1. All exposed masonry to receive anti-graffiti coating.
2. No exposed conduit on exterior CMU walls.
3. Metal coping - CP-1 - Refer to wall sections.
4. Hose bib - center in block - Refer to plumbing drawings.
5. Light fixture - align top of fixture with top of block - Refer to electrical drawings.
8. Masonry control joint - refer to detail 7/A2.50 and structural drawings.
9. Roof and roof overflow drain daylight location - refer to plans and plumbing drawings.
10. Door - refer to door schedule - paint door and frame PC-?
11. Security camera - mount at 15'-0" A.F.F., housing color to match adjacent finish - Refer to electrical drawings.
12. Safety platform and guardrails by contractor - refer to specifications.
13. Existing white hall - protect in place.
14. Extend existing chainlink fence to new vivarium building - match existing height.
15. Ceiling mounted security camera - refer to RCP and electrical drawings.
16. Raised curb for cage wash - refer to civil and plumbing drawings.
17. Fire department connection - refer to civil drawings.

**Building Elevations**

**North Elevation**

**South Elevation**

**West Elevation**

**East Elevation**

**Entry - North Elevation**

**Entry - South Elevation**

**Entry - North Elevation**

**Permit Set**

**Legend**

**PLEASE RECYCLE**

UNLV Vivarium
490 South Maryland Parkway
Las Vegas, NV 89154

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**GENERAL NOTES**

- **TABLE 1785.2 REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION**

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- **TABLE 1785.3 REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL**

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- **TABLE 1785.4 REQUIRED VERIFICATION AND INSPECTION OF STUCCO LANDSCAPE DECK FRAME FOUNDATION ELEMENTS**

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Post Installed Anchors in Concrete and Masonry

1. Post installed anchors shall be used on specific foundation elements as follows:
   a. Contractor shall obtain approved form the Engineer of Record (EOR) prior to using or installing anchors in shear walls.
   b. Anchors shall be installed in accordance with manufacturer's instructions and code requirements.

2. Anchors shall be installed in a vertical or inclined orientation to resist sustained tension loads.
3. Care shall be given to avoid conflicts with existing reinforcement. Holes shall be kept on site and be made available to the EOR as required.
4. Installation of anchors shall be subject to an independent quality assurance program that is in accordance with the ISP 202 and/or the EOR's approval.

5. Anchors shall be embedded in the appropriate substrate with the embedment distances and/or spacing indicated in the manufacturer's literature.
6. Anchors shall be installed in horizontal to vertically overhead orientation.

7. Adhesive anchors installed in horizontal or upwardly inclined orientations to vertical with a 45° or larger incline angle shall be subject to testing per ICC-ES ESR-1269 or shall be used in accordance with the manufacturer's instructions.
8. Anchors shall be embedded in the appropriate substrate with the embedment distances and/or spacing indicated in the manufacturer's literature.

9. Expansion anchors shall be:
   a. Simpson Strong-Tie "Power-Stud+ SD1" per ICC-ES ESR-2818
   b. Simpson Strong-Tie "Power-Stud+ SD2" per ICC-ES ESR-2502
   c. Simpson Strong-Tie "Titen HD Rod Expansion Anchors" per ICC-ES ESR-3067
   d. Simpson Strong-Tie "Titen HD Rod Expansion Anchors" per ICC-ES ESR-3067

10. Screw anchors shall be:
    a. Simpson Strong-Tie "Torq-Cut" per ICC-ES ESR-2705
    b. Simpson Strong-Tie "Strong-Bolt 2" per ICC-ES ESR-3037
    c. Simpson Strong-Tie "Strong-Bolt 2" per ICC-ES ESR-3037
    d. Simpson Strong-Tie "Strong-Bolt 2" per ICC-ES ESR-3037

