



State of Utah

GARY R. HERBERT  
Governor

GREGORY S. BELL  
Lt. Governor

Department of Administrative Services

KIMBERLY K. HOOD  
Executive Director

Division of Facilities Construction and Management

DAVID G. BUXTON  
Director

## ADDENDUM NO. 2

Date: February 7, 2011

To: Design/Build Teams

From: Jeff Wrigley - Project Manager

Reference: Solar Thermal System – Swenson Building  
Weber State University – Ogden, Utah  
DFCM Project No. 11004810

Subject: **Addendum No. 2**

Pages	Addendum Cover Sheet	3 pages
	Structural Summary	6 pages
	<u>Drawings</u>	<u>18 pages</u>
	Total	27 pages

**Note: This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to Disqualification.**

While we contend that SB220 should only be potentially applicable to a contract issued after the effective date of said bill, this is to clarify that for purposes of this contract, regardless of the execution or effective dates of this contract, the status of Utah Law and remedies available to the State of Utah and DFCM, as it relates to any matter referred to or affected by said SB220, shall be the Utah law in effect at the time of the issuance of this Addendum.

**2.1 SCHEDULE CHANGES:** There are no Project Schedule changes.

**2.2 GENERAL ITEMS:**

- 2.2.1 The pool size is 150,000 gallons.
- 2.2.2 The hot water system flow rate is 375 - 390 gpm.
- 2.2.3 Weber State University wants the solar thermal system optimized for the best total year-round performance in terms of total BTU/h produced.

- 2.2.4 The system must include BTU metering to measure thermal output (input and output temp's and flow meter).
- 2.2.5 Any controls and metering devices must be Johnson Controls N2 compliant. Any connections to Weber State University's building controls system will be handled by Weber State University and are not part of this project.
- 2.2.6 Question: Do we need to provide an engineer's approval for seismic bracing as part of our submittal or can we provide it after the project is awarded?  
Answer: The non-structural seismic bracing design does not need to be fully engineered and stamped for your proposal. Proposals must, however, include information regarding non-structural seismic bracing for the selection committee to evaluate, and design and installation of bracing must be included in the cost.
- 2.2.7 Question: Will the roofing contractor be stripping the old roof off and totally replacing it or will they just lay new roofing over the top?  
Answer: The roof will be entirely replaced including insulation. The new roof is likely going to be PVC.
- 2.2.8 Question: Will the crane operator need to be identified as a subcontractor on the Proposal?  
Answer: Crane operators do not need to be listed as a subcontractor on your proposal.
- 2.2.9 Question: It is possible that copper prices will increase between the Proposal due date and award/contract date. How do we address this in our proposal?  
Answer: Material cost escalation must be accounted for in your proposal. Cost proposals are expected to represent maximum prices. There should not be any unforeseen conditions with this project.
- 2.2.10 Question: Could you clarify what "complete outline specifications" are?  
Answer: "Complete outline specifications" are the specifications for the products you intend to use. For this project we do not need traditional CSI format specifications, but we need cut sheets that provide details for the major materials you intend to use.
- 2.2.11 Question: How do "complete outline specifications differ from "system narratives?"  
Answer: System narratives are not limited to information about materials. They are written descriptions of your system and should be provided in conjunction with drawings and diagrams to convey your design proposal. There is no prescriptive requirement to what the narrative should say. It is just a tool to use to communicate the design of your system.
- 2.2.12 Question: What does a debarment certification look like? Is it just a statement that we have not been debarred or kicked off a job? Or is it a notarized document?  
Answer: A debarment certification is just a statement written by the contractor on company letterhead. It does not need to be notarized.

2.2.13 Question: Has a staging area been identified?

Answer: Space will be set aside in the parking area for staging.

2.2.14 Question: Has a location been identified on which to locate a crane or boom lift for placing materials on the roof?

Answer: No specific location has been identified, but WSU will coordinate with the prevailing contractor to identify a suitable location.



**DUNN ASSOCIATES, INC**  
Consulting Structural Engineers

June 30, 2010

**Weber State University**  
Attn: Jacob Cain

RE: Weber Solar Study: Structural Summary  
(Shepherd Union, Swenson Gym, Davis)

Dear Jacob:

This report summarizes Dunn Associates Inc. findings related to the structural capacity of the existing roof structures of the Shepherd Union, Swenson Gym, Davis buildings to carry additional load from possible solar panel installations. This report also identifies recommended wind and snow drift set-back dimensions to avoid higher wind pressures and drifting snow near the building edges.

#### **Proposed Solar Panel Systems**

We evaluated the roofs in question against two solar panel systems; Solyndra 182 watt Photo Voltaic system and the Caleffi NAS 100 series Solar Hot Water system. The operating weight of the Solyndra system is 3.3 psf and the Caleffi system is 4.3 psf.

#### **Structural Description**

##### Shepherd Union

The roof structures and supports of the Union are primarily constructed of structural steel, as is common for structures of this type and age. Three main construction phases occurred for this building; two phases in the 1960's and one in 2006. The 1960's roofs consist of open web steel joists bearing on wide-flange girders. The 2006 addition, which essentially connected the two 1960's buildings, is framed primarily with wide-flange structural steel beams. The roof deck in all corrugated metal decking.

##### Swenson Gym

The high-roof structure of the Gym consists of tapered, custom-built, structural steel girders, spaced 8'-0 on center. The deck consists of 3" tongue and groove wood planking connected to the girder through a nailer. The girders are braced at their quarter points with steel angle bracing. The girders sit on steel columns embedded in the masonry walls.

##### Davis

The Davis roof structure consists of open web steel joists bearing on wide-flange steel beams. The roof deck is corrugated metal decking.



### Load Carrying Capacity

To determine how much additional load can be added to the roof structure, Dunn Associates Inc. performed a variety of analyses. This included investigation of the rated load capacities of the open web joists, back-calculating area loads from beam and girder sizes, and modeling the tapered girders in the gym. Given the limited nature of the scope, we have not performed a full structural analysis of all the gravity and lateral load carrying members.

From this analysis, we have developed the following table to identify the loads each building can accommodate. All roofs in the study can accommodate the additional loads from the specified solar panel installation. The table shows the total additional load (in psf) that can be added to a given section of roof, as identified in the figure. The available load increase comes primarily from the difference between the actual dead-load and the design dead load.

Building	Additional Load (psf)	Accept Solar
Shephard Union	6.0	Yes- Both Systems
Swenson Gym	6.0	Yes- Both Systems
Davis	6.0	Yes- Both Systems

#### Notes

- 1) This table outlines the additional load that the roof can carry. With additional analysis, it may be possible to increase some of these loads.
- 2) It is important to note that the numbers listed above are given on a square foot basis. If panels are placed in half a given area, the permissible load increase would double (i.e., walkways between panels). This would of course **not** hold true if all the panels are placed on one side of the building and the other is unloaded.

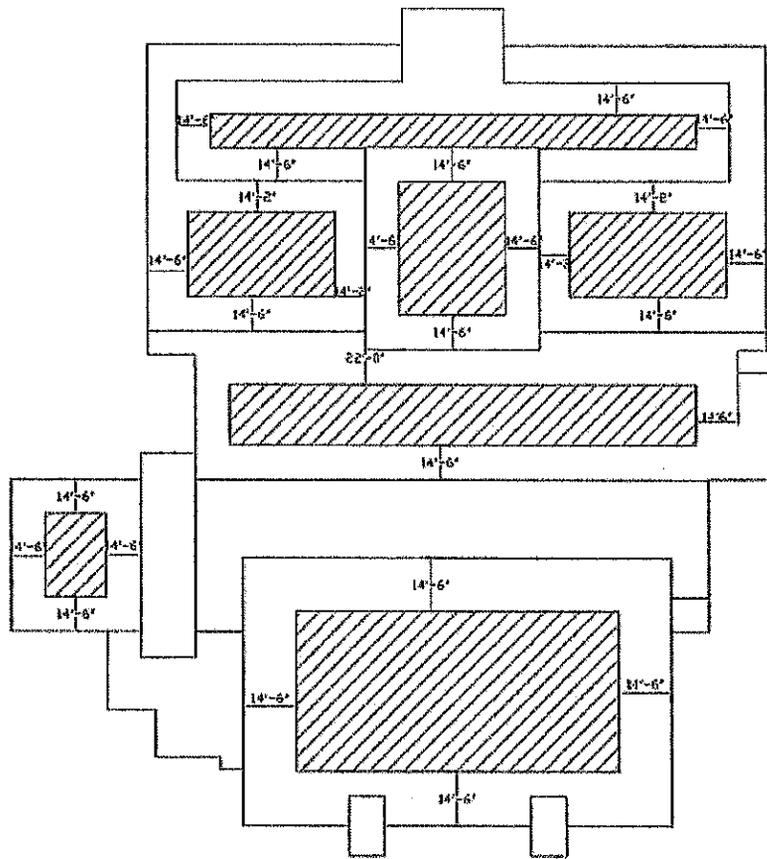
### Wind Setback and Snow Drift

The following figures show minimum setback distances from roof edges, due to increased wind pressures near the edge of the buildings and snow drift locations. Although, it may be possible to install panels in these locations, the wind pressures are generally higher, resulting in heavier anchorage systems and potential for higher amounts of wind-induced damage. The figures below show acceptable areas placement of the panels on a structural basis only.



FIGURES

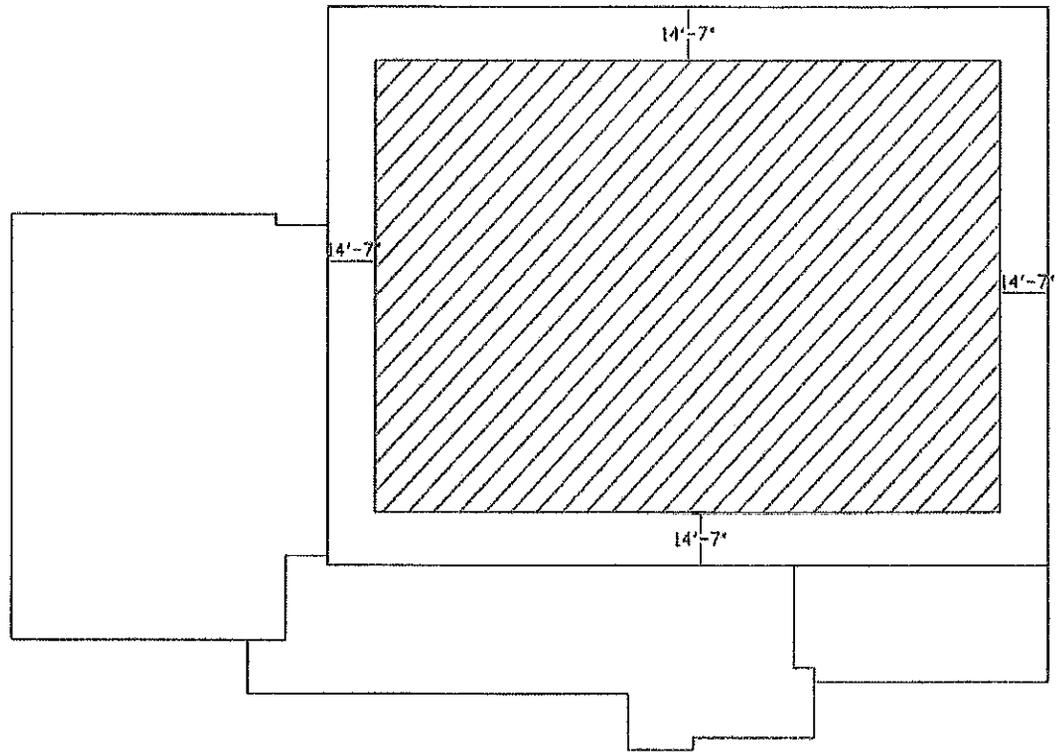
Shephard Union



 ACCEPTABLE AREA FOR SOLAR PANEL PLACEMENT



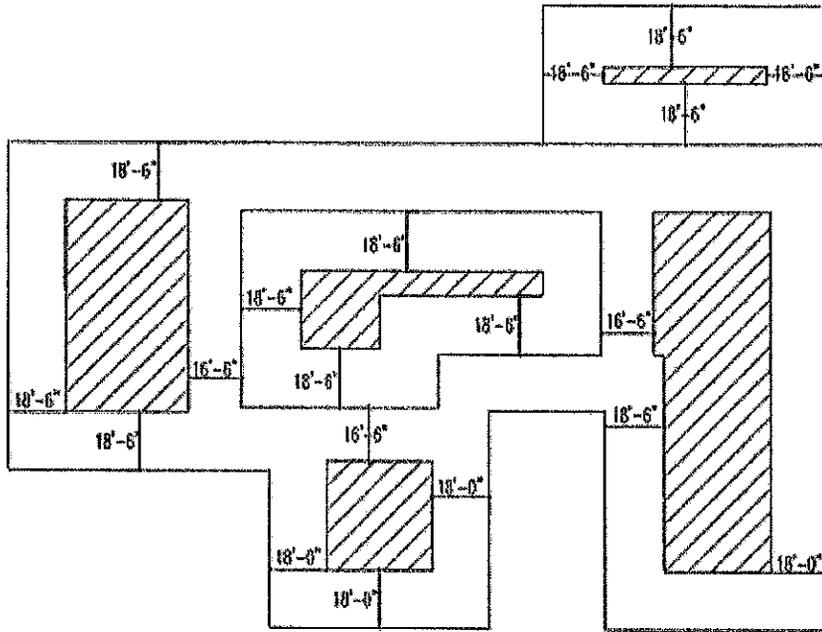
Swenson Gym



 ACCEPTABLE AREA FOR SOLAR PANEL PLACEMENT



Davis



 ACCEPTABLE AREA FOR SOLAR PANEL PLACEMENT



### Attachment Options

Two primary types of solar panel attachment systems exist: ballasted and non-ballasted. The ballasted systems must be heavy enough that they can resist the uplift forces generated by wind. This equates to ballast plus panel weights between 15 and 37 psf. (The required ballast is a function of tilt angle. The greater tilt, the more uplift force increases). Given the current load capacity of the roofs, and the State's recommendation to direct attach the frames, we recommend direct connecting the solar installations to the roof. The "FastFoot", by Unirac provides a simple solution for connecting light and medium weight installations.

