# New Mexico State University 4121 DACC DADM East Mesa Building Reroof CD Set: April 5, 2024

# **OWNER:**

NEW MEXICO STATE UNIVERSITY
PO BOX 30000, MSC 3545
LAS CRUCES, NM 88003
CONTACT: RICHARD HERNANDEZ, PROJECT
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# **DESIGNER:**

ARMSTRONG GROUP INC.
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# **INDEX OF SHEETS:**

C-001 COVER SHEET

A-101 ROOF PLAN

A-501 ROOF DETAILS

A-502 ROOF DETAILS

# **CODE DATA:**

**REQUIRED CODES:** 

2021 NEW MEXICO COMMERCIAL BUILDING CODE
2021 NEW MEXICO EXISTING BUILDING CODE
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL EXISTING BUILDING CODE
2018 NEW MEXICO ENERGY CONSERVATION CODE
2021 NEW MEXICO PLUMBING CODE

2021 NEW MEXICO PLUMBING CODE
2021 NEW MEXICO MECHANICAL CODE
2020 NEW MEXICO ELECTRICAL CODE
2012 NEW MEXICO ELECTRICAL SAFETY CODE

2020 NATIONAL ELECTRICAL CODE

2012 NATIONAL ELECTRICAL SAFETY CODE

ICC/ANSI A117.1-2017

**CLASSIFICATION OF WORK:** 

**NEW ROOF CLASS:** 

REPAIR - EXISTING FACILITY

OCCUPANT TYPE:

В

AREA TABULATIONS: NEW ME

NEW METAL ROOF AREA: APPROX. 10,850 SF NEW MEMBRANE ROOF AREA: APPROX. 3,000 SF

CLASS A

THE PROJECT CONSISTS OF REMOVAL AND REPLACEMENT OF EXISTING ROOFING SYSTEM.

THESE RENOVATIONS DO NOT CHANGE THE OCCUPANCY GROUP OR CONSTRUCTION TYPE WITHIN THE EXISTING BUILDING, NOR DO THEY CHANGE THE CONDITIONED OR OCCUPIED SPACES.

# **SCOPE OF WORK:**

BASE BID WORK: THE SCOPE CONSISTS OF THE REMOVAL AND REPLACEMENT OF THE EXISTING METAL ROOFING AND THE INSTALLATION OF A NEW STANDING SEAM METAL ROOF SYSTEM. APPROXIMATE ROOF AREA: 10,850 SF.
THE SCOPE ALSO CONSISTS OF THE INSTALLATION OF A NEW PVC OVERLAY ROOFING SYSTEM OVER THE EXISTING ROOFING. APPROXIMATE ROOF AREA: 3,000 SF.

SITE MAP:

DACC DADM EAST MESA BLDG.

— 2800 SONOMA RANCH BLVD

LAS CRUCES, NM 88011





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Building Investigation

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New Mexico State University
4121 DACC DADM East Mesa
Building Reroof
2800 Sonoma Ranch Blvd,

Date **4/5/2024** 

CD Set

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COVER SHEET

Sheet No.

C-001

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### **DEMO KEYNOTES**

- A. METAL ROOF AREA REMOVE EXISTING ROOFING DOWN TO DECK:
- BERMUDA METAL ROOF PANELS (2) SHEETS #30 FELT UNDERLAYMENT
- 1/4" GYP. BD. METAL DECK - EXISTING SLOPE 3:12
- B. MECH ROOF AREA EXISTING ROOFING TO REMAIN. MEMBRANE MUST BE CUT IN 12'-0" SECTIONS:

- TWO LAYERS 4" POLYISO INSULATION

#### 1/2" DENSDECK

- METAL DECK

- 1/2" DENSDECK
- ONE LAYER 4" POLYISO INSULATION METAL DECK
- C. REMOVE ALL BASE FLASHING, PENETRATION FLASHING AND COPINGS.