11. Special Inspection shall be provided as required by the applicable ICC-ES Evaluation Services Report.

12. Acceptable products for installation in masonry are as follows:
   a. Hilti "Kwik Bolt 3" per ICC-ES ESR-1385
   b. Hilti "HIT-HY 200 SafeSet" per ICC-ES ESR-3187
   c. Hilti "HIT-HY 70" per ICC-ES ESR-2682
   d. Simpson Strong-Tie "Titen HD" per ICC-ES ESR-1056

13. Acceptable products for installation in cracked and uncracked concrete are as follows:
   a. Simpson Strong-Tie "SET Epoxy-Tie Adhesive" per ICC-ES ESR-1772
   b. Simpson Strong-Tie "Hanger" per ICC-ES ESR-2713
   c. Simpson Strong-Tie "Powder-Driven Fasteners" per ICC-ES ESR-1663 and ESR-2269
   d. Simpson Strong-Tie "Strong-Bolt 2" and "Strong-Bolt 2 Rod Expansion Anchors" per ICC-ES ESR-3037

14. Acceptable products for installation in the soffit of concrete over profile metal deck are as follows:
   a. Simpson Strong-Tie "Power-Stud+ SD1" per ICC-ES ESR-2818
   b. Simpson Strong-Tie "Power-Stud+ SD2" per ICC-ES ESR-2502
   c. Simpson Strong-Tie "Titen HD Rod Expansion Anchors" per ICC-ES ESR-3067
   d. Simpson Strong-Tie "Titen HD Rod Expansion Anchors" per ICC-ES ESR-3067

AS CONSTRUCTION RESIDENTS (TABLE 3.11.2, TMS-7000/ASCI 530-13)

- Proportions of site-prepared mortar
- Grade and type of prestressing tendons and anchors
- Location of reinforcement, connectors, prestressing tendons and anchors
- Properties of the headed mortar for AAC panels

- Prior to grouting (Table 3.11.2, TMS-7000/ASCI 530-13)
- Grout space
- Grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchors
- Precast of reinforcement, connectors, and prestressing tendons and anchors

- Proportion of site-prepared grout and prestressing grout for bonded tendons

- Construction of mortar joints

DURING MASONRY CONSTRUCTION:

- Size and location of structural elements
- Tape, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or crosswall construction.
- Welding of reinforcement
- Preparation, construction, and protection of masonry during salt weather (MWF) or hot weather (HWP)
- Application and measurement of thin coating
- Placement of grout and prestressing grout for bonded tendons in compliance
- Placement of AAC masonry units and construction of the slab spanning joints
- Qualification of grout mix, mortar mixers, mortar mixers, and related processes

MINIMUM TESTING:

- Verification of spring flow and visual stability index (VSI) for self-consolidating grout
- Verification of C3M and C45
- Compression strength test should be performed in accordance with ASTM C 393 for slump flow and ASTM C 109 for VSI.
- Determine the compressive strength of each sample by the "split tensile method" or by the "blast test method" as specified in Article 3.4.8 of TMS 602/ASCI 530-13 prior to construction. For Risk Category V buildings, this should be at least every 5,000 sq ft of construction.
- Verification of proportion of materials in premixed or preblended mortar and grout