### Summary

In summary, the roof structures of the Shepherd Union, Swenson Gym, and Davis building are adequate to carry the additional load from the proposed solar panel installation, assuming they racking system is directly attached to the roof deck.

We have enjoyed working with you and the State on this evaluation. Please contact us if you have questions regarding our evaluation or if you need additional information.

Respectfully yours

DUNN ASSOCIATES, INC.

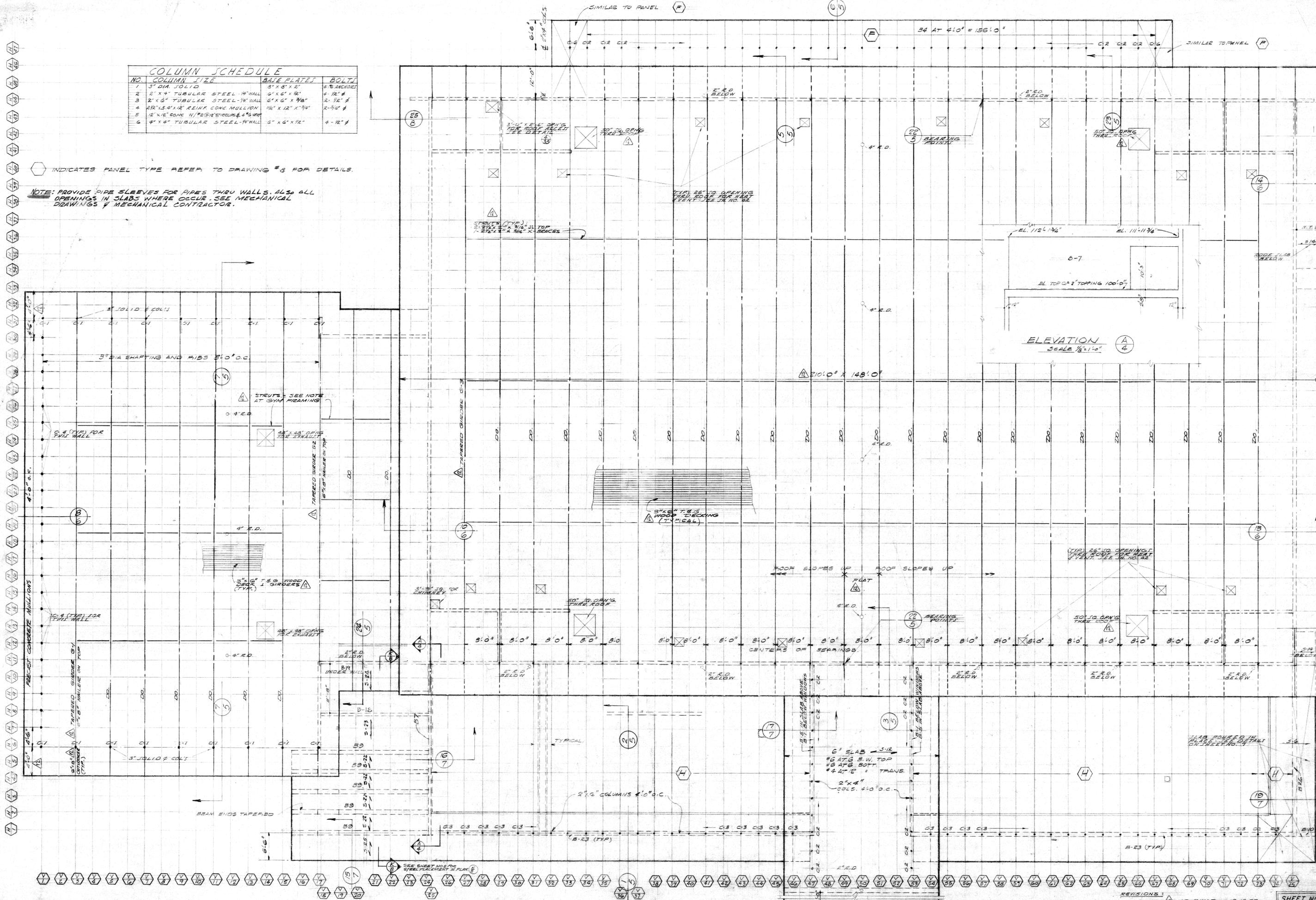
Paul W. McMullin, S.E., Ph.D.  
Principal



NO.	COLUMN SIZE	BASE PLATES	BOLTS
1	3" DIA. SOLID	6" X 6" X 2"	4-1/2" ANCHORS
2	2" X 2" TUBULAR STEEL 1/4" WALL	6" X 6" X 1/2"	4-1/2" #
3	2" X 6" TUBULAR STEEL 1/4" WALL	6" X 6" X 3/8"	2-1/2" #
4	2 1/2" X 4 1/2" REIN. CONC. MULLION	1/2" X 12" X 3/4"	2-3/4" #
5	12" X 6" CONC. W/ #2 @ 12" ON C.	4" X 6" X 1/2"	4-1/2" #
6	4" X 4" TUBULAR STEEL 1/4" WALL	6" X 6" X 1/2"	4-1/2" #

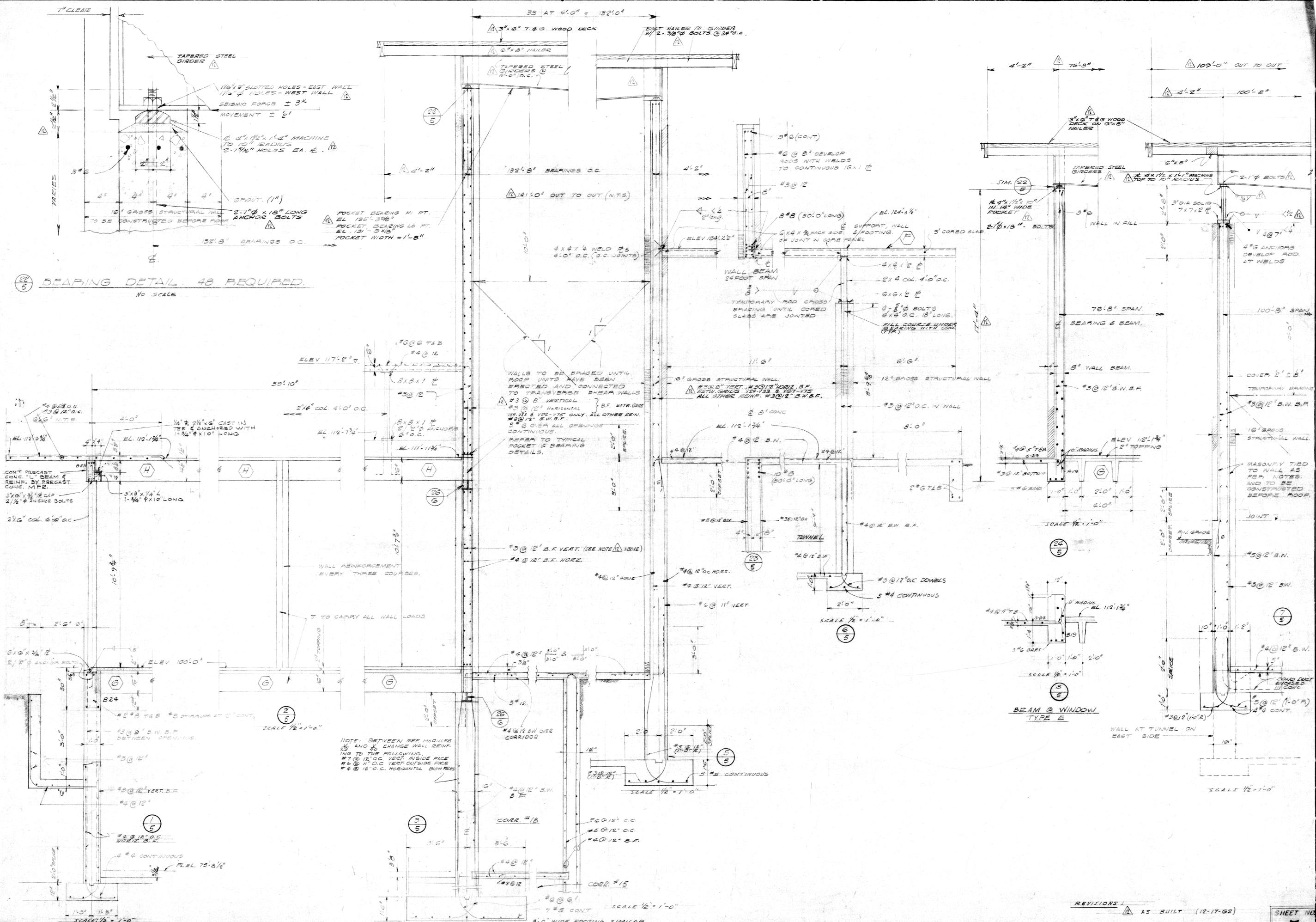
INDICATES PANEL TYPE REFER TO DRAWING #3 FOR DETAILS.

NOTE: PROVIDE PIPE SLEEVES FOR PIPES THRU WALLS. ALSO ALL OPENINGS IN SLABS WHERE OCCUR. SEE MECHANICAL DRAWINGS & MECHANICAL CONTRACTOR.



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

REVISIONS: AS BUILT 12-13-62



22/5 BEARING DETAIL. 48 REQUIRED.  
NO SCALE

SCALE 1/2" = 1'-0"

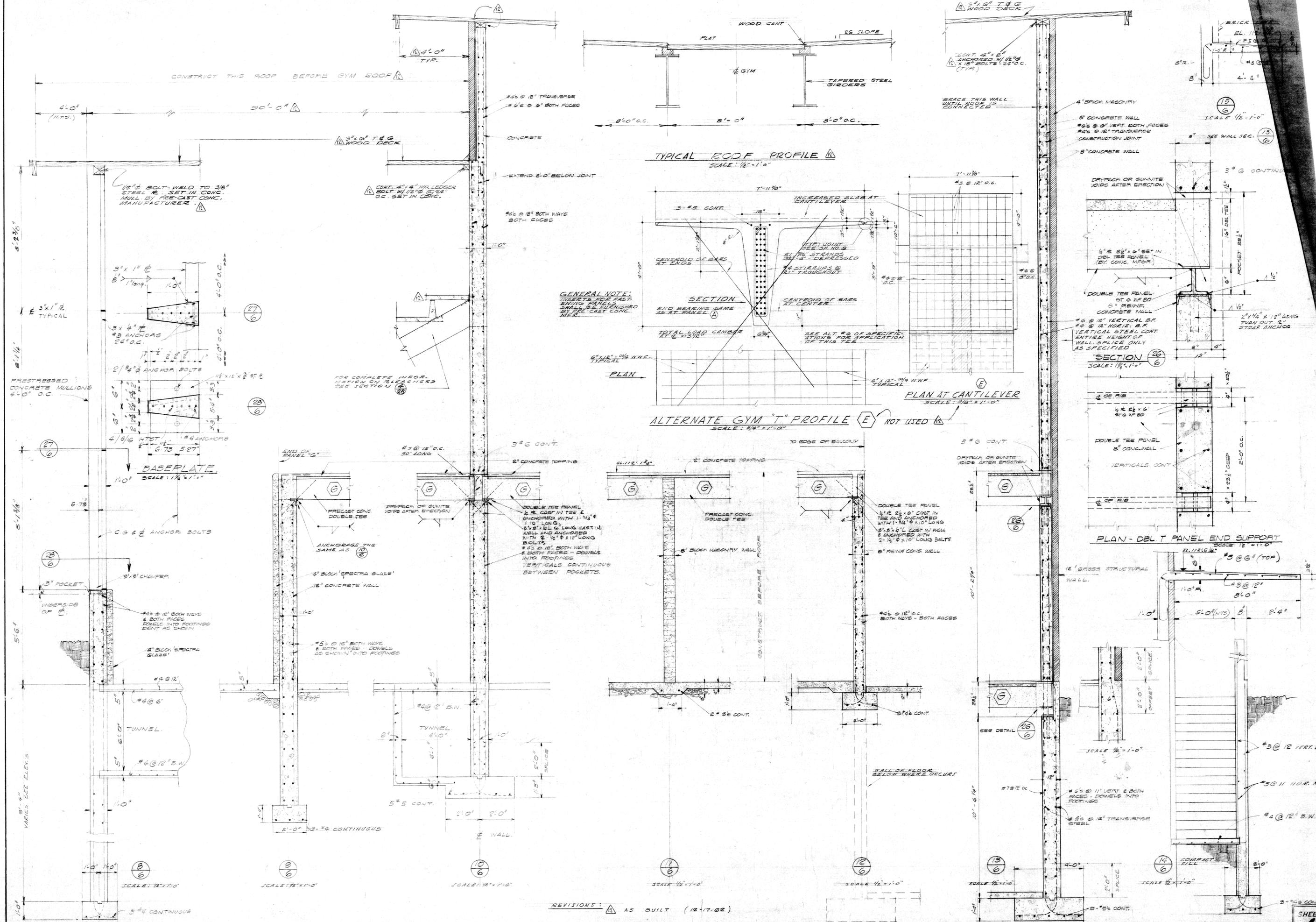
SCALE 1/2" = 1'-0"