#### D. EXISTING ROOF HATCH TO REMAIN.

- E. EXISTING METAL LOUVERED ACCESS PANELS TO REMAIN.
- . BAD METAL DECKING IS ANTICIPATED. REMOVE ALL BAD DECKING. ALL RUSTED DECKING WILL NEED TO HAVE THE DECK RUST REMOVED AND PRIMED WITH A RUST PROHIBITOR. INCLUDE COSTS TO REPLACE 2,000 SF OF B-DECKING IN YOUR BID. ADD/DEDUCT UNIT PRICING WILL BE REQUIRED ON BID FORM.

#### G. EXISTING ROOF AREA TO REMAIN. N.I.C.

- EXISTING LIGHTNING PROTECTION SYSTEM TO BE REMOVED & RE-INSTALLED PER MOST CURRENT CODES AND COMPLYING WITH UL96 BY A CERTIFIED, LICENSED LIGHTNING PROTECTION PROFESSIONAL TO ALLOW FOR NEW ROOFING INSTALLATION. ANY UNUSABLE ITEMS SHOULD BE RECYCLED AND DISPOSED OF PROPERLY, CONTRACTOR TO INSPECT AND REPAIR ALL CABLING AND PROVIDE PROPER SECUREMENT USING METAL CABLE HOLDER PLATES WITH NPI ADHESIVE/SEALANT. CONTRACTOR IS RESPONSIBLE FOR LIGHTNING PROTECTION SYSTEM INSPECTION AND RE-CERTIFICATION. LIGHTNING PROTECTION CONTRACTOR SHOULD BE UL LISTED AND INSTALLERS SHOULD BE MINIMUM JOURNEYMAN LEVEL. SEE B4/A-501 FOR CABLE STRAP DETAIL.
- EXISTING HOIST POLE TO REMAIN.
- . EXISTING HOSE BIB TO REMAIN.

