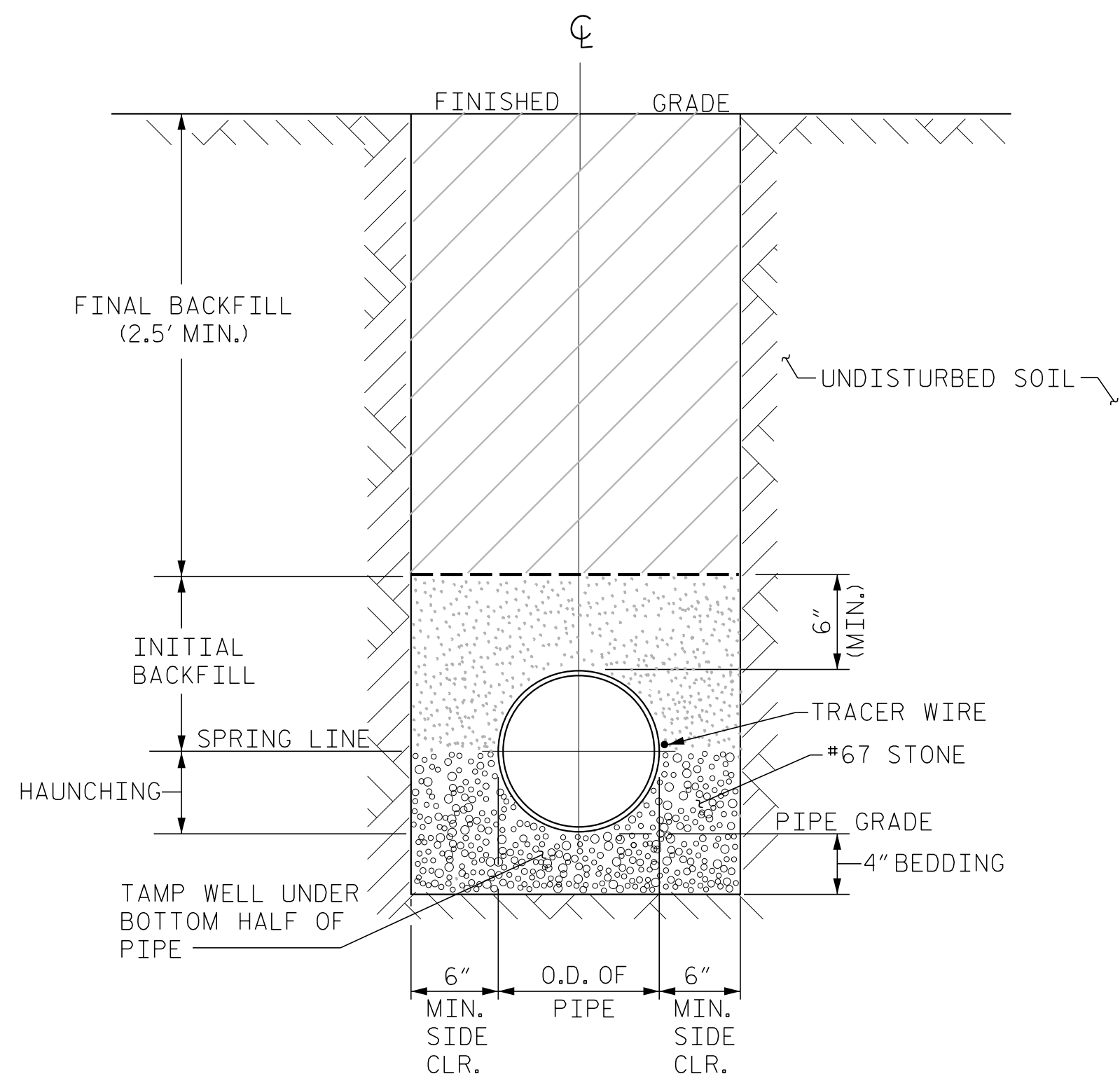
ALL HANGER MATERIAL SHALL BE STAINLESS STEEL