SCALE 1/2" = 1'-0"

SCALE 1/2" = 1'-0"

NOTE: BETWEEN REF. MODULES  
23 AND 24 CHANGE WALL REIN-  
FORCING TO THE FOLLOWING:  
#1 @ 12" O.C. VERT. INSIDE FACE  
#4 @ 11" O.C. VERT. OUTSIDE FACE  
#4 @ 12" O.C. HORIZONTAL BOTH FACES

REVISIONS:  
AS BUILT (12-17-62)





X-REF. SYMBOL

○ DETAIL NUMBER  
○ SHEET NO. WHERE DET. FOUND

SYMBOL LEGEND

- CONCRETE
- BRICK MASONRY
- FLOOR MATS
- INSULATION OR ACOUSTIC TILE
- CERAMIC TILE
- WOOD
- GRAVEL
- UNDISTURBED EARTH

NOTE: FOR INTERIOR ELEVATIONS SEE SHEET NOS. 20, 21, & 22.

NOTE: GENERAL CONTRACTOR TO PROVIDE OPENINGS THROUGH WALLS FOR MECHANICAL DUCTS.

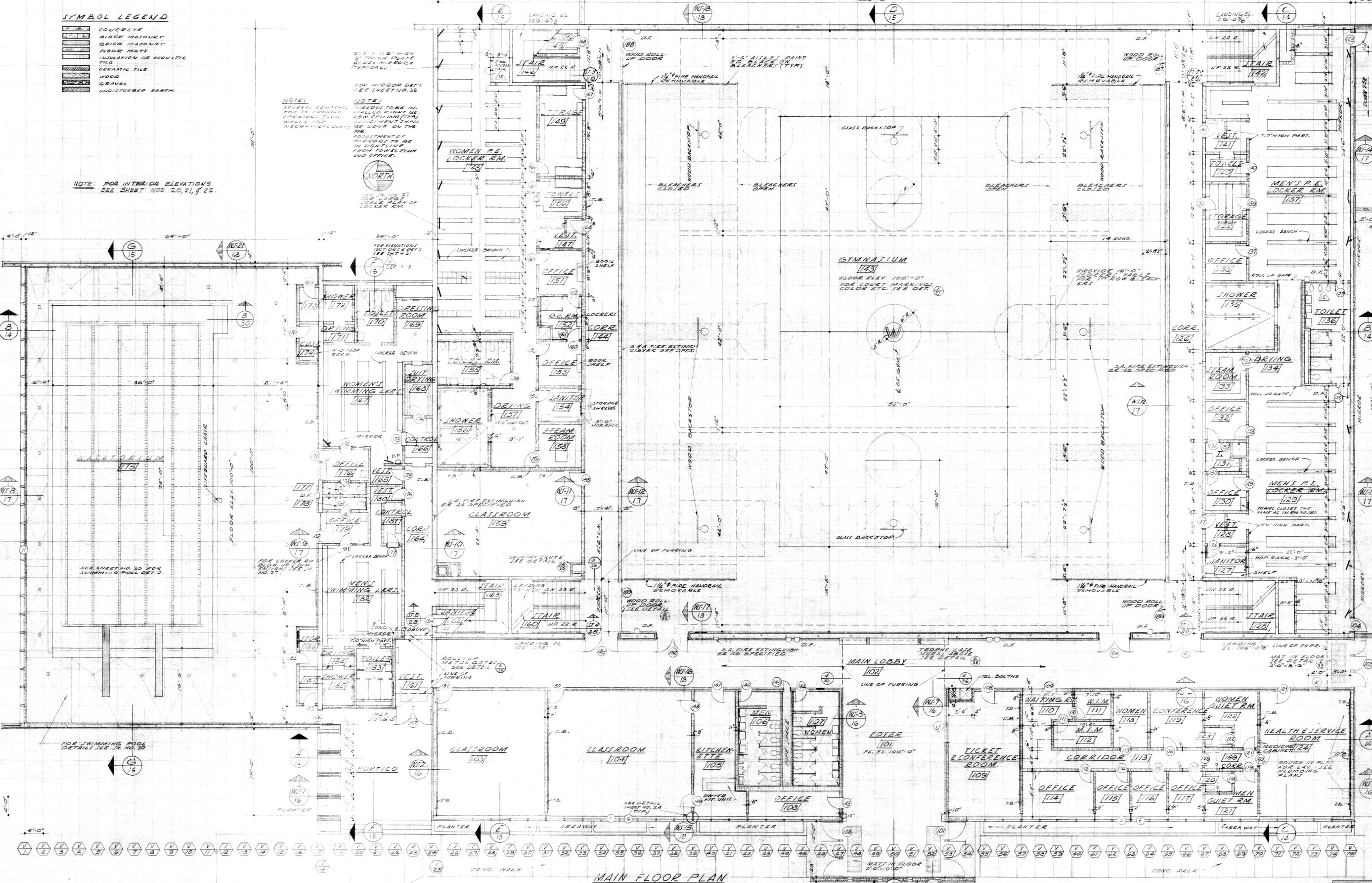
NOTE: THROUGH TO BE INSTALLED RIGHT BELOW CEILING (TYP.) ADJUSTMENT SHALL BE DONE ON THE SPACES.

NOTE: ADJUSTMENT OF HANGERS TO BE IN DRYING ROOM TOWEL ROOM AND OFFICE.



SEE SHEET NO. 27 FOR DETAILS OF LOCKER RM.

FOR ELEVATIONS SEE INT. 21 & 22 SEE S-3

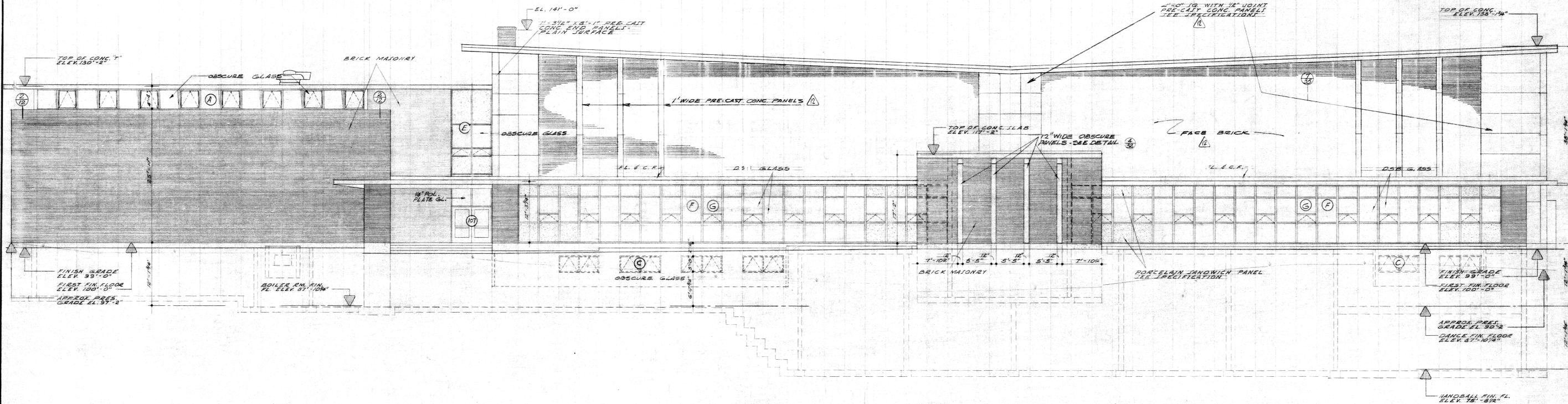


MAIN FLOOR PLAN  
SCALE: 1/8" = 1'-0"

REVISIONS AS BUILT 2-12-63

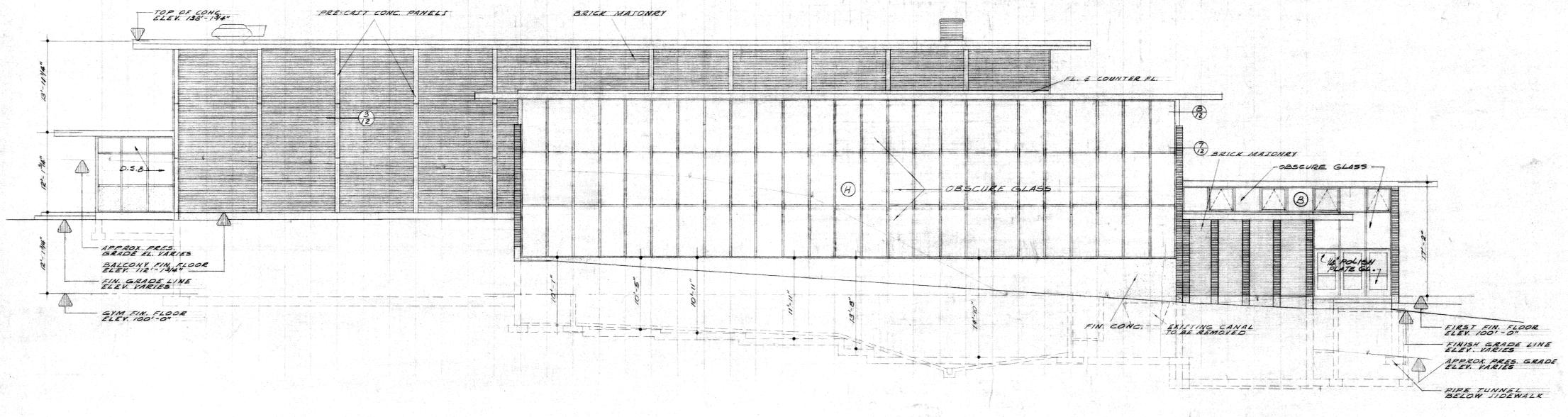


Y 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75

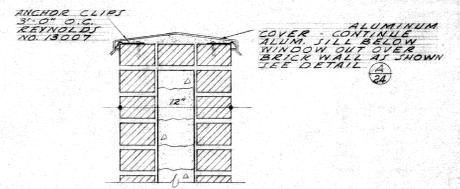


WEST ELEVATION  
SCALE: 1/8" = 1'-0"

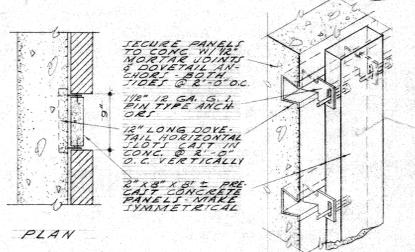
H 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