## SHEET KEYNOTES

- NEW METAL ROOF SYSTEM: REPLACE BAD DECKING. INSTALL NEW STANDING SEAM, 24 GA. 180 DEGREE BENT SEAM WITH KYNAR FINISH. INSTALL NEW PEEL AND STICK UNDERLAYMENT, AS SPECIFIED, OVER MECHANICALLY FASTENED 1/2" HD GYPSUM COVERBOARD OVER EXISTING METAL DECK. REFER TO DETAILS B1, B2/A-501 & A1, A2, B1, B2/A-502 FOR METAL ROOFING DETAILS.
- A. NEW FLAT ROOF OVERLAY SYSTEM: INSTALL 72 MIL PVC BASEFLASHING AND ROOF ASSEMBLY DOWN THROUGH THE METAL DECK WITH
- ALL CRICKETS IN AREAS GRAPHICALLY REPRESENTED ON DRAWINGS MUST PROVIDE POSITIVE SLOPE AND DRAINAGE, WATER TESTED TO INSURE POSITIVE DRAINAGE. INSTALL NEW CRICKETS, AS REQUIRED. CRICKETS NEED TO BE MINIMUM  $\frac{1}{2}$ " GREATER THEN THE SLOPE OF THE ROOF. (I.E.  $\frac{1}{2}$ " SLOPE =  $\frac{1}{2}$ " CRICKET) WITH 3 TO 1 RATIO TO CREATE POSITIVE SLOPE. CRICKETS ARE SHOWN FOR INTENT AND ARE NOT TO SCALE. CONTRACTOR IS RESPONSIBLE FOR POSITIVE DRAINAGE.
- VENT PIPE / ELECTRICAL / GAS PIPE PENETRATIONS THROUGH ROOF TO BE RAISED, AS REQUIRED, TO INSTALL NEW MEMBRANE ROOF FLASHING AS REQUIRED TO TERMINATE NEW ROOFING. SEE DETAILS C1, C2, C3/A-501.
- INSTALL NEW METAL FASCIA PANEL AND NEW COPING CAP. INSTALL NEW CDX PLYWOOD AND WRAP MEMBRANE UP INTERIOR SIDE OF WALL AND OVER PARAPET. SEE DETAILS A2, B1, B2/A-502.
- PRIMARY AND OVERFLOW ROOF DRAINS: CLEAN, TEST FOR POSITIVE DRAINAGE AND REINSTALL DRAIN STRAINER. IF STRAINER IS MISSING AND/OR PLASTIC, REPLACE WITH CAST IRON. SEE DETAIL A1/A-501.
- EXISTING WALL LOUVERS TO REMAIN. TERM BAR MEMBRANE AROUND LOUVER FRAME PERIMETER.
- INSTALL NEW SAFETY RAILING AT ROOF HATCH, SEE DETAILS C4/A-501, PROVIDE AND INSTALL TWO ROWS OF WALKPADS AT EXISTING HATCH LANDING.
- INSTALL NEW FLASHING AT EXISTING HVAC MECHANICAL EQUIPMENT. EXTEND EXISTING CURBS, AS REQUIRED, TO MEET HEIGHT REQUIREMENTS SHOWN IN CONTRACT DOCUMENT DETAILS. FLASHING SHALL BE WRAPPED UP AND OVER, SLIP FLASHING INSTALLED AND THE UNITS AND EXISTING VIBRO CURBS SHOULD BE RESET AND RECONNECTED, MAKING SURE RUBBER CURB CORNERS ARE LAPPED TO BE WATERTIGHT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL NECESSARY RECONNECTIONS AND EXTENSIONS. SEE DETAIL A4/A-501. PROVIDE TWO ROWS OF WALKPADS ON THREE SIDES OF MECHANICAL UNITS.
- LIFT EXISTING ROOF PANELS AS NECESSARY TO INSTALL NEW RIDGE AND VALLEY FLASHING. RESET EXISTING ROOF PANELS AND SECURE FOR A WATERTIGHT FINISHED SYSTEM.
- 10. INSTALL NEW DUCT FLASHING PER DETAIL A2/A-501.
- 11. INSTALL NEW KNEE CURBS AT EXISTING MECH. EQUIPMENT. SEE DETAILS A4/A-502.
- 12. EXISTING HOIST. INSTALL NEW FLASHING PER DETAILS C2,C3/A-501.
- 13. EXISTING ELECTRICAL PANELS AND SUPPORT TO REMAIN. DETACH/REATTACH AS REQUIRED FOR NEW ROOFING INSTALLATION. INSTALL NEW FLASHING AT ALL WALL/ROOF CONDUIT PENETRATIONS. SEE DETAIL C2, C3/A-501.
- 14. INSTALL NEW PIPE SUPPORTS PER DETAIL A3/A-502.
- 15. EXISTING ACCESS DOOR. INSTALL NEW THRESHOLD FLASHING & CUT DOOR AS REQUIRED TO ACCOMODATE NEW THRESHOLD HEIGHT. SEE DETAIL A3/A-501.
- 16. EXISTING ELECTRICAL BOX ON ROOF MOUNTED SUPPORT FRAME. INSTALL NEW FLASHING AT SUPPORT FRAME AND CONDUIT PENETRATIONS. SEE DETAILS C1, C2, C3/A-501 & B3/A-501.
- 17. INSTALL FLASHING AT EXISTING WALL MOUNTED HOSE BIB. SEE DETAL C2, C3/A-501.