- Verify that proportions for mortar meet ASTM C 270 and proportions for great meet ASTM C 476. This applies to Risk Category V buildings.
1. Top of concrete floor reference elevation. Top of slab on grade = 0'-0".
2. Reinforcement steel and concrete footing shall be embedded 8'-0" below finish grade.
3. Contractor to coordinate slab on grade details with S4.01.
4. Concrete and footing details, see sheet S4.01 and S5.01.
5. Footing details and reinforcement shall be in accordance with geotechnical report. If any discrepancies are found, contact architect.
6. See geotechnical report for footing details. Overexcavation for the subgrade shall be in accordance with geotechnical report. 
7. For typical concrete floor details, see S4.01.
8. See architectural plans for locations of structural columns. Structural details are shown for reference only.
9. Structural details and reinforcement shall be in accordance with geotechnical report. If any discrepancies are found, contact architect.
10. Reference structural plans to locate structural columns. Typical reinforcement details are shown for reference only. If any discrepancies are found, contact architect.
11. For typical interior structural framing, refer to sheet S4.01. For stud size, spacing and location, refer to S4.01. For details of interior and exterior wall frames, see architectural plans.
12. Typical masonry interior structural framing, refer to S2.01 for shear walls and displayality. Refer to sheet S2.01 for details of interior and exterior wall frames.
13. For interior walls, refer to plan sheets. Interior wall finishes, see architectural plans.
14. Electrical conduit sizes and electrical outlet locations, refer to sheet S2.01. For master electric panel location, refer to sheet S3.01 and S4.01.
15. For typical details and notes, see sheet S4.01. Signatures to identify each phase. For general notes see sheet S5.01. See schedule and details on sheet S4.01.
16. Reference structural plans to locate structural columns. Typical reinforcement details are shown for reference only. If any discrepancies are found, contact architect.
17. All wall framing steel and hardware shall receive a zinc-rich paint coating. Refer to sheet S2.01 for details of interior and exterior wall frames.
18. See structural plans for locations of structural columns. Typical reinforcement details are shown for reference only. If any discrepancies are found, contact architect.
19. All masonry interior structural framing, refer to S3.01 for stud size, spacing and location. Refer to sheet S3.01 and S4.01.
20. For typical interior structural framing, refer to S3.01. For stud size, spacing and location, refer to S3.01. For details of interior and exterior wall frames, see architectural plans.
21. Typical concrete floor details, see S3.01. For slab on grade control, see S4.01.
22. See architectural plans for locations of structural columns. Typical reinforcement details are shown for reference only. If any discrepancies are found, contact architect.
23. Typical concrete floor details, see S3.01. For slab on grade control, see S4.01.
24. See architectural plans for locations of structural columns. Typical reinforcement details are shown for reference only. If any discrepancies are found, contact architect.
25. Typical concrete floor details, see S3.01. For slab on grade control, see S4.01.
26. See architectural plans for locations of structural columns. Typical reinforcement details are shown for reference only. If any discrepancies are found, contact architect.
27. Typical concrete floor details, see S3.01. For slab on grade control, see S4.01.
28. See architectural plans for locations of structural columns. Typical reinforcement details are shown for reference only. If any discrepancies are found, contact architect.
29. Typical concrete floor details, see S3.01. For slab on grade control, see S4.01.
30. See architectural plans for locations of structural columns. Typical reinforcement details are shown for reference only. If any discrepancies are found, contact architect.
31. Typical concrete floor details, see S3.01. For slab on grade control, see S4.01.
32. See architectural plans for locations of structural columns. Typical reinforcement details are shown for reference only. If any discrepancies are found, contact architect.
33. Typical concrete floor details, see S3.01. For slab on grade control, see S4.01.
34. See architectural plans for locations of structural columns. Typical reinforcement details are shown for reference only. If any discrepancies are found, contact architect.
35. Typical concrete floor details, see S3.01. For slab on grade control, see S4.01.
36. See architectural plans for locations of structural columns. Typical reinforcement details are shown for reference only. If any discrepancies are found, contact architect.
NOTES:
1. Slab shall be placed in strip pattern.
2. Slab shall be divided into areas not exceeding 225 sq ft. by construction joints.
3. No construction joints shall occur and subdivision into areas not exceeding 225 sq ft. by
   construction joints.
4. Construction joints shall be placed at the intersection of the building axes, at the
   interior walls, at the exterior walls, and at the building perimeter. The construction
   joints shall be placed at a maximum distance of 20 ft. apart.
5. Construction joints shall be marked with a contrasting material to facilitate the
   identification of the joint location.
6. Construction joints shall be filled with a durable and flexible material to prevent
   water infiltration.
7. Construction joints shall be inspected and tested to ensure proper waterproofing
   and separation.