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



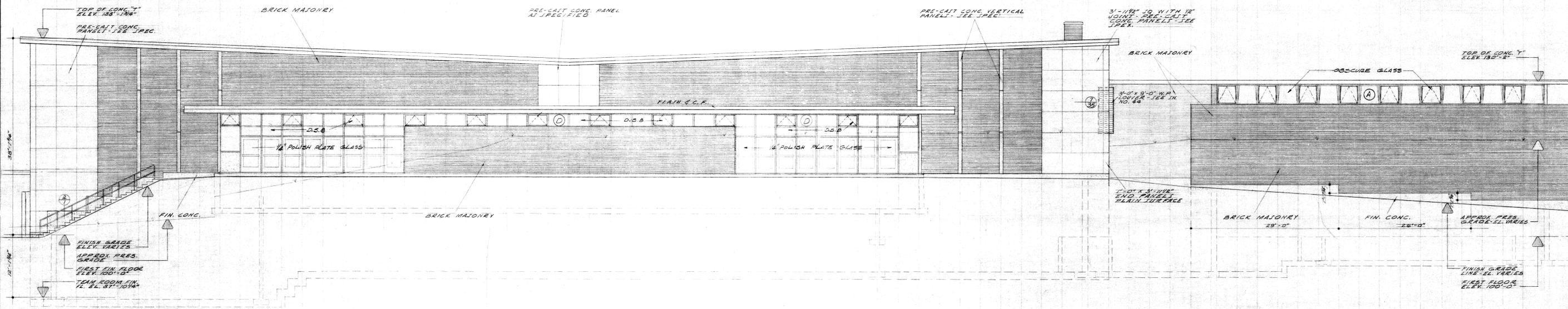
CAP DETAIL - SECTION 2/12  
SCALE: 1/2" = 1'-0"



PRE-CAST CONC. VERTICAL PANELS  
SCALE: 1/2" = 1'-0"

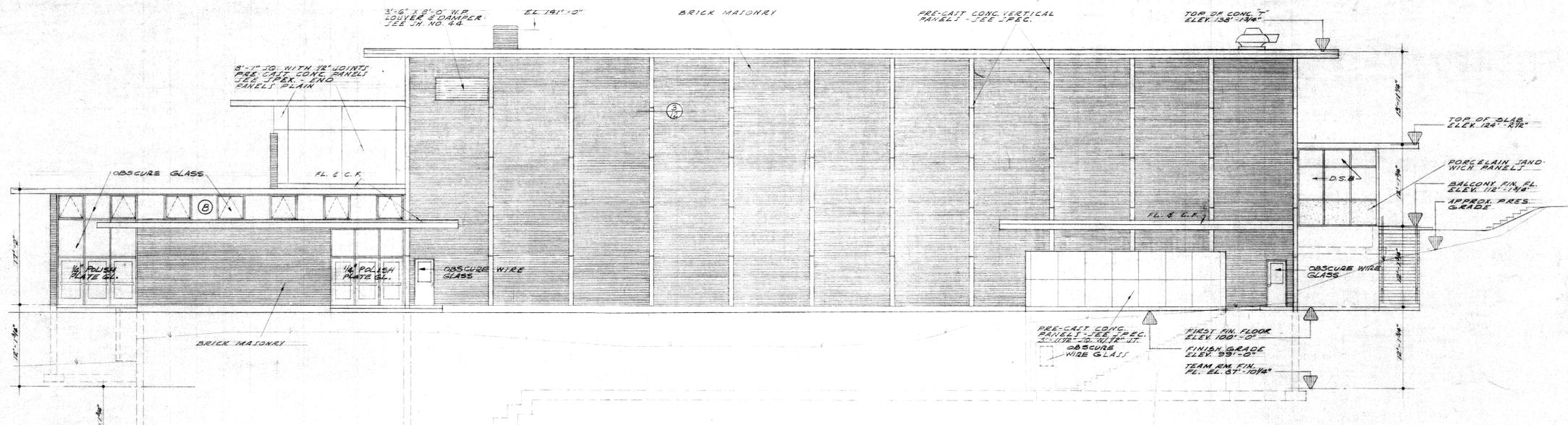
REVISIONS: AS BUILT 12-20-62

V 15 V 14 V 13 V 12 V 11 V 10 V 9 V 8 V 7 V 6 V 5 V 4 V 3 V 2 V 1 V 24 V 23 V 22 V 21 V 20 V 19 V 18 V 17 V 16 V 15 V 14 V 13 V 12 V 11 V 10 V 9 V 8 V 7 V 6 V 5 V 4 V 3 V 2 V 1 V 24 V 23 V 22 V 21 V 20 V 19 V 18 V 17 V 16 V 15 V 14 V 13 V 12 V 11 V 10 V 9 V 8 V 7 V 6 V 5 V 4 V 3 V 2 V 1

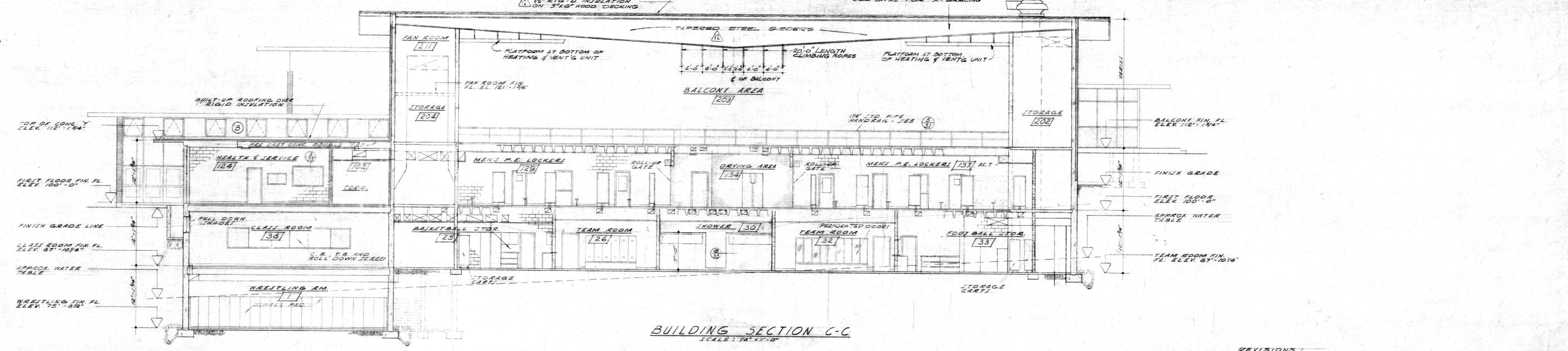
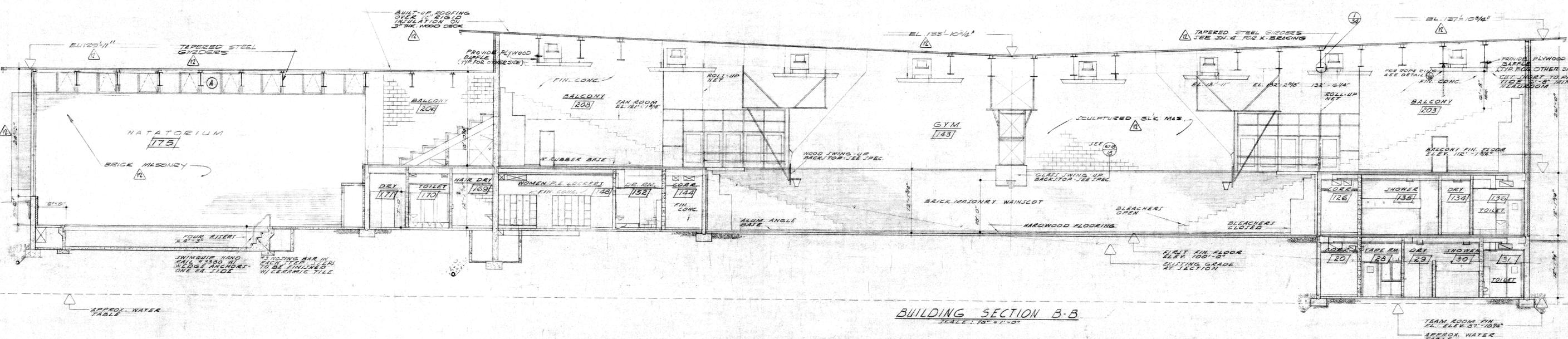
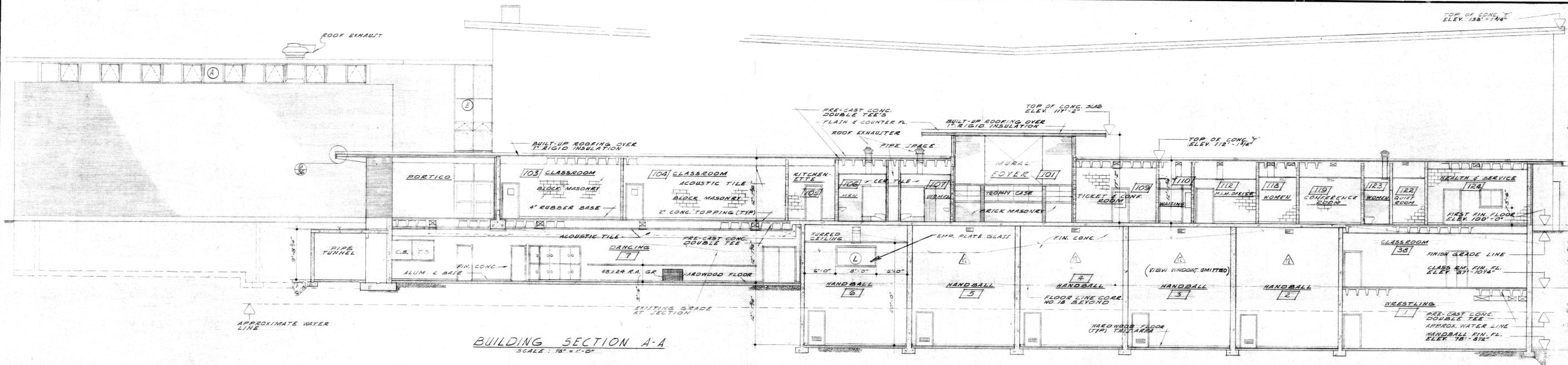


EAST ELEVATION  
SCALE: 1/8" = 1'-0"

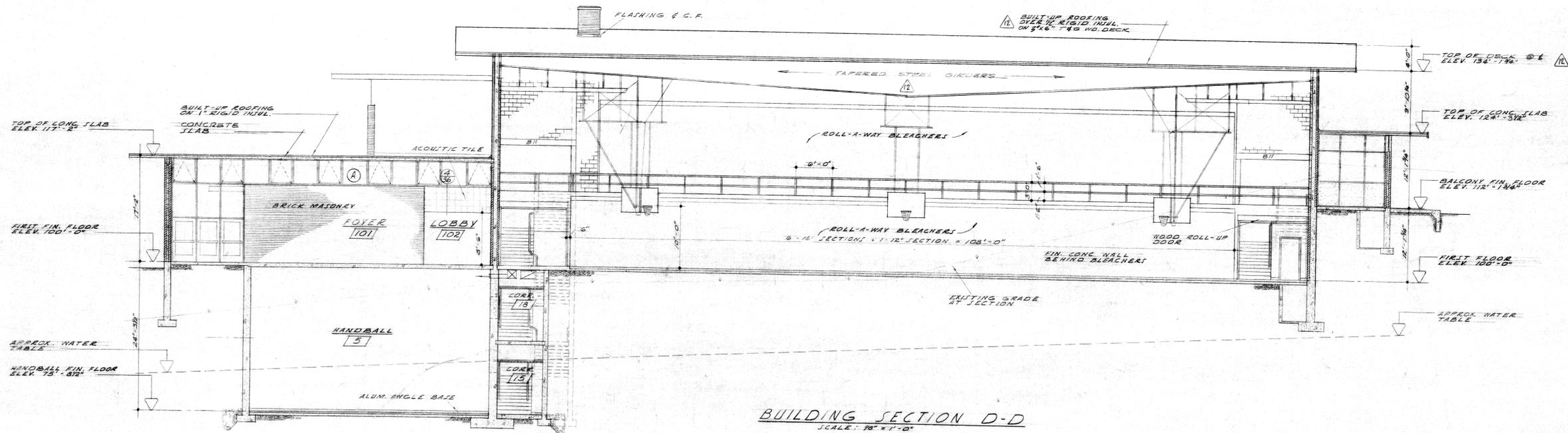
H 1 H 2 H 3 H 4 H 5 H 6 H 7 H 8 H 9 H 10 H 11 H 12 H 13 H 14 H 15 H 16 H 17 H 18 H 19 H 20 H 21 H 22 H 23 H 24 H 25 H 26 H 27 H 28 H 29 H 30 H 31 H 32 H 33 H 34 H 35 H 36 H 37 H 38 H 39 H 40 H 41 H 42 H 43 H 44