#### **GENERAL NOTES**

- THE CONTRACTOR SHALL NOT REMOVE ANY EXISTING ROOFING SYSTEM, DAMAGED DECKING, OR INSTALL NEW ROOFING SYSTEM WHEN WEATHER CONDITIONS THREATEN THE INTEGRITY OF THE BUILDING CONTENTS OR OCCUPANTS. THE CONTRACTOR SHALL COMPLETE EACH DAY'S ROOFING CYCLE AND PROVIDE A WELDED OR FOAMED TEMPORARY SEAL AT JUNCTION OF NEW ROOF AND EXISTING ROOF. THE CONTRACTOR SHALL MAINTAIN A WATERPROOF COMPLETED AREA WITH EACH ROOFING CYCLE. NO TOLERANCES WILL BE GIVEN.
- ALL LOCATIONS OF ITEMS SHOWN ON ROOF PLANS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO BID. NO ALLOWANCES WILL BE MADE FOR ADDITIONAL AMOUNTS OF ROOFING MATERIAL, FLASHING, LABOR, ETC. NOT VERIFIED AND NOTIFIED BY THE CONTRACTOR TO THE OWNER REPRESENTATIVE PRIOR TO BID.
- PERFORM ALL DISCONNECTS, EXTENSIONS AND RECONNECTIONS AS REQUIRED TO ACCOMMODATE NEW ROOF HEIGHTS, FOR ITEMS BEING RAISED AND REMOUNTED FOR RE-ROOFING WORK. AND MUST BE PART OF CONTRACTORS SUBMITTED WORK SCHEDULE AND MUST BE SCHEDULED PRIOR TO ANY DISCONNECT OR RECONNECT. RETURN ALL ITEMS TO OPERATIONAL CONDITION PRIOR TO END OF DAY'S WORK. NOTIFY THE ARCHITECT OF ANY DEFECTIVE ITEMS DISCOVERED DURING WORK.
- PIPES 1-1/2" AND SMALLER SHALL BE SUPPORTED AT 8'-0" O.C. MAXIMUM AND PIPES 2" AND LARGER SHALL BE SUPPORTED AT 10'-0" O.C. MAXIMUM.
- THIS IS A POPULATED BUILDING SPECIAL CONSIDERATION, SCHEDULING, NOISE LEVELS AND STAGING WILL BE REQUIRED DURING ROOFING.
- THE CONTRACTORS SHALL HAVE THE OPPORTUNITY TO ACQUAINT THEMSELVES WITH ALL EXISTING CONDITIONS AT THE PREBID AND BY APPOINTMENT IF SECONDARY INSPECTION IS NEEDED. NO ALLOWANCES SHALL BE MADE FOR CONDITIONS THAT ARE CLEARLY VISIBLE OR DETECTABLE WITH SOME RESEARCH
- THE LOADING AREA AVAILABLE AT GROUND LEVEL IS A FIRE, EMERGENCY AND SECURITY ACCESS AREA. A STRICT SCHEDULE FOR STAGING OF DELIVERIES AND CRANING OF MATERIAL MUST BE SUBMITTED BY THE CONTRACTOR TO THE OWNER REPRESENTATIVE, SO THAT THE OWNER MAY COORDINATE ALL NECESSARY PERMITS. ALL MATERIALS WILL HAVE TO BE STORED ON THE ROOF AREAS AND IN STAGING AREA. AS WELL AS SANITARY FACILITIES.
- NO EMPLOYEES WILL BE ALLOWED IN THE BUILDING. ESCORTED SECURITY WILL NEED TO BE SCHEDULED FOR THE FOLLOWING: ACCESS TO THE ROOF THROUGH THE BUILDING AND ACCESS TO AREAS WITHIN THE BUILDING NECESSARY TO COMPLETE THE SCOPE OF WORK.
- BEFORE ANY UTILITY CUT OFFS OR DEMOLITION IS TO OCCUR, A SCHEDULE MUST BE SUBMITTED TO THE ARCHITECT. A MINIMUM OF ONE WEEK'S ADVANCE NOTICE OF WORK IS REQUIRED. WORK SCHEDULES WILL BE REQUIRED TO BE SUBMITTED TO THE OWNER REPRESENTATIVE TWICE WEEKLY, ANTICIPATING THE NEXT WEEK'S WORK.
- THE CONTRACTOR SHALL PROVIDE LICENSED PLUMBING, MECHANICAL AND ELECTRICAL CONTRACTORS TO REMOVE AND REINSTALL ALL EXISTING EQUIPMENT ON THE ROOF. ALL EQUIPMENT SHALL BE FULLY OPERATIONAL WHEN REINSTALLED. CONTRACTOR'S WORK SHALL MEET CURRENT APPLICABLE BUILDING
- CORROSIVE AGENTS ADDED TO TREATED WOOD NAILERS (IF PRESERVED WOODS ARE USED) AND AS RECOMMENDED BY THE ROOFING MANUFACTURER AND AS REQUIRED FOR THE WARRANTY.