For location and depth see plan or sub-grade see Geo-tech report.
**Plan Detail for Rebar Placement in CMU**

1. **Plan Single Mat**
   - Provide #6 bars @ 12" o.c. for horizontal reinforcement.
   - Provide #6 bars @ 24" on center for vertical reinforcement.
   - Provide #6 bars @ 36" for top horizontal reinforcement.
   - Provide #6 bars @ 18" for bottom horizontal reinforcement.

2. **Plan Double Mat**
   - Provide #8 bars @ 12" o.c. for horizontal reinforcement.
   - Provide #8 bars @ 24" on center for vertical reinforcement.
   - Provide #8 bars @ 36" for top horizontal reinforcement.
   - Provide #8 bars @ 18" for bottom horizontal reinforcement.

3. **Typical Vertical Containment Wall Height**
   - Provide #6 bars @ 12" o.c. for horizontal reinforcement.
   - Provide #6 bars @ 24" on center for vertical reinforcement.
   - Provide #6 bars @ 36" for top horizontal reinforcement.
   - Provide #6 bars @ 18" for bottom horizontal reinforcement.

4. **Anchor Bolt Embedment-CMU**
   - Use M10 or M12 bolts with 3/4" diameter.
   - Use 3/4" diameter bolts for top horizontal reinforcement.
   - Use 3/4" diameter bolts for bottom horizontal reinforcement.

5. **Drift Strut**
   - Use 4" diameter drift struts.
   - Use 5" diameter drift struts.

6. **Beam Bearing Plate Perpendicular to Wall**
   - Use 1/2" thick plates for horizontal reinforcement.
   - Use 1/2" thick plates for vertical reinforcement.

7. **End Plate**
   - Use 1/2" thick plates for horizontal reinforcement.
   - Use 1/2" thick plates for vertical reinforcement.

8. **Contract**
   - Use M10 or M12 bolts with 3/4" diameter.
   - Use 3/4" diameter bolts for top horizontal reinforcement.
   - Use 3/4" diameter bolts for bottom horizontal reinforcement.

9. **Placement of Bar**
   - Where straight extensions is not possible, use 2-#7 bars @ 12" on center.
   - Use 2-#6 bars @ 12" on center for top horizontal reinforcement.
   - Use 2-#6 bars @ 12" on center for bottom horizontal reinforcement.

10. **2-#5 Vert. and Horizontal Wall Reinforcing**
    - Use 2-#5 bars @ 12" on center for vertical reinforcement.
    - Use 2-#5 bars @ 12" on center for horizontal reinforcement.

11. **2-#6 and #7 Bars**
    - Use 2-#6 bars @ 12" on center for top horizontal reinforcement.
    - Use 2-#7 bars @ 12" on center for bottom horizontal reinforcement.

12. **S5.04 Masonry Header Detail**
    - Use 1/2" thick plates for horizontal reinforcement.
    - Use 1/2" thick plates for vertical reinforcement.

13. **Masonry Header Detail**
    - Use 1/2" thick plates for horizontal reinforcement.
    - Use 1/2" thick plates for vertical reinforcement.

**Notes**
- Provide vertical wall reinforcing each side of joint, #5 bars minimum.
- Minimum bolt spacing shall be 12 bolt diameters, minimum edge distance shall be 6 bolt diameters.
- Provide a minimum of 1/4" space above the bolts.
- There are no restrictions on the placement of bars above the top horizontal reinforcement.
### Laboratory General Exhaust Valve Schedule

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### Laboratory Radex Exhaust Valve Schedule "Constant Flow"

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### Laboratory Pure Hood Exhaust Valve Schedule

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**MECHANICAL SCHEDULES**

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**UNLV VIVARIUM**

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**UNIVERSITY OF NEVADA, LAS VEGAS**

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**PERMIT SET**

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**Sheet No:** M0.03