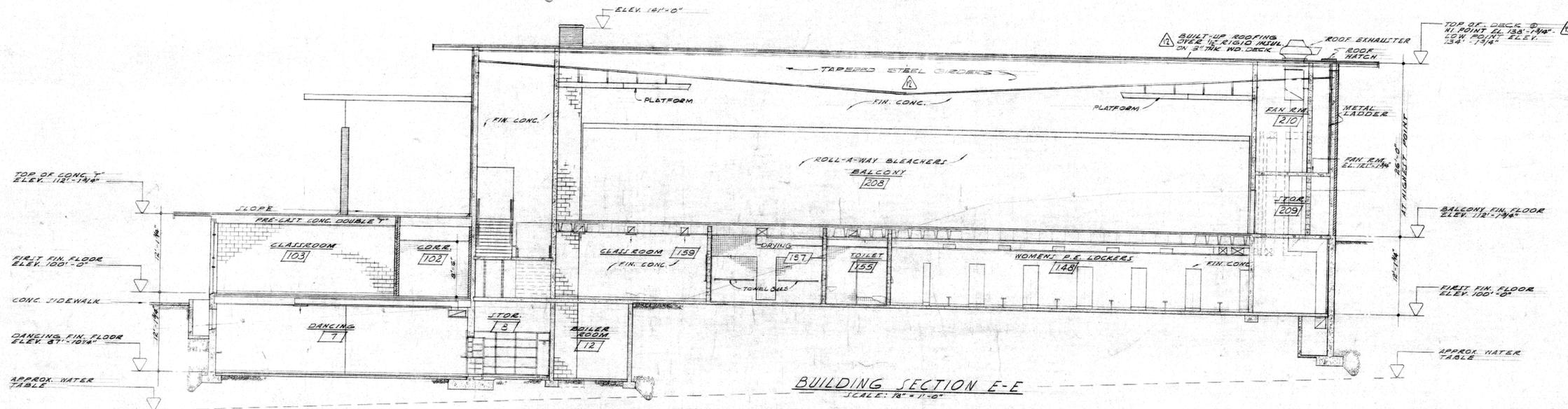
SOUTH ELEVATION  
SCALE: 1/8" = 1'-0"



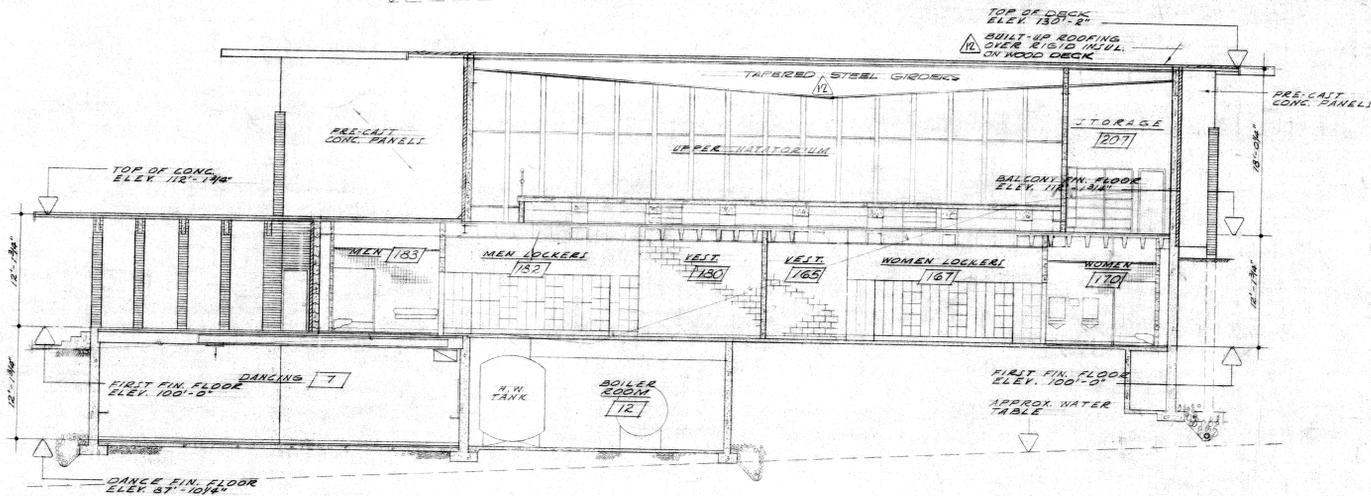
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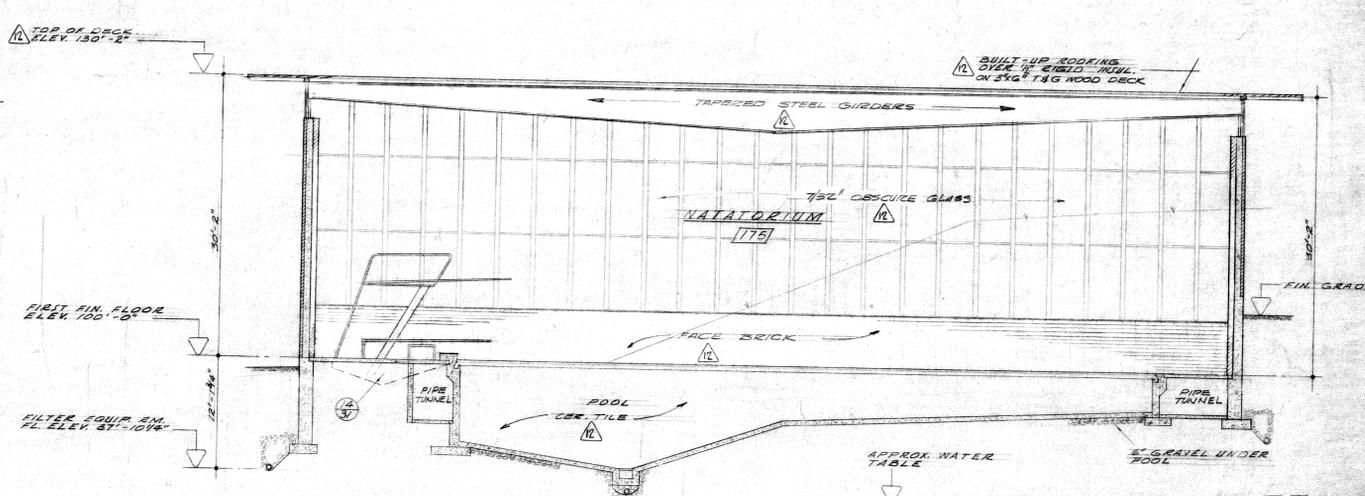
BUILDING SECTION D-D  
SCALE: 1/8" = 1'-0"



BUILDING SECTION E-E  
SCALE: 1/8" = 1'-0"

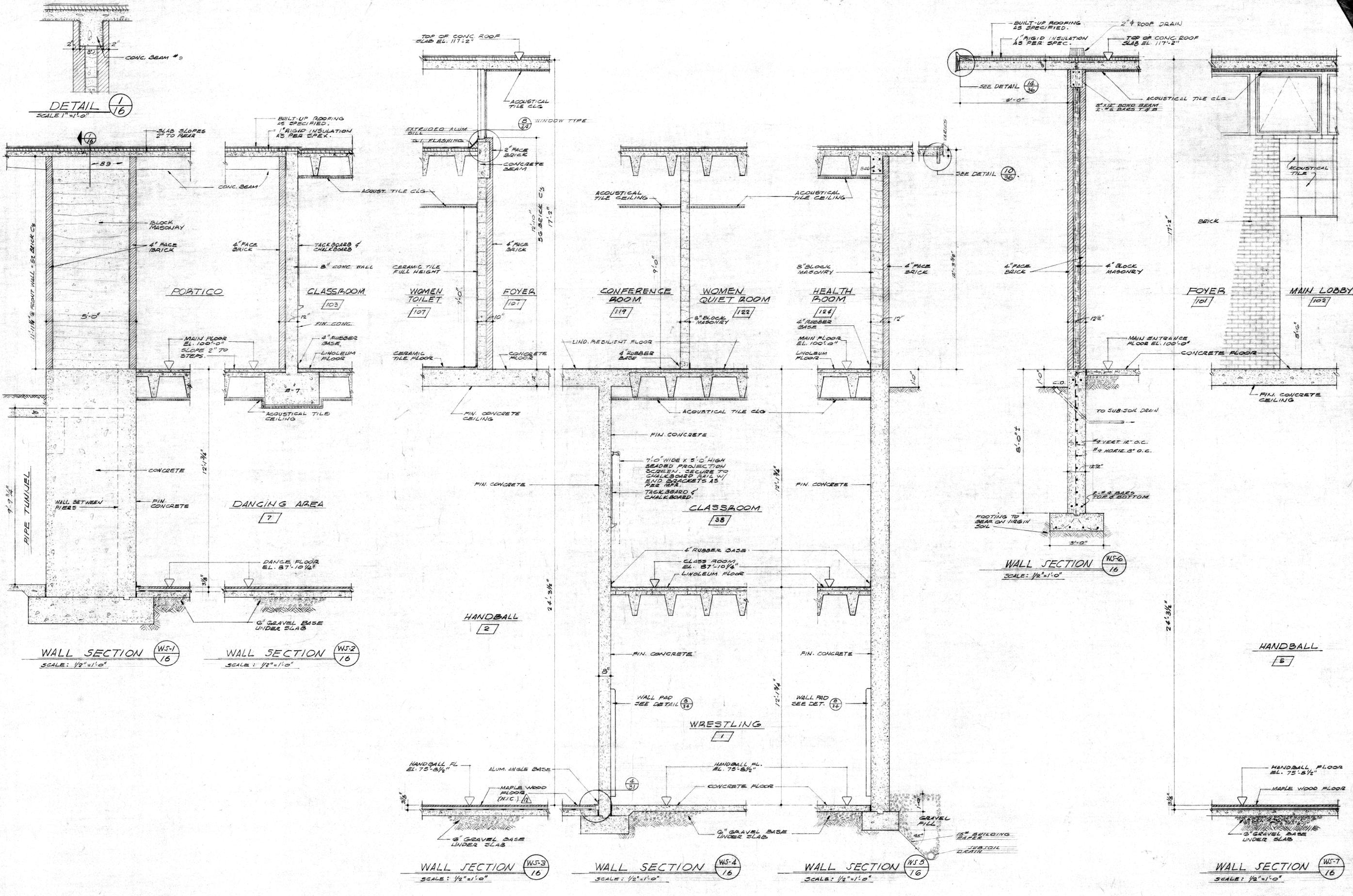


BUILDING SECTION F-F  
SCALE: 1/8" = 1'-0"



BUILDING SECTION G-G  
SCALE: 1/8" = 1'-0"

REVISIONS: 1 AS BUILT (12-26-62)



NOTE: ONE BRICK COURSE = 2 1/4" + 1/2" JOINT.

REVISIONS: 12 AS BUILT 12-21-62







Campbell-Rees Architects  
 105 East South Union Ave., Suite 200, Midvale, UT 84047 (801) 846-3500 Fax (801) 846-3504  
 Design: [Signature] Date: [Blank] Scale: [Blank]

PROJECT NAME: ROOFING IMPROVEMENTS  
 PROJECT LOCATION: Weber State University, Ogden, Utah  
 PROJECT NUMBER: SWENSEN GYMNASIUM BUILDING ROOF PLAN