. THE ROOFING CONTRACTOR SHALL PROVIDE FASTENERS AS REQUIRED FOR

- ALL ROOFING SHALL BE ATTACHED TO THE BUILDING IN ACCORDANCE WITH FM 1-75 WIND UPLIFT FASTENING PATTERN AND ASCE 7 REQUIREMENTS.
- 13. THE DETAILS SHOWN IN DRAWINGS AND PLANS ARE FOR INTENT. THE MOST STRINGENT REQUIREMENTS BETWEEN CONSTRUCTION DOCUMENTS, MANUFACTURERS' DETAILS, SMACNA REQUIREMENTS AND NRCA RECOMMENDATIONS WILL BE REQUIRED.
- 14. ALL AREAS TO RECEIVE NEW ROOFING MEMBRANE SHALL BE INCORPORATED INTO ROOFING WARRANTY, INCLUDING NEW WALL AND PARAPET MEMBRANE WORK. WARRANTY SHALL INCLUDE ALL PENETRATIONS, FLASHING AND TERMINATIONS CONTRACTOR SHALL PROVIDE AND INSTALL ALL FLASHINGS, TRIM, SEALANTS, NAILERS, MATERIALS, ETC. REQUIRED TO PROVIDE A COMPLETE WATERPROOF AND NO DOLLAR LIMIT WARRANTED SYSTEM.
- CONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO BID. NO ALLOWANCES. WILL BE MADE FOR ADDITIONAL AMOUNTS OF ROOFING MATERIAL, FLASHING, LABOR, ETC. NOT VERIFIED AND NOTIFIED BY THE CONTRACTOR TO THE OWNER REPRESENTATIVE PRIOR TO BID.
- 16. THE ROOFING SYSTEM SHALL BE INSTALLED PER PLANS, DETAILS, SPECIFICATIONS & MANUFACTURER'S REQUIREMENTS, AND PROVIDE A 20 YEAR NO DOLLAR LIMIT WARRANTY AS OUTLINED IN THE SPECIFICATIONS.
- 7. PREDRILL ALL METAL FLASHING/ COUNTER FLASHING MATERIAL PRIOR TO INSTALLING FASTENERS.
- 18. THESE DRAWINGS INDICATE, IN GENERAL, ITEMS OF MATERIAL AND EQUIPMENT WHICH MUST BE REMOVED, REUSED, REFINISHED OR MODIFIED. NO ATTEMPT HAS BEEN MADE TO INDICATE EACH AND EVERY PORTION OF DEMOLITION AND REMODELING WORK. THE INTENT OF THE DRAWINGS IS TO PROVIDE A GUIDELINE TO THE CONTRACTOR(S) TO BETTER ENABLE HIM TO ANTICIPATE THE ENTIRE SCOPE OF WORK. THE CONTRACTOR(S) ARE ADVISED TO VISIT THE JOB SITE TO GET FAMILIAR WITH THE WORK: SCOPE, EXTENT AND ROOF AREAS, PRIOR TO BIDDING. SEE GENERAL NOTE 6 IN REGARD TO SCHEDULING SITE VISITS.
- 19. ALL WALLS OVER 32" WILL REQUIRE INTERIM TERM BAR. FASTEN 12" O.C..