DETAIL 'A'

NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.
2. SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
3. CONTRACTOR SHALL PROVIDE FINAL DETAILED PIPING SCHEMATICS FOR SHOP DRAWING APPROVAL PRIOR TO INSTALLATION.
4. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, "SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.
5. JOINTS IN DUCTILE IRON CARRIER PIPE SHALL BE MEGALUG, SERIES 1100 BY EBAA IRON OR APPROVED EQUAL.
6. MAXIMUM PIPE BEND SHALL BE 45° UNLESS APPROVED BY THE ENGINEER.
7. BURIED SECTION OF SEWER LINE SHALL BE 2" DIAMETER SCHEDULE 40 PVC PIPE AND FITTINGS MEETING THE REQUIREMENTS OF ASTM D2665.
8. A HEAT TRACING HEATING CABLE SHALL BE PROVIDED ALONG THE BRIDGE ATTACHED PORTION OF THE SEWER LINE. HEAT CABLE SHALL BE INDUSTRIAL SERIES (IN) BY DELTA-THERM OR APPROVED EQUAL. HEAT TRACING CABLE ACCESSORIES, INCLUDING CONTROL BOX, SHALL BE BY SAME MANUFACTURER AS TRACING CABLE UNLESS OTHERWISE APPROVED.
9. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING SEWER PIPING.
10. ALL WORK SHOWN ON SHEETS U-1 THROUGH U-4 SHALL BE PAID FOR UNDER THE LUMP SUM PRICE BID FOR 'BRIDGE TENDER HOUSE SEWER LINE REPLACEMENT', SEE PROJECT SPECIAL PROVISION.
11. HEAT CONDUIT MAY BE OMITTED IF ENOUGH ELECTRICAL INSULATION PROVIDED TO COMPLY WITH NATIONAL ELECTRICAL CODE, AND AS APPROVED BY THE ENGINEER.
12. ANY OTHER IMPROVEMENTS SHALL BE MADE AS APPROVED BY ENGINEER.



SEWER LINE TRENCH DETAIL

- NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
 2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
 3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
 4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
 5. CONTRACTOR WILL FURNISH AND INSTALL METALLIC WIRING TAPE 24-INCHES ABOVE THE PIPE AND COPPER TRACING WIRE.
 6. PROVIDE SILT FENCE ON DOWN SLOPE SIDE OF TRENCH. (CONTRACTOR SHALL COMPLY WITH ALL NC DEQ EROSION AND SEDIMENT CONTROL RULES AND REGULATIONS.)

PROJECT NO. 15BPR.14
NEW HANOVER COUNTY
STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**BRIDGE TENDER HOUSE
SEWER LINE
DETAILS**

BCSC
BATEMAN CIVIL SURVEY COMPANY
2524 RELIANCE AVENUE
APEX, NC 27539
NC LICENSE NO. C-2378

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	U-4
1			3			TOTAL SHEETS
2			4			213

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

11/13/2018 10:17:42 AM P:\2019\1913\302 New Hanover 11 - Sewer Line\Structures\DN\NewHanover11_SewerLine Hanger Spacing.dgn

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36	--	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	--	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	--	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	---	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	---	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2018 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED $\frac{3}{4}$ " WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO $\frac{1}{2}$ " RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A $\frac{1}{4}$ " FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A $\frac{1}{4}$ " RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE $\frac{7}{8}$ " \emptyset SHEAR STUDS FOR THE $\frac{3}{4}$ " \emptyset STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF $\frac{7}{8}$ " \emptyset STUDS ALONG THE BEAM AS SHOWN FOR $\frac{3}{4}$ " \emptyset STUDS BASED ON THE RATIO OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST $\frac{5}{16}$ " IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY $\frac{1}{16}$ " INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINISHES AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

STD. NO. SN