DATE: MAY 5, 1999  
 DRAWN BY: PMH CHECKED BY: DRG  
 PROJECT NO: 99076  
 SCALE: 1/16" = 1'-0"  
 SHEET NO: A2.1 OF 2

**GENERAL NOTES**

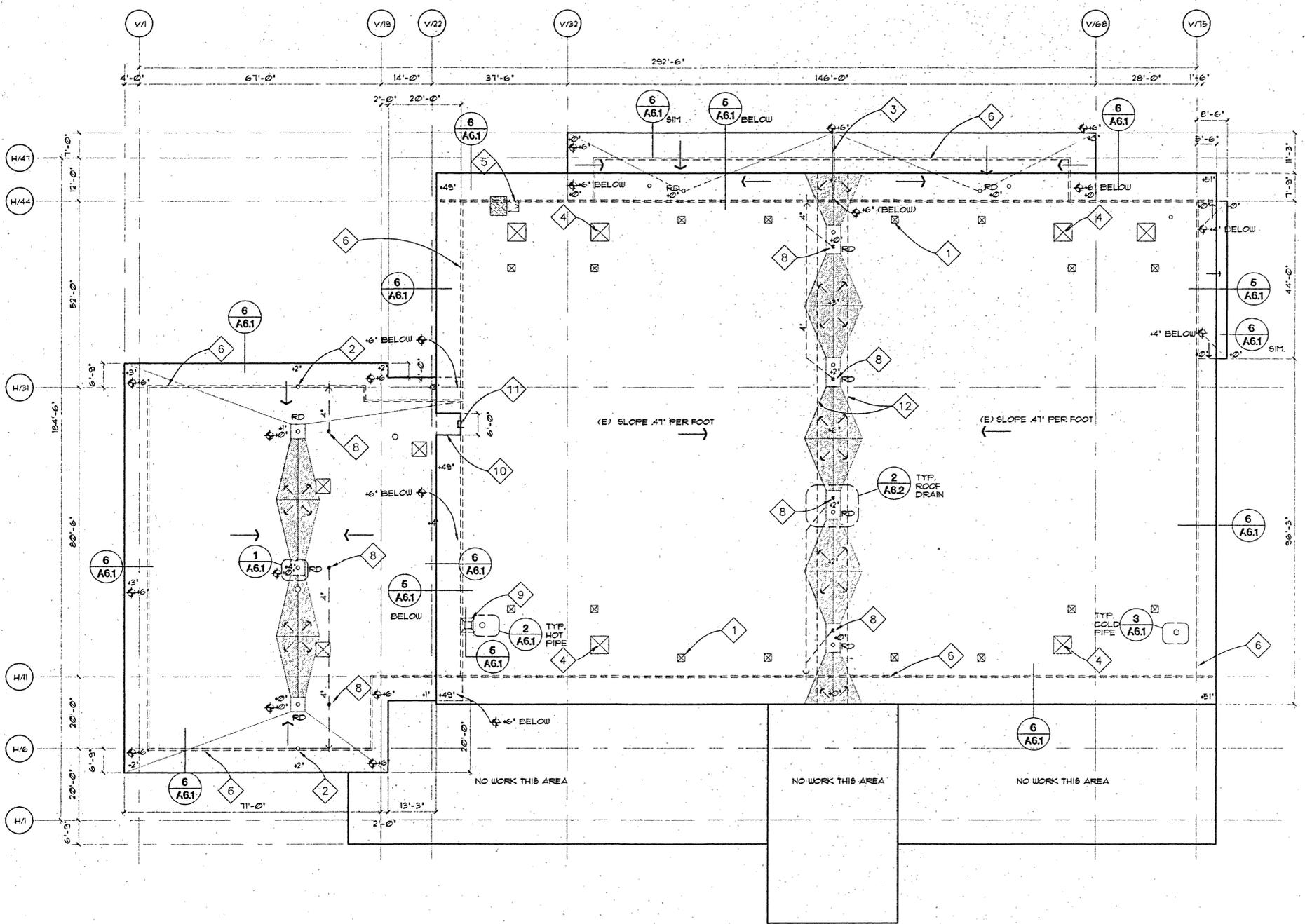
- REMOVE (E) BUILT UP ROOFING MATERIALS COMPLETELY. REMOVE (E) FLASHINGS, INCLUDING METAL EDGINGS, DRAIN LEADS, PIPE BOOTTS, PITCH POCKETS, CANTS, ETC. AND CLEAN SUBSTRATES OF ALL ASPHALT AND ADHESIVE CONTAMINANTS.
- INSPECT AND REPAIR ANY (E) DAMAGED T&G WOOD DECKING SUBSTRATE. RE: UNIT PRICE SPECIFICATION.
- (E) EQUIPMENT NOTED FOR REMOVAL SHALL BE REMOVED TO THE GREATEST EXTENT POSSIBLE AND SHALL INCLUDE ALL UTILITIES, DUCTS, ETC. THAT SERVE EQUIPMENT. DISCONNECT ELECTRICAL SERVICES AT PANEL LOCATIONS AND RE-LABEL PANEL SCHEDULES.
- CONTRACTOR ACCESS AND STAGING AREA SHALL BE LOCATED PER OWNER DIRECTION. CONTRACTOR SHALL COORDINATE WITH OWNER TO MAINTAIN OWNER ACCESS AND DELIVERIES.
- EXTEND UTILITIES AND VENTS AFFECTED BY NEW CRICKET OR TAPERED INSULATION MATERIALS TO PROVIDE PROPER CLEARANCES TO FINISHED ROOF SURFACES.
- DRAWINGS REPRESENT ROOF CONDITIONS FROM ON-SITE SURVEY WORK. HOWEVER, ACTUAL CONDITIONS MAY VARY AND SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO SUBMITTING BID.
- MAINTAIN (E) BUILDING IN WATER TIGHT CONDITION AT ALL TIMES. DAMAGE CAUSED BY CONTRACTOR OPERATIONS SHALL BE REPAIRED / REPLACED AT NO ADDITIONAL COST TO OWNER.
- REMOVE AND REPLACE (E) DAMAGED WOOD FASCIA MATERIALS. RE: UNIT PRICE SPECIFICATION.

**REFERENCE NOTES**

- REMOVE (E) DAMAGED EXHAUST HOOD. PROVIDE (N) EXHAUST HOOD.
- REMOVE (E) PRIMARY ROOF DRAIN.
- REMOVE (E) ROOF EXPANSION JOINT. PROVIDE (N) EXPANSION JOINT PER DETAIL 5/A6.1.
- RAISE (E) EQUIPMENT CURB TO PROVIDE MIN 8" CLEARANCE TO FINISH ROOFING. MODIFY (E) DUCTWORK UTILITIES, ETC. TO ACCOMMODATE RAISED EQUIPMENT. SEE DETAIL 4 / A6.1.
- REMOVE (E) ROOF HATCH. PROVIDE (N) ROOF HATCH. SEE DETAIL 7 / A6.1 SIM.
- LINE OF (E) WALL BELOW.
- (E) ROOF DRAINS, CLEAN. EQUALS AND DRAIN LINES. PROVIDE (N) CAST IRON STRAINERS.
- PROVIDE (N) OVERFLOW ROOF DRAIN AND ASSOCIATED DRAIN LINE.
- (E) BOILER STACK.
- REMOVE (E) OVERHANG TO WALL LINE BELOW. FINISH EXPOSED OVERHANG TO MATCH EXISTING.
- PROVIDE (N) ROOF LADDER PER DETAIL 1/A6.2.
- DASHED LINE DENOTES EXTENT OF (E) ROOF DRAINAGE SUMP. INFILL W/ TAPERED INSULATION TO PROVIDE SMOOTH TRANSITION TO ADJACENT FINISHED ROOF SLOPES.

**LEGEND**

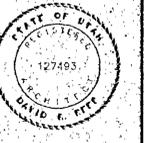
- PROVIDE (N) OVERFLOW ROOF DRAIN AND ASSOCIATED DRAIN LINE.
- (E) VENT OR UTILITY PENETRATION TO REMAIN.
- ⊗ (E) EQUIPMENT OR DUCT PENETRATIONS TO BE REMOVED.
- ▨ DENOTES EXTENT OF (N) TAPERED INSULATION CRICKETS. PROVIDE SLOPES SHOWN OR IF NOT SHOWN, PROVIDE 1/4" PER FOOT MIN. SLOPE.
- ▤ DENOTES EXTENT OF (N) ADHERED ROOF WALKWAY MATERIAL. PROVIDE 4'-0" WIDE WALKWAYS, TYPICAL.
- ⊠ (E) EQUIPMENT.
- 4' (E) FINISHED ROOF ELEVATION
- 4'-0" (N) FINISHED ROOF ELEVATION



**1 SWENSEN GYMNASIUM ROOF PLAN**  
 A2.1  
 1/8" = 1'-0" N

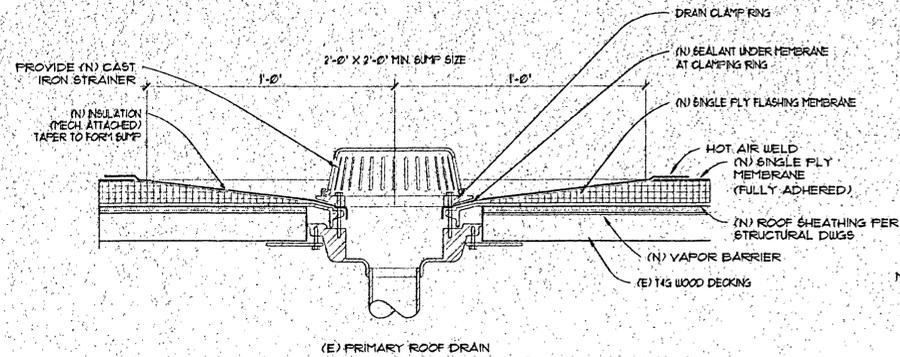
000014A2-1  
 Weber State University, Swensen Gymnasium Building, Re-roofing Improvements - 99025610  
 Roof Plan - 1999

REVISIONS

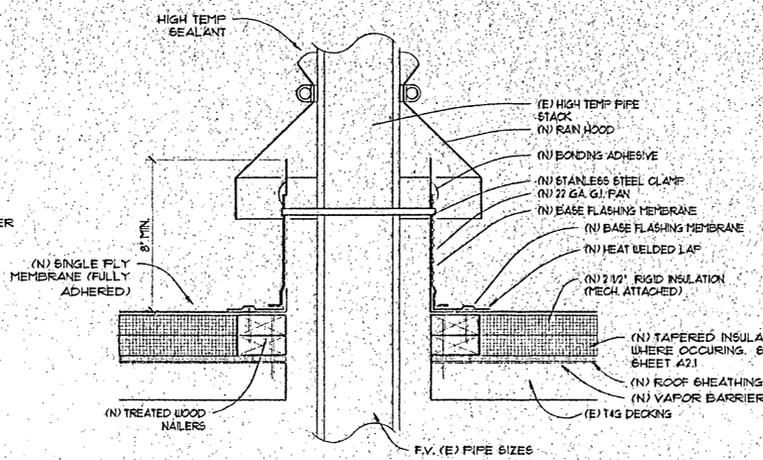


Campbell-Rees Architects  
 1035 East South Union Ave. Suite 2000 Midvale, UT 84047  
 Phone: (801) 566-3500 Fax: (801) 566-3504  
 Email: info@campbellrees.com  
 Do Not Scale This Drawing. Existing Conditions Shown in Grey.

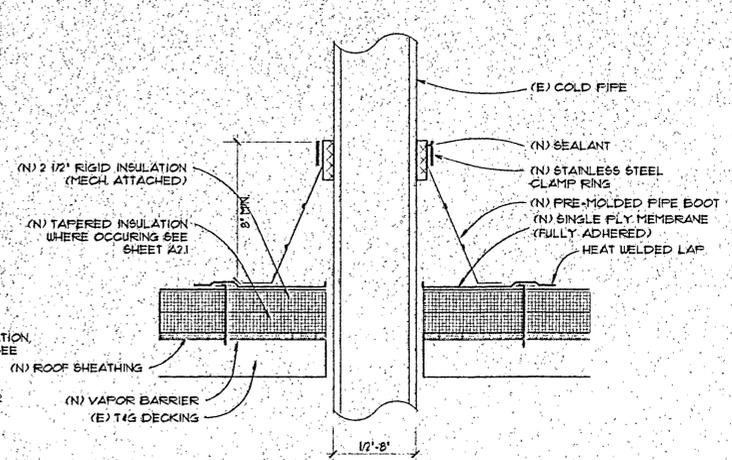
PROJECT NAME: ROOFING IMPROVEMENTS  
 PROJECT: Weber State University Ogden, Utah  
 SHEET NAME: ROOF DETAILS



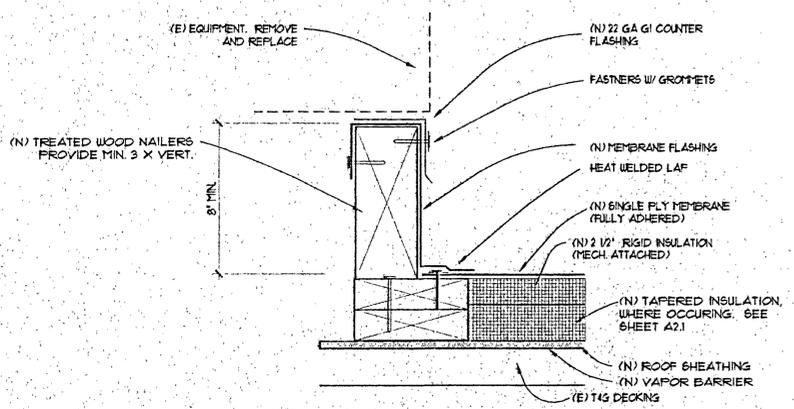
1  
 A6.1  
 1 1/2" x 1'-0"



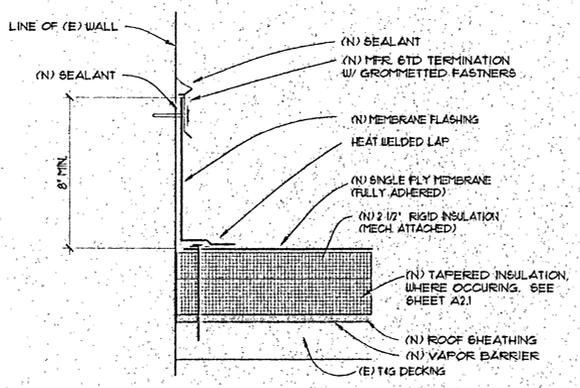
2  
 A6.1  
 8" x 1'-0"