- 20. CONTRACTOR SHALL INCLUDE ALL MECHANICAL AND ELECTRICAL COSTS NECESSARY FOR DISCONNECTING OF EXISTING ROOFTOP EQUIPMENT AND ITS RE-INSTALLATION. CONDUCT NECESSARY TESTS TO VERIFY THAT UNITS ARE FUNCTIONAL. THIS INCLUDES RAISING OF CURBS TO MEET 12" ABOVE FINISHED ROOF. ALL CURBS GREATER THAN 24" WILL REQUIRE A CRICKET.
- L. ON EXISTING ROOFING SYSTEMS AND WALLS THAT ARE NOT PART OF THIS ROOFING PROJECT, ANY DAMAGE OCCURRING DURING THE RENOVATION WORK SHALL BE REPAIRED AT NO EXPENSE TO THE OWNER. NOTIFY OWNER/ ARCHITECT IN WRITING PRIOR TO STARTING WORK IF ANY DAMAGES ARE PRESENT. DAMAGES NOT REPORTED WILL BE CONSIDERED NEW AND CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRS. REPAIRS MUST NOT VOID ANY EXISTING WARRANTIES.
- ALL SECURITY, SATELLITE, WEATHER STATIONS, PHONE AND BUILDING DECORATIONS WILL BE HANDLED BY OWNER. COORDINATE WITH OWNER ON DISCONNECT AND RECONNECT.
- 23. ALL TOOLS AND WORK RELATED EQUIPMENT MUST BE WITHIN WORKERS' POSSESSION AND CONTROL AT ALL TIMES.
- 24. CONTRACTOR SHALL PROVIDE AN INVENTORY OF ALL NON WORKING AND ABANDONED MECHANICAL EQUIPMENT, SUPPLY LINES, DAMAGED CEILING TILES, SIDEWALKS AND OTHER BLDG COMPONENTS THAT COULD BE AFFECTED BY
- ROOFING PROCESS. ALL ABANDONED ITEMS SHALL BE REMOVED 25. COORDINATE ALL MECHANICAL UNIT SHUTOFFS WITH THE PROJECT MANAGER. NO COORDINATION IS TO TAKE PLACE WITH THE USER GROUP.
- THE DESIGNER AND CONSULTANT IS NOT RESPONSIBLE FOR THE ACT AND OMISSION OF ANY CONTRACTOR, SUBCONTRACTOR, MATERIAL SUPPLIER, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: SAFETY PRECAUTIONS / PROGRAMS AND THEIR ENFORCEMENT, OR FOR THE CONSTRUCTION MEANS AND METHODS, TECHNIQUES, SEQUENCING AND PROCEDURES EMPLOYED BY THE CONTRACTORS AND THE INCLUSION OF THE REQUIREMENTS OF THE MANUFACTURE FROM THEIR PUBLISHED DOCUMENTS, PROCEDURES, AND THEIR STAFF ISSUED VERBAL AND WRITTEN INSTRUCTIONS AND REMEDIES.
- . ALL EQUIPMENT THAT CONTAINS FLAMMABLE FLUIDS MUST EITHER BE REMOVED ON A DAILY BASIS OR THE EQUIPMENT TANK MUST BE DRAINED AT END OF EACH DAY. ANY FLAMMABLE FLUID IN CONTAINERS MUST BE REMOVED FROM THE ROOF ON A DAILY BASIS.
- 28. ROOF MUST BE WATERTIGHT AT ALL TIMES. CONTRACTOR MUST SUBMIT A NIGHT SEAL PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS.