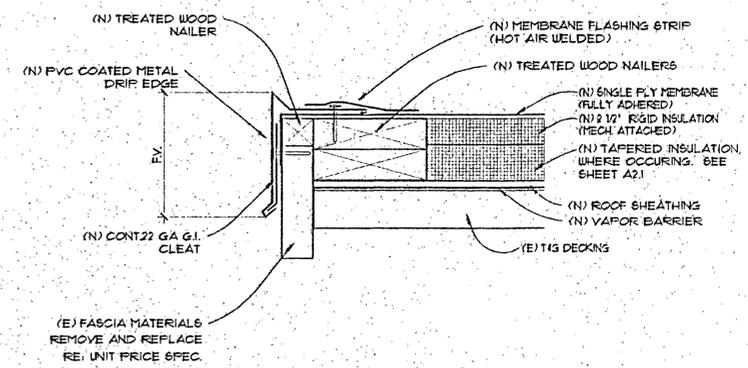
3  
 A6.1  
 6" x 1'-0"



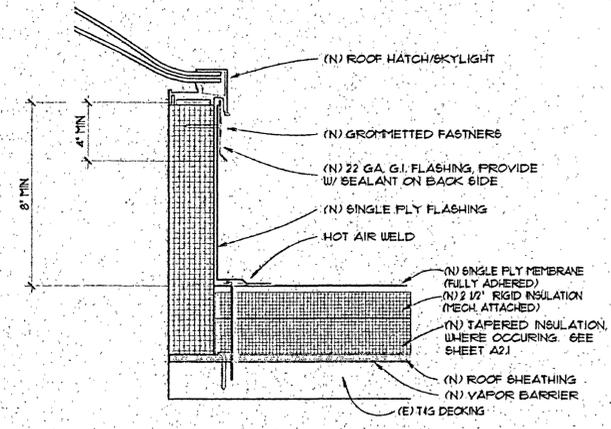
4  
 A6.1  
 8" x 1'-0"



5  
 A6.1  
 8" x 1'-0"

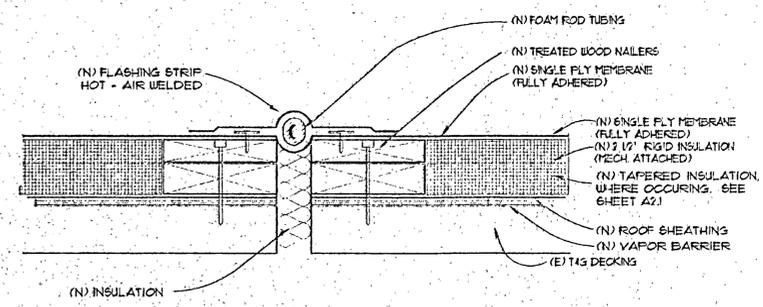


6  
 A6.1  
 8" x 1'-0"



7  
 A6.1  
 8" x 1'-0"

8  
 A6.1  
 8" x 1'-0"

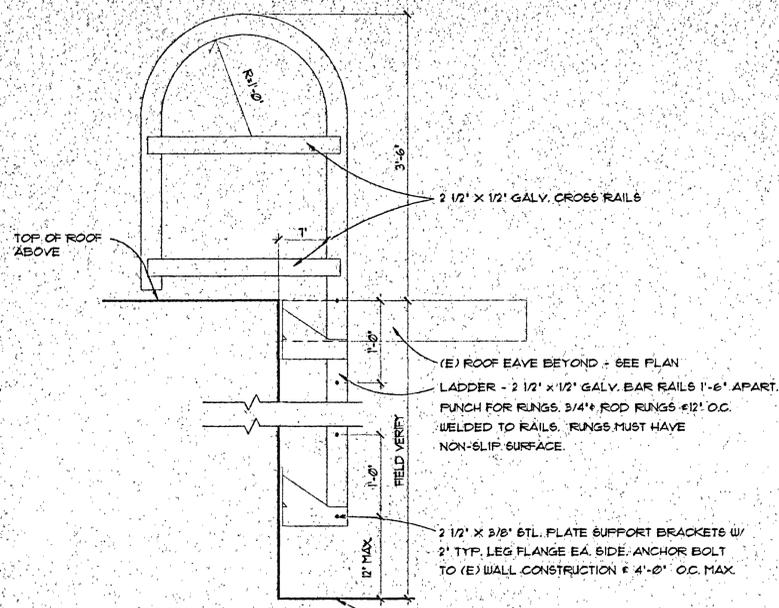


9  
 A6.1  
 8" x 1'-0"

ASB61.DWG 5-4-99 10:33:10 3/4" = 1'-0"

000146-1  
 Weber State University, Swensen Gymnasium Building, Re-roofing Improvements - 99025910  
 Roof Details - 19970

DATE:	MAY 5, 1999		
DRAWN BY:	PI/H	CHECKED BY:	DRR
PROJECT NO.:	99076		
SCALE:	VARIES		
SHEET NO.:	A6.1	TOTAL SHEETS:	3



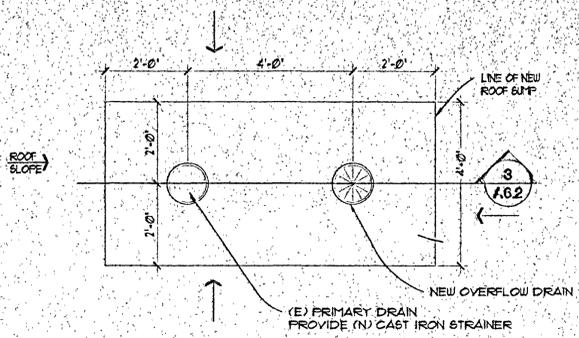
**NOTES FOR THIS DETAIL:**

1. ALL WELDED ASSEMBLY MUST BE GROUND SMOOTH FRIMED AND PAINTED.
2. COMPLY WITH ANSI A14.3

**ROOF LADDER DETAIL**

1  
A6.2

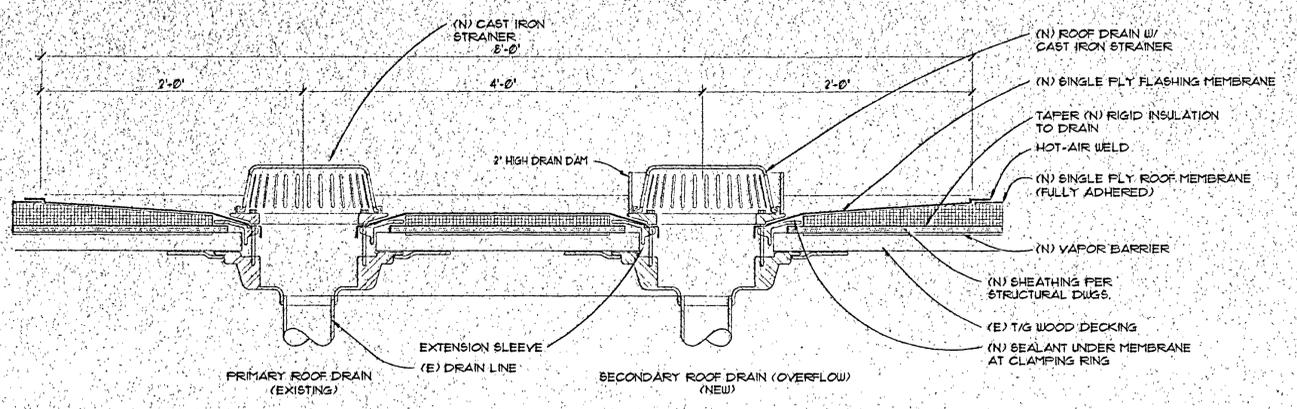
1/2" = 1'-0"



**ROOF DRAIN PLAN**

2  
A6.2

1/2" = 1'-0"



**ROOF DRAIN SECTION**

3  
A6.2

1/2" = 1'-0"

000014A6-2  
Weber State University, Swensen Gymnasium Building, Re-Roofing Improvements - 99025810  
Roof Details - 18871

**REVISIONS**




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Do Not Sign This Drawing Unless You are a Licensed Professional Engineer in the State of Utah

**ROOFING IMPROVEMENTS**  
Weber State University Ogden, Utah

PROJECT NAME:	ROOFING IMPROVEMENTS
DATE:	MAY 5, 1999
DRAWN BY:	PMH
CHECKED BY:	DRR
PROJECT NO.:	99076
SCALE:	VARIES
SHEET NO.:	A6.2
ORDER NO.:	4

REVISIONS



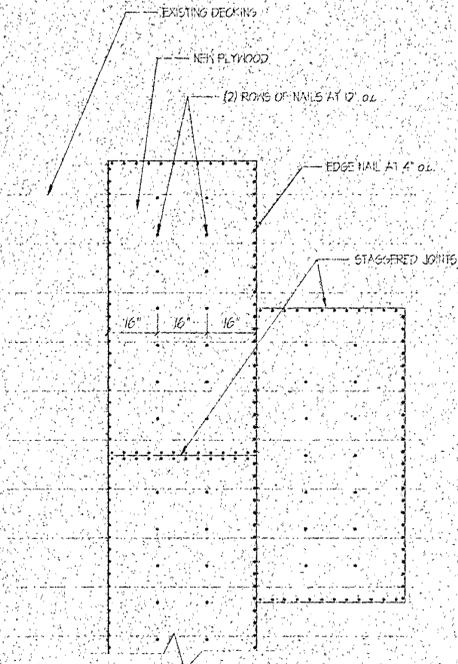
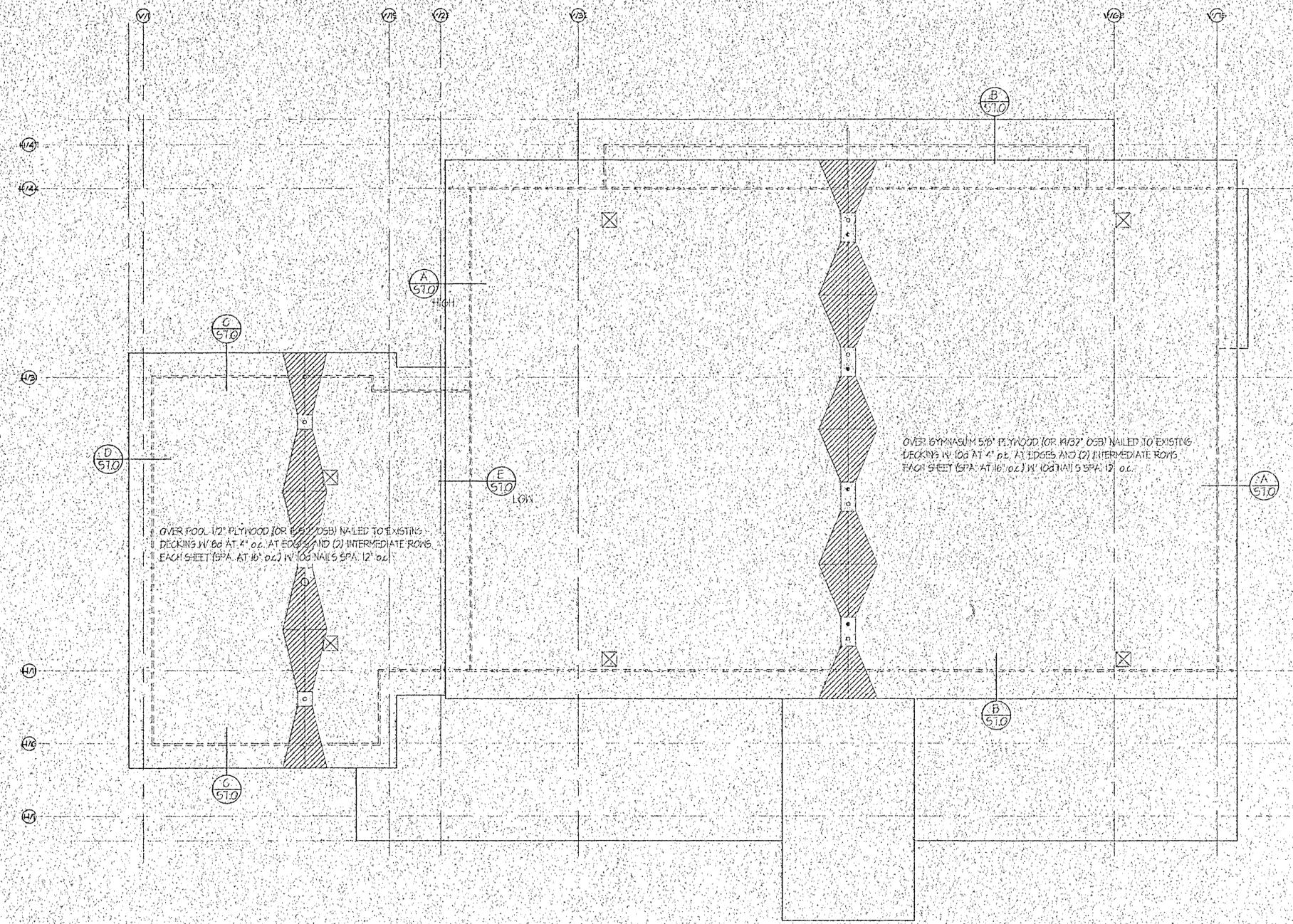

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 Do Not Reduce This Drawing. The Responsibility of Engineer and Shall Remain the Property of

**ROOF SHEATHING NOTES**

1. PLYWOOD OR ORIENTED STRAND BOARD SHALL BE APA RATED, WITH THICKNESS GIVEN ON PLAN.
2. NAILING SHALL BE AS PER NOTES ON PLAN. NAILS SHALL BE SPACED AT 8" IN MIN. FROM EDGE OF PANEL.
3. LAY SHEATHING WITH FACE GRAIN AT RIGHT ANGLES TO DECKING, WITH END JOINTS STAGGERED (SEE TYPICAL DETAIL A/S1.0)

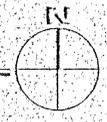
**STRUCTURAL STEEL**

1. ALL STRUCTURAL STEEL FOR MISCELLANEOUS PLATES AND ANGLES SHALL BE ASTM A-36 AND SHALL CONFORM WITH THE STANDARD SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS OF THE AISC AND WITH THE AISC CODE OF STANDARD PRACTICE.
2. ALL BOLTS FOR EMBEDMENT IN MASONRY OR CONCRETE SHALL BE OF ASTM A307.
3. REFER TO PLANS AND DETAILS FOR SPACING OF BOLTS.
4. EPOXY ADHESIVE FOR ANCHORING BOLTS IN MASONRY OR CONCRETE SHALL CONFORM TO ASTM C 887 AND STANDARD SPECIFICATIONS FOR EPOXY RESIN-BASE BONDING SYSTEMS FOR CONCRETE (SAMPLE SYSTEMS "EPOXY-III" BY SIKKENS CO.)



**A/S1.0** TYPICAL PLYWOOD LAYOUT

**1/S1.0** SWENSEN GYMNASIUM ROOF STRUCTURAL KEY PLAN  
 1/16" = 1'-0"



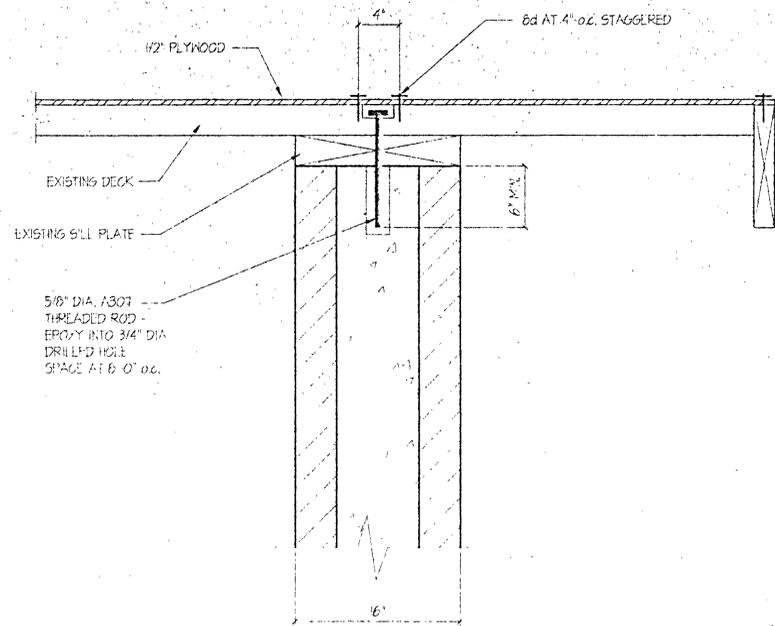
0000451-0  
 Weber State University, Swensen Gymnasium Building, Re-roofing Improvements - 92076  
 Roof Structural Key Plan - 19872



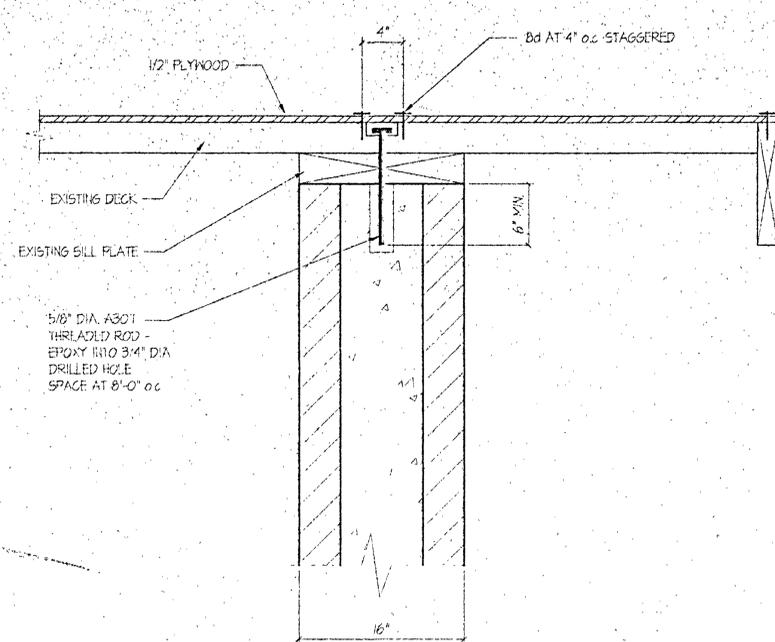
PROJECT NAME: ROOFING IMPROVEMENTS  
 Weber State University, Ogden, Utah  
 SHEET NAME: SWENSEN GYMNASIUM ROOF STRUCTURAL KEY PLAN

DATE: MAY 5, 1999

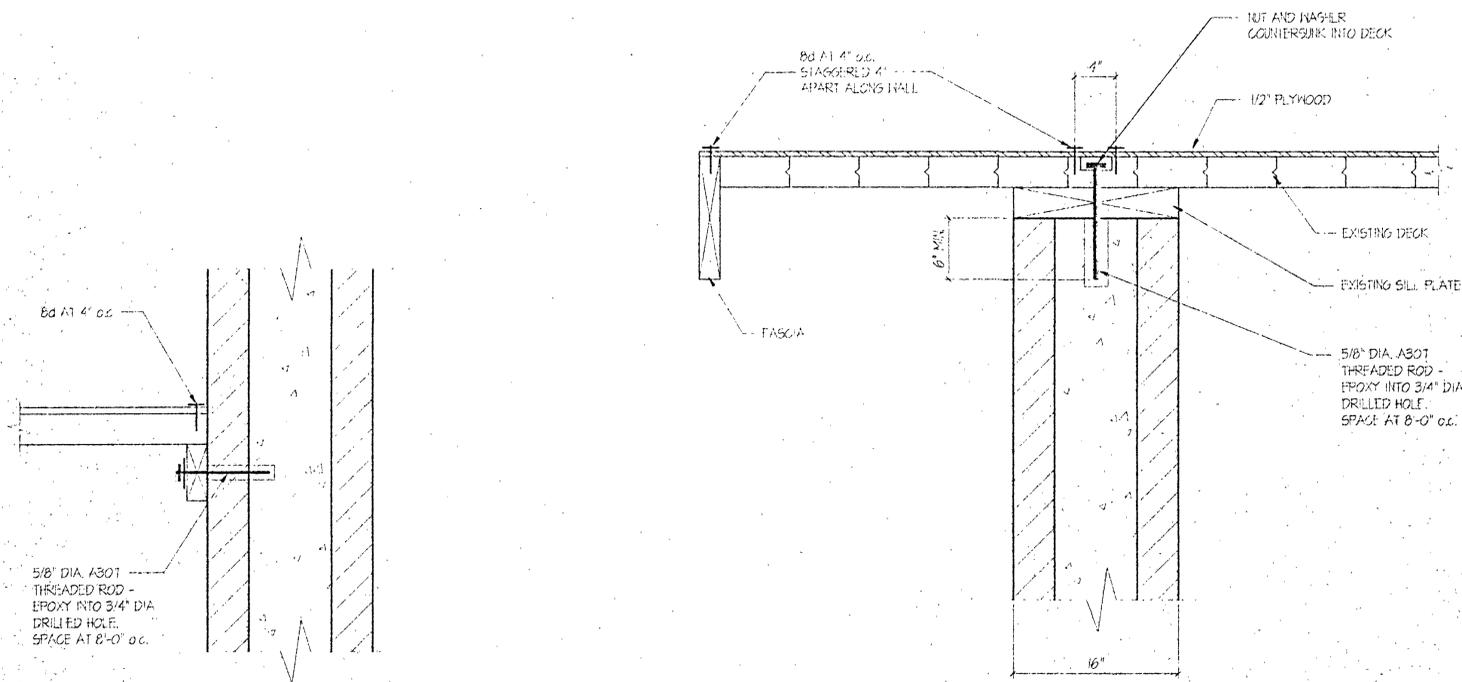
DRAWN BY: RM	CHECKED BY: DGH
PROJECT NO: 92076	SCALE: 1/16" = 1'-0"
SHEET NO: S1.0	TOTAL SHEETS: 1



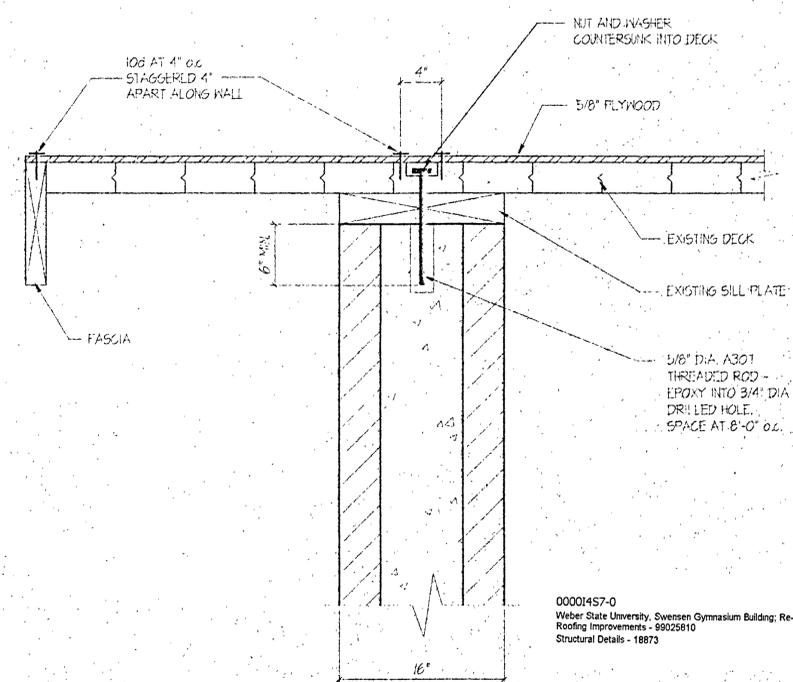
C NORTH WALL OF POOL ROOF



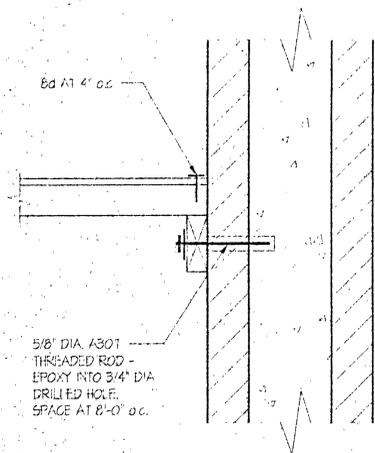
A NORTH AND SOUTH WALL OF GYM ROOF



D EAST AND WEST WALL OF POOL ROOF

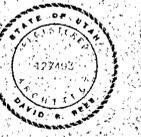


B EAST AND WEST WALL OF GYM ROOF



E SOUTH WALL OF POOL ROOF

REVISIONS

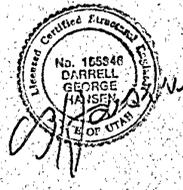


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**ROOFING IMPROVEMENTS**  
**Weber State University Ogden, Utah**

PROJECT NAME:  
 SHEET NAME:

DATE: MAY 5, 1999  
 DRAWN BY: RH  
 CHECKED BY: DGH  
 PROJECT NO: 99076  
 SCALE: 1-1/2" = 1'-0"  
 SHEET NO: S7.0  
 ENDING BLOCK: 2



00001457-0  
 Weber State University, Swensen Gymnasium Building; Re-Roofing Improvements - 99025810  
 Structural Details - 18873