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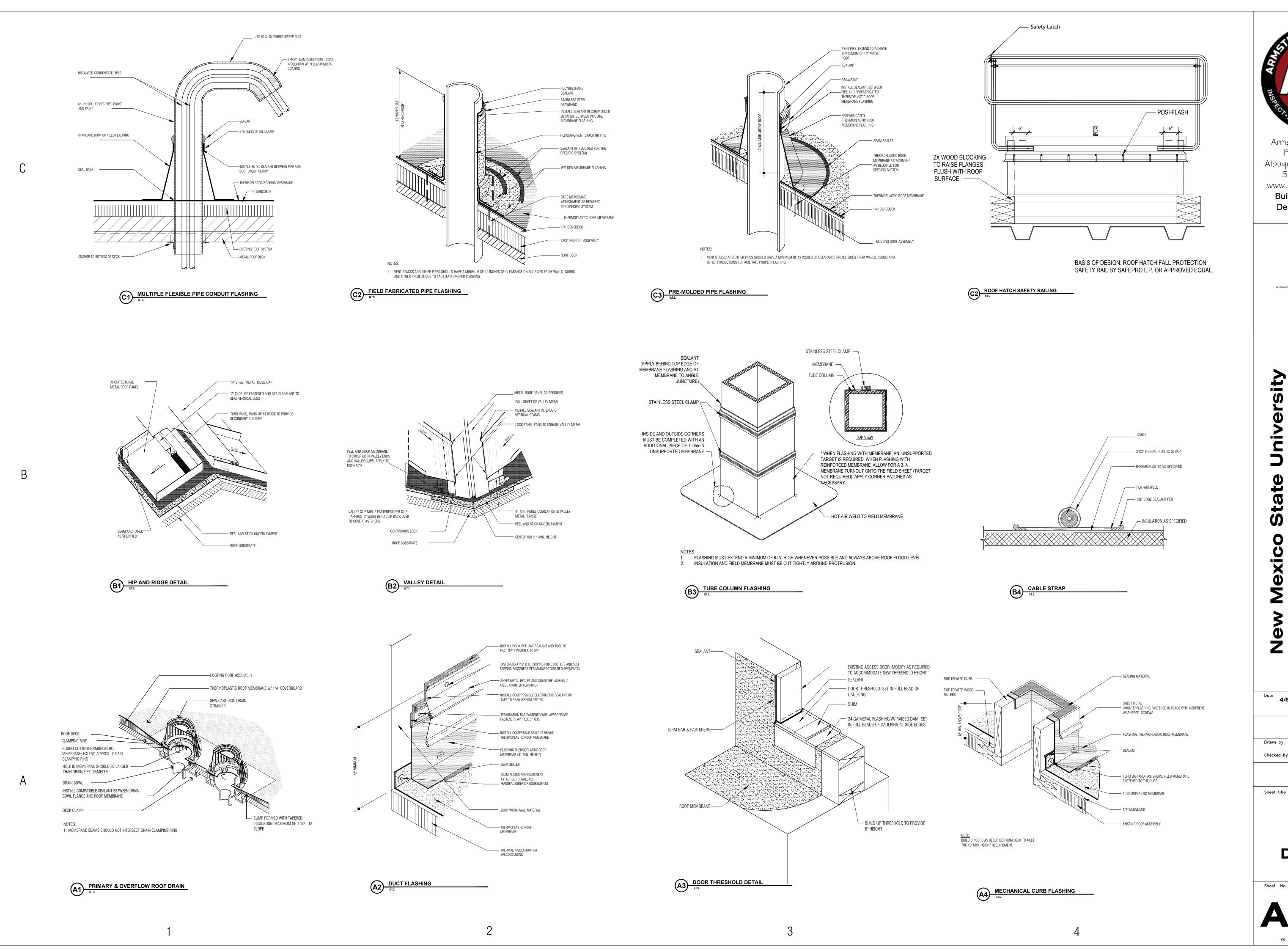
**ROOF PLAN** 



3:12 OPE

3:12 SLOPE

FIELD MEMBRANE. FULLY WELD MEMBRANE TO RHINO PLATES THAT HAVE BEEN FASTENED THROUGH 1/4" DENSDECK TO BE FASTENED THROUGH THE EXISTING MANUFACTURER-APPROVED FASTENERS AND RHINO PLATES.



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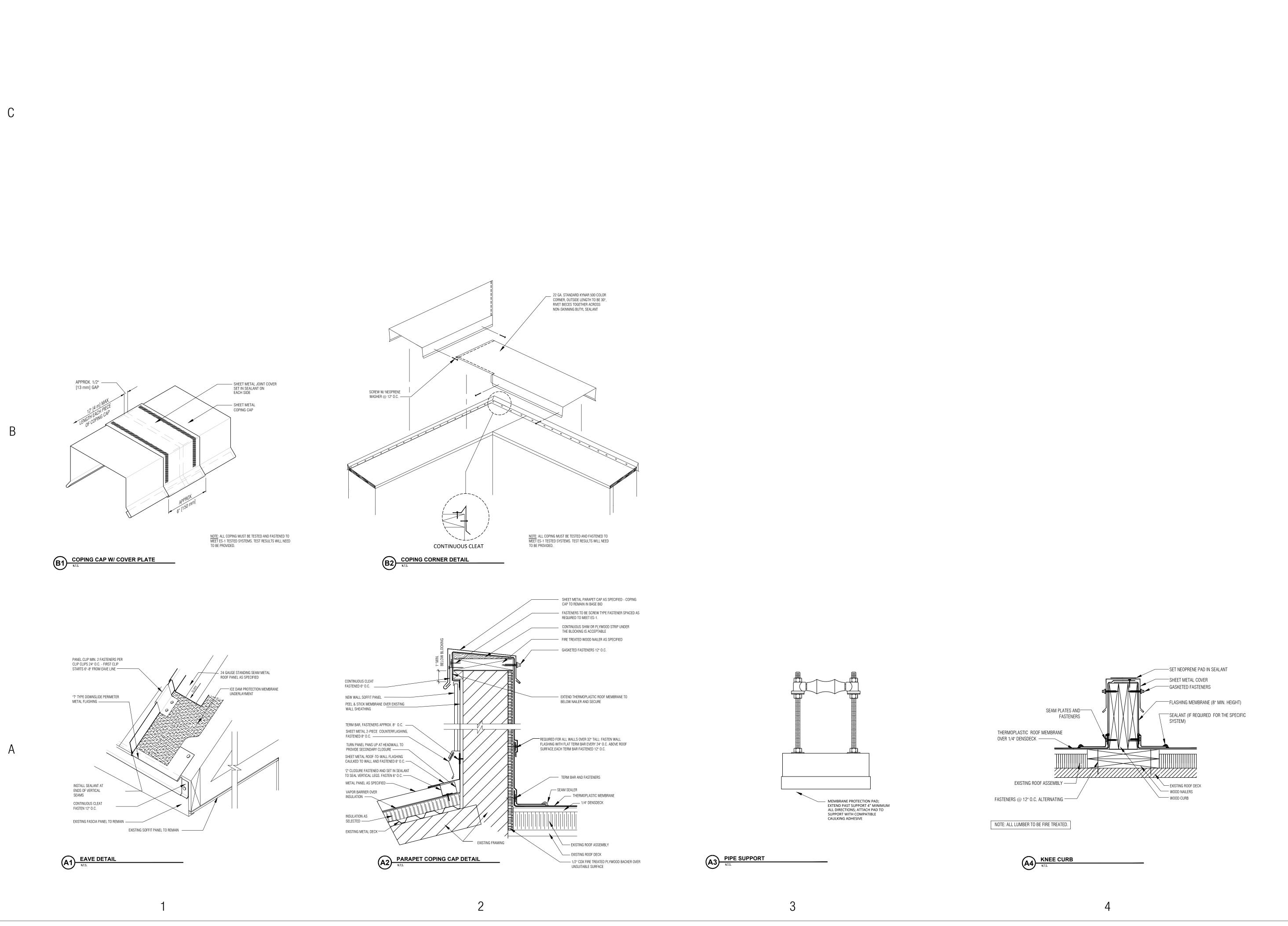
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**ROOF DETAILS** 

**A-501** 



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ROOF DETAILS

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A-502